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Sommario

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Ambiente, sostenibilità e diritto: nuove frontiere e sfide nei sistemi giuridici dell'Asia orientale

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Premessa

Il secondo numero della *Rivista di Diritto dell'Asia Orientale* è dedicato al tema «Environment, Sustainability, and Law: New Frontiers and Challenges in East Asian Legal Systems» e ha come obiettivo quello di stimolare una riflessione accademica su un argomento di preminente rilevanza internazionale, considerato che sostenibilità, tutela dell'ambiente e diritto delle generazioni future costituiscono fondamentali capisaldi ai sensi dell'Agenda ONU 2030.

In tempi recenti, il ruolo del diritto quale mezzo di tutela dell'ambiente e mezzo prodromico al conseguimento dei suddetti obbiettivi sta accendendo un interesse senza precedenti da parte della comunità scientifica, ove principi tradizionali del diritto pubblico e privato si scontrano con le mutevoli ed impellenti istanze derivanti dall'aggravarsi del cambiamento climatico.

Ne sono una riprova il crescente numero di insegnamenti universitari e di programmi di ricerca dedicati ai temi dell'ambiente, della sostenibilità e del diritto, sia negli atenei europei sia in quelli asiatici, così come la crescente attenzione rivolta alle implicazioni giuridiche del cambiamento climatico, della transizione ecologica e della giustizia ambientale. Come emerge dalla letteratura più recente, in passato il rapporto tra diritto e ambiente è stato spesso analizzato quasi esclusivamente in relazione alla tutela delle risorse naturali, alla prevenzione dell'inquinamento, o alla lesione di diritti privati;

ambiti che continuano a richiedere costante approfondimento, ma che oggi si affiancano a prospettive più ampie e trasversali.

Queste ultime hanno esteso la riflessione alle molteplici dimensioni della sostenibilità, sociale, economica e istituzionale, nelle diverse manifestazioni del fenomeno giuridico. Si pensi, a titolo esemplificativo, alle nuove interpretazioni dei testi costituzionali in chiave ecologica, ai cambiamenti normativi in materia di diritto penale ambientale, alle riforme del diritto del lavoro e dell'impresa finalizzate a promuovere modelli produttivi sostenibili, nonché alla transizione verso una nozione di ambiente come interesse diffuso e valore collettivo, meritevole di tutela anche in assenza di un pregiudizio diretto a soggetti determinati. Invero, recentemente, importanti riconoscimenti sia di natura legislativa sia giurisprudenziale sono emersi in seno al diritto di svariati sistemi est-asiatici. Tra questi si segnalano, in particolare, l'affermazione della tutela costituzionale dell'ambiente nella legge fondamentale sudcoreana e vietnamita, l'espansione della *climate litigation* in Giappone e l'inclusione del cosiddetto 'principio verde' all'interno del Codice civile della Repubblica Popolare Cinese.

Tuttavia, come ci ricordano slogan politici recenti, quali «Drill, baby, drill!», la tutela dell'ambiente e la sostenibilità restano conquiste fragili, facilmente messe in discussione ogniqualvolta si manifestino crisi economiche, energetiche o geopolitiche. Proprio il riemergere negli ultimi anni di narrative estrattiviste e di politiche deregolatorie in diverse aree del mondo dimostra quanto rapidamente i diritti ambientali possano essere sacrificati in nome di logiche di breve termine. Alla luce dei conflitti e delle emergenze ecologiche che la comunità internazionale osserva con crescente preoccupazione, si è riacceso un intenso dibattito sull'opportunità di riconoscere le forme di degrado ambientale su larga scala, in particolare quelle sistematiche o promosse da apparati statali, come veri e propri crimini internazionali.

È ormai evidente che, di fronte alle molteplici sfide di un contesto globale sempre più complesso, la comunità internazionale si trova dinanzi a un bivio cruciale, chiamata a individuare soluzioni capaci di garantire uno sviluppo sostenibile non solo sul piano economico, ma anche sociale ed ecologico. In questo quadro, la corsa all'innovazione tecnologica, dall'intelligenza artificiale alla *blockchain*, apre nuove opportunità ma anche gravi interrogativi: l'elevato consumo energetico dei sistemi di addestramento dei modelli di IA e delle operazioni di *mining* o validazione delle catene di blocchi rischia infatti di tradursi in un'ulteriore e grave compromissione dell'equilibrio ambientale globale. Senza un'adeguata governance tecnologica e una politica energetica orientata alla sostenibilità, l'avanzamento dell'economia digitale potrebbe esacerbare le stesse logiche estrattive e dissipative che oggi si vorrebbero superare.

Nel contesto asiatico, l'eterogeneità delle tradizioni giuridiche, delle culture, delle condizioni economiche e dei modelli di sviluppo rende le sfide in materia di tutela ambientale e sostenibilità particolarmente complesse, come dimostra il quadro disomogeneo degli strumenti internazionali e regionali adottati, o ancora mancanti, in tale ambito. Invero, a differenza di altre regioni, in Asia orientale non esiste ancora una convenzione regionale specificamente dedicata alla protezione dell'ambiente o alla promozione della sostenibilità, con la conseguente mancanza di uno standard uniforme di tutela e cooperazione. Tale vuoto normativo è solo parzialmente colmato dagli strumenti multilaterali di matrice universale, come l'Accordo di Parigi sul clima o la Convenzione sulla diversità biologica, la cui attuazione resta tuttavia affidata alle politiche interne dei singoli Stati. D'altro canto, iniziative come l'*ASEAN Agreement on Transboundary Haze Pollution* (2002), la *Partnership for the Green Belt and Road* della Repubblica Popolare Cinese, nonché la recentissima *East Asia's Three Nations Agree on Joint Environmental Action Plan 2026-2030* sottoscritta dalla predetta con Giappone e Corea del Sud nell'ottobre 2025, rappresentano tentativi significativi di integrare la dimensione ambientale nelle politiche regionali e infrastrutturali, sebbene con risultati e ambizioni differenti.

Nonostante i problemi legati al degrado ambientale e al cambiamento climatico coinvolgano tutti i Paesi della regione, le modalità di risposta risultano profondamente condizionate dalle norme sociali, dalle legislazioni interne e dalle strategie di crescita, che spesso continuano a riflettere un approccio antropocentrico e produttivista, più attento alla prosperità immediata che alla tutela a lungo termine degli ecosistemi.

Come anche riconosciuto da numerose corti costituzionali e sovranazionali, tra cui la Corte Europea dei Diritti dell'Uomo nei più recenti casi in materia di cambiamento climatico e diritti fondamentali, la principale criticità nel diritto ambientale contemporaneo risiede proprio nell'effettiva attuazione delle tutele riconosciute, mettendo in evidenza il divario tra *law in the books* e *law in action*. Fattori extragiuridici continuano infatti a incidere profondamente sulla capacità degli ordinamenti di garantire una protezione effettiva dell'ambiente e di attuare i principi di sostenibilità.

Alla luce di quanto sopra, e del fatto che, a livello nazionale, un numero crescente di Paesi dell'Asia orientale stia adottando legislazioni e politiche ambientali volte a promuovere la transizione ecologica e a ridurre l'impatto delle attività antropiche, ma anche della permanenza di significative criticità di implementazione e di *enforcement*, emerge una sempre più evidente necessità di un'analisi sistematica e comparata. In questo contesto, il ricorso a una metodologia interdisciplinare e multifocale, tratto distintivo del diritto comparato, si rivela strumento essenziale per comprendere

le differenti traiettorie normative e istituzionali e per individuare soluzioni comuni alle sfide ambientali globali.

Il secondo numero della *Rivista di Diritto dell'Asia Orientale*, dunque, si propone di esplorare la pluralità delle risposte normative e giurisprudenziali che i Paesi dell'Asia orientale offrono di fronte alle sfide poste dal cambiamento climatico, dallo sviluppo sostenibile e dalla transizione ecologica. Il volume è articolato in tre sezioni principali, che affrontano il rapporto tra diritto e ambiente rispettivamente sul piano privatistico, *corporate* e regolatorio, e internazionale.

La prima sezione, «Danno ambientale, responsabilità civile e diritti privati», raccoglie contributi che analizzano le modalità con cui i sistemi giuridici dell'Asia orientale affrontano il problema del danno ambientale e della sua compensazione.

Il saggio di Alberto Jaci apre la sezione con un'ampia ricognizione comparata sulla responsabilità civile per danno ambientale nella Repubblica Popolare Cinese, in Giappone e Corea del Sud, individuando modelli di tutela e criteri di imputazione della responsabilità, da quella colposa a quella oggettiva, e ponendo attenzione agli strumenti processuali e ai rimedi collettivi emergenti.

Segue l'articolo di Barbara Milillo, che propone una riflessione sulle prospettive giurisprudenziali giapponesi in materia di responsabilità ambientale, evidenziando come l'elaborazione giudiziaria di criteri di imputazione e di valutazione del danno possa offrire spunti per la definizione di un modello di intelligenza artificiale sostenibile e compatibile con la tutela ecologica.

Francesca Rotolo affronta invece il tema dei diritti di proprietà nell'era del cambiamento climatico, mettendo a confronto il modello giapponese dei *commons* e quello italiano, e interrogandosi sul ruolo della proprietà privata e dei beni comuni nella promozione della sostenibilità e nella protezione delle generazioni future.

Chiude la sezione il contributo di Nguyen Toan Thang che analizza il riconoscimento costituzionale del diritto a un ambiente salubre in Vietnam e la sua attuazione legislativa, evidenziando il difficile equilibrio tra crescita economica, equità sociale e protezione ambientale.

La seconda sezione, «Environmental Protection Duties, Corporate Social Responsibility e fattori ESG», è dedicata al rapporto tra imprese, sostenibilità e governance ambientale. Ivi, Davide Clementi esamina le strategie di legittimazione ambientale e la regolazione del *greenwashing* attraverso la disciplina dell'etichettatura ecologica in Unione europea e nella Repubblica Popolare Cinese, mettendo a confronto l'approccio *ex post* europeo, fondato sulla verifica e sul controllo di mercato, con quello *ex ante* cinese, basato sulla certificazione sovrana e sulla dottrina dell'*ecological civilization*.

La terza sezione, «Ambiente e sostenibilità nell'ordinamento internazionale», si concentra sul piano sovranazionale e regionale, indagando le intersezioni tra diritto internazionale, cooperazione transnazionale e politiche ambientali.

Il saggio di Emanuela Rassu ricostruisce il processo di negoziazione della Dichiarazione ASEAN sui diritti ambientali, valutandone il potenziale ruolo nell'integrazione tra diritti umani e tutela ambientale, nonché le criticità relative alla protezione degli *environmental defenders* e alla prevenzione delle SLAPPs contro le comunità vulnerabili.

Segue a sua volta il saggio di Valeria Fappani e Blanca Marabini San Martín, che analizza l'evoluzione della regolamentazione cinese delle terre rare a partire dal piano domestico fino a quello globale, mostrando come la gestione di tali risorse strategiche si sia trasformata da politica industriale a vero e proprio strumento di securitizzazione giuridica e di potere transnazionale, in cui diritto, sovranità e sostenibilità si intrecciano in una nuova grammatica del controllo.

Chiude il numero il contributo di Yumiko Nakanishi, dedicato all'attuazione in Giappone della *Convention on Biological Diversity* attraverso la *National Biodiversity Strategy*. L'Autrice esamina l'integrazione di tale strategia nel contesto giuridico e culturale giapponese, mettendone in luce il legame con la tradizione di armonia con la natura e offrendo una riflessione critica sull'efficacia dell'approccio nazionale, ancora fondato su strumenti di carattere volontaristico e non vincolante.

Pur avendo dedicato questo secondo numero all'analisi delle questioni di diritto dell'ambiente come ambito di studio autonomo, la rivista promuove, in via programmatica, un approccio che integri la dimensione ambientale, sociale e di governance all'interno delle riflessioni giuridiche. RIDAO riconosce l'importanza di un metodo interdisciplinare e intersettoriale, volto a connettere le tematiche ecologiche con le trasformazioni economiche, sociali e istituzionali, affinché le specificità dei contesti locali e le esperienze dei singoli ordinamenti possano emergere e trovare adeguata considerazione.

Redazione RIDAO

Danno ambientale, responsabilità civile e diritti privati

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Responsabilità civile per danno ambientale nei sistemi giuridici dell'Asia orientale
Modelli di tutela e risarcimento

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Abstract The article examines civil liability for environmental damage in China, Japan and South Korea from a private law perspective. Through a comparative methodology, it analyses the normative frameworks, the criteria for attribution of liability (including fault-based and strict liability), and the recognition of pure ecological harm. Emphasis is placed on procedural tools, evidentiary burdens, and emerging models of collective redress. The study also explores trends toward convergence and transnational harmonization.

Keywords Environmental civil liability. Ecological damage. Extracontractual liability. East Asian legal systems. Private law.

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1 Introduzione

La responsabilità civile per danno ambientale costituisce un campo di crescente attenzione all'interno dei sistemi giuridici contemporanei, in ragione dell'intensificarsi degli eventi lesivi legati alla crisi ecologica e della conseguente necessità di individuare strumenti efficaci di tutela e risarcimento (Alpa 2010, 1123-52).

In tale quadro, il diritto civile è chiamato a confrontarsi con istanze nuove, che superano la mera funzione compensativa e abbracciano dimensioni preventive e collettive. L'analisi tecnico-giuridica richiede una distinzione tra i vari modelli di responsabilità per danno ambientale applicati nei sistemi giuridici esaminati. In Cina, la responsabilità oggettiva si applica a prescindere dalla colpa dell'autore del danno (Zhou et al. 2023), mentre in Giappone e in Corea del Sud, benché entrambe prevedano forme di responsabilità oggettiva per attività pericolose, l'approccio tende a essere più modulato, con applicazione di presunzioni e inversione dell'onere della prova in casi particolari (Kawashima 1992, 232-72).

Questa eterogeneità consente di interrogarsi criticamente sulle basi assiologiche e sull'efficacia concreta dei diversi modelli di tutela civilistica.

In tale prospettiva, l'Asia orientale rappresenta un osservatorio privilegiato, in cui l'evoluzione normativa e giurisprudenziale riflette un'interazione dinamica tra sviluppo economico, consapevolezza ambientale e rafforzamento delle garanzie giuridiche. Si tratta di un'area giuridica relativamente trascurata nella dottrina italiana, nonostante la rilevanza crescente delle esperienze normative asiatiche.

Nel contesto del diritto privato, la responsabilità civile per danno ambientale pone specifiche sfide: l'individuazione dei criteri di imputazione (Bergkamp 2001, 259-375), la definizione del danno risarcibile (Larrson 1999, 534-67) e la strutturazione degli strumenti di tutela, sia individuali che collettivi (Wilde 2013, 267-94). Il tradizionale paradigma colpa-risarcimento si confronta, infatti, con modelli fondati sulla responsabilità oggettiva, sulla tutela di interessi diffusi e sull'esigenza di prevenzione del danno, richiedendo un'adeguata elaborazione teorica e sistematica. Questi sviluppi, pur con differenti declinazioni nei vari ordinamenti, evidenziano una traiettoria comune: il progressivo passaggio da un modello risarcitorio centrato sulla lesione individuale a una concezione sistemica e collettiva del danno ambientale, sostenuta da legislazioni settoriali e pronunce giurisprudenziali che, a partire dagli anni Settanta, hanno contribuito a strutturare il campo della responsabilità civile ambientale come ambito autonomo e dinamico del diritto.

Il presente contributo si propone di analizzare, attraverso un approccio comparatistico, la disciplina della responsabilità civile per danno ambientale in tre ordinamenti giuridici dell'Asia orientale: Cina, Giappone e Corea del Sud. L'indagine si concentrerà su quattro assi portanti: i presupposti giuridici della responsabilità, con particolare attenzione alla dicotomia tra responsabilità oggettiva e per colpa; il principio del «chi inquina paga» quale fondamento assiologico e operativo della disciplina; la qualificazione e l'estensione del danno ambientale risarcibile; gli strumenti processuali di tutela, con focus sulle azioni collettive e sull'inversione dell'onere della prova.

A livello metodologico, si adotta una prospettiva privatistica, raramente applicata in letteratura al tema della responsabilità ambientale, più spesso affrontata in ottica pubblicistica.

La scelta di un taglio privatistico consente di evidenziare non solo le soluzioni normative adottate, ma anche le implicazioni dogmatiche e applicative che derivano dalla qualificazione del danno ambientale come fattispecie di responsabilità extracontrattuale, orientata sempre più verso una funzione preventiva e deterrente, oltre che compensativa.

In un'ottica di sintesi, la comparazione metterà in luce le principali convergenze tra i sistemi analizzati, pur nella diversità dei contesti istituzionali e culturali, e individuerà le linee evolutive comuni verso un rafforzamento del ruolo del diritto privato nella tutela dell'ambiente. Tale ricostruzione intende offrire non solo una sistematizzazione degli strumenti giuridici esistenti, ma anche uno spunto critico per la riflessione sulla funzione della responsabilità civile nell'era della crisi ambientale globale.

2 Quadro generale: responsabilità civile e danno ambientale

Nel diritto privato, la responsabilità civile rappresenta uno strumento fondamentale di tutela, la cui funzione originaria è compensativa: essa tende a ristabilire l'equilibrio giuridico violato mediante il risarcimento del danno subito da un soggetto (Vettori 2008, 1-12). L'emergere della responsabilità civile ambientale come figura autonoma può farsi risalire, nel contesto occidentale, al caso statunitense *United States v. Reserve Mining Co.* (1974), in cui una Corte federale del Minnesota condannò una compagnia per il rilascio di rifiuti tossici nel Lago Superiore, stabilendo un precedente per la tutela ambientale mediante azioni civili. Nel 1980, l'adozione del CERCLA (*Comprehensive Environmental Response, Compensation, and Liability Act* – Legge su risposta, risarcimento e responsabilità ambientale globale) sancì un regime federale di responsabilità oggettiva per le contaminazioni ambientali. L'applicazione di tale

paradigma alla materia ambientale pone tuttavia questioni peculiari, in quanto il bene leso – l'ambiente – presenta una natura collettiva, diffusa e spesso priva di titolarità esclusiva (Marino 2016, 3-40). Di conseguenza, il diritto civile è chiamato a confrontarsi con la necessità di garantire la riparazione di un danno che non si esaurisce in una dimensione patrimoniale individuale, ma si estende al pregiudizio arrecato a beni comuni, ecologicamente rilevanti (Longwood 1973, 468-80).

La peculiarità della responsabilità ambientale risiede anche nel fatto che essa spesso comporta l'applicazione di regimi di responsabilità oggettiva, in deroga al principio generale della colpa, allo scopo di rafforzare la funzione deterrente della disciplina (Van Egteren, Smith 2002, 367-94). Una delle prime elaborazioni giurisprudenziali della funzione deterrente si trova nel caso *Minamata* in Giappone (di cui si parlerà diffusamente nel paragrafo dedicato alla realtà nipponica), in cui le Corti condannarono la Chisso Corporation al risarcimento non solo per i danni individuali, ma anche per l'impatto ecologico e sociale, stimolando una revisione normativa culminata nella legge sulla responsabilità per inquinamento ambientale del 1970.

In tale ambito, la responsabilità civile assume una funzione non solo compensativa, ma anche preventiva e sanzionatoria, contribuendo alla dissuasione di condotte lesive dell'ambiente e alla promozione di comportamenti diligenti da parte degli operatori economici (Faure 2009b, 129-87). Tale espansione di funzione comporta tuttavia anche rischi sistemici, tra cui la possibile deresponsabilizzazione giudiziale e l'indebolimento degli standard probatori.

La definizione del danno ambientale in chiave civilistica richiede una riflessione preliminare sulla sua autonomia concettuale rispetto alle tradizionali categorie del danno patrimoniale e non patrimoniale (French 2009, 255-89). Nei sistemi giuridici più avanzati, il danno ambientale viene qualificato come una lesione autonoma, suscettibile di tutela indipendentemente dalla violazione di diritti soggettivi individuali (Lin 2004, 1439-528). Si tratta, in altre parole, di un danno 'ecologico' puro, che colpisce l'ambiente in quanto tale, prescindendo dalla necessaria allegazione di un danno riflesso alla salute, alla proprietà o ad altri interessi personali (Monteduro 2022; Faure 2009a). Questo concetto, di matrice francese e recepito in alcuni strumenti internazionali – ad esempio la Convenzione di Lugano del 1993 – trova oggi applicazioni differenti nei contesti asiatici, come si vedrà. Un momento chiave è rappresentato dalla Direttiva 2004/35/CE sulla responsabilità ambientale in materia di prevenzione e riparazione del danno ambientale, che ha introdotto nell'ordinamento dell'Unione un modello misto di responsabilità (colpa e rischio) ispirato ai principi di prevenzione e precauzione. La direttiva è stata recepita in Italia con il D.Lgs. 152/2006 (c.d. Testo

Unico Ambientale), che ha attribuito agli enti pubblici la titolarità dell'azione di riparazione ambientale.

Questa concezione amplia l'ambito della responsabilità civile, riconoscendo la possibilità di azioni anche in assenza di un danno diretto ad un soggetto determinato, sulla base della sola compromissione dell'equilibrio ambientale (Crea, Perriello 2021, 247-85). Tale evoluzione impone una revisione degli schemi tradizionali del nesso causale e dell'onere probatorio, poiché il danno ambientale presenta caratteristiche di latenza, gradualità e complessità scientifica che ne rendono difficile l'accertamento con gli strumenti probatori ordinari (Brunnée 2008, 351-68).

Nel diritto civile, la responsabilità extracontrattuale si fonda tradizionalmente sul principio della colpa, intesa come violazione di un dovere di diligenza da parte dell'autore del fatto illecito (Salvi 2019, 153-225). Tuttavia, in materia ambientale, tale impostazione è stata progressivamente affiancata – e in alcuni casi sostituita – da regimi fondati sulla responsabilità oggettiva, nei quali l'obbligo risarcitorio sorge per il solo fatto della produzione del danno, indipendentemente dalla colpevolezza del soggetto (Shelton 2007, 1131-51).

Il fondamento teorico della responsabilità oggettiva in campo ambientale risiede nella teoria del rischio: chi esercita un'attività pericolosa, o comunque potenzialmente lesiva dell'ambiente, deve assumersi i costi dei danni che ne derivano, in virtù del principio del 'chi inquina paga' (*polluter pays principle*) (Khan 2015; Ambec, Ehlers 2016; Schwartz 2010). Tale principio, di derivazione internazionale ma ormai accolto in numerose legislazioni interne, giustifica l'imputazione di responsabilità anche in assenza di dolo o colpa, nella logica dell'attribuzione di costi esterni all'autore della condotta dannosa (Degl'Innocenti 2013, 741-70).

Nel contesto giuridico, il principio di responsabilità oggettiva si fonda su modelli giuridici che si distaccano dalla tradizionale logica della colpa. Nei sistemi giuridici avanzati, questa forma di responsabilità è essenziale per dissuasione del rischio ecologico, riconoscendo che in presenza di attività intrinsecamente pericolose, il danno ambientale non può essere ricondotto esclusivamente al comportamento soggettivo dell'inquinatore (Romero 2009, 154-81). Un esempio di tale approccio è rappresentato dalla legislazione cinese, che introduce la responsabilità oggettiva per le industrie che operano in settori ad alto rischio ambientale, come la chimica e la mineraria (Yang, Chen 2022, 1-7). In tali contesti, la logica compensativa viene integrata da finalità sistemiche di prevenzione e riparazione.

Inoltre, l'ampliamento della definizione di danno ambientale implica il riconoscimento di danni che non si limitano alla violazione di diritti patrimoniali (Rogers, Wang 2007, 41-68). In questo ambito, diventa essenziale il concetto di danno ecologico puro, ossia il danno

all'ambiente come bene collettivo, che non richiede una lesione diretta ad interessi privati ma si configura come una lesione degli equilibri ecologici che interessano la collettività (Franks 2011, 637-60). La qualificazione autonoma di tale danno comporta ricadute rilevanti anche sulla legittimazione ad agire, aprendo la strada a soggetti collettivi o istituzionali.

Un ulteriore elemento che caratterizza la responsabilità civile per danno ambientale è l'esigenza di superare il tradizionale modello individualistico della legittimazione ad agire (Sachs 2007, 837-904). Poiché il danno ambientale coinvolge interessi diffusi o collettivi, la tutela non può essere affidata esclusivamente al singolo danneggiato. Ne consegue l'introduzione, in diversi ordinamenti, di strumenti processuali che consentono l'attivazione della giurisdizione da parte di enti esponenziali, organizzazioni non governative o soggetti pubblici (Esty 2008, 116-21).

Tali strumenti, quali le class actions ambientali o le azioni popolari, costituiscono una deroga significativa al principio dispositivo e pongono nuove questioni di bilanciamento tra esigenze di tutela collettiva e garanzie del contraddittorio. In ambito comparatistico, si rilevano significative differenze nella configurazione di tali strumenti, che incidono sulla loro effettività ed efficacia.

Questi profili verranno analizzati nel prosieguo, evidenziando i modelli più avanzati e le relative criticità sistemiche.

3 Cina

Il sistema giuridico cinese ha conosciuto un'evoluzione significativa nella disciplina della responsabilità civile per danno ambientale, culminata nella promulgazione del Codice Civile del 2020, il cui Libro VII, dedicato alla responsabilità civile, ha sistematizzato e consolidato disposizioni precedentemente contenute in leggi settoriali (Chang 2020, 1-15). Fra le norme contenute al suo interno si prevede, altresì, un regime di responsabilità oggettiva per i danni causati da attività pericolose, includendo espressamente il danno ambientale tra le ipotesi risarcibili (Ding 2020, 1-11).[1] Questo passaggio normativo riflette l'intento di rafforzare il ruolo del diritto privato nella tutela ambientale, anche in assenza di un soggetto leso individualmente.

Accanto al Codice Civile, la Legge sulla tutela ambientale (*Environmental Protection Law*, 2014, riformata nel 2015)[2] e la

1 Art. 1234 del Codice Civile della Repubblica Popolare Cinese (2020), Libro VII, sulla responsabilità civile.

2 *Environmental Protection Law of the People's Republic of China*, in vigore dal 1° gennaio 2015.

Legge sulla responsabilità civile ambientale (*Environmental Liability Law*) forniscono ulteriori disposizioni di carattere speciale, volte a definire le misure preventive, riparatorie e risarcitorie in caso di inquinamento o degrado ambientale.

L'ordinamento cinese riconosce esplicitamente la tutela dell'ambiente come interesse pubblico e collettivo, e introduce meccanismi specifici per la riparazione del danno (Zhongmei 2017, 1-9), distinguendo tra danno patrimoniale, danno alla salute e danno ecologico in sé (Xinjun, Yuan 2018, 111-18). Tale distinzione ha rilevanti conseguenze dogmatiche sul piano della qualificazione giuridica del danno e sul regime della legittimazione ad agire (Li, Liu 2023, 1-14). Il criterio di imputazione prevalente in materia ambientale è quello oggettivo, in base al quale il soggetto che esercita un'attività pericolosa – come l'industria chimica, mineraria, petrolifera o nucleare – risponde del danno ambientale indipendentemente dalla colpa, purché sia dimostrata la connessione causale tra l'attività e il pregiudizio (Wei, Rafael 2023, 37-67). Si tratta di un modello che esplicita il principio del rischio in chiave sistemica, con effetti rilevanti sulla funzione preventiva della responsabilità civile.

In tali casi, il principio del rischio è declinato in termini di responsabilità automatica, giustificata dalla natura intrinsecamente pericolosa dell'attività e dall'esigenza di tutela effettiva di beni ambientali (Van Rooij et al. 2018, 118-76).

Nel Codice Civile cinese, l'articolo 1234 costituisce una delle principali innovazioni, stabilendo una responsabilità oggettiva per attività pericolose. La norma, in linea con gli sviluppi internazionali, non solo rende obbligatorio il risarcimento del danno, ma introduce anche una presunzione di colpa in caso di danno ambientale grave (Chen, Wang 2025, 217-49). In tal senso, la responsabilità oggettiva non solo si applica alla violazione della norma ambientale ma estende la responsabilità anche in caso di danno al biodiverso e alla salute ecologica, in un'ottica che supera il tradizionale approccio patrimoniale (Yifei 2022, 61-82). Il risarcimento del danno ecologico puro in questa sede rappresenta uno dei tratti distintivi dell'approccio cinese.

Il danno risarcibile è definito in termini ampi: oltre alla compromissione di diritti soggettivi (salute, proprietà, produzione agricola), è risarcibile anche il pregiudizio ecologico autonomo, inteso come alterazione o distruzione dell'equilibrio ambientale, anche in assenza di danno diretto a soggetti determinati. Ciò implica la configurabilità di un illecito 'senza vittima diretta', con conseguente necessità di individuare soggetti legittimati a far valere in giudizio l'interesse collettivo alla tutela dell'ambiente (Wang 2022, 17-62).

Uno degli snodi critici del sistema cinese è rappresentato dal regime della prova, in particolare in relazione al nesso causale tra l'attività pericolosa e il danno ambientale (Sun, Sun 2020, 237-43). Gli

studiosi riconoscono la difficoltà di accertare tale nesso in presenza di fenomeni ambientali complessi, per i quali le cause possono essere multiple, cumulative o sinergiche (Zhao et al. 2019, 349-77). A fronte di tali difficoltà, il legislatore ha introdotto meccanismi di alleggerimento dell'onere probatorio, inclusa una presunzione di responsabilità in capo all'operatore, salvo prova contraria (Yang et al. 2018, 171-89). Questi strumenti agevolano l'attore processuale, ma comportano anche interrogativi sulla sostenibilità probatoria del sistema in contesti ad alta complessità scientifica.

Quanto agli strumenti processuali, la normativa cinese prevede la possibilità di promuovere azioni di interesse pubblico (*public interest litigation*) da parte di enti autorizzati, in primis la Procura popolare (*People's Procuratorate*) e alcune ONG ambientali accreditate (You et al. 2023, 1-21). Tali azioni consentono di chiedere non solo il risarcimento del danno, ma anche l'adozione di misure correttive e riparatorie, comprese la bonifica dei siti contaminati e il ripristino degli ecosistemi danneggiati (Li et al. 2015, 257-366). Questa legittimazione straordinaria è uno degli elementi più avanzati nel panorama asiatico, contribuendo all'effettività del diritto ambientale civile.

Le azioni collettive, pur formalmente riconosciute, si scontrano con limiti di natura procedurale e politica, nonché con vincoli di legittimazione ristretta (Wang 2018, 699-760). Tuttavia, il numero di casi promossi dalle ONG è in costante crescita, segno di un lento ma progressivo rafforzamento della giustiziabilità degli interessi ambientali (Fu 2016, 499-527).

Uno dei casi più noti nel panorama cinese è il cosiddetto *Qingyuan River Case*, promosso dalla NGO Friends of Nature insieme ad altri soggetti legittimati.[3] Il caso riguardava lo sversamento di rifiuti industriali tossici nel fiume Qingyuan, che aveva causato una grave contaminazione dell'acqua e del suolo circostante. La Corte intermedia di Guiyang ha riconosciuto il diritto all'azione ambientale di interesse pubblico, condannando l'impresa responsabile al pagamento di circa sei milioni di yuan per il ripristino ambientale, oltre che all'adozione di misure correttive. Il caso ha rappresentato un precedente significativo per l'attivazione di azioni civili ambientali promosse da soggetti collettivi (Mingzhe 2022, 119-46).

Altro esempio rilevante è il caso del *Tengger Desert Pollution Case*, in cui otto imprese industriali furono ritenute responsabili dell'interramento illecito di rifiuti chimici nel deserto del Tengger,

3 Corte intermedia del Popolo di Guiyang, Friends of Nature c. Jiangsu Huaneng Power Co., caso *Qingyuan River*, sentenza del 2015.

nella regione autonoma della Mongolia Interna.[4] Il Procuratore locale, in collaborazione con le autorità ambientali, ha avviato un'azione in nome dell'interesse pubblico per ottenere il risarcimento dei danni ecologici e la bonifica dell'area. La decisione ha confermato l'applicabilità della responsabilità oggettiva anche in presenza di plurime concause e ha consolidato la prassi della collaborazione interistituzionale per la tutela ambientale (Liu 2019b, 225-32).

Infine, merita menzione il *Jiangsu Chemical Plant Case*, relativo all'esplosione di un impianto chimico nella provincia di Jiangsu che aveva causato gravi contaminazioni atmosferiche e idriche. In questo caso, oltre alle azioni pubbliche, furono intentate azioni civili individuali da parte di agricoltori locali e residenti, che lamentavano perdite economiche e danni alla salute. Il tribunale ha riconosciuto l'autonomia del danno ambientale rispetto al danno patrimoniale, configurando una pluralità di posizioni giuridiche tutelabili (Liu 2019a, 237-42). Il caso in esame ha evidenziato l'apertura giurisprudenziale cinese al riconoscimento di danni ambientali come entità giuridiche autonome.

I casi *Qingyuan River* e *Tengger Desert Pollution* evidenziano non solo la crescente giurisprudenza sulle azioni collettive ma anche la tensione tra il rispetto delle norme internazionali e l'effettiva implementazione delle leggi locali. Questi casi sono emblematici della difficoltà di armonizzare la tutela ambientale in un sistema che tende a enfatizzare la responsabilità individuale (Gang 2009, 33-64), pur facendo uso di meccanismi di mitigazione del danno come i fondi di risarcimento ambientale (Chen et al. 2025, 1-11).

4 Giappone

Il sistema giuridico giapponese si caratterizza per una disciplina articolata e stratificata della responsabilità civile per danno ambientale, che si fonda su una pluralità di fonti normative (Osaka 2009, 393-426; Kawashima 1995, 232-72). È opportuno ricordare che le radici della responsabilità civile ambientale in Giappone precedono di gran lunga l'intervento legislativo degli anni Settanta. Già a partire dagli anni Venti e Trenta si registrano controversie locali legate all'inquinamento da attività minerarie, come nel caso del distretto di Ashio (Yamamoto 2015, 67.75). La fonte normativa principale è il Codice Civile giapponese (*Minpō*), che disciplina la responsabilità extracontrattuale basandola sul requisito della colpa (Sono et al. 2018, 43-57). Tuttavia, accanto a questo modello classico,

4 Procura del Popolo c. Otto imprese industriali, caso *Tengger Desert Pollution*, 2014, Regione autonoma della Mongolia interna.

il legislatore ha introdotto norme speciali che riconoscono ipotesi di responsabilità oggettiva, specialmente in presenza di attività pericolose (Ortolani 2016, 185-98).

Un esempio emblematico è costituito dalla legge sulla responsabilità per inquinamento ambientale del 1970,[5] adottata a seguito della crescente pressione dell'opinione pubblica a causa dei 'grandi casi di malattie da inquinamento' (Aronson 1983, 135-47). Tale legge introduce un regime di responsabilità oggettiva per i danni derivanti da inquinamento atmosferico, idrico e del suolo, causati da attività industriali. La norma si applica solo alle imprese che utilizzano sostanze inquinanti specificamente elencate, e prevede l'esonero da responsabilità solo in casi limitati, come la forza maggiore. L'elenco delle sostanze, aggiornato periodicamente dal Ministero dell'Ambiente, è consultabile nel registro ufficiale delle sostanze designate (*Yūgai busshitsu shitei risuto*, 有害物質指定リスト). L'introduzione della normativa sulla responsabilità per inquinamento ambientale del 1970 è un esempio di come il legislatore giapponese abbia cercato di rispondere alle problematiche ambientali con un approccio che integra la responsabilità per colpa e quella oggettiva. Tuttavia, la limitazione della responsabilità alle sole sostanze inquinanti specifiche lascia spazio a potenziali lacune giuridiche, che sono state esplorate in noti casi giurisprudenziali, dove l'attenzione è stata focalizzata sul danno ecologico, pur mantenendo un forte legame con il danno alla salute (Murata, Karita 2021, 9-19). Per tale ragione è stata emanata la legge di riforma che istituisce la compensazione per i danni alla salute cagionati dall'inquinamento (*Kōgai kenkō higai hoshō*, 公害健康被害補償) del 1973, che riformulò l'impianto della precedente legislazione introducendo un sistema di indennizzo per danni sanitari causati dall'inquinamento.

La legge si applica solo alle imprese che utilizzano sostanze inquinanti specificamente elencate, tra cui il mercurio, l'arsenico, il cadmio, il piombo, elencati all'interno dell'allegato normativo della legge. Al Ministero dell'Ambiente (*Kankyō-shō*, 環境省) resta affidato il compito di mantenere aggiornato il registro delle sostanze designate.

La coesistenza di criteri di imputazione soggettiva (colpa) e oggettiva (rischio) ha generato un sistema duale, nel quale l'applicazione del principio del 'chi inquina paga' è modulata in base alla fonte normativa invocata, con conseguenze rilevanti in punto di onere della prova, estensione del danno e misura del risarcimento (Lou 2021, 236-50).

5 *Legge giapponese sulla responsabilità per inquinamento ambientale (Kōgai Baishō Hō)*, adottata nel 1970 a seguito di disastri ambientali molto noti, fra cui quello di Minamata.

La giurisprudenza giapponese ha giocato un ruolo essenziale nella costruzione dei presupposti e dei limiti della responsabilità civile ambientale, intervenendo in numerosi casi emblematici. Il più celebre è il caso di Minamata,[6] iniziato nel 1956 con la diagnosi ufficiale della malattia e sfociato in una lunga battaglia legale culminata nelle sentenze del tribunale distrettuale di Kumamoto nel 1973 e successivamente nel 1979, che riconobbero la responsabilità civile della Chisso Corporation per i danni alla salute e all'ambiente. Le corti giapponesi hanno riconosciuto la responsabilità dell'azienda non solo per i danni alla salute delle vittime, ma anche per la compromissione dell'ecosistema marino, aprendo così la strada al riconoscimento di un danno ambientale autonomo rispetto a quello individuale (Otsuka 2021, 121-6).[7]

Altro precedente significativo è il caso *Yokkaichi Asthma* (Yoshida 1997, 83-91), riguardante il danno alla salute derivante da emissioni industriali.[8] In questo caso, la Corte ha affermato la possibilità di presunzione del nesso causale, in presenza di un rapporto statisticamente significativo tra l'attività inquinante e la patologia, esonerando in parte l'attore dall'onere di una prova rigorosa (Nomura 1976, 179-83). Tuttavia, è singolare che nella prassi giapponese non si registri alcuna elaborazione significativa in sede civilistica del disastro di Fukushima, avvenuto nel 2011, il più grave incidente nucleare dopo Cernobyl. La responsabilità della Tokyo Electric Power Company (TEPCO), holding giapponese di servizi elettrici che possedeva e gestiva – tra le altre – la centrale nucleare di Fukushima, è stata trattata prevalentemente in sede amministrativa e penale, con risarcimenti gestiti mediante fondi pubblici e sistemi di compensazione centralizzati. Il diritto civile, in tale contesto, ha svolto un ruolo marginale, segnalando i limiti del sistema giapponese nella gestione extracontrattuale di danni ambientali complessi e sistemici (Yamada 2022, 126-34).

In linea generale, quindi, i tribunali giapponesi riconoscono la risarcibilità di danni sia patrimoniali che non patrimoniali, ivi inclusi il pregiudizio alla salute, alla proprietà e all'ambiente in sé. Tuttavia, la configurazione giuridica del danno ecologico puro rimane ancora incerta, e nella prassi giudiziaria la risarcibilità di tale danno avviene spesso per il tramite di soggetti individuali che abbiano subito un

6 Corte Suprema del Giappone, causa relativa all'inquinamento da mercurio nella baia di Minamata; sentenza del 1988 (conferma della decisione della Corte d'appello di Tokyo).

7 Le sentenze in esame hanno affrontato la questione inerente il principio di precauzione, ossia la questione di come il governo e le aziende dovrebbero rispondere ai problemi di incertezza scientifica.

8 Corte Suprema del Giappone, caso *Yokkaichi Asthma*, 1972, riguardante l'inquinamento atmosferico industriale e i danni alla salute.

danno riflesso (Garbaccio et al. 2019, 111-34). Non esiste, nel diritto nipponico, una norma generale che configuri il danno all'ambiente come lesione autonoma, suscettibile di azione civile indipendente. Il Codice Civile giapponese, che disciplina la responsabilità extracontrattuale all'articolo 709, richiede per il risarcimento la lesione di un interesse giuridicamente protetto appartenente a una persona fisica o giuridica, escludendo di fatto la risarcibilità di danni riferibili esclusivamente a beni collettivi o a entità prive di titolarità soggettiva (Nagasaka 2019, 127-58). In linea con questo impianto teorico, la giurisprudenza non ha mai riconosciuto il danno ecologico puro come voce autonoma risarcibile. Anche in casi emblematici, come quelli sopra trattati, la responsabilità civile è stata affermata in relazione a danni alla salute delle persone, non in riferimento al degrado ambientale in quanto tale. Le decisioni delle Corti, pur adottando criteri oggettivi o presunzioni causali, hanno mantenuto l'impostazione individualistica del danno e non si sono spinte a riconoscere l'ambiente come interesse giuridico autonomamente tutelabile.

Il caso *Yokkaichi Asthma* rimane emblematico per la giurisprudenza giapponese: in esso si riconobbe per la prima volta la presunzione del nesso causale tra emissioni industriali e danni alla salute, applicando una forma attenuata dell'onere della prova (Upham 1976, 576-619). Sebbene risalga a oltre cinquant'anni fa, esso continua a rappresentare un precedente centrale, ancora citato nei procedimenti odierni per inquinamento sistemico (Miyamoto et al. 2012, 229-37). La Corte Suprema, accogliendo il principio della probabilità elevata, ha contribuito a superare le difficoltà probatorie, ma non senza limitare le aspettative di ampie compensazioni per danni puramente ecologici.[9]

L'onere della prova, in materia ambientale, rappresenta un ostacolo significativo per gli attori privati. Il sistema giapponese mantiene in linea di principio la regola della prova del nesso causale in capo all'attore, ma la giurisprudenza ha introdotto margini di attenuazione probatoria, soprattutto nei casi in cui l'inquinamento provenga da una pluralità di fonti industriali non facilmente isolabili (Anderson 2001, 399-426).

Sul piano procedurale, il Giappone ha sviluppato alcuni strumenti collettivi, come la Commissione di coordinamento delle controversie ambientali (*Kōgaitō Chōsei Iinkai*, 公害等調整委員会), istituita nel 1972, un organo pubblico indipendente che promuove la mediazione e l'arbitrato per controversie ambientali (Kiminami et al. 1998, 249-62). La Commissione rappresenta uno dei primi esperimenti istituzionali

9 In dottrina si sostenne che, nonostante la continua ostilità del governo centrale e senza il sostegno di gruppi organizzati a livello nazionale e ben finanziati come quelli esistenti negli Stati Uniti, gli avvocati e i tribunali fossero riusciti a costruire un corpo di giurisprudenza che fornisce almeno una minima protezione procedurale e sostanziale ai valori ambientali.

di ADR ambientale su scala nazionale, sebbene le sue decisioni non siano vincolanti. Tuttavia, la sua funzione di raccordo tra vittime, imprese e pubbliche amministrazioni ha avuto un impatto concreto nella riduzione del contenzioso in ambito ambientale.[10]

Per quanto concerne il noto strumento delle class actions ambientali, in passato sono state poco valorizzate e, pertanto, si sono scontrate con una limitata applicazione pratica, anche a causa della restrittiva configurazione della legittimazione attiva (Nagashima 2017, 183-218). La legge n. 96 del 2013 (*Tokutei Tekikaku Shōhisha Dantai ni yoru Higai Kaifuku Soshō Seido*, 特定適格消費者団体による被害回復訴訟制度) ha introdotto in Giappone un nuovo sistema di azioni collettive, consentendo alle associazioni di consumatori autorizzate di agire in giudizio per ottenere il risarcimento dei danni a favore di più soggetti, ma solo in casi determinati e con severi requisiti di ammissibilità (Koichi 2022, 99-122). Sebbene originariamente non pensata per le controversie ambientali, la sua applicabilità a tali ipotesi è oggetto di dibattito crescente (Madderra 2014, 795-830).[11] Tuttavia, gli effetti pratici della riforma sono stati limitati, anche a causa della persistente diffidenza del sistema giapponese verso modelli di tutela non individualizzati.

In compenso, è significativo il crescente ricorso ad azioni civili supportate da organizzazioni non governative e da gruppi civici, che agiscono a tutela di comunità esposte a inquinamento sistemico (Princen, Finger 2001, 29-68). come dimostrato, ad esempio, dalle cause promosse da associazioni come la Minamata Disease Patients' Families Group o la Citizens' Group to Protect the Tone River, che hanno portato all'avvio di procedimenti civili per il risarcimento di danni collettivi legati a contaminazioni da piombo o nitrati. Queste iniziative hanno contribuito a sviluppare una giurisprudenza di tipo 'ambientalista' anche in assenza di una normativa specifica sulla legittimazione diffusa.

In prospettiva, è auspicabile una maggiore integrazione del diritto civile giapponese con i principi ESG e con gli sviluppi internazionali in tema di responsabilità ambientale, affinché il sistema possa affrontare in modo più efficace i rischi collettivi, i danni senza vittima diretta e le sfide globali legate alla transizione ecologica.

10 La Commissione di coordinamento delle controversie ambientali è un comitato amministrativo istituito come agenzia esterna del Ministero degli Affari interni e delle comunicazioni e, principalmente, si occupa della risoluzione delle controversie ambientali attraverso la conciliazione e il giudizio in modo tempestivo e appropriato (sistema di risoluzione delle controversie ambientali); coordinamento delle attività di estrazione mineraria, di cava o di raccolta della ghiaia con l'interesse pubblico generale o con altre industrie (Sistema di coordinamento dell'uso del suolo).

11 A livello dottrinale si è discusso circa l'utilità di prendere a modello gli strumenti legislativi messi a disposizione dal legislatore americano, paragonando i due strumenti.

5 Corea del Sud

La Repubblica di Corea si è dotata, a partire dagli anni Novanta, di una disciplina articolata in materia di responsabilità civile per danno ambientale, con l'obiettivo di contrastare gli effetti dell'industrializzazione accelerata e dell'elevata densità produttiva sul territorio (Cho 1999, 501-14). La principale fonte normative è costituita dalla legge quadro sulla politica ambientale,[12] che disciplina la responsabilità per danni causati da sostanze chimiche pericolose e attività ad alto rischio ambientale (Woo 2022, 11-18).

Afferma principi generali di politica ambientale, tra cui l'affermazione del principio di responsabilità oggettiva per i danni ambientali connessi ad attività pericolose (Il Song, Glasson 2010, 90-99). Va registrata, inoltre, la presenza della normativa sulla responsabilità ambientale e sul risarcimento dei danni,[13] che ha lo scopo di individuare le modalità più celeri per il risarcimento per i danni ambientali, in particolare per coloro che sono stati colpiti in maniera diretta dall'inquinamento degli impianti. La legge, altresì, chiarisce le responsabilità, alleggerisce l'onere della prova per le vittime e stabilisce un sistema di risarcimento efficace, prevedendo da ultimo l'obbligo di assicurazione per la responsabilità ambientale per alcuni impianti (Hang 2013, 108-39). Il quadro normativo si completa con disposizioni del Codice Civile coreano che continuano ad applicarsi ai casi residuali in cui la responsabilità non sia coperta dalle leggi speciali (Lee 2022, 219-51). In tali casi, si richiede la prova della colpa e del nesso causale, secondo lo schema tradizionale dell'illecito civile.

Il sistema giuridico sudcoreano si caratterizza per un approccio preventivo e riparatorio, che si traduce nell'introduzione della responsabilità oggettiva, abbinata ad obblighi di bonifica immediata (Won-Hee, Hye-young 2010, 29-54). La legge quadro sulla politica ambientale è uno degli esempi di come il diritto privato sudcoreano integri politiche di sostenibilità con obiettivi di tutela ambientale.[14] La regolamentazione della responsabilità ambientale e del risarcimento danni stabilisce che le imprese ad alto rischio ambientale debbano assicurarsi contro i danni derivanti da eventi inquinanti, in modo da

12 *Legge quadro sulla politica ambientale, n. 4492 del 1992 (e successive modifiche), quadro normativo generale in materia di politica ambientale nella Repubblica di Corea*.

13 *Legge sulla responsabilità ambientale e risarcimento dei danni, n. 8635 del 2007, sulla responsabilità ambientale e misure di riparazione per attività ad alto rischio ecologico*.

14 La normativa in esame costituisce la base giuridica per l'attuazione delle norme ambientali e per la creazione di meccanismi finanziari a sostegno degli sforzi di conservazione dell'ecosistema, promuovendo l'integrazione delle considerazioni ambientali nella pianificazione economica e sociale.

garantire un risarcimento immediato per le vittime e per il ripristino ecologico.

Uno degli elementi qualificanti del sistema sudcoreano è l'enfasi sulla funzione preventiva e riparatoria della responsabilità civile (Young-Jun 2009, 73-107). L'ordinamento giuridico sudcoreano, infatti, prevede non solo l'obbligo di risarcire il danno, ma anche di adottare misure di bonifica e ripristino ambientale, a carico del responsabile (Kim 2013, 353-68). Queste misure devono essere avviate anche in via anticipata, ove vi sia un pericolo imminente di danno ambientale, configurando un obbligo di diligenza ambientale preventiva (Lee 2013, 51-64).

Il danno ambientale è concepito in termini ampi, comprendendo sia la lesione a interessi patrimoniali e personali, sia il danno ecologico puro, qualificato come lesione dell'interesse pubblico alla salubrità dell'ambiente (Tae-Young 2013, 541-76; Nam-Sun 2014, 97-125). Tale configurazione consente, in linea teorica, l'esperibilità di azioni anche in assenza di un soggetto leso direttamente, aprendo la via a modelli di tutela collettiva e generalizzata (Yun 2012, 157-69).

In aggiunta, le imprese ad alto rischio sono obbligate a sottoscrivere forme di assicurazione ambientale obbligatoria, o a costituire fondi di garanzia dedicati, al fine di coprire i costi delle operazioni di bonifica e i risarcimenti (Coutaz 2018, 111-32). Questi strumenti integrano la responsabilità civile, attribuendole una dimensione sistemica e preventiva.

La giurisprudenza sudcoreana ha affrontato negli ultimi decenni numerosi casi di danno ambientale, contribuendo a definire l'ambito di applicazione delle regole oggettive e la configurabilità del danno ecologico autonomo. Un caso paradigmatico è il *Hebei Spirit Oil Spill Case*, relativo alla collisione di una petroliera con una chiatta industriale, che ha provocato il più grave disastro ambientale marino della storia sudcoreana (Yim et al. 2012, 6431-7). La Corte Suprema ha riconosciuto la responsabilità solidale dei soggetti coinvolti, applicando il principio del rischio e affermando la necessità di un ristoro integrale anche per danni ambientali non patrimoniali (Hur 2012, 288-98; Hong et al. 2014, 522-32; Chung, Lee 2016, 14-20).

Un ulteriore caso rilevante è il *Gumi Hydrogen Fluoride Leak Case*, in cui una fuga di acido fluoridrico da un impianto chimico ha causato danni alla salute di centinaia di persone e alla vegetazione circostante (Yang et al. 2017, 207-15). I giudici hanno applicato la legge sul risarcimento dei danni ambientali, riconoscendo la responsabilità oggettiva dell'impresa e stabilendo un obbligo di bonifica e risarcimento sia verso i residenti che nei confronti dell'ente locale (Se-young, Do-bin 2014, 727-54).

Questi precedenti mostrano l'orientamento consolidato della giurisprudenza sudcoreana verso un modello di responsabilità oggettiva, riparatoria e collettiva, pur mantenendo margini di

discrezionalità nel bilanciamento tra sviluppo industriale e tutela ambientale. Il caso *Hebei Spirit Oil Spill Case* ha messo in evidenza come la Corea del Sud utilizzi meccanismi di responsabilità solidale nelle operazioni di disinquinamento e risarcimento (Kim et al. 2014, 533-44). La Corte Suprema ha sancito che la solidarietà tra i responsabili non solo accelera i processi di bonifica, ma aumenta la capacità di risarcimento attraverso l'attuazione di politiche di copertura assicurativa obbligatoria (Hao 2019, 151-82).

6 Chi inquina paga: origine, applicazioni e critiche

L'analisi comparata dei tre ordinamenti oggetto di studio – Cina, Giappone e Corea del Sud – evidenzia una tendenza condivisa all'adozione, seppur in forme e gradi differenti, del principio del 'chi inquina paga' quale fondamento assiologico della responsabilità civile per danno ambientale (Harashima, Morita 1998, 39-67). Tale principio, sancito originariamente dall'OCSE nel 1972 e successivamente consacrato a livello europeo dall'art. 191, par. 2, TFUE,[15] è stato recepito sia sul piano normativo che giurisprudenziale, e funge da criterio guida per la costruzione di regimi di responsabilità oggettiva, finalizzati a garantire l'effettività della tutela in contesti di alto rischio ambientale.

L'introduzione di un principio comune di responsabilità oggettiva per danno ambientale nella regione asiatica non è solo una questione di adeguamento alle normative internazionali, ma implica anche una sfida tecnico-giuridica legata alla determinazione del danno risarcibile (Zhang, Jun 2025, 57-84). In tutti i sistemi giuridici esaminati, la definizione di danno ecologico puro si scontra con la difficoltà di misurazione e di prova del danno stesso, richiedendo nuove soluzioni processuali e normative che facilitino l'accesso alla giustizia per i soggetti legittimati.

In Cina e Corea del Sud, la responsabilità oggettiva è espressamente codificata per le attività pericolose, e si fonda su una nozione estensiva di rischio (Lee 2021, 721-42). In Giappone, invece, la coesistenza di norme generali basate sulla colpa e disposizioni speciali fondate sulla responsabilità oggettiva determina un sistema ibrido, in cui la scelta del regime applicabile dipende dalla natura della condotta e dalla fonte normativa invocata (Jobin 2014, 341-86). Ciò si traduce in una

15 Si veda: OCSE, Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies, 26 maggio 1972. Il principio è poi confluito nel diritto UE con la Direttiva 2004/35/CE e trova espressione anche nella Convenzione di Aarhus (1998).

maggiore incertezza per l'attore e in una distribuzione non uniforme del carico probatorio.

Tuttavia, in tutti e tre i sistemi si manifesta una comune esigenza: alleggerire l'onere della prova, attraverso presunzioni, inversioni dell'onere o criteri probabilistici, al fine di favorire l'accesso alla giustizia ambientale e superare le difficoltà legate alla complessità scientifica del nesso causale (Haddad 2023, 10-75).

Una delle principali divergenze tra i tre ordinamenti concerne la qualificazione giuridica del danno ambientale. La Cina appare oggi l'ordinamento più avanzato sotto questo profilo: il danno ecologico è riconosciuto come lesione autonoma dell'ambiente in sé, suscettibile di ristoro anche in assenza di un soggetto individuale leso. Tale impostazione consente la promozione di azioni pubbliche da parte di procuratori e ONG, e favorisce una visione sistemica e collettiva della tutela ambientale (Yang 2005, 46-66).

La Corea del Sud adotta un'impostazione analoga, soprattutto a seguito dell'introduzione della normativa di settore, che estende la tutela oltre gli interessi privati e valorizza la funzione riparatoria della responsabilità civile (Timpson 2021, 335-50). In Giappone, invece, il riconoscimento del danno ecologico puro rimane marginale: la tutela si attua prevalentemente tramite la risarcibilità di danni riflessi alla salute o alla proprietà, e la legittimazione resta centrata su soggetti individuali, salvo eccezioni giurisprudenziali (Okowa 2010, 303-19).

Ne deriva un diverso grado di apertura dei rispettivi sistemi all'oggettivazione del danno ambientale: se in Cina e Corea del Sud l'interesse pubblico è chiaramente giustiziabile, in Giappone permane una tensione tra tutela ambientale e principi tradizionali di diritto civile.

La convergenza verso modelli di responsabilità oggettiva e il riconoscimento del danno ambientale come bene giuridico autonomo suggeriscono la possibilità di elaborare, a livello regionale, principi comuni di diritto civile ambientale, che possano fungere da base per future armonizzazioni normative nell'area dell'Asia orientale (Yuan, Lee 2023, 60-89). Negli ultimi anni, sia in Cina che in Corea del Sud, sono emerse iniziative politiche e legislative volte a rafforzare l'applicazione del principio PPP, anche in relazione agli standard ESG. In Corea, ad esempio, il Ministero dell'Ambiente ha pubblicato nel 2021 un piano triennale per la responsabilità ambientale delle imprese. In Giappone, sebbene le riforme siano meno incisive, il Piano Ambientale aggiornato nel 2018 ha ribadito la necessità di responsabilizzare i soggetti economici attraverso meccanismi di internalizzazione del costo ambientale.

La crescente influenza delle convenzioni internazionali (come la Convenzione di Aarhus e il Principio 10 della Dichiarazione di Rio), nonché degli standard ESG (Environmental, Social, Governance),

contribuisce ad allineare i sistemi nazionali attorno a valori comuni di precauzione, responsabilità e partecipazione.[16] In prospettiva, l'evoluzione dei tre ordinamenti potrebbe convergere su alcune direttrici principali: l'estensione del danno risarcibile anche al pregiudizio ecologico autonomo; la diffusione di azioni collettive ambientali fondate su legittimazioni straordinarie; il rafforzamento dei meccanismi di copertura assicurativa obbligatoria per le imprese a rischio; l'uso di modelli predittivi e statistici per facilitare l'accertamento del nesso causale.

Queste tendenze indicano un rafforzamento del ruolo del diritto civile quale strumento chiave per la realizzazione della giustizia ambientale, in un contesto regionale in cui le sfide ecologiche sono sempre più pressanti e transnazionali. Tali iniziative si inseriscono in una più ampia riflessione regionale sull'armonizzazione dei criteri di responsabilità ambientale, anche in chiave ESG e con attenzione crescente al principio di sostenibilità intergenerazionale.

7 Responsabilità ambientale: riconoscimento e limiti

Lo studio comparato della responsabilità civile per danno ambientale nei sistemi giuridici di Cina, Giappone e Corea del Sud evidenzia un progressivo rafforzamento del ruolo del diritto privato nella tutela dell'ambiente (Kitagawa 2014, 64-90). In contesti storicamente dominati da un'impostazione pubblicistica, si assiste ad una crescente valorizzazione delle categorie civilistiche, sia nella definizione del danno che nei criteri di imputazione e negli strumenti processuali.

Dal punto di vista strutturale, si osserva una progressiva transizione dal modello classico della responsabilità colposa a favore di un paradigma fondato sulla responsabilità oggettiva, ispirato al principio del rischio e alla logica del 'chi inquina paga' (Chiu, Yong 2004, 1037-45),[17] anche alla luce dei limiti emersi in occasione della

16 Sebbene non vincolanti, strumenti di soft law come il Principio 10 della Dichiarazione di Rio (1992), la Convenzione di Aarhus (1998) sull'accesso all'informazione, alla partecipazione pubblica e alla giustizia in materia ambientale, e i criteri ESG, promossi da organismi internazionali e pratiche di finanza sostenibile, esercitano un'influenza crescente sui sistemi giuridici nazionali. Essi orientano l'evoluzione della responsabilità civile ambientale verso modelli più trasparenti, partecipativi e orientati alla prevenzione del rischio ecologico.

17 Dopo il disastro nucleare di Fukushima (2011), si è assistito a un rafforzamento solo parziale degli strumenti di controllo ambientale. L'istituzione dell'Agenzia per la Regolamentazione Nucleare (*Genshiryoku Kisei Iinkai*, 原子力規制委員会) nel 2012 ha rappresentato una risposta emergenziale, ma non ha inciso in modo strutturale sull'efficacia complessiva della responsabilità ambientale civile. I casi civili post-Fukushima, come il contenzioso del 2017 tra cittadini di Fukushima e TEPCO (Tokyo Electric Power Company), hanno portato a sentenze di condanna basate su responsabilità extracontrattuale, ma senza stabilire criteri solidi e ripetibili.

vicenda giudiziaria del disastro di Fukushima. Tale transizione si realizza pienamente in Cina e Corea del Sud, dove il legislatore ha codificato espressamente regimi di responsabilità automatica per le attività pericolose, affiancati da obblighi di prevenzione, bonifica e ripristino. In Giappone, invece, la compresenza di regole generali e speciali produce un sistema più frammentato, in cui l'operatività effettiva della responsabilità oggettiva dipende dall'inquadramento normativo del caso concreto.

Il secondo elemento di rilievo è rappresentato dalla qualificazione giuridica del danno ambientale. Mentre in Cina – e, in misura crescente, in Corea del Sud – il danno ecologico è riconosciuto come figura autonoma, tutelabile anche in assenza di una lesione individuale, in Giappone la protezione dell'ambiente in sé fatica ancora ad affermarsi sul piano del diritto civile sostanziale, rimanendo per lo più mediata da danni riflessi a soggetti determinati.

Una differenza strutturale si manifesta anche sul piano processuale: la Cina ha introdotto forme avanzate di legittimazione straordinaria, con il riconoscimento di azioni promosse da ONG e procuratori pubblici; la Corea del Sud, pur con maggior cautela, ha aperto alla giustiziabilità dell'interesse pubblico; il Giappone, invece, mantiene una configurazione tendenzialmente individualistica della legittimazione, sebbene temperata da alcune aperture giurisprudenziali (Schreurs 2002, 57-64).

Nonostante tali divergenze, emerge un orientamento comune verso una funzione sistemica e integrata della responsabilità civile ambientale: non più solo come strumento compensativo, ma come leva per la dissuasione del rischio ecologico, la promozione di condotte diligenti e la realizzazione di obiettivi pubblici di sostenibilità (Zhang 1999, 201-40), che si sviluppa anche attraverso un costante dialogo con i modelli giuridici occidentali. In particolare, l'influenza della Direttiva 2004/35/CE dell'Unione Europea sul principio di prevenzione, e del CERCLA statunitense sulla responsabilità oggettiva, ha contribuito a ispirare modifiche normative in Cina e Corea del Sud. Il Giappone, pur meno permeabile sul piano legislativo, ha comunque assorbito nozioni di responsabilità ampliata del produttore e approcci ESG grazie alla collaborazione tecnica con agenzie internazionali (es. OCSE, UNEP).

In tutti e tre i contesti, la responsabilità civile si colloca oggi all'intersezione tra diritto privato, diritto pubblico e diritto ambientale, in un quadro normativo sempre più ibrido e interconnesso.

In termini prospettici, l'analisi suggerisce la necessità di consolidare alcuni principi cardine del diritto civile ambientale nell'area dell'Asia orientale: il riconoscimento esplicito del danno ecologico autonomo; l'estensione della responsabilità oggettiva a tutti i settori a rischio ambientale; il rafforzamento della legittimazione processuale collettiva; la diffusione di strumenti assicurativi

ambientali; l'integrazione tra strumenti risarcitori e misure preventive (Boer 1999, 1503-3).

Tali direttrici potrebbero costituire il fondamento per un futuro dialogo normativo intra-regionale, volto a una maggiore armonizzazione delle tutele, nel rispetto delle specificità istituzionali e culturali di ciascun ordinamento. In un'epoca segnata da crisi ecologiche di scala globale, il diritto civile – nella sua funzione evolutiva – è chiamato a farsi carico di interessi collettivi e intergenerazionali, superando le rigidità tradizionali e contribuendo, in modo concreto, alla costruzione di una responsabilità giuridica adeguata alle sfide del nostro tempo.

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Prospettive giurisprudenziali sul danno ambientale in Giappone
Un modello per un'IA sostenibile

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Abstract In a context shaped by new global challenges in turmoil due to climatic emergency, Japanese case law on environmental tort could constitute a significant experience. Through judicial resolution of environmental disputes, Japanese courts have developed relevant criteria in the environmental tort law. This paper aims to analyse the innovative aspects developed in Japan, with the purpose of identifying a model capable of addressing the challenges posed by advanced technologies, such as Artificial Intelligence. In particular, the paper will seek to highlight the most relevant features that may offer new perspectives and insights even beyond Japan's borders, in light of the global dimension of both climate change and the advent of AI.

Keywords Japan. Climate change. Artificial Intelligence. Tort Law. Sustainability.

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1 Introduzione

In un mondo costantemente scosso dagli effetti dei cambiamenti climatici e del surriscaldamento globale, la nozione di danno ambientale, che progressivamente si è fatta spazio negli ordinamenti giuridici contemporanei, è destinata a evolversi. In questo contesto risulta essenziale trovare nuove soluzioni giuridiche, al fine di non far cedere la bilancia dei valori fondamentali sotto il peso delle pretese contrapposte tra esigenze di innovazione e tutela dell'ambiente.

Per sua natura, la disciplina normativa sull'ambiente necessita di una visione a lungo termine e non di provvedimenti che siano meramente destinati a limitare gli effetti negativi nel breve periodo. In un momento in cui è essenziale agire rapidamente per cambiare la prospettiva vigente, nella prassi il legislatore si muove sovente guardando non oltre la sua presente vita politica. Anche per questa ragione, il ruolo di promotore del mutamento può essere assunto dalle corti (Zarro 2022). Tuttavia, non si può trascurare che il potere legislativo è in mano ai Parlamenti, e deriva dalla legittimazione democratica ottenuta dal consenso generale dei cittadini. In un ordinamento democratico, il giudice è chiamato a interpretare la legge nei suoi limiti; tuttavia, ciò non significa che non possa adottare un approccio dinamico, capace di adeguare le nozioni esistenti alle istanze sollevate nel tempo presente. Tale aspetto risulta rilevante soprattutto, se le corti intervengono a tutela dei diritti fondamentali (Burges 2020).

In questo contesto è nato un movimento globale denominato *climate change litigation*.[1] Con questa espressione sono indicate quel numero crescente di controversie giurisdizionali nate al fine di innescare mutamenti sociopolitici sul tema del cambiamento climatico (Zarro 2022). Si tratta di un trend di risposta al silenzio ed all'inerzia della politica di fronte al cambiamento climatico, che non intende essere limitata alle corti, ma vuole rivolgersi anche alla collettività come un'opportunità di mobilitazione sociale (Gaimbardo 2021). Nell'ambito del *climate change litigation* sono comprese controversie tra di loro diverse; un filone significativo è composto da ricorsi per il risarcimento dei danni causati da fenomeni legati cambiamento climatico. Pur sollevato in contesti diversi, tale orientamento va incontro a numerosi problemi in comune: il profilo della legittimazione ad agire e del nesso di causalità, la difficoltà di riconoscere il diritto a un ambiente sano e dunque a un clima sano, ed infine la complessità nell'individuazione di un *quantum* risarcitorio. Si aggiungono anche le fondamentali differenze di ogni

1 Le controversie attualmente in atto e concluse sono consultabili al sito `https://climatecasechart.com`, database per le *climate change litigations* nel mondo.

Stato nella disciplina della responsabilità civile, che portano a diverse conclusioni per ciascuna delle controversie, in base all'ordinamento in cui sono sollevate (Zarro 2022).

Parallelamente al progresso di tecnologie avanzate, si assiste allo sviluppo accelerato dell'Intelligenza Artificiale (IA). Questa nozione comprende diverse tecnologie, quali i sistemi di *Machine Learning*, le reti neurali artificiali, l'IA Generativa e i Large Language Model (LLM). In particolare, l'evoluzione dei modelli di *Machine Learning* e del *deep learning* attualmente solleva crescenti interrogativi sulla sostenibilità ambientale.

Negli ultimi anni, l'IA è stata identificata come strumento strategico nel fornire soluzioni in ambito ambientale nell'affrontare la crisi climatica tramite applicazioni innovative di tali tecnologie (Stein 2020; Chen et al. 2023; Shobake et al. 2025). Tuttavia, emerge un paradosso: mentre vi è la promettente implementazione dei sistemi AI come via privilegiata per affrontare sfide ambientali, lo stesso funzionamento di questi ultimi genera un significativo impatto sull'ambiente, collegato al numero crescente di emissioni di gas serra derivanti dal settore ICT (*Information and Communication Technologies*) (Malmodin et al. 2024), in cui rientrano i sistemi di IA.

L'impatto energetico si manifesta principalmente attraverso due dimensioni. Il primo è collegato al consumo energetico di *data center*, ossia le infrastrutture in cui sono contenuti gli hardware necessari per l'archiviazione, l'elaborazione e la condivisione di enormi volumi di dati. Tali strutture, oltre a un sostanziale apporto energetico per funzionare in modo ottimale, necessitano inoltre anche di complessi sistemi di raffreddamento, al fine di prevenire il surriscaldamento dei server e garantire che l'intero sistema funzioni efficientemente senza interruzioni ed errori (Ewim et al. 2023).

La seconda dimensione riguarda l'impatto energetico complessivo del ciclo di vita di un sistema IA che comprende la fase di progettazione e sviluppo, poi la fase dell'addestramento e l'implementazione del sistema, ed infine la fase operativa che comprende anche la sua manutenzione, fino a giungere a una possibile dismissione (Mäntymäki et al. 2022). La quantificazione precisa del contributo di ciascuna fase rimane complessa, poiché dipende da molteplici variabili tecniche e operative (Cowls et al. 2023). Si pone dunque una questione fondamentale se tali tecnologie, pur promettendo soluzioni, non possano risultare infine complessivamente più dannose per l'ambiente rispetto ai benefici che intendono offrire.

Una visione che guardi oltre i propri confini nazionali è auspicabile per l'individuazione di opportunità significative e per determinare l'efficacia nel contesto globale di soluzioni normative possibili per affrontare le sfide avanzate dalla mitigazione del cambiamento climatico, soprattutto in relazione all'impatto dell'IA. Per tali ragioni, in questo lavoro, si procederà volgendo lo sguardo alla situazione in

Giappone sia in campo normativo che giurisprudenziale. Soprattutto, ad oggi il corpus giurisprudenziale giapponese e il suo approccio metodologico a sfide che impattano sull'ambiente e sugli esseri umani si rivela essere di particolare interesse, e sempre più attuale, nell'affrontare giuridicamente fenomeni di cui i tratti non sono ancora perfettamente delineati, ma che travolgono allo stesso modo ogni individuo, ogni società ed ogni ordinamento.

Alla luce di tali premesse, il presente contributo è diviso in quattro parti. La sezione 2 illustra l'evoluzione legislativa e giurisprudenziale giapponese sul tema dell'ambiente. La sezione 3 è dedicata all'approfondimento dei concetti di base dell'IA, insieme con la valutazione anche del suo impatto sull'ambiente, sia come promotrice di soluzione di contrasto e mitigazione del cambiamento climatico, sia come contributo a esso. Si prosegue nella sezione 4 con la breve esposizione dell'attuale assetto regolatorio dell'IA in Giappone. Infine, la sezione 5 si concentra sulla definizione degli aspetti tratti dai più importanti casi di risarcimento del danno da inquinamento ambientale in Giappone, per poi applicare i criteri individuati alla situazione prospettata dal rapporto dell'IA con l'ambiente, in ragione delle similitudini tra le due.

2 Ambiente e diritto: profili giurisprudenziali del danno ambientale in Giappone

L'iter evolutivo del diritto ambientale giapponese affonda le sue radici nei primi decenni del Novecento, quando è stata oggetto di una trasformazione cruciale a seguito della massiccia e rapida industrializzazione del secondo dopoguerra. In questo contesto, le istituzioni giapponesi adottarono un approccio di favore verso il processo di industrializzazione del paese, anche a discapito della prevenzione del degrado ambientale e della protezione della salute, così esposta a rischi derivanti da intense attività industriali inquinanti (Ortolani 2021b). Tale orientamento rifletteva del resto una sensibilità ancora limitata nei confronti dei valori della sostenibilità e della protezione ambientale, fenomeno che caratterizzava non solo il Giappone, ma l'intero panorama internazionale fino agli ultimi decenni del Novecento.

In principio, difronte all'inerzia del governo centrale – accecato dallo sviluppo industriale ed economico – furono gli enti locali a intervenire con l'emanazione di ordinanze nel tentativo di limitate il forte inquinamento ormai diffusosi (Gresser et al. 1981). Il punto di svolta arrivò a seguito della forte reazione sociale scatenata dai 'quattro grandi casi di inquinamento' (la malattia di Minamata e di

Niigata,[2] la sindrome Itai-Itai,[3] l'asma di Yokkaichi)[4] eziologicamente riconducibili a diversi tipi di inquinamento industriale, i quali spinsero all'adozione dei primi provvedimenti legislativi di contrasto da parte della Dieta. Dapprima nel 1967 venne adottata la legge fondamentale sulle misure contro l'inquinamento diffuso,[5] rimasta in vigore fino all'emanazione nel 1993 della Legge Fondamentale sull'Ambiente (LFA).[6] Particolarmente significativa fu la sessione parlamentare del 1970 che approvò 6 nuove leggi e ne emendò altre 8 già in vigore in materia ambientale (Ortolani 2015; 2016; 2021a; 2021b). Questi processi legislativi segnarono un radicale cambio di prospettiva: dall'opinione circa la prevalenza assoluta dello sviluppo economico ed industriale rispetto alla protezione dell'ambiente, si giunse finalmente a ritenere che le due istanze necessitino di un bilanciamento (Ortolani 2021a; 2021b).

Il risultato è che, nel quadro normativo giapponese odierno, vi sono numerose leggi che disciplinano vari aspetti della tutela ambientale e della salute pubblica. Tra queste, l'attuale testo legislativo di riferimento è la legge fondamentale sull'Ambiente del 1993. Negli anni Novanta, il mutamento sul tema della sensibilità ambientale a livello internazionale e la definizione di nuovi obiettivi a tutela dell'ambiente – soprattutto nella lotta al contrasto del cambiamento climatico – determinò un ulteriore cambio di prospettiva. In Giappone, questo nuovo approccio condusse all'emanazione della LFA, promulgata in seguito del summit di Rio del Janeiro del 1992 (Nakanishi 2016).[7] La LFA dispone come sua finalità:

2 La malattia di Minamata è una malattia che colpisce il sistema nervoso causata dall'avvelenamento cronico di mercurio. I cittadini di Minamata e di Niigata furono avvelenati tramite la loro alimentazione che consisteva in frutti di mare e pesci, contaminati dal metilmercurio, rifiuto industriale scaricato direttamente nella baia di Minamata per decenni (Fujikura 2007).

3 La sindrome Itai-Itai ('che male, che male') è una malattia causata dall'avvelenamento cronico di cadmio, i cui sintomi principali consistono in una fragilità e deformazione ossea causa di forti dolori. L'avvelenamento era causato dal riversamento di cadmio, prodotto da attività estrattive minerarie, nel fiume Jintsu, dal quale i cittadini della prefettura di Toyama prendevano l'acqua da bere e per irrigare dei capi di riso, che fu a sua volta contaminato (Gresser et al. 1981).

4 L'asma di Yokkaichi è una malattia respiratoria causata dall'avvelenamento cronico da anidride solforosa attribuita all'inquinamento dell'aria prodotto dalle emissioni del complesso petrolchimico nella città di Yokkaichi (Gresser et al. 1981)

5 *Basic Law for Environmental Pollution Control* (1967) [*Kōgai taisaku kihon-hō*, 公害対策基本法], Law No. 93/1967.

6 *Basic Environment Law* (1993) [*Kankyō Kihonhō*, 環境基本法], Law No. 91/1993.

7 Il Summit di Rio (c.d. *Earth Summit*) è la prima conferenza mondiale dei Capi di Stato sull'ambiente tenutosi a Rio de Janeiro tra il 3 e il 14 giugno del 1992, a cui si deve l'emendazione dell'accordo sulla Convenzione quadro delle Nazioni Unite sui cambiamenti climatici, che poneva obiettivi di riduzione alle emissioni dei gas serra, ritenuti responsabili del surriscaldamento globale (Zarro 2022)

> [t]o promote policies for environmental conservation in a comprehensive and systematic manner so as to ensure wholesome and cultured living of the people present and in the future, as well as to contribute to the welfare of humankind by establishing the basic principles of environmental conservation; clarifying the responsibilities of the State, local governments, business operators and citizens; and prescribing the basis for formulating the policies for environmental conservation.[8]

La legge è costituita principalmente da disposizioni programmatiche, tuttavia non mancano gli articoli con carattere vincolante: il piano fondamentale per l'ambiente (art.

15), la giornata dell'ambiente il 6 giugno (art. 10), il report annuale da sottoporre alla Dieta (art. 12), l'elaborazione di standard di qualità ambientale (art 16), e la costituzione del programma per il controllo dell'inquinamento ambientale (art. 17) (Nakanishi 2016). A seguito dell'entrata in vigore della LFA, si sono susseguite ulteriori leggi specifiche[9] con l'obiettivo di realizzare una società basata sul trattamento corretto dei rifiuti, attraverso sistemi di riciclo, e sull'ottimizzazione dell'efficienza energetica; collegato al processo attualmente in corso per la realizzazione una società 'a zero emissioni' (Nakamaru 2009).

In Giappone, tuttavia, l'effettiva tutela all'ambiente si realizza principalmente attraverso l'applicazione del diritto comune da parte delle corti. Difatti la tutela dell'ambiente si è sviluppata in modo indiretto tramite la risoluzione del contenzioso in materia di responsabilità civile, attraverso l'applicazione delle disposizioni del Codice civile nipponico.[10] La norma generale in materia di illecito civile è l'articolo 709 del Codice civile,[11] in base al quale «A person that has intentionally or negligently infringed the rights or legally protected interests of another person is liable to compensate for damage resulting in consequence». L'onere della prova grava dunque sulla vittima del danno. Il soggetto leso è chiamato a provare i seguenti quattro requisiti fondamentali: (a) il dolo o la colpa del danneggiante; (b) l'ingiustizia dell'atto, ossia che deve aver violato diritti o interessi protetti dall'ordinamento; (c) il danno effettivo subito dalla vittima; (d) il nesso di causalità tra l'evento dannoso e il danno verificatosi

8 *Basic Environment Law* (1993) [*Kankyō Kihonhō*, 環境基本法], Law 91/1993, Art. 1.

9 Tra cui si può ricordare la legge sulla valutazione dell'impatto ambientale (1997) [*Kankyō eikyō hyōka-hō*, 環境影響評価法], Law No. 81/1997.

10 *Civil Code* (1896) [*Minpō*, 民法], Law No. 89/1896, Art. 709 ss.

11 «A person that has intentionally or negligently infringed the rights or legally protected interests of another person is liable to compensate for damage resulting in consequence».

(Oda 2009). Il risarcimento avviene principalmente per equivalente monetario,[12] nel quale vengono inclusi danni patrimoniali, come il danno emergente e il lucro cessante, e non patrimoniali, come il danno morale (Osaka 2009).

Nel linguaggio giuridico giapponese termine per riferirsi al danno ambientale è *kōgai*, che compare nei testi legislativi in Giappone per la prima volta nel 1896, all'interno un regolamento della provincia di Osaka, poi il termine è stato codificato all'interno della Legge sulle industrie del 1911 (Ortolani 2021a; 2021b).[13] Più precisamente, in Giappone il danno ambientale è il riflesso di un danno specifico alle vittime, come soggetti lesi da un evento dannoso che si è propagato tramite l'ambiente. In sostanza, la protezione dell'ambiente avviene in modo indiretto, tramite l'applicazione delle norme di diritto comune; tuttavia, non è la finalità primaria (Ortolani 2015; 2016). Le condizioni da soddisfare affinché la lesione possa considerarsi *kōgai* sono: (a) che il danno sia alla salute umana; (b) che vi sia un legame con una attività industriale, o comunque un'attività di origine umana; (c) la notevole ampiezza dell'area colpita dal fenomeno inquinante; e (c) la qualificazione del degrado ambientale, che deve rientrare in sette specifiche categorie quali: l'inquinamento dell'aria, delle acque, del suolo, acustico, da vibrazioni, cedimento del terreno o odori sgradevoli (Ortolani 2015; 2016; 2021a; 2021b).

Nell'ambito del *kōgai*, si rinviene una difficoltà in merito al nesso di causalità, soprattutto poiché la posizione delle vittime ricorrenti è risultata sempre più debole rispetto a quello delle imprese inquinanti in relazione alla prova dello stesso. Nell'ordinamento giapponese sono previsti casi di responsabilità oggettiva, stabiliti per esempio dalla legge sul risarcimento dell'energia nucleare[14] e dalle leggi sulla prevenzione dell'inquinamento atmosferico[15] e delle acque (Ortolani 2021b);[16] tuttavia se il danno non rientra in una di queste fattispecie, l'onere della prova del nesso di causalità ricade sulla vittima. Nel contesto dei grandi casi di inquinamento, le vittime spesso si sono trovate in circostanze di estrema difficoltà nel provare in maniera piena la causalità, ragione per cui la Corte si è espressa ritenendo sufficientemente provato il nesso tramite una prova epidemiologica (Osaka 2009).

12 *Civil Code* (1896) [*Minpō*, 民法], Law No. 89/1896, Art. 722.

13 *Factory Act* (1911) [*Kōjōhō*, 工場法], Law No. 46/1911.

14 *Act on Compensation for Nuclear Damage* (1961) [*Genshiryoku songai no baishō ni kansuru hōritsu*, 原子力損害の賠償に関する法律], Law No. 147/1961.

15 *Air Pollution Control Act* (1968) [*Taiki osen bōshi-hō*, 大気汚染防止法], Law No. 97/1968.

16 *Water Pollution Control Act* (1970) [*Suishitsu odaku bōshi-hō*, 水質汚濁防止法], Law No. 138/1970.

Con riguardo al risarcimento da danno ambientale in Giappone, per riflesso delle difficoltà legate ad aspetti procedurali, è stata elaborata da parte della giurisprudenza la nozione di 'danno comprensivo' che integra sia i danni patrimoniali e non patrimoniali in una somma consolatoria a titolo di risarcimento della lesione globalmente subita. A partire da una sentenza della Corte Distrettuale di Osaka,[17] riguardo un caso di inquinamento dell'aria, si affermò che il ricorrente dovesse avere la possibilità di presentare domanda per un risarcimento comprensivo consolatorio, comprensivo sia del danno morale in senso stretto e sia danni patrimoniali subiti. La ragione risedeva nel fatto che il danno da inquinamento dell'aria era destinata ad avere effetti a lungo termine. Di conseguenza, l'evoluzione sintomatologica aveva sortito un decorso eterogeneo tra le diverse vittime; perciò, la corte ritenne idoneo riconoscere un unico importo a titolo di risarcimento (Matsumoto 2021). Con riguardo al risarcimento dei danni in una delle sentenze concernenti la malattia di Minamata e di Niigata, la Tribunale Distrettuale di Niigata[18] introdusse anche la domanda di risarcimento standardizzata, per la quale i ricorrenti furono stati divisi in base alla gravità delle loro lesioni ed ebbero la possibilità di presentare richiesta specifica per la propria categoria di appartenenza, in base a specifici criteri (Matsumoto 2021).

Le pronunce sui quattro grandi casi di inquinamento sono state un punto di svolta nella definizione dei principi a fondamento della domanda di risarcimento del danno alla salute da inquinamento dell'aria e delle acque (Gresser et al. 1981). Sulla base dell'impulso originato da queste decisioni, fu fondato un sistema di compensazione economica e di supporto alle vittime dei principali casi con l'emanazione della legge sulla risoluzione delle controverse ambientali (1970)[19] e legge sull'indennizzo dei danni alla salute causati dall'inquinamento (1973).[20] La prima legge fondò la Commissione sull'indennizzo delle controversie ambientali (*Kōgaitōchōseiiinkai*) che assunse il ruolo di promuovere la risoluzione extragiudiziale del contenzioso in campo ambientale, attraverso mediazioni, conciliazioni e procedure di arbitrato (Osaka 2009), ma anche di redigere e pubblicare linee guida sui temi del nesso causale e dell'imputabilità del danno (Ortolani 2021b).

17 Tribunale Distrettuale di Osaka, 29 Marzo 1991, 判例時報 *Hanrei Jiho* 1383 (1991) 22.

18 Tribunale distrettuale di Niigata, 29 settembre 1971, 判例時報 *Hanrei Jiho* 642 (1971) 96.

19 *Act on the Settlement of Environmental Pollution Disputes* (1970) [*Kōgai funsō shorihō*, 公害紛争処理法], Law No. 108/1970.

20 *Act on Compensation for Pollution-Related Health Damage* (1973) [*Kōgai kenkō higai no hoshō tō nikansuru hōritsu*, 公害健康被害の補償等に関する法律], Law No. 111/1973.

Invece, la legge sugli indennizzi, senza richiedere la prova del nesso di causalità, stabilì un sistema di supporto e di risarcimento gestito dagli enti locali, basato su un sistema di certificazioni mediche rilasciate da commissioni locali, per cui solo chi era certificato poteva fare domanda per ottenere l'indennizzo e la copertura delle spese mediche. In sostanza, le aree colpite da inquinamento furono suddivise in due classi: la prima classe trattava di vittime di inquinamento dell'aria, affette da malattie respiratorie, mentre nella seconda classe erano comprese le vittime di avvelenamento da metalli pensanti (mercurio, cadmio, arsenico). Il principio fondamentale della legge era la regola del «chi inquina paga», e, ai sensi di questo principio, i fondi per gli indennizzi della prima classe furono fatti provenire principalmente dalle tasse imposte alle imprese inquinanti, mentre per la seconda classe furono versati direttamente dalle imprese ritenute responsabili dell'inquinamento (Osaka 2009; Ortolani 2021b).

In definitiva, la disciplina ambientale in Giappone si è evoluta attraverso due momenti cruciali: i grandi casi di inquinamento degli anni Sessanta e il cambio di paradigma degli anni Novanta. Oltre all'ampia normativa specifica di settore, nell'ordinamento giuridico nipponico esistono norme generali di responsabilità civile che i tribunali hanno a lungo applicato nel contenzioso ambientale, quando le vittime hanno fatto ricorso per ottenere il risarcimento dei danni arrecati alla propria salute. L'ambiente è invece tutelato in senso lato, come conseguenza delle misure adottate in casi di risarcimento civile di lesioni alla salute, tuttavia, ancora oggi non è riscontrabile nel diritto giapponese una nozione unificante di diritto all'ambiente (Ortolani 2021b).

3 L'Intelligenza Artificiale e il cambiamento climatico

A seguito di una lunga evoluzione che ha portato a una maggiore, se non prioritaria, attenzione nei confronti delle questioni ambientali da parte della società globale, paralleli investimenti si stanno attualmente riversando nel campo dell'IA. In relazione all'emergenza climatica, l'IA non assume solo un ruolo di fornitrice di soluzioni per affrontarla, difatti in realtà un suo aspetto fondamentale è legato al livello del suo contributo al cambiamento climatico. Proprio attualmente si avverte la necessità di bilanciare le pretese di sviluppo ed impiego dei sistemi di IA con l'indirizzo di una società sostenibile.

Innanzitutto, i sistemi di intelligenza artificiale sono tecnologie basate su algoritmi progettati per simulare il ragionamento umano a partire dal recepimento di informazioni (*input*) per ottenere da esse dei risultati autonomamente elaborati (*output*) (Barfield et al. 2020). Negli ultimi anni uno sviluppo fondamentale compiuto

nel settore dell'IA è rappresentato dal *Machine Learning* (ML). Il *Machine Learning* consiste in un campo di studio che si occupa di algoritmi addestrati, su una grande quantità di dati, a migliorare le proprie risposte senza istruzioni esplicite da parte di operatori esterni. Questo processo avviene attraverso diversi modelli di apprendimento (Reznik 2021).[21] Una specializzazione particolare del *Machine Learning* è il *deep learning*. Il *deep learning* consiste metodo che utilizza le reti neurali artificiali (ANN).[22] Attraverso il passaggio delle informazioni inserite tra diversi livelli della rete, questi sistemi riescono a identificare con precisione inserti sequenze ricorrenti (*pattern*) e schemi complessi nei dati elaborati (Barfield et al. 2020).

Il *Machine Learning* costituisce il fondamento dell'IA Generativa, ovvero l'applicazione dell'IA capace di generare una varietà di contenuti originali che possono consistere in testi scritti, immagini o audio (EDPS 2024). Esempi significativi di queste applicazioni sono i Large Language Model (LLM), che sono modelli di *deep learning* addestrati su enormi dataset, tra cui troviamo Chat-GPT di OpenAI e DeepSeek R1 sviluppato da DeepSeek AI (Barberá 2025).

In relazione al rapporto dell'IA con il cambiamento climatico, esso è duplice: (a) tramite l'applicazione del ML riesce apporta un enorme contributo all'individuazione di soluzioni per la mitigazione e per adattare la società agli effetti avversi; (b) l'IA è uno strumento che inizia a concorrere in modo sempre maggiore all'emergenza climatica attraverso l'aumento delle emissioni di gas serra a esso riferibili (Nordgren 2023; Cowls et al. 2023).

Importante per valutare l'impatto ambientale dei sistemi di IA è la loro impronta di carbonio (*carbon footprint*).[23] In relazione a essi, l'impronta di carbonio è di difficile calcolo, data soprattutto alla mancanza di trasparenza da parte degli sviluppatori sulle

21 I sistemi di *Machine Learning* utilizzano varie metodologie di apprendimento automatico, in modo che gli algoritmi siano capaci di rispondere a determinati input o riconoscere specifici schemi complessi. Vi sono tre metodi di apprendimento: (1) apprendimento supervisionato dove l'algoritmo viene addestrato a rispondere a casi simili con risposte analoghe; (2) apprendimento con rinforzo, dove l'algoritmo è addestrato a scegliere le strategie o le opzioni che lo conducano alla ricompensa di maggior valore, e, in caso di mancanza di dati sufficienti, tale programma continua a imparare e migliorarsi in base alla propria esperienza; (3) apprendimento non supervisionato, nel quale il sistema viene lasciato a imparare da solo a partire da set di dati, ottenuto mediante *clustering* (Sator et al. 2020).

22 Le reti neurali o *Artificial Neural Networks* (ANN) consistono in un modello di apprendimento composta da elementi interconnessi come neuroni che, da input esterni, elabora delle risposte che trasmette a ciascuna unità connessa in base alle stimolazioni ricevute (Capparelli 2020).

23 Secondo la definizione data dal Gruppo Intergovernativo sul cambiamento climatico (IPCC) la *carbon footprint* consiste nel calcolo delle emissioni espresse tramite in quantità di anidride carbonica (CO2) prodotta ed immessa nell'atmosfera da una attività specifica oppure accumulata lungo le fasi del ciclo di vita di un prodotto.

effettive emissioni e i reali consumi energetici (Cowls et al. 2023). Il settore ICT per via della necessità di enormi *data center* in cui processare le informazioni raccolte e il mantenimento dei network di comunicazione, utilizzano enormi quantità di energia (Malmodin et al. 2024). È vero che, con il lancio del modello open-source DeepSeek R1, è stata presentata un'alternativa nell'ambito del LLM. Tramite innovazioni nella sua architettura e a livello algoritmico, il modello cinese riesce a offrire delle prestazioni elevate a un consumo energetico inferiore. Di conseguenza il suo impatto ambientale risulta ridotto, in ragione della inferiore impronta di carbonio rispetto ai modelli diffusi fino alla sua uscita (Wang et al. 2025). Ciò nonostante, il problema energetico permane.

Con i progressi negli hardware durante l'addestramento dei modelli che utilizzano il *deep learning*, le fonti di approvvigionamento energetico del settore rimangono principalmente fonti fossili, e anche nelle ipotesi in cui siano impiegate fonti rinnovabili, queste non coprono totalmente il fabbisogno (Strubell et al. 2019). Il calcolo esatto dei consumi energetici non è perfettamente determinabile; tuttavia, è previsto che aumenterà entro il 2030 fino a prendere per sé almeno il 20% del totale del consumo di energia al mondo (Gailhofer et al. 2021).

L'IA richiede in particolare alti consumi energetici in ogni sua fase di vita. Gli impatti delle due fasi principali si articolano in: (a) la fase di *training* dell'algoritmo che richiede un elevato consumo ma limitato nel tempo; (b) la fase di interfaccia con utenti, in cui il consumo è ridotto; ma, come nel caso nel caso dei LLM, è moltiplicato per gli utilizzi quotidiani da parte di milioni di persone (Cowls et al. 2023). Dunque, a sua volta migliorare l'efficienza di questi sistemi, conduce a un maggiore consumo, in ragione del fatto che ogni fase dell'esistenza dell'IA contribuisce a emissioni di gas serra (Nordgren 2023; Cowls et al. 2023).

Invece sull'altro lato della medaglia, se l'IA è impiegata come strumento per individuare soluzioni efficaci di contrasto al surriscaldamento globale in diversi settori, sono individuabili tre linee di applicazione principali: (1) per ridurre le emissioni; (2) per mitigare gli effetti del cambiamento climatico; (3) per adattare la società ai mutamenti in corso e quelli previsti (Nordgren 2023). In ogni caso, l'implementazione dell'IA è multisettoriale e ogni campo di impiego ha delle declinazioni caratteristiche a cui può adeguarsi per fornire le migliori soluzioni. Alcune possono essere individuate negli ambiti: dei sistemi di energia, dei trasporti, delle infrastrutture, delle

fabbriche, dell'agricoltura, della cattura dell'anidride carbonica,[24] delle previsioni metereologiche, della geoingegneria solare,[25] degli impatti nella società, fino a quello dell'azione individuale e delle decisioni collettive (Rolnick et al. 2019).

Al momento l'IA si offre per elaborare diverse opzioni di impiego per contrastare il cambiamento climatico. Tali approcci sono principalmente indirizzati a chiarire la natura del fenomeno e i suoi effetti, nonché a individuare quali sono i settori più attrattivi per investire e quali sono ancora sorvolati al momento (Cowls et al. 2023). Non trascurando la nuova generazione di LLM trainata dal successo del modello DeepSeek R1, che ha mostrato la possibilità di sviluppare nuove tecnologie nell'ambito dell'IA con notevoli prestazioni senza ricorrere necessariamente a enormi investimenti in infrastrutture di supporto (Okaiyeto et al. 2025).

4 L'approccio giapponese all'IA: tra *soft law* e sostenibilità

Al contrario della disciplina sull'ambiente, ormai ben definitiva attraversato un decorso alquanto travagliato,[26] in Giappone la regolamentazione delle nuove tecnologie si muove su un nuovo piano e con notevole anticipo rispetto ad altri Stati. L'approccio positivo verso le nuove tecnologie si manifesta con chiarezza nella sua elaborazione di un assetto regolatorio che bilancia innovazione e sostenibilità. La visione di una società futura modellata dall'utilizzo integrato delle nuove tecnologie, come l'IA e l'*Internet of Things* (IoT), è perfettamente incorporata nel progetto della 'Società 5.0', definita e perseguita dal governo giapponese.

Il progetto pone come obiettivo principale la realizzazione una società futura sostenibile, guidata dal progresso tecnologico e scientifico, ma soprattutto capace di generare nuova ricchezza per la collettività tramite l'integrazione delle nuove tecnologie emergenti nel tessuto imprenditoriale e nella vita quotidiana dei cittadini (Hitachi-UTokyo Laboratory 2020). Il fulcro di questa trasformazione

24 Si intendono quelle tecniche impiegate per rimuovere l'anidride carbonica (CO2) dall'atmosfera tramite lo stoccaggio del carbonio (CCS) e la cattura diretta dall'atmosfera (DAC).

25 Si intende quelle tecniche indirizzare a ricercare e studiare misure volte alla riduzione del surriscaldamento solare riflettendo la luce solare non sulla terra, con l'obiettivo di contrastare il fenomeno dell'aumento dei gas serra nell'atmosfera.

26 Oltre ai quattro grandi casi di inquinamento, si ricorda anche l'incidente della centrale nucleare di Fukushima a seguito del terremoto e conseguente tsunami nel 2011, che ha evidenziato le gravi carenze presenti anche nel complesso sistema normativo concernente l'energia nucleare e il risarcimento del danno da radiazioni (Pardieck 2013, 641-64).

è previsto che sia l'essere umano, la cui qualità della vita si intende migliorare attraverso soluzioni innovative ai problemi sociali, come diminuzione della manodopera e l'invecchiamento della popolazione, grazie alla continua interazione tra il mondo reale e la sfera digitale (Narvaez Rojas 2021). Con l'impiego di tecnologie innovative come l'IA, la Società 5.0 intende giungere alla creazione di una società dove dimensione digitale e mondo fisico siano integrati alla perfezione (Inatani et al. 2023).

La risposta del governo nipponico si è tradotta in un chiaro impegno verso politiche di sostenibilità, articolato attraverso alcune principali linee strategiche quali: (a) le politiche energetiche caratterizzate da investimenti e un maggiore impiego delle fonti rinnovabili; (b) l'investimento nella ricerca per garantire metodi di produzione agricola più resilienti; (c) la progettazione e la costruzione di infrastrutture in grado di resistere a disastri di varia natura; (d) l'integrazione crescente dei sistemi di IA in ciascuno di questi ambiti (Mavrodieva 2020).

Le motivazioni alla base possono essere individuate in tre fenomeni principali: (1) la rivoluzione portata avanti dalla nuova era dell'IA, che è accompagnata da numerose innovazioni tecnologiche nel campo della robotica e delle biotecnologie; (2) il progressivo spostamento del centro di interesse dell'economia mondiale dall'Occidente all'Asia, grazie alla rapida crescita economica di India e paesi del Sud-Est Asiatico, trainata da una sostanziale crescita demografica; (3) l'impulso dell'Agenda 2030 per lo Sviluppo Sostenibile delle Nazioni Unite (Hanefi Calp et al. 2022).

Al contrario di approcci incentrati sul contenimento di rischi tramite interventi di *hard law*,[27] attualmente in Giappone la regolamentazione *soft* dell'AI si sta sviluppando lungo due assi principali: la regolamentazione 'per l'IA', che riguarda la gestione e la limitazione dei rischi associati con il suo utilizzo e sviluppo, e 'sull'IA', che promuove riforme in diversi settori del diritto per la sua implementazione (Habuka 2023).

Sul piano della regolamentazione 'sull'IA' in Giappone, gli interventi sono stati emanati sotto l'egida del Ministero dell'Economia, del Commercio e dell'Industria (METI) e consistono in strumenti di *soft law*, indirizzati ai principali *stakeholders*, privati e pubblici. Il primo passo è stato il documento *Social Principles of Human-Centric*

27 Un approccio opposto dell'Unione Europea è rappresentato dal Regolamento (UE) 2024/1689 (c.d. *AI Act*), che si accompagna a un pacchetto di misure politiche indirizzato al sostegno sviluppo di un IA affidabile in UE. Il modello di *hard law* dell'*AI Act* è costituito da un sistema basato sui rischi in base ai quali i sistemi di IA sono suddivisi e con riguardo alla loro appartenenza in una determinata categoria impone degli obblighi vincolanti e dei divieti specifici. Le categorie dei sistemi di IA sono: (a) a rischi minimi, (b) a rischi limitati, (c) ad alto rischio, (d) rischi inaccettabili.

AI,[28] pubblicato dall'Ufficio di Gabinetto, che ha rappresentato il riferimento primario per la redazione delle successive linee guida. Il ruolo e l'azione dell'IA è ritenuto debbano essere modellati per rispettare tre valori principali: il rispetto della dignità umana, la diversità e l'inclusione, e infine la sostenibilità. Sulla stessa linea di pensiero è stata pubblicata dall'Ufficio di Gabinetto l'*AI Strategy 2022*.[29] La strategia si articola in una dettagliata descrizione sul futuro approccio riguardo l'integrazione dell'IA all'interno del tessuto sociale e produttivo, con il fine di preparare al meglio la società a crisi imminenti – come pandemie o disastri naturali – in modo da tutelare i cittadini attraverso l'impiego di sistemi di IA sotto varie forme.

Successivamente si sono susseguite una serie di linee guida emanate dal METI per lo sviluppo e l'impiego dei sistemi di IA,[30] ma l'intervento più recente in materia sono le *AI Guidelines for Business ver. 1.0* pubblicate il 19 aprile 2024, che si dichiarano il risultato dell'integrazione delle precedenti. L'obiettivo enunciato nel documento è quello di promuovere un uso sicuro dell'IA e di fornire una guida a coloro che intendono implementare i sistemi di IA all'interno delle proprie attività economiche di diversa natura.

Oltre alla numerosa produzione di misure di *soft law*, invece gli interventi sulla regolazione 'per l'IA' si sono concentrati sulle riforme di leggi ordinarie, al fine di adeguarle alle esigenze avanzate dello sviluppo e utilizzo dei sistemi di IA.[31]

Infine, il 28 maggio 2025, la Dieta ha approvato il disegno di legge *Act on Promotion of Reserarch and Development and Utilisation of Artificial Intelligence-Related Technologies* (c.d. *AI Bill*). L'*AI Bill* sarebbe il primo intervento legislativo in materia di IA in Giappone, che prospetta la definizione di un nucleo di principi base per la ricerca, lo sviluppo e l'utilizzo di questi sistemi.[32] Si tratta di un cambio di rotta rispetto all'assetto stabilito fino a tempi recenti, come è rinvenibile nella scelta di misure di *soft law* contenute nelle

28 *Social Principles of Human-Centric AI* (2019) [*Ningen chūshin no AI shakai gensoku*, 人間中心のAI社会原則].

29 Una versione aggiornata rispetto a quella pubblicata nel 2019.

30 Tra cui l'*AI Governance in Japan Ver. 1.1*, che definisce la direzione giapponese rispetto alla governance dell'IA e alla legislazione in materia, e le *Governance Guidelines for Implementation of AI Principles* che hanno l'obiettivo fondamentale di fornire una guida pratica per gli sviluppatori ed utenti dei sistemi di IA.

31 Alcuni di questi emendamenti sono stati apportati alla Legge sulla Prevenzione della Concorrenza Sleale (*Unfair Competition Prevention Act* (1993) [*Fusei kyōsō bōshi-hō*, 不正競争防止法], Law No. 47/1993) e Legge sul Copyright (*Copyright Act* (1970) [*Chosakukenhō*, 著作権法], Law No. 48/1970) (Habuka 2023).

32 Per la visione delle specifiche disposizioni contenute nel disegno di legge si veda: `https://www.whitecase.com/insight-our-thinking/ai-watch-global-regulatory-tracker-japan`.

linee guida. Tale disegno di legge apre quindi la strada a una nuova prospettiva del Giappone sulla regolamentazione sull'IA.

5 La sostenibilità dell'IA: insegnamenti dalla giurisprudenza ambientale in Giappone

L'evoluzione della giurisprudenza giapponese in materia di danno ambientale offre un quadro metodologico per affrontare sfide regolatorie poste dalle nuove tecnologie. Così come negli anni Sessanta emersero problematiche legate alla industrializzazione che il diritto tradizionale faticava a inquadrare (impatti collettivi diffusi, nessi causali complessi e necessità di bilanciare lo sviluppo economico con la protezione della salute), oggi l'IA presenta sfide analoghe procedurali e concettuali dal punto di vista della governance evidenziabili in tre dimensioni principali: la tipologia dei danni prodotti da attività umane, la mancanza di trasparenza informativa da parte degli operatori coinvolti e la dimensione temporale intergenerazionale delle conseguenze derivate.

I principi fondamento dell'approccio ai problemi legati all'ambiente elaborati dalle corti giapponesi per il *kōgai* – in particolare lo standard di diligenza rafforzato, l'approccio alla prevedibilità del danno e i meccanismi di inversione dell'onere probatorio – possono fornire strumenti concettuali per sviluppare un framework normativo per l'IA che integri considerazioni di sostenibilità ambientale. Il caso della Malattia di Minamata illustra la rilevanza di questi principi metodologici nei contesti di incertezza scientifica e complessità nel nesso eziologico.

In origine, i primi casi riscontrati sorsero intorno agli anni 50, con la nascita di bambini affetti dalla malattia; tuttavia, solo nel 1965 fu ufficialmente riconosciuta da Ministero della Sanità Pubblica con un annuncio pubblico (Gresser et al. 1981). La compagnia responsabile del processo dell'inquinamento da metilmercurio era la società Chisso, che per anni si rifiutò di cessare il riversamento del metilmercurio nella baia di Minamata, anzi continuò finché i cittadini sollevarono cause civili innanzi ai tribunali. Un focolaio della malattia di Minamata si verificò anche a Niigata, dove l'inquinamento da metilmercurio fu causato dalla società Showa Denko, che applicava gli stessi processi industriali della Chisso (Fujikura 2007).

Nel contesto attuale emergono alcune similitudini significative tra l'inquinamento diffuso originato dallo sviluppo industriale del dopoguerra e l'entità del contributo al cambiamento climatico dell'IA, ancora non perfettamente inquadrabile. Nonostante l'assenza nell'ordinamento giuridico giapponese di una tutela effettiva del bene 'ambiente' e di una normativa vincolante per l'IA, è possibile individuare come elementi comuni rilevanti: (1) la tipologia dei

danni sull'ambiente, (2) mancanza di trasparenza sulle informazioni relative alle attività industriali, (3) la dimensione temporale dei fenomeni coinvolti.

Innanzitutto, con riferimento alla tipologia del danno, con il termine *kōgai* si indica, da un punto di vista tecnico, un danno considerato direttamente inflitto alla vita umana in senso geografico e in senso sociale, non invece al bene 'ambiente'. In senso più atecnico, il *kōgai* può essere utilizzato per riferirsi a danni diffusi di rilevanza sociale anche se non collegati direttamente un elemento di degrado ambientale,[33] come anche sono configurabili ipotesi di inquinamento ambientale che non corrispondono a *kōgai* poiché collegate a eventi naturali e non ad attività umana (Ortolani 2021b).[34] Di conseguenza, seppur il nesso causale tra IA ed eventi naturali catastrofici causa di danni alla collettività possa apparire debole ed indiretto, il contributo sistematico e quantificabile dell'IA all'accelerazione del cambiamento climatico – attraverso emissioni di gas serra continue (Nordgren 2023) – potrebbe configurare una forma evoluta di *kōgai*. In questo modo il concetto di *kōgai* si adatterebbe a nuove forme di danno antropico diffuso.

In secondo luogo, riguardo alla mancanza di trasparenza sulle informazioni relative alle attività industriali, soprattutto con riferimento al contesto degli anni Sessanta e Settanta del Novecento, la Chisso era a conoscenza della sua eziologia da tempo; tuttavia, negò a lungo che gli scarichi della sua fabbrica ne erano la causa, rifiutando anche i pareri provenienti da medici che asserivano il contrario. Tutto ciò condusse l'opinione pubblica a credere che le vittime avessero contratto una malattia contagiosa, producendo una situazione di discriminazione ed emarginazione sociale dei malati, i cui danni morali sono stati successivamente risarciti (Osaka 2009). Il parallelismo metodologico si rileva nella gestione della trasparenza informativa. Come la Chisso occultava la conoscenza degli effetti del metilmercurio pur essendo consapevole delle conseguenze negative sulla salute umana, oggi si osserva un pattern analogo nel settore ICT. Nel suo *Enviromental Report 2024* Google ha riportato un aumento del 48% delle emissioni di gas serra dal 2019, in parte attribuito al consumo energetico dei *data center*; tuttavia, la divulgazione dei dati completi rimane limitata.[35] La lezione del caso di Minamata suggerisce che l'assenza di trasparenza informativa, non solo

33 Nella dottrina giuridica giapponese sono sorte ipotesi di *kōgai* collegate a danni da alimenti, da turismo eccessivo e da vaccinazioni.

34 Alcuni esempi sono inquinamento dovuto a emissioni prodotte da eruzioni vulcaniche e incendi.

35 Per il report completo di Google sulla strategia di sostenibilità ambientale del 2024 si rinvia a: `https://sustainability.google/reports/google-2024-environmental-report/`.

impedisce una valutazione accurata dei rischi, ma soprattutto può perpetuare danni diffusi.

In ordine all'ultima questione, la dimensione temporale di entrambi i fenomeni è caratterizzata da conseguenze a lungo termine. La Chisso aveva iniziato a riversare il metilmercurio nella baia di Minamata sin dal 1932, e le prime sporadiche vittime della malattia comparvero in realtà una decina di anni dopo (Osaka 2009). Sul tema del cambiamento climatico in senso stretto, il fenomeno fu riconosciuto dalle istituzioni internazionali per la prima volta al il summit di Rio de Janeiro del 1992 come problema incombente. All'incontro, gli Stati stipularono un accordo con il quale presero l'impegno di ridurre le emissioni di gas serra, riconosciute come causa del riscaldamento globale, ma tali impegni non erano comunque vincolanti per gli Stati firmatari. Il cambiamento climatico non è un evento a breve termine, ma ha un impatto intergenerazionale, che prospetta di protrarre i suoi effetti negativi per secoli a venire (Zarro 2022). In particolare, in Giappone la LFA indica come sua finalità principale «[t]o ensure wholesome and cultured living of the people in the present and in the future»,[36] stabilendo una prospettiva intergenerazionale di tutela dell'ambiente (Nakanishi 2016). Il contributo del settore ICT, e proprio dell'IA nello specifico, non è ancora perfettamente inquadrabile; tuttavia, l'impatto concreto che esso avrà sul surriscaldamento globale è da tenere assolutamente in considerazione (Cowls et al. 2023).

Sulla base di queste considerazioni, all'interno della dimensione giurisdizionale, con le decisioni dei tribunali di Niigata[37] e di Kumamoto[38] le corti ritennero le società, Chisso e Showa Denko, rispettivamente responsabili dei danni ai sensi dell'articolo 709 del Codice civile e riconobbero il risarcimento alle vittime ricorrenti. Nell'applicare la norma di diritto comune le corti adottano degli approcci innovativi per determinare la responsabilità (Fujikura 2007).

L'applicazione dei principi giuridici elaborati per il *kōgai* al contesto dell'IA non implica un'identità sostanziale dei fenomeni, ma piuttosto una trasferibilità degli strumenti metodologici sviluppati per affrontare situazioni di danno diffuso, difficoltà nell'individuazione del nesso causale ed ipotesi di responsabilità solidale. Tre principi possono risultare particolarmente rilevanti per la costruzione di un quadro normativo innovativo per l'IA: (a) lo standard di diligenza

36 *Basic Environment Law* (1993) [*Kankyō Kihonhō*, 環境基本法], Law 91/1993, Art. 1.

37 Tribunale distrettuale di Niigata, 29 settembre 1971, 判例時報 *Hanrei Jiho* 642 (1971) 96.

38 Tribunale distrettuale di Kumamoto, 20 marzo 1973, 判例時報 *Hanrei Jiho* 696 (1973) 15.

richiesto in ragione della natura dell'attività svolta; (b) la prevedibilità di un possibile danno propagato attraverso l'ambiente; (c) l'inversione dell'onere probatorio.

Per quanto riguarda la determinazione del dovere di diligenza, le corti ritennero che, data la natura intrinsecamente pericolosa del trattamento dei composti chimici nelle fabbriche, le società avrebbero dovuto adottare uno standard di diligenza più elevato, posto che era prevedibile che le scorie dei processi chimici producessero dei danni alla salute. Inoltre, nelle decisioni fu riconosciuto l'obbligo di applicare la migliore conoscenza e la tecnologia più avanzata esistenti al tempo nei processi produttivi, anzitutto per i possibili rischi alla salute delle persone (Fujikura 2007).

Il principio metodologico dello standard di diligenza rafforzato può essere trasferito al settore IA, non per l'equiparazione diretta dei rischi di cui è portatore, ma per l'affinità delle sfide regolatorie. Si riscontra come in entrambi vi sono attività economiche con impatti ambientali significativi, portatrici di asimmetrie informative tra operatori economici e cittadini, nonché della necessità di bilanciare sviluppo tecnologico e la protezione ambientale. L'applicazione di questo principio si baserebbe su tre considerazioni: (a) la capacità di mitigazione maggiore dato che stanno emergendo pratiche per la riduzione dell'impatto energetico (fonti rinnovabili, ottimizzazione algoritmica, hardware più efficienti); (b) la conoscenza consolidata sul contributo del settore ICT alle emissioni globali; (c) il contributo crescente dell'IA ai consumi energetici derivanti dai *datacenter*. Proprio nelle *AI Guidelines for Business ver. 1.0* nei principi alla guida degli operatori economici nel settore dell'IA, è richiesta sempre l'adozione di misure di adeguate in base al livello tecnologico disponibile al momento per assicurare la sicurezza dei sistemi (METI 2024).

In secondo luogo, il criterio di prevedibilità del danno sviluppato nelle sentenze di Minamata offre un approccio metodologico per valutare la responsabilità in presenza di conoscenza scientifiche consolidate. In principio le società convenute affermarono che l'ampiezza del danno non era prevedibile almeno finché l'acqua inquinata non sarebbe stata rilasciata, e perciò i cittadini erano tenuti tollerare tale inquinamento. Nelle sentenze questa posizione viene rigettata, in ragione del fatto che fu ritenuto illegittimo considerare le vittime alla stregua di 'soggetti per la sperimentazione' (Osaka 2009). Nel contesto dell'IA in Giappone, dove nei *Social Principles of Human-centric AI* è sancito il principio umano-centrico,[39] non sono

39 Il principio è sancito al punto 4.1 (1) dove viene affermato: «The utilization of AI must not infringe upon the fundamental human rights guaranteed by the Constitution and international standards».

trascurabili le conseguenze alla sfera privata dei soggetti, inflitte da conseguenze negative prodotte dei cambiamenti climatici (Cabinet Office 2019). Benché il calcolo non sia esatto, la letteratura scientifica ha già evidenziato il contributo significativo del settore ICT sulle emissioni globali, desinato anzi ad aumentare negli anni a venire (Gailofer et al. 2021).

Infine, la corte è stata chiamata a individuare il nesso causale tra l'evento inquinante dannoso e la lesione alla salute, manifestatasi nella malattia di Minamata. La causalità fu analizzata in tre parti: (1) i sintomi caratteristici della malattia e l'agente eziologico, (2) il percorso dell'inquinamento, (3) il rilascio nell'ambiente dell'agente dannoso scatenante da parte del danneggiante. Le corti ritennero sufficiente la prova del nesso tra la prima e la seconda parte, anche tramite prove circostanziali consistenti nelle nuove scoperte scientifiche al tempo. Con l'adozione di questa prospettiva, l'onere della prova slittò dalle vittime alle società convenute, chiamate così a provare che il loro agente inquinante non fosse uscito dalle proprie fabbriche, cosa che non furono capace di dimostrare. In sostanza, tramite l'applicazione dell'articolo 709 del Codice civile e secondo la terminologia utilizzata nella prassi, fu così delineata un'ipotesi di fattispecie di responsabilità oggettiva delle società inquinanti (Fujikura 2007). Sulla base di questo principio, le imprese nel campo dell'IA sarebbe opportuno che fossero chiamate a dimostrare un contributo significativo alla diminuzione delle emissioni lesive, tramite la fornitura dati verificabili.

Peraltro, nelle decisioni sull'asma di Yokkaichi del 1972,[40] in base agli articoli 709 e 719 del Codice civile sulla responsabilità solidale,[41] la corte riconobbe la responsabilità congiunta delle società petrolchimiche, dato che le emissioni individuali di ciascuna di esse non sarebbero state sufficienti alla causazione delle malattie respiratorie (Ortolani 2021b). Secondo il principio umano-centrico, gli *stakeholders* coinvolti nel campo dell'IA potrebbero essere considerati responsabili di ogni conseguenza derivante dall'impiego di questa tecnologia, in base alla natura del problema verificatosi (Cabinet Office 2019). Ai sensi di questo principio, l'approccio adottato nella decisione sull'asma di Yokkaichi rappresenterebbe un precedente importante per il riconoscimento di una responsabilità 'collettiva' delle imprese legate al settore ICT, in modo che vengano ritenute partecipi alle emissioni di gas serra in una determinata misura,

40 Tribunale distrettuale di Tsu, 24 luglio 1972, 判例時報 *Hanrei Jiho* 672 (1972) 30.

41 L'articolo 719 del Codice civile afferma: «If more than one person has inflicted damage on another person by a joint tort, each of them is jointly and severally liable to compensate for the damage. The same applies if it cannot be ascertained which of the joint tortfeasors inflicted the damage».

sia che tale misura sia calcolata preventivamente sia che essa sia approssimativa.

L'approccio metodologico basato sui principi relativi al *kōgai* presenta vantaggi specifici per la governance dell'IA. Innanzitutto, offre strumenti giuridici già testati per la gestione di danni diffusi, fornisce criteri per l'individuazione di responsabilità e integra considerazioni sull'adozione di un approccio precauzionale alle esigenze di sviluppo tecnologico. Tuttavia, si riconoscono anche i limiti di tale analogia, dato che comunque l'IA non produce un inquinamento direttamente collegabile a fenomeni climatici catastrofici, ma contribuisce limitatamente alla loro causa. Inoltre, non deve essere tralasciato il fatto che sono ampi i lassi di tempo che incorrono tra l'evento dannoso, come emissioni di gas serra, e i danni ambientali, ma soprattutto la difficoltà della prova di un di un nesso causale forte tra essi. Ciononostante, tali principi sviluppati offrono una base giuridica consolidata per costruire un quadro normativo innovativo che pone al centro il bilanciamento tra il progresso tecnologico e la sostenibilità.

Proprio perché la sostenibilità è considerata un aspetto chiave nell'avanzare della società giapponese nel suo complesso, la rilettura dell'IA e il suo ridimensionamento secondo la responsabilità civile in campo ambientale, come delineata dalle importanti controversie in materia di inquinamento, non ne risulta totalmente estranea.

6 Considerazioni conclusive

Il panorama delineato evidenzia come l'evoluzione della giurisprudenza giapponese in materia di danno ambientale possa offrire spunti interpretativi significativi per affrontare le difficili sfide poste dalle tecnologie emergenti, in particolare dall'IA. Ciò assume particolare rilevanza soprattutto in considerazione dell'assenza, ad oggi, di controversie sul tema. Volgere lo sguardo al passato può offrire spunti preziosi, facendo emergere soluzioni già sperimentate, che pur restando circoscritte alla dimensione teorica, si rivelano oggi sorprendentemente attuali. Tale prospettiva appare ancora più significativa se si considera come il Giappone abbia già sperimentato le gravi conseguenze di una industrializzazione incontrollata.

Le decisioni giurisprudenziali analizzate possono rappresentare modelli utili per la costruzione di una governance dell'IA che sia realmente responsabile. In particolare, l'approccio giapponese alla regolazione globale dell'IA – fondato finora su strumenti di *soft law* fino ad oggi – dimostra una volontà normativa di conciliare il progresso tecnologico con la protezione dell'ambiente.

Sebbene non si possa ancora parlare di un contenzioso ambientale legato all'IA né in Giappone[42] né globalmente, è possibile individuare una traiettoria giurisprudenziale, suscettibile di influenzare anche la produzione normativa, che potrebbe evolversi in tale direzione. In questo senso, l'esperienza giapponese potrebbe offrire un modello originale per l'elaborazione di strumenti di responsabilità civile in campo ambientale, applicabili anche alle tecnologie avanzate, contribuendo in maniera significativa al dibattito internazionale sull'effettivi sostenibilità dell'IA e dei suoi effetti sull'accelerazione del cambiamento climatico.

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42 Tuttavia, nel contesto delle *climate change litigation*, dal 2017 sono state intentate 5 cause civili ed amministrative volte a bloccare l'attività e la costruzione di centrali elettriche a carbone; tuttavia, nessuna di queste ad oggi ha avuto successo. L'ultima causa sollevata da 16 giovani giapponesi è denominata *Youth Climate Case Japan for Tomorrow*. In essa i ricorrenti chiedono alle corti l'applicazione delle disposizioni 709 e 719 del Codice Civile adducendo che l'impegno sulla riduzione delle emissioni di gas serra è un obbligo internazionali vincolante (vedi Caso *Urgenda*, Zarro 2020) imposto dal IPCC, che il Giappone è vincolato a rispettare. Attualmente la causa è pendente presso la corte di Appello di Kobe. Per un approfondimento sullo stato attuale della *climate change litigation* in Giappone si rinvia a: https://blogs.law.columbia.edu/climatechange/2025/02/27/climate-litigation-in-japan-what-to-expect-in-2025/.

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Rethinking Property Rights in the Age of Climate Change: Lessons from the Japanese Commons and the Italian Approach

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Abstract This article reflects on the role of property in addressing climate change and environmental degradation through the lens of the theory of goods. It examines the relationship between private property and commons as tools for sustainability, drawing on the foundational debates sparked by Hardin, Ostrom and Heller, as well as recent discussions in Japan and Italy. The aim is to highlight the strengths and limits of current legal frameworks and to explore how property law might evolve, even beyond the domain of environmental law, to promote sustainability, equitable access to resources and protection of future generations.

Keywords Environmental sustainability. Social sustainability. Private property. Commons. Anticommons. Environmental commons. Iriai. Satoyama. Beni comuni. Usi civici. Dominii collettivi. Assetti fondiari collettivi. Échelle de communalité.

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1 Introduction

Today, sustainability occupies a central position in both political and legal discourse, with increasing efforts to reconceptualize it beyond its traditional environmental dimension toward a broader vision that includes social equity and institutional governance.

Despite its normative appeal, the concept of sustainability remains ambiguous and open to interpretation. Its Latin root, *sustinere* – meaning both 'to support' and 'to restrain' – aptly captures this dual nature: it enables protection while simultaneously imposing limits (Irti 2024, 1035). As articulated in the 1987 Brundtland Report, sustainability refers to a form of development that meets the needs of the present without compromising the ability of future generations to meet their own. This definition is widely regarded as a foundational principle for the responsible use of resources.

In the face of climate change, much of the research on sustainability has so far focused on the ecological consequences of industrialization – particularly those related to deforestation and the degradation of environmental common-pool resources (McKean 2000) – as well as on the social dimension of sustainability (Palinkas, Wong 2019; Wang, Ke 2024).

Nowadays, however, the challenges extend beyond merely analyzing these ecological consequences of industrialization to encompass a broader examination of the institutional arrangements that may either mitigate or exacerbate these impacts (Agrawal, Chhatre, Hardin 2008; Ostrom 2005). Among these, the paradigm of private property, as conceptualized in nineteenth-century Western legal traditions, holds particular significance.

Building on this premise, this contribution aims to offer some reflections on the role of property in addressing the challenges posed by climate change and the degradation of environmental resources, approaching it through the lens of the theory of goods. In particular, it will explore the relationship between private property and commons as tools for promoting environmental sustainability, drawing on the foundational analyses originally sparked by Hardin, Ostrom and Heller, that have formed the core of scholarly debate on the subject. Their work has indeed significantly influenced – with different and somehow opposed perspectives – the study of commons and natural resource usage, laying the groundwork for much of contemporary environmental law and representing a conceptual bridge to the issues now regarded as central to this article.

By doing so, the article aims to ultimately illuminate the strengths and limitations of current legal frameworks and discussion on commons, contributing to broader reflections on how property law might evolve, even beyond the domain of environmental law, to

more effectively promote sustainability, ensure equitable access to resources, and safeguard the interests of future generations.

2 The Legal Challenges of Climate Change: The Role of Property Law

As a preliminary step, it may be useful to briefly outline the legal instruments that have been employed to date in addressing the challenges related to climate change. The following reflections offer only a brief overview of a much broader and ongoing debate within legal scholarship. Nevertheless, this initial reconstruction is essential to contextualize the focus of this paper, which engages with just one of the many tools available within private law.

The evolution of scholarship on (environmental) sustainability reveals an increasing hybridization of diverse legal tools, as environmental harms have been addressed through a combination of civil liability paradigms, contractual regulation, and proprietary mechanisms (Pozzo 2024, 801).[1]

Particularly noteworthy in this regard are studies and reflections on the role of property law in addressing environmental challenges, which stand at the centre of an ongoing and lively debate – within both civil law and common law traditions – highlighting the limitations as well as the potential of the private property paradigm in responding to environmental degradation.

On the one hand, in order to address environmental challenges, traditional instruments within property law, such as institutions governing neighbourhood relations, have been more and more reinterpreted in innovative ways, extending beyond cases in which damage can be specifically attributed to identifiable harm to persons or property (Pozzo 2024, 805). Judicial mechanisms have also been employed to provide protection in disputes between private parties, particularly in situations where the object of ownership is contaminated. In such cases, the property owner may be required to remediate the land unless they can demonstrate that they acquired it in good faith and did not purchase it at a significantly undervalued price due to its polluted condition. This may include proving, for instance, that an environmental due diligence was conducted prior to the acquisition (Pozzo 2024, 806).

1 Among these frameworks, one of the earliest developed to address the impacts of industrialization on environmental resources was, without doubt, the liability paradigm, which was primarily employed to discourage corporate behaviour leading to pollution-intensive activities. Another private law instrument widely employed to address environmental challenges in the era of climate change beyond civil liability has been the contract (Pozzo 2024, 804).

On the other hand, notwithstanding these potentials, the limitations of property in addressing environmental challenges are undeniable. A central issue in this regard lies in its absolutist conception – developed within nineteenth-century Western legal traditions – which has often been invoked since the 1800s to justify 'egoistic' (De Mauro 2025) behaviour in the private sector, even when running counter to the general interest in a healthy environment.

To counterbalance the excesses of an absolutist approach to private property, many legal systems already permit the expropriation of privately owned land of particular environmental significance for reasons of public interest, provided that no alternative means or instruments exist to ensure its protection (Pozzo 2024, 806). They may also impose easements to guarantee enhanced environmental safeguards on sites considered, from an ecological standpoint, to be either at high risk or of critical importance for the protection of human health or the preservation of specific geological features. A noteworthy example is that of France, which established a public agency affiliated with the Ministry of the Environment to implement a territorial policy aimed at protecting coastal areas, respecting natural sites, and maintaining the ecological balance of littoral zones (Pozzo 2024, 806). The Conservatoire du littoral is empowered to undertake various actions concerning real estate assets, including the purchase – and, where necessary, the expropriation – of land deemed more effectively managed for environmental purposes than if left in private hands.

However, a more systematic reflection around the possibility to challenge this 'egoistic' conception of private property has received less consistent support in the relevant literature. The reflections that follow are intended to advance scholarly inquiry in this regard.

3 From Exclusive to Inclusive Property Through the Lenses of Commons

Rooted in the absolutist conception of ownership that emerged during the codification era, and closely tied to industrialization, the Western legal tradition model for property has historically legitimized the misuse (including, overexploitation or underuse) of goods, including natural resources, and has failed to adequately protect unowned or collectively held assets, such as lands and environmental resources.

In light of the historical significance attributed to property during the 1800s – conceived as intrinsically linked to, if not the very embodiment of, individual freedom, and as defining the 'horizon of meaning' for the emerging bourgeoisie in stark contrast to the preceding feudal order (Barcellona 2016, 19) – it is easy to understand the central role that (private) property assumed in the codification

movements of the nineteenth century, as well as the symbolic weight attached to the notion of property as 'full and exclusive'.

From a comparative perspective, based on differing understandings of the prerogative to exclude third parties from the use, enjoyment, and disposal of an asset, two main conceptions of property emerge, broadly reflecting the approaches characteristic of the civil law and common law traditions.

Firstly, the civil law tradition, has – famously – depicted it as a tree with the trunk representing the core element of exclusivity and the branches symbolizing the various prerogatives and powers of owners, which can be adjusted or combined depending on the legal and factual characteristics of the asset. In this view, property is primarily understood as the relationship between an individual and a material object.

By contrast, in the common law tradition, property is conceptualized as a set of relationships between individuals, all interacting with one another through a defined structure of rights, powers, privileges, and immunities, alongside their corresponding duties and liabilities. These entitlements over an object are often described as a 'bundle of sticks', with the right to exclude representing only one of them, the absence of which – unlike in the civil law tradition – does not automatically disqualify a legal interest from being considered 'property' (Mattei et al. 2023, 9).

It is what has been called the 'bundle of rights theory', referring to the idea that

> private ownership is not an absolute right but what remains from the rights governed by state laws, local ordinances, private nuisance regulations, and institutions, and has intrinsic constraints. An owner has a set of rights to use, manage, and transfer within these limits, and can assign certain rights to other people. (Takamura et al. 2021, 262, recalling Hohfeld 1913)

In this view, property is understood less as rights to a 'thing' and more as a collection of rights vis-à-vis others (Johnson 2007, 247).[2]

In recent years, as in other areas of law, a convergence between civil law and common law traditions has been underway (Marini 2016). With respect to property, however, this convergence has been far from linear. On the one hand, as a byproduct of broader phenomena such as digitalization and globalization – which have

2 "It is a legal construct that has evolved to describe the rights as well as the responsibilities that attend ownership quite independently of whatever 'thing' is owned. The bundle of rights also demonstrates the many ways in which ownership can be divided. In this sense, the concept works to illustrate both tangible and intangible property equally well" (Johnson 2007, 247).

reinforced the dominance of economic structures in the governance of global challenges – an expansion of the 'exclusivity-driven' model of property has gained increasing traction.[3] On the other hand, diverse political and theoretical reflections have emphasized a weakening of the exclusivity 'trunk' of property, accompanied by a growing recognition of new configurations of power in the circulation of assets, particularly intangible ones.[4]

Based on these considerations, and indeed moving beyond them, even Western legal systems have begun to signal the desirability of a shift toward the theorization of more 'inclusive' property regimes, seeking to preserve the core of exclusive ownership while simultaneously acknowledging third-party entitlements to access and benefit from (natural) resources, and promoting active community involvement in their governance (Ostrom 1990).

These reflections emerge from the recognition of the limitations inherent in the traditional property paradigm – not only in ensuring the proper maintenance of goods essential to a healthy environment, but also, more broadly, in achieving a more equitable distribution and governance of wealth, as envisioned by global and national sustainability agendas.

A similarly renewed conception of property as an inclusive paradigm is rooted in the pioneering reflections (in Italy, Rodotà 1981; Rescigno 1972; Sacco 1968;Salvi 1986) on the theory of social function and social utility for private property, advanced by several legal scholars across various jurisdiction – whether or not[5] based on legal provisions on private property 'limitations'.[6]

3 This trend reflects a broader shift toward what Piketty (2020) has termed proprietarianism and is closely linked to the emergence of 'Knowledge capitalism'. The evolution of this new form of capitalism underpins the processes of commodification and the expansion of exclusive rights over resources that previously belonged to the public domain. It offers a compelling explanation for the accelerating privatization of intangible assets (Boyle 2003; Resta 2013).

4 An illustration of this is the proliferation of streaming services, that allow people to 'enjoy' a song, a movie, etc., without granting them full property to it.

5 In France, for example, the idea of limited private property in the name of its social function is not expressly provided for by law but has nevertheless been reconstructed from the thought of the jurist Josserand. He denied the purported unlimited nature of this right, claiming as evident that there are in it "a multitude of obstacles, barriers, borders that restrain its movement and oppose its expansion" (Josserand 2006, 16). The German theory of the social function of private law (*Sozialbindung des Privatrechts*) has a broader scope: according to it, it is the entire legal system that has a social nature, being aimed at finding an ideal compromise point between the interests of the individual and those of the community (Geiger 2013).

6 See Art. 17 of the EU Charter of Fundamental Rights, which recalls the possibility for the law to impose constraints on the indiscriminate use of property by virtue of the general interest. Similarly, Article 1 of Additional Protocol No. 1 to the ECHR also enshrines the possibility of setting restrictions in the name of the public interest.

The idea of property constrained by requirements of social utility is clearly expressed, for instance, in Article 42, § 2 of the Italian Constitution.[7] This provision affirms that "private property is recognised and guaranteed by law, which determines the ways in which it may be acquired, enjoyed and its limits in order to ensure its social function and to make it accessible to all". This constitutional framework grounds property rights in broader considerations of collective welfare and accessibility.[8]

This emerging perspective on property – apparently in logical and systematic tension with the idea of maximum freedom in the enjoyment of ownership – has led some scholars to reimagine the very notion of 'limits' to private property not merely as exceptional (external) derogations from the property regime, but rather as structural and inherent elements of a specific *modus essendi* of property itself (Macario 2006, 8).

Such limits, when understood as internal to property (Angiolini 2021, 505; Patti 2016; Macario, Miletti 2017), function as a directive for the legislators intervening with diverse sector-specific laws and have the task to systematize – acting as a common denominator – the different disciplines in which property can be operationalized, as well as to regulate the use and distribution of resources ('*utilizzazione*' and '*distribuzione delle risorse*') (Rodotà 1960, 1272, revised in Rodotà 1981, 324).

Incorporating and operationalizing the idea of the social function of property is far from straightforward; it has, in fact, been at the centre of extensive scholarly reflection across time and jurisdictions. In the perspective advanced in this paper, however, this idea is conveyed through the conceptual lens of the commons.

The relationship between property and commons is by no means a simple one. Some scholars have theorized them as being in tension – if not in outright contradiction – with one another: on the one hand stands private property, and on the other, the commons, which challenge it on the terrain of resource governance and the "broader question of the relationship between forms of ownership

7 For broader reflections on the paradigm of social utility with reference to Article 41 of the Italian Constitution, which addresses the limitations to the freedom of private economic initiative, see Lemme (2018). For more comprehensive insights into the intersection of the environment, landscape, and constitutional values see Lemme 2025.

8 According to prominent Italian scholars, developments in this area reveal that the principle of social function has played a dual role. On the one hand, it has served as the normative core around which diverse forms and legal regimes of private property have been structured. On the other, it has helped to erode – or even neutralize – the traditional barrier created by the supposed exceptional nature of limitations on private property. This barrier had long prevented the integration of the numerous special legal regimes governing property into a coherent general theory. For broader reflections in this regard see Gambaro 1995, Pugliatti 1964 and Macario 2006.

and political community" (Marella 2012, 7). In this view, the owner's prerogative to exclude others from a given resource – framed even as a fundamental right[9] – has been viewed as being in direct tension with an opposing fundamental right: the right to access and inclusion, which constitutes the core of the commons discourse (Mattei et al. 2023, 9).

By contrast, an alternative conception sees these two rights (and related interests and powers) not as mutually exclusive, but as interconnected and this interconnection is mediated through the concept of the social function of private property, which enables a reimagining of property as an inclusive right.

As will be further explored below, the commons "aim at conceiving the proprietary relationship as qualitative rather than quantitative, based on access and inclusion rather than exclusion and deprivation" (Mattei et al. 2023, 6). The key characteristics of the 'material and immaterial goods' that can constitute a common lie in their nature as shared resources among individuals, which require the organization of collective action for their management and preservation. Examples of commons include natural resources (to be preserved for future generations), cultural patrimony, and traditional knowledge (Mattei et al. 2023, 8).

It is precisely at this juncture – particularly in light of the multiplicity of relationships that may exist around, and upon, the same asset(s) – that the connection between property and commons can be constructed. Drawing on the idea that the legal regime governing a resource emerges from the web of relationships that develop around it (Albanese 2024, 1289-95), the various interests of those who use, manage, and benefit from a resource classified as a common can be understood through the lens of the 'bundle of rights' paradigm.[10]

From this perspective, the expression 'commons' may refer to situations in which the existence of common interests affects the legal regime of a given asset by requiring the construction of specific entitlements for the holders of those interests – particularly when such interests are constitutionally recognized as fundamental rights – alongside private ownership rights and the public interest as represented by the State (Angiolini 2021).

Thus conceived, commons – when imbued with "an ecological sensibility rendered urgent by the current environmental crisis" – can

9 See Art. 17 EU Charter of Fundamental Rights.

10 This perspective allows for the conceptualization of a form of relational property, that is able to integrate the six components identified in Elinor Ostrom's framework for commons governance: access, withdrawal, and exploitation (use rights), alongside management, exclusion, and alienation (control rights), see Lawrence et al. 2021, 449.

serve as an entry point for reflections on the role of property not only in human life (because of its relationship with fundamental rights) but also 'in the life' of this legal institution (Mattei et al. 2023, 8).

4 Commons and Environmental Sustainability

Commons have played a central role in the field of environmental sustainability studies. Numerous investigations in this realm have indeed focused on forests and other landscapes, both in rural and urban contexts.

Over time, and across different regions of the world, many of the medieval practices that gave rise to the original notion of the commons[11] have either disappeared or come under significant pressure due to processes of economic restructuring, socio-cultural transformation, shifting policy frameworks, and evolving administrative regulations. Nonetheless, many of these practices have endured, albeit often in radically transformed forms, as the very concept of the commons has undergone substantial evolution (Hribar et al. 2023, 1).

As briefly noted above, the concept of commons today generically refers to "a broad set of resources, natural and cultural, that is shared by many people" (Hribar et al. 2023, 1). Under this broad understanding, the term encompasses a wide and diverse range of practices, institutions, and resources.

Among the many ways in which commons have been conceptualized so far, four approaches are worth mentioning: (i) first, an economic perspective, according to which the goods are to be classified as such based on their low/high excludability and low/high subtractability (and not their ownership regime). In this view, common-pool resources, for example, generally refer to natural resources characterized by subtractability (where one person's use diminishes availability to others) and non-excludability (where it is difficult to prevent access to the assets themselves) (Ostrom 2005); (ii) second, a political perspective (Rochfeld, Cornu, Martin 2021, 371), according to which commons are framed as instruments of radical social transformation and have been central in both contemporary social theory and political activism in the last decades (Mattei et al. 2023, 2). In this idea, they are viewed as tools for reimagining the structure of society (Barcellona 2016); (iii) third, a sociological perspective, which has

11 Historically, the term 'commons' refers to the practices by which communities in medieval Europe collectively managed land and other resources essential for their survival, resources that were held in common and subject to shared rules of use and governance. Traditional commons were typically sustained by commoners, that is, members of a community who made joint use of local resources over long time periods, often across multiple generations (Hribar et al. 2023, 1).

focused on the study of the factual characteristics of these goods and practices; (iv) finally, a legal perspective, according to which commons are primarily conceived as objects of regulation.

This study focuses principally on the two latter approaches.

From a sociological standpoint, it is noteworthy that scholarship has extended the concept of commons to include a range of related terms that refer to similar phenomena – though with subtle conceptual distinctions – such as common property regimes and common-pool resources (McKean 2000).[12]

The defining features of commons have been described by scholarship as the interconnection of four elements: the asset, the community, the relationship between community and the good, and the relationship with the outside world (Lawrence et al. 2021, 449). The commons indeed presuppose the existence of a "community of people" which jointly manage the asset (Lawrence et al. 2021, 449) – whose size varies according to the nature of goods and the related circumstances. In some cases, a local community is optimal; on the other hand, global commons require global communities (Mattei et al. 2023, 8).

As for the relationship between the community and the asset, this can be structured in such a way that the community exercises a range of prerogatives, extending from simple access and use to active participation and control – with this latter often meaning not only having a "a right to voice an opinion or participate in some way" but rather having significant management forest (Lawrence et al. 2021, 458); while, concerning the relationship with the outside world, particularly significant is the right to access to the asset by the non-owners – view as a mechanism to avoid the atrophy resulting from possible absentee owners or governments.

From the legal perspective, instead, scholarship has mainly focused on identifying how legal systems recognize and regulate commons, often highlighting the absence of statutory definitions of commons (Mattei et al. 2023, 15). One notable exception is the provision of the category of *choses communes*, which appears both in the Code Napoléon as well as in the Belgian and Quebec Civil Codes, but is absent from other jurisdictions. This category includes things that cannot be privately owned, such as air or water. Within this framework, scholarly attention has focused on the possibility of constructing models for the management and governance of resources that transcend both market-based logic and the traditional *summa divisio* between public and private powers (Angiolini 2021; Cascione

12 According to McKean, drawing on earlier work by Bromley (1992), the common property regime designates a form of collective private property in which "access is limited to a specific group of users who hold their rights in common".

2013). In particular, legal professionals are typically exposed to the concept of commons through the lens of property law, a perspective that tends to constrain its interpretive and regulatory scope (Mattei et al. 2023).

In line with this approach, commons can be understood differently depending on the property regime upon which they are grounded. More specifically, the scope and meaning of this category vary depending on whether the jurisdiction in which commons are conceptualized bears the historical legacies of feudalism, colonialism, or socialism (Mattei et al. 2023).

Among these legal systems, the continental European tradition – once governed by feudal regimes – offers an interesting example for the scope of this paper. In this context, certain features of the commons can be found in goods belonging to State apparatuses – which explains why still now in European legal systems commons are generally addressed through the lenses of public property ("stressing its management in the interest of a community and its common usage") (Mattei et al. 2023, 13). This conception is based on two elements: (i) the principle of inalienability that governs public goods included in the public domain, and (ii) their designation for common use (Mattei et al. 2023, 13). Interestingly, even in Europe commons are understood not only as shared resources, but also as institutional or governance arrangements that enable and regulate the collective use of such resources.

This perspective explains the relation of the notion of 'commons' to the legal structure and rules governing it (Hribar et al. 2023, 2) and brings the European view closer to the original U.S. conception of this institution, where a central role was granted to communities ('communing'), to the position of the commons outside the realm of the market, and "social rules, customs, and institutional arrangements that can be introduced to govern the commons beyond traditional public or private structures" (Mattei et al. 2023, 11).

It is within these broader reflections that the relationship between commons and the environmental challenges brought about by industrialization at the core of this analysis must be framed. The foundational debate on this topic originates from the dialectical opposition between the views of Hardin, Ostrom, and Heller, each addressing the role of commons in either causing, amplifying, or mitigating the effects of industrial expansion, human intervention, intensive pollution, and the depletion of natural resources.

Garrett Hardin, in his seminal work on the 'Tragedy of the Commons', argued that commons were inherently incapable of preventing individual overuse (and over-exploitation) of shared resources under an open-access regime. To address the risk of resource depletion, he advocated for the imposition of 'strongly

defined' governance mechanisms[13] through the assignment of private property rights. In his classical narrative, commons are portrayed negatively, as mirror of a fundamentally inefficient system. He suggested that without the concentration of decision-making power in either private owners or a centralized authority, communities would inevitably fail to manage shared resources. In this sense, Hardin's depiction of commons echoes the perceived inefficiencies of feudal structures (Mattei et al. 2023, 424).

At the opposite end of the spectrum, yet sharing the same pessimistic outlook, Michael Heller introduced, several years later, the concept of the 'Tragedy of the Anticommons' (Heller 1998), wherein the risk of deterioration of a resource stems not from over-exploitation, but from underutilization, resulting from the excessive fragmentation of ownership rights among too many actors. In this model, a large number of rights holders each possess the power to exclude others from using the resource. As the number of stakeholders increases, so do the transaction costs associated with obtaining unanimous consent for use, ultimately rendering the resource unusable – resulting in a paralysis of use, where potential beneficiaries abandon any attempt at access or exploitation (Takamura et al. 2021, 260).

The concerns raised by Hardin and Heller have been extensively studied and debated over the past decades. Interestingly for the scope of this analysis, the risks they identified can be observed, for instance, in the ecological crises affecting *satoyama* (里山) landscapes in Japan – a traditional form of secondary natural environment shaped by long-standing sustainable human intervention.[14] Some studies by the Japanese scholarship (Shimada 2015, 488) have indeed observed the emergence within *satoyama* landscape of three forms of crisis: (i) the degradation of habitats and the loss of biodiversity, attributable to excessive human activity – which echoes Hardin's warnings about overuse and resource depletion in open-access regimes; (ii) the underutilization and abandonment of *satoyama* systems, leading to the decline of ecosystems that rely on continuous human management (under-use can, for example, threaten biodiversity) – thus resonating with Heller's theory of underuse resulting from fragmented rights

13 The idea that property rights are 'strong' recalls the considerations raised by Rodotà who argued that "la proprietà, per lungo tempo, ha costituito la situazione forte per eccellenza" (Rodotà 1981, 43).

14 "*Satoyama* is a Japanese term for landscapes that comprise a mosaic of different ecosystems including secondary forests, agricultural lands, irrigation ponds and grasslands, along with human settlements. In France, a similar landscape is called 'bocage'. People cultivate gently sloping hills as farms and orchards. To protect crops and cattle, they have preserved forests surrounding their land. This agricultural environment, maintained by people, has created di-verse wildlife habitats" (Shimada 2015, 488).

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or limited access;[15] and (iii) the disruption of ecosystems caused by the introduction of invasive species and chemical contamination (Shimada 2015, 488). This third form of degradation suggests, however, that the root causes of *satoyama*'s ecological decline may not lie inherently in its commons-based structure, but rather in a more complex set of socio-environmental dynamics that go beyond the binary logic of overuse and underuse.

The same risk akin to the 'tragedy of the anticommons' has also been studied with reference to rural and forestry areas in Italy. As early as the mid-nineteenth century, the abandonment of land due to declining profitability had begun and the situation worsened during and after the two World Wars. One of the most severe consequences of rural depopulation and reduced human presence in the landscape has been the widespread fragmentation and dispersion of rural and forest property. This extreme parcelisation has long caused a series of problems, including significant difficulties in land cultivation and management, increased production costs, inefficiencies in farm operations, the need for complex labour coordination, frequent disputes among neighbouring landowners, and ultimately, the abandonment of land management altogether (Crosetti 2017, 58).

That said, even though a more optimistic perspective on the commons took some time to emerge, it nonetheless eventually did – twenty years after Hardin's seminal work – thanks to the publication of *Governing the Commons: The Evolution of Institutions for Collective Action* by Elinor Ostrom.

Although her work primarily focused on preventing overuse in situations marked by social dilemmas (and not also the different issue of underutilization), the Nobel Prize-winning economist and political scientist decisively challenged the prevailing assumption that commons are inherently tragic or ungovernable and that "markets and their foundational institution – private property based on exclusion" – are "the only efficient mechanisms for managing resources" (Mattei et al. 2023, 3).

On the contrary, her research showed that local communities often succeed in establishing and maintaining robust institutional arrangements for collective governance, effectively preventing the depletion of shared resources and demonstrating a remarkable capacity for resilience. Interestingly, Ostrom did not frame commons

15 More specifically, in Japan, the profound economic transformations of the past century have significantly diminished people's reliance on commons as a foundation for their livelihoods. As a result, many commons have undergone substantial changes in character and now suffer from chronic underuse – closely linked to the declining economic value of natural resources as productive inputs (Shimada 2014). This issue of underuse is not unique to Japan; it is also shared by many European countries facing similar socio-economic dynamics (Olsson, Austrheim, Grenne 2000; Shimada 2015, 488).

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as necessarily governed by either private or public institutional arrangements (Mattei et al. 2023, 3). Rather, she acknowledged that the form of governance depended on the specific features of the particular common resource in question.

Building on her theory, a growing body of research has sought to assess whether such community-based institutional arrangements can also be effective in preventing or addressing the underutilization of resources and, more broadly, in supporting sustainable landscape management. This includes ensuring the sustainable use of natural resources, the provision of ecosystem services or "nature's contributions to people" and the preservation of cultural landscapes (Hribar et al. 2023, 2).

To this end, scholars have grounded their analyses in empirical case studies to address the conceptual ambiguity surrounding the notion of the commons (Mattei et al. 2023, 11) and particularly those that are referred to as 'environmental commons' (Flanagan et al. 2020). Given that some of the earliest studies on this topic focused on the Japanese system,[16] the reflections below will likewise explore the dimension of Japanese commons, the so-called *iriai* (入会権), as effective models for sustainable resource governance.[17] These studies offer concrete examples of best practices and alternative governance models, which can serve as a foundation for the subsequent comparative analysis with the current Italian framework.

16 "The centuries-old common lands of traditional Japanese villages are particularly worthy of inclusion in our comparative study of common property, for several reasons. First, they fall squarely into most our pristine definition of common property: they are common lands with identifiable communities of co-owners, as opposed to being vast, open access public areas used by all and in essence owned by no one. Second, Japanese villages developed elaborate regulations, even written codes, for their commons; even a tiny fraction of the many thousands of traditional villages offers ample variety on most variables of interest. Third, the documentation and historical records allow us to inquire not only into formal rules but also into their operation and enforcement, thus offering more data than we have in other cases of common-property institutions. Fourth, Japanese villages employed threats of ostracism and banishment to control social behavior and as ultimate penalties for abusing the commons; we therefore find a fascinating resemblance between the sanctions they employed and the concept of exclusion that is so important in theories of public goods and property rights used in the study of common property. Fifth, from the mid-seventeenth to the mid-nineteenth century, Japan closed its ports to trade; as a result Japanese society spent two centuries in a conveniently isolated 'test tube' uncontaminated by the world economy and living within the limitations imposed by nature and local technology" (McKean 1992, 63).

17 "Ostrom identifies iriai as a robust institution and appropriate model to devise the principles and uses it as one of several cases from which she builds design principles for maintaining long-enduring common-pool resources (CPR) institutions that support sustainable production" (Shimada 2014, 208).

4.1 Lessons from the Japanese *iriai*

In rural Japan, for centuries local communities have collectively managed forest, semi-natural grassland resources, rivers, fisheries and marine areas – forming a complex ecological and cultural mosaic throughout Japan (Duraiappah, Nakamura 2013).

They did so through the traditional *iriai* (communal) system (Shimada 2014; Muroi 2021), which allows still now local inhabitants to collectively use the land to procure timber, firewood, and other natural resources (Hribar et al. 2023, 3).

This system is interesting insofar as it provides for a highly formalized and codified example of common property management, where the regulatory arrangements are designed to accommodate the diverse interests of community members (Lees 1993, 107). The 'decentralized' regulations represent the traditional wisdoms (Satsuka 2014, 89) and typically delegate to the communities the authority to establish detailed guidelines concerning the methods, timing, and quantities of resource extraction permitted to each household, ensuring that resource use remains sustainable and supports local livelihoods.[18]

The *iriai* regime is also particularly interesting when examined within the broader context of Japanese culture, which has often been portrayed (at least, in Western comparative legal scholarship) as a 'unique' legal and social tradition, where social duties are emphasized over individual rights, and the individual is understood as existing in relation to, and for the benefit of, the collective. Within this framework, the Japanese notion of individualism has historically been, and appears to remain, closely tied to the group: the individual is seen as existing within, and only through the support of, the group (Imparato 2024, 385). This narrative depicts Japan as a society in which civic duties take precedence over individual rights, and where the community functions as the primary point of reference. Such a representation is often linked to the Confucian roots of the Japanese legal tradition, in which the very concept of the autonomous individual had little relevance (Colombo 2018, 34).

The risk of romanticizing this narrative is high. It is a depiction that tends to oversimplify Japanese legal consciousness, if not, even, to reconstruct a completely different cultural identity (Colombo 2018, 33).

This is not the place to fully examine or critique such a 'mildly stereotypical' view (Colombo 2018, 33); nevertheless, the centuries-old

18 A key feature of these systems was the autonomous regulation of resource use: local residents created detailed rules governing how, when, and how much each household could harvest (McKean 1992).

iriai tradition inevitably evokes the historical dimension of Japanese legal development and it is in this perspective that the reference to this narrative must be interpreted.

Consequently, although it is increasingly argued that today's Japanese society has shifted from a collectivist model toward a more individualistic one (Imparato 2024, 386), it is interesting to notice that this system emerged in a period when Japanese society was deeply grounded in notions of honour and shame (arising from non-compliance with social obligations) and highly receptive to the (not-to-be romanticized) idea of social 'harmony'[19] which required individuals to maintain a strong sensitivity to the needs of others. It remains essential to keep this broader cultural and historical framework in mind when analyzing the *iriai* system particularly in light of the observation by some scholars that some of these features of Japanese society have remained remarkably consistent over time.[20]

4.1.1 Evolution of the *iriai* System: From Paradise to Purgatory?

Within the study of Japanese commons, a distinction is often made between traditional – those that "have been handed down for hundreds of years" – and non-traditional commons – that "arose after the rapid economic development in the 1960s and 1970s", including those called 'transforming commons', that embrace new practices, such as benefit distribution or governance models (Hribar et al. 2023, 3).

Primarily established during the Edo period (1603-1867), traditional commons have been transmitted across generations for centuries and deeply embedded in communal life (Poljak Istenič 2012). Before the modern land-tenure system emerged in the late 1800s, these resources were controlled by local communities under customary law. Although the land was formally owned by feudal lords, villagers had long-standing usage rights and the duty to care for the land to ensure its renewal (Satsuka 2014, 89).

In contrast, commons that arose during or after the rapid economic expansion of the 1960s-1970s are classified as non-traditional (Hribar et al. 2023, 3). These, as said, often incorporate new principles of governance or distribution and differ significantly from the medieval traditions upon which they were originally based (Satsuka 2014, 90).

19 This idea of social harmony (associated with the *Nihonjinron* discourse and the theory of *wa* – see Imparato 2024, 386) was shaped by specific structures and dynamics of power (rather than having emerged from the people themselves).

20 It has been interpreted in this way the fact that, even nowadays, the Supreme Court affirms that individual freedoms may be reasonably restricted when necessary for public welfare or for the preservation of peace and public order (Imparato 2024, 386).

The transition from traditional to non-traditional commons was driven by concerns of policy makers in the second half of the twentieth century about the fact that common forests governed under customary *iriai* rules were underutilized from the perspective of timber production and plantation forestry. They believed that changing the legal status of these lands – by consolidating them into forest producers' cooperatives or even dividing them into individually owned plots – would enhance their productivity (Matsushita 2012). Following years of research and debate among bureaucrats and experts, these concerns ultimately led to the enactment of the Common Forests Modernization Act in 1966 (Takahashi et al. 2019, 1022).

According to some observers, following the enactment of the Common Forests Modernization Act, a common is considered 'modernized' when it no longer meets (altogether) the three traditional criteria historically associated with the institution: revenues used for the local community, rights based on custom, and residency of rights-holders within the community (Takahashi et al. 2019, 1022).

Beyond this politically driven transformation, however, the evolution of commons in Japan has also been shaped by a variety of other factors: most notably, economic and social changes whose effects are still felt today.

The first factor relevant to this analysis is the transformation of the Japanese economy in the aftermath of World War II. Rapid industrialization and economic growth in the second half of the twentieth century led to drastic changes in both energy provision (Takamura et al. 2021, 260) and land use (Shimada 2015). In particular, the demand for firewood and grasses sharply declined as Japan shifted toward a modern lifestyle, increasingly relying on imported timber and fossil fuels. This transformation was part of a broader trend associated with industrialization that also touched other modern industrialized countries, where the direct use value of local natural resources diminished, due to the availability of substitutes and imports (Shimada 2015, 489).

In addition to this economic transformation, and closely linked to it, there has been a significant social transformation, marked by rapid urbanization and the depopulation of rural areas, which aligned with national patterns of economic growth and urban development (Hribar et al. 2023, 3).

This process has triggered a vicious cycle with regard to *iriai* commons – a cycle that begins when the group benefiting from common-pool resources no longer coincides with the group responsible

for their maintenance.[21] As a result, local communities become less incentivized to uphold high-quality management practices (Shimada 2014; Hribar et al. 2023, 3), leading to the gradual deterioration of these resources (Shimada et al. 2014, 209) and, eventually, their abandonment. In recent years, many *iriai* systems – once sustained by interpersonal alliances and collaborative bonds that underpinned local autonomy – have been increasingly neglected. Today, much of Japan's rural population has ceased to manage its common property forests (Shimada 2014, 209). As a consequence, these dynamics have resulted not only in the underuse of *iriai* commons but also in a significant loss of biodiversity.[22]

More recently, however, there has been a growing movement to revitalise these commons, alongside a renewed emphasis on the multi-level benefits that natural resources can offer (not only to their direct users but also to a broader audience, including society in its entirety).[23] This shift has contributed to the emergence of various new commons centred around landscapes rich in ecological value (Hribar et al. 2023, 3; Shimada 2014, 209; Yamamoto 2013).

4.1.2 Three Case Studies

Several case studies illustrate the effectiveness of commons in improving natural resource management from an environmental protection perspective (McKean 1992). Three of them are particularly significant for the type of asset on which they rely, as well as the type of organisation and the content of rules established to meet a specific (different in each case) need within the relevant community.

One of the cases analysed here concerns the community of Tarōji (太郎路) – located in the village of Soni (Soni-mura 曽爾村) in Nara Prefecture (Nara-ken 奈良県) – and its management of semi-natural grasslands and forests (Shimada 2015).

21 In the Japanese context, Shimada has observed that the transition from direct use values to indirect, multi-level, values of these resources has created a disconnect between the costs borne by local resource managers and the benefits increasingly enjoyed by external actors, who become free riders (Shimada 2015, 489; Shimada 2014, 209).

22 Shimada (2015) notices that in response to these concerns, the Japanese Ministry of the Environment formulated a National Biodiversity Strategy, grounded in the principles of the Convention on Biological Diversity signed at the 1992 Earth Summit.

23 In recent years, Japanese citizens have, for example, mobilized to restore *satoyama* – traditional agrarian landscapes – as a strategy to counteract the perceived harms of modern life on both human well-being and the environment. These landscapes have also become important sites for biodiversity conservation aimed at securing a more sustainable future (Satsuka 2014, 87).

This community has succeeded in continuing for years the management of its semi-natural grasslands by layering new governance structures on top of traditional communal practices. Originally, this collective management arose from the need to produce thatching material – grass used for the roofs of traditional houses. Economically, indeed, it would not have made sense for each household to manage its own individual plot: maintaining the grassland requires substantial work every year, a task unmanageable by a small number of individuals. To address this, the community adopted a collaborative approach, pooling labour and resources to ensure the sustainable upkeep of the landscape.

Specifically, the community relied on the *yui* (結) system – a traditional form of mutual assistance involving joint labour for large-scale tasks during peak periods. This cooperative practice extended beyond collective work to include the exchange of gifts and resources, particularly for the purpose of roof maintenance. As noted in historical records, these gifts often covered nearly all the materials and provisions a household would require for re-thatching, including not only construction supplies but also food. Homeowners meticulously recorded these exchanges in registers, enabling them to reciprocate with equivalent gifts when neighbours undertook similar repairs in subsequent years (Shimada 2015, 499).

In the 1970s, Nara Prefecture purchased the semi-natural grasslands from the community of Tarōji. However, it did so under the condition that local residents could continue to use the grasslands in accordance with long-standing customary practices. In return, the prefecture paid the Tarōji community a maintenance fee, acknowledging that the grasslands generated benefited extending beyond the local level (Shimada 2015, 501). The revenue was used to support various community activities. For a time, this arrangement, referred to by some as a 'contract' (Shimada 2015, 501), functioned effectively. However, in 2007, during a community assembly meeting, the residents of Tarōji decided to cease direct community maintenance of the grasslands due to the increasing difficulty posed by the ageing population. Responsibility for grassland management was subsequently transferred to a community-based volunteer organization, the Soni Highland Preservation Society.

Since then, a new governance framework has been developed, involving collaboration among the Tarōji community (together with the volunteer organization), Soni Village, and Nara Prefecture. This new system distributes management responsibilities and costs across a broader base of beneficiaries. Its key features include: (i) the continued involvement of Tarōji residents, who contribute essential labour and ecological knowledge; and (ii) the financial support of local governments at both village and prefectural levels, representing a form of public investment by taxpayers.

The literature analyzed suggests that the property is formally under public ownership. However, its governance structure is shaped by a multi-level arrangement that helps bridge the gap between the costs borne by local communities and the benefits enjoyed by broader society and respond to multi-layered interests (ranging from local communities to prefectural authorities and extending to national and global stakeholders) (Shimada 2015, 507; Hribar et al. 2023, 11).

Two additional case studies reported by Hribar further illustrate the diverse configurations of commons in contemporary Japan (Hribar et al. 2023, 7).

The first is the Shiretoko (知床) case, which exemplifies a co-management system involving autonomous measures developed by local fishery operators. These actors draw on traditional ecological knowledge to balance marine biodiversity conservation with fisheries and tourism. This system emerged as a local response to the decline in fishery yields after the 1990s and relies on the motivation of fishers to sustain marine resources. The commons framework was established with the dual objective of conserving the marine ecosystem and securing stable fisheries through the sustainable use of marine resources within a designated Marine Natural Heritage Area. This case demonstrates the integration of public and private interests in a commons regime, where the natural resources are directly owned and managed by the commoners. A dispute resolution mechanism is also in place to mediate conflicts.

The second case concerns traditional rural commons in Ishikawa Prefecture (Ishikawa-ken 石川県), where the local government has implemented a volunteer matchmaking system. This initiative recruits companies, university students, and individual volunteers (both from within and outside the prefecture) to assist rural communities facing labour shortages due to depopulation and ageing demographics. Host communities work alongside volunteers in the maintenance of both the community and its surrounding natural resources, including farmlands, waterways, roads, and cultural landscapes. Unlike in Shiretoko case, formal monitoring mechanisms and sanctioning procedures are present in this case, but no dispute resolution mechanism.

Despite differences in ownership structure and institutional design, both cases are characterised by commoners operating under defined use rights accompanied by formal obligations and established rules of use.

4.1.3 The Beneficial Consequences of a Communal System

As noted by Hribar, collective management in the examined cases has produced benefits not only for local residents and government bodies but also for organized groups (often acting as benefit providers) as well as for tourists, visitors, and society at large (Hribar et al. 2023, 9).

Historically the benefits derived from commons were primarily economic in nature, functioning as a form of 'insurance against hard times' by helping to mitigate economic risks (McKean 1992, 69). However, beyond these core economic advantages, the literature has long recognized a range of non-economic benefits associated with commons governance since the earliest forms of commons institutions.

One of these benefits was the enhancement of equity among co-owners.

Despite considerable inequality in private property holdings, many villages maintained a strong sense of fairness by distributing access to commons based on equitable principles, thus compensating for broader disparities in wealth distribution (McKean 1992, 88). Another benefit was the increased legitimacy of rules: rules governing commons did not require external or coercive imposition; instead, they gained legitimacy through internal democratic processes (often based on consultation and consensus) (McKean 1992, 89). Finally, an important additional advantage was the improved enforceability of rules, as most commons had established penalty schemes to ensure compliance. These typically began with the confiscation of illegally extracted resources and could escalate to temporary or permanent exclusion from the commons and, eventually, from the social and economic interactions within the community.[24]

Based on a series of interviews with individuals directly involved, Hribar observed that non-material benefits were more frequently cited by interviewees than material ones. These included the promotion of civic education, capacity development, and knowledge sharing. As he puts it, "the key benefits of commons are the enhancement of social capital, such as the cultivation of shared norms, values, and social networks" (Hribar et al. 2023, 12). Among the various forms of social capital identified, the capacity to build and maintain networks (along with the ability to collaborate with individuals or organisations) appears to be especially crucial for enhancing social resilience. Social resilience, in turn, is widely recognised as a key factor in enabling communities to mitigate and adapt to environmental change.

24 McKean (1992, 89) argues that, despite their apparent severity, these penalties were generally applied with moderation, as most violators preferred to confess and apologize rather than face harsher consequences.

As Hribar notes, social networks function as essential channels for the exchange of information and resources, both of which are indispensable for fostering sustainable environmental practices (Hribar et al. 2023, 12). Hence, the importance of social benefits in the era of climate change.

4.2 Insights from the Italian Forest Commons

Italy also presents a number of institutional arrangements that fall under the umbrella term of 'commons', as used in this analysis. A substantial body of literature has documented these commons – particularly forest commons (FCs) – focusing primarily on socio-economic dimensions and shedding light on the role of the State in their evolution. While several case-specific studies are available, a systematic overview remains lacking (Gatto, Bogataj 2015), due to the considerable institutional diversity across the Italian regions where the commons are situated.

Notably, the Alpine region is home to numerous long-standing traditional forest commons, whose community-based forest governance has persisted for centuries: despite episodes of decline or dysfunction, many of these institutions have indeed endured, and scholars have considered this region as a valuable 'laboratory' for studying forest commons and community-based resource governance (Gatto, Bogataj 2015).

In remote Alpine valleys, early settlers developed systems of communal ownership and management of forests and pastures as a survival strategy in response to harsh natural conditions and limited resources (Gatto, Bogataj 2015, 7). Over time, these communities established detailed rules governing membership – usually based on the household unit – along with the use of pastures, forests, and shared infrastructure. They also restricted individual appropriation, imposed fines for violations, and designated officials responsible for administration and monitoring.

One illustrative example of forest commons in Italy is offered by that situated in Cortina d'Ampezzo, where an eight-hundred-year-old community institution continues to manage a continuous-cover, uneven-aged coniferous Alpine forest. In this case, the land is jointly owned by the entire community, without individual property shares, reflecting a deep-rooted model of collective ownership and

management.[25] Many of these commons are currently managed by '*associazioni fondiarie*' (landowner associations) or other forms of associative governance, including that of so-called '*enti esponenziali*'.[26] These organizational structures have largely emerged in response to widespread underuse of agricultural and forest lands. As highlighted by some scholars, the crucial problems of land fragmentation and abandonment originated in the mid-nineteenth century, primarily due to rural exodus driven by the declining profitability of land use (Crosetti 2017, 58). What began as seasonal migration eventually turned into permanent emigration, particularly between the two World Wars, severely weakening the social and economic fabric of Alpine and hilly rural communities.

This depopulation led to the extreme parcelisation of land, often resulting in plots owned by a multitude of absentee or non-coordinated owners. Fragmentation was frequently compounded by the lack of physical contiguity between parcels belonging to the same owner, which were often separated by plots owned by others (Crosetti 2017, 58).

These persistent and well-documented structural inefficiencies in land use – echoing Heller's 'tragedy of the anticommons' – gave rise to multiple legal and policy responses. Some approaches, grounded in the liberal principle of private autonomy, envisioned voluntary initiatives among landowners as the primary solution. These included private agreements, purchases, exchanges, or the formation of landowner associations to re-aggregate and consolidate scattered parcels. Other approaches, emphasizing the primacy of public interest in productive and efficient land use, advocated for more interventionist strategies, including compulsory exchanges and transfers mandated by public authorities (Crosetti 2017, 59) (see *infra*).

That said, regardless of their specific legal form, emerging studies have begun to demonstrate, in Italy too, that collective management practices have generated significant positive environmental outcomes, specifically in terms of improved resource governance

25 Other examples of Italian commons illustrate the persistence and diversity of collective natural resource governance. These include the Bosco di Mestre (Mestre Woodland); the Associazione Forestale Veneto Orientale, now known as the Associazione Forestale di Pianura (Eastern Veneto Forest Owners' Association); the Comunanza delle Regole d'Ampezzo (Community of Ampezzo Forest Commons); the Partecipanza di Trino Vercellese (Trino Vercellese Forest Common); and the Foresta del Comune di Asiago (Asiago Communal Forest), among others, see Lawrence et al. 2021, 452.

26 "L'amministrazione dei demani collettivi è solitamente affidata agli enti esponenziali delle collettività titolari, quali per esempio le Università agrarie, i quali sono enti dotati di personalità giuridica di diritto privato; in alternativa, sono amministrati dai comuni con gestione separata. Le terre civiche sono considerate inalienabili ed indivisibili e, al pari dei beni demaniali, inusucapibili" (Cenini 2018, 1838).

and equitable distribution of benefits. These findings confirm the robustness and adaptability of forest commons as social-ecological systems (Gatto, Bogataj 2015).

However, much of the research on Italian forest commons has been approached from a public law perspective, often focusing on the role of the State as a key driver of change in forest commons governance. Some observers, for instance, have highlighted the undeniable and powerful influence of the State in the Italian common forests (both in disrupting and in supporting local communities), suggesting that internal governance structures alone are insufficient to ensure the long-term survival of commons-based systems (Gatto, Bogataj 2015).

One such study examines forest commons in the Veneto region, identifying two main types of community forest owners: municipalities and *Regole*, the latter being a distinctive form of collective forest ownership. Interestingly, the institutional arrangements governing these commons are documented in community charters and forest by-laws, with charters being important for defining the community's assets and the core institutional framework regulating internal governance, and by-laws essential for providing more detailed provisions concerning forest use.

5 Legal Qualification of the 'Environmental Commons'

Once the importance of commons in promoting environmentally sustainable practices and supporting the management of natural resources is acknowledged (hence the use of the term 'environmental commons' in this context) it becomes essential to undertake a more systematic effort to qualify and analyse the phenomenon from a legal perspective, despite the diversity of existing practices.

5.1 In Japan

From a legal standpoint, the Japanese *iriai* are regulated under Book II of the Civil Code,[27] which concerns real rights. The Code adheres to the principle of the *numerus clausus* of real rights,[28] which includes possession, ownership, superficies, emphyteusis, and servitudes, that are addressed in Chapters 2 to 6 of Book II. The subsequent four chapters are devoted to security rights *in rem*: the

27 *Japanese Civil Code* (1896) [*Minpō, Meiji ni jū kyū-nen hōritsu dai hachi jū kyū-gō,* 民法, 明治二十九年法律第八十九号], Law No. 89/1896.

28 See Art. 175 of the Japanese Civil Code.

right of retention (*ryūchi-ken*), preferential rights (*sakidori tokken*), pledge, and mortgage.

Within this framework, the two provisions specifically addressing right to common property (*iriaiken*), Articles 263 and 294, are included respectively in the chapters on ownership and servitudes. They stipulate that such rights are primarily governed by local custom and, where compatible, by the provisions of the Civil Code (Ortolani 2011, 439).

Specifically, the two articles provide: (i) "Rights of common that possess the nature of co-ownership are governed by local custom and are otherwise subject to the application of the provisions of this Section (Co-ownership)";[29] (ii) "Rights of common that do not possess the nature of co-ownership are governed by local custom and are otherwise subject to the mutatis mutandis application of the provisions of this Chapter (Servitudes)".[30]

The Code's formulation is terse, almost tautological. However, this may be due to the centuries-old nature of these traditions, which are difficult to systematize and reflect the principle of subsidiarity, according to which rules are left, as far as possible, to the autonomy of local communities. It is noteworthy that, as established, the self-governance rules of these communities take precedence over the codified legal framework.

As for the legal nature of the commons, it is not specified whether they constitute public property, private property, or a *tertium genus*. Based on the empirical analysis drawn from the literature, however, the answer seems to vary depending on the specific case (namely, the community statute or applicable regional regulations).

It is also interesting to note that the Japanese Civil Code provides no guidance regarding the enforcement mechanisms of these norms; in many cases, such systems are autonomously developed by the communities themselves (as in one of the case studies discussed above – Hribar et al. 2023, 12-14). Nor does the Code provide any provisions concerning sanctions, delegating this aspect as well to community local custom.

29 See Article 263 – Rights of Common with the Nature of Co-Ownership.

30 See Article 294 – Rights of Common without the Nature of Co-Ownership.

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5.2 In Italy

As previously noted, the legal frameworks governing the collective management of natural resources in Italy are diverse. Notably, Italian law does not currently provide a statutory definition of 'commons', although an adjacent concept (that of '*dominii collettivi*', collective domains) was introduced in 2017, as will be further discussed below.

Before turning to existing positive law, it is worth recalling a significant – albeit ultimately unsuccessful – attempt to define the commons through a legislative proposal drafted by the Rodotà Commission on *beni comuni* (common goods) in 2007 (Mattei 2011; Marella 2012; Di Porto 2013).[31] These were conceived as resources, including natural assets and cultural heritage, that contribute to the fulfilment of fundamental human rights and the free development of the individual (Mattei et al. 2023, 4).

The proposal carried a strong ideological dimension. The Commission, in fact, had been established right after the privatization of Italian public assets valued at over 130 billion euros which took place throughout the 1990s and the early 2000s (Mattei et al. 2023,, 4), in response to which, public and scholarly interest in the notion of the commons and in the legal mechanisms for their protection grew significantly (Marella 2012, 9).

Although this proposal did not result in the formal recognition of '*beni comuni*' within the Italian legal system, it has been widely regarded by scholars across Europe as a pioneering model (Rochfeld, Cornu, Martin 2021, 41). The Commission's approach was particularly innovative in its effort to ground the concept of commons in constitutional values, framing certain categories of goods as essential to human flourishing and proposing a conception of property as a complex legal institution capable of encompassing such objectives.

Indeed, the Commission proposed introducing the notion of commons by revising the traditional legal classification of goods and assigning those identified as commons a heightened level of protection against privatization. Core characteristics of the commons were strict inalienability, legal regimes oriented toward safeguarding the interests of future generations, and the possibility for any individual to seek injunctive relief against activities that threaten such goods.

In its accompanying report on the proposed reform, the Rodotà Commission noted that commons could include both publicly and privately owned assets, thus implying that the commons serve a function independent of legal ownership. The core idea was that governance (rather than formal title) should determine access to and

31 Critics to this framework have been raised by Caterina (2017, 293-304) e Perlingieri (2022, 137-64).

use of the commons. It is the institutional framework of governance that ensures access and protection, not the public or private status of ownership.

Some years before the introduction of the concept of *'dominii collettivi'* by Law 20-11-2017, n. 168, which is now the most suitable framework for the qualification of a number of environmental commons in Italy, the Italian Supreme Court, in decision no. 3665/2011 of the Corte di Cassazione,[32] borrowed the concept of commons as developed by the Rodotà Commission and applied it for the first time in a case concerning the legal status of the *valli da pesca* (fishing valleys) in the Venetian Lagoon. Although expressed only as *obiter dictum*, the Court emphasized the need to enhance the protection of public goods closely linked to constitutional values (Cascione 2011, 2506-14).

In the absence of a statutory definition, the idea of the commons in Italy has been historically conveyed through the long-standing legal institution of *usi civici* (civic uses) – "shared rights of access to natural resources" (Mattei et al. 2023, 15) – and, more recently, through the concept of *dominii collettivi*, which added to the previous legal foundational on collective land regimes, Law No. 1766/1927).

Together, *usi civici* and *dominii collettivi* have come to be referred to as *assetti fondiari collettivi*, i.e. 'collective land tenure systems' (Grossi 1977; 2019; Albanese 2024).

On one side, *usi civici* can be described rights held collectively by a community of people (*cives*) tied to a specific territory, entitling them to derive certain benefits from land or natural resources owned by others for the purpose of satisfying basic needs. These are known as *diritti di uso civico in senso proprio* ('rights of civic use in the proper sense') or *ius in re aliena* and constitute real rights over the property of another. Some scholars have compared them to predial servitudes. Of medieval and Germanic origin, and widely practiced during feudalism, indeed these *use rights* are typically linked to agriculture, fishing, hunting, gathering, and pastoralism (Cenini 2018, 1838-43). Framed as such, they could be compared to 'commons' as described in the previous paragraphs of this paper. However, they have a more limited scope in nature, only including activities and concept such as '*ghiandare*', '*spigare*', '*servitù di pascolo*', '*legnatico*' (pannage, gleaning, pasture servitude or right of pasturage, estovers or firewood gathering rights).

On the other hand, the term *dominii collettivi*, as employed in recent legislation, refers to the 'primary legal order of original communities'. By also encompassing *usi civici* in the strict sense, the notion of *dominii collettivi* consolidates a range of historically

32 Cass. civ., Sez. un., 14 febbraio 2011, n. 3665, and related rulings.

and regionally diverse terms (such as *terre civiche*, *terre collettive*, *demanio universale*, *demanio comunale*, *demanio civico*, *demani collettivi*, and *demani feudali*) into a single legal category (Germanò 2018, 1).

According to Article 3, § 1 of the new law, *beni collettivi* (the assets subject to *dominii collettivi*) include not only those affected by *iura in re propria* (i.e., collective ownership in strict sense), but also – under letter (d) – "lands owned by public or private entities over which the residents of the municipality or local hamlet exercise *usi civici* that have not yet been extinguished".

The reference to *dominii collettivi* as the 'primary legal order of original communities' (subject to the Constitution and endowed with the capacity for self-regulation in the management of resources defined as intergenerational co-ownership) is particularly significant. This formulation highlights two core dimensions.

First, *dominii collettivi* are explicitly linked to fundamental rights. The new legislation affirms indeed that *dominii collettivi* are linked not only to Articles 9 (protection of the landscape), 42 (social function of private property), and 43 (public or community management of enterprises of general interest), but also of Article 2 of the Italian Constitution, which safeguards the 'social formations' in which individuals fully realize their personality (Germanò 2018, 3).

Second, this legal recognition affirms the existence of a normative order alternative to state law. It acknowledges that "these peculiar forms of property arise beyond the State and are justified beyond the State, as they are the expression of different or even opposing cultures, and they bear the imprint of those cultures" (Germanò 2018, 3).

This vision is grounded in the principle of horizontal subsidiarity, according to which the State, Regions, Metropolitan Cities, Provinces, and Municipalities must promote the autonomous initiative of citizens – both individually and in associations – in pursuing activities of general interest. In other words, the law supports self-regulation and self-governance by civil society in the management of common goods, as expressions of general interest (Germanò 2018, 3).

The new law the law has served as catalyst for new constitutional case law. In the judgement of the Corte Costituzionale, 2 December 2021, No. 228, and 28 November 2022, No. 236, the Court recognized that *dominii collettivi* constitute "a subjective property right (*diritto soggettivo dominicale*), which, as a form of collective ownership, stands alongside public and private property under Article 42, paragraph 1, of the Constitution". Most recently, the Corte Costituzionale addressed this issue again in its judgment of 15 June 2023, No. 119, to which specific comments will be devoted a few lines below.

Moreover, has the remarkable merit of having resolved a longstanding controversy concerning the legal nature of ownership over lands collectively held by local communities, and specifically,

whether such lands should be considered public or private property. The older Italian legal doctrine – as said, mainly advanced by public law scholars – tended to classify them as a form of public ownership. The new legislation clarifies this ambiguity by affirming that the legal regime of *dominii collettivi* is private with respect to the legal subjects, and public with respect to the legal regime of the assets. In particular, it establishes that the representative entities of collective communities possess legal personality under private law,[33] while the assets themselves are subject to the regime of public domain goods: inalienability, indivisibility, non-usucapability, and permanent designation for agro-silvo-pastoral use.[34]

On this point, however, the just mentioned Corte Costituzionale, 15 June 2023, No. 119, made two important contributions (Albanese 2024). First, it clarified the coordination between the two principal national legislative sources in the field (Law No. 168/2017 and Law No. 1766/1927) whose coexistence had previously raised systemic challenges. Second, it emphasized some inconsistencies within this legal framework, particularly in relation to the social function of property and the governance of *dominii collettivi*.

In this decision, the Court focused primarily on constitutional concerns raised under Articles 3 (principle of equality) and 42(2) of the Italian Constitution (social function of private property), in connection with Article 3, § 3 of Law No. 168/2017, insofar as it fails to exclude the inalienability of privately owned lands burdened by *usi civici* that have not yet been extinguished. The Court concluded that such inalienability regulates an aspect of private property burdened by *usi civici* in a way that is "entirely unrelated to the protection of the general interest". According to the Court, making such lands inalienable does not serve the social function of property but rather amounts to a constitutionally unjustified limitation on the transferability of private ownership. In practical terms, it deprives creditors of effective remedies by preventing the execution of rights against such property.

Another significant merit of the law, further elaborated – with a peculiar angle – by the just mentioned ruling of the Constitutional Court, is the explicit connection it establishes between the legal framework of *dominii collettivi* and the imperative of environmental protection. Article 2, § 1 of the law provides that *beni di collettivo godimento* (assets subject to collective enjoyment) are protected insofar as they are essential to safeguarding, among other things, "the life and development of local communities", the "conservation and enhancement of the national natural heritage", as well as "stable

33 See Art. 1, § 2, Law No. 168/2017.

34 See Art. 3, § 3, Law No. 168/2017.

components of the environmental system" and "renewable resources to be developed and used for the benefit of the local communities and entitled persons".

Taken as a whole, this formulation suggests a shift in emphasis: whereas in the past such lands were primarily protected as a means of subsistence for the local community, their current justification leans more heavily toward the 'national natural heritage' (Germanò 2018, 3).

Consequently, according to some doctrinal interpretations, the object of regulation is not (or not only) the community's enjoyment rights as such, but rather the protection of the environment and landscape themselves, understood as constitutionally protected public goods (Cenini 2018, 1841).

This represents an unusual change in perspective, a change that continuously (and perhaps perpetually) reopens the debate surrounding social function of property, competing interests, and ownership structures. In this regard, it is worth recalling a particularly telling passage from the aforementioned Constitutional Court ruling, which explicitly states that environmental and landscape protection directives are "subsumed within the social function" of property. The Court further clarified that, in the case at hand, "this imperative is in no way undermined by the circulation of private property encumbered by *usi civici* that have not yet been extinguished".

The emerging legal framework – formed at the intersection of the pre-existing legislation, the 2017 reform, and evolving constitutional jurisprudence that underscores the triad *dominii collettivi*-property-social function – constitutes a critical bridge toward addressing the underlying tension between traditional classifications in property law and the broader horizon of a more robust pluralism of ownership forms (Albanese 2024).

6 Multi-Level Management System and the French *échelle de communalité*

Despite concerns about a potential crisis in the commons under the current socio-economic structure, due to the profound social and economic transformations outlined above (particularly in relation to Japanese commons), one of the key factors ensuring their survival in modern industrialized societies has been their capacity for successful adaptation. This has been made possible through the autonomy of local communities and the adoption of a model of multi-level governance that respects the principle of subsidiarity.[35]

This layered governance structure for natural resources is clearly observable in the case studies of Japanese commons, such as the *satoyama grasslands*.

As noted, in one of them, the multi-level governance arrangement of these commons has helped bridge the gap between the costs borne by local communities and the benefits enjoyed by broader society, accommodating a range of stakeholders from local communities and prefectural authorities to national and even global actors (Shimada 2015, 507; Hribar et al. 2023, 11). However, in Italy as well, in more dogmatic terms, a similar notion of the multi-level nature of property can be found, at least implicitly, in the new legislation on *dominii collettivi*, and has also been theorized by legal scholars in other areas of law.[36]

The idea of a multi-level governance model, by responding to layered and overlapping interests, exemplifies how different claims – private, communal, and public (as represented by the State) – can be simultaneously expressed and protected through diverse institutional and legal arrangements. When framed within the concept of the commons and interpreted through the paradigm of property, these arrangements gain coherence and normative strength.

A reconceptualization and systematic reorganization of property law – moving away from the exclusively individualistic approach and toward a multi-level model aligned with the principle of solidarity – is

35 The principle of subsidiarity holds that problems should be addressed at the smallest, most local level capable of resolving them – institutions should operate at the scale of the problem itself (Shimada 2014, 232-3).

36 This reasoning is also echoed in the legal framework of the *supercondominio* (multi-building condominium structures), as discussed by Bernes (2024). According to Bernes, a new 'image' of real property is emerging: one in which the division of utilities derived from the same asset among multiple subjects – each bearing distinct interests and rights – is assessed based on various factors that affect the exclusivity of ownership (*dominium*), thereby making shared access and management possible.

not foreign to contemporary legal scholarship. On the contrary, it has increasingly become a focus of scholarly reflection and debate.

Not too long ago, for example, French legal scholarship has proposed a reinterpretation of the right to property as a norm that can be reorganized according to a scale of protections built around the pursuit of the interest, more or less pervasive in the specific case, of a reference community. This is referred to as the *échelle de communalité* (which recalls, but also goes beyond, the idea of a bundle of rights) (Rochfeld, Cornu, Martin 2021).

According to this theory, the legal regime of certain categories of goods is structured along a spectrum of appropriability, which varies depending on the significance of the general interest associated with those goods. Specifically, "les biens reconnus porteurs d'un intérêt commun seraient appropriables selon certaines gradations" (Rochfeld, Cornu, Martin 2021, 34) – that is, goods that carry a recognized communal interest would be subject to varying degrees of exclusivity or inclusiveness. At one end of the spectrum lies maximum exclusivity, applying to goods for which no relevant general interest is present; at the other end, maximum inclusiveness applies where the general interest is overwhelmingly predominant.

A paradigmatic example is the legal regime governing intangible goods. Their regulation is far removed from the classical, 'egoistic' notion of ownership as a binary relationship between an owner and a thing. Instead, the legal framework focuses on organizing the circulation and exploitation of intangible assets in a way that balances the interests of multiple stakeholders. In this context, '*les prérogatives des titulaires*' (the rights of stakeholders) can, along the spectrum toward maximum *communalité*, take several forms: (i) a right of control, such as actions to cease certain uses (e.g., as seen in health law), where oversight of the owner's activity is not entirely entrusted to public authorities; (ii) a right to benefit from certain utilities of the good deemed 'common', requiring coordination among the owner and holders of the shared interests; (iii) at the far end, a right to the full benefit of the good's utilities, entirely dedicated to the satisfaction of collective interests – such as in the cases addressed by the Italian Corte di Cassazione in 2011 cited above (Angiolini 2021, 507).

7 Concluding Remarks: An Inclusive Proprietary Paradigm Beyond Environmental Issues

Altogether, the reflections above underscore the essential role of environmental commons in the era of climate change, particularly as a means of counteracting the negative externalities of industrialization and the underuse or misuse of natural resources. Given the conceptual and legal plurality surrounding the notion of the commons, empirical analysis was deemed necessary.

Case studies have shown that the collective governance of such resources does not necessarily lead to the 'tragedy of the commons' or 'anticommons' scenarios anticipated by Hardin and Heller.

In Japan, such practices have been extensively studied, with the literature often emphasizing not only the outcomes of collective management but also the operational regimes underpinning them – for example, by highlighting sanctioning mechanisms embedded within local governance structures. These enforcement tools have been thoroughly documented and analyzed by a substantial body of scholarship, offering valuable insights into the institutional conditions that sustain long-term collective resource management.

By contrast, in Italy, while a number of studies examine the functioning and positive value of certain forms of commons – albeit not in a systematic manner – legal scholars tend to focus primarily on the virtuous aspects of collective governance, but there remains a significant gap concerning the operational dimensions of these commons.

From a legal standpoint, a notable strength of the Japanese system lies in its explicit recognition of actual rights over commons within the Civil Code – regardless of whether those commons fall under a co-ownership regime. By incorporating such provisions into the Civil Code itself, Japan establishes a general legal framework that is not relegated to secondary or special legislation. Moreover, the wording of these provisions is formulated broadly enough to extend beyond environmental resources.

This stands in contrast to the Italian approach. Although the Italian system has the merit of formally recognizing *dominii collettivi* as a legal category and linking it to constitutional values concerning the protection of both individuals, communities and society, the legal framework remains narrowly focused. Specifically, the *dominii collettivi* legislation applies only to land-based resources, recognized as functional to environmental protection. As a result, the scope of the legal recognition is limited in at least two important respects: (i) there is no protection, in the mentioned new legal framework, for non-land-based resources that may equally serve environmental purposes; (ii) there is no systematic recognition or protection, within the legal system broadly understood, for commons that are unrelated

to environmental objectives, but nonetheless essential to other fundamental interests – such as the protection of knowledge (and traditional knowledge), access to information and cultural heritage.

In any case, a major strength of this Italian piece of legislation and the subsequent case law lies in having highlighted that the constitutional principle of the social function of property, as set forth in Article 42 of the Italian Constitution, no longer operates solely through the regulation of the modes of acquisition, enjoyment, and limitations of private property rights. Rather, it also encompasses the full legal protection of collective, non-proprietary interests that nevertheless carry a real character (Albanese 2024, 4).

This recognition is significant because it opens the door to a broader theoretical generalization: that under both legislative and jurisprudential authority (at least in the Italian context) the collective utility of a resource no longer needs to be framed exclusively through public ownership (Cenini 2018, 1839-43). Instead, it can – and indeed should, according to the Italian Constitution – be also recognized through alternative configurations of interests, prerogatives, and rights. The *dominii collettivi* exemplify this shift, but they represent only one among many possible forms through which collective utility can find juridical expression outside the traditional public/private property dichotomy.

For this reason – and considering that such reflections often overlook the proprietary dimension, focusing instead, if at all, on theories of goods – a systematization of the subject matter, beginning with the paradigm of property rather than bypassing it, is deemed necessary.[37] This is particularly important in light of the role that property plays as a structuring criterion for the allocation of responsibilities and obligations (Cenini 2018, 1840).

A systematization of the phenomenon could serve three main objectives: (i) from a dogmatic perspective, it would acknowledge that the monolithic conception of property law (largely dominant and asserted within Western legal traditions) often functions more as a declaratory principle than as a reflection of legal reality, at least in certain fields and areas of law; (ii) recognizing this would promote greater legal clarity, which is essential for the circulation

37 Provided that, however, the debate on the constitutional notion of private property doesn't turn into "a matter of belief, with a substantial erosion of the margins for rational discourse", which, "in its radical uncertainty, contradicts the very idea of the normativity of constitutional law" (Gambaro 1995, 44, drawing on Rodotà 1981, 464).

and recognition of legal positions across different legal systems;[38] (iii) by shedding light on the actual, pluralistic (and more inclusive) configurations of rights and interests, such a systematization would provide the conceptual tools needed to also engage with complex and evolving phenomena related to globalization and digitalization of every human interaction – particularly in relation to knowledge as a common good (Rodotà 1981) and a critical asset for individuals, communities, and society as a whole.

Within this framework, and in light of the social function of private property, the question of whether commons fall within the domain of private property (and private law) or public property (and public law) takes on a different meaning. It ultimately depends on the role attributed to the right of exclusivity – whether it is seen as constitutive of ownership or not – and on the extent to which one adheres to the proprietarian (Piketty 2020) trend that has *de facto* taken hold in recent years.

These considerations highlight the circular relationship between the notions of commons and private property, which should not be understood as inherently opposed. Commons – thanks to their flexibility and hybrid nature – do not stand against private property *per se*, but rather against a specific, absolutist, and exclusionary conception of it, one that undermines a more equitable redistribution of resources (Mattei et al. 2023, 24). At the same time, they underscore the need to recognize, through the systematizing role of the social function paradigm (Gambaro 1995, 55), the limitations on private property as an integral component of a coherent legal framework aimed at accommodating a plurality of interests (Mattei et al. 2023, 27).

By systematically embracing the idea of property, for example, as a bundle of rights, or as an *échelle* structured around the degree of *communalité*, as theorized in French legal doctrine, can commons fully carry out the role they are called to play: that of being a vital element in "rebuilding social bonds that have been weakened or broken, and creating new ones" (Marella 2012, 11), while also advancing Rodotà's vision of the 'responsibility of wealth' in light of the interest of future generations.

38 This need is particularly urgent in contexts where public authority cannot be effectively exercised, due to the transnational nature of the challenges at stake. In such cases, private legal arrangements are called upon to play a substantive role. However, divergences between legal systems can hinder the effectiveness of the tools available to private law.

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Ensuring a Healthy Environment Toward Sustainable Development
An Analysis of Legislation to Implement the Constitution in Vietnam

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Abstract The article examines how Vietnam's constitutional right to a healthy environment is implemented through the 2020 Law on Environmental Protection. Read through the lens of the three pillars of sustainable development (economic, social and environmental) and against benchmarks from international law and the SDGs, it reveals an implementation gap: a growth-centred economic pillar still dominates, fragmenting governance and hollowing out participation. It argues that only a rebalancing which strengthens environmental institutions and 'greens' economic policy can turn this constitutional promise into an effective, lived right.

Keywords Healthy environment. Sustainable development. Constitution. Environmental legislation. Vietnam.

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1 Introduction

The global legal landscape has been reshaped over the past decade by the ascendance of the right to a clean, healthy, and sustainable environment as a universal human right, a landmark development solidified by resolutions from the United Nations Human Rights Council in 2021 and the General Assembly in 2022 (Boyd 2024, 1). Vietnam's formal recognition of this right in its 2013 Constitution marks a pivotal moment, signaling the nation's integration into this global normative current and its commitment to environmental stewardship (Constitution of Vietnam 2013, Art. 43). This constitutional entrenchment, however, presents Vietnam with a profound dual challenge: the imperative to operationalize this fundamental right for its citizens while simultaneously pursuing a national agenda of rapid industrialization and socio-economic progress under the paradigm of sustainable development. This complex interplay places the country at a critical juncture, where the aspirations of constitutional law meet the formidable realities of a developmental state in transition (Ortmann 2017, 67).

This article posits that realizing the constitutional right to a healthy environment in Vietnam is not merely a matter of legal enforcement but a far more intricate exercise in balancing the three interdependent pillars of sustainable development: economic growth, social equity, and environmental protection (WCED 1987, 39). It argues that while Vietnamese legislation, particularly the comprehensive Law on Environmental Protection (LEP) 2020, has made significant strides in creating a framework for this balance, a persistent implementation gap reveals a structural tendency to prioritize short-term economic objectives over long-term environmental integrity and social justice. This tension is characteristic of developmental states, where the logic of economic growth often subordinates other policy goals, potentially rendering environmental rights aspirational rather than enforceable. The concept of 'sustainable development' itself, while intended to be integrative, can be co-opted to justify environmentally detrimental activities in the name of economic progress, a critique that resonates strongly within the Vietnamese context (Lostal 2025, 828).

Consequently, this study seeks to answer a central question: How has Vietnam's legal framework institutionalized the relationship between the right to a healthy environment and the goals of sustainable development, and what are the practical outcomes and structural barriers affecting this balance? To this end, the article aims to critically evaluate the effectiveness of existing legal mechanisms, identify the systemic gaps that hinder the harmonization of the three pillars, and propose holistic solutions. Employing a methodology that combines doctrinal legal analysis, comparative review against international standards, and public policy analysis, this paper

examines the architecture of Vietnam's environmental law. It uses the normative framework established by the United Nations as a benchmark for assessment (UN Human Rights Council 2021). The significance of this research lies in its potential to offer a nuanced understanding of the legal deficiencies and practical challenges, thereby providing targeted recommendations to strengthen enforcement, foster genuine public participation, and ultimately align Vietnam's development trajectory with its constitutional and international commitments.

The article is structured as follows. The second section will establish the international legal framework, exploring the synergistic relationship between the right to a healthy environment and the principles of sustainable development. The third section will analyze Vietnam's legal response, examining how the 2013 Constitution and the LEP 2020 have sought to institutionalize this relationship. The fourth section critically assesses the realities of implementation, highlighting the systemic imbalance between the pillars of sustainable development through an analysis of key challenges and illustrative case studies. Finally, the fifth section will propose a set of strategic, multi-faceted recommendations aimed at recalibrating this balance and paving the way for a more sustainable and rights-respecting future in Vietnam.

2 Environmental Rights and Sustainable Development in International Law

2.1 The Convergence of Two Normative Streams

International law over the past half-century has witnessed the parallel evolution of two powerful normative streams that have increasingly converged: the right to a healthy environment and the principle of sustainable development. Initially conceived on separate tracks, their conceptual synthesis has become a cornerstone of modern global governance, reflecting a growing recognition that environmental integrity is not a policy option but a fundamental precondition for just and durable human progress. This convergence did not occur overnight but was the result of a gradual, iterative process of norm development, driven by escalating ecological crises and a deepening understanding of the indivisibility of human rights (UNEP 2023, 14).

The genesis of the right to a healthy environment is often traced to the 1972 Stockholm Declaration, which, for the first time in a global instrument, proclaimed that man has a "fundamental right to […] an environment of a quality that permits a life of dignity and well-being" (UN 1972, Art. 1). While this was a landmark statement, it initially

existed more as a political aspiration than a legally binding norm. For decades, its development was primarily advanced through regional instruments, such as the African Charter on Human and Peoples' Rights (1981) and the San Salvador Protocol (1988), and through the innovative jurisprudence of human rights courts interpreting existing rights, such as the right to life and private life, through an environmental lens. This period saw the 'greening' of human rights law, where environmental protection was increasingly framed not as an end in itself, but as essential for the enjoyment of established human rights (Boyle 2012, 613).

Concurrently, the concept of sustainable development emerged onto the world stage, most influentially defined by the 1987 Brundtland Report as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED 1987, 39). This paradigm was revolutionary for its explicit integration of environmental considerations into the very definition of development, seeking to reconcile the often-conflicting imperatives of economic growth and ecological preservation. The 1992 Rio Declaration further solidified this nexus, particularly through Principle 4, which stated that "In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it" (UN 1992, 4).

The definitive convergence of these two streams began in the twenty-first century. The 2012 UN Conference on Sustainable Development (Rio+20) outcome document, "The Future We Want", explicitly recognized that a healthy environment is integral to sustainable development (UNGA 2012, § 30). This was followed by the adoption of the 2030 Agenda for Sustainable Development, whose 17 Sustainable Development Goals (SDGs) implicitly and explicitly link environmental health to social and economic outcomes. The culmination of this process arrived with the formal resolutions by the UN Human Rights Council (HRC Res 48/13, 2021) and the UN General Assembly (UNGA Res 76/300, 2022), which universally recognized the human right to a clean, healthy, and sustainable environment. The inclusion of the term "sustainable" in the right's formulation was deliberate, cementing the inseparability of human rights and the sustainable development agenda and marking the maturation of these once-parallel concepts into a unified legal and policy framework (Boyd 2018, 17).

2.2 Environmental Rights as the Foundation for the Environmental Pillar of Sustainable Development

The conceptual convergence of environmental rights and sustainable development is more than a mere intersection of ideas; it represents a fundamental restructuring of global environmental governance. Within this integrated framework, the human right to a healthy environment serves as the normative, rights-based foundation for the environmental pillar of sustainable development. This evolution is transformative because it recalibrates the architecture of governance, shifting environmental protection from the realm of discretionary policy – often subject to political negotiation and economic trade-offs – into the domain of a binding legal obligation incumbent upon states (May, Daly 2014, 87). By framing environmental integrity through the universal language of human rights, this approach elevates its status, providing it with the legal gravitas and moral urgency necessary to stand on equal footing with the economic and social pillars of the sustainability paradigm. It legally codifies the principle that a thriving economy and an equitable society are ultimately unattainable without the ecological preconditions that a healthy environment provides, a view explicitly recognized in the UN Human Rights Council's resolution, which states that "the protection of the environment […] contribute[s] to and promote[s] human well-being and the enjoyment of human rights" (UN Human Rights Council 2021, 1).

A rights-based approach fundamentally alters the relationship between the state, its citizens, and the environment, creating a new dynamic of empowerment and accountability. Under a traditional policy-driven model, individuals and communities are often positioned as passive 'stakeholders' to be consulted, their interests weighed against competing priorities. In contrast, a rights-based framework redefines them as active rights-holders, legally entitled to demand action and seek redress from the state as the primary duty-bearer. This is not merely a semantic shift; it activates the core state obligations of international human rights law: the duty to respect the right by refraining from harmful actions, the duty to protect the right from infringement by third parties such as corporations, and the duty to fulfil the right by taking positive measures to create an enabling environment (Knox 2018, 3). This framework provides a legal shield for individuals and, crucially, for vulnerable and marginalized groups who are often disproportionately affected by environmental degradation. Their claims are no longer pleas for political favor but demands for the enforcement of a legal entitlement, making the state's failure to prevent environmental harm a potential violation of its human rights obligations.

Furthermore, operationalizing the environmental pillar through a rights-based approach provides a robust and coherent structure for implementation and monitoring, directly linking it to the concept of the environmental rule of law (UNEP 2023, 15). The substantive components of the right – clean air, a safe climate, healthy ecosystems, and non-toxic environments, among others – are not abstract ideals; they serve as specific, and increasingly measurable, legal benchmarks for state performance (Boyd 2024, 7). For instance, the right to clean air can be linked to scientifically established standards like the World Health Organization's Air Quality Guidelines, transforming a general principle into a justiciable standard against which state policies can be evaluated in a court of law. This concrete translation of principles into standards is what gives the environmental pillar of sustainable development its legal teeth.

Simultaneously, the procedural elements of the right – access to information, public participation, and access to justice – function as the indispensable guardrails of the entire sustainable development process. These "gateway rights" are the mechanisms that ensure transparency, accountability, and equity in all environmental decision-making, from the strategic planning phase to individual project approval (Eliantonio, Richelle 2024, 261). They are essential for preventing the kind of opaque decision-making that leads to environmental injustice, where the social and environmental costs of development are borne by the poor and politically weak (Atapattu, Gonzalez, Seck 2021, 5). The UN Human Rights Council's resolution underscores this by recognizing that "the exercise of human rights, including the rights to seek, receive and impart information, to participate effectively […] and to an effective remedy, is vital to the protection of a clean, healthy and sustainable environment" (UN Human Rights Council 2021, 2). Ultimately, this rights-based foundation legally enforces the principle of indivisibility, making it clear that the three pillars of sustainable development are not a menu from which to choose. The right to a healthy environment ensures that the environmental pillar is not an afterthought, but a legally mandated, non-negotiable component of any development path that can legitimately be called 'sustainable'.

2.3 The Content of the Right in the Context of Sustainable Development

The universal recognition of the human right to a clean, healthy, and sustainable environment is not merely a symbolic declaration; it represents the maturation of a legal norm endowed with distinct substantive and procedural content, progressively clarified through decades of international legal development. This content is inextricably interwoven with the principles of sustainable development, providing a concrete and actionable framework for state obligations. Far from being an "empty vessel", the right has been filled with meaning derived from international treaties, jurisprudence from human rights bodies, and the authoritative work of UN Special Rapporteurs (Knox 2018, 5). Understanding the dual dimensions of this right – its substantive elements that define the essential qualities of the environment to be achieved, and its procedural elements that mandate a just and inclusive governance process – is critical for any meaningful evaluation of its implementation within a national legal system like Vietnam's.

2.3.1 Substantive Elements: The Ecological Foundation for Human Dignity

The substantive elements of the right articulate the core ecological conditions necessary for a life of dignity, equality, and freedom. These are not aspirational environmental goals but legally cognizable components essential for the enjoyment of a wide spectrum of established human rights, including the rights to life, health, food, water, and culture. The Framework Principles on Human Rights and the Environment provide the most comprehensive catalogue of these elements (Knox 2018, 7).

First and foremost is the right to clean air, a component of critical importance given that air pollution is the single largest environmental risk to human health, responsible for millions of premature deaths annually (Boyd 2019, 4). This right imposes a clear obligation on states to move beyond generic anti-pollution policies. It requires them to establish robust systems for monitoring air quality against science-based standards, such as the World Health Organization's Air Quality Guidelines, and to enforce stringent emissions limits for industrial facilities, transportation, and other sources. It also entails a duty to provide the public with real-time, accessible information about air quality and associated health risks, enabling individuals to take protective measures.

Second, the right encompasses a safe climate, a component that has gained prominence with the escalating climate crisis. This is arguably

the most challenging element, as it requires states to take ambitious and urgent action to mitigate greenhouse gas emissions in line with their international commitments under the Paris Agreement. This obligation is not just about setting distant net-zero targets; it involves implementing concrete, near-term measures to phase out fossil fuels, accelerate the transition to renewable energy, and protect carbon sinks like forests and wetlands. Furthermore, it includes a duty to enhance adaptive capacity, particularly for vulnerable communities, to protect them from the unavoidable impacts of climate change, such as sea-level rise and extreme weather events (UN Human Rights Council 2021, 2).

Third, the right includes access to safe and sufficient water and sanitation. While these are also recognized as stand-alone human rights, their inclusion within the environmental right adds a crucial ecological dimension. It expands the focus from the delivery of water services to the protection of the water sources themselves – the rivers, lakes, wetlands, and aquifers. This imposes on states a clear duty to prevent the contamination of water bodies by industrial, agricultural, and domestic pollution, and to manage water resources sustainably to prevent depletion, thereby safeguarding the health of aquatic ecosystems for both present and future generations (UNCESCR 2002, 1-18).

Fourth, the right to a healthy environment is intrinsically linked to healthy and sustainably produced food. This element connects the health of ecosystems directly to human health and nutrition, addressing the profound environmental impacts of modern food systems. State obligations under this component are multifaceted. They include protecting soil and water from contamination by pesticides and fertilizers, thereby ensuring that food produced is safe for consumption. Furthermore, it demands a systemic shift towards sustainable agricultural practices, such as agroecology, that conserve biodiversity, restore soil health, and minimize greenhouse gas emissions. This element challenges the industrial agricultural model, which often leads to deforestation, water depletion, and loss of genetic diversity. By incorporating healthy and sustainable food, the right to a healthy environment champions food systems that are not only productive but also ecologically resilient and socially equitable, ensuring food security for present and future generations without compromising the planet's ecological integrity (Boyd 2021, 2).

Fifth, the right to healthy ecosystems and biodiversity is recognized as fundamental to human survival. This moves beyond a purely anthropocentric view, acknowledging that human well-being is deeply dependent on the services provided by functioning ecosystems, such as pollination, soil fertility, flood control, and disease regulation. State obligations under this component include establishing and effectively managing protected areas, taking

measures to halt biodiversity loss, restoring degraded ecosystems, and ensuring the sustainable use of natural resources (Knox 2018, 1).

Finally, the right demands a non-toxic environment, which obligates states to establish a strong regulatory framework for the entire life cycle of hazardous substances and wastes – from production and use to disposal. This requires states to prevent the contamination of air, water, soil, and food, and to protect individuals, especially vulnerable groups like children and workers, from harmful exposures. It encompasses everything from industrial chemicals and pesticides to plastic pollution and electronic waste, demanding a precautionary approach to chemical management (Boyd, Orellana 2022, 1-21). Together, these six substantive elements form a comprehensive and legally grounded vision for the environmental pillar of sustainable development, setting the minimum standards for a world where humanity can thrive in harmony with nature.

2.3.2 Procedural Elements: The Pillars of Environmental Democracy

If the substantive elements define the desired outcome, the procedural elements prescribe the indispensable process for achieving it. They are the pillars of what is commonly referred to as 'environmental democracy' and are crucial for ensuring that the path to sustainable development is itself just, equitable, and accountable (Ebbesson 2009, 1-36). These procedural rights are not secondary considerations; they are co-equal components of the right to a healthy environment and are essential for strengthening all three pillars of sustainability.

The first pillar is access to information (Knox 2018, 11). This right is foundational, as informed participation is impossible without it. It imposes a dual obligation on the state: a reactive duty to provide environmental information upon request in a timely and affordable manner, and a proactive duty to actively collect, update, and disseminate crucial environmental data. This includes information on pollution levels, environmental quality, the environmental performance of corporations, and the potential environmental and human rights impacts of proposed development projects. In an age of environmental crisis, transparency is not a luxury but a necessity for building public trust and ensuring governmental and corporate accountability.

The second pillar is public participation in decision-making (Knox 2018, 12). This guarantees the right of all individuals and communities, particularly those who will be most directly affected, to participate in a meaningful way in decisions that impact their environment. This right applies across the entire spectrum of decision-making, from the formulation of national-level environmental

laws and policies to the environmental impact assessment (EIA) process for specific projects. For participation to be meaningful, it must occur early, when all options are still on the table, and the public must be provided with the necessary information and capacity to engage effectively. The state has an obligation to take the public's views into account, and to provide justifications for its final decisions, demonstrating how public input was considered.

The third, and arguably most critical, pillar is access to justice and effective remedies (Knox 2018, 13). When the first two rights are denied, or when substantive environmental rights are violated, individuals must have access to impartial, independent, and effective judicial and administrative procedures to seek redress. This requires states to remove barriers to justice, such as prohibitive costs, restrictive standing rules, and undue delays. 'Effective remedies' can take many forms, including compensation for harm, restitution of property, injunctions to halt or prevent harmful activities, and orders compelling public authorities to take specific actions to protect the environment. Without access to justice, all other environmental rights risk becoming mere 'paper tigers'. These three procedural rights, famously articulated in Principle 10 of the Rio Declaration and legally codified in regional treaties like the Aarhus Convention, form a self-reinforcing triangle that is essential for implementing the right to a healthy environment in a manner that is truly sustainable – environmentally sound, socially equitable, and economically viable (UN 1992, 5).

3 Institutionalization in Vietnam: Integrating Environmental Rights into the Development Framework

3.1 The Constitutional Vision: Balancing Protection and Development

The enactment of the 2013 Constitution represents a watershed moment for environmental governance in Vietnam, formally elevating the protection of the environment to the highest level of the nation's legal hierarchy. For the first time, Article 43 explicitly recognizes that "Everyone has the right to live in a healthy environment and has the duty to protect the environment" (Constitution of Vietnam 2013, Art. 43). This provision marks a profound normative shift from previous constitutions, which had framed environmental protection primarily as a state policy rather than an individual right (Doan, Tran 2023). The dualistic structure of Article 43 is particularly significant: it not only bestows a right upon individuals but simultaneously

imposes a corresponding duty, creating a framework of shared responsibility among citizens, organizations, and the State itself. This constitutional language resonates strongly with the spirit of the international legal framework, reflecting a domestic commitment to the principles that would later be universally affirmed by the United Nations.

However, a closer analysis reveals that while Article 43 aligns with the overarching goal of the international right, it is articulated as a general clause rather than a detailed enumeration of specific entitlements. In contrast to the granular substantive elements laid out in the UN Framework Principles – such as a safe climate, non-toxic environments, or healthy biodiversity (Knox 2018, 7-8) – the Vietnamese Constitution employs the broad, encompassing term "healthy environment". This generality is not a flaw but a deliberate legislative choice that grants significant discretion to the legislature and executive branches to interpret and implement its meaning through subsequent laws and policies. It establishes a foundational principle, but leaves the complex task of defining its precise parameters – and resolving the inevitable conflicts with other interests – to the political and administrative process. This approach sets the stage for a continuous dialogue and contestation over the very meaning of a "healthy environment" within Vietnam's specific socio-economic context (Bui 2022).

Crucially, Article 43 does not exist in a constitutional vacuum. Its mandate for environmental protection must be read in conjunction with other powerful constitutional directives that underscore the State's commitment to socio-economic development. Article 50, for instance, sets the national objective to build "an independent, self-reliant economy", while Article 51 outlines the roles of various economic sectors in achieving national prosperity (Constitution of Vietnam 2013, Arts. 50-1). This creates a deliberate constitutional architecture that embeds a foundational tension between environmental preservation and the imperatives of economic growth. This is the hallmark of a developmental state, where the constitution serves not only to protect rights but also to legitimize and guide a national project of rapid development (Bui 2016).

Therefore, the constitutional vision for a healthy environment in Vietnam is best understood not as an absolute, self-executing right that trumps all other considerations, but as a programmatic principle. It sets a clear direction and a binding goal for the state, but one that must be actively pursued and balanced against the equally legitimate constitutional mandate for development (May, Daly 2014, 209). This inherent tension means that the true measure of Vietnam's commitment to Article 43 lies not in the text itself, but in how this balance is struck in subsequent legislation, most notably the Law on Environmental Protection 2020, and how it is adjudicated in the

face of concrete conflicts on the ground. The Constitution provides the vision; the laws and their implementation reveal the reality of that balance.

3.2 Institutionalization in the Law on Environmental Protection 2020: Instruments for Sustainability

The Law on Environmental Protection (LEP) 2020, which took effect in January 2022, stands as the most significant and ambitious legislative instrument for operationalizing Vietnam's constitutional vision for a healthy environment and its commitment to sustainable development. It represents a paradigm shift in the country's environmental governance, moving beyond the reactive and fragmented approaches of its predecessors (the 1993, 2005, and 2014 laws). The new law was crafted in the shadow of major environmental disasters, most notably the Formosa steel plant incident in 2016, which served as a powerful catalyst for political and public demand for a more robust legal framework (Do, Thi 2022, 113). Consequently, the LEP 2020 is designed not merely to regulate pollution but to fundamentally re-engineer the relationship between economic activity, social well-being, and environmental integrity. It does so by introducing a suite of modern governance tools aimed at integrating sustainability into the very fabric of development.

3.2.1 'Greening' the Economic Pillar

A central challenge for Vietnam's sustainable development is to decouple economic growth from environmental degradation. The LEP 2020 addresses this by strengthening and introducing a range of legal instruments designed to internalize environmental costs into economic decision-making, thereby 'greening' the pillar of economic development.

The first and most foundational of these is the more robust application of the Polluter Pays Principle (PPP). While this principle existed in previous legislation, the LEP 2020 operationalizes it with greater force and clarity. Article 4 stipulates that organizations and individuals who discharge waste or cause pollution must pay for treatment and remediation, and are liable for any damages caused (LEP 2020, Art. 4.6). This is implemented through a combination of environmental taxes on polluting products, pollution fees for wastewater and solid waste, and a newly strengthened civil liability regime for environmental damage. Crucially, the law also introduces a modern deposit-refund mechanism for products with recyclable packaging or those containing toxic substances, requiring consumers

to pay a deposit that is refunded upon return of the product, thereby creating a direct financial incentive for recycling (LEP 2020, Art. 55).

A major institutional innovation is the introduction of a single, integrated Environmental License (LEP 2020, Art. 39). This reform addresses a significant source of fragmentation and inefficiency in previous regimes, where a business might need up to seven different environmental permits from various agencies. The new license consolidates these into a single, comprehensive permit covering all aspects of waste discharge (wastewater, emissions, solid waste, hazardous waste) for high-risk projects (Group I, II, and III). This not only streamlines administrative procedures for businesses but, more importantly, creates a single, powerful point of control for state authorities. It allows for a holistic assessment of a project's total environmental footprint and makes monitoring and enforcement more coherent and effective. The license specifies the types and limits of pollutants that can be discharged, sets requirements for monitoring, and becomes the primary legal basis for inspection and sanctions, thereby serving as the law's core command-and-control instrument.

Further advancing the goal of a circular economy, the LEP 2020 for the first time codifies Extended Producer Responsibility (EPR) as a mandatory obligation (LEP 2020, Art. 54). This market-based instrument shifts the responsibility for the post-consumer stage of a product's life cycle from municipalities and the public back to the producers. Manufacturers and importers of certain products, including packaging, batteries, lubricants, and tires, are now legally required to either organize the recycling of their products according to a mandatory rate and specification or make a financial contribution to the Vietnam Environment Protection Fund to support recycling activities. This policy is designed to create a powerful economic incentive for producers to design products that are more durable, easier to recycle, and contain fewer hazardous substances, directly embedding the principles of circularity into industrial design and production.

Finally, in light of its long-term climate commitments, the LEP 2020 establishes the legal foundation for a domestic carbon market (LEP 2020, Art. 139). This provision is a direct response to Vietnam's pledge to achieve net-zero emissions by 2050. The law mandates the development of a national carbon credit trading system, outlining a roadmap for its implementation. It requires major greenhouse gas emitters in sectors such as energy, industry, and transportation to conduct GHG inventories and adhere to their allocated emission quotas. Enterprises that reduce their emissions below their quota can sell their surplus credits on the market, while those exceeding their quota must purchase credits. While the market is still in its early stages, establishing this legal framework is a critical first

step in utilising a market-based mechanism to drive low-carbon investment and achieve national climate goals in an economically efficient manner (Hanns Seidel Foundation in Southeast Asia 2021).

3.2.2 Empowering the Social Pillar

A significant weakness in Vietnam's past environmental governance has been the largely formalistic and inadequate role of the public, leading to social conflicts and undermining the legitimacy of development projects. The LEP 2020 attempts to rectify this by significantly strengthening the procedural rights that form the bedrock of the social pillar of sustainable development (Hanns Seidel Foundation in Southeast Asia 2021, 35).

The most profound change lies in the reinforced mechanisms for public consultation during the Environmental Impact Assessment (EIA) process. Previous laws mandated consultation, but the process was often opaque and channeled through official organizations like the Fatherland Front, with limited direct engagement with affected communities (Tran 2024, 121). The LEP 2020 revolutionizes this by explicitly identifying "residential communities and individuals directly affected by the project" as the primary subjects of consultation (LEP 2020, Art. 33). It mandates that project developers must consult these communities and that the results of this consultation must be included in the EIA report. The law specifies various forms of consultation, including public meetings and written comments, and requires that the EIA report must present and address the public's concerns. Furthermore, it stipulates that a failure to conduct proper consultation is grounds for the authorities to reject an EIA report, giving this procedural requirement unprecedented legal weight.

Complementing this is a stronger commitment to access to information. The law mandates the public disclosure of a wide range of environmental information on the web portals of government agencies, from the national to the district level. This includes draft EIA reports, approved EIA reports, issued environmental licenses, and the results of environmental inspections and monitoring (LEP 2020, Art. 114). This creates a legal basis for transparency that was previously lacking, enabling civil society organizations, researchers, and the public to access the information needed to scrutinize development projects and hold both government and businesses accountable. By making this information publicly accessible, the law aims to level the playing field and foster a more informed public discourse on environmental issues.

The LEP 2020 also provides a stronger legal footing for community-based monitoring. Article 159 formally recognizes the right and responsibility of residential communities to participate in

environmental protection within their localities (LEP 2020, Art. 159). It explicitly grants community representatives the right to request information from project developers and state agencies, and to participate in inspections. The law further creates a legal pathway for communities to report and provide information about environmental violations to the authorities. This provision aims to formalize the 'eyes and ears' role that communities have often played informally, giving them a legally recognized standing in the environmental monitoring and enforcement process. While the effectiveness of this provision will depend heavily on the responsiveness of state agencies, it marks a critical step in empowering the social pillar and fostering a model of co-governance where communities are active partners in protecting their own environment.

3.2.3 Strengthening the Environmental Pillar

To build a truly sustainable system, environmental considerations must be integrated 'upstream' into the earliest stages of planning and decision-making. The LEP 2020 introduces and strengthens several strategic tools designed to shift governance from a reactive, project-by-project approach to a more proactive and integrated model, thereby strengthening the environmental pillar itself.

A cornerstone of this new approach is the refined preliminary environmental impact assessment (PEIA) and project classification system (LEP 2020, Arts. 28-9). Instead of a one-size-fits-all approach, the law now categorizes all investment projects into four groups based on their potential environmental risk (Group I: high risk, Group II: medium risk, Group III: low risk, Group IV: no risk). This risk-based screening, conducted at the earliest stage of investment approval, determines the type of environmental assessment required. High-risk projects (Group I) must undergo both a PEIA and a full EIA, while low-risk projects may only require an environmental registration. This is a crucial efficiency reform that allows regulatory agencies to focus their limited financial and human resources on the projects that pose the greatest threat to the environment and public health, while simplifying procedures for less harmful activities.

The law also enhances the role of Strategic Environmental Assessment (SEA). SEA is a tool for integrating environmental considerations into higher-level decision-making, such as national strategies, master plans, and sectoral development plans (LEP 2020, Art. 25). While SEA existed previously, the LEP 2020 clarifies its application and strengthens its link to the planning process. By requiring an assessment of the potential environmental impacts of an entire strategy or plan, SEA aims to identify and mitigate environmental risks long before specific projects are even proposed.

This ensures that the environmental pillar is considered alongside economic and social factors at the strategic level, helping to steer national and regional development onto a more sustainable path from the outset.

Finally, the LEP 2020 provides a stronger legal basis for Environmental Zoning, a key tool for integrated spatial planning (LEP 2020, Art. 22). This involves the creation of a national environmental protection master plan that designates different zones based on their ecological sensitivity and function. These zones include strictly protected areas (e.g., national parks, nature reserves), buffer zones, and zones designated for sustainable development. This master plan is intended to serve as a guide for all other sectoral and provincial-level planning, ensuring that decisions about land use and investment are aligned with national environmental protection priorities. By providing a clear spatial framework for balancing conservation and development, environmental zoning represents a powerful instrument for proactively managing the environmental pillar and preventing future land-use conflicts.

4 Implementation in Practice: The Imbalance of the Pillars

While Vietnam's constitutional and legislative framework, particularly the LEP 2020, presents a sophisticated and modern architecture for balancing environmental protection with sustainable development, the reality of its implementation reveals a persistent and systemic imbalance. The ambitious legal script often collides with the powerful political and economic logic of a developmental state, resulting in a gap between *de jure* commitments and *de facto* outcomes. An analysis of the practical application of this framework demonstrates a hierarchy among the three pillars of sustainable development: the economic pillar remains dominant, often at the expense of a weakened environmental pillar and an underdeveloped social pillar. This section will critically examine this imbalance, exploring the root causes and practical manifestations of the challenges that hinder the full realization of the right to a healthy environment in Vietnam.

4.1 The Dominance of the Economic Pillar

The central, and often overriding, priority of the Vietnamese state since the *Đổi Mới* reforms of 1986 has been rapid socio-economic development. This national project has been remarkably successful, lifting millions out of poverty and transforming Vietnam into a regional economic powerhouse. However, this success has been built upon a model of development that is resource-intensive and heavily reliant on foreign direct investment (FDI), creating a powerful systemic bias that prioritizes economic growth above all else. This prioritization is not merely a political choice but is deeply embedded in the state's performance metrics and the political economy of provincial governance (Ortmann 2017, 67). Consequently, while national policy documents and laws speak the language of sustainable balance, operational commitment on the ground often tells a different story (Do, Thi 2022, 113).

The most catastrophic illustration of this imbalance was the 2016 Formosa Ha Tinh Steel disaster, a national environmental trauma that profoundly shaped the discourse leading to the LEP 2020. The incident, where a massive discharge of toxic industrial waste from the Taiwanese-owned steel plant caused an unprecedented marine ecological disaster along Vietnam's central coast, was not simply an industrial accident. It was a systemic failure of governance, rooted in the prioritization of a monumental economic project over rigorous environmental risk management (Fan, Chih-Ming, Mabon 2022, 192). The environmental impact assessment (EIA) process, designed to be a critical gatekeeper, failed to prevent the construction and operation of a facility with an inadequately designed and monitored wastewater treatment system. This reflects a broader pattern where, in the pursuit of attracting large-scale FDI, provincial authorities may engage in a "race to the bottom", offering incentives that can include a less stringent application of environmental standards and oversight (Carlitz, Povitkina 2021).

This dynamic is exacerbated by what Do and Thi (2022, 113) term "over-decentralization" without adequate accountability mechanisms. While empowering provincial authorities to approve investments appears sensible, it creates a conflict of interest where the same provincial government that benefits directly from the tax revenues and employment generated by a project is also responsible for enforcing environmental regulations against it. This structural conflict often results in pro-business interests overriding environmental concerns in local decision-making. The national goal of balancing development and protection, therefore, lacks "operational commitment" at the provincial level where most critical investment decisions are made. The data on Vietnam's development trajectory bears this out: a period of rapid GDP growth has been accompanied

by skyrocketing CO2 emissions and a sharp decline in "adjusted net savings" – a World Bank metric that accounts for resource depletion and pollution damage – indicating a fundamentally unsustainable development trend. The dominance of the economic pillar is thus not an aberration but a structural feature of Vietnam's political economy, posing the single greatest challenge to the substantive realization of the right to a healthy environment (Do, Thi 2022).

4.2 The Weakness of the Environmental Pillar

In the face of the powerful momentum of the economic pillar, the environmental pillar, despite its robust legal articulation in the LEP 2020, often proves to be a 'paper tiger'. The effectiveness of environmental law is contingent upon the capacity and political will of the institutions tasked with its implementation and enforcement. In Vietnam, these institutions face a combination of structural, financial, and human resource limitations that severely curtail their ability to act as an effective counterweight to entrenched economic interests (UNEP 2023, 36-40). This results in an "enforcement deficit" where sophisticated laws exist on the books but are only weakly applied in practice, a problem identified as a key challenge in Vietnam's 30-year environmental policy history (Do, Thi 2022, 113).

A primary constraint is the chronic underfunding and understaffing of environmental management agencies. Financial resources allocated from the state budget for environmental protection have consistently been insufficient, meeting only about 55% of the demand and accounting for a mere 0.3% of GDP, well below the regional average. This translates into a critical lack of capacity at the operational level. For example, on average, each province has only eight environmental inspectors, a number wholly inadequate to cover the demanding tasks of monitoring thousands of industrial facilities, mining operations, and land administration issues. This institutional weakness creates a low-risk environment for polluters, where the probability of being inspected is low, and even when violations are detected, the penalties are often seen as a mere "cost of doing business" rather than a significant deterrent (Do, Thi 2022, 113).

This problem of fragmented governance and poor interagency coordination has long been a defining challenge for Vietnam's environmental policy. For decades, environmental management authority was notoriously dispersed across multiple ministries with overlapping mandates and often conflicting priorities, a primary obstacle to effective policy implementation. The classic structure involved the Ministry of Natural Resources and Environment (MONRE) as the central environmental regulator, while the Ministry of Agriculture and Rural Development (MARD) governed

critical environmental sectors like forestry, water resources for irrigation, and agricultural pollution. This division created inherent coordination challenges, for example, in managing river basin health where MONRE was responsible for overall water quality while MARD managed irrigation and agricultural runoff. This fragmentation was exacerbated by the powerful economic ministries, such as the Ministry of Planning and Investment (MPI), which holds the gatekeeping role for investment approvals, often prioritizing economic targets over environmental concerns raised by MONRE.

Recognizing this systemic weakness, Vietnam has initiated a landmark institutional reorganization aimed at overcoming this fragmentation. The most significant of these changes is the decision to merge the Ministry of Agriculture and Rural Development with the Ministry of Natural Resources and Environment to form a new, integrated Ministry of Agriculture and Environment. This is a revolutionary move designed to internalize the management of natural resources and environmental protection directly within the ministry that oversees the sectors most reliant upon and impactful to them. Theoretically, this merger seeks to resolve the long-standing silos between resource exploitation (agriculture, forestry) and resource protection (environment). By placing both functions under a single ministerial roof, the reform aims to foster a more holistic, ecosystem-based approach to governance, where policies for agricultural intensification, for instance, must inherently consider their environmental consequences on water and soil quality from the outset (Ngoc 2025).

This structural change has profound implications for the implementation of the LEP 2020. The law's emphasis on tools like strategic environmental assessment (SEA), environmental zoning, and river basin management can now, in principle, be coordinated more coherently. For example, planning for agricultural development and setting environmental standards for agricultural pollution would no longer be a matter of negotiation *between* two ministries, but an internal policy-making process within one. However, while this consolidation is a powerful step towards resolving fragmentation in the 'green block' of government, it does not eliminate the overarching tension between environmental protection and the broader national economic agenda. The newly formed Ministry of Agriculture and Environment will still need to interface and negotiate with the powerful economic ministries that remain separate, particularly the Ministry of Planning and Investment (MPI) and the newly consolidated Ministry of Finance.

Therefore, the ultimate success of this ambitious reform will hinge on two factors. First is the internal capacity of the new super-ministry to genuinely integrate its dual mandates, ensuring that the environmental protection function is not subordinated to

the powerful and established agricultural production interests within its own structure. Second, and more importantly, is its ability to champion this integrated 'green growth' perspective effectively in high-level policy debates with the economic ministries. The LEP 2020 provides this new ministry with powerful legal tools, but the challenge of balancing the pillars of sustainable development has now shifted from being primarily an inter-ministerial coordination problem to a combination of an intra-ministerial integration challenge and a continued contest of priorities at the highest levels of government.

Furthermore, there is a palpable lack of political will to utilize the strongest enforcement tools available. Although Vietnam's Criminal Code includes provisions for environmental crimes, these are very rarely prosecuted. Despite numerous cases of severe water pollution, only several cases of illegal water discharge have ever been treated as an environmental crime. This is because criminal prosecution requires a high burden of proof to establish cause and effect and severity of damage, which is often beyond the technical capacity of current institutions. The reluctance to pursue criminal charges sends a powerful signal that environmental violations are not treated with the same seriousness as other offenses, further weakening the deterrent effect of the law and reinforcing the perception of the environmental pillar as subordinate to economic and political interests (Do, Thi 2022).

4.3 The Fading of the Social Pillar

The LEP 2020's progressive provisions on public participation, access to information, and access to justice are designed to empower the social pillar, creating a system of 'bottom-up' accountability to complement 'top-down' state management. However, in practice, this pillar remains the most underdeveloped, hindered by a combination of limited public awareness, formalistic implementation of procedural rights, and significant barriers to accessing justice. This deficit in environmental democracy not only undermines the rights of affected communities but also removes a crucial driver for better environmental governance.

A fundamental barrier is the limited legal awareness and understanding of environmental rights among the general public. As noted by Tran (2024, 115), awareness of these specific human rights is still very limited, and there is often a cultural tendency to accept environmental misfortune as 'fate', rather than as a violation of an enforceable right. This is reinforced by a lack of accessible legal education and support. While official channels for participation exist, many citizens lack the knowledge, resources, or confidence to navigate them effectively. Surveys consistently show that while

concern for the environment is rising, particularly among the educated and urban youth, this concern does not always translate into active and informed engagement in governance processes (Hanns Seidel Foundation in Southeast Asia 2021).

Consequently, the implementation of procedural rights often becomes a formalistic, box-ticking exercise rather than a process of meaningful dialogue. Public consultation for EIAs, while legally mandated, is frequently conducted in a perfunctory manner. Communities may be presented with highly technical documents at short notice, with little opportunity for genuine input or influence on the final project design. The case of the Rang Dong factory fire in Hanoi serves as a stark example of the failure of information disclosure. In the aftermath of the massive mercury release, residents were left in a state of confusion and fear due to the lack of timely, clear, and trustworthy information from both the company and the authorities about the health risks they faced. The LEP 2020's mandate for information disclosure is a step forward, but its effectiveness depends entirely on a culture of transparency that has yet to be fully institutionalized (Nguyen 2013).

Finally, when consultation fails and harm occurs, access to justice remains a formidable challenge. The path to the courthouse is fraught with obstacles, including high costs, a lack of specialized environmental lawyers, the difficulty of proving causation in complex pollution cases (Tran 2024, 123). While some specialized environmental benches have been established within the court system, they are few and their capacity is limited. Furthermore, there is often a reluctance on the part of courts to rule against major state-supported development projects. The combination of barriers means that the social pillar, envisioned in the law as a vibrant partner in governance, remains largely muted, unable to exert the necessary pressure to bring the dominant economic pillar and the environmental pillar into a more sustainable and equitable balance.

5 Recommendations: Recalibrating the Pillars for Genuine Sustainable Development

The preceding analysis has demonstrated that while Vietnam has constructed an impressive legal edifice for environmental protection and sustainable development, its practical application is undermined by a systemic imbalance where economic priorities consistently outweigh environmental and social considerations. Bridging the gap between the nation's constitutional aspirations and its on-the-ground reality requires more than incremental adjustments; it necessitates a strategic recalibration of the relationship between the three pillars of sustainable development. The following recommendations are not

presented as a simple checklist but as a holistic and interconnected strategy designed to strengthen the weaker pillars – environmental and social – while simultaneously 'greening' the dominant economic pillar. This approach aims to foster a governance model where the right to a healthy environment is not an obstacle to development, but its essential and non-negotiable foundation.

5.1 Elevating the Environmental Pillar: From a Subordinate Mandate to a Core Governance Principle

To move beyond being a 'paper tiger', the environmental pillar requires a significant enhancement of its institutional authority, enforcement capacity, and its integration into the core machinery of the state. This involves not only empowering environmental agencies but also ensuring that environmental considerations are a mandatory and powerful component of all government decision-making.

First, the recent institutional reorganization, merging the Ministry of Natural Resources and Environment (MONRE) with the Ministry of Agriculture and Rural Development (MARD) into a new Ministry of Agriculture and Environment, presents a historic opportunity that must be carefully managed. To be effective, this 'super-ministry' must establish robust internal mechanisms to ensure genuine integration, preventing the environmental protection mandate from being subsumed by the more established and economically powerful agricultural production interests. This requires creating a clear internal hierarchy where the environmental regulatory body (analogous to the former Vietnam Environment Administration) is endowed with significant autonomy, a guaranteed budget, and the authority to review and, if necessary, veto environmentally detrimental agricultural or forestry policies developed within the same ministry. Furthermore, a clear and empowered inter-ministerial coordination mechanism, led at the Deputy Prime Minister level, must be established to adjudicate policy conflicts between this new ministry and the powerful economic ministries, particularly the Ministry of Finance. This mechanism is crucial for ensuring that the 'gatekeeper' of investment does not systematically override the 'gatekeeper' of environmental health.

Second, there is an urgent need to strengthen enforcement capacity at both the national and provincial levels, a weakness highlighted by numerous studies (Ortmann 2017; Do, Thi 2022). This requires a significant increase in the state budget allocation for environmental protection, moving it closer to the regional average. These funds should be earmarked for specific capacity-building initiatives: increasing the number of well-trained environmental inspectors, providing them with advanced monitoring technology

(such as real-time sensors and satellite imagery analysis tools), and establishing independent, well-resourced environmental laboratories. Following international best practices, Vietnam should consider establishing a National Environmental Enforcement Agency, a body with a degree of operational independence from political influence at the provincial level, tasked with investigating and prosecuting serious environmental violations (Hanns Seidel Foundation in Southeast Asia 2021, 10). This would help to mitigate the conflict of interest where local governments are hesitant to enforce regulations against major investors. Furthermore, the sanctions regime must be reformed to ensure that fines are not merely a 'cost of doing business'. Penalties should be linked to the economic benefit gained from the violation and the severity of the environmental harm, ensuring they serve as a genuine deterrent.

Finally, Vietnam must harmonize its entire legal framework with the principles of the LEP 2020. This requires a systematic and mandatory review of other key laws, such as the Law on Investment, the Land Law, and sectoral laws, to identify and eliminate contradictions that weaken environmental standards. The principle of "non-regression", which holds that states should not weaken existing environmental standards, should be explicitly adopted as a guiding principle for all future law-making (Knox 2018, 14). This comprehensive legal and institutional strengthening is the first step in transforming the environmental pillar from a subordinate concern into a core principle of state governance.

5.2 Empowering the Social Pillar: Fostering a Culture of Participatory Governance

A strong social pillar is not a luxury but an essential component of effective environmental governance. Empowered and informed citizens and civil society organizations act as a vital 'bottom-up' accountability mechanism, complementing 'top-down' state enforcement. To activate this pillar, Vietnam must move beyond the formalistic application of procedural rights and foster a genuine culture of participatory governance.

The first priority is to give practical meaning to the right of access to information. While the LEP 2020 mandates information disclosure, the reality is often one of opaque and inaccessible data (Do, Thi 2022). The government should establish a single, user-friendly, and publicly accessible National Environmental Information Portal. This portal should provide real-time or near-real-time data from automated monitoring stations, full and searchable texts of all approved EIA reports and environmental licenses, and a public registry of environmental violations and enforcement actions. Following the

principles of the Aarhus Convention, information should be provided in a format that is easily understandable to the layperson, and barriers to access, such as fees or complex procedures, should be eliminated. This radical transparency is the precondition for all other forms of public engagement.

Second, the public consultation process must be reformed to ensure it is meaningful, not merely procedural. This requires a shift in mindset from 'informing' the public to genuinely 'consulting' them. Clear guidelines, inspired by international best practices such as the Akwé: Kon Guidelines for cultural, environmental, and social impact assessments, should be issued, mandating that consultation happens early in the project cycle, before key decisions are made (Knox 2018, 17). Project developers should be required to fund independent technical experts to help communities understand complex EIA documents. Most importantly, the authorities reviewing the EIA must be legally required to provide a written, public justification explaining how community feedback was considered and why specific concerns were accepted or rejected. This 'duty to give reasons' is a cornerstone of accountable governance.

Third, access to justice must be made a practical reality. As the case of the Rang Dong factory fire demonstrated, the path to legal redress is often blocked by financial and procedural hurdles (Tran 2024, 113). Vietnam should reform its legal framework to explicitly allow for public interest litigation and class action lawsuits in environmental cases, enabling NGOs and community representatives to bring cases on behalf of a wider group of affected people. The 'loser pays' principle, which can have a chilling effect on public interest litigation, should be modified for environmental cases, so that claimants acting in the public interest do not face the risk of crippling legal costs if they lose. Furthermore, establishing specialized environmental courts or tribunals, as many countries have done, would build judicial expertise and streamline the handling of these complex cases (UNEP 2023, 123). Investing in legal aid programs specifically for environmental cases would further empower marginalized communities to seek justice, transforming the social pillar into a powerful force for accountability.

5.3 'Greening' the Economic Pillar: Aligning Market Forces with Sustainability

The long-term solution to environmental degradation lies not only in strengthening regulation and participation but also in fundamentally reorienting the economic pillar itself. This involves creating a policy environment where market forces and private investment are systematically channeled towards sustainable outcomes, making environmental protection not a burden on the economy, but a driver of innovation and competitiveness.

First, Vietnam must rigorously implement and expand the use of market-based instruments introduced in the LEP 2020. The Polluter Pays Principle should be enforced not just through fines but through a robust and progressively increasing system of pollution charges and environmental taxes that accurately reflect the social and environmental costs of pollution. The revenues generated from these charges should not disappear into the general state budget but should be transparently reinvested into the Environmental Protection Fund and used for remediation and green technology initiatives. The domestic carbon market, established under the LEP 2020, must be accelerated. The government should set a clear, ambitious, and progressively tightening cap on emissions to create a meaningful carbon price that will drive investment away from fossil fuels and towards renewable energy and energy efficiency (Ngo, Nguyen 2022).

Second, the state must play a more proactive role in incentivizing sustainable business practices and green investment. This goes beyond simply regulating polluters; it involves creating a favorable ecosystem for green businesses. This can be achieved through a variety of policy tools: providing tax incentives, preferential credit, and land access for companies investing in renewable energy, circular economy models, and clean technology; launching a robust national "Green Label" program to guide consumers and create market advantages for sustainable products; and reforming public procurement rules to mandate that all government agencies give preference to sustainable goods and services. By creating clear market signals that sustainability is profitable, the government can harness the innovative power of the private sector to drive the transition (Dang 2020).

Finally, Vietnam must undertake a systematic review and phasing out of perverse subsidies. Sizable fossil fuel subsidies, for example, directly contradict the nation's climate goals and create an unlevel playing field that disadvantages renewable energy (Do, Thi 2022). Similarly, subsidies in agriculture that encourage the overuse of chemical fertilizers and pesticides should be redirected to support farmers in transitioning to organic and agroecological practices. This process of subsidy reform is politically challenging but is an

essential step in ensuring policy coherence and aligning the country's economic incentives with its constitutional commitment to a healthy environment. By strengthening the environmental pillar, empowering the social pillar, and greening the economic pillar in a coordinated and strategic manner, Vietnam can begin to close the implementation gap and move towards a future that is not only prosperous but also truly sustainable (Le 2024).

6 Conclusion

Vietnam's journey over the past decade in environmental governance represents a microcosm of the central challenge of the twenty-first century: how to reconcile the urgent imperative of economic development with the non-negotiable necessity of environmental preservation. This article has critically examined this journey, tracing the path from the landmark constitutional recognition of the right to a healthy environment in 2013 to the ambitious legislative framework of the Law on Environmental Protection 2020. The analysis demonstrates that Vietnam has successfully constructed a sophisticated legal architecture that aligns with international best practices and embraces the modern paradigm of sustainable development. The law institutionalizes the crucial nexus between environmental rights and sustainability, providing a comprehensive suite of tools designed to balance the economic, social, and environmental pillars.

However, a persistent gap exists between these *de jure* commitments and the *de facto* reality. The practical implementation of Vietnam's environmental law is characterized by an imbalance, where the powerful momentum of the economic pillar can overshadow the environmental and social pillars. This is not simply a matter of weak enforcement or limited resources, though those are significant factors. It is a structural consequence of a developmental state model where the logic of economic growth remains the dominant organizing principle of governance. This has resulted in a weakened environmental pillar, hampered by fragmented authority and insufficient capacity, and a muted social pillar, where the procedural rights of citizens to participate are often more formal than substantive.

Closing this implementation gap and achieving a genuine rebalancing of the three pillars is the most critical task for Vietnamese policymakers in the coming decade. This will require more than just better enforcement of existing laws; it demands a profound shift in the nation's governance philosophy. The recommendations put forth in this paper – strengthening the institutional authority of the environmental pillar, empowering the social pillar through genuine participatory governance, and 'greening' the economic pillar by

aligning market forces with sustainability – are not discrete options but form an interconnected, holistic strategy for change.

Ultimately, the successful realization of the constitutional right to a healthy environment is not an impediment to Vietnam's development aspirations but is, in fact, the only viable path to achieving them in a sustainable manner. A polluted environment degrades the human capital, depletes the natural resources, and erodes the social stability upon which long-term prosperity depends. By strategically recalibrating its governance framework to give genuine weight to the environmental and social pillars, Vietnam can move beyond a model of growth that comes at an unacceptable ecological cost. This is the essential next step in its journey, a step that will transform the constitutional right to a healthy environment from a noble aspiration into a lived reality for all its citizens and secure a truly sustainable and prosperous future for the nation.

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Green Labels, Red Flags: Comparative Legal Pathways to Environmental Legitimacy in the European Union and the People's Republic of China

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Abstract This article explores how greenwashing is regulated through environmental labelling in the European Union and the People's Republic of China. Through a comparative analysis, it contrasts the EU's ex-post model – based on substantiation and market supervision – with China's ex-ante architecture of sovereign certification, grounded in the ideological tenets of ecological civilization. The study reveals how each system embeds environmental legitimacy within distinct legal, institutional, and political logics, offering a broader reflection on the semiotics of sustainability and the governance of credibility in the global green transition.

Keywords Greenwashing. Comparative Law. People's Republic of China. Environmental claims. State-led certification.

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1 Introduction

The phenomenon of *greenwashing*, stretched between marketing rhetoric and market reality, traces its origins to the mid-1980s United States. Coined by environmentalists to critique misleading assertions made by corporations and institutions regarding the ecological implications of their conduct, the term – whose provenance is commonly attributed to biologist Jay Westerveld (Rawsthorn 2010; Gatti, Conti, Seele 2025, 3) – denotes the deliberate attempt by companies, governments, or even individuals to project a simulacrum of environmental responsibility (cf. Cherry 2014). This objective is achieved through the deployment of 'green' imagery and discourse for products, services, or the entity itself, without a corresponding and substantive ecological merit. Such practices, by creating an informational asymmetry that privileges deceptive narratives, ultimately distort market dynamics and corrode consumer trust.

At its core, greenwashing poses a regulatory puzzle because of its nature, thriving in the ambiguous space between legitimate marketing, aspirational corporate communication, and outright deception (Sobrero 2022). A green or ecological claim[1] transcends mere simple statement of fact; it constitutes a performative act designed to attribute value and influence consumer choice. How, then, can a legal system effectively discipline a phenomenon that lies at the slippery intersection of commercial language, scientific evidence, and public perception? The challenge extends beyond the mere prohibition of falsehoods to encompass the governance of credibility's very grammar, ensuring that the language of sustainability remains a meaningful tool for ecological transition rather than a devalued currency of corporate branding.

While the challenge of policing environmental claims is global, the regulatory responses it elicits are far from uniform. They reveal deep-seated divergences in legal philosophy, institutional design, and the very understanding of the relationship between the state, the market, and the production of truth. This article undertakes a comparative exploration of the legal instruments employed to combat greenwashing, juxtaposing two profoundly different regulatory models for assessing green claims: that of the European Union (EU) and that of the People's Republic of China (PRC).

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1 It. 'asserzione ecologica', cf. Genovese 2024.

In the Chinese context, greenwashing[2] has shown a worrying increase, with emblematic cases of firms labelling their products as 'green' or 'eco-friendly' without any verifiable substantiation, at times in blatant contradiction with their own actions. A paradigmatic case is the 2010 incident involving Zijin Mining, a publicly listed mining company, which promoted the slogan "we prefer clear waters and green mountains to gold and silver" (*yào jīnshān yínshān, gèng yào lǜshuǐ qīngshān* 要金山银山, 更要绿水青山), while simultaneously causing a major wastewater spill that severely impacted the Tingjiang River ecosystem, with repercussions in the Fujian and Guangdong provinces (He et al. 2011). Even multinational corporations such as Walmart have faced repeated accusations of greenwashing in China, having allegedly made unsubstantiated ecological promises for the sole purpose of constructing an image of environmental responsibility (He et al. 2011). The EU, particularly through its recent legislative reforms culminating in Directive (EU) 2024/825,[3] has consolidated a model of *ex-post* verification. In this system, green claims are, in principle, freely made by market actors, but must withstand rigorous scrutiny concerning their clarity, accuracy, and substantiation, primarily through independent, third-party certification.

Conversely, the PRC has developed a model of *ex-ante* authorization. Confronted with the proliferation of misleading claims and a chaotic landscape of public-led labels, the Chinese Party-State has engineered a vast, centralized architecture of sovereign control. Here, the right to make a "green" claim is not a default liberty but a state-conferred privilege. Legitimacy is not adjudicated *ex-post*, but granted *ex-ante* through a hierarchical system of state-sanctioned labels, managed by a complex administrative apparatus and underpinned by a now pervasive digital oversight infrastructure. In this paradigm, the law does not merely regulate the grammar of green claims; it claims the authority to write the dictionary.

This analysis will first outline the contours of the EU framework as a baseline for understanding. It will then delve into the Chinese system, not just to find direct imitation and transplants (Watson 1993), but to interrogate the endogenous political and ideological drivers that have led China to forge its unique path of state-led green claims governance. The decision to concentrate on China as the most representative context of East Asia stems from the breadth

2 In Chinese *piāolǜ* 漂绿, literally "to whitewash in green".

3 Directive (EU) 2024/825 of the European Parliament and of the Council of 28 February 2024 amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information. Hereinafter, 'ECGTD'. For analysis of the legislative process and its implications, see Bertelli 2024; De Franceschi 2023, 45 ff.; Perrillo 2023, 1603 ff.; Micklitz, Reisch 2023, 1.

and sophistication of its regulatory edifice and the availability of rich primary sources and case materials, allowing for a granular examination of a distinct legal-political response to a global phenomenon (Hu, Wang 2004). This comparative mapping aims to illuminate how the seemingly technical issue of greenwashing becomes a site for the articulation of different visions of law and the market.

2 The EU's Original UCPD-Based Framework and Its Inadequacy

Given EU's asserted role of global regulatory standard-setter (cf. Bradford 2020), its trajectory makes it an ideal counterpart to distinct models, such as the one emerging in China. Furthermore, the European Union's approach to greenwashing demonstrates a unique perspective on market regulation, rooted in a persistent, dialectical tension between the fundamental freedoms of the internal market, as stipulated in Article 114 of the Treaty on the Functioning of the European Union (TFEU), and the imperative of ensuring a high level of consumer protection. This approach signifies a progressive shift from relying on general clauses against misleading conduct to a highly specific legal framework designed to govern green claims.

The EU's initial legal framework for policing the market relied almost exclusively on the general, principles-based prohibitions of the 2005 Unfair Commercial Practices Directive,[4] without subjecting greenwashing to a *lex specialis* (cf. Minervini, Rossi Carleo 2007).

As a framework of maximum harmonization, its ambition was to provide a comprehensive safety net against all forms of misleading commercial conduct. Legally, environmental sustainability characteristics were not explicitly mentioned in its core articles on misleading actions and omissions. UCPD defined a commercial practice as misleading if it contained false information or was likely to deceive the "average consumer", causing them to take a transactional decision they would not have otherwise taken.[5] However, it was well-established through subsequent Commission guidance that deceptive green claims could indeed be captured by the UCPD's scope, provided they could distort the average consumer's economic behaviour. In this regard, the European Commission's 2016 Guidance on the implementation of the UCPD (SWD/2016/163) represented a significant interpretive step: while a non-binding instrument of soft law, it explicitly addressed green claims, defining

4 2005/29/EC, hereinafter 'UCPD'.

5 Article 6 UCPD.

greenwashing as the appropriation of environmentalist virtues for the purpose of creating a 'green' image (cf. Ottley, Valauskas 1983, 85) and providing criteria for assessing their fairness. The Guidance stipulated that such claims must be clear, specific, accurate, and unambiguous, and should not omit material information about a product's overall environmental impact. This marked the beginning of a process of normative specification, yet the core enforcement mechanism remained anchored in the general clauses of the UCPD. Misleading omissions – the failure to provide material information – were similarly proscribed.[6] Within this framework, a false or unsubstantiated eco-friendly claim was treated as just one possible instance of a broader category of market distortion, its regulation dependent on a case-by-case assessment by national authorities. Furthermore, the burden of proving the accuracy of any factual assertion, including a green claim, already rested squarely on the trader, a crucial principle enshrined in Article 12 UCPD. It is not the consumer or the public authority that must demonstrate the falsity of a green claim, but the professional who is legally obliged to provide adequate substantiation upon request. This principle is the procedural linchpin of the system, demanding that verifiable proof must precede any public claim. The practical and, at times, contentious application of this logic is compellingly illustrated by a judicial saga involving the Italian Competition Authority (AGCM) and a prominent mineral water company. The case concerned a series of 'specific and quantified environmental boasts'[4] through which the company advertised its new "eco-friendly" bottles. The AGCM deemed the claims unsubstantiated and sanctioned the company. The Regional Administrative Tribunal (TAR Lazio) initially annulled the sanction, faulting the authority for an improper reversal of the evidentiary burden (T.A.R. Lazio, I, n. 3674/2011). The final word, however, came from the highest administrative court, the *Consiglio di Stato*, which overturned the lower court's decision (Cons. Stato, VI, n. 1960/2017), clarifying that the issue was not the internal origin of the evidence, but its manifest inadequacy. The Court thus affirmed that the evidentiary burden correctly lies with the professional making the claim and that professional diligence demands that substantiation cannot be an afterthought assembled only when challenged (Pistilli 2022).

In theory, the legal tools were in place. In practice, however, this generalist model proved profoundly inadequate to stem the tide of greenwashing. Its insufficiency was not merely a matter of academic debate (cf. Micklitz 2019, 235) but was laid bare by a confluence

6 Article 7 UCPD.

of overwhelming empirical evidence and a powerful new political mandate.

The policy impetus for change emerged forcefully from the 2019 communication on the European Green Deal (COM(2019) 640 final), which stressed the need to empower consumers for the green transition. This was swiftly followed by the 2020 Circular Economy Action Plan (COM(2020) 98 final), in which the Commission explicitly announced its intention to reinforce consumer protection against greenwashing by proposing minimum requirements for sustainability labels and requiring that businesses substantiate their environmental claims. The political will for reform was fuelled by startling data from the Commission's own investigations that showed a market in a state of informational disarray. Studies and market sweeps conducted by the European Commission and the network of national Consumer Protection Cooperation authorities (CPC Network)[7] have repeatedly highlighted the pervasiveness of greenwashing. A major 2020 screening (European Commission 2020), for instance, found that in 42% of cases examining online green claims, the assertions were exaggerated, false, or deceptive and could potentially qualify as unfair commercial practices under the UCPD; of all green claims examined across the Union, a remarkable, 53% were found to be vague, misleading, or unfounded, and 40% were entirely unsubstantiated. This chaos was compounded by the structural proliferation of labels, with an estimated 230 active ecolabels and a further 100 private green energy labels operating in Europe, creating an impenetrable jungle of signs for the consumer. The failure of the existing framework to ensure that claims were reliable, comparable, and verifiable demonstrated that a principles-based, general clauses, while flexible, approach was ill-suited to discipline a market saturated with technically complex and emotionally resonant environmental messaging, providing neither sufficient legal certainty for businesses nor adequate protection for consumers, who often lack the technical knowledge to decipher complex claims.

The New Consumer Agenda of November 2020 (COM(2020) 696 final) therefore solidified the political commitment to act, formally identifying greenwashing as a key challenge and paving the way for a more direct legislative intervention.

7 On CPC Network, see Poncibò 2012, 175; Scott 2018, 466.

3 Targeted Prohibitions under the EU's Empowering Consumers for the Green Transition Directive (ECGTD)

The legislative response which reconfigured the legal terrain of greenwashing in the European Union was firstly articulated with the adoption of the Directive (EU) 2024/825.

Situated within the broader *Circular Economy Package* (Keirsbilck 2024, 205; Galli, Rainone 2025), the ECGTD's stated purpose is not only to ensure a high level of consumer protection but also to explicitly integrate environmental protection as a guiding objective, thereby contributing to the Union's green transition. Its primary method for achieving this is twofold: first, by making subtle but significant amendments to the general clauses of the UCPD, and second, far more powerfully, by inserting a raft of new, targeted prohibitions directly into the Annex I blacklist, which outlaws certain practices *per se* without the need for a case-by-case assessment of their effect on the consumer's transactional decision.

The first layer of Intervention subtly re-engineers the UCPD's general prohibitions. The non-exhaustive list of main product characteristics in relation to which a trader must not mislead, found in Article 6(1), has been explicitly amended to include 'environmental or social characteristics' and 'circularity aspects, such as durability, reparability and recyclability'. While this may appear to be a simple clarification, its legal significance is profound: it formally signals that sustainability is no longer a peripheral marketing angle but a core parameter of product competition, fully integrated into the fabric of unfair competition law (Genovese 2024, 3).

More substantially, the directive introduces a new regime within Article 6(2) UCDP to govern future environmental performance claims, effectively creating a blacklist of prohibited greenwashing practices. Assertions such as 'climate-neutral by 2030' are now presumptively misleading unless they are supported by a rigorous set of cumulative conditions: the trader must have set out 'clear, objective, publicly available and verifiable commitments' in a detailed and realistic implementation plan; this plan must contain measurable, time-bound targets and specify the allocation of resources; crucially, the plan and the trader's progress must be 'regularly verified by a third party expert' whose findings are 'made available to consumers'. While this mechanism provides a pathway for legitimate aspirational claims, its complexity and cost have raised scholarly concerns that it might inadvertently lead to 'greenhushing', where businesses, fearing the high compliance burden, refrain from communicating genuine, incremental environmental improvements (Reale 2024, 121).

The most potent Innovations of the ECGTD, however, lie In Its use of the Annex I blacklist as a tool for surgical, *per se* prohibitions. The directive adds several new entries specifically designed to outlaw

the most common forms of greenwashing. It institutes an outright ban on 'generic environmental claims' where the specification of the claim is not provided in clear and prominent terms on the same medium.[8] Vague terms like 'eco-friendly', 'green', or 'ecological' are thus prohibited, with a narrow exception for instances where the trader can prove 'recognized excellent environmental performance' relevant to the claim, such as certification under the EU Ecolabel (cf. Iraldo, Barberio 2017, 751) or an equivalent national scheme compliant with the EN ISO 14024 Type I standard.[9] The directive also bans the displaying of a 'sustainability label that is not based on a certification scheme or not established by public authorities', a measure aimed directly at the proliferation of meaningless, self-awarded logos.

This voluntary standard, which underpins the EU Ecolabel, requires that claims be based on a comprehensive life-cycle assessment and verified by an independent third-party body. The legal framework thus outsources the function of verification to a technical apparatus of expertise, transforming a self-interested marketing assertion into a verifiable statement of conformity (Bertelli 2024, 354).

Furthermore, ECGTD prohibits 'making an environmental claim about the entire product when it concerns only a certain aspect of the product', targeting, for instance, a product marketed as recycled when only its packaging is. Most significantly, the directive takes direct aim at the pervasive practice of climate-washing by blacklisting any claim 'based on the offsetting of greenhouse gas emissions, that a product has a neutral, reduced or positive impact on the environment'. This crucial prohibition forces companies to ground their climate-related claims in the actual lifecycle impact of their products and value chains, rather than on the often opaque and unreliable practice of purchasing external carbon credits.

8 Cf. *Whereas Nine and Ten*, Directive (EU) 2024/825.

9 See the technical standard EN ISO 14024:2018, *Environmental labels and declarations – Type I environmental labelling – Principles and procedures*. This standard is foundational for credible ecolabels, requiring a multi-criteria approach based on the product's entire life cycle and certification by an independent body. Within EU law, it functions as a key instrument for ensuring the reliability and comparability of environmental information, operating in synergy with mandatory legislation on unfair commercial practices (Gola 1994, 895; Redi 2020, 135).

4 The Next (Contested) Frontier: The Proposed Green Claims Directive and the Possible Shift to Ex-Ante Verification

While marking a significant tightening of the rules, the enhanced *ex-post* regime established by the ECGTD represents only one facet of the EU's evolving strategy. The unfinished and arguably more radical frontier of this regulatory project is embodied in the proposed Green Claims Directive (GCD). Conceived as a *lex specialis* intended to complement the general framework of the UCPD as amanded by the ECGTD (cf. Perillo 2023; Bordin, Bovino 2023), the GCD represents a departure from traditional consumer protection law (Keirsbilck 2024; Botti 2024, 496). Its core ambition is to pivot the entire regulatory logic from *ex-post* enforcement to a system of mandatory *ex-ante* verification and control (Jung, Dowse, 2024). The proposal's premise is that to truly empower consumers and establish a level playing field, it is not enough to punish misleading claims after they have already circulated in the market; it is necessary to 'nip the dissemination of misleading information […] in the bud' before it can reach the consumer (Jung, Dowse 2024, 13-14). Under this proposed regime, the freedom to make explicit environmental claims would be suspended, pending prior approval. Traders would be required to subject their claims to a comprehensive substantiation process, which must then be submitted for scrutiny to an officially accredited, independent third-party 'verifier'[10] (Tommasini 2023, 861). Only after a successful verification, resulting in the issuance of a 'certificate of conformity' with EU-wide effect (Keirsbilck 2024, 206), would the claim be granted 'market access' and permitted to circulate within the Union. This approach effectively seeks to replace the uncertainty of subsequent judicial or administrative review with the certainty of prior scientific and procedural validation, fundamentally altering the relationship between commercial speech and regulatory oversight.

Nonetheless, this proposed paradigm shift is not without significant conceptual and practical challenges, raising questions about its proportionality and potential redundancy. The most immediate concern is the immense administrative and financial burden it would place on the supply side. The obligation to substantiate every explicit claim through methodologies like Life-Cycle Assessment (LCA) and to undergo a costly third-party verification process could prove prohibitive, particularly for small and medium-sized enterprises (SMEs). The European Commission's own estimates suggest substantiation costs could range from €500 to over €54,000 per claim, a considerable expense that could stifle innovation and

10 Article 11, GCD Proposal.

competition. Stakeholders like SMEunited have voiced strong reservations, fearing that such a system would create a market where only financially strong market players can afford to make green claims, effectively silencing smaller, genuinely sustainable businesses (SMEunited, Eurochambres 2024). This could lead to the perverse outcome of greenhushing, where companies, daunted by the complexity and cost of compliance, choose not to communicate their environmental efforts at all, thereby impoverishing the market of valuable information (Reale 2024, 121).

Furthermore, the GCD's *ex-ante* model appears, in some respects, redundant with the very framework it seeks to complement. The recently adopted ECGTD has already woven the principle of third-party verification into the UCPD for the most critical types of claims. As noted, future performance claims under the amended Article 6(2)(d) already require a plan verified by a third-party expert (cf. Keirsbilck 2024, 204). The ECGTD has thus already established a robust (da Costa Machado 2025, 355) *ex-post* system where traders must have verifiable, third-party proof ready upon request for their most significant claims. The GCD's proposal to escalate this to a mandatory, universal *ex-ante* approval for *all* explicit claims represents a monumental increase in regulatory intensity and burden power (Meisterernst, Sosnitza 2023, 779). While aiming for absolute certainty, this move risks creating a burdensome and costly administrative apparatus to solve a problem that the newly strengthened UCPD may already be equipped to address, questioning the overall proportionality and necessity of the proposed directive (Euronews 2025).

5 A Conceptual Toolkit: The "Seven Sins of Greenwashing" in their Original Context

Before a coherent legal architecture can be constructed to discipline a phenomenon as protean as greenwashing, a conceptual taxonomy is required to identify and classify its diverse manifestations. While legislators, particularly in the EU, have only recently moved to codify specific prohibitions, a highly influential diagnostic tool has shaped academic and policy discourse for over a decade: the *Seven Sins of Greenwashing* framework. Developed through a series of reports by the North American environmental marketing consultancy TerraChoice between 2007 and 2010 (TerraChoice 2009; Mulch 2009), this model was not conceived as a legal standard but as a heuristic device, a practical guide to help consumers, advocates, and regulators deconstruct the rhetorical strategies underpinning deceptive environmental communication. The framework's initial aim was to move beyond a binary "true-or-false" assessment, recognizing

that greenwashing operates through a spectrum of misleading tactics (Dahl 2010, 2). Its enduring legacy lies in its capacity to provide a clear and accessible grammar for identifying these patterns of deception, so much so that it remains a foundational reference in the contemporary academic literature on the subject (Vieira de Freitas Netto et al. 2020; Bernini et al. 2023; Breuer et al. 2024, 80) and continues to be employed as an analytical tool in current research (Marrucci et al. 2025). Moreover, its influence has transcended Western literature, informing the doctrinal debate in diverse legal systems, including China, as a means to delineate the contours of greenwashing (Zheng, Li 2012, 116).

The typology articulates seven recurring modes of deception. An analysis of these sins reveals a sophisticated understanding of communicative ambiguity and strategic omission.

The first of these sins is that of the Hidden Trade-off (*yǐncáng jiāoyì*, 隐藏交易). This practice consists of emphasizing a single, narrow positive environmental attribute of a product while conveniently ignoring other, more significant negative impacts that persist throughout its life cycle. A classic example is a product advertised for its high recycled content, while its manufacturing process remains highly energy-intensive or generates hazardous by-products. This sin preys on the consumer's tendency to focus on a single, salient "green" cue, and its antidote is the principle of a holistic, life-cycle assessment (LCA), a cornerstone of modern environmental regulation. The case of Asia Pulp & Paper (APP) is often cited as a paradigmatic real-world instance (cf. Córdoba, Candón-Mena 2020, 46). The company has repeatedly engaged in sophisticated marketing campaigns highlighting its sustainable forestry policies, while simultaneously facing extensive and documented accusations from environmental organizations of contributing to large-scale deforestation and ecosystem degradation. This selective disclosure of information, focusing on positive corporate actions while obscuring negative operational impacts, is a core theme in the academic analysis of greenwashing drivers (Delmas, Burbano 2011, 65).

A second and related category of deception is the Sin of No Proof (*jǔzhèng bùzú*, 举证不足). This refers to any environmental claim that cannot be substantiated by easily accessible supporting information or a reliable third-party certification. It represents a direct exploitation of the information asymmetry between the producer, who possesses all the relevant data, and the consumer, who cannot independently verify the assertion. This 'sin' finds its direct legal counterpoint in the principle of substantiation, which is central to the EU's regulatory framework. The UCPD, in its Article 12, already established that the burden of proving the accuracy of any factual claim rests squarely on the trader. The recent legislative turn has

only reinforced this principle, making unsubstantiated claims not just a 'sin' but a presumptively unlawful practice.

The third transgression identified by the framework is the Sin of Vagueness (*móhú chénshù*, 模糊陈述). This involves the use of terms so poorly defined or broad – such as 'eco-friendly', 'all-natural', or 'green' – that their real meaning is likely to be misunderstood by the consumer (Dahl 2010, 3). For years, such terms populated the marketplace, creating an ambient fog of aspirational marketing that lacked any concrete, verifiable substance. This practice has been decisively addressed by the EU's ECGTD. The new point 4(a) of the UCPD's Annex I blacklist now explicitly prohibits 'making a generic environmental claim for which the trader is not able to demonstrate recognized excellent environmental performance relevant to the claim'. This legislative act effectively transforms what was once a diagnostic category into a *per se* offence, rendering such vague claims illegal unless substantiated by high-level, verifiable certifications such as the EU Ecolabel or equivalent schemes compliant with the rigorous EN ISO 14024 standard.

Fourth is the Sin of Irrelevance (*wúguān chénshù*, 无关陈述), which consists of making a claim that, while factually true, is unimportant or unhelpful for consumers seeking to make environmentally preferable choices. The most-cited example is the 'CFC-free' claim on aerosols, which is entirely irrelevant in jurisdictions where chlorofluorocarbons have been banned by law for decades under the Montreal Protocol. This tactic leverages consumer ignorance of the existing regulatory baseline to create a false aura of environmental distinction. Here too, the EU legislator has provided a direct legal response: point 10a of the UCPD blacklist now prohibits 'presenting requirements imposed by law on all products within the relevant product category on the Union market as a distinctive feature of the trader's offer'.

A fifth, more subtle strategy is the Sin of the Lesser of Two Evils (*bìzhòngjiùqīng*, 避重就轻). This occurs when a claim attempts to frame a product as environmentally sound based on a comparison with other products in its category, while the category as a whole has a significant environmental impact. The promotion of 'fuel-efficient' sport-utility vehicles or 'organic' tobacco falls into this pattern. Such claims are not necessarily false, but they are misleading by context, as they obscure the product's overall negative footprint and can induce a consumer to feel virtuous about an inherently impactful choice. While not subject to a *per se* ban, this practice is a clear candidate for scrutiny under the general clauses of UCPD Articles 6 and 7.

The final two sins represent the most explicit forms of deception. The Sin of Fibbing (*xūjiǎ chénshù*, 虚假陈述) involves making environmental claims that are demonstrably false, a direct violation of the general prohibition on misleading actions. The seventh and

final sin, Worshipping False Labels (*xūjiǎ biāoqiān*, 虚假标签), refers to the practice of creating labels or certifications that give the impression of a legitimate third-party endorsement when no such validation exists (e.g., a globe intertwined with leaves). This tactic is now directly prohibited by point 2(a) of the UCPD's blacklist, which outlaws the display of a sustainability label not based on a credible certification scheme. A paradigmatic case illustrating both of these final sins in the Chinese context is the widely reported 2011 Walmart "green pork" scandal (*Chinanews* 2011). Stores operated by the multinational in Chongqing were found to have mislabelled over 63,000 kilograms of conventional pork with terms such as "organic" and "green". This blatant fabrication of credentials triggered a strong institutional response, including temporary store closures, significant administrative fines, and criminal proceedings against employees, highlighting the tangible legal risks associated with such practices (Dai 2011; Liu 2011). The TerraChoice framework, therefore, proves its enduring value not only as an advocacy tool but as a sophisticated analytical lens, offering a taxonomy of deception that has both anticipated and illuminated the very practices that modern consumer protection law now seeks to regulate and eradicate.

This conceptual framework, born from market observation in the West, provides a powerful analytical grammar. Its categories, as will be shown, resonate strongly with the practices observed in the Chinese market. Indeed, Chinese legal scholars have engaged with this model as a heuristic device to clarify the definitional contours of greenwashing within their own regulatory environment (Zheng, Li 2012, 116). Equipped with this conceptual toolkit and a firm understanding of the EU's regulatory paradigm, we can now turn our attention to the People's Republic of China and its distinct approach to the governance of green claims.

6 The Chinese Approach: State-Led Certification as Normative Cornerstone

As this study will demonstrate through a diachronic analysis of Chinese regulatory evolution, a superficial glance at the system might lead to diagnose a regulatory deficit in the People's Republic. Such a conclusion, however, would be profoundly mistaken. The fundamental flaw in the Chinese system of green claims, particularly prior to its recent reforms, was not a lack of regulation, but rather its precise antithesis: a state of excessive regulatory burden, akin to the European Union's own.

This state of affairs dictates a different starting point for analysis when proceeding from the European Union's framework to that of the People's Republic of China. The two systems represent

fundamentally divergent political and legal models, even in the field of greenwashing. Where the EU has been trying to progressively refine its model of market regulation – moving from broad, *ex-post* prohibitions towards a system of mandatory substantiation within a pluralistic, market-oriented verification ecosystem – China has hard constructed a model of *ex-ante* state authorization, where the power to make a green claim is not a default freedom to be disciplined, but a privilege to be granted by the State (Zhang 2003, 27).

This approach did not emerge in a vacuum; it is a deliberate, top-down response to the aforementioned condition of regulatory excess, embedded in a unique political and legal approaches.

For years, the Chinese market was saturated by a fragmented and bewildering proliferation of eco-labels (*huánbǎo lèi biāozhì zhòngduō*, 环保类标识众多), each claiming to signify a particular ecological virtue. Labels for environmental protection, energy-saving, water-saving, circular economy, low-carbon, and organic production coexisted in a state of chaotic pluralism. This disarray was the result of a disjointed administrative architecture characterized by overlapping functionalities (*gōngnéng chóngdié*, 功能重叠), inconsistent standards (*rènzhèng biāozhǔn bùyīzhì*, 认证标准不一致), and multiple agencies, each of which developed its own standards in the absence of a coherent, top-down regulatory blueprint.[11] This inflation of signs, far from empowering consumers, paradoxically fostered systemic distrust and erected formidable 'identification barriers' (*shìbié zhàng'ài*, 识别障碍), ultimately corroding the credibility of green claims themselves.

It is against this backdrop of institutional dysfunction that the highest echelons of the Chinese state initiated a decisive unifying turn, a project of state-led rationalization rooted not in liberal market principles but in the ideological imperatives of what is termed "Ecological civilization" (*shēngtài wénmíng*, 生态文明). This concept gained significant traction in the political consolidation period following the rise of Xi Jinping (Wang 2019; Fu, Cao, Li et al. 2024, 100), becoming a central pillar of Party-State ideology.

The foundational political blueprint for this project is the *2015 General Plan for the Reform of the Ecological Civilization System* (CPC Central Committee and PRC State Council 2015). This is not a legal text in the conventional sense, but a testament to a political will to re-engineer the relationship between the Party-State, the

11 While the process of verifying certifying bodies was overseen by the CNCA (a sub-body of SAMR), the licensing and oversight of individual marks remained dispersed among various ministries, such the Ministry of Ecology and Environment (MEE), the Ministry of Agriculture and Rural Affairs (MARA), the Ministry of Housing and Urban-Rural Development (MOHURD), and the Ministry of Industry and Information Technology (MIIT).

economy, and the natural world, outlining eight interlocking pillars (*bā xiàng zhìdù*, 八项制度) that form the structure of the 'Ecological civilization', covering everything from natural resource property rights to environmental governance and performance evaluation. Its introductory section on concepts (*lǐniàn*, 理念) articulates the principles that serve as the ideological bedrock for the entire reform. The now-famous dictum that 'lucid waters and lush mountains are invaluable assets'[12] (*lǜshuǐ qīngshān jiùshì jīnshān yínshān*, 绿水青山就是金山银山) is the linchpin of Party-State's political thought. This is not mere poetic metaphor; it represents a concerted effort to resolve the perceived contradiction (*máodùn*, 矛盾) between development and protection by reframing nature itself through an economic and political lens. This logic is further illuminated by the explicit call to establish the concepts of 'natural value and natural capital' (*zìrán jiàzhí hé zìrán zīběn*, 自然价值和自然资本). Here, nature is rendered legible to the state's calculative rationality; it becomes an asset on the national balance sheet, whose degradation constitutes a quantifiable liability. This economic reframing is intertwined with a holistic conception of governance, encapsulated in the principle that 'mountains, waters, forests, farmlands, and lakes are a community of life' (*shānshuǐ líntián hú shì yīgè shēngmìng gòngtóngtǐ*, 山水林田湖是一个生命共同体, cf. People's Daily Online 2017. This axiom provides the theoretical justification for a profoundly interventionist and integrated administrative approach, even in the field of green labels. It posits that because all ecological elements are interconnected, they demand 'holistic protection, systemic restoration, and comprehensive governance' (*zhěngtǐ bǎohù, xìtǒng xiūfù, zōnghé zhìlǐ*, 整体保护、系统修复、综合治理) orchestrated by the State.[13] Within this vast ideological edifice, the call to 'establish a unified green product system'[14] (*jiànlì tǒngyī de lǜsè chǎnpǐn tǐxì* 建立统一的绿色产品体系) ceases to be an isolated consumer protection initiative and appears as a logical component of the grander strategy. The unification of green labels is not simply a market-correcting measure; it is an act of state-building, an assertion of the state's exclusive authority to define, certify, and bestow environmental legitimacy. It is a direct application of the "community of life" principle to the semiotics of the marketplace, aimed at replacing private and competing claims with a single, state-sanctioned voice. The *General Plan* is thus less

12 Sec. 2 ("Concept of Ecological Civilization System Reform"), para. 3, *2015 General Plan*: '*lǜshuǐ qīngshān jiùshì jīnshān yínshān* 绿水青山就是金山银山'.

13 Sec. 2, para. 6, *2015 General Plan*.

14 Sec. 8 ("Improving the market system for environmental governance and ecological protection"), para. 46, *2015 General Plan*: '*jiànlì tǒngyī de lǜsè chǎnpǐn tǐxì* / 建立统一的绿色产品体系'.

a legal text in the conventional sense and more a testament to an immense political will to re-engineer not only the economy and the environment, but also the very language used to describe them. The ultimate question, which only the passage of time can answer, is whether this grand blueprint for an 'ecological civilization' will result in a genuine harmony between humanity and nature, or merely a more sophisticated and pervasive administration *of* nature.

If the 2015 General Plan provided the political foundation, the *2016 State Council Opinions on Establishing a Unified Green Product Standard, Certification, and Labeling System* represented its immediate operational corollary (PRC State Council 2016). This document translates the metaphysical language of Ecological Civilization into the precise register of administrative rationalization. It explicitly reframes the issue as a core component of state strategy, linking it directly to supply-side structural reform (*gōngjǐ cè jiégòuxìng gǎigé*, 供给侧结构性改革), the international competitiveness of 'Made in China', and, most tellingly, China's 'institutional power to speak' (*zhìdùxìng huàyǔquán*, 制度性话语权) in the arena of global governance. The unification of standards is thus explicitly framed as a tool of industrial and foreign policy, designed defensively to counter foreign 'green barriers' (*lǜsè bìlěi*, 绿色壁垒) and offensively to enhance the nation's normative influence, a critical consideration given the pivotal role of State-Owned Enterprises (SOEs) in the country's innovation strategies (York, Rosa, Dietz 2009, 134; Zhou, Gao, Zhao 2017, 375; Wang, Jiang 2021).

The core of this blueprint is a mandate for radical simplification, encapsulated by the "Four Unifications": a Unified Directory (*tǒngyī mùlù*, 统一目录), Unified Standards (*tǒngyī biāozhǔn*, 统一标准), Unified Evaluation (*tǒngyī píngjià*, 统一评价), and a Unified Label (*tǒngyī biāozhì*, 统一标识). This ambition is further crystallized into the "Five-in-One" objective: for 'one category of product, there is one standard, one list, one certification, and one label'. This reveals a faith in the capacity of centralized administrative design to impose order and legibility upon the market. While the document deploys market-oriented rhetoric (*shìchǎnghuà de gǎigé fāngxiàng*, 市场化的改革方向), stressing the need to stimulate the 'endogenous dynamics' (*nèishēng dònglì*, 内生动力) of the market,[15] the institutional architecture it describes is one of total state orchestration. The market here is not a spontaneous order to be regulated, but an arena to be meticulously constructed, populated, and policed by the State. The central nervous system of this engineered market is the "inter-departmental coordination mechanism" (*bùjì xiétiáo jīzhì*, 部际协调机制), a high-level body designed to ensure policy coherence

15 Paragraph 1, point 2, PRC State Council 2016. See Pan 2022.

across a vast swathe of the Chinese bureaucracy. Furthermore, the instruments of enforcement and trust-building are quintessentially state-centric, relying on the creation of credit systems and, most notably, a blacklist system (*hēimíngdān zhìdù*, 黑名单制度) for non-compliant actors. Trust, in this model, is not an emergent property of market interactions but a commodity conferred, and withdrawn, by the administrative state through instruments like social credit and blacklisting systems (Marcatajo 2023, 1693). It appears that the Chinese model is not an imitation or adaptation of Western regulatory frameworks; rather, it is an endogenous creation, rejecting the EU's liberal, market-led pluralism in favour of a system where normative credibility is an artifact of centralized political will, and domestic order-building is a steppingstone to projecting global influence.

7 Governing the Green Label: From Certification to Sovereign Signification

To grasp the practical application of the state-authorising system outlined in the preceding section, one must consider its archetypal and most enduring manifestation: the regulatory framework established around the "Green Food" (*lǜsè shípǐn*, 绿色食品) certification mark.

This system offers an illustration of how, in China, environmental legitimacy is not policed ex-post but conferred ex-ante through a vast and intricate apparatus of state-led certification and preventative control. The absence of a normative definition for a "green trademark" within the Trademark Law of the People's Republic of China – a law that underwent substantive revisions in 2013 and 2019 – is itself indicative, revealing a broader regulatory hesitation in addressing ecological implications of green branding. In practice, trademarks that the public associates with ecological responsibility are certification marks, of which the "Green Food" logo is the progenitor.

The Green Food system's origins trace back to the 1992 Notice on the Lawful Use of "Green Food" Trademark, a regulation adopted by the State Administration for Industry and Commerce (SAIC) and the Ministry of Agriculture.[16] The document defined "green food" as an agricultural product free from pollution and harmful substances, embedding the concept within China's broader strategy for promoting ecological agriculture and modernising food production.[17] The introduction and dissemination of these standards were framed

16 Hereinafter also '*1992 Notice*'. Abrogated by the *Decision of the State Administration for Industry and Commerce on the Repeal of the Second Batch of Regulations and Normative Documents Related to Industry and Commerce* (2004.08.31).

17 First Paragraph, *Notice on the Lawful Use of "Green Food" Trademark 1992*.

not merely as technical measures but as instruments to enhance environmental awareness and protect public health, in perfect alignment with the developmental ambitions of Deng Xiaoping's Four Modernizations (MacFarquhar 1987, 20; Moak, Lee 2015, 91; Jiang, Lu, Zhang 2020, 57).

The diachronic evolution from this initial Notice to the modern *2022 Measures for the Administration of the Green Food Logo* showcases the deepening of this unique regulatory philosophy. This evolution stands in stark contrast to the EU's trajectory. While the EU has moved to create stricter rules for a pluralistic market of claims, China has spent decades refining and formalizing its centralized control over a single, state-defined category of greenness. The *2022 Measures* define *lǜsè shípǐn* as a precise legal category enshrined in primary instruments like the Agriculture Law and the Food Safety Law.[18] It signifies a 'safe, high-quality edible agricultural product' originating from a superior ecological environment, produced according to specific state-mandated standards, and subject to a quality control regime covering the entire production chain.[19] Consequently, the 'Green Food' logo is not a self-proclaimed virtue by a market actor but a legally protected certification trademark (*zhèngmíng shāngbiāo*, 证明商标);[20] it is a seal of conformity conferred by the state, which acts as the ultimate guarantor of its credibility.

The institutional architecture designed to administer this system is, unsurprisingly, hierarchical and centralized. At the apex sits the China Green Food Development Center, the national body vested with the exclusive authority to review applications and grant the right to use the logo.[21] This central body is supported by provincial-level agencies that serve as its operative arms, responsible for initial application processing (cf. Wang, Li 2008; Li, Zhao 2009; Ren, An, Duo 2011). The path to obtaining this state-conferred legitimacy is a procedurally intricate, multi-stage process. The applicant – the production unit – must not only demonstrate that its products and production sites comply with predefined standards but must also prove its own operational capacity.[22] This includes possessing a robust quality assurance system, adequate technical personnel, a stable production base, and, notably, a clean record with no quality or safety incidents for the preceding three years. The process itself involves a capillary system of checks and balances: a formal application review, an on-site inspection by qualified personnel, and

18 Article 1, *Green Food Mark Management Measures 2022 Amendment*.

19 Article 2, *Green Food Mark Management Measures 2022 Amendment*.

20 Article 3, *Green Food Mark Management Measures 2022 Amendment*.

21 Article 5, *Green Food Mark Management Measures 2022 Amendment*.

22 Article 9, *Green Food Mark Management Measures 2022 Amendment*.

finally, laboratory testing of both the product and its surrounding environment by a state-designated agency. Only upon successfully navigating this gantlet may the central authority, guided by an expert committee, grant the certification.

This state-conferred legitimacy is, however, impermanent. The three-year validity of the certificate,[23] coupled with a mandatory and equally rigorous renewal process, transforms the certification from a one-time achievement into a form of probationary status. It suggests a philosophy of continuous scrutiny, where the right to bear the 'green' label is never definitively acquired but must be perpetually re-earned under the watchful eye of the administration. This logic is reinforced by a stringent disciplinary regime of annual checks and potential sanctions,[24] including the revocation of usage rights for non-compliance. In serious cases, such as obtaining the right through deceit or bribery, the sanction can be a permanent ban from the system. Moreover, any entity or individual who reproduces or uses the "Green Food" mark without permission, or who sells counterfeit products bearing the mark, is deemed to have infringed trademark rights or engaged in fraudulent use of certification. Such violations are prosecutable by the administrative and judicial authorities in accordance with the Trademark Law. This entire framework – from prior authorization to continuous supervision and the threat of revocation – perfectly embodies the shift from market policing to sovereign gatekeeping, making the correspondence between the declared claim and reality an outcome of administrative discipline rather than a matter for *ex-post* judicial dispute.

A paradigmatic illustration of the institutional response to greenwashing practices within the Chinese trademark system is offered by a case reported in April 2025 among the "Top Ten Intellectual Property Protection Cases" jointly released by the courts of Chongqing and Chengdu. The matter, classified under administrative trademark supervision and so listed, concerns the unlawful use of the *Green Food symbol* by an agricultural cooperative in Shaanxi province, and the ensuing intervention by the People's Procuratorate of Qindu District (*Green Food "Shuimitao" Case, Shaanxi Procuratorate 2025*).

Originally registered in 1996 as a certification trademark under the jurisdiction of the State Administration for Industry and Commerce, the "Green Food" mark was administered by the established China Green Food Development Centre, established under the supervision of the Ministry of Agriculture by a 1993 regulation (*Green Food Mark Management Measures* 1993). In this case, a local agricultural

23 Article 10, *Green Food Mark Management Measures 2022 Amendment*.

24 Articles 11-13, *Green Food Mark Management Measures 2022 Amendment*.

cooperative had obtained a valid *Green Food Certificate* for its *shuimitao* (juicy peach) products in December 2020, with a usage term expiring in December 2023. However, the cooperative continued to display the mark on its packaging and promotional materials beyond the expiration date, despite having failed to renew the licence. The omission stemmed from the cooperative's non-payment of the necessary renewal fees, which in turn precluded the required inspections and compliance verifications by the relevant authorities.

Upon discovery of the infringement in September 2024 – during a field survey on agricultural intellectual property – the Qindu District Procuratorate initiated a supervisory inquiry. Having established the cooperative's unauthorised use of the mark, the procuratorate issued a formal prosecutorial recommendation to the district agricultural bureau, urging it to fulfil its supervisory obligations, reinforce its inspection mechanisms, and promote lawful use of the certification system. The authorities responded by ordering the cooperative to resubmit its renewal application and by launching a district-wide audit of green food mark usage. In addition, financial support in the amount of 500,000 yuan was allocated across seven local agricultural entities, including the one involved in the case, in order to alleviate financial hardship and enhance compliance capacity.

The *Shuimitao* case reflects the increasing institutional sensitivity in China toward the overextension or misuse of green credentials, particularly in rural economic development schemes tied to the Rural Revitalisation Strategy (*xiāngcūn zhènxīng*, 乡村振兴) (Huang 2018; Tang, Han 2023, 149). It underscores the symbolic and economic significance now attached to the "Green Food" mark, which functions not only as a sign of environmental compatibility, but as a strategic asset in the branding of regional agricultural excellence. This case highlights not only the fragility of trademark integrity in the agri-food sector, but also the evolving role of procuratorial supervision (*jiǎnchá jiànyì*, 检察建议) as a governance instrument in environmental labelling enforcement. Through the lens of this case, it becomes evident the convergence of intellectual property enforcement, food safety governance, and rural economic policy. This convergence underscores the complexity of maintaining normative credibility in the era of green marketing.

This logic of centralized control, perfected over decades in the agri-food sector, was generalized and elevated to the cornerstone of China's entire green product strategy with the adoption of the *2019 Measures for the Administration of the Use of Green Product Labels*, issued by the State Administration for Market Regulation (SAMR). It is here that abstract ambition is rendered into the concrete articles of a regulatory regime, creating the normative architecture of a sovereign gatekeeper. The Measures establish SAMR as the sole proprietor and administrator of environmental legitimacy, stating in

Article 2 that the agency shall "uniformly release the green product label, build and manage the green product label information platform [...] and implement supervision and management over the use of the green product label". More revealing, however, is the sophisticated, two-tiered structure of legitimacy established in Article 3. The system distinguishes between "Certification Activity One" (*rènzhèng huódòng yī*, 认证活动一), which applies to the exclusive list of products in the national unified green product certification catalog, and "Certification Activity Two" (*rènzhèng huódòng èr*, 认证活动二), which covers other state-endorsed green attributes such as energy-saving or organic. This is not a simple, monolithic system; it is a carefully calibrated hierarchy. Activity One represents the pinnacle of state-sanctioned greenness, while Activity Two functions as a flexible mechanism for the state to gradually absorb the multitude of other existing eco-labels into its unified orbit. Beneath SAMR's sovereign authority operate the third-party certification bodies (cf. Gao 2015, 167-68). These entities are best understood not as independent market actors but as carefully circumscribed intermediaries within this regulatory fiefdom. Although operating independently, they must first receive approval from the competent state authority. Their role is thus one of transmission, channelling the state's centralized authority downwards into the capillaries of the market (Cf. Guo 2009, 138).

The technological infrastructure mandated by these Measures is, perhaps, the most potent instrument of this *ex-ante* control. The Green Product Information Platform (*Lǜsè Chǎnpǐn Biāozhì Xìnxī Píngtái*, 绿色产品标识信息平台), as detailed in Articles 7 and 9, constitutes the digital heart of this regulatory infrastructure. A certification is not truly complete, and the right to use the label is not perfected, until the approved certification body has uploaded all relevant data to this central state-run platform. It is only then that the system generates a unique QR code, which the enterprise may affix to its product. This transforms the static label on a package into a dynamic portal for real-time verification and continuous digital oversight. The claim of greenness is thus perpetually tethered to a live, state-controlled database, subject to constant scrutiny by consumers, supply chain actors, and the administration itself.

8 The Limits of Enforcement and the Judicial Response

While the Chinese state has constructed a top-down architecture for the administration of environmental legitimacy, its coherence and efficacy are ultimately tested in the crucible of judicial enforcement, as anticipated by the *Shuimitao* case. It is here, in the micro-level realities of private litigation, that the tensions between the state's macro-level regulatory ambitions and the complexities of individual

disputes become manifest. An examination of recent case law reveals a distinct judicial pragmatism that often prioritizes commercial order and social harmony over the strict, formal enforcement of rights, thereby reinforcing the primacy of administrative supervision and revealing the practical limits of private action in policing the market for greenwashing.

A more subtle, yet perhaps more pervasive, threat to the integrity of green claims emerges not from a direct misrepresentation by a major corporation, but from the cumulative effect of micro-level trademark infringements that dilute a brand's carefully constructed 'green' credentials. A recent first-instance judgment from the People's Court of Weiyang District, Xi'an (*Weiyang District Court Judgment 2024 no. 583*), offers an illustration of this dynamic and of the practical limitations of the normative architecture designed to protect intellectual property. The case involved a well-known chemical company, which had invested significantly in developing a "green and environmentally friendly" cleaning agent that had earned a "China Environmental Label" certification (Zhao, Xia 1999, 480; Zhong 2011). The company held a valid trademark for its product, 手榴弹 (*shǒuliúdàn*, or "hand grenade"). The dispute arose when a small, sole-proprietorship retailer was found to be selling a lower-quality cleaning product with a pungent odour under the name "首榴弹" (*shǒuliúdàn*, a homophone meaning "first grenade"). The court's reasoning on the matter of infringement was straightforward and methodologically sound. It correctly identified that the infringing mark was phonetically identical and semantically similar to the plaintiff's registered trademark, and was used on the same class of goods, thereby creating a high likelihood of consumer confusion (*róngyì dǎozhì hùnxiáo*). The infringement was proven, and an injunction was duly granted against the small retailer.

It is the remedy, however, that invites a more critical reflection. Despite the plaintiff's claims of significant investment in its certified 'green' product and the reputational harm caused by the low-quality knockoff, the court awarded damages of a mere 3,000 yuan. This sum was calculated using judicial discretion, as the plaintiff could not prove actual losses, and was intended primarily to cover reasonable costs. This judicial pragmatism, while understandable, reveals a structural weakness. The almost symbolic nature of the damages fails to create a meaningful deterrent and raises serious questions about the economic viability of enforcing intellectual property rights against a constellation of minor infringers. This outcome stands in stark contrast to the dual-track enforcement model of the European Union. In the EU, while private litigation over damages faces similar challenges, the system is powerfully complemented by public enforcement (da Costa Machado 2025). National competition and consumer authorities can impose fines for misleading practices

that harm the market, creating a credible threat that discourages the very kind of brand dilution seen in the *shǒuliúdàn* case. The Chinese approach, in this instance, results in a pyrrhic victory for the holder of a 'green' brand, whose reputational and commercial value, certified at great cost by the State's own apparatus, is eroded one small, inadequately sanctioned infringement at a time.

This tension between formal rights and practical enforcement is cast in even sharper relief when the legal action shifts to the highly contentious arena of consumer protection and punitive damages. A particularly revealing civil judgment from the People's Court of Lingbi County, Anhui (*Liang v. Liu*, 2022), illuminates the profound judicial scepticism directed at a specific category of litigant: the so-called "commercial fraud bounty hunter" (*zhíyè dǎjiārén*, 职业打假人) (Zhang 2023). This figure, who strategically purchases goods with the sole intention of suing for statutory penalties, represents an internal challenge to a Chinese judiciary struggling to reconcile the legislative goal of consumer empowerment with what it often perceives as an abuse of rights motivated by profit.

In a dense and effective synthesis of judicial manoeuvring, the *Liang* case saw the court neutralize what appeared to be a straightforward claim. The plaintiff alleged that a seller's royal jelly was a "three-no product" (*sān wú chǎnpǐn*, 三无产品) and, crucially, was falsely advertised as a green food without the requisite certification, a clear instance of greenwashing. Citing the Food Safety Law, he sought punitive damages of ten times the purchase price, a remedy explicitly provided for in Article 148 of the Food Safety Law (Yuan 2023, 11). The court, however, pivoted away from the product's non-compliance. It focused instead on the plaintiff's status as a *zhíyè dǎjiārén*, deeming his strategic purchase a violation of the foundational principle of good faith (*chéngshí xìnyòng*, 诚实信用) (cf. Leonhard 2009, 305; Novaretti 2010, 946; Khosravi 2024, 112). It then reclassified the product as a 'primary agricultural product' (*chūjí nóngchǎnpǐn*, 初级农产品), exempting it from the strictest labelling rules and reducing the false green claim to a mere "formal defect" (*xiácī*, 瑕疵) incapable of triggering punitive damages. The judgment is paradigmatic: it showcases a judiciary prepared to mobilize general principles to override specific consumer protection statutes, revealing a deep-seated institutional resistance to the private enforcement model that contrasts sharply with the EU's legislative efforts to empower consumers and their associations as active market police.

9 From the "Green Principle" to Public Order: The Dormant Potential of the Civil Code?

Having examined the Party-State's administrative architecture and the circumscribed nature of judicial enforcement in specific statutory contexts, the analysis must now turn to a final, crucial question: does the foundational text of Chinese private law, the Civil Code (Timoteo 2022), offer an alternative, more general pathway for combating greenwashing? The answer requires an inquiry into one of the Code's most lauded innovations, the so-called "Green Principle", and a critical assessment of its practical import, revealing a deep chasm between normative potential and judicial reality.

The PRC Civil Code (2021), which entered into force on January 1, 2021, is more than a mere codification; it is a framework of values intended to guide civil society (Timoteo 2018; Timoteo 2019).

In its Article 9, The PRC Civil Code establishes the so-called "Green Principle" (绿色原则), mandating that all civil actors must 'engage in civil activities in a way that is conducive to conserving resources and protecting the ecological environment'. This provision could represent a remarkable innovation, theoretically infusing the entirety of private law with an ecological ethos, setting the Chinese legal system apart from many Western jurisdictions where such environmental obligations typically reside within the domain of constitutional law.[25] Theoretically, Article 9 possesses immense potential as a tool against greenwashing. It could function as an interpretive guide for other statutes, a declaratory norm of conduct, and, most powerfully, as a subsidiary source of liability (Szpotakowski 2020, 233; Ouyang 2023). A consumer misled by a false environmental claim, or a competitor harmed by such a practice, could plausibly argue that the dissemination of deceptive 'green' information is a civil activity that is manifestly *not* conducive to protecting the ecological environment, as it incentivizes unsustainable consumption and distorts the market for genuinely green products. In this reading, Article 9 could ground a private cause of action for breach of a general civil duty, entirely independent of specific consumer protection or trademark laws.

This dormancy, however, is not necessarily the result of an inherent weakness or a conflict with other principles. Rather, it appears to be a consequence of the Chinese legal system's structural deference to administrative *lex specialis*. In a field like environmental claims, where the state has invested immense capital in creating a comprehensive and detailed administrative regime for certification and supervision,

25 E.g. see the heated debate on the environmental reform of the Italian Constitution, fueled, among others, by Mattei 2022; Amendola 2022; Bifulco 2022; Cecchetti 2022.

the judiciary shows a clear preference for the certainty of these specific rules. The granular requirements of the "Green Food" or "China Green Product Label" systems provide a more predictable and manageable basis for adjudication than the abstract and broad Green Principle. The courts' reluctance to activate Article 9 in this context can thus be read as a form of comity towards the administrative apparatus, which is seen as the primary and legitimate locus for defining and policing greenness.

This judicial posture of restraint, however, is not absolute across all general principles. The potent and decisive application of the principle of Public Order and Good Morals (*gōngxù liángsú*, 公序良俗), enshrined in Articles 8 and 153 of the Civil Code, offers a stark contrast. The case of *Guangdong Shanhai Da Data Storage Co., Ltd. v. Shanhai Da Data Storage Group Co., Ltd. (2023)* is paradigmatic.[26] Here, the Guangzhou Intermediate People's Court was faced with a sales contract for cryptocurrency "mining machines". While the lower court treated it as a standard commercial dispute and upheld the contract, the appellate court took a radically different approach. It looked beyond the contract's form to its substance, identifying its core purpose as facilitating cryptocurrency "mining" (*wākuàng*, 挖矿), an activity explicitly targeted by a series of high-level state policy documents as detrimental to national financial stability and carbon neutrality goals. On this basis, the court made a decisive move: it declared the contract entirely void for violating public order and good morals (*wéibèi gōngxù liángsú*, 违背公序良俗), overturning the lower court's judgment, without mentioning also the Green Principle.

The *Guangdong Shanhai Da* case demonstrates that Chinese courts are not only willing but also capable of using broad, general principles to intervene forcefully in private contracts. However, they do so when the subject matter of the contract directly contravenes a fundamental state policy directive. The judicial activation of a general clause appears to be contingent on the hierarchical importance of the public interest at stake. The fight against unregulated virtual currencies is framed as a matter of national economic security and core environmental strategy, justifying the use of the powerful "public order" tool to align private law with state objectives. By contrast, the policing of individual greenwashing claims in the consumer market, while a regulatory priority, is treated as a matter best managed by the specific, pre-existing administrative regime, thus revealing a clear division of labour and a hierarchy of norms: the judiciary deploys the principle of public order to safeguard fundamental state interests, while showing deference to the administrative *lex specialis* for the governance of more routine, albeit complex, market conduct.

26 Confirmed by (2024) Yue Min Shen No. 8221.

10 Conclusion

The journey through EU and PRC's regulatory landscapes has revealed more than mere divergences in legal techniques for combating greenwashing. While both global powers converge on the strategic necessity of disciplining environmental claims to foster a sustainable economy, they diverge radically in the juridical form and institutional ethos through which such claims are rendered operable, contestable, and legitimate. The comparison unveils not merely two different sets of rules, but two distinct worlds of green legitimacy, one founded on the principle of market regulation and the other on the logic of sovereign authorization.

At the normative heart of the European Union's model lies a commitment to a pluralistic, *ex-post* system of control, albeit one that has become progressively more stringent. The evolution from the general clauses of the UCPD to the targeted, *per se* prohibitions of the ECGTD demonstrates a move toward greater regulatory precision, but within a consistent legal framework based on autonomous economic actors, transparency (Cesaro 2024; Regazzoni 2025), fairness. In the EU, the state sets the rules of the game but does not, as a rule, monopolize the role of certifier. Legitimacy is constructed through a decentralized ecosystem of public and private actors. The emphasis on third-party independent verification, particularly through standards like EN ISO 14024, functions as a juridical mechanism of decontamination (Tommasini 2023, 861). As has been observed, by outsourcing the evaluation of sustainability assertions to a neutral body, the certification process strips the green claim of its unilateral, self-interested character, transforming it into a verifiable statement of conformity (Bertelli 2024, 354). The EU system, therefore, presupposes an economic actor whose truthfulness can and must be assessed (Reale 2024, 124), policed through a combination of public enforcement and empowered consumers' action.

By contrast, the Chinese model is rooted in a logic of *ex-ante* authorization that resists this liberal grammar: its architecture does not seem to be a legal transplant of Western models but an endogenous creation, born from the still-evolving political philosophy of Ecological civilization and designed to remedy a specific domestic pathology of regulatory hypertrophy. The law here does not primarily adjudicate the truthfulness of claims; rather, it constitutes the very possibility of making a legitimate claim. To declare a product or a service green is not an instance of entrepreneurial expression but an administrative utterance contingent upon a revocable license from the state. The Chinese green labelling system, therefore, is tethered to a logic of sovereign permission, wherein the field of sustainability is enclosed within a state-curated regime of controlled signification.

Yet, herein lies a paradox common to both systems: the very instruments designed to render sustainability claims intelligible and trustworthy – certifications, labels, seals of approval – risk undermining their own efficacy through proliferation and misuse. In China, as we have seen, it was the chaotic multiplication of state-sanctioned labels that precipitated the top-down unification project. In the EU, a similar risk now looms from a different source: market fragmentation. The unchecked expansion of private third-party certifiers, each operating under potentially divergent methodologies, could produce redundancies and erode consumer trust, transforming the market into a 'jungle where the consumer can no longer distinguish between performative illusion and verified compliance' (Spedicato 2024, 60). This shared challenge, approached from opposite ends of the state-market spectrum, underscores the universal difficulty of maintaining semiotic credibility (cf. Lunghi 2023; Antelmi 2024) in the quest for greening economic structures.

Thus, the divergence between Brussels and Beijing offers a profound lesson in comparative law. It demonstrates how a similar problem – greenwashing – can generate radically different legal solutions when filtered through different political cultures, institutional capacities, and legal philosophies. As China continues to consolidate its state-led model and the EU contemplates an even more interventionist turn with its proposed Green Claims Directive – a move that would push it further towards an *ex-ante* logic – the global landscape of environmental regulation will continue to be shaped by their distinct and competing visions. The ongoing global effort to align commercial speech with ecological reality is thus being forged not on a single path, but on several ones, each reflecting a different conception of the relationship between the market, the state, and the environment itself.[27]

27 Across jurisdictions, regulatory responses vary in form but converge in their core concerns. The UK's *Green Claims Code* (2021) provides a principles-based checklist grounded in transparency and lifecycle thinking. France, through its *Loi Climat et Résilience* (2021), has opted for a punitive deterrence model, imposing fines of up to 80% of an advertising campaign's cost for misleading environmental claims. Spain, with its self-regulatory *Código de autorregulación sobre argumentos ambientales* (2009), emphasizes objectivity and factual accuracy. The United States' *FTC Green Guides* offer detailed prescriptive guidance, while countries like Australia and New Zealand have developed their own enforcement priorities, creating a rich mosaic of global regulatory practice.

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Verso la Dichiarazione per un ambiente sicuro, pulito, sano e sostenibile: il ruolo dell'ASEAN per la tutela transnazionale degli *environmental defenders*

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Abstract The article aims to analyse the path taken by the Association of Southeast Asian Nations (ASEAN) in drafting the Declaration on environmental rights. Even though it presents a potential role for the integration of environmental rights and human rights, significant critical issues have been identified, including the need for effective implementation at the regional level and the lack of provisions for the protection of vulnerable communities, including indigenous peoples and so-called 'environmental defenders', who are often hindered by strategic lawsuits against public participation.

Keywords ASEAN. Environmental defenders. Human Rights. SLAPPs. Healthy environment.

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1 Introduzione

Negli ultimi decenni, i Paesi membri dell'Associazione delle Nazioni del Sud-Est Asiatico (ASEAN) hanno conosciuto un'imponente crescita economica, accompagnata da una sensibile riduzione della povertà e da profondi cambiamenti strutturali nei settori industriali e urbani (ASEAN 2023; World Bank 2020). Al contempo, dimostrano una forte vulnerabilità alle conseguenze dovute dal cambiamento climatico, con impatti diretti sulla qualità della vita e sull'integrità degli ecosistemi dei singoli Stati Membri.

A livello nazionale e dell'ASEAN nel suo insieme, le iniziative politiche e programmatiche per affrontare tali problematiche rimane spesso frammentaria e poco incisiva (Akenji et al. 2019) e gli strumenti adottati riflettono l'approccio dell'ASEAN fondato sul principio di non-interferenza e sul consenso intergovernativo (Koh 2012).

Parallelamente, l'attenzione della dottrina e delle istituzioni si è concentrata su questioni settoriali correlate all'ambiente e al clima come: la qualità dei carburanti, i trasporti sostenibili (Zusman, Srinivasan, Dhakal 2012), la gestione dei rifiuti (Hermawan, Astuti 2021) e la promozione dell'economia circolare (Akenji et al. 2019), senza una vera e propria analisi integrata e sistemica dei diritti ambientali nell'ordinamento regionale e nella sua *governance*. Inoltre, fino a tempi recenti la dimensione ambientale è rimasta nettamente distinta da quella della tutela dei diritti umani, sviluppandosi su binari paralleli.

Una svolta si è verificata a partire dal 2022, quando la Commissione Intergovernativa sui diritti umani (ASEAN Intergovernmental Commission on Human Rights – AICHR) ha avviato un processo di negoziazione volto all'elaborazione di una Dichiarazione regionale sui diritti ambientali. L'iniziativa si propone di costruire un quadro normativo che unisca in maniera coerente la protezione dell'ambiente con i diritti umani fondamentali. La bozza più recente della Dichiarazione, pubblicata l'8 maggio 2024 e presentata anche in sede della 29° Conferenza delle Parti della Convenzione Quadro sui Cambiamenti Climatici delle Nazioni Unite svoltasi a Baku a novembre 2024 (UNFCCC-COP29),[1] rappresenta il primo tentativo di sistematizzazione a livello sovra statale dei diritti umani ambientali.

Il panorama internazionale contemporaneo registra una crescente centralità del contenzioso climatico e delle opinioni consultive emesse dalle Corti sovranazionali, che consolidano il diritto a un ambiente sano come parte integrante dell'ordinamento dei diritti

1 ASEAN (2025), *Environmental Rights Declaration – Impact, Challenges, and Strategies for Paris Agreement Goals*. https://unfccc.int/es/node/642401.

umani. In particolare, la Corte Interamericana dei Diritti Umani, con la sua Opinione Consultiva OC-23/17 (IACtHR 2018), ha riconosciuto il diritto a un ambiente sano come diritto autonomo, la cui violazione compromette diritti fondamentali quali vita e integrità personale, anche in via extraterritoriale. Più recentemente, con l'Opinione Consultiva OC-32/25, la stessa Corte ha innovato profondamente la materia, distinguendo il *diritto a un clima sano* da quello ambientale, riconoscendo la Natura come soggetto di diritti autonomo e qualificando la protezione contro i danni climatici irreversibili come obbligo *jus cogens* (IACtHR 2025; Fundeps 2025). Parallelamente, la Corte Internazionale di Giustizia, nella sua opinione consultiva del 2025, ha stabilito che l'inazione contro il cambiamento climatico può costituire violazione del diritto internazionale, affermando obblighi di cooperazione, mitigazione e responsabilità storica (ICJ 2025), a ciò aggiungendosi il parere del Tribunale Internazionale per il Diritto del Mare, che ha qualificato le emissioni di gas serra come forma di inquinamento marino, vincolando gli Stati ad adottare misure efficaci di riduzione (ITLOS 2024).

Queste evoluzioni giurisprudenziali esercitano una pressione crescente anche sull'ASEAN, la cui architettura istituzionale tradizionalmente fondata sulla sovranità nazionale appare oggi sollecitata ad adeguarsi a standard più elevati di tutela ambientale e dei diritti umani. La crescente vulnerabilità della regione agli impatti climatici – in termini di alluvioni, innalzamento del livello del mare e perdita di biodiversità – rende l'adeguamento normativo e istituzionale non solo auspicabile, ma necessario (ASEAN 2024). In questa prospettiva, il consolidarsi di un quadro giuridico internazionale in materia ambientale funge da leva normativa e politica che spinge l'ASEAN verso un progressivo allineamento agli standard globali di protezione dei diritti umani ambientali.

Pertanto, il presente contributo intende commentare il processo istituzionale in corso, focalizzandosi sul ruolo dell'AICHR nella gestione della negoziazione e la valutazione di quali strumenti giuridici sono adottabili. In particolare, si rifletterà sulla rilevanza assunta dagli attori non statali – tra cui organizzazioni della società civile, comunità indigene e ONG – nel dialogo consultivo con l'AICHR, esaminando il potenziale di queste interazioni per dare legittimità sostanziale al futuro testo dichiarativo.

In relazione a questo processo, si intende favorire, inoltre, l'attenzione sullo spazio (scarsamente) dedicato al ruolo degli *environmental defenders*, specie per via del contesto politico e giuridico dei singoli Stati membri, soprattutto con l'importante emergere delle pratiche repressive contro la categoria e definite come *strategic lawsuits against public participation* (SLAPPs) (vedi *infra*, § 4), sempre più utilizzate per limitare la libertà di espressione e ostacolare le azioni legali in difesa dell'ambiente.

A fronte dell'aumento della *climate litigation* generale nella regione,[2] la Dichiarazione potrebbe costituire una base normativa per rafforzare la posizione giuridica di questi attori e favorire l'emergere di standard comuni nella protezione dei diritti umani ambientali.

A tal proposito, è importante sottolineare che, in mancanza di un testo definitivo, l'attenzione deve essere rivolta alla qualità e all'inclusività del processo in corso. Il successo dell'iniziativa non dipenderà solo dal contenuto finale della Dichiarazione, ma anche – e soprattutto – dalla capacità dell'AICHR di recepire in maniera autentica e operativa le istanze delle comunità locali, dei movimenti ecologisti e dei gruppi vulnerabili. Nel contesto sociale, politico, e giuridico dell'ASEAN, basato su un forte principio consensuale (Acharya 2014), un processo partecipativo effettivo potrebbe garantire che il documento finale, seppur non cogente, rappresenti una base giuridico-politica largamente riconosciuta su cui fondare futuri strumenti di implementazione e rafforzare la coerenza normativa dell'ASEAN in questo profilo.

Al fine di comprendere il contesto in cui si colloca la negoziazione della Dichiarazione ASEAN sui diritti ambientali, questo contributo adotterà un approccio articolato su più livelli. In primo luogo, verrà delineato il quadro istituzionale dell'ASEAN, facendo riferimento alla letteratura scientifica disponibile e alla giurisprudenza maggiormente rilevante, con particolare attenzione alle difficoltà incontrate dagli Stati membri nel convergere verso un modello vincolante di tutela dei diritti umani. Successivamente, l'analisi si concentrerà sullo sviluppo di strumenti normativi sovranazionali in materia ambientale, valutandone l'effettività non solo a livello regionale, ma anche in un più ampio contesto comparato e internazionale, che sarà oggetto di una discussione critica. A partire da queste premesse, verrà poi condotta un'analisi genetica della Dichiarazione sui diritti ambientali, volta a ricostruirne le origini, i principali passaggi negoziali e i nessi con la più recente proposta di inserire esplicite garanzie a favore degli *environmental defenders*. Infine, la riflessione sarà arricchita da un esame di alcuni casi emblematici di contenzioso ambientale nell'area ASEAN, con l'obiettivo di verificare la tenuta applicativa delle previsioni dichiarative e di mettere in luce le criticità strutturali che ne ostacolano l'efficacia.

2 Si veda il *policy report* di giugno 2022 sui *Global Trends in Climate Change Litigation: 2022 Snapshot* di J. Setzer e C. Higham disponibile su `https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/08/Global-trends-in-climate-change-litigation-2022-snapshot.pdf`.

2 L'ASEAN tra tutela dell'ambiente e diritti umani

Per comprendere appieno le scelte politiche e giuridiche dell'Associazione delle Nazioni del Sud-est asiatico (ASEAN) in materia di tutela ambientale e diritti umani, è necessario partire da un'analisi del suo contesto storico, geografico e culturale, nonché dalla sua struttura istituzionale e dai valori fondanti che ne regolano l'azione. L'ASEAN, fondata nel 1967 e istituzionalizzata attraverso l'*ASEAN Charter*[3] sottoscritta nel 2007, è un'organizzazione regionale intergovernativa che comprende oggi dieci Stati membri: Brunei, Cambogia, Filippine, Indonesia, Laos, Malesia, Myanmar, Singapore, Thailandia e Vietnam. Il modello organizzativo, nato con l'intento di promuovere la cooperazione e la stabilità regionale, preservando nel contempo la sovranità e l'indipendenza dei Paesi membri,[4] rappresenta un modello di integrazione regionale peculiare e ben diverso dalle esperienze occidentali, discostandosi sensibilmente da una concezione forte di integrazione regionale.

Uno dei tratti distintivi dell'ASEAN è la sua eterogeneità strutturale sotto il profilo storico, culturale, politico e economico; infatti, la regione dell'Asia sud-orientale è caratterizzata da un mosaico di tradizioni religiose, lingue, sistemi di governo e gradi di sviluppo, pluralismo che non avrebbe consentito l'emergere di un costituzionalismo asiatico condiviso (Groppi, Rinella, Piergigli 2009), pertanto influenzando profondamente il modo in cui i diritti umani vengono interpretati nella regione, compresi, di conseguenza, anche quelli correlati all'ambiente.

Alla luce di questa struttura, l'ASEAN ha sviluppato un approccio peculiare reso noto dalla dottrina come *ASEAN way* (Bertolini 2023; Acharya 2014; Jetschke, Murray 2011), il quale si fonda su tre principi cardine: la non ingerenza negli affari interni degli Stati membri; l'adozione di pratiche decisionali informali, basate sulla consultazione e sul consenso; il primato dell'attuazione nazionale rispetto alla creazione di meccanismi sovranazionali (Bertolini 2023; Acharya 2014; Jetschke, Murray 2011). Tali norme, lungi dall'essere puramente retoriche, costituiscono l'ossatura operativa dell'ASEAN e si riflettono su ogni ambito di azione dell'organizzazione.

Uno degli esempi più emblematici della tensione tra cooperazione regionale e rispetto della sovranità statale, trattando di diritti umani, è rappresentato dalla Commissione intergovernativa per

3 https://asean.org/wp-content/uploads/images/archive/publications/ASEAN-Charter.pdf.

4 Carta dell'ASEAN (2007) [*ASEAN Charter*]. Articolo 2.2, lett.a): «rispetto dell'indipendenza, della sovranità, dell'uguaglianza, dell'integrità territoriale e dell'identità nazionale di tutti gli Stati membri dell'ASEAN».

i diritti umani (AICHR), istituita nel 2009. Pur essendo l'organo centrale dell'ASEAN dedicato alla promozione e protezione dei diritti umani, l'assenza di un meccansimo regionale dotato di strumenti di garanzia *ad hoc* (Groppi 2020) rende il suo mandato fortemente limitato. Di conseguenza, l'attività della Commissione si concentra principalmente sulla promozione dei diritti umani attraverso iniziative di sensibilizzazione, istruzione e *capacity building*, trascurando quasi del tutto la dimensione impositiva, restando priva di strumenti effettivi di monitoraggio, indagine, ricezione di denunce, accesso alle vittime e fornitura di rimedi.

Questa impostazione è coerente con la filosofia del regionalismo debole (Mansab 2024; Jetschke, Murray 2011) che l'ASEAN ha scelto di adottare, in cui la cooperazione avviene attraverso il metodo intergovernativo piuttosto che mediante istituzioni sovranazionali indipendenti dotate di competenze esecutive e di controllo. Non sorprende, a tal proposito, la mancata istituzione di alcuna Corte regionale dei diritti umani, né altri organi giurisdizionali indipendenti capaci di imporre sanzioni o garantire il rispetto degli accordi. Tale scelta non è solo il frutto del rispetto delle specificità culturali dei Paesi membri, ma è anche una conseguenza fisiologica della volontà politica di non rinunciare a porzioni significative di sovranità nazionale (Varkkey 2014).

In questo senso, l'*ASEAN way* appare simultaneamente come causa e effetto della disomogeneità interna dell'organizzazione e della sua architettura istituzionale. La mancanza di organi indipendenti che possano agire in nome e per conto dell'organizzazione rappresenta una limitazione strutturale che si ripercuote necessariamente anche sul possibile rafforzamento dei diritti umani e della tutela ambientale nella regione. Il rischio è quello di un sistema autoreferenziale, in cui gli Stati restano gli unici garanti e attuatori delle norme regionali, senza un effettivo controllo esterno.

Un altro elemento rilevante è rappresentato dalla costruzione dell'identità dell'ASEAN, costituendo uno degli obiettivi statutari dell'organizzazione, come indicato espressamente all'articolo 1, § 14, della Carta dell'ASEAN, così come l'articolo 35 ribadisce l'impegno dell'organizzazione nella promozione di un senso di appartenenza comune tra i popoli del Sud-est asiatico. Tuttavia, la stessa nozione di identità resta una ambigua e scarsamente definita nei documenti ufficiali (Bertolini 2023).

Questi pilastri si manifestano chiaramente nella Dichiarazione ASEAN sui diritti umani del 2012, che, pur facendo riferimento alla Dichiarazione Universale dei Diritti dell'Uomo, alla Carta delle Nazioni Unite e altri strumenti internazionali, subordina l'applicazione di tali principi al rispetto dei contesti nazionali, culturali e religiosi degli

Stati Membri.[5] In tal modo, l'universalità dei diritti umani viene, di fatto, relativizzata (Groppi 2020), con l'effetto di ridurne la portata applicativa concreta. L'approccio adottato, benché coerente con il pluralismo culturale della regione, rischia di svuotare di contenuto il concetto stesso di diritto, che dovrebbe essere invece garantito in modo uniforme e inalienabile.

La medesima logica si ritrova nel campo della tutela ambientale, ambito nel quale l'ASEAN ha adottato numerose dichiarazioni e leggi quadro, ma con risultati concreti spesso molto modesti. Nonostante la proliferazione di norme e strategie ambientali, la loro implementazione effettiva è spesso carente, a causa della mancanza di coordinamento tra gli Stati membri, dell'assenza di meccanismi vincolanti e di una comune cultura giuridica sulla tutela ambientale (Kheng-Lian 2012).

Alla luce di quanto detto, si può concludere che l'ASEAN rappresenta un esempio paradigmatico di regionalismo relazionale basato sulla diplomazia, sul consenso e sulla tutela della sovranità nazionale. Questo modello, se da un lato ha garantito una certa stabilità politica e ha favorito la cooperazione economica, dall'altro ha prodotto un sistema debole e frammentato di protezione dei diritti, sia civili che ambientali. La sfida futura sarà quella di conciliare il rispetto per le diversità culturali e sovrane dei Paesi membri con l'urgenza di rafforzare gli strumenti di garanzia e di giustizia, in un'ottica più ambiziosa di integrazione e responsabilità condivisa.

5 Espressione che ricalca quanto affermato dalla Dichiarazione di Bangkok sui diritti umani adottata nel 1993 da 34 Paesi dell'Asia che afferma al punto 8: «while human rights are universal in nature, they must be considered in the context of a dynamic and evolving process of international norm-setting, bearing in mind the significance of national and regional particularities and various historical, cultural and religious backgrounds».

3 Lo sviluppo del diritto a un ambiente sano: una panoramica regionale

Nel contesto del costituzionalismo comparato, l'affermazione del diritto a un ambiente sano costituisce uno dei più significativi sviluppi normativi degli ultimi decenni. Tale diritto si sta progressivamente consolidando come dimensione imprescindibile della protezione dei diritti umani fondamentali, trovando forme di riconoscimento nei testi costituzionali (Amirante 2022), nelle legislazioni ordinarie e nell'attività delle Corti Internazionali.[6]

La redazione della Dichiarazione ASEAN sul diritto a un ambiente sicuro, pulito, sano e sostenibile rappresenta la naturale conseguenza dei nuovi sviluppi in materia ambientale attualmente in corso, stimolati sia dalla crescente pressione del contesto internazionale[7] appena accennato che dalla crescente esposizione della regione ASEAN alle sistemiche crisi ambientali – e dei diritti umani – L'approccio verso la materia ambientale riflette le stesse caratteristiche della struttura della struttura multilivello, cooperativa e prevalentemente consensuale, incentrata su meccanismi di *soft law* e sull'autonomia regolativa degli Stati membri dell'ASEAN.

A livello istituzionale, il riferimento principale è sempre costituito dall'*ASEAN Charter* secondo la quale l'ambiente, pur non rappresentando un'area prioritaria come l'economia o la sicurezza, è riconosciuto come ambito di cooperazione, inserito nel più ampio obiettivo dello sviluppo sostenibile.[8] Tuttavia, il principio del consenso, sancito all'articolo 20 della Carta, rende l'adozione di misure cogenti dipendente dall'unanimità, limitando di fatto la capacità dell'organizzazione di imporre misure comuni o di intervenire nei casi di inadempimento.

Tra le principali misure adottate a livello regionale, l'Accordo ASEAN sulla conservazione della natura e delle risorse naturali del 1985 – pur non ratificato da tutti i Paesi membri – rappresenta il tentativo più organico di disciplinare in modo unitario le responsabilità in materia di conservazione, uso sostenibile e gestione

6 Così la Corte Interamericana sui diritti umani, che aveva già riconosciuto nell'Opinione Consultiva OC-23/17, il diritto a un ambiente sano come diritto umano, ha affermato nell'Opinione Consultiva OC-32/25 ribadisce il suo riconoscimento ed enuclea i suoi elementi in relazione alle obbligazioni climatiche in capo agli Stati: `https://jurisprudencia.corteidh.or.cr/es/vid/1084981967`.

7 Assemblea Generale delle Nazioni Unite, Risoluzione 76/300, che riconosce il diritto umano a un ambiente sano (2022).

8 La Carta fa riferimento alla promozione e alla protezione dei diritti umani nel suo preambolo: all'articolo 1.4, esprimere l'obiettivo di «ensure that the peoples and Member States of ASEAN live in peace with the world at large in a just, democratic and harmonious environment».

delle risorse naturali, integrando principi fondamentali come l'equità intergenerazionale, la responsabilità condivisa e l'obbligo di cooperazione transfrontaliera, costituendo per lungo tempo un riferimento essenziale per le successive iniziative regionali.

Un altro degli strumenti legislativi più significativi, anche per il suo potenziale transnazionale, è rappresentato dall'Accordo ASEAN sull'inquinamento transfrontaliero da foschia (*Agreement on Transboundary Haze Pollution* – ATHP), volto a contrastare il fenomeno dell'inquinamento atmosferico transfrontaliero derivante dagli incendi boschivi, con particolare riferimento alla regione indonesiana (Varkkey 2014). Questo accordo, entrato in vigore nel 2003, rappresenta il primo trattato multilaterale ambientale vincolante dell'ASEAN, ma la sua implementazione ha incontrato numerose difficoltà dovute alla mancanza di meccanismi sanzionatori, alla lentezza nei processi di ratifica e alla dipendenza dalla volontà degli Stati membri. Nonostante tali limiti, l'ATHP ha costituito un precedente importante per la formalizzazione degli obblighi ambientali nella regione, introducendo elementi quali la notifica tempestiva dei disastri ecologici, lo scambio di informazioni e l'assistenza reciproca (Ituarte-Lima et al. 2020).

Accanto a essi, un ruolo crescente è stato assunto dai Piani d'Azione Ambientali dell'ASEAN, adottati su base quinquennale dall'ASEAN *Ministerial Meeting on the Environment*. Questi piani definiscono le priorità politiche e tecniche condivise e costituiscono la base operativa per i programmi regionali in materia di biodiversità, gestione dei rifiuti, cambiamento climatico e qualità dell'aria. L'ultimo ciclo strategico 2021-25 prevede, tra gli obiettivi principali, la promozione dell'economia circolare, l'adozione di meccanismi basati sulla scienza e il rafforzamento delle capacità istituzionali dei singoli Stati nella protezione ambientale.

Complessivamente, il quadro legislativo dell'ASEAN in materia ambientale si configura come un mosaico in evoluzione, composto da accordi multilaterali, strategie regionali e piani di cooperazione tematici. Pur in assenza di un *corpus* normativo vincolante e uniforme, la progressiva elaborazione di strumenti giuridici, in combinazione con la crescente pressione da parte della società civile e degli attori transnazionali, ha contribuito a rafforzare il profilo giuridico del diritto a un ambiente sano nel Sud-Est asiatico. In questo contesto, l'evoluzione normativa dell'ASEAN fornisce un terreno fertile per riflettere sulla possibilità di rafforzare, attraverso strumenti regionali, la tutela del diritto all'ambiente e, al tempo stesso, di proteggere le persone e le comunità che ne promuovono l'effettività.

Sul piano nazionale, l'Indonesia, le Filippine, la Thailandia e il Vietnam sono gli unici stati appartenenti all'ASEAN che riconoscono

esplicitamente il diritto a un ambiente sano nelle loro costituzioni.[9] La Malesia riconosce implicitamente questo diritto, in quanto i giudici hanno elaborato il contenuto del diritto alla vita di cui all'articolo 5 della Costituzione federale della Malesia,[10] argomentando che questa disposizione include il diritto di vivere in un ambiente ragionevolmente sano e privo di inquinamento. Invece, Brunei, Cambogia, Laos, Myanmar e Singapore non hanno riconosciuto costituzionalmente questo diritto. In una certa misura, tuttavia, essi riconoscono le dimensioni sostanziali e procedurali di tale diritto nelle legislazioni nazionali (Kim, Das, Canales 2025).

9 Costituzione dell'Indonesia (1945) [*Undang-undang dasar negara Republik Indonesia*] articolo 28H (1) [*Pasal* 28H]: «Every person has the right to live in prosperity physically and spiritually, to reside, and to enjoy good and healthy environment, and has the right to obtain medical care», traduzione disponibile sul sito della Corte Costituzionale dell'Indonesia [*Mahkamah Konstitusi Republik Indonesia*] https://en.mkri.id/download/constitution/constitution_1_1625426222_4c1e13f466840d7ed721.pdf; Costituzione della Repubblica delle Filippine (1987), articolo II, sezione 16: «The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature», testo originale in inglese consultabile su https://www.officialgazette.gov.ph/constitutions/1987-constitution/; La Costituzione del Regno della Thailandia (2017) [*Ratthathammanun Haeng Ratchaanachak Thai Phutthasakkarat* 2560 รัฐธรรมนูญแห่งราชอาณาจักรไทย พ.ศ. 2560], attribuisce allo Stato il compito di conservare, proteggere, ripristinare e gestire le risorse naturali, l'ambiente e la biodiversità in modo equilibrato e sostenibile, affermando al contempo il diritto delle comunità locali a partecipare alle relative attività e beneficiarne nei modi stabiliti dalla legge. A tal proposito, la Costituzione aggiunge l'obbligo di valutazione dell'impatto ambientale e di prevedere le modalità di organizzazione delle consultazioni pubbliche preventive all'autorizzazione di attività e progetti. Sul punto, la sezione 57: «The State shall: […] (2) conserve, protect, maintain, restore, manage and use or arrange for utilisation of natural resources, environment and biodiversity in a balanced and sustainable manner, provided that the relevant local people and local community shall be allowed to participate in and obtain the benefit from such undertaking as provided by law»; sezione 58: «the State shall undertake to study and assess the impact on environmental quality and health of the people or community and shall arrange a public hearing of relevant stakeholders, people and communities in advance to take them into consideration for the implementation or granting of permission as provided by the law». Traduzione ufficiale in inglese presente sul sito della Corte Costituzionale della Thailandia [*San Ratthathammanun* ศาลรัฐธรรมนูญ]: https://www.constitutionalcourt.or.th/occ_en/download/article_20170410173022.pdf; Costituzione del Vietnam (2013) [*Hiến pháp nước Cộng hòa xã hội chủ nghĩa Việt Nam*] riconosce, all'articolo 43, non solo il diritto ad un ambiente sano ma anche il dovere di tutelarlo: «Everyone has the right to live in a clean environment and has the obligation to protect the environment». Traduzione reperibile su https://faolex.fao.org/docs/pdf/vie127527.pdf#page=8.57.

10 Costituzione della Malesia (1957) [*Perlembagaan Malaysia*]: «no person shall be deprived of his life or personal liberty save in accordance with law». Traduzione reperibile a https://www.sprm.gov.my/admin/files/sprm/assets/pdf/penguatkuasaan/perlembagaan-persekutuan-bi.pdf#page=32.10.

4 Verso la Dichiarazione sul diritto a un ambiente sicuro, pulito, sano e sostenibile: genesi e sviluppi

L'elaborazione di una dichiarazione formale, sebbene non dotata di un carattere di vincolatività, sta generando aspettative su una maggiore convergenza o quantomeno coordinamento nel campo dei diritti umani e della protezione ambientale nell'organizzazione regionale (Boer, Boyle 2013). Tuttavia, il suo contenuto e le dinamiche della sua negoziazione[11] riflettono ancora una volta la tensione strutturale che attraversa l'architettura normativa dell'ASEAN, ovvero quella tra la valorizzazione del principio della non interferenza negli affari interni degli Stati membri e la necessità di sostenere norme comuni in materia di tutela ambientale e dei diritti generali delle comunità.

Dal 2022 al 2024 sono disponibili due versioni del testo. La bozza del 7 marzo 2024[12] si limitava a menzionare i diritti ambientali, evitando sia il riconoscimento del diritto umano a un ambiente sano sia qualsiasi riferimento agli attori che difendono tale diritto, presentando un approccio cauto e tecnico basato su principi di più facile compromesso come quello di 'sostenibilità' e 'conservazione', evitando imputazioni soggettive e obblighi legali chiari. È solo con la bozza dell'8 maggio 2024,[13] presentata alla COP29, che emerge un importante cambiamento: il testo introduce il riferimento esplicito al diritto a un ambiente sano e sostenibile e presenta un riferimento di protezione per i difensori dell'ambiente (ASEAN 2024).

In questa versione aggiornata, gli articoli 21 e 22 definiscono l'impegno degli stati membri a identificare, salvaguardare e

11 Tuttavia, è necessario specificare che la documentazione ad oggi disponibile sui processi di negoziazione deriva per quasi la totalità da report rilasciati dalle Organizzazioni non Governative e Osservatori sui diritti umani locali o internazionali, come lo Stockholm Environment Institute mentre dai siti ufficiali della AICHR sono reperibili quasi esclusivamente delle mere conferenze stampa. Inoltre, non si riscontra nella letteratura commento alcuno rispetto all'elaborazione di questa Dichiarazione.

12 AER WG/3M/03/Add.1 *Draft as of 7 March 2024: Draft ASEAN Declaration on Environmental Rights*.

13 AER/WG/3M/03Add.1 *Draft as of 8 May 2024: Draft ASEAN declaration on the right to a Safe, Clean, Healthy and Sustainable Environment*.

incoraggiare le attività dei difensori dell'ambiente.[14] Questi articoli suggerivano l'adozione di leggi per fermare intimidazioni, minacce e ritorsioni e scoraggiare gli stati dall'emanare leggi sui diritti di libertà di parola per fermare questi abusi e l'uso di SLAPPs. Tuttavia, il linguaggio del testo è ancora vago e diplomatico e molte delle sue disposizioni sono ancora tra parentesi quadre, mentre il lessico utilizza regolarmente il modo verbale debole, come le costruzioni *should* e *may* (ASEAN 2024).

Le tensioni negoziali indicano divisioni geopolitiche interne all'ASEAN stessa.

Da un lato, Filippine, Indonesia e Thailandia sostengono un approccio più ambizioso verso il rafforzamento dei diritti (Tran, Kim 2024); dall'altro, Paesi come Myanmar, Cambogia e Laos hanno espresso preoccupazioni circa possibili interferenze negli affari interni, spingendo per un linguaggio meno vincolante. La storica priorità ASEAN per la sovranità statale e il consenso intergovernativo sembra in questo caso frenare la spinta verso una piena tutela dei diritti ambientali e dei soggetti che li difendono.

A favore di ciò risulta la poca attenzione riservata al pieno riconoscimento della categoria degli *environmental defenders* e dei gruppi vulnerabili in genere, comprese le comunità indigene, nelle diverse versioni della Dichiarazione (Tran et al. 2025); seppure sia menzionato il principio del *free, prior and informed consent*,[15] esso è condizionato dal rispetto delle leggi nazionali, dimostrando un'apertura verso interpretazioni restrittive.

In tale dinamica, la Dichiarazione ASEAN potrebbe offrire una base giuridica regionale che legittimi tali azioni, a patto che il testo finale non eviti di affrontare la questione delle garanzie processuali e materiali previste per chi intraprende tali contenziosi.

Pertanto, la bozza di maggio 2024 rappresenta un significativo passo avanti rispetto alla versione del marzo precedente, spostandosi

14 Articolo 21: «Every person and every group, including national human rights institutions, working to promote the right to a safe, clean, [healthy,] and sustainable environment following national laws require further protection from threats and retaliation»; articolo 22: «AMS should: (1) take adequate and effective measures to recognise and protect those who promote the right to a safe, clean, healthy and sustainable environment, as well as their ability to exercise their rights. (2) ensure that those who promote the right to a safe, clean, healthy, and sustainable environment are free from threat and retaliation in any form for exercising such rights. (3) take appropriate, effective, and timely measures to prevent, investigate, deter, and punish threats or intimidation against those who promote the right to a safe, clean, healthy, and sustainable environment».

15 Sulla scia degli accordi internazionali maggiormente rilevanti a riguardo, fra tutti in particolar modo l'Accordo di Escazù e la Convenzione di Aarhus, nonché della lunga tradizione e forza propulsiva della Corte Interamericana dei diritti umani sulla tutela degli indigeni e dei processi partecipativi di questi ultimi in materia ambientale e climatica.

da un'impostazione meramente dichiarativa e ambientale a una più marcatamente legata ai diritti umani. Tuttavia, resta da verificare se tale strumento riuscirà davvero a proteggere chi difende l'ambiente, o se resterà una dichiarazione priva di effetti concreti. La capacità dell'ASEAN di superare la propria logica intergovernativa e aprirsi a una governance ambientale orientata ai diritti e partecipativa dipenderà dalla volontà politica degli Stati membri e dal ruolo che le organizzazioni della società civile riusciranno a esercitare nel processo di finalizzazione e implementazione del documento (Boer, Boyle 2013).

5 Gli *environmental defenders*: dalla partecipazione pubblica nella tutela ambientale alla questione degli SLAPPs

Se il riconoscimento formale del diritto ad un ambiente sano e salubre nei contesti giuridici nazionali e regionali dell'ASEAN costituisce la base sostanziale della protezione ambientale, è sul piano procedurale che si misura l'effettività di tale diritto. In tal senso, un ruolo cruciale è svolto dagli *environmental defenders*, attori che, individualmente o collettivamente, si mobilitano per contrastare progetti dannosi per l'ambiente, denunciare pratiche illegittime e promuovere la sostenibilità ambientale a livello locale, nazionale e transnazionale.[16] L'attività di questi soggetti non si limita all'attivismo sociale o alla protesta simbolica, ma rappresenta un elemento strutturale di governance ambientale, in quanto contribuisce all'esercizio concreto del diritto alla partecipazione, all'informazione e all'accesso alla giustizia ambientale. Tuttavia, il quadro giuridico dell'ASEAN e dei suoi Stati membri, pur mostrando segnali di apertura, risulta ancora profondamente deficitario nel garantire tutele procedurali efficaci a fronte di fenomeni come la criminalizzazione dell'attivismo.

Nel contesto del Sud-est asiatico, gli *environmental defenders* operano in ambienti ad alta conflittualità sociale e ambientale, spesso privi di strumenti giuridici efficaci per difendersi da pressioni politico-economiche e repressioni giudiziarie. La loro esposizione deriva dal ruolo che svolgono nel monitoraggio delle attività estrattive, nella denuncia di progetti infrastrutturali ad alto impatto ecologico, nella tutela dei diritti delle popolazioni indigene e nella promozione della giustizia climatica. In molti casi, questi soggetti si trovano a esercitare i propri diritti in condizioni di vulnerabilità estrema, aggravata dall'assenza di normative protettive a livello regionale e da un uso sistematico di azioni legali intimidatorie

16 UN General Assembly A/71/281.

da parte di attori pubblici e privati. In Paesi come le Filippine, la Thailandia e l'Indonesia, le SLAPPs sono diventate strumenti consueti di repressione della dissidenza civica e ambientale. Esse consistono in cause civili o penali mosse con l'intento non tanto di ottenere un risarcimento o una condanna, quanto piuttosto di generare un effetto dissuasivo, esaurendo le risorse finanziarie e psicologiche dei soggetti coinvolti e riducendo lo spazio democratico del dibattito ambientale.

La pervasività di questo fenomeno si evidenzia anche attraverso l'analisi di alcuni casi giurisprudenziali nel panorama regionale. Nelle Filippine, la Corte Suprema ha introdotto un'importante innovazione con la *Rule of Procedure for Environmental Cases*,[17] che consente il rigetto delle SLAPPs in fase preliminare. In *Resident Marine Mammals vs. Reyes*,[18] la Corte Suprema aveva riconosciuto la legittimazione delle ONG a intervenire nei procedimenti ambientali come rappresentanti dell'interesse pubblico, affermando la centralità della partecipazione civica. In Thailandia, particolarmente eclatante è la vicenda che vede coinvolta la Tungkum Mining Company e i membri del gruppo Khon Rak Ban Kerd,[19] relativamente all'opposizione popolare a una miniera d'oro nella provincia di Loei, al centro di un'ondata di SLAPPs. La compagnia ha intentato almeno 19 cause per diffamazione tra il 2014 e il 2017 contro 33 attivisti locali, generando un effetto paralizzante sull'intera comunità. Le denunce si sono concentrate contro chi aveva denunciato pubblicamente la contaminazione dei terreni e delle acque. La pressione esercitata dalla società civile e da organismi internazionali ha infine spinto l'azienda a ritirare molte delle accuse, evidenziando la natura ritorsiva dell'intera strategia legale. In Indonesia, nel caso una compagnia mineraria ha citato in giudizio sette attivisti e giornalisti per aver pubblicato un rapporto su livelli di contaminazione da mercurio nei fiumi della regione. Anche qui, l'obiettivo principale era quello di bloccare la diffusione delle informazioni, esercitando pressione attraverso il sistema giudiziario.

17 A.M. No. 09-6-8-SC: https://lawphil.net/courts/supreme/am/am_09-6-8-sc_2010.html.

18 G.R. No. 180771 & 181527, 21 April 2015.

19 Thailandia: il rapporto evidenzia la lotta della comunità contro la miniera d'oro e le rappresaglie contro i difensori dell'ambiente: https://www.business-humanrights.org/en/latest-news/thailand-report-highlights-community-struggle-against-gold-mine-reprisals-against-environmental-defenders-tungkum-ltd-did-not-respond/.

In tal senso, le osservazioni sollevate da diverse organizzazioni regionali e internazionali,[20] convergono sulla necessità di rafforzare la dimensione procedurale della Dichiarazione, introducendo esplicitamente obblighi di protezione per chi esercita la propria libertà di espressione e di critica nell'ambito delle controversie ambientali.

Va altresì considerato che la protezione degli *environmental defenders* non è solo una questione di diritti individuali, ma rappresenta un indicatore dell'effettività della *governance* ambientale in chiave democratica e partecipativa. Uno degli ostacoli principali alla tutela ambientale nella regione risiede proprio nella mancanza di inclusività nei processi decisionali e nella marginalizzazione delle comunità locali.[21] Gli attivisti ambientali, in quanto portatori di istanze collettive e mediatori tra il territorio e le istituzioni, svolgono un ruolo fondamentale nella prevenzione dei conflitti ambientali, nella denuncia delle violazioni e nella promozione di alternative sostenibili. Tutelarli significa, dunque, garantire la piena implementazione del diritto all'ambiente, non solo sul piano formale ma anche sostanziale e procedurale.

Un possibile modello può essere individuato nelle esperienze normative già esistenti in alcuni Stati membri e le riflessioni sulle possibili riforme in Indonesia (Kamal et al. 2024). Tali esperienze, pur parziali, forniscono una base di confronto utile per lo sviluppo di un protocollo ASEAN condiviso, che riconosca il ruolo strategico dei difensori ambientali e garantisca loro mezzi di protezione legale, accesso alla giustizia, supporto economico e assistenza legale in caso di ritorsioni. Una simile evoluzione contribuirebbe anche a rafforzare la coerenza interna dell'ASEAN rispetto agli impegni assunti in ambito internazionale, a partire dalla ratifica della Convenzione ONU sui Diritti Civili e Politici, passando per la Dichiarazione Universale dei Diritti dell'Uomo, fino alla più recente Risoluzione dell'ONU del 2022 sul diritto a un ambiente sicuro, pulito, sano e sostenibile.

In questo quadro, la trattazione giuridica della figura degli *environmental defenders* all'interno del progetto di Dichiarazione ASEAN del 2024 assume un valore strategico. La loro protezione giuridica risulta imprescindibile per l'affermazione di un diritto ad un ambiente sano, condizione necessaria per garantirne l'effettività

20 Tra cui l'OHCHR (2025), *Comments to the Draft ASEAN Declaration on Environmental Rights*. https://www.ohchr.org/sites/default/files/documents/issues/environment/srenvironment/cfis/cfi-ga-79/subm-overview-implementation-cso-mekong-legal-ne2rk-2.pdf.

21 Come indicato dall'ESCAP (2022), *Technical Report to Strengthen Environmental Impact Assessment Procedures in ASEAN*. https://www.unescap.org/sites/default/d8files/event-documents/ESCAP%20Summary%20Asssessment%20of%20Access%20Rights%20ASEAN.pdf.

e sindacare la legittimità delle politiche ambientali nei contesti pluralistici dell'Asia Sud-orientale. Su questa premessa, il successivo esame della Dichiarazione sul diritto ad un ambiente sicuro, pulito, sano e sostenibile consentirà di analizzare lo stato dell'arte circa l'inclusione *environmental defenders* e quali strumenti giuridici possano essere adottati o adattati dall'ASEAN per rafforzarne la tutela procedurale.

6 Conclusioni

Le consultazioni e i negoziati riguardanti la Dichiarazione dell'ASEAN sul diritto a un ambiente sicuro, pulito, sano e sostenibile rappresentano un momento paradigmatico per considerare se l'organizzazione regionale possa svilupparsi verso forme di governance ambientale più integrate e partecipative. L'esame del documento e del suo quadro di riferimento politico-istituzionale consente anche di affermare la percezione di una crescente sensibilità verso la dimensione dei diritti ambientali, insieme alla conferma delle problematiche critiche connesse al modello intergovernativo consensuale proprio dell'*ASEAN way*.

L'impatto limitato delle formule di bozza, la vaghezza semantica di numerose espressioni e l'incertezza continua rispetto ai difensori dell'ambiente e alle comunità indigene costituiscono sfide specifiche per un riconoscimento efficace del diritto a un ambiente sano. Tuttavia, è proprio il principio della consultazione inclusiva, con la possibilità di un forte coinvolgimento degli attori non statali, che può rappresentare il fulcro su cui costruire una *governance* regionale più responsabile e legittima.

Da questo punto di vista, sembra chiaro che debba essere una priorità per l'ASEAN e, più specificamente, per l'AICHR, di promuovere l'integrazione della partecipazione pubblica e procedere con un riconoscimento e una protezione espliciti per i Difensori dell'Ambiente. Questi ultimi non solo misurano la maturità democratica del sistema giuridico ambientale, ma rappresentano anche una parte imprescindibile di un ambiente giuridico inclusivo e capillare e che possa superare gli ostacoli derivanti dalla congenita struttura organizzativa dell'ASEAN.

Quindi, questa fase attuale della definizione della Dichiarazione presenta anche un'importante opportunità: sarà la qualità del processo partecipativo e l'inclusione delle voci della società civile a svolgere ruoli determinanti nel trasformare una dichiarazione di principio in uno strumento politico e normativo tangibile per l'ASEAN. Solo un reale coinvolgimento multilivello può colmare il divario tra enunciazione e attuazione, investendo l'ambizione di

creare un regionalismo giuridico e ambientale basato sui diritti umani con contenuti concreti.

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From National Law to Global Ambitions: China's Rare Earth Regulation in Domestic and International Law

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Abstract Rare Earth Elements (REEs) underpin green, industrial, and defence technologies and are increasingly governed following security logics. This article traces the evolution of REE governance in China, articulating it in a four-stage periodisation: horizontal reciprocity, state-led transactionalism, securitisation, and then the current phase of neo-securitisation. It will show how Chinese environmental and mineral resource laws, and their interaction with international economic law, centralise production and relocate geopolitical rivalries into legal arenas that encompass WTO disputes to EU tariffs and international arbitrations.

Keywords Rare Earths (REEs). Chinese law. Environmental law. Mineral resources law. International law.

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1 Introduction: The Periodisation of the Chinese Rare Earth Governance

Rare earth elements (REEs), also known simply as rare earths (REs), have become one of the most contested topics in contemporary debates over technology and security (Gangul, Cook 2018, 2-3). Their growing global relevance stems from two intertwined dynamics: the rising need for essential materials used in green technologies and the ongoing efforts to securitise their supply chains. This article bridges these dynamics to offer a critical, multidisciplinary account of how China's REE policy operates at the intersection of environmental governance, industrial strategy, and international law. It will also show that the securitisation dynamics linked to REEs are not merely a recent phenomenon but an ongoing trend.

In this paper, we will trace how China has consistently framed REEs as strategic resources rather than ordinary commodities and a key state industry. We argue that the sector is witnessing emerging trends of heightened regulatory securitisation, in which legal frameworks are increasingly used as instruments to protect national strategic interests and meet industry requirements. Building on Shen et al.'s temporalisation of China's REE policy evolution (2017) and the broader scholarship on REE security, namely: Ting, Seaman 2013; Hurst 2010; Medeiros, Trebat 2017; Andrews-Speed, Hove 2023; Chen et al. 2018; Sahai 2025; Butler 2014; Chapman 2018; Park, Tracy, Ewing 2023; Zhang 2015; Shuai et. al, 2023; Yu 2024; Yang 2025; Lewis, Hao 2011, this article will present a new four-stage temporalisation of China's REE governance:

1. Horizontal Reciprocity (1950s-70s), a period marked by socialist cooperation, marked by Sino-Soviet and Sino-Japanese technological cooperation and exchanges.
2. State-Led Transactionalism (1980s-90s), when foreign investments by Western countries and, consequently, technology transfers became central to China's industrial upgrading.
3. Securitisation (2000s-10s), the consolidation of state control over the sector and the formalisation of domestic priorities through export quotas, stricter environmental regulation, and international disputes.
4. Neo-Securitisation (2020s-), the externalisation of China's securitised logic as REEs became instruments of international power projection and the object of transnational legal contestation.

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To develop this temporalisation, we have examined the Copenhagen School of Security and its relationship to legal research. The Copenhagen School, primarily associated with Buzan, Wæver, and de Wilde, presents a constructivist framework for understanding how non-military issues can become security threats warranting extraordinary measures. Buzan and his colleagues contend that security is not an objective fact but a social construct shaped through discourse and practice. Securitisation becomes a 'speech act', i.e., a passage where an actor declares an existential threat to a referent object and then claims legitimacy for extraordinary measures outside routine political procedures (Wæver 1995; Buzan, Waever, De Wilde 1998). Yet, this passage is not analitally neutral, as framing an issue as security does not merely identify a threat. It instead produces a justificatory vocabulary through which exceptional governance becomes normalised within the legal order (Charrett 2009).

Salter applied this approach in his analysis of the Canadian Air Transport Security Authority, using Buzan's concept of securitisation, which involves framing an issue as a threat based on the recipient state's perception and the severity of the threat (2008, 323-4; Buzan 1991, 133-4; Buzan, Waever, de Wilde 1998, 25). Hanrieder and Kreuder-Sonnen examined the "ambiguous effects of securitization in global health" (2014, 3), demonstrating how presenting an issue as a security threat can justify extraordinary governance measures. Building on Williams's (2003) earlier work linking the Copenhagen School to Schmitt's theory of the state of exception, this scholarship underscores how securitisation resonates with Schmitt's friend-enemy distinction and with his definition of sovereignty as the authority to decide on the exception (Schmitt 1985, 5; 2007, 50-1; Huysmans 1998). Although not primarily focused on legal aspects, Sahai's work on natural resource securitisation followed a similar pattern: when scarcity is framed as an existential threat, extraordinary regulatory measures become politically and legally justifiable (2025, 328-9).

As REEs are increasingly recognised as strategic assets underpinning economic development, security rationales have ultimately been codified within environmental and mineral resources law. Statutory amendments, quota systems, licensing regimes, and export controls were increasingly institutionalised to recalibrate authority within the sector, while formally grounded in objectives of environmental protection and sustainable development. This article seeks to present this regulatory shift and its articulation through our proposed four-stage periodisation. We will demonstrate that this trajectory marks a structural transformation, in which resource regulation is now embedded within national security frameworks, consolidates state control over market access, while triggering disputes in international economic law.

2 From Fragmentation to Formation: From Colonial Asymmetries to Horizontal Reciprocity and the Early Industrial Planning (1920s-70s)

The definition and valuation of rare earth elements (REEs) in China have developed significantly since their initial utilisation in the late nineteenth century, particularly given that their more systematic applications were established later. The lanthanide series (REEs are all lanthanides in the periodic table) was conclusively identified in 1914 by Henry Moseley, whose work also contributed to rare-earth separation and early nuclear research (Klinger 2015, 574-5). By the time of the First World War, the phosphoric properties of certain REEs had already found military applications in fuses and explosives, revealing their potential beyond laboratory chemistry. In the interwar period, the Chinese nationalist government under the Guomindang began its own geological research, initiated systematic mineral surveying in 1922, albeit with limited funding, and pushed for strategic mineral extraction from the late 1920s onward (Klinger 2015, 575).

In these same years, China signed barter agreements with Germany to exchange tungsten, antimony, and other minerals for military purposes, and engaged with German, Swiss, and Danish geologists to map mineral deposits in Inner Mongolia and Xinjiang (Klinger 2015, 576). It was during a 1927 mission that what would later be discovered as the world's richest REE deposit was discovered in Baotou, and its abundance persists to this day. However, large-scale production did not begin at the site until 1957, when it was integrated into the Baotou Iron and Steel (BIS) industrial complex (Chen et al. 2022, 126). This delay was not merely technological; it reflected the erosion of Republican sovereignty in Northern China following the Japanese invasion of 1931 and the establishment of Manchukuo. In the invasion period, the Chinese iron, coal, and REE resources were seized by the Japanese army for its own rearmament and war economy. Furthermore, Japan conducted extensive geological surveys in the region, primarily through the South Manchuria Railway Company and the Manchurian Industrial Development Corporation, and appropriated much of the infrastructure established during earlier joint mapping missions (Shen 2019, 123-7; Stewart 1941, 202-3).

Not only did the war and Japanese occupation hinder the development of the Chinese mining sector, but mining activities also didn't resume promptly due to the civil war between the Guomindang and the Chinese Communist Party. However, when the CCP's attention returned to the region in the 1950s, they found that the Japanese had left behind industrial blueprints, laboratory archives, and infrastructure that laid solid groundwork for the new

People's Republic of China's (PRC) mineral resource policy. Especially since many Chinese geologists who had previously worked under the Japanese or the Guomindang had remained in the mainland. Within just a few years, conditions were ripe for the PRC to launch its new mining policy, marking the beginning of renewed Chinese attention to Bayan Obo (Klinger 2015, 578).

The first Five-Year Plan (FYP) of 1953 marked the beginning of Chinese industrialisation, heavily inspired by the Soviet economic model and thus emphasising heavy and chemical industries. Baotou was already part of this early industrial strategy as one of the key bases for establishing one of the first iron and steel companies, alongside the landmark Anshan Iron and Steel Company and the newer mills in Wuhan and Taiyuan (Matsuaki 1997, 15). When the central government of the PRC established the Baotou Iron and Steel (BIS) Company in 1954 as one of the key projects of the first FYP, it became an example of Sino-Soviet cooperation. Soviet experts were based locally in Inner Mongolia between 1953 and 1960 to provide support on design, resource management, and smelting methods to exploit the unique nature of the Bayan Obo ore, which contained both iron and REEs. The established architecture became a symbol of industrial and geopolitical innovation (Wu, Yi 2021, 74-86).

The first FYP also marked the beginning of horizontal reciprocity. While the pre-PRC period was characterised by asymmetries linked to colonial rule, the PRC's horizontal reciprocity relied on selective forms of cooperation grounded less in equality than in pragmatic solidarity. Namely, it relied on the Sino-Soviet partnership to develop this first model of REE governance, based on cooperation, shared technological development, and a rejection of the dynamics of colonial times. The Baotou complex and the other REE extraction sites became a symbol of self-reliance powered by shared socialist expertise, and what had once been imposed asymmetry turned into mutual development.

During the 1960s, REEs were still treated mainly as byproducts of iron and niobium, but this decade marked the beginning of organised scientific research. The Baotou Research Institute of Rare Earths, established under the BIS in 1963, became China's first specialised institution for REE metallurgy (Li, Yang 2014, 30-2; Tse 2011, 2). In the mid-1950s, Xu Guangxian, a Columbia University-trained Chinese chemist, returned to China right when the PRC was consolidating its heavy industry strategy. Not only did Xu pioneer domestic research on REE separation, but he was also embedded in Baotou's emergent industrial architecture. His application of quantum-chemical methods to solvent-extraction processes significantly improved the efficiency of REE isolation and the purity of final products, ultimately pioneering domestic Chinese separation technologies (Shen et al. 2017, 216).

By the end of the 1960s, China's REE deposits had expanded beyond Bayan Obo: in 1958, geologists discovered the Shandong Weishan deposit (production began in 1975); in 1969, geologists discovered ion-absorption clay deposits in Jiangxi Province, which were later followed by discoveries in Fujian, Hunan, Guangdong, and Guangxi (Li, Yang 2014, 30-2). These southern clays would become increasingly important to the national industrial complex because of their high REE content (Tse 2011, 2). Although production during the 1960s and early 1970s remained limited and largely experimental and academic, it was foundational. The experiences of these early years proved crucial for the subsequent large-scale industrialisation of the 1970s and 80s (Chen, He, Potgieter 2022, 126-7; Shen et al. 2017, 216-17).

3 State-Led Transactionalism and the Reform and Opening Up Period (1970s-90s)

During the mid-1970s, and after two decades of Soviet-aided development, China began developing its heavy sector independently. In 1975, it established the National Rare Earth Development and Application Leading Group to promote industrial development, attract foreign investments, and strengthen domestic capacity. While formally presented as a vehicle for sectoral development, the Group coordinated much of the central government's existing economic planning activities rather than actively innovating policy (Shen, Moomy, Eggert 2020, 130). After REEs were recognised as strategic inputs for the high-tech and defence industries, Xu established the Chinese Rare Earth Society in the late 1970s to drive the development of Chinese separation chemistry (Shen et al. 2017, 216; Li, Yang 2014, 30-2). In 1979, a year after the Sino-Japanese Treaty of Peace and Partnership, China and Japan launched their formal foreign technical cooperation through Inoue Japan Research Inc., which was established to undertake Sino-Japanese research and to develop REE extraction technology. They set out to build two facilities: one in Baotou, set to produce 5,500 tons per year, and a second, for which Moore reported that the location was unclear (1979, 750), to produce 1,100 tons per year. In the same years, the Mitsui Metal Mining Company and the Mitsui and Company sent teams to investigate the possibility of extracting REEs from the Poyun iron ore deposit (Moore 1979, 740; Park, Tracy, Ewing 2023; Goldman 2014, 149).

This Sino-Japanese partnership marked the development of 'state-led transactionalism', in which foreign companies leveraged China's natural resource base and comparatively lax environmental oversight, while Chinese authorities used foreign capital and

technology transfers to advance their development. The scale of this strategy is reflected in MOFTEC data indicating that, between 1979 and 1990, China engaged in more than 4,000 foreign technology projects valued at approximately USD 24.6 billion (Wang 1995, 42). In heavy industry, this model reached a decisive phase in the 1980s, when technology imports became structurally embedded in industrial upgrading.

By the 1980s, foreign partnerships had become structurally embedded in China's heavy industrial development, and the Chinese government actively recruited foreign investments through FDIs and joint ventures to upgrade its technological base. Thus, as REE applications expanded and intensified, permanent magnet production increased due to their greater use in new technologies (Dushyantha et al. 2020, 10). In 1985, China introduced tax rebates (13% for ores and 17% for metals) to incentivise upstream production (Shen et al. 2020, 130-1). In 1986, Japan and China deepened their cooperation through an agreement to jointly extract, refine, and use REEs, which followed the aforementioned transactional model. By the end of the 1980s, Chinese partnerships extended to Western partners. In 1989, the Ningbo-based Ke Ning Da Industry partnered with the US-based Tredas International to produce Nd-Fe-B magnets, modernising their facilities with American Equipment. A similar project was the MPV Lanthanides, a merger of China Metallurgical Import & Export Corporation and two US-based companies (Pacific Chemicals & Engineering and Universal Victory). In 1991, the Canada Rare Earth Metal Company joined with the Ganjian Rare Earth Company in Ganzhou (Jiangxi) to build a facility valued at 3.3 million USD and capable of processing 200 t of mixed REEs per year. Soon after, the Advanced Materials Resources of Toronto became the majority stakeholder in two joint ventures: one operating a 300-t oxide facility in Jiangyin and another producing permanent magnets with Beijing New Precision Alloy Company (Goldman 2014, 149-50).

These agreements can be understood as instances of state-led transactionalism imposed by Beijing. While Shen et al. (2017) argue that this period is characterised by unrestricted openness, and He (2014) by liberalisation, the available evidence also points to a more negotiated dynamic, in which exchanges were grounded in reciprocal arrangements linking resource access to technology transfer. In 1995, Beijing San Huan New Materials High-Tech Inc. and China National Non-Ferrous Metals Import & Export Corporation, together with the U.S. investment firm Sextant Group Inc., acquired Magnequench, a General Motors subsidiary that produced Nd-Fe-B magnets. Although the terms of acquisition required the company to maintain operations in Indiana for a set period. However, once the period expired, operations were closed, and core production was fully relocated to China (Goldman 2014, 149-50). By the mid-1990s, China

had managed to turn its vast mining resources into manufacturing capacity, yet high-end innovation and cutting-edge REE research remained comparatively dependent on foreign technology. This, however, changed with China's accelerated economic growth during the 1990s, the central government's attention to the sector, which was already fairly extensive given that almost all the projects involved state-owned or state-affiliated enterprises, tightened even further.

4 From Transactionalism to Securitisation Through Law (1990s-2010s)

In 1990, the state officially designated REEs as protected and strategic minerals, marking the beginning of a decline in the sector's openness and the end of the state-led transactionalism. Foreign investors were now required to enter into joint ventures to invest in the Chinese mining industry, and forming those joint ventures required additional approval from the MOFTEC (and from the Ministry of Commerce (MOC) after 2003). However, even the few private domestic firms involved in mining projects now required the approval of the State Development and Planning Commission (SDPC) to continue their activities (Tse 2011, 5).

At the end of the transactionalism period, China was producing a lot of REE minerals, which were consequently very cheap. Additionally, there are little to no bottlenecks to production linked to environmental and safety standards. This passage changed when China enacted its first Mineral Resources Law in 1986[1] and Mine Safety Law in 1992,[2] both of which imposed stricter conditions on licensed enterprises. However, the laws' impact was limited because restricting licences led to the growth of an informal mining sector, mainly composed of entities that had not obtained the PRC-issued mining licences mandated for domestic mineral extraction.[3] Their emergence warranted greater state action, which sought both to take control of the mining sector (*inter alia* by limiting its transactions with foreign companies) and to eliminate illegal mining, especially by small, informal producers (Shen et al. 2020, 130-1).

In 1994, producers stabilised prices through a cartel, and the central government tightened licensing. Mining and exploration licenses were limited to qualified, often state-affiliated enterprises,

1 *Mineral Resources Law of the People's Republic of China* (1986) [*Zhonghua Renmingongheguo Kuang Chang Ziyuan Fai*, 中华人民共和国矿产资源法].

2 *Mine Safety Law of the People's Republic of China* (1992) [*Zhonghua Renmin Gongheguo Kuangshan Anquan Fa*, 中华人民共和国矿山安全法].

3 Art. 13 Mineral Resources Law of the People's Republic of China.

while all other licenses, especially those held by smaller producers, were suspended. Ionic clay deposits were classified as 'national protective exploitation minerals', which led to their being placed under the direct regulation of the central government. Moreover, licences for smelting and separation activities were given almost exclusively to SOEs (Shen et al. 2020, 130-1). While the 1996 Mineral Resource Law stressed that all companies could apply for a mining license,[4] SOEs received preferential treatment in the licensing process, but limiting licenses did not curb illegal mining, as many smaller producers continued to operate without licenses. Ultimately, annual REE production increased substantially, rising from 16,150 t in 1991 to 65,000 t in 1998, with an annual growth rate of 22%. Ultimately, China's global REE market share rose from 33% to 85% in the same year, supported by increasing international demand (Shen et al. 2020, 131).

Nevertheless, in the early 2000s, the Chinese government reoriented its goals towards its high-tech sector, consequently increasing domestic demand for REEs and byproducts. The central government introduced export quotas in 1999 and began to favour downstream enterprises, especially those with higher-value-added products and better environmental performance. REEs were classified as 'B'[5] in 1997 within the Chinese foreign investment framework, which allowed foreign firms to invest in the sector under close supervision and directed them mainly to downstream activities (MacBride, Bei 2001, 222-3; Zhong 1997, 81-3). The central government began phasing out tax rebates, which were ultimately replaced by export taxes in 2007, and ultimately began to retain increasing quantities of REEs, leading to a decline in exports from 70,000 t in 1999 to fewer than 44,000 t in 2009 (Shen et al. 2020, 132-3; Shen et al. 2017, 217).

With a flourishing REE sector, China was driving its transactionalism as the logic of exchanging resources for technology was gradually abandoned in favour of domestic innovation and technological self-reliance. Following Hu Jintao's developmental theory of 'Scientific Development', which was emphasised in both

4 *Mineral Resources Law of the People's Republic of China* (1996 Amendment) [*Zhonghua Renmingonghеguo KuangChang Ziyuan Fai*, 中华人民共和国矿产资源法].

5 The Chinese FDI system followed an A, B, C, D approval structure introduced under the *Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment* (*Zhongwai hezi jingying qiye fa*, 中外合资经营企业法, 1979). This system was symplified in 1995 by the *Provisions on Guiding the Direction of Foreign Investment* (*Waishang touzi fangxiang zhidao guiding*, 外商投资方向指导规定), which replaced the administrative letters with substantive policy categories: in encouraged (A), permitted (B), restricted (C), and prohibited (D). The system was discontinued and replaced by a negative list of forbidden systems in 2017 and formalised through the *Foreign Investment Law of the People's Republic of China* (*Waishang touzi fa*, 外商投资法, 2019).

the 11th (2007-2012) and 12th (2012-2017) Five-Year Plans, innovation and environmental protection were designated as the path to the future of the Chinese economy. The central government furthered its efforts to modernise its REE sector by excluding small artisanal mining companies, which were still yielding very little output despite significant environmental degradation and limited security measures. To tackle environmental degradation, the Ministry of Land and Resources introduced the Provisions on the Protection of the Geologic Environment of Mines in 2009. This regulation introduced the principle of sustainable development in mining governance, and required enterprises to prepare restoration plans and submit 'conservation security deposits', which ensured the restoration of the mined zone upon the completion of their mining activities.[6] Illegal mining was more complex to tackle.

Excluding smaller informal mining companies, however, proved extremely complex; smaller provinces relied on these producers too much for revenue and local production to completely exclude them from the sector (Wübbeke 2013, 386-90). Therefore, the central government introduced the Interim Measures for the Administration of the REE Mandatory Production Plan and the Measures for the Administration of the Total Mining Quota (2010-2012), to tighten oversight of quotas, combat smuggling and illegal activities, and stabilise supply. In 2014, the State Reserve Bureau began strategically stockpiling resources to consolidate the government's pricing power, and that same year, China amended its Environmental Protection Law (EPL) to further streamline economic development while protecting the environment.[7] This increased protection can be read both as China's commitment to deepen its environmental obligations and as an instrument to proper state control by excluding smaller firms and informal actors from strategic sectors. The EPL amendment introduced a tougher penalty regime that removed the ceiling on fines and expanded enforcement powers (Zhang, He, Mol 2015, 2-3), to ultimately signal that environmental compliance had become a tool of industrial discipline as much as ecological protection.

Thus, even if China had joined the World Trade Organization in 2001, WTO rules quickly revealed their own limitations. Global REE producers who had invested in China were now concerned about the gradual asymmetric securitisation state and resorted to restarting domestic production or sourcing from alternative suppliers. Between

6 *Provisions on the Protection of the Geologic Environment of Mines* (2009) [*Kuangshan Dizhi Huanjing Baohu Guiding*, 矿山地质环境保护规定].

7 *Environmental Protection Law of the People's Republic of China* (2014 Amendment) [*Zhonghua Renmin Gongheguo Huanjing Baohu Fa*, 中华人民共和国环境保护法]; *Environmental Protection Law of the People's Republic of China* (1989) [*Zhonghua Renmin Gongheguo Huanjing Baohu Fa*, 中华人民共和国环境保护法].

2008 and 2014, China significantly reduced export quotas and the number of firms allowed to export REEs. The MOFCOM introduced stricter quota allocation mechanisms that distinguished between light and heavy REEs and further prioritised high-value-added exports. The quota-attribution system was now based on bids, favouring state-related enterprises and marginalising private and foreign-invested actors. All of this was also complemented by additional export taxes (ranging from 15% to 25%) to encourage domestic processing and the export of final products. The existing reforms were consolidated in the 2009-2015 Development Plan for the Rare Earth Industry, which capped the export of REE oxides at 35,000 t while reinforcing environmental-preservation and technological goals (Mancheri 2015, 267-8).

What we have presented so far is the evolution of horizontal reciprocity into state-led transactionalism, but we have not yet tackled the external response to the Chinese situation and the securitisation responses. As we have extensively presented, the early years of the Chinese REE sector during the period of horizontal reciprocity saw close collaboration between Chinese producers and foreign investors, many of whom remained in the country and retained primary interests in Chinese REEs to support their domestic high-tech sectors. This aspect clashed with the state-mandated transactionalism, which was now highly asymmetrical, leading to a further step in RE's regulatory evolution: securitisation.

5 Securitisation, Neo-Securitisation, and the Consolidation of State Control During the 2010s

A prominent example of REE securitisation emerged in 2010 during the Diaoyu/Senkaku Islands dispute. The contested islets in the East China Sea were claimed by China, Japan, and Taiwan,[8] and have long been associated with potential hydrocarbon reserves in the surrounding seabed (Grieger, Claros 2021, 2; Fravel 146). While the territorial dispute itself predates the REE issue, the conflict escalated when a Chinese fishing boat collided with a Japanese Coast Guard vessel, leading to the temporary detention of the Chinese captain (Tseng 2014, 84). In the aftermath, China suspended high-level diplomatic relations, and reports emerged that it had halted rare-earth exports to Japan. Although Beijing later denied the existence of any

8 While Japan claimed the ownership of the islets in 2012, their ownership still remains contested. Yet it must be acknowledged that the Japanese-Chinese relations over this matter have quieted down since then (Duan, Hao 2025).

formal embargo, the episode demonstrated how control over REE supply could be mobilised as a tool of strategic pressure (Robinson 2010).[9] This was especially true since the disruption caused panic in Japan's internal market and led the country to reorganise its REE sector and diversify supply chains by funding alternative sources and investing in substitution technologies, which proved to be quite costly (Yang 2025, 393-4; Vekasi 2018, 7-10).

This disruption also occurred at a pivotal moment in history, marked by a surge in the global high-tech sector, during which companies' reliance on REEs reached an unprecedented level. Therefore, having to rely on an unreliable partner for the development of a key sector for many of China's trading partners led countries to reconsider their investment strategies. Some countries had REE resources in existing ores and geological formations, which they had extensively used before turning to China (Goldman 2014, 153-4; Vekasi 2018, 4), like the French Rhône-Poulenc, which relocated its operations to China in the late 1980s after being denied a license due to stricter environmental requirements (Shen et al. 2020, 130-1), so they considered restoring their domestic productions. However, completely reverting to the domestic market was extremely difficult, since China had secured not only extraction but also smelting and the production of key intermediate products. Consequently, even nations such as the United States, which possessed domestic resources but had outsourced certain critical stages of the extraction process to China (Golev et al. 2014, 58; Van Gosen, Verplanck, Emsbo 2019), were unable to simply recommence production.

The 2010 episode did not inaugurate the securitisation of the REE sector; rather, it marked a visible intensification of an ongoing process. Over the preceding decades, China had gradually tightened export quotas and reoriented policy to prioritise domestic high-tech industries over the export of raw materials. In this sense, the diplomatic crisis exposed and accelerated a regulatory trajectory that was already underway. Therefore, when Japan, the United States, and the European Union raised the issue of increased sectoral closures with the World Trade Organization (WTO), it stemmed from an ongoing policy trend rather than from bilateral friction. In 2012, the United States, the European Union, and Japan initiated three joint WTO disputes (DS431, DS432, DS433) alleging that China's REE export quotas and taxes violated China's WTO Accession Protocol and the broader WTO framework. The complaints invoked, *inter alia*, §§ 5.1 (on quotas imposed through restrictive conditions), 11.3 (on the

9 Bradsher, K. (2010). "Amid Tension, China Blocks Vital Exports to Japan". *The New York Times* [A1.1]. https://www.nytimes.com/2010/09/23/business/global/23rare.html.

imposition of export taxes beyond those imposed in the Accession Agreement), and the General Agreement on Tariffs and Trade (GATT) Article XI:1 (quantitative export restrictions). It should be noted that this was not China's first dispute on mineral exports, as another joint dispute "China- Raw Materials" (DS395, DS398, DS399) had already been brought up in front of the WTO by the EU, the US, and Mexico in 2009 on the export restrictions on *inter alia* bauxite, coke, and magnesium. Both cases also followed the same pattern: the country had given domestic firms unfair advantages through export duties, quotas, and restrictive licensing (Burnay, Wouters 2016, 119-23; Burnay 2018, 164-5; World Trade Organization 2016, 833-4).

In its reply, China asserted that the restrictions were intended to curb illegal mining and environmental degradation, and that the general exception outlined in Article XX of the 1994 GATT could justify potential violations of § 11.3 of the Accession Protocol. China also argued its REE export duties could be justified under Article XX(b) of the GATT, which allows measures necessary to protect animal or plant life, conserve natural resources, and prevent environmental degradation resulting from over-extraction of materials. Additionally, China argued that the imposed export quotas were permissible under Article XX (g) of the GATT, which allows restrictions on the protection and conservation of natural resources, provided that the same restrictions are applied in the domestic market as well. Finally, China claimed that its trading rights commitments under § 5.1 of the Accession Protocol did not prevent the country from implementing existing or pre-WTO export measures and minimum registered capital requirements as criteria for managing export quotas (World Trade Organization 2016, 853).

Nevertheless, the WTO panel ruled against China. Twice. Dispute Settlement Body (DSB) ruled that the export duties imposed were inconsistent with its obligations under § 11.3 of the Accession Protocol and violated China's broader commitments. Even after China appealed, the Appellate Body confirmed the initial decision in 2014, rejected China's attempt to justify its export duties under the general exceptions granted by Article XX(b) and (g) of the GATT, and found that export quotas were inconsistent with Article XI:1 on quantitative restrictions. The Chinese actions were also found to be in breach of § 1.2 of the Accession Protocol. Finally, it ruled that the discriminatory manner in which China administered its quota systems and trading rights, including its opaque licensing and discriminatory favouring of state-participated firms, was in breach of Article 5.1 of its Accession Protocol. Thus, China was found to be in complete violation of its WTO commitments (World Trade Organization 2016, 289; Trujillo 2015, 617-19).

The WTO ruling affected only China's formal regulatory framework, but did not reverse the ongoing securitisation strategy. The central

government outwardly complied with the ruling, but maintained state control under the guise of reform. In 2014, the central government eased internal conditions to facilitate mergers among the largest REE SOEs in the country, namely China Minmetals, Chinalco, Baotou Steel, Xiamen Tungsten, Ganzhou Rare Earths, and Guangdong Guangsheng Rare Earths. The main aim was still to reduce the power of smaller, artisanal (and sometimes illegal) producers and to further centralise governance, and by the mid-2010s, these large groups accounted for about 90% of domestic production (Mancheri 2015, 267-8). Rather than focusing solely on ores and minerals, China expanded into midstream and downstream production, as permanent magnets became the focus of the securitisation strategy, especially neodymium-iron-boron (NdFeB) and samarium-cobalt (SmCo) magnets. China also pushed domestic firms such as Zhongke Sanhuan and China Northern Rare Earths (formerly Baotou Steel) to the global market, while keeping the door open for selected foreign companies, such as the Japanese company Hitachi Metals, through joint ventures. This calibrated combination of outward expansion and controlled foreign collaboration contributed to China's emergence as the world's leading producer of permanent magnets (Mancheri 2015, 268-9; Kalantzakos 2017, 120).

In 2016, the central government released the 2016-2020 National Mineral Resource Plan, which underscored the strategic value of REEs and REE-related products and the need to maintain a strategic mineral inventory to support its economic and military sectors. It also encouraged global cooperation with Africa, Latin America, and other regions reached by the Belt and Road Initiative (BRI) to supplement domestic ore sources.[10] The 14th Five-Year Plan (2021) reaffirmed this commitment to maintaining control over strategic mineral resources.[11] In the 2020s, the central government's control over the sector became even more evident, and the industry grew more securitised. Although the 2020-2025 National Mineral Resource Plan has not been publicly released due to security concerns (Andersson 2024; Brusse, von Carnap 2024, 21), the securitisation of REEs has become widely recognised in this sector, as demonstrated through other policies.

By this stage, the structural characteristics of the Chinese REE sector were completely securitised. The sector is now dominated

10 *National Mineral Resource Plan (2016-2020) of the PRC* (2016) [*Quanguo Kuangchan Ziyuan Guihua (2016-2020 nian),* 全国矿产资源规划(2016-2020年)].

11 *Five-Year Plan (2021-2025) for National Economic and Social Development and Vision 2035 of the People's Republic of China (2021)* [*Zhonghua Renmin Gongheguo Guomin Jingji he Shehui Fazhan di Shisi ge Wunian Guihua he 2035 nian Yuanjing Mubiao Gangyao,* 中华人民共和国国民经济和社会发展第十四个五年规划和2035年远景目标纲要]. https://www.fujian.gov.cn/english/news/202108/t20210809_5665713.htm.

by two conglomerates: the China Rare Earth Group; which was established in 2021 through the merger of the 'three giants' China Minmetals Corp, Aluminum Corp. of China Ltd, and Ganzhou Rare Earth Group Co. This mega conglomerate was placed under the direct supervision of the State-owned Assets Supervision and Administration Commission of the State Council (Yu 2024, 1). In 2022, the China Northern Rare Earth Group, now the country's biggest producer, merged with several subsidiaries: the Baotou Huaxing Rare Earth Technology Co. and Baotou Keri Rare Earth Materials Co. This passage brought the group to control about 74% of light rare-earth mining, 67% of total REE extraction, and 64% of smelting capacity under one group. At the same time, China expanded its global reach by entering into collaborations with global partners through share acquisitions: Shenghe Resources Holdings Co. acquired a 19.9% stake in Peak Rare Earths Ltd, an Australian company. In contrast, Chinalco entered into a collaboration with the Australian Ionic Rare Earths Ltd (Moon 2025, 5).

The central government also imposed export controls on gallium and germanium as of August 1, 2023 (People's Daily 2023), and on selected graphite items as of December 1, 2023 (MOFCOM 2023), ultimately banning the export of REE extraction and separation technologies in December 2023 (Ministry of Commerce and Ministry of Science and Technology 2023; Andersson 2024). In 2024, the State Council of the People's Republic of China published its first RE-specific regulation, the 'Rare Earth Management Regulation' (*Xitu Guanli Tiaojie*, 稀土管理条例). The regulation, drafted to address the increased geopolitical relevance of REEs, ultimately classified REE policy as within the scope of national security.[12] In the same year, China drafted a new amendment to the Mineral Resources Law, which was revised to match the evolving conditions of the Chinese mining landscape, ensure mineral resource security in the country and align mining and environmental goals.[13]

This final consolidation of the Chinese REE sector marked the onset of a phase of neo-securitisation, where rare earths were no longer treated merely as critical resources but as integral components of China's national security. Unlike the initial securitisation period, this phase is marked by a strategic internalisation of control and a deliberate use of REEs to project external influence. In this environment, REEs have become a token of multilateral diplomatic

12 *Rare Earth Management Regulation* (2024) [*Xitu Guanli Tiaojie*, 稀土管理条例].

13 *Explanation on the "Draft Revision of the Mineral Resources Law of the People's Republic of China"* (2023) [*Guanyu Zhonghua Renmin Gongheguo Kuangchan Ziyuan Fa (Xiuding Cao'an) de Shuoming*, 关于《中华人民共和国矿产资源法(修订草案)》的说明]; *Mineral Resources Law of the People's Republic of China* (2024 Amendment) [*Zhonghua Renmingongheguo KuangChang Ziyuan Fa*, 中华人民共和国矿产资源法].

exchange, occurring not only through indirect regulation, as we have witnessed extensively, but also through further export controls. Namely the exports restrictions of April 2025 on samarium, gadolinium, terbium, dysprosium, lutetium, scandium, and yttrium, which now required special export licenses to be exported, and the one of October 2025 on holmium, erbium, thulium, europium and ytterbium, which caused chaos and panic to automotive and high-tech producers (Jackson et al. 2025; Baskaran, Schwartz 2025; Kynge 2025).[14]

Beyond export controls, neo-securitisation strategies are becoming evident across varied external engagements, with partner responses heavily shaped by the geopolitical environment. To capture these variations, we will now present two contrasting arenas: the EU's tariff measures on electric vehicles and China's strategic involvement in the Kvanefjeld rare-earth project in Greenland. These cases illustrate that the securitized management of REEs functions not only via domestic regulatory measures but also through legally mediated economic engagement.

6 Neo-Securitisation in Practice: The EU EV Tariffs and Greenland's Arctic Governance

6.1 The Securitisation of Trade: Electric Vehicles and the Legal Re-Armament of the EU

The wave of ambitious climate pledges elevated permanent magnets to a strategic node in the global REE value chain. Essential to electric vehicles (EVs) and wind turbines, they rely almost exclusively on REEs for their production. As climate pledges were translated into binding regulatory obligations, the green transition acquired a tangible dependency: electrification required magnet-intensive technologies, and magnets in turn required rare earth elements.

This dynamic unfolded in parallel in China and the European Union. China's dual-carbon pledges to peak emissions by 2030 and achieve carbon neutrality by 2060[15] unfolded in parallel with the European Union's climate pledge to reach carbon neutrality by 2050

14 Jackson, L.; Lv, A.; Onstad, E.; Scheyder, E. (2025). "China Hits Back at US Tariffs with Export Controls on Key Rare Earths". *Reuters*. https://www.reuters.com/world/china-hits-back-us-tariffs-with-rare-earth-export-controls-2025-04-04/.

15 "For Man and Nature: Building a Community of Life Together. Remarks by Chinese President Xi Jinping at Leaders Summit on Climate" (2021). *Quishi*. http://en.qstheory.cn/2021-04/23/c_613388.htm.

under the new Climate Law and the EU Green Deal.[16] However, this seeming regulatory alignment masked a deeper structural imbalance. While China had now evolved into a permanent-magnet powerhouse, much of the EU's climate strategy remained materially dependent on Chinese supply chains. The adoption of the Fit for 55 package made this asymmetry more visible, as the EU mandated steep reductions in vehicle emissions and effectively phased out internal combustion engine cars by 2035 (Council of the European Union 2022; 2023). The EU accelerated electrification without diversifying its access to critical inputs to the same extent. As demand intensified, so did the legal and geopolitical relevance of REE supply chains, ultimately embedding resource dependency within the architecture of climate law itself.

EU countries had been almost entirely dependent on China for REE materials (estimated at around 98%, Schaus, Lannoo 2023) and for permanent magnets. This concentration unfolded against a backdrop of increased Chinese control over the REE sector and a recalibration of EU-China relations. By 2019, the European Commission had redefined China as a "cooperation partner, an economic competitor and a systemic rival" (European Commission 2019, 1), signalling a shift from pragmatic engagement toward strategic ambivalence. In this environment, material dependency acquired a distinct geopolitical dimension.

As China progressively consolidated control over the REE sector, the EU increasingly internalised a comparable logic of resource securitisation, as the Critical Raw Materials Act (CRMA, Regulation (EU) 2024/1252) formalised this shift. The instrument, which embedded the EU's concepts of strategic autonomy and resilience into the EU legal framework, set binding targets for domestic EU processing (40%), recycling (25%), and diversification, capping reliance on any single non-EU supplier at 65% by 2030.[17] Unlike precedent instruments, such as the Batteries Regulation (Regulation (EU) 2023/1542), which was primarily focused on sustainability and

16 Recital 2 Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No. 401/2009 and (EU) 2018/1999 ('European Climate Law'), PE/27/2021/REV/1, OJ L 243, 9.7.2021, pp. 1-17. https://eur-lex.europa.eu/eli/reg/2021/1119/oj/eng.

17 Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No. 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 (Text with EEA relevance), PE/78/2023/REV/1, OJ L, 2024/1252, 3.5.2024, (CRMA). http://data.europa.eu/eli/reg/2024/1252/oj.

circularity, the CRMA was structured around strategic autonomy and supply security, and had clear geopolitical references.[18]

Beyond securing mineral supply, the EU's EV strategy also unfolded in direct competition with China's deeply institutionalised EV regime. Since the Tenth FYP (2001), Beijing has integrated New Energy Vehicles, a broader category that includes, *inter alia*, EVs, into its energy security agenda, using the sector to advance technological self-sufficiency and global market leadership.[19] In 2012, China issued the Energy-Saving and New Energy Vehicle Plan (2012-2020) with two goals: reducing energy dependence and promoting environmental and economic development.[20] The Plan was followed by the 2014 Guiding Opinions of the General Office of the State Council on Accelerating Promotion and Application of New Energy Automobiles, which committed to broad technological and infrastructural reforms. In particular, it committed to expanding technological and infrastructural reforms and set a target of having 30% of public transport fleets composed of NEVs by 2016.[21] In 2020, the Development Plan of the New Energy Vehicle Industry (2021-2035) further consolidated these efforts, positioning China as the global centre of EV innovation and production.[22]

By 2015, China had become the world's leading EV manufacturer, and its dominance was underpinned by a combination of state subsidies, a technology-driven industrial policy, and the strategic coupling of REE extraction and smelting (Howell et al. 2014, 6; Fappani, Marabini San Martín 2023). Therefore, when the 2024 Draghi report on EU competitiveness highlighted that global demand

18 Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC, (Regulation 2023/1542, Batteries Regulation) PE/2/2023/REV/1, OJ L 191, 28.7.2023, pp. 1-117. https://eur-lex.europa.eu/eli/reg/2023/1542/oj.

19 National People's Congress of the People's Republic of China (2001). *Report on the Outline of the Tenth Five-Year Plan for National Economic and Social Development (2001)*. http://www.npc.gov.cn/zgrdw/englishnpc/Special_11_5/2010-03/03/content_1690620.htm.

20 *Notice on the Printing and Distribution of the Energy Saving and New Energy Vehicle Plan (2012-2020)* (2012) [*Guowuyuan Guanyu Yinfa Jieneng yu Xinnenyuan Qiche Chanye Fazhan Guihua (2012-2020 nian) de Tongzhi* 国务院关于印发节能与新能源汽车产业发展规划(2012-2020年)的通知].

21 *Guiding Opinions of the General Office of the State Council on Accelerating Promotion and Application of New-Energy Automobiles* (2014) [*Guowuyuan Bangongting Guanyu Jiakuai Xinnenyuan Qiche Tuiguang Yingyong de Zhidao Yijian*, 国务院办公厅关于加快新能源汽车推广应用的指导意见].

22 *Notice on the Printing and Distribution of the Energy Saving and New Energy Vehicle Plan (2021-2035)* (2020) [*Guowuyuan Bangongting Guanyu Yinfa Xinnenyuan Qiche Chanye Fazhan Guihua, (2021-2035 nian) de Tongzhi* 国务院办公厅关于印发新能源汽车产业发展规划(2021-2035年)的通知].

for lithium, cobalt, and nickel has skyrocketed since 2017 – mostly due to the growth of EVs and green technologies (2024, 45) – the EU was not only years behind its targets but also trailing the Chinese framework, which had foreseen this trend over a decade earlier. The EU's push for decarbonisation changed how dependency was viewed, emphasising resource security and strategic independence in its industrial and trade policies, though dependency itself was not fully eliminated.

In 2023, the European Commission launched an EU-wide anti-subsidy investigation into Chinese BEVs in its internal market, alleging that state support to Chinese producers was distorting competition in the EU internal market. The investigation culminated in provisional measures and, ultimately, in countervailing duties ranging from 7.8% to 35.5% on BEVs (European Commission 2024). A year later, the Commission opened another inquiry into four Chinese-linked wind turbine projects across Europe (Fappani, Marabini San Martín 2024). Taken together, these measures exceeded traditional trade defence responses and reflect a broader integration of security considerations into the EU's industrial policy through legal instruments. In this respect, the EU approach begins to mirror, albeit with a different legal framework, a manner similar to the securitised regulatory logic previously deployed by China in the REE sector.

The countervailing duties did not, however, remain confined to unilateral trade defence measures, as it quickly migrated into the multilateral legal framework that had previously constrained China's own export policies. In August 2024, the Chinese government requested WTO consultations with the EU over the provisional countervailing duties on Chinese BEVs. China alleged procedural and substantive violations of the WTO law to which the EU is a party, including Articles 4.4 of the Dispute Settlement Understanding, Article XXIII of the 1994 GATT, and Article 30 of the Subsidies and Countervailing Measures (SCM) Agreement. The complaint characterised the EU's *ex officio* investigation as a protectionist measure unsupported by evidence.[23] A second request in November expanded on the previous one, focusing on the EU's alleged misclassification of Chinese financial institutions and suppliers as "public bodies". China referenced the EU studies, highlighting irregularities such as non-transparent sampling and insufficient consultation with Chinese counterparts, and singled out these behaviours as inappropriate benchmarking practices and procedural irregularities.[24]

23 European Union - Provisional Countervailing Duties on New Battery Electric Vehicles from China (WT/DS626/1).

24 European Union - Provisional Countervailing Duties on New Battery Electric Vehicles from China (WT/DS630/1).

These exchanges demonstrate how securitisation has seeped into the procedural grammar of international law. The EU anti-subsidy investigations and China's recourse to the WTO framework do not merely contest market distortions; they stage geopolitical rivalry within juridical form. The EU's countervailing duties, justified as corrective mechanisms to safeguard the internal market, and China's WTO complaints, framed in the language of procedural fairness and compliance, articulate parallel claims to regulatory sovereignty. The EV dispute illustrates neo-securitisation, where industrial policy, resource strategy, and legal frameworks come together to reshape global economic governance.

6.2 The Securitisation of Environmental Governance: Greenland's Rare Earths and China's Arctic Reach

As previously presented, China's REE policy had been primarily focused on domestic production and control. By the mid-2010s, the internal securitisation of production expanded to encompass external mineral reserves, signalling a shift from resource protection to resource projection. The 2016-2020 National Minerals Resource Plan explicitly encouraged partnerships in mining for critical materials within countries along the Belt and Road Initiative (BRI) and related strategies. It even reached the Arctic, where China had developed its Polar Silk Road (PSR) in 2017 to integrate the region's maritime and resource corridors, primarily via the Northern Sea Route, into its global supply network. This outward-looking logic was reflected in the 2018 White Paper on China's Arctic Policy,[25] which positioned the Arctic as one of the next frontiers for China's mineral diplomacy. Whilst this strategy suffered minor setbacks due to the COVID-19 pandemic and the Russian invasion of Ukraine, Chinese interest in the Arctic and its mining resources remained consistent (Lamazhapov, Stensdal, Heggelund 2023; Andersson 2018, 127-9; Marabini San Martín 2023).

Within this Arctic reorientation, Greenland emerged as a particularly consequential site of Chinese external resource engagement. The island's rare earth and uranium endowment became strategically consequential after the 2009 Self-Government Act redefined the allocation of mineral authority, embedding Greenland more directly within transnational investment circuits. In the aftermath of the 2008 financial crisis and its subsequent downturn, Greenland sought to diversify its economy, and Chinese

25 *China's Arctic Policy. White Paper* (2018). https://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm.

investments entered this landscape during a period of limited Western engagement, positioning themselves within key mineral projects. One notable project was the Citronen mine, a lead-zinc deposit initially developed by Australian Ironbark Zinc, with a long-standing investment from the Chinese Nonferrous Metal Mining Group (CNMM). The Sino-Australian collaboration lasted until 2020, when a competing financial package from the U.S. Export-Import Bank effectively displaced Chinese participation, signalling a broader geopolitical recalibration of Arctic investment flows (McGwin 2020). Similar dynamics unfolded at the Wegener Halvø copper project, which was initially tied to Jiangxi Copper Corporation but later abandoned due to security concerns (Rizo Ortiz 2020).

Chinese involvement in Greenland was not limited to mineral extraction but also expanded to include infrastructure-related assets, heightening political sensitivity for the Danish government. The China Communications Construction Company had expressed interest in building a series of airports on Greenland's west coast, but the project was ultimately awarded to Danish financing after the Prime Minister offered a favourable state-backed loan.[26] A similar dynamic unfolded when the General Nice Group, which is China's largest importer of coal and iron ore, was granted an opportunity to acquire the Isua mine (LSE Ideas 2021). However, the project was soon abandoned due to a steep drop in global iron prices and increased security concerns by Denmark over the growing Chinese presence in the independent territory. Those same security concerns led the Danish Defence Ministry to withdraw an offer to sell a naval base in Greenland's southwest after General Nice had expressed interest.[27] This trajectory culminated in the Kvanefjeld project, arguably the most emblematic case in which mineral development, foreign investment, and geopolitical rivalry converged in the Arctic.

Controlled by the Australian-based Energy Transition Minerals Ltd (formerly Greenland Minerals and Energy Ltd), the site attracted significant Chinese involvement when Shanghai-based Shenghe Resources acquired a 12.5% stake, becoming its largest shareholder (Wishnick 2020). In 2018, a Memorandum of Understanding gave Shenghe a dominant role in processing and marketing the rare earths extracted at the site, and in 2019, Shenghe announced a partnership with China National Nuclear Corporation to manage the

26 "China Withdraws Bid for Greenland Airport Projects" (2019). *Reuters*. https://www.reuters.com/article/us-china-silkroad-greenland-idUSKCN1T5191.

27 Matzen, E. (2017). "Denmark Spurned Chinese Offer for Greenland Base over Security". *Reuters*. https://www.reuters.com/article/uk-denmark-china-greenland-base-idUKKBN1782E2.

REE separation process at Kvanefjeld (Dams, van Schaik, Stoetman 2020, 32-3). However, the venture was very short-lived.

When, in 2021, the newly elected *Naalakkersuisut* passed the Uranium Act (Act No. 1 of 1 December 2021), which prohibited uranium-related activities (Art. 1) and authorised the restriction or revocation of existing licences (Art. 2).[28] Although not formally retroactive, the Act rendered Kvanefjeld commercially untenable by imposing a radiation threshold of 100 ppm, far below the site's estimated 266 ppm concentration. In a jurisdiction where private land ownership is not recognised, and mining activity depends entirely on licensing, this regulatory shift effectively halted the project. In March 2022, Greenland Mineral A/S (GMAS), the group's subsidiary, initiated arbitration proceedings in Copenhagen claiming that its exploration licence had been *de facto* blocked, despite earlier indications of eligibility and longstanding regulatory support. The subsidiary argued that it had been involved in the project since 2007 and had received continuous support from both the *Naalakkersuisut* and the Danish authorities. They further contended that, over time, the legal framework has undergone significant evolution to accommodate the constant presence of uranium by-products, including an *ad hoc* 2012 amendment of the licensing regime. Therefore, GMAS also contended that these developments had generated legitimate expectations of obtaining a full exploitation license, notwithstanding uranium concentrations of approximately 266 ppm, which are well above the 100 ppm limit imposed by the Uranium Act in 2021.[29]

When the Act was adopted in 2021, GMAS claimed that the *Naalakkersuisut*'s proposed uranium ban altogether was a clear indication that its licensing rights were *de facto* revoked. Although the act was *de jure* non-retroactive, it rendered the company's license path unviable. The company initiated arbitration proceedings, alleging that the measure was politically motivated and incompatible with years of regulatory cooperation and assurances.[30] GMAS argued that the act amounted to *de facto* expropriation and violated both Article 73 of the Danish Constitution and international law norms on property protection and the principle of *pacta sunt servanda*. In

28 Greenland Parliament Act No. 20 of 1 December 2021 to ban uranium prospecting, exploration and exploitation, etc. (2021).

29 Greenland Minerals A/S. (22 March 2022). Request for Arbitration: Greenland Minerals A/S v. Government of Greenland & Government of the Kingdom of Denmark; Greenland Minerals A/S. (19 July 2023). Claimant's Statement of Claim. Arbitration between Greenland Minerals A/S and the Government of Greenland and the Kingdom of Denmark.

30 Greenland Minerals A/S. (19 July 2023). Claimant's Statement of Claim. Arbitration between Greenland Minerals A/S and the Government of Greenland and the Kingdom of Denmark.

particular, the company claimed that its legitimate expectations, built through years of official cooperation between the company and the government, had been retroactively and unilaterally erased.

The arbitration, now split into a jurisdictional and a merits phase, remains pending, with a hearing scheduled for 2025 (Energy Transition Minerals 2024; 2025). Even in the absence of a final award, the dispute illustrates a mature phase of neo-securitisation. The Uranium Act, presented as a measure of environmental and public health protection, ultimately operated as a sovereign instrument to block Chinese strategic capital. Furthermore, it shows how neo-securitisation circulates across jurisdictions and is a growing trend transforming global resource governance into a cycle of mutual defensiveness and strategic exclusion. REEs, whether in the Arctic, China, or the European Union. REE governance now has acquired the features of neo-securitisation. It has become a playing field, where law, environmental governance, and sovereignty no longer function as separate domains but as interlocking instruments of strategic power.

7 Conclusion: From National Interests to Transnational Securitisation

This article has traced the transformation of China's rare earth governance from early industrial pragmatism to a consolidated paradigm of securitised resource management. What once began as a developmental strategy, first through horizontal cooperation, then through transactional agreements with Western foreign investors, has been gradually expanded into a system in which environmental regulation, industrial planning, and export controls were integrated into a broader security rationale. REEs have been integrated into the logic of economic planning within the broader framework of Chinese heavy industry because the Chinese central government has recognised their relevance to the country's industrial growth and technological processes.

This trajectory, which culminated in the 2024 Rare Earth Management Regulation and the 2025 export restrictions, has revealed an institutional shift that coincides with the securitisation of governance. Mining, processing, and access to mineral resources and byproducts, such as permanent magnets, have been framed as drivers of innovation, self-reliance, and economic development, but ultimately have consequences for security and geopolitical positioning. What originated as economic modernisation has matured into a system of structural securitisation, where the boundaries between market, state, and law are progressively blurred.

The four-stage periodisation advanced in this paper captured this gradual transformation. The early decades of industrialisation were characterised by horizontal reciprocity, reflecting socialist principles and mutual cooperation. During the Reform and Opening Up era, China introduced state-led transactionalism to attract foreign investments and expertise within a managed framework, balancing openness with governmental control, particularly emphasising transactions involving natural resources and mining technologies. From the 1990s through the 2010s, a third phase of securitisation emerged, integrating environmental, industrial, and export regulations into national security objectives, culminating in the 2014 Environmental Protection Law, and its centralisation of state authority. The current phase of neo-securitisation extends this logic beyond China's borders by codifying resource governance within a national security paradigm and aligning it with global competition over critical minerals, exemplified by the 2024 Rare Earths Management Regulation. This regulation explicitly frames REES within national security discourse and establishes mechanisms for China to exert influence over resource policy through trade, investment, and technological means.

The same securitisation patterns are replicated beyond China. Similar securitisation patterns are visible in the EU CRMA, and in the legal and political resistance surrounding the Greenland projects. What was once a technical matter of geology and metallurgy has now become a global currency of transnational securitisation. This article has traced this evolution as a fundamental structural transformation in the language of global governance, extending beyond Chinese borders.

In this paper, we have demonstrated that the REE industry has transitioned from a developmental and industrial sphere to a dominant governance paradigm in which sovereignty, sustainability, and security are inextricably linked. REEs have acquired the status of tokens through which states assert control, bolster domestic resilience, and shape future geopolitical transactions. The evolution of the Chinese REE governance reflects this shift, and its legal architecture has evolved from a developmental initiative into a robust system of securitised governance that now profoundly influences Chinese foreign policy. Ultimately, REEs embody a broader narrative: that security considerations are now deeply embedded in legal frameworks, extending beyond traditional notions of security to shape a new geopolitical landscape.

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Implementation of the Convention on Biological Diversity in Japan and Its Characteristics

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Abstract This paper analyzes Japan's implementation of the Convention on Biological Diversity (CBD) and highlights its distinctive features. Japan has established a comprehensive framework through the Basic Act on Biodiversity (2008), successive National Biodiversity Strategies, and recent measures aligned with the Kunming-Montreal Global Biodiversity Framework (GBF). Japan's approach reflects its cultural tradition of harmony with nature, emphasizing ethical responsibility and collaboration among government, businesses, and citizens. Japan's policies are characterized by the integration of international obligations with traditional ecological values.

Keywords Convention on Biological Diversity. Japan. Biodiversity Strategy. Kunming-Montreal Global Biodiversity Framework. Environmental law. Symbiosis with nature.

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1 Introduction

Princess Mononoke,[1] written and directed by Hayao Miyazaki, depicts the relationship between humanity and nature. It portrays the conflict between humans and the forest gods and animals, the destruction of the woodland, and the renewal of nature. There is no pure evil in the movie and even the humans who destroy nature receive justice, as the film illustrates the necessity for human life of clearing forests while at the same time highlighting the sadness originating from the acknowledgement that cleared areas will never return to their original state. In a radio interview, French philosopher Corine Pelluchon referred to *Princess Mononoke* and stressed the need to protect animals and nature. This idea is particularly evident in her book, *Réparons le monde* (Pelluchon 2020).

The concept of dominating nature has deep roots within European Christianity (Nakanishi, Joachim 2023, 28). Notably, as claimed by French philosopher Michel Serres in his 1990 book *Le contrat naturel* (Serres 2009), the very idea of nature as a controllable possession has spread since the modernization of Descartes. Conversely, unlike in Europe, the Japanese share no such notion. Indeed, since ancient times, they have experienced the threats as well as blessings of nature, always coexisting with natural disasters such as typhoons, floods, and earthquakes.

According to statistics from 2022, Japan's forest area is approximately 25.02 million ha, accounting for 67% of the country's total land area of 37.3 million ha, with a planted forest rate of 40% (10.09 million ha).[2] Compared to other nations around the world, Japan can be said to be a country blessed with forestlands. That being said, does Japan have any problems in the context of biodiversity? Yes, it most certainly does. For example, the Japanese wolf became extinct, and the Japanese crested ibis disappeared from mainland Japan in 2003 due to overhunting and habitat degradation. Although several hundred crested ibises now live on Sado Island, their presence is the result of a successful artificial breeding program using birds provided by China, followed by their reintroduction into the wild. Furthermore, the deteriorating condition of state forests has become increasingly evident, making human maintenance necessary to ensure proper tree growth.[3] Furthermore, the Japanese timber industry cannot compete

1 *Princess Mononoke* (*Mononoke hime* もののけ姫) is a Japanese animated film from 1997.

2 Japanese Forestry Agency, Forest Coverage Rate and Planted Forest Rate by Prefecture (as of March 31, 2022), https://www.rinya.maff.go.jp/j/keikaku/genkyou/r4/1.html.

3 Japan Innovation Center of Civil Engineering, https://www.jice.or.jp/knowledge/japan/commentary07.

with cheap foreign imports, so forestry has ceased to be a sufficiently profitable occupation. The March 2025 Issue of the Web Magazine,[4] published by the Ministry of Agriculture, Forestry and Fisheries, also explained that wood imports increased since 1971, causing the domestic wood self-sufficiency rate to decline until 2002. However, it also indicates that the enactment of the Forest and Forestry Basic Act in 2001 led to a greater emphasis on the multifunctional role of forests.[5] In recent years, the wood self-sufficiency rate has been rising, supported by the expansion of plantation forest resources and improvements in processing technology within the domestic wood industry.

The purpose of this paper is to describe the national measures for the implementation of the Convention on Biological Diversity (CBD) and highlight the characteristics of biodiversity conservation in Japan. Accordingly, this paper will first describe Japan's engagement with the CBD and its Conferences of the Parties. Second, since the EU has contributed to maintaining biodiversity and adopting the Kunming-Montreal Global Biodiversity Framework, this paper will present the EU's activities in comparison with Japan's. Finally, three key characteristics of Japan's approach regarding biodiversity will be outlined: first, symbiosis with nature; second, future generations; third, involvement of businesses and individuals.

2 National Measures for the Implementation of the Convention on Biological Diversity

2.1 The Convention on Biological Diversity and Japan

Japan is a contracting party of the CBD, which was adopted at the Earth Summit in 1992. Thus, in compliance with Article 6 of the Convention, entitled 'General Measures for Conservation and Sustainable Use', Japan's First National Biodiversity Strategy was formulated in October 1995. In March 2002, a 'New National Biodiversity Strategy' was decided by the Council of Ministers concerned with global environmental conservation, which summarized the inspection work

4 Japanese Ministry of Agriculture, Forestry and Fisheries, https://www.maff.go.jp/j/pr/aff/2503/spe1_01.html.

5 *Forest and Forestry Basic Act* (1964) [*Shinrin ringyō kihonhō*, 森林・林業基本法], Act No. 161 of 1964. For the text of the Act in Japanese and the English translation, see https://www.japaneselawtranslation.go.jp/ja/laws/view/132. Note that, *Japanese Law Translation Site: The Japanese Laws Foreign Language Translation Database System* is a website operated by the Ministry of Justice that provides translations of Japanese laws.

of the National Biodiversity Strategy and comprehensively revised it. This new National Biodiversity Strategy identified three kinds of crises: 1) caused by human activities such as development; 2) caused by reduced interaction with nature; and 3) caused by elements introduced by humans; and drew a concept of a society coexisting with nature (*shizen kyōsei shakai* 自然共生社会). Furthermore, nature restoration was identified, together with strengthening protection and sustainable use, as three major directions for future policy initiatives. More recently, the Third National Biodiversity Strategy was set forth by the Cabinet on November 27, 2007. This Strategy addressed the effects of global warming, which at the time was becoming increasingly apparent, and also presented an image of the desirable national land from the perspective of biodiversity as a '100-year plan' to restore the ecosystems that have been destroyed over the past 100 years, emphasizing the need for local and private sector participation.[6]

2.2 Basic Act on Biodiversity

The Japanese Basic Act on the Environment, often regarded as the 'Constitution' of Japan's environmental law, was enacted in November 1993 following the June 1992 Rio Summit (Nakanishi 2016, 4-5).[7] Notably, the provision has been the basis of several additional relevant acts on environmental protection, among them the Basic Act on Biodiversity,[8] which took effect in 2008.

The Basic Act on Biodiversity consists of a preamble and 27 articles. Furthermore, the Act highlights seven main contents (Ōtsuka 2023, 374-5). First, the following recognition is made in the preamble: "Human beings are living through enjoying benefits from biodiversity. Biodiversity thus serves as a basis of the survival of human beings. In addition, biodiversity, as the particular asset of each region, also supports the diversity of unique regional culture". Furthermore, the preamble also lays down, "We are responsible for ensuring biodiversity, which is a common property of all human

6 Ministry of the Environment, Cabinet Decision on the Third National Biodiversity Strategy, https://www.env.go.jp/press/9089.html; For the text, see https://www.mofa.go.jp/mofaj/files/000062251.gif.

7 *Basic Act on the Environment* (1993) [*Kankyō kihonhō,* 環境基本法], Act No. 91 of 1993. For the text of the Act in Japanese and the English translation, see https://www.japaneselawtranslation.go.jp/en/laws/view/3850/je.

8 *Basic Act on Biodiversity* (2008) [*Seibutsu tayōsei kihonhō,* 生物多様性基本法], Act No. 58 of 2008; unless otherwise stated, all quotations from this Act are taken from the English translation available at https://www.japaneselawtranslation.go.jp/ja/laws/view/3892/je.

beings, and for carrying it on to *the next generation* so that human beings can continue enjoying benefits therefrom in the future" (italics added). Second, under its Article 1, this Act aims "to set fundamental principles for conservation and sustainable use of biodiversity in line with the basic principle of the Basic Environment Act (Act No. 91 of 1993), to clarify the responsibility of the State, local governments, *businesses*, *citizens and private bodies*, and to promote policies for conservation and sustainable use of biodiversity in a comprehensive and systematic manner by developing the national biodiversity strategy and prescribing other matters that serve as a basis of policies for conservation and sustainable use of biodiversity, thereby maintaining a rich biodiversity, and to aim at realizing a society living *in harmony with nature* where human beings can continue enjoying benefits therefrom in the future and to contribute to conserving the global environment" (italics added). Third, Article 3 entitled 'Fundamental Principles' set forth the following: "(2) Use of biodiversity must be carried out for the purpose of using national land and natural resources *by a sustainable method* to ensure that impacts on biodiversity are avoided or minimized, in light of the fact that biodiversity has been damaged along with changes in socioeconomic activities and that use of natural resources is likely to have an impact on biodiversity in Japan and abroad" (italics added) and "(3) Conservation and sustainable use of biodiversity must be carried out for the purpose of making responses *by a preventive method* in which biodiversity is conserved while endeavoring to enrich scientific knowledge and by an adaptive method in which the state of biodiversity is monitored even after the project, etc. is started, scientific evaluations are made on the monitoring results and the evaluation results are reflected on the project, etc., taking into consideration of the fact that biodiversity is based on a subtle balance and *involves many phenomena that have yet to be scientifically explained and that it is difficult to regenerate biodiversity once it is damaged*" (italics added). In other words, Article 3 confirms the 'principle of sustainability' as well as the 'precautionary principle' (Ōtsuka 2023, 374). Fourth, pursuant to Articles 4-6, the Act regulates not only the responsibility of the State and local governments, but also that of business, citizens and private bodies. Fifth, in view of Article 10, the Government is obliged to submit to the Diet a report on the state of biodiversity and policies which the government has implemented. Sixth, the Act mandates the Government to define a "National Biodiversity Strategy", as Article 11(1) provides that the government must set up a basic plan for the purpose of promoting policies for conservation and sustainable use of biodiversity in a comprehensive and systematic manner. Moreover, Article 12(1) of the Act stipulates that the National Biodiversity Strategy is to be formulated based on the Basic Environment Plan prescribed in Article

15(1) of the Basic Act on the Environment. Therefore, in compliance with Article 11 of the Act, the National Biodiversity Strategy has since been adopted; thus, rendering the article above the domestic provision that establishes the obligations envisaged under Article 6 of the CBD. Seventh, under Articles 14-16, the Act stipulates basic policies including conservation of regional biodiversity, conservation of diversity of wildlife species and prevention of damages by alien species.

2.3 Cartagena Protocol on Biosafety

The Cartagena Protocol on Biosafety was adopted as a supplementary agreement to the CBD on 29 January 2000 and entered into force on 11 September 2003. This protocol seeks to protect biological diversity from the potential risks posed by Living Modified Organisms (LMO) resulting from modern biotechnology. Japan signed it and it has been effective since February 19, 2004. According to the explanation by the Ministry of Foreign Affairs of Japan, since then, the country has participated in various initiatives under the Protocol, taking an active role in the Sixth Meeting of the Conference of the Parties to the Protocol (COP-MOP 6), and achieving the adoption in Nagoya in 2010 of the 'Nagoya-Kuala Lumpur Supplementary Protocol'.[9] Furthermore, to ensure the precise and smooth implementation of the Cartagena Protocol, the Act on the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms was enacted in 2003.[10]

2.4 Nagoya Protocol

In October 2010, Japan hosted the Tenth Meeting of the Conference of the Parties (COP10) of the CBD in Nagoya, in which the 'Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity' was adopted, aiming to establish procedures to ensure fair and equitable Access and Benefit Sharing (ABS) in using

9 Ministry of Foreign Affairs of Japan, https://www.mofa.go.jp/policy/environment/convention/cartagena.html.

10 *Act on the Conservation and Sustainable Use of Biological Diversity Through Regulations on the Use of Living Modified Organisms* (2003) [*Idenshi kumikae seibutsu tō no shiyō tō no kisei niyoru seibutsu no tayōsei no kakuho nikansuru hōritsu*, 遺伝子組換え生物等の使用等の規制による生物の多様性の確保に関する法律], Act No. 97 of 2003. For the text of the Act in Japanese and the English translation, see, https://www.japaneselawtranslation.go.jp/ja/laws/view/132.

genetic resources. In light of this, Japan issued the ABS guidelines on May 18, 2017, as domestic ABS measures.[11]

2.5 The Kunming-Montreal Global Biodiversity Framework

The Kunming-Montreal Global Biodiversity Framework (GBF)[12] was adopted during the Fifteenth Meeting of the Conference of the Parties (COP 15) of the CBD on December 19, 2022. It aims to halt and reverse biodiversity loss by 2030, paving the way for a 'Nature-Positive' world. According to this Framework, "Nature embodies different concepts for different people, including biodiversity, *ecosystems*, Mother Earth, and systems of life. Nature's contributions to people also embody different concepts, such as ecosystem goods and services and nature's gifts. Both nature and nature's contributions to people are vital for human existence and good quality of life, including human well-being, *living in harmony with nature*, and living well in balance and harmony with Mother Earth" (italics added).[13]

The GBF envisions four global goals (under letters from A to D) for 2050. For instance, Goal A states that "the integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050".[14] It also sets 23 targets to be achieved by 2030. For example, Target 15 sets forth to "take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions: (a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios; […] in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production".[15] Furthermore, it shows a vision of the world in which by living in harmony with nature: "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem

11 Access the Japanese ABS Guidelines in English on the site of the Ministry of the Environment website at https://www.env.go.jp/nature/biodic-abs/english.html.

12 UNEP, CBD/COP/DEC/15/4, December 19, 2022, https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf.

13 UNEP, CBD/COP/DEC/15/4, December 19, 2022, Section C. § 7(b).

14 UNEP, CBD/COP/DEC/15/4, December 19, 2022, Section G. Goal A.

15 UNEP, CBD/COP/DEC/15/4, December 19, 2022, Conference of the Parties to the Convention on Biological Diversity, Fifteenth meeting, Section H. Target 15.

services, sustaining a healthy planet and delivering benefits essential for all people".[16] Following the GBF, all Parties committed to setting national targets to implement it.

The GBF has substantially adopted the 2030 'Nature-Positive' mission, although such term does not explicitly appear in its mission statement. Therefore, following this, notable changes in Japan substantiated in the formulation of a new national strategy, the National Biodiversity Strategy 2023-2030 and the enactment of the Law on the Promotion of Activities for Enhancing Biodiversity (Oikawa 2025, 3).

2.6 National Biodiversity Strategy 2023-2030

As mentioned above, Article 11 of the Basic Act on Biodiversity requires the government to develop the National Biodiversity Strategy. As a result, the National Biodiversity Strategy 2023-2030, a new government plan document based on the GBF, serving as a roadmap to achieve the '2030 Nature Positive' was approved by the Cabinet on 31 March 2023. The strategy defines 'Nature Positive' (*i.e.*, Nature Revitalization) as follows: "Nature Positive means halting and reversing the loss of biodiversity in order to put nature on a recovery track".[17] Furthermore, to achieve 'Nature Positive 2030', it specifies that "we must secure a healthy ecosystem as a foundation for human existence, maintain and restore the blessings of nature, and expand socioeconomic activities to protect and utilize natural capital, based on the concept of a regional recycling symbiosis zone that aims for integrated environmental, social, and economic improvement".[18] Oikawa identified three important aspects of setting 'Nature Positive' as a policy goal (Oikawa 2025, 8-9). First, a 'statutory' strategy was employed to express the will to change, leaving it up to each country to decide how to make 'Nature Positive' a national policy goal (for instance, Japan developed a national strategy based on the statutory provisions of the Basic Act on Biodiversity). Consequently, the legitimacy of the 'Nature Positive' concept is bolstered by its inclusion within such statutory framework. Second, the new national strategy goes a step further than the GBF by explicitly adopting the concept of 'Nature Positive', a term that was not originally used in

16 UNEP, CBD/COP/DEC/15/4, December 19, 2022, Conference of the Parties to the Convention on Biological Diversity, Fifteenth meeting, Section F. § 10.

17 The National Biodiversity Strategy 2023-2030, p. 25, https://www.env.go.jp/content/000124381.pdf. In the absence of an official translation of the Strategy drafted in Japanese only, the English translation of the cited extracts which follows has been provided by the author.

18 The National Biodiversity Strategy 2023-2030, p. 25.

the framework itself. The very choice to embrace such a simple yet foundational and memorable phrase being pivotal to 'mainstreaming biodiversity'. Indeed, since laws and policies are ultimately words, if the phrase 'Nature Positive' becomes commonplace in the mass media and permeates the general public, related measures will arguably follow. Third, 'Nature Positive' serves as an incentive for the review and revision of existing laws.

The National Biodiversity Strategy 2023-2030 sets forth five basic strategies.[19] The first is to restore ecosystem health, aiming to reach the '30-by-30' target of conserving at least 30% of land and sea by 2030. In this context, conservation efforts of protected areas is promoted through Other Effective Area-based Conservation Measures (OECM). More specifically, OECM is an area that is governed and managed in a manner that continuously achieves positive long-term outcomes for the *in situ* conservation of biodiversity, together with cultural, spiritual, socio-economic, and other locally relevant values. For example, OECMs are areas such as *Satochi-Satoyama* (里地里山), corporate green spaces, and shrine and temple forests where private efforts are being made to preserve biodiversity.[20] These efforts will include the conservation of the entire community of organisms, including common species. The second basic strategy is solving social issues by utilizing nature. The third is realization of a 'Nature Positive' economy, aiming to reduce the burden of business activities on biodiversity and natural capital, as well as to increase their positive impacts by establishing an evaluation system in collaboration with the government. The fourth basic strategy is recognition of the value of biodiversity in daily life and consumption activities, and behavior change of each individual. In fact, since individuals play a critical role through consumption and use, measures should be taken to restore and strengthen the connection between lifestyle and consumption activities. Last, the fifth basic strategy pushes for developing infrastructure to support biodiversity-related initiatives and promote international collaboration.

19 The National Biodiversity Strategy 2023-2030, pp. 25-6.

20 The National Biodiversity Strategy 2023-2030, p. 10.

2.7 The Law on the Promotion of Activities for Enhancing Biodiversity

Furthermore, Act on Promoting Activities to Enhance Biodiversity through Cooperation among Regional Diverse Actors (commonly known as the Act on Promoting Activities to Enhance Biodiversity, *Chiiki seibutsu tayōsei zōshin hō* 地域生物多様性増進法) was promulgated on 19 April 2024, and came into effect on 1 April 2025.[21] The purpose of this law is to promote biodiversity-related activities by companies and other entities in local communities with the aim of achieving 'Nature Positive' objectives. Namely, the law intends to encourage voluntary private-sector activities that restore or create ecosystems on abandoned land in addition to activities in areas with rich biodiversity. To this end, it establishes a system through which the government certifies outstanding private-sector activities to conserve and create biodiversity. Oikawa pointed out that in Japan, prior to the Cabinet decision on the National Biodiversity Strategy 2023-2030, a system called 'nature symbiosis sites' had begun to be implemented. This system certifies areas, such as company-owned forests, *Satochi-Satoyama*, and urban green spaces where biodiversity is being conserved through private-sector activities (Oikawa 2025, 5). Finally, the Act on Promoting Activities to Enhance Biodiversity supports conducts that 'maintain' areas already rich in biodiversity, 'restore' biodiversity in abandoned areas, and 'create' biodiversity in former development sites (Oikawa 2025, 6). Oikawa explains that the new law focuses not on places like nature symbiosis sites, but rather on activities that encourage biodiversity. The promotional activities authorized under the new law can theoretically be carried out possible anywhere within the defined space of Japan, and in a variety of ways (Oikawa 2025, 6).

21 *Act on Promoting Activities to Enhance Biodiversity Through Cooperation Among Regional Diverse Actors* (2024) [*Chiiki ni okeru tayō na shutai no renkei niyoru seibutsu no tayōsei no hozen notameno katsudō no sokushin tō nikansuru hōritsu*, 地域における多様な主体の連携による生物の多様性の保全のための活動の促進等に関する法律], Act No. 18 of 2024. For the text of the Act in Japanese only, see, `https://laws.e-gov.go.jp/law/422AC0000000072`.

3 Nature Conservation and Biodiversity Protection in the EU

Although the Christian concept of mankind dominating nature culturally originated in Europe, it does not mean that Europe has adopted a destructive and neglectful stance on nature. On the contrary, the EU has made significant efforts to conserve nature and maintain biodiversity (De Vido 2016, 115-31). The first of these steps was the adoption of the Wild Bird Conservation Directive[22] of 1979 which, seeking comprehensively to protect wild birds by setting rules for their conservation, management and control, mandated EU Member States to take measures to protect, maintain or reconstruct an adequate diversity of habitats and areas for all bird species. Migratory birds, in particular, were considered to be the common heritage of the constituent countries and their effective protection deemed a transboundary environmental issue involving common and shared responsibilities. In this regard, protecting wetlands is considered of prime importance for conserving migratory birds. Thus, in view of the above, EU Member States must establish Special Protection Areas (SPAs) for the conservation of these species.

Second is the Directive on the Conservation of Natural Habitats and of Wild Animals and Plants, also known as the 'Habitats Directive', entered into force in 1992. Based on the concept that habitats and wild fauna and flora are part of the EU's natural heritage, the directive aims to contribute to biodiversity in the EU.[23] Significantly, Article 2(2) states that measures must be taken to maintain and restore natural habitats and wild fauna and flora. To this end, it covers more than 1,000 plant and animal species and 200 habitat types. Furthermore, it prompted the designation of approximately 900 Sites of Community Importance, which are currently included in the Natura 2000 network (*i.e.*, an European ecological network of special areas of Conservation designated by EU Member States under the Directive).

Third, the concept of 'Nature Positive' was already manifested in the EU's Environmental Action Plan 10 years ago. Indeed, the seventh Environmental Action Plan (EAP), released in 2013, was titled 'Living Well Within Our Planetary Boundaries', placing emphasis on the

22 OJ 1979 L103/1, Council Directive 79/409 on the conservation of wild birds; Currently, OJ 2010 L20/7, Directive 2009/147 of the European Parliament and of the Council on the conservation of wild birds.

23 OJ 1992 L 206, Council Directive 92/43 on the conservation of natural habitats and of wild fauna and flora.

terms 'planetary boundaries'.[24] This notion has been expanded in the following eighth EAP in 2022,[25] pursuant to which, under Recital 16 and Article 2(2)(c) the idea of 'giv(ing) back to the planet more than we take' is recognized; providing a glimpse of the shift in consciousness from parasitism to symbiosis, as under this model, humanity would no longer be exploiting nature. The very same Recital 16 states that the EAP should accelerate the green transition, in a just and inclusive way, to a climate-neutral, sustainable, non-toxic, resource-efficient, renewable energy-based, resilient and competitive circular economy. Another noticeable feature of the eighth iteration of the plan is an explicit focus on protecting, conserving and enhancing the Union's natural capital whilst improving the quality of life of current and especially future generations, as clarified under Recital 5. This very same concern for future generations and the idea of intergenerational responsibility are also enshrined and reiterated in Article 2(1), which requires the Union to set the pace to ensure the global prosperity of present and future generations.

Finally, the EU published the EU Biodiversity Strategy as its contribution to the international negotiations for COP 15 of the CBD, which in turn led to the aforementioned Kunming-Montreal GBF. The 2030 biodiversity strategy is an ambitious, long-term plan to protect nature and reverse ecosystem degradation; it aims to put Europe's biodiversity on a path to recovery by 2030 and contains specific actions and commitments. Following the GBF, a new regulation, the EU Nature Restoration Law[26] was also adopted in June 2024, drawing the EU Biodiversity Strategy for 2030. Coherently, it integrates an overarching restoration objective for the long-term recovery of nature in the EU's land and sea areas with binding restoration targets for specific habitats and species. Notably, under Article 1, the measures it envisages are projected to encompass at least 20% of the EU's terrestrial and maritime territories by 2030, with the objective of encompassing all ecosystems requiring restoration by the year 2050. Interestingly, the notion of 'ecosystem', as defined in Article 3, suggests the potential for law to transcend the conventional anthropocentric paradigm; then again the EU environmental legal framework remains grounded in this very anthropocentric foundation.

24 OJ 2013 L 354, European Parliament and of the Council Decision 1386/2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet'.

25 OJ 2022 L 114, European Parliament and of the Council Decision 591/2022 on a General Union Environment Action Programme to 2030.

26 OJ 2024 L 1991, European Parliament and of the Council Regulation 1991/2024 on nature restoration and amending Regulation (EU) 2022/869. Rooting its legal basis within is Article 192 (1) TFEU, the Regulation was barely adopted when Austria voted in favor of it.

4 Characteristics of Japan Regarding Biodiversity

4.1 Symbiosis with Nature

The concept of 'symbiosis with nature' (*shizen to no kyōsei* 自然との共生) in Japan is a widely accepted idea. In contrast to the Catholic doctrine, which posits that human beings are above and should be in control of nature, the Japanese concept of nature encompasses and includes human beings (Nakanishi, Joachim 2023, 30). This notion is not exclusive to Shintoism but is also shared by Buddhism, according to which human beings are not regarded as superior to animals; rather, both possess a sense of empathy and should strive to lead ethical lives. Indeed, in the Buddhist worldview, the concept of interdependence and interconnectedness is a fundamental principle, and asserts that all living beings – including human, animals, and plants – are in a state of mutual dependence and interconnection. This philosophy is thus guided by a set of precepts that govern the relationship between humans and the natural world. From a legal standpoint, the concept of 'symbiosis with nature' can be found in the Japanese Act on Welfare and Management of Animals (Nakanishi 2025, 239-40).[27] Specifically, within the statement of the purpose of the provision described under Article 1, it explicitly address the need to foster symbiosis between humans and animals, thereby promoting a harmonious relationship between the two. Article 2, entitled 'Fundamental Principle' further stresses this notion laying down, "in light of the fact that animals are living beings, no person must kill, injure, or inflict cruelty on animals without due cause, and every person must treat animals properly by taking into account their natural habits and giving consideration to the *symbiosis between humans and animals*" (italics added). Furthermore, since the Japanese have been confronted with natural disasters such as typhoons, earthquakes, and floods, people have always held a sense of awe toward nature, rather than the idea of dominating it. This has been highlighted also within Japan's National Strategy 2023-2030, which stated that in light of the Great East Japan Earthquake, it is important to recognize the relationship between people and nature in terms of both blessings and threats, and to engage in continuous recovery efforts by making the most of nature in the region.[28]

27 *Act on Welfare and Management of Animals* (1973) [*Dōbutsu no aigo oyobi kanri ni kansuru hōritsu*, 動物の愛護及び管理に関する法律], Act No. 105/1973. For the text of the Act in Japanese and the English translation, see, https://www.japaneselawtranslation.go.jp/ja/laws/view/3798.

28 The National Biodiversity Strategy 2023-2030, p. 21.

On the same vein, GBF also states that "both nature and nature's contributions to people are vital for human existence and good quality of life, including human well-being, *living in harmony with nature*, and living well in balance and harmony with Mother Earth" (italics added).[29] It is noteworthy that the term 'living in harmony with nature' is used. In the area of biodiversity as well, based on the GBF, which represents a global objective, Japan is required to set a new target by 2030 to achieve a 'society in harmony with nature' in 2050.[30] The National Biodiversity Strategy 2023-2030 reports that the Biodiversity Strategy 2012-2020 was formulated as a roadmap for Japan to achieve the Aichi Targets and demonstrate the path toward a nature-symbiosis society.[31] This strategy includes the concept of 'nature symbiosis zones', in which rural areas supply the bounty of nature and cities receive its benefits, and the two support each other, while also stating that Japan should further develop this concept. Moreover, it contains a section entitled 'Theory of a Society in Harmony with Nature Concept'[32] which indicates that, to build a sustainable society, we must choose actions based on the laws of nature, such as symbiosis and cycles; as doing so would allow nature to remain stable and flexible to change for the continuous and future benefit of humankind. Within this framework, the need to view natural capital as an asset to be passed on to future generations, to properly recognize its value, and to transform our society into one that protects and sustainably uses natural capital has been further emphasized. Notably, Section 2, entitled 'Vision of a Nature-Symbiotic Society (Vision 2050 as a Long-Term Goal)', explains that the goal is to realize "a society living in harmony with nature, valuing, conserving, restoring, and using biodiversity wisely; maintaining ecosystem services; sustaining a healthy planet; and providing essential benefits to all people by 2050".[33]

29 UNEP, CBD/COP/DEC/15/4, December 19, 2022, Conference of the Parties to the Convention on Biological Diversity, Fifteenth meeting, Part II, 15/4, Section C. § 7(b).

30 The National Biodiversity Strategy 2023-2030, p. 3.

31 The National Biodiversity Strategy 2023-2030, p. 3.

32 The National Biodiversity Strategy 2023-2030, p. 23.

33 The National Biodiversity Strategy 2023-2030, p. 23.

4.2 Consideration for Future Generations

The Japanese Constitution (*Nihonkoku kenpō* 日本国憲法), drafted under the direction of Douglas MacArthur, was promulgated in 1946 and took effect on May 3, 1947, following World War II. Even though the Japanese Constitution has never been amended, the rights of future generations are from its very first conceptualization nonetheless explicitly stipulated therein; feature that renders the Japanese Supreme Charter particularly notable among its peers (Nakanishi 2023a, 241, 259-60). Specifically, Articles 11 and 97 of the Japanese Constitution envisage the fundamental human rights of not only the present but also future generations of citizens (Hatajiri 2021, 107-8). The very same notion of 'future generations' explicitly remerged within the Japanese statutory framework on environmental protection (Kurokawa 2012, 165), and more precisely under Article 1 of the Basic Act on the Environment, as mentioned regarded as the 'Constitution' of Japan's environmental law. Notably, such provision stipulates that the purpose of the law is to contribute to ensuring healthy and cultured lives for present and *future generations of citizens*, and to contribute to the welfare of mankind. This idea is also reinforced in the preamble of the Basic Act on Biodiversity, which in turn states we have a responsibility to secure biological diversity, as the common property of mankind, and to pass it on to *the next generation* so that they may enjoy its blessings in the future. Again, the Act on Promoting Activities to Enhance Biodiversity also refers to the relationship between future generations as well as the present generation under its Articles 1 and 3, the latter of which states, "The promotion of biological diversity shall be carried out in close coordination with the national government, local governments, business operators, citizens, and private organizations organized by them, based on the fact that securing rich biological diversity is the foundation for the survival of humankind, in order to achieve a society in harmony with nature, where the conservation of biological diversity and other natural environments is compatible with sustainable economic and social development, and *the present and future citizens can enjoy the benefits of rich biological diversity*" (italics added).

Lastly, the National Biodiversity Strategy also refers to 'future generations' as: "It is our responsibility to protect the habitats and habitats of diverse organisms in Japan and pass them on to future generations".[34] Moreover it reiterates the aforementioned notion also in stating its objective of fostering "a society in which the blessings of nature produced by diverse and healthy ecosystems, as well as culture and lifestyles-including knowledge and skills to draw various

34 The National Biodiversity Strategy 2023-2030, p. 2.

blessings from the relationship with nature, are passed on to the next generation, and local communities are revitalized."[35]

4.3 Involvement of Businesses and Individuals

Both business and individuals are subject to the Japanese environmental framework, as the responsibility envisaged by its relevant provisions encompasses not only the government, but also business operators and the very citizens (Nakanishi 2023a, 260). According to Article 1 of the Basic Environment Act, such law establishes principles for the preservation of the environment and clarifies the responsibilities of the national government, local governments, business operators and citizens. Similarly, The Basic Act on Biodiversity also establishes basic principles for the conservation and sustainable use of biological diversity, and clarifies the responsibilities of the national government, local governments, business operators, citizens, and private organizations. For instance under its Article 6, entitled 'Responsibility of Businesses', it mandates that, "in conducting business activities, businesses are to endeavor to reduce impacts on biodiversity and to achieve sustainable use by gaining an understanding of impacts of their business activities on biodiversity and by conducting biodiversity-friendly business activities while coordinating with other businesses and other persons concerned, in accordance with the fundamental principles". Furthermore, under the same Act's Article 7, entitled 'Responsibility of Citizens and Private Bodies', it stipulates that citizens endeavor to reduce impacts on biodiversity and to achieve sustainable use by handling alien species in an appropriate manner and choosing biodiversity-friendly goods or services in their daily life, and furthermore, should make voluntary efforts for conservation and sustainable use of biodiversity. Moreover, Article 3 of the Act on Promoting Activities to Enhance Biodiversity stipulates that the activities shall be carried out under close cooperation among the national government, local governments, business operators, citizens, and private organizations organized by them. For the sake of completeness, complementing the provisions above Articles 6 and 7 of the Act on Promoting Activities to Enhance Biodiversity also refer to efforts by businesses and individuals.

In addition to this, individual responsibility and initiatives (and their pivotal role) have been further highlighted outside positive sources. Notably, the mentioned National Biodiversity Strategy 2023-2030 acknowledges that its ambitions cannot be achieved

35 The National Biodiversity Strategy 2023-2030, p. 23.

by governmental efforts alone, and therefore individuals ought to collaborate to achieve the 2030 'Nature Positive' objectives.[36] Furthermore, it recognizes the value of biodiversity in daily life and consumption activities, action as well as the necessity of behavior change on an individual level.[37]

In view of this, Japan Business Federation (Keidanren 経団連), has voluntarily contributed to the development of due diligence practices (Nakanishi 2023b, 300-7), by working for example on the Keidanren Declaration on Biodiversity and Action Guidelines-Toward Nature Positive 2030.[38] The document, introduced on March 17, 2009, and revised on October 16, 2018, and again on December 12, 2023, addresses the role of businesses and states that "as companies, our role in building a society in harmony with nature will be to provide goods and services and conduct R&D that steadily reduce negative impacts on natural capital including biodiversity and ecosystems inside and outside Japan, and instead contribute to increasing positive impacts. In addition, we will take action to conserve and restore natural capital including biodiversity and ecosystems not only within our group companies, but also throughout our supply chains". Interestingly, as of August 29, 2025, 375 companies and private organizations have endorsed the Keidanren Declaration for Biodiversity and its Guidelines, and have applied to use the logo mark to demonstrate their commitment to future-oriented biodiversity conservation efforts;[39] Ricoh Company, which engages in product procurement and forest conservation, is a notable example.[40]

5 Concluding Remarks

As it modernizes, Japan has adopted Western legal culture and has also kept pace with the international community in environmental protection, developing its own laws. Regarding the topic of biodiversity protection, which is the focus of this paper, Japan has enacted relevant laws to implement its obligations. As mentioned above, the GBF is based on the concept of 'Nature Positive'. Based on this protocol, the National Biodiversity Strategy 2023-2030 was approved by the Cabinet and the Law on Promoting Activities to Enhance Biodiversity

36 The National Biodiversity Strategy 2023-2030, pp. 3-4.

37 The National Biodiversity Strategy 2023-2030, p. 22.

38 Keidanren, https://www.keidanren.or.jp/en/policy/2023/082_proposal.html.

39 Keidanren Initiative for Biodiversity Conservation, https://www.keidanren-biodiversity.jp/logo_en.php.

40 Ricoh Company, https://www.ricoh.com/sustainability/environment/biodiversity.

was enacted. The National Biodiversity Strategy further explicitly enshrines the concept of 'Nature Positive', which was not expressly mentioned in the GBF, and put symbiosis with nature at the forefront of its policy goals. Additionally, Japan's approach encompasses corporates consideration for future generations, and responsibility of companies, and individuals. In particular, the aforementioned Law on the Promotion of Activities for Enhancing Biodiversity following through the framework of Japan's Basic Environmental Act, includes consideration of future generations and defines the role of corporations and individuals. That being said, although the law is intended to protect nature and biodiversity based on Japanese values, its effectiveness remains to this day unclear since it does not impose strict obligations but rather leaves it up to companies and individuals to take their own voluntary initiatives.

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