ABU Legal Division
August 2026

AI, Climate Change, Intellectual Property and Media: The Emerging Governance Triangle

Dr. Seemantani Sharma
Legal Manager (Regulatory & IP)
Asia-Pacific Broadcasting Union

Disclaimer

The views and opinions expressed in this publication are those of the author and do not necessarily reflect the views or official position of the Asia-Pacific Broadcasting Union (ABU) or its members. This publication is provided for general information and policy discussion purposes only and does not constitute legal advice, and ABU assumes no responsibility or liability for reliance on the information contained herein.

Introduction: From Separate Domains to a Governance Triangle

Artificial intelligence (AI), climate change, intellectual property (IP) and media regulation have traditionally been approached as distinct areas of law and policy. AI governance has largely focused on questions of safety, accountability, transparency, and innovation; climate policy has concentrated on mitigation, adaptation, and the transition to low-carbon economies; intellectual property law has sought to balance incentives for innovation with access to knowledge and technology; and media regulation has addressed questions of editorial responsibility, public interest, copyright and the integrity of information. Yet the rapid development and deployment of AI is increasingly making these boundaries difficult to sustain. The same AI system may simultaneously constitute a technological innovation, consume significant amounts of energy and water, generate or assist in generating potentially protectable intellectual property, and produce or distribute information through broadcasters and digital media platforms.

The relationship between these domains is particularly significant in the context of climate change. AI is increasingly presented as an important tool for climate action. It can assist with climate modelling and forecasting, optimise energy systems, improve the efficiency of buildings and industrial processes, support disaster prediction and response, and accelerate research into clean technologies. At the same time, however, the development and

operation of increasingly sophisticated AI systems require substantial computational infrastructure. Data centres consume electricity and water, generate associated emissions and create demand for increasingly intensive digital infrastructure. AI therefore presents a fundamental regulatory paradox: the technology may contribute to climate mitigation while simultaneously creating environmental pressures of its own.

This paradox becomes more complex when intellectual property is introduced. Many of the technologies required for AI-enabled climate action are protected by patents, copyright, trade secrets or other forms of proprietary rights. At the same time, AI itself is challenging established assumptions concerning inventorship, authorship, ownership and the use of copyrighted materials as training data. Questions concerning who owns an AI-assisted climate innovation, whether an AI system can be recognised as an inventor, how copyrighted material may be used to train AI models, and whether proprietary climate technologies can be made sufficiently accessible to facilitate global climate action are no longer merely theoretical questions of IP doctrine. They have implications for the pace, direction, and distribution of technological innovation.

The media dimension introduces a further layer. Broadcasters, journalists, and other media organizations increasingly use AI for research, translation, subtitling, content production, personalisation and distribution. Generative AI can also produce increasingly sophisticated synthetic text, audio, images and video. In the climate context, these technologies can potentially improve public communication of complex scientific

information and make climate information more accessible. They can equally facilitate misinformation, manipulation and the creation of apparently authentic but fabricated climate-related content. Copyright, licensing, provenance and editorial accountability therefore become intertwined with both AI governance and climate communication.

These interactions suggest that AI, climate change, IP and media should not be understood merely as four adjacent regulatory fields. Rather, they are beginning to form an emerging governance triangle in which decisions taken in one domain can materially affect the objectives of the others. AI policy can influence environmental sustainability; climate policy can affect the development and dissemination of technology; IP rules can determine who controls and who can access climate-relevant innovations; and media regulation can influence how climate information, including AI-generated information, reaches the public. The resulting governance problem is therefore not simply how to regulate AI, nor how to protect IP in the age of AI, but how these regulatory systems can operate coherently when their objectives increasingly overlap.

This paper examines that emerging governance triangle through the intersection of AI, climate change, intellectual property and media. It first considers AI's dual role as both an instrument for climate action and a source of environmental pressure. It then examines the IP questions arising at the AI–climate interface, including patents, AI-generated inventions, copyright, training data, licensing and technology transfer. The paper subsequently considers the implications for broadcasters and other media

organizations, particularly in relation to synthetic media, climate communication, and copyright. Building on these analyses, it identifies the principal points of regulatory fragmentation and the tensions between innovation, proprietary control, environmental sustainability, access, and the public interest.

The paper ultimately argues that these challenges cannot be adequately addressed through isolated sectoral regulation. What is required is a more integrated governance approach in which AI regulation, climate policy, IP law and media governance are designed to recognize their mutual effects. Such an approach should not seek to collapse these distinct regulatory regimes into a single framework. Instead, it should establish principles and mechanisms for coordination across them, with particular attention to sustainability, technological access, transparency, accountability, and the public interest. The governance challenge is therefore not to choose between innovation and regulation, or between IP protection and climate action, but to design institutional and legal arrangements capable of ensuring that technological innovation contributes to climate objectives while remaining environmentally sustainable, accessible, and trustworthy.

2. **AI as Both Climate Solution and Climate Challenge**

Artificial intelligence is increasingly being positioned as an important enabling technology for climate action. Its potential lies not only in automating existing processes, but in its capacity to process large and complex datasets, identify patterns that may not be readily apparent through conventional analytical methods, and optimize systems operating

under multiple and changing variables. These capabilities have applications across both climate mitigation and adaptation. At the same time, however, AI is not an immaterial or environmentally neutral technology. Its development and deployment depend upon data centres, semiconductor manufacturing, telecommunications infrastructure, and substantial quantities of electricity and water. The climate implications of AI must therefore be understood through a dual lens: AI can support the transition to a low-carbon and climate-resilient economy, while its own expanding infrastructure can contribute to environmental pressures.

2.1 AI as an Enabler of Climate Action

One of the most significant applications of AI is in climate modelling and environmental prediction. Climate systems generate enormous quantities of data from satellites, sensors, weather stations, oceans and other sources. AI and machine-learning techniques can assist in analysing these datasets, improving forecasting capabilities and identifying patterns relevant to extreme weather events and longer-term environmental change. These capabilities can contribute to earlier warnings of floods, storms, droughts, wildfires and other climate-related hazards. In this context, the value of AI is not necessarily that it replaces established scientific models, but that it can complement them by increasing the speed and scale at which environmental information can be processed and used.

AI can similarly contribute to climate mitigation through the optimisation of energy and resource use. Energy systems are becoming increasingly complex as renewable sources such as solar and wind are integrated into

electricity grids. Unlike conventional fossil-fuel generation, many renewable sources are variable and dependent upon weather conditions. AI can assist in forecasting electricity demand and renewable generation, balancing supply and demand, detecting inefficiencies and optimising energy storage. Similar applications can be found in buildings, transport and industrial systems, where AI-enabled optimisation can reduce unnecessary energy consumption and improve operational efficiency.

The potential contribution of AI also extends to the development and deployment of clean technologies. Machine-learning systems can assist researchers in identifying materials, chemical combinations and design configurations that may be relevant to batteries, solar technologies, carbon capture, hydrogen production and other areas of climate-related innovation. AI can therefore operate not only as an efficiency technology but also as a research and development tool capable of accelerating aspects of the clean-technology innovation cycle.

These applications illustrate an important feature of AI's relationship with climate change: its contribution may be indirect. AI does not itself constitute a climate technology in every application. Rather, it increasingly functions as a general-purpose enabling technology embedded within other systems. Its climate significance therefore depends on how it is designed, deployed and integrated into energy, industrial, scientific and public-sector infrastructure.

2.2 The Environmental Footprint of AI

The environmental benefits of AI, however, cannot be considered independently of the resources required to develop and operate AI systems. The rapid expansion of generative AI and increasingly computationally intensive models has drawn particular attention to the energy demands of data centres. Training and deploying advanced AI models require specialised computing hardware and substantial computational capacity. As demand for AI services increases, so too does demand for data-centre infrastructure and electricity.

The environmental footprint extends beyond electricity consumption. Data centres may require significant quantities of water for cooling, particularly in locations where cooling systems rely on water-intensive processes. The production of semiconductors and other specialised computing equipment also has environmental implications, including resource extraction, energy consumption and waste generation. The resulting footprint is therefore distributed across the AI lifecycle rather than confined to the operation of an individual AI model.

This creates a significant policy complication. The climate benefits of an AI application cannot simply be assumed from the fact that the application improves efficiency. An AI system that optimises an energy-intensive process may produce environmental benefits, but those benefits need to be assessed against the resources required to develop, operate and maintain the system. Similarly, the environmental consequences of AI are shaped by

factors such as the energy mix of the jurisdiction in which computing takes place, the efficiency of data centres and chips, the size and frequency of computational workloads, and the extent to which computing infrastructure is shared or reused.

This suggests that the question should not be whether AI is, in general, a “green” or “non-green” technology. AI is better understood as a technology with context-dependent environmental consequences. Its net contribution to climate objectives depends upon what it is being used for, how efficiently it operates, what infrastructure supports it, and whether the resulting benefits outweigh the environmental costs associated with its lifecycle.

The distinction is particularly important from a governance perspective. Climate policy has traditionally focused on the environmental impacts of sectors such as energy, transport, buildings and manufacturing. AI cuts across these sectors while simultaneously creating a new layer of digital infrastructure. This means that environmental governance increasingly needs to account for computational infrastructure alongside more conventional sources of emissions and resource consumption.

2.3 From Technological Promise to Governance Problem

The dual character of AI creates the first major tension underlying the governance triangle developed in this paper. Policymakers have strong reasons to encourage AI applications that can accelerate climate mitigation,

adaptation and technological innovation. At the same time, policies promoting rapid AI deployment without adequate attention to energy consumption, water use and infrastructure could unintentionally increase environmental pressures.

The appropriate policy response is therefore unlikely to be either unrestricted technological expansion or broad restrictions on AI development. Instead, it requires greater attention to sustainable AI. This means designing, developing and deploying AI systems with environmental impacts in mind. These considerations should sit alongside traditional concerns such as safety, fairness, privacy and accountability. This approach shifts the question from whether AI should be used for climate action to how AI can be developed and deployed so that its contribution to climate objectives is environmentally credible.

This tension also provides the foundation for the intellectual property analysis that follows. Much of the infrastructure, software, semiconductor technology and climate-related innovation underlying AI applications is protected through various forms of IP. At the same time, the acceleration of AI-enabled innovation raises difficult questions concerning inventorship, authorship, ownership, access and technology transfer. The environmental value of AI therefore cannot be separated entirely from the legal structures that determine who controls the technologies on which that value depends.

3. Intellectual Property at the AI–Climate Interface

The relationship between intellectual property (IP), artificial intelligence, and climate technology presents a fundamental policy tension. IP law is designed, among other things, to provide incentives for innovation by granting creators and inventors legally enforceable rights over certain forms of intellectual output. Climate policy, however, has an overriding interest in the rapid development and widespread diffusion of technologies capable of reducing emissions and strengthening climate resilience. AI adds another layer of complexity because it can both facilitate the creation of climate-related innovations and challenge conventional assumptions concerning authorship, inventorship, ownership and the use of existing knowledge. The resulting question is not simply whether climate technologies should be protected by IP. It is also about how IP systems should operate when the speed and scale of technological diffusion may be critical to addressing a global environmental emergency.

3.1 Patents and Climate Technologies

Patents occupy a particularly important position at the intersection of IP and climate action. A patent can provide an incentive for investment in technologies that may require substantial research and development expenditure, including renewable energy systems, batteries, energy-efficient technologies, carbon capture, hydrogen technologies and advanced materials. The possibility of obtaining exclusive rights may encourage private investment in areas where technological development is uncertain and commercially expensive.

At the same time, the exclusive nature of patent rights can create tensions with the objective of rapid technological diffusion. A patented climate technology may be technically viable but remain inaccessible to organisations, companies or governments that cannot afford licensing fees or otherwise obtain access to the technology. The problem becomes particularly significant in developing countries, where access to climate technologies is often constrained by financial, technological and institutional capacity.

This does not mean that patents are inherently incompatible with climate objectives. On the contrary, eliminating patent protection altogether could weaken incentives for private investment in some areas of climate innovation. The more difficult policy question is therefore how to preserve incentives for innovation while ensuring that patent rights do not unnecessarily impede access to technologies with significant public environmental value. Voluntary licensing, patent pools, collaborative research arrangements, technology-transfer mechanisms and carefully designed public-sector interventions may provide ways of addressing this tension without abandoning the patent system.

AI may intensify this issue by accelerating the discovery and development of climate-related technologies. If AI substantially reduces the time and cost required to identify new materials, optimise designs or develop technological solutions, the innovation landscape may change more rapidly than existing IP frameworks anticipate. The central policy question may increasingly concern not only how to reward invention, but how to ensure

that AI-accelerated inventions contribute effectively to broader climate objectives.

3.2 AI-Generated Inventions and Inventorship

The emergence of AI-assisted and AI-generated innovation also challenges traditional concepts of inventorship. Patent systems have historically been structured around human inventors. Increasingly sophisticated AI systems can generate technical solutions. They can also identify previously unknown combinations of materials and propose new designs. These solutions and designs may not have been directly conceived by a human in the conventional sense. The legal response to AI-generated inventions has generally continued to place human agency at the centre of patent law. The question of whether an AI system itself can be recognised as an inventor has been litigated in multiple jurisdictions, with courts and patent authorities generally maintaining a human-centred approach to inventorship. The issue is particularly significant for climate innovation. AI can help researchers explore technical possibilities across complex, highly multidimensional design spaces that may be difficult to investigate using conventional research methods alone.

If an AI system contributes substantially to the conception of a climate-related invention, several questions arise. Who should be identified as the inventor? Who owns the resulting patent? Should ownership follow the developer of the AI system, the user who deploys it, the organisation that commissioned the research, or the human researchers who selected and

refined the resulting solution? Different answers could create very different incentives for investment in AI-enabled climate research.

The issue also raises a deeper question about the purpose of patent law. If the principal objective is to incentivise socially valuable technological innovation, the law may need to adopt a different focus. The question is not simply whether AI can possess legal status. It is also about identifying the human and institutional actors whose conduct should receive legal recognition and responsibility. In the climate context, this distinction matters because uncertainty surrounding ownership could discourage investment in AI-assisted research, while excessively broad proprietary claims could impede subsequent innovation.

3.3 Training Data, Copyright and Technological Knowledge

Copyright creates a different but equally important set of tensions. Contemporary AI systems are developed through the use of very large datasets, which may contain books, articles, photographs, audiovisual works, software, databases and other forms of protected or potentially protected material. The use of copyrighted material for training raises questions concerning reproduction, access, exceptions and limitations, licensing and the appropriate balance between technological development and the interests of rights holders.

These questions have direct relevance to climate innovation. Scientific publications, technical documentation, patents and datasets can all

contribute to AI development. These and other forms of knowledge may help build AI systems capable of assisting climate research. If access to such material becomes subject to increasingly restrictive licensing arrangements, AI developers may face higher costs. Researchers may also encounter barriers to developing models that can process climate-relevant knowledge at scale. Conversely, an unrestricted approach to training data could undermine legitimate interests of authors, publishers, researchers and other rights holders. The policy challenge is therefore not simply to determine whether AI training should be permitted, but to establish rules capable of distinguishing between legitimate technological development and unjustified appropriation of protected works.

This issue illustrates a broader feature of the AI–climate relationship. Knowledge itself has become part of the infrastructure for climate action. Climate action depends not only on physical technologies, but also on access to scientific literature, datasets, technical standards, software, models and accumulated research. IP law consequently influences climate innovation in more than one way. It determines ownership of technologies while also affecting access to the knowledge from which those technologies emerge.

The challenge is particularly acute where the same body of knowledge may have both commercial and public-interest dimensions. A technical dataset may be valuable to a private AI developer while also being relevant to public climate modelling. A scientific publication may be commercially

exploited by a publisher while containing knowledge essential to climate research. The appropriate legal response therefore requires careful consideration of public-interest exceptions, research uses, licensing mechanisms and access models rather than treating all forms of protected material identically.

3.4 Access, Licensing and Technology Transfer

The final dimension of the AI–climate IP interface concerns technology transfer. The effectiveness of climate innovation cannot be measured solely by the number of patents granted or the amount of private investment attracted. It must also be assessed by the extent to which useful technologies reach the places where they are needed. This is particularly important in developing countries. They may face significant climate vulnerability while lacking the financial resources and technical capacity to reproduce advanced technologies independently. They may also lack the domestic innovation ecosystems needed to develop such technologies. An IP system that successfully incentivises innovation but fails to facilitate meaningful diffusion may therefore produce an uneven distribution of the benefits of technological progress.

Technology transfer mechanisms can help address this problem. Licensing arrangements can permit access without eliminating proprietary rights. Patent pools can reduce transaction costs where multiple patents are required for a technological solution. Collaborative research can combine expertise and resources across jurisdictions. Public procurement and

publicly funded research can also be structured to promote wider dissemination of resulting technologies.

Governments may also consider whether publicly funded climate technologies should be subject to conditions concerning affordability, licensing or accessibility. The question becomes even more significant where AI is used to accelerate climate innovation. AI may reduce the cost of discovering new climate technologies. However, those technologies may still be protected by exclusive rights held by a small number of companies or jurisdictions. As a result, the benefits of AI-enabled innovation may also become concentrated. Conversely, excessively broad limitations on IP protection could reduce incentives for the investment required to develop those technologies in the first place.

The policy objective should therefore be understood as innovation with diffusion. IP protection should continue to provide credible incentives for investment and technological development. However, these incentives should operate within a broader policy framework. That framework must recognise the exceptional global and intergenerational significance of climate change. The challenge is to design mechanisms that preserve the economic value of innovation while reducing unnecessary barriers to access.

Taken together, these issues demonstrate why IP cannot be treated as a peripheral consideration in AI and climate governance. Patents determine

who controls technologies; inventorship rules govern AI-assisted innovation; copyright affects access to knowledge; and licensing shapes technological diffusion. IP is therefore both an innovation incentive and a distribution mechanism. How that dual function is managed will have significant consequences for whether AI contributes to a climate transition that is not only technologically advanced, but also broadly accessible.

4. The Media Dimension

The relationship between AI and climate change also has an important media dimension. Climate action depends not only on technological innovation and regulatory intervention, but also on the public's ability to access reliable information about climate risks, policies and scientific developments. Broadcasters and other media organisations play a central role in this process. At the same time, AI is transforming how media content is researched, produced, translated, distributed, and consumed. These developments create opportunities for more effective climate communication, but also introduce new risks concerning synthetic media, misinformation, copyright, and editorial responsibility.

4.1 AI in Broadcasting and Journalism

AI is increasingly being incorporated into broadcasting and journalism workflows. Broadcasters can use AI for transcription, translation, subtitling, archive management, content recommendation and data analysis. Generative AI can also assist journalists and production teams with research, drafting and other aspects of content creation. For organisations operating across multiple languages and jurisdictions, these technologies

may reduce production costs and make content available to wider audiences.

The potential benefits are particularly relevant to climate communication. Climate science is often technically complex and may involve large volumes of data. AI tools can assist media organisations in processing this information and presenting it in more accessible forms. Automated translation and subtitling can also improve the accessibility of climate-related information across linguistic and geographical boundaries. AI may therefore help broadcasters communicate climate risks and scientific developments to audiences that might otherwise have limited access to such information.

However, the use of AI in journalism also raises questions of accuracy, accountability and editorial control. AI-generated or AI-assisted content may contain errors, reflect biases in training data or present uncertain information with unwarranted confidence. These risks are particularly significant in climate reporting, where inaccurate information can affect public understanding of scientific evidence and policy choices. The use of AI therefore does not remove the editorial responsibilities of broadcasters. Instead, it creates a need for appropriate human oversight and institutional standards governing when and how AI-generated content is used.

4.2 Synthetic Media, Misinformation and Climate Communication

Generative AI presents a more fundamental challenge through the development of increasingly sophisticated synthetic media. Text, images, audio and video can now be generated or manipulated at a scale and speed that can make distinguishing authentic material from synthetic content increasingly difficult. In the context of climate change, this creates opportunities for both constructive communication and manipulation. Synthetic media could, for example, be used to visualise future climate scenarios, explain complex scientific concepts or create educational content tailored to different audiences. It can make abstract or technical information more accessible and potentially increase public engagement with climate issues.

The same technologies can also be used to create misleading representations of climate events, scientific findings or statements by public officials and experts. Climate misinformation can undermine public understanding of environmental risks and weaken confidence in climate science. The problem is not limited to deliberately false content. AI-generated material can also produce inaccurate summaries or fabricated information without an explicit intention to deceive. The speed at which such material can be produced and distributed may make traditional mechanisms of correction less effective.

This creates a particular challenge for broadcasters and other trusted media institutions. The value of professional journalism increasingly depends not only on the ability to produce information, but also on the ability to establish its authenticity and reliability. AI governance in the media

environment must therefore address provenance, verification, disclosure and editorial accountability alongside broader concerns about innovation and efficiency.

4.3 Copyright and Licensing Implications for Broadcasters

The use of AI also creates significant copyright questions for media organizations. Broadcasters hold extensive archives containing audiovisual recordings, photographs, music, scripts and other protected material. These archives may be used in the development of AI systems, including systems for search, recommendation, transcription, translation, or content generation. At the same time, broadcasters may themselves use third-party AI systems that have been trained on copyrighted material.

This creates questions concerning the scope of licences, permitted uses of archived content, ownership of AI-assisted outputs and the allocation of responsibility between broadcasters and technology providers. A broadcaster may have obtained rights to transmit or reproduce a work without necessarily having rights to use that material for AI training or other computational purposes. Traditional broadcasting licences may therefore not always address the full range of uses made possible by AI.

The issue becomes particularly important where climate-related content is concerned. Broadcasters may hold valuable archives documenting environmental events, scientific developments, disasters and public responses to climate change. These archives have both commercial and

public-interest value. AI can potentially make them more searchable and useful for research, education and public communication. At the same time, the copyright and contractual rights attached to archival material must be respected. The emergence of AI therefore requires broadcasters to examine their existing licensing arrangements and rights-management practices. It also highlights the need for clearer legal and contractual frameworks governing the use of audiovisual archives in AI systems.

4.4 The Media's Role in Climate Awareness and Public Accountability

The media's role in climate governance ultimately extends beyond the production and distribution of information. Journalism and broadcasting can contribute to public accountability by examining government policies, corporate conduct and the implementation of climate commitments. They can provide a platform for scientific expertise, report on the effects of climate change and bring local experiences of climate-related events into broader public debate.

AI can strengthen some of these functions by enabling journalists to analyse large datasets, identify patterns and process information more efficiently. However, the increased use of AI also makes institutional accountability more important. Audiences need to know when significant content has been generated or materially assisted by AI, particularly where the content concerns matters of public importance. Editorial standards must therefore evolve alongside technological capabilities.

This is where the media dimension connects directly to the wider governance problem examined in this paper. AI affects not only how climate technologies are developed, but also how climate information is produced and understood. IP law affects not only ownership of technological inventions, but also the use of copyrighted media and access to information. Climate policy depends not only on technological solutions, but also on informed public participation. Media regulation, consequently, forms an important part of the emerging governance framework.

The challenge is to ensure that AI strengthens rather than undermines the media's public-interest function. Broadcasters will need to balance technological innovation with editorial responsibility, copyright compliance, transparency and audience trust. In the climate context, these responsibilities acquire particular significance because reliable information is itself an essential component of effective climate action.

5. The Emerging Governance Triangle

The preceding sections demonstrate that AI, climate change, intellectual property and media are increasingly interconnected. AI can contribute to climate mitigation and adaptation, but its infrastructure also generates environmental costs. Intellectual property can incentivise the development of climate technologies, but exclusive rights may affect their accessibility and diffusion. Media organisations can use AI to improve climate communication, while synthetic media and automated content creation create new risks for accuracy, copyright and public trust. These

relationships suggest that the regulatory challenges cannot be addressed effectively by treating each domain in isolation.

The concept of an emerging governance triangle provides a framework for understanding these interactions. The triangle does not represent a single regulatory regime. Rather, it describes a set of overlapping policy relationships in which decisions taken within one domain can produce consequences in the others. AI regulation may influence the environmental sustainability of digital infrastructure. Climate policy may shape incentives for technological development and access. IP law may determine who controls technologies and knowledge relevant to climate action. Media regulation may affect how AI-generated information about climate change is produced, verified and distributed. The resulting governance challenge lies precisely in these points of intersection.

5.1 Where Regulatory Domains Intersect

The first point of intersection is between AI regulation and climate policy. AI governance frameworks have traditionally focused on issues such as safety, transparency, accountability, discrimination and privacy. Climate policy, by contrast, has concentrated on emissions reduction, energy transition, adaptation and resilience. Yet the environmental footprint of AI demonstrates that these concerns increasingly overlap. Decisions concerning the deployment of AI systems can affect electricity demand, water consumption and infrastructure development. Conversely, climate policies concerning energy efficiency and emissions can influence the conditions under which AI systems are developed and operated.

A second intersection exists between AI and intellectual property law. AI systems depend upon access to data, software, computing technologies and existing bodies of knowledge. At the same time, AI can generate or assist in generating new works and technical solutions. This creates questions concerning copyright, patents, inventorship, authorship, trade secrets and licensing. The legal treatment of these issues can influence the incentives available to AI developers and the accessibility of AI-generated knowledge and innovation.

The third intersection concerns IP and climate policy. Climate technologies often require significant investment and technical expertise. IP rights can support that investment by providing legal protection and commercial opportunities. However, the global nature of climate change means that the social value of a technology may extend well beyond the market in which it was developed. A technology that can substantially reduce emissions may have public value even where its commercial owner has strong incentives to limit access. IP law therefore becomes relevant not only to innovation incentives but also to technology transfer and equitable access.

The fourth intersection is between AI and media regulation. AI can improve the efficiency of broadcasting and journalism, but it also challenges existing assumptions about content creation and editorial responsibility. Synthetic media can make it more difficult to establish the authenticity of audiovisual material. Automated systems can generate inaccurate or misleading information. Broadcasters therefore need

governance mechanisms that address transparency, verification, human oversight and accountability.

Finally, media and climate policy are closely connected because climate action depends in part on informed public engagement. The media can communicate scientific evidence, scrutinise government and corporate conduct, report on climate impacts and provide space for public debate. Where AI is increasingly involved in producing and distributing that information, media governance becomes part of the broader architecture of climate governance. These intersections demonstrate that the four domains are not merely adjacent. They are mutually conditioning. A regulatory decision designed to achieve an objective in one field may produce unintended consequences in another.

5.2 Regulatory Fragmentation

Despite these connections, governance remains largely fragmented. AI regulation is developing through technology and digital-policy frameworks. Climate governance operates through environmental legislation, international agreements and energy and industrial policies. IP remains grounded primarily in national and international IP regimes. Broadcasting and journalism are governed through media-specific legislation, regulatory standards, professional codes and institutional policies.

This institutional separation is understandable. Each regulatory field has developed its own objectives, institutions, and expertise. However, the

convergence of technologies and policy challenges increasingly exposes the limitations of these boundaries. A regulator considering the environmental implications of AI may not have expertise in IP licensing. An IP authority examining AI-generated inventions may not consider the climate implications of technological diffusion. A broadcaster developing an AI policy may focus on editorial integrity and copyright without considering the environmental costs of the underlying systems.

Fragmentation can therefore produce regulatory blind spots. A technology may comply with the requirements of one regulatory framework while generating significant consequences that fall outside that framework. For example, an AI system may satisfy applicable requirements concerning transparency and accountability while consuming substantial computational resources. A climate technology may be highly valuable for emissions reduction while remaining difficult to access because of proprietary restrictions. A broadcaster may have lawful access to content under an existing licence but lack clarity concerning whether the same material can be used to train an AI system. The problem is not necessarily that any individual regulatory regime is inadequate on its own. Rather, the difficulty lies in the absence of coordination between regimes whose objectives increasingly overlap.

5.3 Innovation, Access, Sustainability and the Public Interest

The governance triangle also reveals a series of competing interests that cannot easily be resolved through a single regulatory principle. The first is the tension between innovation and access. Strong IP protection and

favourable conditions for AI investment may encourage technological development. However, excessive exclusivity can make important technologies, data or knowledge less accessible. Climate change complicates this balance because the benefits of technological diffusion may extend across borders and generations.

The second is the tension between innovation and environmental sustainability. Rapid AI development may generate significant economic and scientific benefits. Yet computational intensity, energy consumption, water use and hardware production create environmental costs. Policies designed solely to promote technological growth may therefore conflict with broader sustainability objectives.

The third is the tension between commercial interests and the public interest. AI developers, technology companies, broadcasters, publishers and rights holders all have legitimate commercial interests. At the same time, climate information, scientific knowledge and technologies capable of reducing environmental harm can have substantial public value. Governance must therefore determine when private rights should yield to broader public-interest considerations and when proprietary protection remains necessary to sustain innovation.

A fourth tension concerns speed and accountability. AI technologies are developing rapidly, while regulatory and institutional processes tend to move more slowly. Climate change creates an additional imperative for

rapid technological deployment. Yet accelerated adoption without adequate safeguards can create new environmental, legal and informational risks. The governance challenge is therefore not simply to regulate quickly, but to establish mechanisms capable of adapting as technologies and their consequences evolve.

These tensions suggest that the governance triangle should not be understood as a search for a single optimal balance. Different technologies and circumstances may require different solutions. A publicly funded climate technology, for example, may justify different access conditions from a privately developed technology involving substantial commercial risk. Similarly, the use of AI to analyse climate data for scientific research may raise different governance concerns from the use of generative AI to produce climate-related news content.

5.4 From Fragmented Regulation to Integrated Governance

The emerging governance triangle therefore points towards a different approach to regulation. The objective should not be to create one comprehensive law governing AI, climate change, IP and media. Such an approach would risk creating an overly complex and inflexible regulatory structure. Instead, the objective should be regulatory interoperability: ensuring that different legal and policy frameworks recognise their interaction and provide mechanisms for coordination.

Such coordination could take several forms. AI governance frameworks could incorporate environmental sustainability alongside existing principles of safety, transparency and accountability. Climate policies could consider the role of IP and licensing in facilitating technology transfer. IP policymakers could examine whether existing mechanisms adequately support access to climate-relevant technologies and knowledge. Broadcasters could develop AI governance standards that incorporate copyright, provenance, editorial responsibility and climate communication.

International cooperation is particularly important. AI systems, digital infrastructure, IP rights and media distribution all operate across national borders, while climate change is inherently global. Regulatory divergence can therefore create gaps that individual jurisdictions cannot address effectively. International organisations and sectoral bodies can play a role in developing common principles, technical standards and mechanisms for cooperation.

The emerging governance triangle ultimately requires a shift in perspective. The relevant question is no longer simply whether AI should be regulated, how climate technologies should be protected, or how broadcasters should use generative AI. The more fundamental question is how these regulatory systems can work together to ensure that technological innovation advances climate objectives without undermining environmental sustainability, access, information integrity or the public interest. This shift from sectoral regulation to coordinated governance provides the foundation for the questions examined in the following section. If AI,

climate change, IP and media are increasingly interdependent, governance must confront questions of ownership, responsibility, access, accountability and technological diffusion across institutional boundaries.

6. Key Governance Questions

The emerging governance triangle raises a set of questions that existing regulatory frameworks do not always answer clearly. These questions concern ownership, responsibility, access, editorial accountability and technological diffusion. They also expose the limits of approaching AI, climate change, IP and media through separate regulatory lenses.

6.1 Who Owns AI-Generated Climate Innovations?

The first question concerns ownership. As AI becomes increasingly involved in the discovery and development of climate technologies, conventional assumptions about inventorship and ownership become more difficult to apply. If an AI system identifies a new material, optimises an energy technology or generates a technical solution, the legal system must determine which human or institutional actors are entitled to claim the resulting IP rights. The answer has implications not only for commercial incentives but also for investment in AI-enabled climate research.

6.2 Who Bears Responsibility for AI's Environmental Footprint?

The second question concerns responsibility for AI's environmental impact. The environmental footprint of AI is distributed across model developers,

infrastructure providers, data-centre operators, hardware manufacturers and users. This makes responsibility difficult to allocate. Should environmental obligations fall primarily on developers? Should data-centre operators bear greater responsibility because they control physical infrastructure? Or should users and procuring organisations also be accountable for the environmental consequences of the systems they deploy? Effective governance may require responsibility to be distributed across the AI lifecycle rather than assigned to a single actor.

6.3 Should Climate-Relevant Technologies Receive Differentiated IP Treatment?

The third question concerns whether existing IP rules adequately account for the exceptional public-interest character of climate technologies. Not every climate-related invention will justify special treatment, and broad exceptions could undermine incentives for innovation. However, certain technologies may have such significant implications for mitigation or adaptation that their treatment warrants closer consideration. This raises the possibility of differentiated approaches to licensing, publicly funded research, patent pools, compulsory licensing or other mechanisms designed to facilitate access while preserving appropriate incentives.

6.4 How Should Broadcasters Govern AI-Generated Climate Content?

The fourth question concerns media responsibility. Broadcasters increasingly have access to AI tools that can generate, modify and distribute content at unprecedented speed. In climate reporting, errors or fabricated material can have significant consequences for public

understanding. Broadcasters therefore need to consider when AI-generated content should be disclosed, how it should be verified, who remains editorially responsible and how audiences can distinguish authentic material from synthetic content. These questions extend beyond technical accuracy to the preservation of public trust.

6.5 How Can IP Facilitate Rather Than Obstruct Climate Technology Diffusion?

The final question concerns the broader purpose of IP in the climate transition. IP protection can encourage investment and innovation, but exclusive rights can also affect the affordability and availability of climate technologies. The challenge is therefore to identify mechanisms through which IP can support diffusion rather than simply control access. Licensing models, technology-transfer arrangements, collaborative research, patent pools and conditions attached to publicly funded innovation may all contribute to this objective.

These questions reveal a common underlying problem. The governance challenge is not simply to determine which actor should be regulated or which legal regime should apply. It is to determine how different regulatory objectives can be reconciled when technological innovation, environmental sustainability, proprietary rights and public information increasingly depend upon one another. The answer requires a framework that preserves incentives for innovation while incorporating sustainability, access and public-interest considerations into AI and IP governance. The next section therefore moves from questions to principles. It proposes an integrated governance framework designed to connect sustainable AI,

climate-sensitive IP policy, responsible media practices, cross-sector coordination and international cooperation.

7. Towards an Integrated Governance Framework

The governance challenges identified above cannot be resolved through a single regulatory intervention. AI, climate change, intellectual property and media operate through different legal and institutional structures, each with legitimate and sometimes competing objectives. What is required is therefore not a unified regulatory regime, but an integrated framework capable of connecting these domains. Such a framework should preserve incentives for innovation while ensuring that technological development remains environmentally sustainable, that climate-relevant technologies can be effectively diffused, and that AI-enabled media continues to serve the public interest.

7.1 Sustainable AI Principles

Environmental sustainability should become an explicit component of AI governance. Existing approaches to responsible AI have largely focused on issues such as safety, fairness, transparency, privacy and accountability. These principles remain important, but they should be complemented by consideration of the environmental costs associated with developing and deploying AI systems. Sustainable AI should therefore address the entire lifecycle of AI systems, including computational requirements, energy consumption, water use, hardware production and disposal. Developers and operators should be encouraged to improve computational efficiency and use infrastructure powered by lower-carbon energy where feasible.

Environmental impact assessments could also be incorporated into the development or procurement of high-impact AI systems.

Such measures should be proportionate. Not every AI application requires the same level of environmental scrutiny. Governance should focus particularly on large-scale and computationally intensive systems where environmental impacts are material. The objective should be to encourage innovation while ensuring that efficiency and sustainability become design considerations rather than afterthoughts.

7.2 Climate-Sensitive IP Policy

IP policy should similarly recognise the particular characteristics of climate-related innovation. The objective should not be to weaken IP protection generally, but to identify circumstances in which existing mechanisms can better support climate technology diffusion. Greater use could be made of voluntary licensing, patent pools, collaborative research and technology-transfer arrangements. Publicly funded research could also incorporate appropriate conditions concerning licensing, affordability or access where the resulting technologies have significant climate relevance. In exceptional circumstances, existing legal mechanisms for compulsory licensing or other public-interest interventions may also warrant consideration.

The central principle should be innovation with diffusion. IP rights should continue to provide incentives for investment and technological

development. However, where technologies have substantial climate significance, governance should also consider whether proprietary control creates unnecessary barriers to deployment, particularly in developing countries with limited technological and financial capacity.

7.3 Responsible AI in Media

Media organisations require governance approaches that reflect both the opportunities and risks created by generative AI. Broadcasters should establish clear policies governing the use of AI in research, production, translation, editing and content generation. Such policies should address human oversight, verification, disclosure and accountability. Particular attention should be given to synthetic media. Where AI-generated or materially AI-assisted content could affect audience understanding of matters of public importance, appropriate disclosure and provenance mechanisms should be considered. Editorial responsibility should remain with the broadcaster or journalist rather than being transferred to the AI system or its developer. Copyright should form part of this framework. Broadcasters should ensure that their use of AI tools is consistent with applicable copyright and licensing arrangements, particularly when using archival material or third-party content for training, analysis or generation. Clear contractual provisions will become increasingly important as conventional broadcasting licences may not anticipate AI-related uses.

7.4 Cross-Sector Regulatory Cooperation

An integrated governance framework also requires greater institutional cooperation. Regulators and policymakers responsible for AI, climate, IP

and media should not operate entirely within separate policy silos. Cross-sector mechanisms could facilitate information sharing, coordinated standards and joint assessment of emerging technologies. Regulatory impact assessments could also be expanded to consider consequences across multiple domains. For example, an assessment of a major AI deployment could consider not only privacy and safety but also environmental impact, IP implications and effects on information integrity. Similarly, climate-technology policies could consider whether IP and licensing arrangements are likely to facilitate or impede deployment. The objective is not to create unnecessary regulatory complexity. Rather, coordination should reduce regulatory blind spots and ensure that decisions made within one policy area do not unintentionally undermine objectives in another.

7.5 International Cooperation and Developing-Country Interests

The international dimension is particularly important because neither AI nor climate change is confined by national borders. AI models and digital infrastructure operate across jurisdictions, while IP rights are territorial and climate impacts are global. Regulatory fragmentation can therefore create significant gaps in governance.

International cooperation should focus on developing common principles, technical standards and mechanisms for technology transfer. Developing countries should have a meaningful role in shaping these frameworks rather than being treated solely as recipients of technologies developed elsewhere. Their interests are particularly important because many

developing countries face significant climate vulnerability while having fewer financial and technological resources. International institutions and sectoral organisations can provide forums for coordination among governments, technology companies, IP institutions, broadcasters and civil society. Cooperation should aim not at complete legal harmonisation, but at greater interoperability between regulatory systems and more equitable access to climate-relevant innovation.

An integrated governance framework should ultimately be guided by five interconnected principles: sustainability, innovation, access, accountability and cooperation. These principles provide a basis for reconciling the competing interests identified in the governance triangle. AI should be developed sustainably, while IP should incentivise innovation and facilitate appropriate access. Media organisations should deploy AI responsibly, and regulators should cooperate across institutional boundaries. International governance should also ensure that the benefits of technological progress are not concentrated in a small number of jurisdictions.

The objective is therefore not simply to regulate AI more effectively. It is to ensure that AI-enabled innovation contributes to climate action without creating new barriers to sustainability, technological access or trustworthy public information. This is the central purpose of an integrated governance approach.

Key Takeaway :

Ultimately, AI should be developed sustainably; IP should incentivize innovation while facilitating appropriate access; media organizations should deploy AI responsibly; and regulators should cooperate across institutional boundaries. The success of the AI-enabled climate transition will depend not only on technological capability, but on whether the legal and institutional systems surrounding that technology are capable of directing its benefits toward the wider public interest.