



Center for International Environmental Law

20 December, 2011

**CIEL's activities relevant to the Right to Enjoy the Benefits of Scientific Progress and its Applications**

Thank you for the opportunity to comment on the questionnaire, dated 29 September 2011. Since 1989, the Center for International Environmental Law (CIEL) has worked to strengthen and use international law and institutions to protect the environment, promote human health, and ensure a just and sustainable society. Many of CIEL's activities are in pursuit of realizing the Right to Enjoy the Benefits of Scientific Progress and its Applications, as enshrined in article 27 of the Universal Declaration of Human Rights and article 15 of the International Covenant on Economic, Social and Cultural Rights. The following are specific areas that CIEL works with in relation to the Right to Enjoy the Benefits of Scientific Progress and its Applications, including the nature of the issues and challenges we have faced.

**Accessing the benefits of science and its applications**

To help ensure that marginalized groups benefit from scientific progress and its applications, CIEL has worked on the implementation of technology transfer obligations in international law. For example, CIEL, together with civil society partners, has worked on the development and implementation of access and benefits sharing provisions of the Convention on Biological Diversity (CBD). Effective implementation of access and benefits sharing obligations ensures the equitable distribution of any benefit that may derive from the application of genetic resources and traditional knowledge, especially where these resources and knowledge have been cultivated by marginalized communities. We have taken a multifora approach, addressing related issues not just under the CBD, but also under the World Trade Organization (WTO), the World Intellectual Property Organization (WIPO) and the International Treaty on Plant Genetic Resources for Food and Agriculture. The number of fora illustrates a challenge faced by many stakeholders, especially marginalized groups, in developing the capacity to participate effectively in fragmented and technical negotiations. When necessary, we have requested reexamination of patents that implicate traditional knowledge in national venues, such as before the U.S. Patent and Trademark Office.

CIEL and its partners have also worked to establish legal obligations and develop conditions whereby beneficial technologies and know-how may better flow into marginalized communities. A significant part of our work in this respect has been to advocate for a recalibration of intellectual property norms that may present a barrier to the transfer of beneficial technologies to those in need. Again, we have taken a multifora approach to technology transfer, a need which has been highlighted under

international environmental law since the adoption of Agenda 21 and the Rio Declaration in 1992. Recently, much of our work has been in advising governments and civil society on the development of technology transfer provisions under the UN Framework Convention on Climate Change (UNFCCC), including the treatment of intellectual property where it might serve as a barrier to the access of essential technologies for the right to food, health, safe drinking water and other human rights which are projected to be adversely affected by climate change. As the world's emphasis has shifted away from multilateral processes to bilateral and regional approaches to trade, CIEL analyzed intellectual property provisions and other issues relevant to accessing benefits of scientific progress in bilateral trade and investment agreements. Moreover, we have helped to establish and implement chemicals conventions to enable the transfer of beneficial technical assistance for the sound management of harmful chemicals, such as persistent organic pollutants (POPs) and mercury. We have worked to reconcile potential conflicts between economic, social and environmental regimes that may impede access to beneficial technologies, particularly through our collaboration with the International Council on Human Rights Policy (ICHRP) on a recent project, *Beyond Technology Transfer*.

However, the effective and balanced integration of social, environmental and economic considerations into decision-making remains a challenge, particularly in large-scale projects. For example, CIEL's examination of projects under the Clean Development Mechanism (CDM) of the Kyoto Protocol from a right to development perspective illustrates problems regarding equitable access to the benefits of scientific progress. The CDM also illustrates a higher-level challenge: ensuring the transfer of technologies with long-term benefits. Another overarching challenge is ensuring that sufficient financing and other economic conditions are in place to ensure the transfer of these beneficial technologies. As efforts to curb greenhouse gas emissions fall short of what is needed to avoid severe impacts to vulnerable communities, increased attention is required for the research and development of environmentally sound adaptation measures. This challenge raises parallel concerns to the challenge of developing beneficial and environmentally sound technologies for neglected diseases, if not identical concerns with respect to the projected increase in vector borne diseases such as malaria due to climate change.

### **Scientific responsibility, safeguards and remedies**

While there are undoubtedly many benefits of scientific progress, there are also challenges in redirecting or discontinuing outdated applications of scientific progress in pursuit of the full realization of human rights. The challenges of climate change and sound chemicals management illustrate the difficulty of incorporating scientific knowledge regarding actual or potential adverse impacts into new business models.

For example, civil society environmental organizations working on the implications of toxic chemicals on the full enjoyment of human rights continue to advocate on the need for health and safety information for all industrial and agricultural chemicals. The monitoring of human bodies for synthetic chemicals shows wide-spread exposure to synthetic chemicals, many of which are known or suspected to carry

substantial human health burdens. Chemicals exposure implicates the rights of many vulnerable populations, in particular the rights of children, workers and indigenous populations.

While science-based evidence continues to accelerate regarding the breadth of consequences for an increasing number of chemicals, including the toxic effects of mixtures of chemicals in our bodies and ecosystems, there is still inadequate health and safety information on the vast number of chemicals. The laws and regulations that emerged in the 1970s in Europe, Japan and the United States for chemical health and safety assumed that chemicals already on the market were innocent and did not ask for basic health information, while creating a separate review process for the risks presented by new chemicals. The European Union (EU) established sweeping changes through its Regulation for the Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH, EC 1907/2006), a legal mechanism to require information on all chemicals, both new and existing. Changes have also been made or are underway in many countries, including Canada, Japan, China, South Korea, and Turkey, as well as the state and local levels in the United States. While these are steps in the right direction, implementation has been difficult and additional steps are still required, such as reform of the 1976 Toxic Substances Control Act (TSCA) in the United States to require health and safety information for all industrial chemicals.

Intellectual property, specifically confidential business information (CBI), remains a key challenge for accessing and developing scientific progress on understanding the hazards posed by the tens of thousands of chemicals in commerce. The application of the benefits of scientific progress on the hazards of industrial and agricultural chemicals by civil society and regulators has been impeded by the use of CBI privileges by the private sector. Regulations often do permit certain information to be shielded through the privilege of CBI; however, the extent to which CBI privileges are claimed for chemicals hinders the efforts of both regulators and civil society in ensuring chemical safety. For example, both businesses and consumers have faced challenges in accessing information on the chemicals in products. Construction companies have found it extremely difficult to determine which materials have persistent, bioaccumulative and toxic chemicals (PBTs). Mothers are continually challenged to investigate the chemicals are in everyday household products, and which one(s) may result in a higher risk for certain diseases in their children. "Right to Know" provisions of recent European laws, policies which CIEL advocated for, have made some improvements. However, again additional steps are still required to provide adequate access to information.

Taking a life-cycle approach, nearly all technological value-chains begin with natural resources, including plants, animals, metals, minerals and fossil fuels. As the recent trend towards biofuels illustrates, the Green Economy is not without consequences for marginalized communities. Resource-dependent communities, often indigenous, are disproportionately affected by development projects supported by governments and the private sector. The rights of these communities to determine whether and how their natural resources are developed--rights often recognized by national and international law--are frequently ignored. Recourse to international mechanisms can complement and bolster national efforts to ensure respect for the rights of communities. CIEL, together with its colleagues, has supported the creation and strengthening of these mechanisms over the last twenty years. There is a great need, however, to ensure that communities know these mechanisms exist and how to use them.

CIEL assists communities in defending their human rights, particularly those closely tied to their land and natural resources. Free, prior and informed consent (PIC or FPIC), a reoccurring requirement in human rights and environmental law, can play a substantial role in helping to ensure that local communities and indigenous peoples have meaningful participation in decision-making that can infringe on the full enjoyment of human rights. In 2007, CIEL developed a general guide for civil society organizations, i.e. a 'toolkit,' to assist local communities in developing FPIC protocols, based upon our close work with the Mursi tribe in Ethiopia. This toolkit is now being used by the Nzara and Mukaya communities in Sudan, in response to serious development pressures focused in the agricultural sector. The lessons from the toolkit's application in Sudan and elsewhere will further refine and strengthen its usefulness for other communities and peoples facing serious questions regarding their rights relating to activities in their environment. [insert challenges in developing and using the toolkit].

While regional and international mechanisms are available to help communities defend themselves, the capacity for utilizing these mechanisms remains underdeveloped among many communities. Moreover, existing human rights safeguards are not adequately observed in development projects, particularly by financial intermediaries. For example, sugarcane workers along the Pacific coast of Nicaragua are battling an epidemic of chronic kidney disease. The cause of the disease is unknown, but many believe it is related to the chemicals applied to the cane or the working conditions in the field. In March 2008, ASOCHIVIDA and other community members submitted a complaint, prepared by CIEL, to the Compliance Advisor Ombudsman (CAO) of the International Finance Corporation (IFC). The World Bank's Inspection Panel is another mechanism for communities to defend their rights. Unfortunately, remedies are typically unsatisfactory, especially for many individuals and communities that suffer from irreversible harms, highlighting the importance of a precautionary approach to the application of scientific progress.

In the climate context, CIEL is working in collaboration with a network of human rights practitioners and organizations to integrate rights protections in the international climate framework. While we are working to increase the transfer of appropriate technologies under the UNFCCC, we are also working to ensure that Parties to the UNFCCC consider how to avoid or minimize the human rights impacts of measures to mitigate or adapt to climate change, measures which typically involve the application of scientific progress.

To accomplish this objective, we are working to establish safeguards at the international level, as well as monitoring and reporting systems through which civil society groups can submit information regarding the human rights impacts of climate change-related measures. In addition, we are working to develop a grievance mechanism to which individuals, peoples or communities (or their representatives) whose rights may be impacted by the implementation of response measures can submit relevant information and/or complaints. The mechanism is intended to provide an assessment of the impacts of the response measures on the affected peoples or communities, including on their enjoyment of human rights, and recommendations for preventing or minimizing harmful effects and for ensuring that the response measures do not interfere with the full enjoyment of their rights. In addition, the mechanism should be available to assist policymakers in safeguarding human rights and in applying the guidance.

## **Participatory decision-making and transparency**

Non-governmental organizations (NGOs) serve as a valuable link between stakeholders and policy makers. Public participation through accredited observers is an established principle of public international law, from Article 71 of the Charter of the United Nations, to decisions by the UN General Assembly in the 1990s, to ECOSOC resolution 1996/31. These decisions provide arrangements for consultation with non-governmental organizations, acknowledging their full diversity at the national, regional and international levels, and the breadth of their expertise and capacity to support the work of the United Nations. Public participation allows for accountability, strengthens the legitimacy of decisions made, and helps to provide coherence between regimes. Twenty years ago, the Rio Convention and Agenda 21 identified three principles of effective public participation in international environmental law: access to information; access to decision-making; and access to justice. These principles are also central to a rights-based approach to democratic governance.

Access to information, essential to effective participation, is also central to realizing the right to scientific progress and its applications. There are, for example, serious concerns that hazard assessments done pursuant to certain international standards are insufficient to determine the hazard(s) of certain chemicals. For example, the test methods developed by the Organization for Economic Cooperation and Development (OECD) have been criticized by civil society as an inadequate reflection of scientific progress in detecting the hazards of chemicals; however, many regulatory agencies give greater weight to these tests conducted under these methods. Likewise, good laboratory practice (GLP) standards are also criticized for not being state-of-the-art tests for sensitive effects, such as those associated with endocrine disruption. Governments intended GLP methods to provide a safeguard against the potential for fraud by companies that generate scientific data for regulatory findings. Therefore, industry-funded studies are typically GLP. However, experts note conceptual and methodological flaws in GLP studies for certain chemicals. The reluctance of regulators to use non-OECD or non-GLP—yet peer-reviewed and published—scientific evidence of chemicals hazard(s) can impede the application of the benefits of scientific progress by effectively limiting access to relevant information in decision-making processes.

Civil society, CIEL included, plays an essential role ensuring the dissemination of information about ongoing scientific research and its applications. Often times, the technical nomenclature adopted by legal and scientific bodies discourages, if not impedes, effective public participation, especially by vulnerable communities. In many instances, the potentially adverse effects of emerging areas of research and their applications are future generations, which all too often depend on civil society to voice their interests. Civil society plays a critical link in providing relevant information to decision-makers in local, national, regional and international fora of effects upon present and future generations of new and existing developments in science and technology.

The pace of scientific development far exceeds the pace at which national, regional and international regulatory frameworks are developing. For example, CIEL is leading international, civil society efforts on nanotechnology; a relatively new, but well-established field built upon a new class of materials tens of thousands of times thinner than the width of a human hair, with revolutionary physical and chemical

properties – and potential risks. Commercial applications of nanotechnologies are growing by leaps and bounds, yet questions about the potential effects of these miniscule materials are unanswered.

Industry heralds the potential application of benefits of nanomaterials in response to concerns regarding potential risks. Nanomaterials generally fall outside the scope of regulatory frameworks in Europe, the United States and elsewhere. While voluntary initiatives have been developed, they are unsatisfying in comparison to a legally-binding and enforceable regulatory structure to protect human health and the environment. Part of the challenge in developing these frameworks has been the uncertainty of how the technology is evolving and the breath of potential applications. CIEL works to reform laws Europe, the United States and at the global level to address the risks of nanomaterials. We also works to link international processes with the concerns of vulnerable populations, such as workers and children in Africa, Asia, Eastern Europe, and Latin America.

### **International cooperation, achievements and challenges**

Finally, regarding the integration of the development and application of scientific progress in international processes, CIEL would like to submit a recent study on the challenge of systemic integration in international law of human rights, technology transfer and climate change (Annex, and also available here: [http://www.ichrp.org/files/papers/184/138\\_technology\\_transfer\\_UNFCCC.pdf](http://www.ichrp.org/files/papers/184/138_technology_transfer_UNFCCC.pdf)).

Again, CIEL would like to thank the Office of the High Commissioner for Human Rights for the opportunity to comment.