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11.1. Introduction

The 1968 UNESCO Biosphere Conference (in partnership with the FAO, WHO and the UN) [UNE 68] was the first intergovernmental conference to consider both human and health ecology from a scientific point of view [BOU 93]. Thus, it has a leading role in addressing health issues related to ecological diversity on a global scale. It insists on the need for integrated, planned, multidisciplinary policy action for the use and conservation of natural resources within the framework of international cooperation. It notes that:

“Political decisions should take into account ecological as well as economic considerations”.

This conference was followed by many international conferences and initiatives (see Figure 1.2 in Chapter 1 and Lajaunie et al. [LAJ 15]), which began with the United Nations Conference on the Human Environment in Stockholm in 1972, which considered the environment in its economic, political and social aspects. Subsequent to this conference, the United Nations Environment Program (UNEP) was established to coordinate United Nations activities in the field of environment and to assist countries in the implementation of environmental policies.

Among the missions of the organization, the 1946 WHO Constitution (Article 2) mentioned the improvement of environmental health. This mission was reaffirmed at the end of the Stockholm Conference through several resolutions by the World Health Assembly (decision-making body of WHO).
It should be noted that the Stockholm Declaration, in its preamble, affirms that to protect and improve the environment for present and future generations:

“... responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International cooperation is also needed...”.

These different levels of decision-making, from global to local level, and sometimes both combined, are what we will consider in order to study the governance of biodiversity and health.

11.2. International governance of biodiversity and health

There is no international body that explicitly includes both biodiversity and health in its mandate, but, in this section, we will show how biodiversity and health issues have been indirectly taken into account by international organizations that are concerned with environment and health.

For example, the 1992 United Nations Conference on Environment and Development (UNCED) in Rio provided an opportunity to adopt the Convention on Biological Diversity (CBD, see Box 11.1). It was an international environmental treaty, which has today been ratified by 196 parties with the notable exception of the United States, and is aimed at conserving biodiversity and the sustainability of its components. At the Rio summit, the Director of the WHO also called for a paradigm shift for (human) health and the adoption of a holistic vision to include a physical, social, behavioral and ecological context1. Building on the outcomes of the conference, the WHO proposed a global strategy for health and environment (1993), which provided a unified framework for action and the basis for

1 WHO Director General, “A paradigm for health: a framework for new public health action”, EB89/11, December 9, 1991.
building the organization’s programs on a global, regional and country-wide level.

Seven international conventions focus on biodiversity issues and aim to implement actions at national, regional and international level to achieve common objectives for conservation and sustainability:

- the Convention on Biological Diversity (date of adoption, 1992) https://www.cbd.int/;
- the Convention on the Conservation of Migratory Species (1979) http://www.cms.int/en/;
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973) https://cites.org/eng;
- the International Treaty on Plant Genetic Resources for Food and Agriculture (2001) http://www.fao.org/plant-treaty/overview/en/;
- the Ramsar Convention on Wetlands (1971) http://www.ramsar.org;
- the Convention concerning the Protection of World Cultural and Natural Heritage (1972) http://whc.unesco.org/en/conventiontext/;
- the International Plant Protection Convention (IPPC) https://www.ippc.int/en/;
- Liaison Group on Biodiversity Conventions.

In 2004, the 7th Conference of the Parties to the Convention on Biological Diversity\(^2\) decided to establish a liaison group to connect biodiversity-related conventions with a view to enhancing coherence and cooperation in their respective implementation. This liaison group promoted synergy between the different conventions.

**Box 11.1. Biodiversity-related conventions**

The CBD refers to human health in relation to adverse impacts from environmental change on the conservation and use of biological diversity. However, in 2000, while it was clear that the ecosystems on which human life depends were threatened, the causes and extent of the damage remained to be investigated. The Secretary General of the United Nations therefore

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2 CBD, COP7, Decision VII/26, Cooperation with other conventions and international organizations and initiatives.
launched the Millennium Ecosystem Assessment (MA) with the objective of assessing the consequences of ecosystem changes on human well-being and establishing a scientific basis for implementing the actions needed to improve conservation and sustainable use of these ecosystems. The MA synthesis report for health was published in 2005 and called on the health sector to ensure that benefits to human health and well-being from the natural environment, and hence biodiversity, are preserved for future generations [WHO 05].

Simultaneously, regardless of biodiversity issues, the United Nations took note of the globalization of trade (goods, displacement, human and animal interactions) and its effects on health and particularly on the transmission of infectious diseases, and recognized the importance of international and regional cooperation in the control of infectious diseases. It called on Member States to give priority to the revision of the International Health Regulations\(^3\). In 2005, the outbreak of severe acute respiratory syndrome (SARS) led to the adoption of new International Health Regulations. It was an international legal tool designed to help protect all States from any extraordinary event involving a risk of international spread or requiring coordinated international action [WHO 07]. It entered into force on June 15, 2007. It is currently legally binding for 196 Party States (including all WHO Member States).

The purpose of the new Regulation was to “prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade”.

It should be noted that the scope of this new regulation was extended to include any extraordinary event that constitutes a public health emergency of international concern\(^4\), including environmental risks\(^5\).

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3 United Nations General Assembly, Resolution 58/3 Intensification of Capacity Building in the Public Health Sector Across the World, 43rd plenary meeting, October 27, 2003.

4 Article 1 defines an event as “a manifestation of disease or an occurrence that creates a potential for disease”.

5 WHO, International Health Regulations (2005), Brief introduction to application in national legislation, January 2009, WHO/HSE/IHR/2009.2, p. 2.
In order to cooperate on the effective implementation of the International Health Regulations and improve transparency among countries, the WHO, FAO and OIE (World Organization for Animal Health) agreed in 2006 to coordinate and share information on outbreaks of animal and human diseases and their epidemiological analyses by establishing the Global Early Warning and Response System (GLEWS). In 2010, recognizing that cooperation among countries remained limited in terms of control systems, the three organizations decided to adopt a long-term international collaboration and share responsibility to coordinate management of health risks at the human/animal/ecosystem interface on a global scale. The purpose of the tripartite strategy was explicitly to achieve the objectives of the One Health initiative, to attain “a world capable of preventing, detecting, containing, eliminating, and responding to animal and public health risks attributable to zoonoses and animal diseases with an impact on food security through multi-sectoral cooperation and strong partnerships”\(^6\).

A decisive step in integrating the One Health approach into international governance and the legal sphere came from the 2010 Hanoi Conference, which was co-organized by the European Union and the United States in partnership with the FAO, WHO, OIE, Asian Development Bank, World Bank and UNICEF. At the end of the conference, the Hanoi Declaration constituted a commitment by participants to continue in their efforts to improve pandemic risk prevention plans to jointly strengthen animal and human health systems. They recognized the need to align national strategies with regional strategies to address the challenges of implementing the One Health approach at the animal–human–environment interface.

Nevertheless, there had been no clarification regarding consideration of the environment in national strategies. Among the international organizations involved in the fight against infectious diseases, none is specialized in environmental or biodiversity issues.

Consideration of the environmental aspect of infectious diseases emerged with the issue of wildlife health at the 10th Conference of the Parties to the

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\(^6\) FAO-OIE-WHO Collaboration, A tripartite concept note: Sharing responsibilities and coordinating global activities to address health risks at the animal–human–ecosystems interfaces, 2010.
Convention on Migratory Species (CMS, see Box 11.1), which recognized that the “One Health” initiative was gaining ground as a multidisciplinary means for treating infectious diseases\(^7\) and was specified in the terms of reference of the scientific working group for ecosystem health and wildlife\(^8\).

Integration of health issues into key international agreements related to biodiversity was accelerated through the development of agreements and initiatives between international organizations and between secretariats of the various biodiversity-related conventions (Lajaunie, Mazzega [LAJ 16a] and Box 11.1) and the Rio conventions (CBD, UN Framework Convention on Climate Change, UN Convention to Combat Desertification, see Lajaunie, Mazzega [LAJ 16]).

In 2012, the lack of appropriate policy responses to the deterioration of biodiversity led to the creation of an intergovernmental platform to support policy-making in the area of biodiversity and ecosystem services (IPBES) through tools, methods and scientific knowledge.

While the IPBES’s broad thinking framework did take human well-being into account, it did not explicitly refer to the health term that was mentioned during the first meetings of the platform.

It should be noted, however, that the World Organization for Animal Health (OIE) and the Secretariat of the CBD signed a cooperation agreement in 2013 to promote the One Health approach, while in 2015, the CITES and OIE collaboration decided to *conserve biodiversity by ensuring the effectiveness of health surveillance and control measures*, which are required to protect animal and human health worldwide. In addition, the WHO and the CBD Secretariat presented a joint report in 2015 that was entitled “Connecting Global Priorities: Biodiversity and Human Health, Summary of the State of Knowledge Review” [WHO 15a].

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7 In UNEP/CMS Resolution 10.22, Wildlife disease and migratory species, Bergen, November 20–25, 2011, section 1.

8 Which aims to encourage an integrated scientific approach within the framework of the “One Health” Initiative. From CITES, 26th Meeting of the Animals Committee. Relationship between wildlife trade and wildlife diseases, AC26 Doc. 23 (Rev. 1), Geneva (Switzerland), March 15–20, 2012 and Dublin (Ireland), March 22–24, 2012, Annex section 1 and section 3B.
Finally, the 13th Conference of the Parties to the CBD took note of this joint WHO-CBD publication by highlighting the importance of the One Health approach as an integrated approach for managing ecosystems and the associated human settlements and livestock. This was done in order to minimize unnecessary disturbance of natural systems, thus avoiding or mitigating the potential emergence of new pathogens\(^9\).

### 11.3. Regional challenges

Determining and addressing regional issues is fundamental to the implementation of internationally defined health and environment (or biodiversity) policies and strategies. Indeed, these challenges constitute the common concerns of Member States from the same region, beyond their diversity, and justify a collective intervention to resolve issues that go beyond the national framework. They highlight issues that are specific to a regional geographical group, whether these involve historical, geographical, cultural, economic or socio-ecological factors.

By taking these regional issues into account, international and regional organizations and a multitude of public and private stakeholders proposed solutions, forming networks of partners to implement the principles defined at international level, and also to try to resolve problems that were common to several States in a given geographical area. These two approaches, one from the international commitments of the States and the other resulting from local problems, constituted the founding elements of regional governance.

At the regional level, the network dynamics, which were formed more or less formally to respond to environmental or health issues, required many actors to create a certain form of flexible organization that could help with the implementation of health and environmental regulations. This emerging network organization, which generated its own rules, was highlighted in a report by the United Nations International Law Commission on the

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9 CBD, COP13, Decision XIII/6, Biodiversity and human health, Cancun, Mexico, December 4–17, 2016.
difficulties of fragmenting international law\(^{10}\) for its networks that emerged from intergovernmental cooperation. For health and environment networks, these could be an asset and offer a new, more flexible form of coordination than international organizations.

To illustrate regional governance and the type of regional policies and initiatives that address regional issues related to health and biodiversity, let us take the example of the Southeast Asia region (as a geographical, biogeographic and political entity), which has a high potential for emergence or re-emergence of infectious diseases.

In Resolution 46.20 of the World Health Assembly\(^{11}\), the WHO Regional Offices were instructed to use the 1993 Global Health and Environment Strategy to develop regional strategies and action plans. The WHO Regional Offices\(^ {12}\) adapted the global strategy to the specific needs of their region [OZO 94] by consulting the countries concerned. For example, the two WHO offices in the Southeast Asia region adopted health and environment strategies\(^ {13}\) that aimed to work with national and local authorities to create environmental conditions that meet minimum health requirements. These strategies promoted understanding of the interactions between environment, health and development among policymakers and citizens in order to strengthen public policy in these sectors. They planned to improve the capacity for prevention and response to health emergencies, monitoring, managing and evaluating environmental health risks.

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\(^{10}\) ILC Analytical Study 2006, ILC Study Group on the Fragmentation of International Law. Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law; Report of the Study Group of the International Law Commission, Finalized by Martti Koskenniemi. UN Doc A/CN.4/L.682. New York: International Law Commission, 2006, section 481.

\(^{11}\) WHO, Resolution WHA46.20, WHO global strategy for health and environment, May 12, 1993, al. p. 5.

\(^{12}\) There are two separate WHO regional offices covering the countries commonly considered to belong to the geographical area of Southeast Asia: the Southeast Asia Office (SEARO) and the Asia-Pacific Office (WPRO).

\(^{13}\) WHO SEARO, Regional strategic plan for health and environment for the WHO Southeast Asia Region (1993), p. 18 and WHO WPRO, Regional Strategy on Health and Environment, including follow-up of the United Nations Conference on Environment and Development, WPR RC44/13, 1993, p. 16.
Similarly, the Millennium Ecosystem Assessment was carried out as a “multi-scale” assessment and was also conducted at intermediate levels (local, national, regional and river basin levels) to meet the needs of policy makers and improve management of ecosystems. In the Southeast Asia region, these assessments concerned Indonesia, the Philippines and the wetlands downstream of the Mekong River in Vietnam.

The need to share knowledge on good practices and communal efforts in the biodiversity sector between ASEAN Member States\(^\text{14}\), in particular in accordance with Article 14c of the CBD\(^\text{15}\), led to the creation of a regional institution in 2005: the ASEAN Center for Biodiversity. Hosted by the Government of the Philippines, this institution was intended to be a center of excellence to facilitate regional and international cooperation in the conservation and sustainability of biodiversity. From its inception, the ASEAN Biodiversity Center also developed a clearing house for regional information on biodiversity while contributing, in particular through the organization of workshops and training, to the establishment and development of national information exchange centers. However, these data may be of disparate quality and it is necessary to know how they were gathered, where, by whom and with what degree of accuracy or reliability. Indeed, in addition to these national information exchange centers that were established in accordance with the provisions of the Convention on Biodiversity, many initiatives in Southeast Asia and more broadly in the Asia-Pacific gather data on biodiversity. Among these is the Asia-Pacific Biodiversity Observation Network (AP-BON), a regional network linked to the Global Biodiversity Observing Network (GEO-BON), which collects information on all levels of biodiversity.

In the area of health, in 2005 (the year in which the International Health Regulations were adopted), the Southeast Asia Office of the WHO proposed a plan of action to combat infectious diseases in the region, in light of the public health impact of SARS and avian influenza epidemics as well as to

\(^{14}\) Association of Southeast Asian Nations.

\(^{15}\) “Promote, on the basis of reciprocity, notification, exchange of information and consultation on activities under their jurisdiction or control which are likely to significantly affect adversely the biological diversity of other States or areas beyond the limits of national jurisdiction”, CBD, article 14c.
To anticipate the emergence of new pathogens\textsuperscript{16}. The paper began with the observation that countries in the region had, until then, mainly taken public health measures during crisis situations, so it was high time to set up a surveillance and prevention system. This strategy proposed a key element of developing research activities to improve knowledge about a whole range of infectious diseases and the factors that influence them (such as pathogen evolution, social inequalities, behavior when faced with disease, environmental factors and the impact of environmental change/climate change, changes in land use, disruption of hydrological regimes).

In the regional context of rapid environmental change with reduced biodiversity and increased incidence of pandemic-risk infectious diseases, many networks and initiatives have been created in relation to the environment (agriculture, forestry, land use, biodiversity) and health (infectious diseases, health monitoring, zoonotic diseases). Since its creation, ASEAN has been characterized by its minimally institutional organization, limited use of formal rules and a principle of non-interference in the internal affairs of other Member States [CHA 09]. This has led to the implementation of national regulations, cooperation programs and a system of dialogue within the Member States, and the development of regional programs by non-State actors [LAJ 16c].

The first Asia-Pacific Forum of Ministers and Environmental Authorities meeting in Bangkok in 2015 recalled the importance of examining the links between health and the environment to address urgent environmental health issues and discuss potential policy solutions. The forum strongly emphasized that strategies should focus on promoting the health benefits of healthy ecosystems (whether in terms of food security and nutrition, traditional medicine, mental health and physical and cultural well-being) and the management of ecosystems that prevent their degradation, such as to reduce the risk of infectious diseases\textsuperscript{17}.

\textsuperscript{16} WHO SEARO, Combating Emerging Infectious Diseases in the Southeast Asia Region, (SEA-CD-139), February 2005, p. 36.

\textsuperscript{17} UNEP Regional Office Asia Pacific, Discussion Document for Session 4 Environment and Health Linkages in Asia Pacific, 1st Forum of Ministers and Environment Authorities of Asia Pacific, Bangkok, May 19–20, 2015.
We must also bear in mind that regional initiatives do not imply regional players and an analysis of existing initiatives and networks will provide a clearer picture of a more or less formal articulation of governance (from international to local level).

11.4. Implementation at the national level

The Convention on Biological Diversity is a framework convention that proposes a flexible body of obligations and is legally binding on Party States. These must be implemented through national law and public policy\textsuperscript{18}. The decision-making power is thus placed at the national level and each country, as a party to the Convention, interprets the provisions of the CBD according to its national or regional priorities to make them operational. Parties should also develop National Biodiversity Strategies and Action Plans (NBSAPs) and provide information on actions taken to implement the Convention and their effectiveness.

Article 8 of the Convention lays down a list of the measures required to apply the essential elements of conservation \textit{in situ}, which is the preferred means of conservation (protected areas, regulation and management of biological resources both within and outside of protected areas, protection of ecosystems and natural habitats as well as species populations). Article 9 lists the measures necessary for conservation of biodiversity \textit{ex situ}, which should be complementary to \textit{in situ} measures. These include measures to conserve components of biological diversity, preferably in their country of origin; restoration and regeneration of endangered species and reintroduction of these species into their natural habitat under good conditions, as well as regulate and manage the collection of biological resources within natural habitats for \textit{ex situ} conservation purposes to avoid endangered ecosystems and populations of species \textit{in situ}\textsuperscript{19}.

\textsuperscript{18} On the core characteristics of the CBD (comprehensiveness, complexity, compromise), see McGraw DM, 2002. The CBD – key characteristics and implications for implementation, Review of European Community and International environmental law, 11 (1), pp. 17–28.

\textsuperscript{19} Glowka L. \textit{et al.} [GLO 94], A Guide to the convention on Biological Diversity. IUCN, Gland and Cambridge, xii + p. 193.
Similarly, the 2005 International Health Regulations have been implemented nationally. States have had to establish or designate a national IHR focal point and national authorities to be responsible for the implementation of IHR measures. National focal points circulate urgent communications linked to the implementation of the IHR to a WHO IHR contact point (an IHR contact point was designated in each of the six regional offices). They also disseminate information to the competent sectors of the party State’s administration, including sectors responsible for disease monitoring and reporting, entry points\(^\text{20}\), public health services, dispensaries and hospitals, and to gather information from these sectors\(^\text{21}\).

States therefore had to respond to IHR obligations and public health monitoring at all administrative levels and with the appropriate means.

The IHR authorizes the WHO to consider informal reports on public health events from public sources other than States (and not only public health information from governments) and obtain verification of these from party States, in accordance with a principle of international solidarity\(^\text{22}\). The WHO must share the information obtained from non-governmental sources with all Member States and intergovernmental organizations if they are required to respond to public health risks of international concern.

These two examples show that international regulation must be effectively implemented at the local level and that this is an obligation of the party States. It remains to be seen how this implementation should be carried out, which depends on the policy choices that underlie the regulation to be defined.

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20 Annex 1b in the IHR defines point of entry as “a passage for international entry or exit of travellers, baggage, cargo, containers, conveyances, goods and postal parcels, as well as agencies and areas providing services to them on entry or exit”.

21 WHO, International Health Regulations, 2nd edition, Geneva, 2006, Annex 1.

22 Heymann D. L., SARS and Emerging Infectious Diseases: A Challenge to Place Global Solidarity above National Sovereignty, Annals of the Academy of Medicine, Singapore 35, no 5 (May 2006), pp. 350–353.
In 2010, the Secretary-General of the United Nations made a statement of failure to implement the CBD and stressed that the main pressures leading to loss of biodiversity were intensifying. The States in the CBD decided to adopt a strategic plan for 2011–2020 with 20 objectives linked to biodiversity, called the Aichi Targets. These objectives express global aspirations and provide a flexible framework to determine national and regional targets. Achieving these objectives requires that “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”.

The achievement of these objectives depends first and foremost on common international willpower and implementation at national level through the political will of States as well as constantly balancing divergent interests. For example, protected areas created for conserving biodiversity and ecosystem services raise a number of issues concerning the right of local communities to these protected areas (equity, benefit sharing), the type of resource management (community management, state management or non-governmental organizations) and the preferred mode of management (directive or participatory).

Many initiatives for participatory approaches have been developed at the local level by different types of stakeholders, NGOs, research centers (national or external) and international institutions working in the field of biodiversity, particularly through the conventions linked to biodiversity.

A widely accepted participatory approach saw the light of day in the rural development sector in the late 1970s [CHA 94] with the idea of breaking with policies that had been imposed by decision-making centers and instead

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23 Secretariat of the Convention on Biological Diversity, Global Biodiversity Outlook, 3rd edition 2010, Montreal, Foreword by UN Secretary-General Ban Ki-Moon.
24 In accordance with decision UNEP/CBD, IX/9 Process for the revision of the Strategic Plan, October 9, 2008. The plan was adopted by decision UNEP/CBD, X/2, Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets, October 27, 2010.
25 UNEP/CBD, X/2, Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets, October 27, 2010, II, section 11.
26 Borrini-Feyerabend G., Dudley N., Jaeger T., Lassen B., Pathak Broome N., Phillips A. and Sandwith T. (2014). Governance of Protected Areas: From understanding to action. IUCN Best Practice Protected Area Guidelines Series No.20, Gland, Switzerland. IUCN. xvi + p. 124.
implementing a bottom-up approach. This approach combined the knowledge from local populations and scientific expertise through combined efforts. This included joint surveys, mapping and tools tailored for the issue at hand using a holistic approach such as that implemented through necessity by farmers [CON 86].

For example, in relation to protected areas, the 5th IUCN World Parks Congress in Durban in 2003 emphasized the importance of a participatory approach for the management of protected areas and biodiversity as well as for the assessment of biodiversity [TUC 05, LAW 10].

Participation may cover a specific field such as forest management [LAW 07] or management of biosphere reserves created under the aegis of UNESCO with the involvment of NGOs [RAG 13a] or it could operate on a voluntary basis to assess biodiversity [LAW 07] as advocated by Aichi Target 18. As early as 1999, the Conference of the Parties called for the participatory management of wetlands in Resolution VII.8. The Ramsar Convention Secretariat then proposed a manual on participatory competences in 2010 to clarify participatory environmental management approaches to wetland management.

In terms of cultivated biodiversity, there are some research programs in the Consultative Group on International Agricultural Research (CGIAR), such as the Seeds for Needs program, which is based on participatory selection by farmers of local varieties of seeds.

In the field of biodiversity, as we have just seen, there are many examples of participatory approaches at various scales and on more general or more specific issues.

**Box 11.2. Local governance and participatory approaches**

There are a number of legal tools that enable a convergent study of health and environmental problems at the national level. These may be Environmental Impact Assessments (EIAs), which are internationally recognized but controversial in terms of their implementation (independence of experts in relation to the project, consideration of the time scale, procedure, partial access to information). These differ from one State to another but they do consider the environmental impact and human health of projects, studies or interventions in the natural environment. Nevertheless, it
should be noted that this tool still barely integrates biodiversity despite the decisions of various COPs of biodiversity-related conventions. Health impact studies should also be mentioned here; these can be carried out before a project is implemented, in order to study the effects on human health and the environment and alert public authorities on practices that may have an adverse effect (use of pesticides and agricultural production, water pollution). The procedure is still very diverse in different countries. In Thailand, some health impact studies are conducted by local communities and they can challenge public authorities on health issues after conducting their own investigations. Finally, the WHO-supported National Environment Plans provide intersectoral planning and a multidisciplinary approach to health and environmental issues, and clarify the roles and responsibilities of the various stakeholders.

The governance of biodiversity and health is not fixed and is the result of various initiatives and networks for which the mission was to manage issues defined to a greater or lesser extent in the field of health and environment or biodiversity. The effectiveness of this governance lies in good connections between the different levels of decision-making but, above all, in the actual desire of States to take control of health and biodiversity issues. By adopting regulations that coordinate the principles to which they have acceded as a party to international agreements, States can decide to show real involvement in the conservation of biodiversity and the protection of public health.

These regulations need to be part of a broader framework for environmental justice, in which citizens and local communities can truly be involved in the decision-making process and particularly access and benefit-sharing of biodiversity. Let us note that many decisions of the Conferences 27 Prieur Michel, [PRI 11], “Instruments internationaux et évaluation environnementale de la biodiversité: enjeux et obstacles”, Revue juridique de l’environnement, 5/2011 (special edition), pp. 7–28.
28 Lajaunie C. and Morand S. (2015). A legal tool for participatory methods in land systems science: the Thai model of Health Impact Assessment and the consideration of zoonotic diseases concerns into policies. GLP newsletter, no. 11, Avril 2015, pp. 30–33.
29 These plans exist in Europe (see http://www.who.int/heli/impacts/nehaps/en/, last accessed on 07/05/2017), for France the current plan is the National Health Environment (PNSE3) 2015–2019. These plans are also being implemented in Southeast Asia (see WHO, UNEP, Charter of the Regional Forum on Environment and Health Southeast and East Asian Countries – Framework for Cooperation 9 August 2007, Bangkok, Thailand).
of the Parties to the CBD have given States the responsibility of benefit-sharing with local communities. Fully involving local communities implies that a State has planned for local populations to participate in the biodiversity management process with real support and recognition of biodiversity practices in these communities.

Implementation of the Nagoya Protocol on Access and Benefit-Sharing into the national legislation of party States may be an opportunity to consider this concept in all its complexity and richness, and to make the sharing of knowledge effective, in terms of sharing of benefits that arise from the use of traditional knowledge or scientific cooperation. Beyond the responsibility of States, benefit-sharing is also a duty of the scientific community, not just for research with commercial purposes but also for public scientific research.

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30 And even before the Nagoya Protocol, see Morgera E. and Tsioumani E. (2010), The Evolution of Benefit Sharing: Linking Biodiversity and Community Livelihoods. Review of European Community and International Environmental Law, 19: 150–173.
31 Morgera E. and Tsioumani E. (2010), pp. 162–163.
32 Morgera E. Fair and Equitable Benefit-Sharing at the Cross-Roads of the Human Right to Science and International Biodiversity Law. Laws 2015, 4, 803–831.