The Development of Environmental Law within a Changing Environmental Governance Context

Towards a New Paradigm Shift in the Anthropocene Era

Cassotta, Sandra

Published in:
Yearbook of International Environmental Law

DOI (link to publication from Publisher):
10.1093/yiel/yvaa071

Publication date:
2021

Document Version
Publisher's PDF, also known as Version of record

Yearbook of International Environmental Law, Vol. 30, No. 1 (2019), pp. 54–67
doi:10.1093/yiel/yvaa071
Advance Access published on February 28, 2021

The Development of Environmental Law within a Changing Environmental Governance Context: Towards a New Paradigm Shift in the Anthropocene Era

Sandra Cassotta

I. INTRODUCTION

In the Anthropocene era, environmental law is changing. Environmental governance is changing rapidly as well. Is environmental law prepared to operate within the new, changing, environmental governance? This article places environmental law within the changing context of the current environmental governance dynamisms. Starting from a general concept of environmental law and using the specific, multi-level context of ocean environmental governance facing climate change as an example, it confirms that the current environmental laws and governance frameworks are indeed changing. It seeks to grasp, identify, and explain these changes. The conclusion advocates the existence of a 'shift of paradigm' in both environmental law and governance as well as acknowledging the need for a new role of environmental law, enabling it to catch up rapidly and effectively with the new dynamisms of the changing environmental governance context.

II. THE DEVELOPMENT AND MODERNIZATION OF ENVIRONMENTAL LAW IN THE ANTHROPOCENE ERA

Environmental law is a body of law bringing together rules, cases, and principles that share the obligation to protect all of the complex systems that surround us and represent the foundations of our life. Defining environmental law as such is not an easy task because it depends on the way we perceive the inherently fuzzy notion of environment. Therefore, the foundations of environmental protection are fluid. The main efforts in jurisprudence and in doctrine have been directed at building a unitary, global, holistic understanding of the notion of 'environment.' How should the notion of 'environment' be considered? Should it be considered

Sandra Cassotta, Associate Professor in International, Environmental and Energy Law, Department of Law, Aalborg University, Denmark; Lead Author at the Intergovernmental Panel on Climate Change, United Nations Environment Programme, 2017–19; Research Fellow, Sustainability College Bruges, Belgium; Honorary Professor, International Centre of Ocean Governance, Western Sydney University, Australia; Fellow, Institute of Security and Development Policy, Stockholm, Sweden. Email: sac@law.aau.dk.

as inclusive of the private ownership of the environment or public goods? Furthermore, should it also be inclusive of abiotic national resources (such as water, air, soil) and biotic ones (flora and fauna)? Moreover, should the notion of environment also be inclusive of the interactions between these same natural resources (interactions between abiotic and biotic)?

The answers differ from various vantage points. Who owns the environment? Can it be owned? Where do we place responsibility? For example, one ascendant understanding is that the 'environment' is common grounds and not the object of a single ownership. Others argue that national boundaries define ownership. More agreement is necessary. These perceptions determine the legal tools chosen (traditional or non-traditional) to protect the environment or to solve environmental problems. Despite the absence of an organic and compact normative framework protecting the environment, like the one we have in other traditional areas of law and acknowledging the strong fragmentary character of environmental law, a progressive transformation of the way we perceive environmental problems and, consequentially, also the way we perceive the notion of environment is currently underway. A good example is that the 'environment' is increasingly perceived and recognized as being shared and not belonging to one single entity. Rather, it is *res communes* and a public good, which explains why the traditional typical mechanism of civil liability as a consequence of environmental damage definitely assumes a very peculiar and anomalous function in environmental law compared to other areas of law. Another example is the challenge to the fallacious understanding by the general public that natural resources are infinite, culminating at present in the 'tragedy of commons,' which requires environmental law to facilitate an equitable future on planet Earth, using the space without the wild, human, unlimited overexploitation.

These are examples of the special and unique character of environmental law. They have been deeply influential in contributing to the development of a specific set of norms, institutions, and procedural mechanisms specifically dedicated to the protection of the environment. From a sceptical point of view, it has been argued in the past that environmental law was mostly a collection of rules lacking internal coherence and mostly devoid of unifying principles. The importance of environmental law has become more evident and has been taken more seriously with a 'legal identity' with the increasing pressures from degradation and the impact of climate change that has occurred in the Anthropocene era. In a polluted environment, where natural resources are not managed in a sustainable manner, we cannot be healthy and experience well-being; we will die too early, not only in developing countries but also in developed countries. To observe the development of environmental law, a comparative observation between the past, present, and future permits us to understand the 'modernization' of environmental law and the shift of paradigm occurring in our present Anthropocene era.

In order to bring clarity in terms of time, the 'past' is understood as the period of time prior to 1972, the date of signature of the Stockholm Declaration and the date after which we first attempted to ensure there was environmental legislation to deal with environmental problems at a global scale.[1] The Stockholm Declaration adopted an anthropocentric approach to the protection of the environment and contains the seeds of provisions that enable subsequent legislative instruments to protect the rights of 'future generations' as enshrined in Principle 2. The term 'present' is understood as the period of time following the beginning of the Anthropocene era, which was first proposed at the start of the new millennium in the year 2000. Anthropocene is a term that has evolved from 2000 until today, encapsulating the unprecedented scale of changes caused by anthropogenic activities that determine new, negative interactions between air, water, and land modifying the normal healthy equilibrium of our planetary system. It is in this period that a shift of paradigm of environmental law is taking place. The 'future' is the period of time that will require environmental law to facilitate and change the relationship between humans and the earth and that will require environmental law to be proactive and synchronize with the changing environmental governance.

Environmental law has become a body of law that aims to manage benevolently all of the natural resources that surround us, which are also the essential elements of any state's economic development. Environmental law can now guarantee fundamental rights in reaction to environmental degradation and climate change, which are drivers of entire population movements to forced displacement, for example. Environmental law is now going through a process of modernization, resulting in a serious and defined discipline with specific peculiarities, which have become extremely interconnected to problems of a different nature than environmental. Right now, people can no longer question the existence of a real discipline with its own identity when defining environmental law. Its development is simultaneous and consequential to the changes of the physical environment, especially the pressure of the impacts of climate change, increased standards of living, population growth, and the use of natural resources sometimes determining the loss of biodiversity. All of these new impacts and effects have exercised a pressure, which has modernized environmental law by stimulating this body of norms to find new solutions in the name of a sustainable use of our home, the earth.

This has given greater coherency to environmental law, developing new instruments delineated by unified principles specific to environmental law at the global, regional, national, and sub-national levels. Environmental law is now facing physical challenges that were non-existent before, making flexibility a new and important characteristic to this body of law and, in turn, making it more modern. The process of modernization of environmental law offers the possibility to

[1] Stockholm Declaration on the Human Environment, 1972, 11 ILM 1416 (1972).

understand its development in terms of sustainability. Modernization can also help to understand and assess what is the effectiveness or efficiency of environmental law, which can be conducive to the idea of 'general interest.' From this angle, environmental law has become a law aiming at an effective intervention of the public in environmental governance. In this spirit, the 1998 Aarhus Convention, for example, represents a philosophical line of thinking that public action and civil society must be in the centre of the environmental decision-making process.[2] Environmental law has evolved towards a new law that is no longer a law of technical experts of different environmental media (media referring here to water, land, and air) but, rather, a 'universal law,' advocating for a new focus on the mechanisms for participation by civil society in the operation and implementation of transnational environmental law. At the same time, environmental law is challenging national sovereignty and is confronted with new interactions existing in nature, facing new challenges and complexities that are determined by the new anthropogenic interferences. For example, the impacts between climate and the seas are new, and, therefore, the way to protect and regulate this interaction is at a nascent stage.

The 1992 United Nations Convention on Climate Change (UNFCCC) and the 1982 United Nations Convention on the Law of the Sea (UNCLOS) are the legal backbone of this new kinship between climate law and the law of the sea.[3] UNCLOS does take into account, but only in an incidental and indirect way, certain climate impacts affecting oceans clearly related to marine pollution, specifically in Article 192 on the obligation of all states 'to protect and preserve the marine environment' and Article 194(1) on the obligation of states to undertake 'all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source.' Environmental global treaties that cover this new interaction between climate and oceans do not exist. Environmental law is not yet ready to regulate all of these new types of environmental challenges.

Environmental law has undertaken important steps recently as this new kinship between climate law and ocean law has been recognized for the first time both by the 2016 Paris Agreement on Climate Change and by the Intergovernmental Panel on Climate Change, in its latest special report on the ocean and cryosphere in a changing climate, which was published in September 2019.[4] However, there is a lack of treatment and effectiveness of specific legal provisions and remedial actions in environmental treaty law. The term 'ocean' has been included for the

[2] Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 1998, 38 ILM 517 (1999).

[3] United Nations Framework Convention on Climate Change, 1992, 1171 UNTS 107; Convention on the Law of the Sea, 1982, 1833 UNTS 3.

[4] Paris Agreement on Climate Change, UN Doc. FCCC/CP/2015/L.9/Rev.1, 12 December 2015; Intergovernmental Panel on Climate Change, *Special Report on the Ocean and Cryosphere in a Changing Climate* (2019).

first time in the Paris Agreement, but it is found in the preamble, which is not legally binding. The interactions existing in the current environmental treaty law between climate law and ocean law, legally speaking, are at a formation stage, but they are still weak. The existing environmental treaty law applicable to the oceans and cryosphere presents opportunities and challenges. States can agree on a multitude of instruments, but some of the main problems in effectiveness are enforcement, compliance, and dispute settlement forums. This demands a considerable deal of flexibility and also the recognition of another peculiar characteristic of this law—namely, that it cannot be considered detached from international law but, rather, is connected to other problems of international law, such as human rights, trade law, economic development and poverty reduction, management and use of oceans, international security, and the impact with new technologies.

This new peculiar characteristic of environmental law gives birth to new connections, synergies, overlaps, as well as conflicts, all of which demonstrate that it is an area of law that is not static and isolated but, on the contrary, very alive, connected, and dynamic. In this sense, environmental law can be considered to be one of the most interesting examples in the debate that characterizes the development of the law in general.

III. MOVING TOWARDS A NEW, SUSTAINABLE ERA OF TRANSITION

A new idea has been accepted and is encapsulated in the normative reservoir of environmental law—namely, that societal transition towards sustainability can be achieved through norms that support a sustainable governance framework. This means that the principal objective of modern environmental law is to ensure the effectiveness of sustainable development. This can be achieved through high standards of environmental protection within a framework of economic, social, and technological innovation set in practice by a collective whole of society. Achieving sustainability also means realizing environmental protection goals and transition in terms of resilience as well as adaptive transformation in how society copes with environmental problems, existing and new. The transition towards sustainable development not only involves state actors but also non-state actors, such as private actors, which can also be seen as a sign of environmental democratization characterizing the development of environmental law.

Environmental law now acknowledges as key actors of environmental law's formation process not only states but also non-governmental organizations (NGOs), private actors such as industries, enterprises, local authorities, Indigenous people, and citizens who can be defined in their complexity as civil society. After the Rio Conference of 1992, non-state actors have been acknowledged as having a central role in achieving sustainable development. Currently, one of the most important challenges of environmental law is how to balance

and coordinate the different interests between public and private actors. Environmental governance is changing due to the relevance of private actors in and amongst non-official actors, which will entail a rebalancing of responsibilities, meaning that it will be of fundamental importance from now on to design interactive governance arrangements to ensure sustainable development. The shift from public to private sectors and the co-existence between the public and private sectors are supposed to be beneficial to achieving a model of governance based on sustainability.

This shift towards sustainability in terms of environmental governance will be challenging for environmental law in its capacity to keep pace with the rapid tempo of governance changes, especially in its capacity to coordinate or resolve conflicts between private and public sectors through environmental regulation. The private sectors will have new responsibilities and a strong role in changing societal behaviour, which will contribute to a new bottom-up approach, where the role of enterprise and business and industry sectors from the bottom will be key to achieving the new transition as well as with financial solutions towards sustainability. The private sector will have new responsibilities in producing a new, more sustainable approach and in changing future economic patterns, thus changing business as usual. Environmental law is faced with a changing environmental governance framework, and future challenges will consist of how smart, flexible, and fast this law will be able to protect the environment and ensure a new transition towards a new sustainable pattern.

IV. CHANGING ENVIRONMENTAL GOVERNANCE AND ENVIRONMENTAL LAW: NEW MULTI-LEVEL FRAMEWORK AND ACTORS

Explaining environmental governance is difficult because it often deals with complex regimes at a 'nascent stage' or in the 'formation processes,' to use one of Oran Young's expressions.[5] Environmental governance can be defined today as the sum of the many ways in which individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated, and cooperative actions taken. It includes formal institutions and regimes empowered to enforce compliance as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest. This could set a cross-area and interdisciplinary perspective and perhaps add that states' governments no longer possess a monopoly on legitimate authority to govern new environmental problems, such as, for example, climate change. It could include informal actors and institutions.

[5] Oran Young, 'Building an International Regime Complex for the Arctic: Current Status and Next Steps' (2012) 2(2) Polar Journal 391; Oran Young, 'The Shifting Landscape of Arctic Politics: Implications for International Cooperation' (2016) 6(2) Polar Journal 218; Oran Young, *Creating Regimes: Arctic Accords and International Governance* (1998) at 80.

In the environmental domain, actors are situated in a common environment, and governance strives to resolve the resulting social conflicts associated with issues such as pollution, common-pool resource use, environmental protection, and the management of environmental risk. Formal and informal institutions such as laws, property rights, policies, norms, conventions, and taboos have emerged, or are purposefully designed, to constrain human behaviour whereby such social conflicts are mitigated. In this context, a vast body of contemporary environmental governance literature has emerged, utilizing a range of theories of institutional change to explain observed environmental governance arrangements and their performance. Environmental governance has now developed into multi-layered and deformalized governance—multi-layered because it has turned into a system of global governance that involves not only single states but also the community as a whole, and certain environmental problems are global in scale and transboundary since all pollution does not stay within the territorial limits but moves from state to state and also crosses disciplinary limits because it interacts with other disciplines. Environmental governance has developed into a deformalized system because it involves a multitude of non-state actors.

Environmental law is attempting to catch up with these changes by using soft law and informal collaboration, encompassing a range of local initiatives from public/private sectors to the recognition of the role of non-state actors, and the influence of certain institutions in shaping the law. In the environmental law field, scholars are increasingly interested in global multi-level governance and transnational environmental law, described by Gregory Shaffer and Daniel Bodansky as being much broader than that of international environmental law.[6] Other scholars are looking at the synergies and interconnections of environmental (climate) multi-layer governance in legal pluralism and from a polycentric perspective, which have already been applied to different media, such as, for example, the case of environmental ocean governance. Legal pluralism and polycentrism is one of the schools of thought that can explain this logic and assess environmental governance, especially in the case of ocean governance at different levels and across sectors in a holistic fashion.

Both environmental governance and law are changing in a paradigm shift from the traditional, state-based practice of international environmental law and governance to untraditional, multi-level, and informal governance structures that involve both states and non-state actors, including Indigenous people among the non-state actors. The shift has occurred from state actors to governance regimes and includes civil society in the current Anthropocene era. In the past, the main actors were the states in what can be defined as a state-centric vision, using principles, some belonging to the general body of international law and others more specifically belonging to environmental law. Relevant examples of the first

[6] Gregory Shaffer and Daniel Bodansky, 'Transnationalism, Unilateralism and International Law' (2012) 1(1) Transnational Envtl L Rev 31.

category are the principle of state sovereignty and obligation not to cause harm as well as the principle of common but differentiated responsibilities and respective capabilities; examples of more specific environmental law principles are the polluter pays principle or the principle of prevention. In this sense, international environmental law was more of an instrument that reconciled different interests.

Presently, the situation has changed, and environmental law has developed considerably so that the main actors are not exclusively states in what can be defined as a state-centric vision of the past. States in the new non-state centric vision operate in a new environmental governance framework with other actors, where other principles take a prominent role, such as the principle of integration, the principles of proportionality, and the principle of cooperation. New principles, such as the principle of progression, which was incorporated for the first time in the Paris Agreement and holds that every five years the parties will look back and forward in line with progression and there will be no back sliding, are now combined with new concepts that were not present in the past, such as the concept of the circular economy. It is a new, multi-level, and multi-layer formal and informal environmental law and governance framework, based on polycentrism and pluralism, hybrid environmental governance, and network governance. It replaces the old framework where other principles are increasingly insufficient, and new principles are combined with new concepts.

Environmental law is developing in a system where different sources of law and policy interweave, mainly due to new synergies in a logic of multi-regulatory governance with both a top-down and bottom-up approach. In part, it is a coalescing of global, regional, national, and sub-national local levels of sources of law (both hard and soft) and policies interacting under a mechanism of multi-level decision-making, under which institutions, formal and informal actors, and national governments shape, act, and enact environmental regulations. Within the multi-layer realm of environmental law, effectiveness and management, adaptation, and mitigation depend on compliance and enforcement as well as on the level of accountability, transparency, and facilitation, a triadic combination of the environmental governance of states. The triadic combination has been introduced by the Paris Agreement, which has introduced a new pattern of environmental law and governance based on new integration between a top-down and bottom-up approach, where the role of states and the choice of their instruments are important, both in the vertical and horizontal implementation of environmental law, including the relevance of the role of non-official actors interacting from the bottom. For example, the effectiveness and implementation of environmental treaties applicable to the oceans and cryosphere are dependent on actions taken at the national and sub-national levels, and since climate change and its effects on oceans are transboundary, states tend to apply elements of good governance (both legal and non-legal) in international cooperation with other states, respecting the principle of international cooperation.

Currently, ineffective environmental law has given way to a trend that recognizes the stronger role of other environmental decision-making tools in protecting the environment and humans, such as environmental impact assessments (EIAs), social impact agreements (SIAs), strategic environmental assessments (SEAs), or impact benefit agreements (IBAs). These instruments, even if they are no longer relatively 'young,' are still valuable, modern procedural tools in their application of the principle of cooperation by the duty of states to assume control of shared resources and to manage natural resources under the impact of climate change in an equitable and reasonable way. EIAs, SIAs, and IBAs include environmental consideration in risk management with the obligation to consult states and to negotiate environmental risks collectively in order to reach equity. The obligations contained in these instruments are of a procedural nature and permit responsibilities in project management to be shared by guaranteeing the involvement of civil society. In the case of IBAs, responsibility in project management aimed at protecting the environment depends on how the associated Aboriginal communities will share benefits and develop plans for mitigating or adapting to climate change. They provide for future monitoring by the engagement of all relevant stakeholders through consultation and public hearings.

These instruments can be environmentally effective because they provide an assessment to facilitate the consideration of all available options with the goal of avoiding the degradation of areas that are important to biodiversity. This also includes traditional knowledge (including the full involvement of Indigenous people and local communities). Therefore, these instruments also provide an important contribution to international biodiversity law in tackling climate change based on a human rights approach, such as when they are used in the functioning of the reducing emissions from deforestation and forest degradation mechanism (REDD+). New strategies and different types of hybrid cooperation, such as conventional hybrid cooperation, co-management, and other mixed models of private and public cooperation are also being used in combination with environmental decision-making tools. Presently, there are three main elements of importance in environmental law and governance that were absent in the past:

- different kinds of actors, which answer new methodological challenges of power shifts among known actors and new actors emerging in the picture (that is, the roles of civil society, NGOs, groups of interest, stakeholders, and Indigenous people that are able to shape environmental law and policy at different scales of governance) (Figure 1);
- public-private interactions (new interactions between hard/soft law and the fragmentation of environmental law and governance); and
- jurisdiction and law enforcement (that need to revisit the balance between state-based power) in light of new environmental challenges and new interactions between international environmental politics and law).

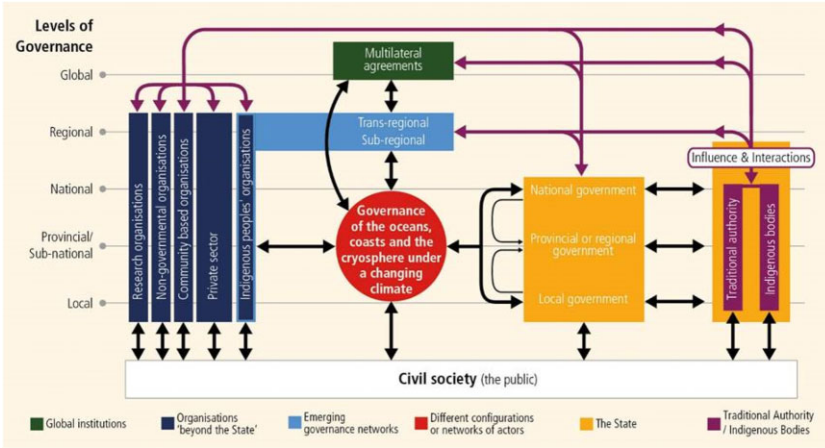

Figure 1: An illustration of the complexity of environmental law and governance in the case of the oceans and cryosphere and the multi-layer and deformalized character that has changed environmental law and governance. It shows the position of states and non-state actors in the landscape across different scales and along the continuum from influence to policy-making (taken from N. Abram et al., '2019: Framing and Context of the Report' in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (5 November 2019) 97 <https://www.ipcc.ch/site/assets/uploads/sites/3/2019/11/05_SROCC_Ch01_FINAL.pdf>).

V. IS ENVIRONMENTAL LAW FLEXIBLE AND MODERN ENOUGH TO MEET THE CHALLENGES OF THE CHANGING ENVIRONMENTAL GOVERNANCE?

Environmental law has become very complex. One reason is because of the difficulties in making coherent and interconnected norms among the different sectors and the cross-areas involved when evaluating the applicability of environmental law as such to solve specific environmental problems. Another reason is because of the fragmentation of environmental law. This can pose barriers to its correct implementation. In order to maintain the flexibility of environmental law, the legislator sometimes must use the 'technique of integration' or 'technique of reference.' On the one hand, this technique incorporates the point of view of environmental protection in all regulations that are not necessarily environmental. On the other hand, it bows to the necessity of integrating or refering to all human activities. The difficulty in maintaining flexibility and dealing with the complexity of environmental law is also a question of the flexibility of the institutions that should enact or produce environmental norms able to cope with changing environmental impacts and governance. For example, the oceans and cryosphere are governed by a wide range of new institutions, both formal and informal, that are controlled by multi-level governance (see Figure 1).

Good governance of the oceans and cryosphere in the face of climate change now requires that connections and relations be built between the different institutions—for example, the UNFCCC, marine protected areas, and the institutions that support local fisher communities, all of which facilitate transformation towards a more resilient and sustainable future at different scales, but which often exist in conflict with each other as they have different interests and approaches. At each level of governance (international, regional, national, local, or sub-local) and in each context, institutions, through their laws and practices, and the actors that support them need to interact and build relationships with institutions and actors at other scales (see Figure 1). However, this is challenging as environmental governance processes do not always allow for deliberation, debate, and the co-construction of knowledge across vertical or hierarchical and horizontal governance regimes and institutional structures.

Environmental problems, such as climate change and its rapid escalation, have produced a world of uncertainty and unpredictability where the 'rules of the game' are yet to be determined both at, and across, multiple levels of governance and scales. Current institutions provide some guidelines and frameworks. However, these are not sufficient to address both the current and future challenges in terms of climate mitigation and adaptation in relation to the oceans and cryosphere, for example. This has led to an institutional void or institutional ambiguity where, as yet, there are no generally accepted rules and norms regarding the choice of politics and which policy measures are to be agreed upon in governing the oceans and cryosphere in the face of climate change. Flexible and adaptable institutions are therefore required to support experimental governance and 'learning by doing' as actors, and institutions that are constructed at different scales must engage with each other to determine how to move forward in this complex and uncertain space of mitigating and adapting to climate change, especially in the case of the oceans and cryosphere. One such example is the Arctic Council, which is emerging as a new institution of multilevel regional cooperation. It employs soft law mechanisms, drawing on, and reconstructing, best available practices and standards to develop new strategies for climate adaptation and mitigation in the Arctic.

The institutions themselves are adapting to climate change as new rules of the game emerge in this time of uncertainty and risk. Environmental law's capacity to deal with the flexibility, complexity, and rapidity of the phenomena at hand will depend much on the role of the institutions in their ability to operate in a multi-level complex system and to simplify the complexity of environmental governance. To be realistic, the amendment and change of the existing environmental treaty laws is almost impossible because environmental law cannot address the new physical, anthropogenic challenges fast enough, especially when faced with unpredictability, variability, and epistemic or unintentional risks of environmental challenges. The difficulty in renegotiating treaties or finding

compromises to have efficient pieces of environmental law in place that look more like real pieces of law rather than mere political compromises is dauntingly high. For these reasons, the capacity of future environmental law to be 'fit for purpose' to deal with the changing environmental governance in reaching environmental protection goal achievements will depend on: (1) the ability to focus on synergies and interactions when dealing with multi-level governance in a multi-layer governance system, integrating a top-down and bottom-up approach involving public-private sectors and local communities; (2) the development of future research in environmental law; and (3) the solutions to fill the gaps of ineffectiveness of environmental law by using decision-making regulatory tools, strategies, and the ability to balance 'environmental tools' with 'environmental strategies' to reduce complexity and balance conflicts of interests.

VI. IS ENVIRONMENTAL LAW ABLE TO DEAL WITH NEW CONFLICTS AND BALANCE DIVERGENT INTERESTS?

Deficiencies in the current international environmental law in terms of governance and effectiveness can be ameliorated by strengthening the interactions and synergies in a logic of multi-level regulatory governance (vertical and horizontal) between sources of law and policy in the different sectors and by reinforcing international cooperation. This includes, as pointed out previously, the role and behaviour of institutions, as well as of formal and informal actors, not only in their role of strengthening the synergies among different levels and sectors but also in their capacity to use the myriad of other measures and legal tools available for the regulation and management of the interplay of interacting environmental media, such as in the case between climate law and the law of the sea.

Most international environmental agreements contain imprecisions and lack mechanisms of enforcement. Therefore, they are less binding than they propound to be. For example, even though UNCLOS and Chapter 17 of Agenda 21 have become the overall legal framework for ocean environmental affairs, they still present shortcomings in terms of effectiveness that need to be addressed by global, regional, and national marine legal instruments, international organizations, and policies as well as through international cooperation as a way to respond to climate change impacts.[7] Examples of some of these instruments could be regional fisheries management organizations, marine protected areas or integrated coastal management, ecosystem-based management, various research programs, and assessment programs. Other regulatory decision-makings tools that states could decide to use (and to choose to make mandatory in their respective legal orders) are again the EIAs, SIAs, SEAs, and IBAs that can be applied to protect the environment or adaptively mitigate the effect of climate change on the oceans or tackle other environmental problems.

[7] Agenda 21, UN Doc A/CONF. 151/26 (1992).

Conflicts in environmental law are key to pushing for better solutions to prevent damage and manage environmental issues by legislators and public administrations. This also entails a shift of paradigm in terms of responsibility, shifting from the public sector to the private and to other actors belonging to civil society (as depicted in Figure 1). However, the question that remains to be addressed is: who is responsible to present and manage the conflicts? This seems to also be an issue that is more pertinent to the role of the courts. One wonders if dispute settlement resolution in environmental law is well enough developed to deal with complexity, flexibility, fragmentation, and conflicts of different environmental interests.

VII. CONCLUSION: ENVIRONMENTAL LAW'S SHIFT OF PARADIGM

The scales of environmental, physical challenges do not always match the existing scales of multi-level governance, and environmental law does not always have legal solutions to protect the environment. Environmental governance is changing more rapidly than environmental law. The latter is supposed to be a 'fixed frame' of law, even if it is dynamic and flexible, and should aim to be adaptive and fit within the frame of changing environmental governance. But many possible legal environmental responses might have limited effectiveness if they are not coordinated on an adequate scale or if environmental law is not sufficiently developed or updated rapidly enough to respond to imminent environmental problems. Environmental law should develop as a proactive law rather than being reactive in order to face unpredictability and to be able to be synchronized with the changes of environmental governance.

The weakness of all environmental governance regimes and law at all scales has been more or less established. The relevance of this analysis is to point out important changes in both environmental law and governance and to consider if the two systems are in synchrony and to map what is happening in terms of the development in environmental law. This appears to be crucial. Two fixed points are the importance of civil society and the recognition of local-scale governance as a vehicle for a paradigm shift in environmental governance and law. Environmental law is developing from a traditional to an untraditional system of law based on a non-state-centric vision, but it is also becoming more flexible and ready to face new conflicts from new parallel laws pertaining to other areas of international law and new parallel interests from other actors, which are no longer just states, but now include non-state actors.

Environmental law can assist in shifting the paradigm from a state-centric vision to a non-state-centric vision in terms of the function of its system of law. Another established characteristic is that environmental law is already very complex. Finding coherent responses to new environmental challenges across sectors in the same area or across different parts of single environmental media (that is, ocean and climate law) will not be a simple task. There are more ideas than

evidence regarding what changes in environmental law and governance can render it more effective, especially when facing regimes that are at the nascent stage or in formation. One example is the appearance for the first time of interactions between the law of the sea and climate change. The development of environmental law still needs to experiment with what works and what does not work, to evaluate, and to learn from its mistakes. Whatever direction environmental law might take in the future, there is evidence to support the generalization that the bottom-up approach and local actions and local actors will be significant and decisive for effective environmental law and for environmental governance responses to new environmental, physical problems and greater inclusiveness and empowerment of a diversity of actors at a larger scale. Multi-level governance will also make those levels of governance and scales more effective.

In addition to the present state-focused approach, environmental law is developing as a new law where other interests and actors operate on the scene and the roles of other actors are to be considered since they are now shaping environmental law and policy. Environmental law has other interests to protect: interests of people, of the current civil society, and of future generations. New challenges will include how to manage conflicts of interests and the interests at stake in a holistic way where all of the actors and all levels of governance are relevant. Reacting to these new environmental impacts, environmental law is developing in a legal system that is balancing the different interests at stake with the aim of providing sustainable use of the different media for present and future generations. All that humans will do or not do will matter tremendously for the future because there is a threshold of climate environmental science that indicates a point of no return, and this point of no return has to be dealt with by future developments and implementation in environmental law.

Instead of pointing out the infinite weakness of environmental law that we are all aware of, it is time to sharpen and reframe our focus on existing environmental law to make sure that countries comply with the regulations already in place and to strengthen the enforcement of, and compliance with, what we already have. Instead of focusing on transforming environmental law, we should rather focus on the need to transform our actions. We need to reframe our actions to respond to the unprecedented environmental changes to our earth but with a new perspective and awareness, one that takes into account the existence of a shift of paradigm of both environmental law and governance, the need to synchronize the two, and, most importantly, the awareness that we are on the cusp of no return in the use of our earth. The cusp of 'non-return' is a new concept that could be reflected in future environmental law as a successor of the concept of sustainable development and as motivation for our future actions.