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2011
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IDDRI
SciencesPo

IDDRI

The Institute for Sustainable Development and International Relations (IDDRI) is a non-profit policy research institute based in Paris, with an office in Brussels. Its objective is to determine and share the keys for analyzing and understanding strategic issues linked to sustainable development from a global perspective. IDDRI helps stakeholders in deliberating on global governance of the major issues of common interest: action to attenuate climate change, to protect biodiversity, to enhance food security and to manage urbanisation. IDDRI also takes part in efforts to reframe development pathways.

A special effort has been made to develop a partnership network with emerging countries to better understand and share various perspectives on sustainable development issues and governance. For more effective action, IDDRI operates with a network of partners from the private sector, academia, civil society and the public sector, not only in France and Europe but also internationally.

As an independent institute, IDDRI mobilises resources and expertise to disseminate the most relevant scientific ideas and research ahead of negotiations and decision-making processes.

It applies a cross-cutting approach to its work, which focuses on five themes: global governance, climate change, biodiversity, urban planning, and agriculture.

As a Sciences Po partner, IDDRI's experts are highly involved in teaching and in developing research programs.

As a non-profit research institution acting for the common good, the institute posts all of its analyses and proposals free of charge on its website.

To view the scope of our activities, please register for the IDDRI newsletter.

www.iddri.org

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foreword

LAURENCE TUBIANA (DIRECTOR), JEAN JOUZEL (PRESIDENT), IDDRI

Exiting the EU crises through green investments

The 2008 financial crisis deeply impacted world economies and social cohesion. Today, the world is still faced with a precarious economic situation. Europe is in the midst of a series of interlinked crises, which have their roots in the build up of structural divergences and macroeconomic imbalances, in particular between Eurozone states. A mismatch between the need for long-term investments for sustained prosperity and the preferences for short-term returns is at the heart of these crises.

Sizeable measures have been taken to strengthen economic and budgetary governance and bring the economies of the Eurozone back on to a more sustainable course. Unfortunately, disagreement over the scope of the institutional reforms to be enacted has hampered a timely response to the crisis. To recover economic growth, Europe will have to implement a coordinated plan for economic stimulus as well as deep structural reforms embracing tomorrow's challenges: the increasing strain of natural resources and climate change.

We are already seeing 'megatrends' of growing resource scarcity and rising prices. And asymmetric economic reactions to rising energy and commodity prices over the period 2005-2008 played a role in fuelling and triggering the subprime and the European crises.

Therefore a focus only on austerity within current EU institutions perimeter will not create jobs, restore public finances, nor lay the foundations for mid-term prosperity. Coordinated investment in the 'green economy' can bridge these two timeframes: creating growth and jobs now; and contributing to the long-term productivity and rebalancing of the European economy.

In the short term, it is vital that governments kick-start growth. If not, the debt burden of a number of European countries will be unsustainable. But now is also the right time to invest in long-term productive assets and reduce Europe's internal imbalances. Resource efficiency is a key driver of future economic competitiveness and resilience. There are substantial economic savings to be made, and the scale of transformation is huge. No other sector offers the same logic of scale, opportunity and necessity. Private investments can be leveraged with a limited public outlay, for example through partial debt guarantees and smart regulatory frameworks. Europe could consider strengthening its climate targets in order to unleash investments in carbon-efficient infrastructure.

Governments also need to consolidate their budgets and undertake structural reforms to enhance competitiveness. However, such reforms risk lowering growth or generating social injustice. Green tax reform offers the opportunity to address fiscal consolidation and competitiveness in a more coherent way. Shifting excessive labour taxes to under-taxed resource consumption can create jobs and improve wages, boosting growth. Reducing labour taxes progressively according to income can also address broader equity concerns.

Finally, Europe must create the conditions for long-term prosperity. Price competitiveness is an important part of intra-European imbalances, but Europe cannot compete with emerging economies by focusing solely on price. Innovation is clearly central in these times of scarcity and competition, to reduce resource imports and exposure to resource shocks, and lead the booming market for green and low-carbon goods and services. But competitive green industries cannot be created from scratch.

The European budget and national reform packages must prioritise support based on the capacities of industries to innovate, and the potential for European benefits. Public intervention can address market barriers to innovation, and realise rapid cost and efficiency improvements.

The shift to a green economy is vital to guarantee long-term economic resilience. By stimulating investment and jobs in growing sectors, it can also contribute to the recovery. It offers the means for short-term job creation and growth, in building the European infrastructure and intellectual assets necessary to compete and prosper in the long term.

editorial

MARION GUILLOU (INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE, INRA)

Integrating food security and sustainable agriculture into global and national policies

Global governance for sustainable development, climate change, biodiversity and precaution: these are concerns that motivated partners from different horizons to support and engage in IDDRI's creation. Whether from the research community, public authorities or socio-economic sector, these partners were convinced of the need for an open dialogue between science, society and decision-makers with regard to the international dimensions of sustainable development challenges. For INRA–whose scientific approach had already taken on board the new context of climate change and the vital need for sustainable development pointed up by the Rio Summit–the research and debates proposed by IDDRI have been of precious help in framing research questions within a global understanding of sustainable development and in translating scientific results into actionable analyses for stakeholders and deciders.

Today, governance issues and global thinking have broadened out to encompass food and agriculture. While the dramatic food riots of 2007 certainly heightened public and official awareness of the food security question, its growing visibility in the world arena can also be explained by the increasing convergence of analyses on the subject.

At the regional and global levels, agriculture will experience severe tensions, torn between the pressure to respond to the growing food and non-food needs of a world population set to reach 9 billion people by 2050 and, on the other side, the efforts to preserve natural resources.

Yet, what is demanded from agriculture varies widely depending on the assumptions of how food systems and food consumption will change, notably in terms of loss and waste.

Foresight studies by INRA and CIRAD on sustainable food systems also highlight the importance of post-harvest measures with respect to the environmental impact of consumer goods. Finally, while the proportion of the world's population suffering from hunger has decreased, it nonetheless remains a major issue affecting a billion individuals. This is accompanied, sometimes within the same country, by the problem of over-nutrition, which affects a growing population now numbering 1.5 billion people.

In addition, agriculture needs to adapt to global changes. Climate change has already taken its toll on yields: for example, the slowdown in the growth rate of wheat and maize yields in different world regions, revealed by a paper published in *Science* in 2011.[1] Moreover, the increasing global circulation of goods and services has intensified the instances of biological invasion and the introduction of pathogens, while agriculture is having to adapt to economic and financial vicissitudes on a worldwide scale.

The tight linkage between agriculture, food and global change is drawing greater attention from policy makers and mobilising collective thinking. Since 2010, IDDRI has contributed to this thinking on international agricultural research. In 2011, a commission of international experts was set up under the CGIAR (Consortium of International Agricultural Research Centers) to ponder on sustainable agriculture and climate change. Its conclusions are unequivocal:

"Business as usual in our globally interconnected food system will not bring us food security and environmental sustainability. Several converging threats – from climate change, population growth and unsustainable use of resources – are steadily intensifying pressure on humanity and world governments to transform the way food is produced, distributed and consumed." [2]

These changes, which we need to start implementing as of today, will mobilise all the scientific, political, economic and social stakeholders. Platforms such as IDDRI offer them an opportunity to further the debate.

1 Lobell D., Schlenker W., Costa-Roberts J. (2011). "Climate Trends and Global Crop Production Since 1980", *Sciencexpress Report*, 5 May 2011.

2 Beddington J et al. (2011). *Achieving food security in the face of climate change. Summary for policy makers from the Commission on Sustainable Agriculture and Climate Change.* CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Available at: www.ccafs.cgiar.org/commission.

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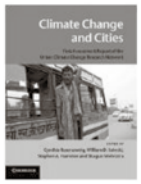
www.iddri.org



FEBRUARY

February 2, 2011

Biodiversity – Access and benefit-sharing

An international conference, "Towards the effective implementation of the Nagoya Protocol on ABS", organised in partnership with AFD (Agence française de développement) and aiming to take stock and assess the implications of the ABS Protocol for the governance of biodiversity as well as its implementation challenges and potential contributions to the global sustainable development agenda. As a conference follow-up, a workshop was organised in order to create an informal network of experts contributing to the defintition of this agenda.

February 3, 2011

Cities – Urban modelling

A workshop, « Modèles transport-urbanisme » ("transportation-urbanism modelling"), organised with Tomás de la Barra (designer of the Tranus integrated transportation-use modelling) and other modelling designers and users in order to share experiences and expertise.

MARCH

March 9, 2011

Cities – Cleantech

A conference, "Growing greener cities: factors affecting cleantech deployment in cities", organised with Stephen Hammer (University of Columbia, United States) in order to address the issue of clean technologies deployment within the framework of urban development.

Contribution of Benoit Lefèvre (IDDRI) to the report *Climate Change and Cities: First Assessment Report of the Urban Climate Change Research Network* (Cambridge University Press) as coordinating lead author of chapter 6, "Climate change and urban transportation system".

March 29, 2011

Climate – European policies

An IDDRI/Climate Strategies report, coordinated by Emmanuel Guerin, insisting on the need for Europe to enforce immediate measures to strengthen its Climate and Energy Package (CEP) in order to secure sustainable growth and energy security, and to set ambitious climate policies and targets.

"Strengthening the European Union Climate and Energy Package - To build a low carbon, competitive and energy secure European Union". Emmanuel Guérin, Thomas Spencer. IDDRI/ Climate Strategies, 2011.
"Decarbonizing the EU Power Sector Policy Approaches in the Light of Current Trends and Long-term Trajectories". Michel Colombier, Emmanuel Guérin, Céline Marcy, Thomas Spencer. IDDRI, *Working Papers* n°13/11.

JUNE

June 8, 2011

Biodiversity – Market-based instruments

An international conference, «Market-based instruments for biodiversity: Nature at any cost?», organised in partnership with the Fondation d'entreprise Hermès and aiming to investigate the development of Market-based instruments (MBIs) for biodiversity and ecosystem services conservation.
What's in a name? Market-based instruments for biodiversity. Romain Pirard, Emma Broughton. Iddri, *Studies* n°03/11.

June 24, 2011

Governance – Trade and climate change

An international conference, «Climate Change Policies and the World Trading System: The Challenges Ahead», organised by IDDRI and FERDI (Fondation pour les études et recherches sur le développement international), and seeking to elicit a lively debate on the steps needed to avoid a 'collision course' between trade policies and the operation of the World Trade System (WTS) on the one side, and climate change policies on the other side.

SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER

September 21, 2011

Biodiversity – Marine protected areas

An international seminar, "Towards a legal framework for the creation and management of cross-sectoral marine protected areas in areas beyond national jurisdiction", organised by IDDRI and IUCN (International Union for Conservation of Nature). The seminar is based on an innovative approach, using foresight methodologies to stimulate discussions on possible pathways to ensure an efficient governance of marine protected areas (MPAs) in areas beyond national jurisdiction (ABNJ). "A legal scenario analysis for marine protected areas in areas beyond national jurisdiction". Elisabeth Druel, Raphaël Billé, Sébastien Treyer, IDDRI, *Studies* N°06/11.

October 12/16, 2011

Agriculture – Perspectives from New Zealand and France, and foresight research

A seminar, «Rising to the Sustainability Challenge in the Agri-Food Sector: Perspectives from New Zealand and France», organised by IDDRI and the New Zealand Embassy in France. The agri-food sector is being increasingly challenged to demonstrate its sustainability credentials. This seminar debates the nature and magnitude of the sustainability challenge, and how it is being tackled in both New Zealand and France, including through collaboration at company and industry levels. Rising to the Sustainability Challenge in the Agri-Food Sector: Perspectives from New Zealand and France. Viviane Gravey; Catherine McIntosh; Hayden Montgomery; Sébastien Treyer, IDDRI, *Policy Briefs* N°07/11.
An intervention by Sébastien Treyer (IDDRI) during the international workkshop "How to integrate agriculture and environmental stakes in foresights?". The presentation is based on the report «Sustainable food production and consumption in a resource constrained world» written in February 2011 by the Foresight Expert Group of the European Commission's Standing Committee on Agricultural Research (SCAR).

November 2011

Governance – Towards Rio+20

IDDRI submits different articles to the United Nations Conference on Sustainable Development Bureau in responding to the invitation from Second Preparatory Committee "to provide inputs and contributions for inclusion in a compilation document to serve as basis for the preparation of zero draft of the outcome document".
Powerful International Science-Policy Interfaces for Sustainable Development (Sébastien Treyer *et al.*) ; Advancing the Oceans agenda at Rio+20: where we must go (IDDRI, *Policy Briefs* N°05/11, Raphaël Billé, Elisabeth Druel, Julien Rochette) ; 20 ans après Rio, un développement qui n'a rien de durable (IDDRI, *Working Papers* N°12/11, Lucien Chabason) ; "Now is the Time! Why 'Rio+20' must succeed" (Laurence Tubiana *et al.*).

December 6, 2011

Climate – International Negotiations in Durban

IDDRI and its Learning Platform initiative (independent forum for the exchange of policy expertise and experiences between developed and developing countries) organise a side event during COP17 (17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change [UNFCCC]).
IDDRI also contributes to addressing the negotiations' issues with different publications: A Legal Form Proposal for Durban and Beyond (IDDRI, *Working Papers* N°21/11, Thomas Spencer) ; Key lessons from international financing mechanisms for the Green Climate Fund (IDDRI, *Working Papers* N°18/11, Cécile Valadier) ; Le Fonds d'adaptation, laboratoire du financement du changement climatique (IDDRI, *Working Papers* N°10/11, Sandrine de Guio, Julien Rencki).

December 20, 2011

Migrations and environment

A co-publishing by IDDRI and the International Organisation for Migration (IOM), *The State of Environmental Migration* (SEM) 2010 (IDDRI-OIM, *Studies* N°07/11) is intended to be the first of an annual series, which aims to provide regularly-updated qualitative assessments on the changing nature and dynamics of environmental migration throughout the world. For their final assignment, Sciences Po students were asked to select and analyse a case of environmental migration, be it a sudden and violent natural disaster or a slow-onset environmental degradation. Most of the articles constitute the first detailed analyses of the migration flows that were induced by some of the most dramatic events of 2010, paving the way for future scholarly works.

Introduction

A project for strategic renewal

In 2011, taking stock of its 10 years of operation and of the experience gained, IDDRI undertook an in-depth strategic reflection on its research themes as well as its mission, its means of intervention and its organisation. This renewed strategic project, which confirms the hypotheses that led to its creation, identifies new challenges in order to ensure its relevance.

An independent policy research institute of international scope

IDDRI has gained international recognition as an independent policy research institute for international policy, despite its limited size. This recognition hinges on several factors. Neither an NGO nor a lobbying group, IDDRI has become a platform for debating and structuring controversial issues to define positions based on critical discussion and foresight thinking, interlinking the perspectives of public and private decision-makers and the academic world. IDDRI has secured its credibility not only by substantially increasing its production, mainly in the form of scientific publications, but also, given the independence and relevance of its analyses and proposals, by combining expertise in international relations with socio-political, technical and economic expertise in the area of national public policy. In 2011, this expertise was recognised when IDDRI, along with Ferdi and Cerdi (Foundation and Centre for International Development Study and Research), was awarded Labex (laboratory of excellence) status. IDDRI's independence is safeguarded by a careful balance of governance and financing that blends private support from large groups and public support, as well as partnerships with research organisations with seats on its Board.

Think tanks – increasingly active and more strategic

Today IDDRI actively partners with major international think tanks (World Resources Institute, Stockholm Environment Institute, and the Center for Policy Research in India or Tsinghua University in China), intervening as much in the large multilateral (biodiversity, climate) or regional (e.g. the Regional Seas Conventions) processes as in European policy.

IDDRI became more influential when global-issue think tanks enjoyed a second wave of prominence following a first wave in the 1970s. Some of the more recently created institutes (such as the Centre for Global Development) were quickly and generously funded thanks to mobilisation of private and public resources, reflecting recognition of the strategic role such international policy research centres can play. With competition on the rise, IDDRI must continue to enhance its reputation if it is to remain in the forefront of internationally reputed think tanks on sustainable development issues.

Sustainable development as a system of tensions

Beyond the context of severe economic crisis in the developed world, it is now explicitly acknowledged that sustainable development involves a system of tensions between its three goals (economic growth, social cohesion and environmental protection). This is a potential source of both conflict and synergy, as well as a pointer to the differences between policy agendas. This tightening tension would seem to be a healthy phenomenon at a time when what has been achieved since Rio raises questions as to the operational reach of the key coordinating principles adopted at the summit (e.g. common but differentiated responsibilities), and makes the case for a new conceptual approach.

Societies change, we must change society

In light of this background, the relevance of IDDRI's role will mean questioning the long-term changes in our global societies, with environmental problems serving as an entry point to reveal the broader malfunctions (particularly in social matters) of economic regulation and development models in the North and South alike.

Environmental concerns are central to the specific relevance of IDDRI's role, mainly as an interface between socio-political debates and specialised scientific knowledge on environment and ecology. This enables IDDRI to

diagnose the global deadlocks and structural problems in development trends, and to organise discussions on possible alternatives and ways of influencing these changes. This input to the debate should be devised so that it can be more closely tied into research on social issues, conducted by other stakeholders, within a context of heightened tensions between different objectives. This would mean gradually expanding IDDRI's expertise to areas such as employment or general taxation.

Radical or incremental change processes in our developed, emerging or developing societies will also be central to the relevance of IDDRI's mission, at the crossroads between technological innovation and social mobilisation. Changes of direction are underway, offering a great diversity of choices that could well address environmental and development questions from a fresh perspective.

An objective of reinforced influence and strategic partnerships in emerging countries

Through dialogue and analysis, IDDRI will seek greater influence in the policies of the governments, international organisations, public authorities, civil society and businesses that will be negotiating changes in development models. Its lines of research and proposals will focus on those scales of action able to produce the greatest leverage effect. An understanding of the unilateral reasons for putting in place sustainability policies, on all these scales, will facilitate the design of the most relevant forms of international coordination.

More particularly, in order to take account of the policies implemented by the large emerging countries and their own vision of sustainable development, IDDRI will set priority on establishing strategic partnerships with these countries' major think tanks. It will not, however, leave aside its analyses on the least developed countries, and will also affirm its ability to influence the European debates.

Innovative crosscutting issues

As the work accomplished in 2011 shows, IDDRI continues to demonstrate its ability to intervene on major environmental issues such as climate change and the transition to low-carbon economies, or the decline in biodiversity and the need to act upstream on the sectoral or territorial strategies that are responsible for this decline. It is also addressing sectoral and territorial questions such as food security and changing agricultural models or the process of creating more or less sustainable cities.

Tomorrow's challenge involves dealing with new crosscutting questions. For example, what will be the environmental and social impacts of the different competitiveness policies and major macroeconomic imbalances in an interdependent world? How can innovation policies be designed to bring about a change in models in an ever more open world? What degree of effectiveness is to be expected from the different instruments (economic tools, international commitments...) in terms of influencing change processes? How can pilot experiences lead to genuine transition? What are the new global networks and actors and how can transnational strategies, the legitimacy of multilateral bodies and subsidiarity be articulated?

Besides a clear reorientation in our current team's work—already visible in the following chapters of this annual report—strategic international cooperation, just like the new crosscutting questions, means that IDDRI's research and intervention capacity need to be progressively enhanced, based not only on the implementation of multi-year projects but also on a growth in core funding. Just as societies do, IDDRI must also adapt to change.

The IDDRI - Sciences Po partnership

Educational and scientific innovation in climate negotiations

Beyond its activities in education and the facilitation of public debate, the strategic partnership between IDDRI and Sciences Po led in 2011 to the development of a large-scale innovative climate negotiation simulation project, entitled "Copenhagen: what if events had taken a different course?".

Faced with the disappointing outcome of the Conference of the Parties to the Climate Convention, held in Copenhagen in 2009, Sciences Po and IDDRI sought to provide students with an opportunity to hold an innovative reenactment of the negotiations. Innovative in the sense that, with its dual educational and scientific impetus, the simulation constituted a real pilot experiment in social sciences, at the crossroads between international negotiations and public policy debate. The intention was not to identically replicate the negotiations, but to test, based on the symbolism and dramaturgy embodied by Copenhagen, the extent to which different representations of problems and negotiation modes could reveal pathways to reach novel solutions. It was also innovative in terms of its scope, mobilizing 160 undergraduate and graduate students and encompassing the global challenges that the decision-makers of tomorrow will have to confront. Finally, through its governance, this important educational and human experience has placed students at the heart of the event's organisation and the conduction of negotiations.

Drawing from its experience and involvement in climate negotiations, IDDRI has actively participated in the project's design through the scientific committee, as well as its implementation via the steering committee. The students attended a six-month tailor-made training programme, which was based on IDDRI's network of specialists and international negotiators. IDDRI also contributed to the supervision of students by tutors that were specialists from the represented countries.

The week of 6th to 10th June was dedicated to formal negotiations at Sciences Po, the highlight of which was a 48-hour session of continuous discussions and negotiations between official delegations, NGO representatives, IPCC experts and others, to reach an international agreement on climate policy. The final agreement, reached by the students at the eleventh hour, acknowledged the impossibility, given the current state of technology and expertise, of reconciling the objective of limiting the global temperature increase to within 2°C with the necessary development of emerging and poor countries. It thus set some ambitious, although insufficient, targets for 2035 and entrusted the task of fostering innovative and original options to a World Environment Organisation (WEO) with powerful financial (global tax) and political means.

A student group from SPEAP (Sciences Po-Experiments in Art and Politics) monitored the entire negotiation process by following the interactions between delegates to consider an alternative representation of the subject[1]. Based on this investigation, the group made a film/performance[2] that highlighted the relationship between humanity and planet earth, which was shown at the opening of the final conference.

In continuation of this event, IDDRI and Sciences Po have initiated discussions to mobilise international experts on the potential of simulations as a heuristic tool for social sciences. In addition, IDDRI-supported student initiatives[3] have been conducted, along with actions to promote such projects in various scientific and media forums.

The partnership with Sciences Po has also provided an opportunity to support the Ile de France region in the organisation of an international conference on the concept of ecological debt. Originally created by NGOs in Southern countries, this concept is now increasingly present in the debates of the North. Delegates discussed its relevance and scientific validity, assessed the extent to which it may be a point for action and analysed its practical implications for public and private stakeholders in the North.

Finally, IDDRI participated in various events organised by the Sciences Po Sustainable Development Centre on transport[4], agricultural[5] and energy[6] issues. ▮

1 Note that this project continues. While a film and exhibition have already been made, the group has been invited to participate in several seminars and conferences on the issues of negotiation techniques.

2 http://blogs.sciences-po.fr/speap/projets/projets-2010-2011/cop-15-reenactment/

3 CliMates (http://www.studentclimates.org/) and Mycity+20 (http://mycityplus20.blogspot.fr/)

4 "Fracture de mobilité - Comment une forte augmentation du prix de l'énergie agirait sur les populations les moins favorisées et l'économie ?", Wednesday 30th November

5 "Régulation des marchés agricoles : où en est-on depuis la crise 2006-2008 ?", Thursday 10th February, and "Contributions de l'agriculture à la lutte contre le changement climatique : enjeux européens et internationaux", Wednesday 25th May

6 "Quel avenir pour l'énergie solaire dans la zone Méditerranée ?", Tuesday 28th June

Agriculture and Food security

On both worldwide and regional scales, the year 2011 was one of major agricultural developments. Since the late 2000s agriculture has occupied an important place on the international agenda, and the debate over the reform of the European Common Agricultural Policy and the US Farm Bill are set to continue into 2013. Two issues, however, were particularly apparent in 2011: first was the problem of agricultural price volatility, which the French presidency has placed at the heart of the G20 agenda and is one of the issues where better international coordination could make a real difference; and second was the issue of resource scarcity (water, energy, arable land, phosphates, etc.), which is a central concern for agricultural and food systems and was identified as a vital issue on European (with a strategy for Europe to become efficient in its use of natural resources) and global agendas. Indeed, during this year of preparation for the Rio+20 conference, the concept of green economy, which is struggling to establish itself, was partially replaced or supplemented by that of the long-term viability of economies and business models in light of a set of interdependent shortages. IDDRI has contributed to all of these debates, as detailed below.

Between these two major issues - resilience to shocks in the short term, and viability and sustainability in the long term - there is an important area that remains insufficiently explored that would allow the structuring of proposals and political measures to enable the required goals to be achieved. What development trajectory for agriculture and food systems could work on both of these timescales? What would be the best transformation plan for agriculture? IDDRI's work on agriculture in 2011 for the special issue of the annual sustainable development publication, *A Planet for Life 2012*, specifically explored different perspectives on these issues that form the heart of the "Agriculture and Food" programme: is a change in agriculture necessary? If so, in which direction should such a change be made and who will carry out the transformation?

The number and diversity of contributions relating to agriculture that have been raised during the preparatory consultations for the Rio+20 conference testify to the severity of these issues, but also highlight the wide divergence of future visions for agriculture, which have, for example, been expressed during the construction of the FAO's official contribution to the conference. While the "Greening the Economy with Agriculture" expert meeting has emphasised the relevance of an agroecological model to ensure food security and reduce poverty and inequality (in accordance with the report of Olivier De Schutter, UN Special Rapporteur on the Right to Food), at the same time there has been a radical reaction from the agricultural supply sector, rejecting any approach that they see as overly biased towards this model. This has persuaded the FAO not to publish the reports from the expert meeting, limiting itself to a very truncated contribution that calls for a profound change in agricultural models and food systems in general, without going into detail. For its part, the 2011 United Nations Environment Programme (UNEP) report on the green economy has made a useful contribution (although one that has not been sufficiently debated) that compares two agricultural scenarios, conventional and agroecological, and supports the idea that for equal investment the agroecological trajectory creates more employment and growth, in Southern and Northern countries - a conclusion that should have attracted greater controversy.

More precisely, with regards to price volatility, apart from the general recurring theme of international coordination and market regulation that seems to find a consensus, what

HIGHLIGHT

Resource scarcity and development pathways in agricultural innovation

Resource scarcity has emerged as a new mantra for the justification of European environmental policies, in addition to or instead of ecosystem protection. The European strategy for a resource efficient Europe is regularly invoked as part of the process to organise new initiatives for sustainable development: this is reflected in the European debate on innovation in agriculture, to which IDDRI has contributed within the framework of the third report by foresight experts for the Standing Committee on Agricultural Research of the Directorate-General for Research. The report, entitled "Sustainable food consumption and production in a resource-constrained world" describes two contrasting world views that emerge from the recent foresight *Studies* on agricultural innovation. One vision focuses on "productivity", in which the main emphasis is on unleashing the full potential of technological innovation to improve resource use productivity, along with the capacity to substitute one resource for another. The other perspective calls for "restraint" or "moderation" (sufficiency, in the terms of the report), where the central idea is that the rapidity of global change and the scarcity of certain resources would actively drive innovation towards paradigm changes in terms of both consumption and production, to avoid the situation where, despite efficiency gains, a growth of demand would lead to an increased pressure on resources.

The issue is also growing internationally following the recent reformulation of the concept of the planet's limitations as Planetary Boundaries (Rockström et al., 2009), which has renewed the terms of the Malthusian challenge, particularly in relation to agriculture, which largely depends on these resources and also has a strong impact on them. Whether in forums on international agronomic research (CGIAR Science Forum, Beijing, October 2011, in which IDDRI held a workshop that brought together different agricultural foresight approaches) or at the Bonn conference on the intersection of water, energy and food issues (Water, Food and Energy Nexus, Bonn, November 2011) in preparation for Rio+20, the international environmental agenda has placed food security at the centre of the discussion, in a situation where the interdependent processes of the depletion or overexploitation of water, land and energy resources highlight potential systemic crises and potentially difficult but necessary trade-offs. The revival of the Malthusian issue provides, above all, the incentive to have a substantive debate on the capabilities of societies to innovate and change, at a pace that is fast enough to cope with rapid environmental change. The importance of this debate at different levels affirms IDDRI's decision to retain a major component of its "Agriculture and Food" programme, that of the issue of foresight for research and innovation systems in agriculture.

can we actually do? What firm incentives for action can be identified and negotiated? IDDRI has contributed to the organisation of a seminar on this subject with the Sciences Po Sustainable Development Chair and Proléa (French agri-food industry), and has supported Pierre Jacquet (chief economist, AFD), who has been given the task by the French Presidency to prepare a report for the French chairing of the G20. This presidency has provided a window of opportunity to put agriculture at the centre of G20 decisions, but ambitions could only be relatively modest. Without encroaching on state sovereignty and without unrealistic assumptions on the level to which the actions of financial operators on the derivatives markets can be controlled, some progress was nevertheless achieved, particularly in terms of the transparency of commodity markets and the related financial product markets, and also in terms of transparency, at least declarative, regarding the status of national stockpiles, thus laying the foundations for better internationally coordinated action.

On this theme we must also welcome the publication of one of the two first reports of the High Level Panel of Experts (HLPE) on Food Security and Nutrition for the benefit of the Committee on World Food Security. The report ("Price Volatility and Food Security") notes some progress in discussions that has allowed a greater understanding of the different analyses in terms of price volatility and the different timescales to which trends and price variability can be analysed, which relates to cyclical factors such as weather events, cycles of disinvestment in the medium term, and also to longer term trends resulting from possible global tensions between resources and the usage of agricultural biomass. Having made this analysis, the report also reaches a consensus on the necessary solutions: while a system of international stockpiles for price regulation would be problematic in terms of prices and production incentives, a physical stockpile system to combat crisis situations would bring benefits (in terms of the capacity to manage emergency situations) that outweigh its costs of establishment and operation. The progressive implementation of this still fragile institution at the interface between science and politics illustrates the

level of progress in the global governance of food security: while highly dependent on matters of national sovereignty and trade controversies, such efforts towards international governance are cautiously advancing, gaining strength when successfully combining an openness to civil society with the robustness of expert evaluation.

Resource scarcity, the second major issue of 2011, is discussed below (*see Highlight* "Resource scarcity and development pathways in agricultural innovation", p.10).

The reform of national or regional public policies is one of the central requirements to enable change in existing models. The Common Agricultural Policy (CAP) reform is a prime example to illustrate how a transition towards other models can be achieved (*see Highlight* "The Common Agricultural Policy (CAP) in transition: how are GHG emission reductions to be integrated?", p.12). But it is not only in Europe that changes can be detected, whether it is the reform of the US Farm Policy, the new Latin American agricultural policies, the challenges raised by experts and federated states regarding the effects of the federal agricultural policy in India, or the difficult equation that the Chinese food and agricultural policy must consider... In these areas, IDDRI has started to develop for partnerships in the relevant countries (Chinese Academy of Sciences, United Nations Economic Commission for Latin America and the Caribbean...), in accordance with its 2011-2015 strategic lines. Agricultural and food policy constitutes a major sovereignty issue for states, which breakdowns in trade negotiations clearly demonstrate. But by approaching the issue from the perspective of the environment, the green economy or even food security, we begin to see the emergence of a certain necessity for the international community to collectively call into question the political agricultural choices made by different countries, particularly with regard to the social and environmental impacts of national or regional policies, both within countries and beyond borders. Certainly, it is not that these policies require a normalization process, but a potentially achievable goal would allow the establishment of a mechanism to facilitate connected discussions on such policies, halfway between the peer review of environmental policies in the OECD and an exchange platform for education on the reform of agricultural policies. The following questions seem to emerge: why are certain political decisions made? Can the results be evaluated? Can experiences provide collective understanding?

Who would be a legitimate choice for such a peer evaluation? Those with involvement or responsibility in the gradual reform of the FAO and the creation of HLPE are perhaps assuming that these forums could lead to the implementation of such a global governance, but their dynamic remains very fragile. As seen in the area of policies to address greenhouse gas emissions, the assessment of sovereign policies implemented by states remains a highly problematic issue, even when the objective is more for educational purposes than for the imposition of sanctions.

Finally, another important issue, which may have significant impacts in the long term, also affects developmental pathways, namely: what are the policy orientations of aid to agricultural development, of the agricultural strategies of recipient states, and of

SUSTAINABLE DEVELOPMENT IN THE AGRI-FOOD INDUSTRY: A PROFOUND CHANGE IN MODELS?

The sustainability of our food habits presents challenges not only to agricultural models, but also to the entire value chain, particularly for the agri-food sector. The latter is facing increasing demands and difficulties in terms of sustainable development. How can we increase production whilst maintaining a healthy diet and limiting environmental impact? To answer this question, in October 2011, IDDRI, together with the New Zealand Embassy, organised a conference that brought together experts and stakeholders in the sector from France and New Zealand, two major countries in the global agri-food landscape. Adopting a systemic approach in the sector, from production to distribution, is a priority to simultaneously obtain: improvements in resource usage; modifications to the relationship between the different stages of the processing and supply industries; reductions in the carbon footprint of final products; and the assurance of food security. To achieve these goals, representatives from France and New Zealand insisted on the need for greater collaboration between stakeholders, in particular at the international scale, but also between private and public sectors at the national level. Such cross-sectoral consultation, without removing the power relations inherent in the negotiations, should allow for the harmonization of standards and, in particular, the definition of shared ambitions for one of the key sectors of sustainable development.

Note: IDDRI published a report of this seminar, "Rising to the Sustainability Challenge in the Agri-Food Sector: Perspectives from New Zealand and France", IDDRI, *Policy Briefs,* N°07/11.

HIGHLIGHT

The Common Agricultural Policy (CAP) in transition: how are GHG emission reductions to be integrated?

In 2011, the matter of a change in the agriculture and food model was also expressed by the continuing European debate on the reform of the Common Agricultural Policy which is slowly progressing towards a final decision. The proposals of the European Commission, which were widely debated during that year, seem to draw nearer to the positions expressed jointly by French and German representatives (governments, major agricultural unions), alleviating concerns that there would be a disappearance of or serious reduction in the budget for this policy (but a guarantee of stability is however at the expense of the structural funds budget), or that it would be replaced only by financial compensation or taxation of positive or negative environmental externalities. To what extent are calls for a strong public policy - justified as a (temporary) policy of transition towards a different agricultural model - purely rhetorical or tactical, simply to guarantee the continuation of this policy? Or does this represent a real transition project? The current debate on the scope of the greening of the first pillar and its ability to influence current development pathways is far from reaching a consensus. In 2011, IDDRI attempted to envisage, beyond the 2013 reform, to what extent the integration of objectives to reduce the agricultural sector's greenhouse gas emissions could lead to changes in this sectoral policy.

A seminar organised jointly with Proléa has enabled the assessment of the potential room for improvement in different agricultural systems, by differentiating between CO_2 emissions related to the direct or indirect consumption of fossil fuels (fuel, manufacture of nitrogen fertilizers), emissions of nitrogen oxides associated with the application of these fertilizers, the possibility of the storage or release of soil carbon according to management techniques, methane emissions derived from the digestive fermentation of ruminants, CO_2 or nitrogen oxide emissions related to livestock dung... In each case, there is room for improvement that partly converges with the productivity enhancement of systems. But to what extent could the establishment of an emissions reduction target lead to one system being favoured to the detriment of another? For example, it is very difficult to compare carbon efficiency for intensive and extensive livestock systems without taking into account their other environmental impacts. For now, innovative solutions to reward greenhouse gas emission reduction efforts are being proposed, under the auspices of, for example, the climate group of the Caisse des Dépôts. However, the establishment of a national system for emission reduction in agriculture leads to intense political debate on the issues of asymmetry that exist between the levels of effort required by different sectors and different countries, as shown by the example of the integration of agriculture in the tradable emission permit system in New Zealand.

AGRICULTURAL DEVELOPMENT AID: SHOULD ONE MODEL BE CHOSEN?

In the framework of its work on agricultural development strategies, IDDRI organised a seminar in partnership with the French Development Agency (Agence française de développement, AFD) on the subject of the report "Agroecology and the Right to Food" by Olivier De Schutter, the UN Special Rapporteur for the Right to Food. In parallel, IDDRI supervised a more specific study on the conditions and the opportunity for a change in the sub-Saharan African agricultural model. Indeed, while the need for renewed support for agricultural development seems unanimous given the objective of feeding nine billion people by 2050, the means differ on how this objective should be achieved while satisfying the different components of food security. Among these options, agroecology seems to provide scientifically validated guarantees for environmental, social and economic sustainability and would enable the achievement of global food security. However, for the moment, given the current conventional green revolution model, the paradigm shift that agroecology implies, particularly in terms of agricultural research and the organisation of sectors, only gives it the status of an alternative model that must prove its consistency and relevance in the short and long terms.

donors? The return of investment in agriculture, which was much heralded following the food crisis of 2006-2008, is still uncertain. But, new funds are clearly available, such as those of the Bill and Melinda Gates Foundation. How do these donors and investors choose between the different technical models raised in expert debates, between making adjustments to the first green revolution or considering a paradigm shift to agroecology? In 2011, IDDRI's preliminary work on this subject indicated a preference for the green revolution model, and a greater caution regarding agroecology (*see Box* "Agricultural development aid: should one model be chosen?", p.12). But how can donors make decisions whilst taking into account the need to link short-term efficiency in terms of food security, with long-term sustainability? Who effectively decides on the choice of model? How can a learning process be organised to assess the social, environmental and economic impacts of the choices made, and ensure that it will still be possible to change trajectory?

The year 2011 has therefore been pivotal, leading to expectations that 2012 will offer opportunities to get to the heart of the issues driving transitions in agriculture and food systems.

Biodiversity

Alongside the stakeholders, both in France and abroad, eager to contribute to specific changes in the way in which biodiversity is managed (NGOs, ministries, international organisations, research institutions and companies), in 2011 the Biodiversity programme endeavoured to (i) strengthen the analysis and appraisal of management systems, their effectiveness, their contradictions and their adverse effects; (ii) promote policies and measures to fix the problems diagnosed; and (iii) inform the debate on the transformation of the development models responsible for biodiversity loss, by preparing the transition in the sectors of activity the most directly involved.

To achieve this, in 2011 the Biodiversity programme structured its work around three strategic areas:

- The implementation of the three pillars of the "Nagoya deal": access and benefit sharing, the Strategic Plan 2011-2020, and the Strategy for Resource Mobilization;
- Economic approaches to biodiversity, between economic assessments, "market-based" instruments and public policy;
- Ocean and coastal zone management, with a particular focus on the regional level and biodiversity in areas beyond national jurisdiction.

Implementing the Nagoya deal

2010, International Year of biodiversity, closed with mixed feelings. It witnessed success after success, at the same time as reaching a crisis point in terms of the increasingly troubling paradox created by the concomitance of the alarming decline in the global state of biodiversity and the intensification of efforts to remedy this. After the relative success of the 10th Conference of the Parties to the Convention on Biological Diversity with the Nagoya deal, 2011 was a return to the (harsh) reality of the implementation of commitments made: the Protocol on Access and Benefit Sharing (ABS); the Strategic Plan 2011-2020 and its 20 targets for 2020; and the Strategy for Resource Mobilization. In 2011, the Biodiversity programme actively contributed to interpreting the challenges involved and facilitating the implementation of these commitments.

IDDRI, which was involved in negotiations prior to the adoption of the ABS Protocol, worked to clarify the issues surrounding its implementation. At the core of a network of European experts (*see Box* "Access and benefit-sharing: a year on from Nagoya", p.15), IDDRI stressed both the importance of the Nagoya Protocol for the CBD and North-South relations, and the limitations of the text finally adopted. Links were also established with high seas governance, a field in which ABS is becoming increasingly critical for the future of international negotiations.

The 2020 targets, made relatively "soft" by the nature and wording of the Strategic Plan, have been given special attention by IDDRI since the targets work on a different level to that of the legal obligation of Parties. Indeed, several of these targets concern – for the first time in such an explicit manner within the CBD framework – the underlying causes of biodiversity loss, such as agricultural pollution, overfishing or adverse economic incentives. Moreover, the quantified targets for protected areas (10% at sea, 17% on land), which are realistic if ambitious, call for particular care regarding the degree of protection formally granted to the areas in question and the conditions for the monitoring, control and surveillance of their management.

As regards the third pillar of the Nagoya deal, financing, in 2011 IDDRI pursued its work[1] to highlight the lack of robustness of needs assessments as well as of the resources already available, and to inform the international discussions that should result in clarifications and major decisions by the 11th Conference of the Parties in Hyderabad in 2012.

Finally, IDDRI maintained its support, alongside its French and international partners, for the process to launch an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), whose operational structure is more than ever the subject of heated debate.

1 Feger, C., Pirard, R. 2011. Assessing funding needs for biodiversity: Critical issues. *IDDRI, Policy Briefs,* N°06/11.

Economic approaches to biodiversity

The idea of applying economic tools to the environment is not a new one. Since the 1960s at least, there have been more and more calls to mobilise these instruments to justify and instigate biodiversity conservation, and activity in this field has increased. This movement is characterised on the one hand by economic (or monetary) assessments. On the other hand, hopes have been pinned on the use of "market-based" instruments – in other words those that use the concepts of price and market trade – in a context of State withdrawal, budget crisis and a certain lack of stakeholder trust in the public authorities.

In 2011, IDDRI stepped up its efforts to elucidate the issues raised by these changes and to explore the real benefits that the conservation community could reap from them. The Biodiversity programme therefore worked to achieve a better understanding of the concepts, the political-institutional context in which they operate, and the conditions for the usefulness and effectiveness of the analyses and instruments built on these foundations. The stakes are high, of course, within the framework of domestic or European policies, but also increasingly within that of official development assistance, whose operators are more than ever a clear target for IDDRI's research on the economics of biodiversity. Three key questions were addressed:

- Is it truly pragmatic to develop economic assessments of biodiversity? The investigations conducted by IDDRI using case *Studies* and a systematic literature review suggest that these assessments are in fact remarkably underused in decision-making processes.
- What links do "market-based" instruments actually have with science and economic tools on the one hand, and with public action on the other (*see Highlight* "Market-based instruments for biodiversity and ecosystem services", p.16)? A background paper[2] and a multi-stakeholder conference[3] have shown just how crucial these empirical and theoretical questions are to ensure dispassionate discussions about the potential risks associated with these instruments (such as financialisation) and to identify options for improving them.
- Could economic analysis not be put to better use for biodiversity than by giving it a monetary value? In particular, what role could be played by the economic and financial analysis of the industries or sectors of economic activity that have the greatest impact on biodiversity loss? The economics *of* biodiversity or economics *for* biodiversity: a question that IDDRI is helping conservation stakeholders to grasp.

Ocean and coastal zone management

The oceans and coasts are an exceptional source of biodiversity, which is currently under increasing threat from the range and intensity of human activity. The concentration of societies and economic activities in coastal areas has a major impact on the integrity of marine ecosystems and on all associated ecosystem services. At the same time, the ocean frontiers are being continuously pushed back, and the exploitation of marine resources, whether fishery, mineral or genetic, is becoming ever more intense, distant and deep. Yet both at sea and on land, at the global and local levels, the responses provided by the international community remain inadequate to guarantee their conservation and sustainable use. In 2011, IDDRI therefore continued to foster better international coordination in the specific fields and at the levels required.

STRENGTHENING THE REGIONAL SYSTEM IN THE SOUTH-WEST INDIAN OCEAN

The year 2011 marked additional investment by IDDRI in the Western Indian Ocean, through its participation in two important processes currently underway as part of the Nairobi Convention. IDDRI first provided its legal and technical expertise during meetings to draw up the Protocol on Integrated Coastal Zone Management (ICZM), an instrument aimed at guaranteeing the sustainable development of coastal zones in the region. In addition, with stakeholders agreeing that the regional institutional framework, which is somewhat lacking, constitutes a major obstacle to the implementation of the legal agreements adopted, IDDRI prepared a study to present the institutional and financial options for improving the capacity of the regional system to support States in fulfilling their obligations. The study will help to clarify discussions on this subject during the upcoming Conference of the Parties in 2012. This research was facilitated by a partnership concluded with the Institute of Marine and Environmental Law at the University of Cape Town (South Africa), which hosted Julien Rochette for a six-month study visit.

2 Pirard, R., Broughton, E. 2011. « Les instruments de marché pour la biodiversité : la nature à tout prix ? ». IDDRI, *Policy Briefs,* N°02/11.

3 Conaré, D. 2011. « Les instruments de marché pour la biodiversité : la nature à tout prix ? ». IDDRI, *Policy Briefs,* N°02/11.

HIGHLIGHT

Applying foresight methodologies to the creation of marine protected areas beyond national jurisdiction

In 2010 in Nagoya, the international community undertook to create a network of marine protected areas (MPA) by 2020 covering at least 10% of marine and coastal zones. However, in areas beyond national jurisdiction, which represent almost two thirds of the world's seas and oceans, the legal framework for the creation of these MPAs seems to be incomplete. It is in this context, and to contribute to the ongoing discussions at the international level, that IDDRI, in partnership with IUCN and the French Marine Protected Areas Agency, organised a seminar on legislative foresight in September 2011 in Boulogne-sur-Mer, which was attended by around 20 international experts.

This event was based on an innovative approach that applied foresight methods to the field of international law, through the development and analysis of four plausible and coherent scenarios describing a legal framework for the creation and management of MPAs in areas beyond national jurisdiction by 2030.

The first of these scenarios, which envisaged the total absence of any global agreement by 2030, was built on the prevalence of the regional approach to the creation and management of MPAs. The second and third scenarios were based on the hypothesis of a global agreement adopted by the international community in the form of an implementation agreement for the United Nations Convention on the Law of the Sea or a protocol to the Convention on Biological Diversity respectively. Finally, the last scenario presented a radically different approach assuming the prohibition of any economic activity in the high seas, unless specific authorisation is granted.

The seminar concluded in particular with the need to act at the three levels – regional agreements, the United Nations Convention on the Law of the Sea, and the Convention on Biological Diversity – in order to establish a robust legal framework for the creation and management of MPAs in areas beyond national jurisdiction.

Following this event, IDDRI published a report presenting and analysing these four scenarios with a view to helping the stakeholders concerned to determine their own strategies during future negotiations[1]. The key lessons from this seminar have been and will continue to be disseminated among the French authorities and stakeholders, as well as within the international bodies that deal with these issues (such as expert seminars, the United Nations working group on high seas biodiversity, and the IUCN World Conservation Congress in Jeju in 2012).

1 Druel, E., Billé, R., Treyer, S., 2011. A legal scenario analysis for marine protected areas in areas beyond national jurisdiction. Report from the Boulogne-sur-Mer seminar, 19-21 September, *Studies* N°06/11, IDDRI IUCN Agence des aires marines protégées.

The Biodiversity programme thus worked steadily to support the implementation of integrated coastal zone management in the Mediterranean and in the South-West Indian Ocean. Its research revealed the decisive nature of not only the content of the texts adopted at the regional level[4], but also of their legal scope, of enforcement or sanction mechanisms, and of the way in which States and stakeholders appropriate them. IDDRI also raised the fundamental question of institutional, organisational and individual implementation capacities[5], analysed these and helped to develop them[6] at the regional level as well as in the States concerned (*see box* "Strengthening the regional system in the South-West Indian Ocean", p.14).

In 2011, IDDRI also signed a partnership agreement with the French Marine Protected Areas Agency on the governance of high seas biodiversity. Within this framework, the two partners worked to understand the issues of international meetings concerning the high seas, whether at the regional or global level. Several reports and briefing notes were produced to inform the debate on specific

4 Rochette, J., Wemaëre, M., Billé, R., du Puy-Montbrun, G. An introduction to legal and technical aspects of the Mediterranean ICZM Protocol. UNEP, MAP, PAP/RAC. To be published in 2012.

5 Rochette, J., Billé, R. 2011. Are ICZM protocols the new silver-bullet for sustainable coastal development? IDDRI, *Policy Briefs*, N°03/11,4 p.

6 Rochette, J., Billé, R. 2011. Strengthening the Western Indian Ocean regional framework: An analytical review of potential modalities. Indian Ocean Commission.

ACCESS AND BENEFIT-SHARING: A YEAR ON FROM NAGOYA

At the 10th meeting of the Conference of the Parties to the CBD, the successful adoption of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) has marked the end of seven years of difficult negotiations on ABS. This binding instrument finally provides the basis for the implementation of the benefit sharing objective of the Convention. In 2011, in collaboration with the Agence française de développement (AFD), IDDRI organised an international seminar aimed at assessing the implications of the ABS Protocol for biodiversity governance as well as its implementation challenges and potential contributions to sustainable development. Discussions highlighted, *inter alia*, how it leaves room for different – and sometimes divergent – interpretations of key obligations. A back-to-back expert meeting on outstanding issues was then convened as an informal opportunity to discuss collaborations and to set the future global ABS research agenda. This informal expert network now operates under various forms of partnerships and has resulted in the successful development of international research projects on biodiversity-related research and innovation.

Market-based instruments for biodiversity and ecosystem services

"Market-based" instruments for biodiversity and ecosystem services associate high science-media visibility with problematic confusion about their content. At present, talks within the CBD are highlighting the potential of these "innovative" instruments for conservation in terms of additional financial input to that of States, initiatives to promote them are flourishing, and development agencies are working to implement them. IDDRI is therefore focusing its efforts on this subject in order to inform the debate and to steer stakeholders' decisions in the right direction.

For IDDRI, 2011 marked the culmination of two parallel research efforts, both empirical and theoretical, launched in 2006 and 2009 respectively. The first, concerning payments for environmental services (PES)[1], draws attention to the complex relations between these mechanisms and the concept of the market on the one hand, and public policies on the other. The second, which deals with the use of economic assessments of biodiversity in decision-making processes, finds that these are remarkably underused[2], even if one of the voices often put forward for their mobilisation specifically refers to market-based instruments.

On this basis, and further to initial clarification work[3], IDDRI organised an international conference in partnership with the *Fondation d'entreprise Hermès*, entitled "Market-based instruments for biodiversity: Nature at any cost?"[4]. The aim of this conference was to stimulate discussions between different stakeholders from the scientific, political, non profit and industrial spheres. It revealed the many goals assigned to these instruments, and was the opportunity to present some of them (payments for ecosystem services, eco-certification, tradable permits and reverse auctions). The debates also questioned the links between market-based instruments and public policies, and the legitimacy and equity issues they raise, as well as their supposed efficiency gains. Finally, civil society was able to express its hopes and fears about what is often seen as the "commodification of nature".

This landmark event fostered the creation of a network of experts which successfully submitted a project proposal, coordinated by IDDRI, to the ERA-NET BiodivERSA. Entitled Invaluable, it will bring together 10 European partners for a period of three years beginning in 2012, including CIRAD (Centre de coopération internationale en recherche agronomique) (Institut de recherche sur le développement) and IRD in France. Invaluable will study different aspects of market-based instruments including: their theoretical foundations; their emergence in the discourse; their influence on stakeholders' motivations and institutional arrangements; and their social and environmental impacts. The initial findings seem to indicate that, for better or for worse, we are still far from a process of commodification (in terms of standardisation) of ecosystem services and biodiversity.

Unquestionably, a good deal of research still needs to be done and disseminated among decision makers to ensure that the hopes pinned on market-based instruments are not dashed in the long run. Conversely, the appropriate development of these instruments to halt the loss of biodiversity and ecosystem services, and the possibility of changing scales in their deployment, requires critical assistance, and IDDRI intends to actively contribute to this movement.

1 Pirard, R., Billé, R. 2011. Paiements pour services environnementaux : de la théorie à la pratique en Indonésie. *VertigO - la revue électronique en sciences de l'environnement*, 11(1) : 22 p ; Pirard, R. 2011. Payments for Environmental Services (PES) in the public policy landscape: "Mandatory" spices in the Indonesian recipe, *Forest Policy and Economics,* Special issue on Global Governance, in press.

2 Billé, R., Laurans, Y., Mermet, L., Pirard, R., Rankovic, A. 2011. À quoi servent les évaluations économiques de la biodiversité ? *Ecorev*, pp. 48-54.

3 Pirard, R. Broughton E. 2011. What's in a name? Market-based Instruments for Biodiversity. IDDRI, *Studies*, N°03/11.

4 Conaré, D. 2011. Les instruments de marché pour la biodiversité : la nature à tout prix ? IDDRI, *Policy Briefs*, N°02/11.

matters such as marine protected areas[7] (*see Highlight* "Applying foresight methodologies to the creation of marine protected areas beyond national jurisdiction", p.15) or the inclusion of high seas concerns in certain regional seas conventions.

Faced with the growing impacts of one activity, the exploitation of offshore energy resources, which is set to develop at ever greater distances and depths in the coming years, IDDRI undertook in 2011 to facilitate international talks to achieve better regulation[8]. The Biodiversity programme consequently launched a technical, economic and legal analysis of the sector to assess the validity and feasibility of a more restrictive international system. Mobilising experts with complementary profiles, IDDRI thereby created an informal forum to provide input for the discussions underway within different bodies such as the G20 or the International Maritime Organization.

Finally, armed with this substantive work on ICZM, the high seas and offshore drilling, IDDRI was able to contribute to shorter-term processes such as the transatlantic dialogue on ocean governance[9] or the preparations for the Rio+20 conference[10].

7 Druel, E. 2011. Marine protected areas in areas beyond national jurisdiction: The state of play. IDDRI, *Working Papers,* n°07/11.

8 Chabason, L. Offshore oil exploitation: a new frontier for international environmental law. IDDRI, *Working Papers,* n°11/11.

9 Cavalieri, S., Cantral, L., Billé, R., Cicin-Sain, B., Orbach, M. (Eds) 2011. Policy recommendations for improved EU and US cooperation in maritime governance. Calamar Project report, European Union, 36 p.

10 Billé, R., Druel, E., Rochette, J. 2011. Advancing the oceans agenda at Rio+20: where we must go. IDDRI, *Policy Briefs,* n°5/11, 8 p.

Climate

In 2011, IDDRI's Energy-Climate change programme activities centred around three major issues: the global governance of climate change; the relationship between climate policies, economic growth and employment in Europe; and the linkages between climate policies and socio-economic development in the major emerging countries (China, India, Brazil and South Africa).

The global governance of climate change

Following the reassertion, during the Cancún Conference in late 2010, of the key role the UNFCCC plays as the only legitimate forum for negotiation on the global governance of climate change – even if its organisation needs to be modified to increase its efficiency and its articulation with other processes improved –, IDDRI worked in 2011 to analyse and answer the following questions: how can the international climate change regime be strengthened, within the framework of the UNFCCC, in order to increase its level of ambition as well as its credibility? And how can negotiations on international finance, energy and trade be best used to contribute to reducing GHG emissions?

In Durban in late 2011, the negotiations were built around the European proposal for a roadmap to a global, legally binding agreement after 2020, in exchange for a second commitment period under the Kyoto Protocol. IDDRI played an active role in this debate, tabling a proposal[1] that was the subject of numerous discussions with negotiators prior to and during the Conference of the Parties. The outcome of Durban is close to the solution proposed by IDDRI (*see Box* "The Durban Agreement", p.18).

Although the negotiations did not focus on scaling up ambitions for emissions reductions, since most of the countries are still in the process of defining the policies and measures that will enable them to meet their targets for 2020, IDDRI showed that the climate objectives (especially that of limiting global warming to 2°C) were a co-construction between scientists and policy-makers[2]. In 2015, when the international agreement is reviewed, and after the publication of the Fifth IPCC report, science will once more have to be central to negotiations.

Regarding finance, the negotiations made some progress in the governance of the Green Climate Fund (GCF), which is to the credit of the GCF Transitional Committee (TC). Indeed, this UNFCCC organisational model represents an interesting innovation that could be replicated in the future for other subjects. But as regards sources of funding, which should total 100 billion dollars per year by 2020, the negotiations have not moved forward. IDDRI is associated with an Agence française de développement (AFD) initiative, along with other aid agencies and national and regional development banks, aimed at learning from the funding of development, measuring the impact of aid, and justifying the use of certain instruments for financing emissions reductions and adaptation to climate change[3].

Finally, concerning the linkages between trade and climate change, IDDRI and FERDI organised an international conference to study the potential of different options for the coexistence and complementarity of the two rounds of negotiation (*see Box* "The international trading system faced with the challenge of climate change", p.28). Within the WTO framework, IDDRI also worked with ICTSD to launch an initiative for an agreement on access to clean energy.

1 Spencer, T. 2011. A Legal Form Proposal for Durban and Beyond. IDDRI, *Working Papers*, N°21/11.

2 Guérin, E., Cointe, B., Ravon, P.-A. 2011. 2°C: the history of a policy-science nexus. IDDRI, *Working Papers*, N°19/11.

3 Valadier, C. 2011. Key lessons from international financing mechanisms for the Green Climate Fund. IDDRI, *Working Papers*, N°18/11.

Climate policies, economic growth and employment in Europe

In 2011, Europe – and the eurozone in particular – suffered an unprecedented series of crises, of which the public debt crisis is just one manifestation. It reveals the long-term weakening of potential growth in Europe, which no longer suffices to finance the welfare state. The context was therefore unfavourable to the implementation of ambitious climate policies in Europe; all the more so because this European economic crisis should not overshadow the global crisis that looms if nothing is done to combat climate change. Yet innovation for a low-carbon economy could establish a framework for the recovery of long-term growth in Europe; investment in low-carbon energy, transport and building infrastructure could boost growth in the medium term; and carbon taxation could provide short-term fiscal consolidation.

In 2011, IDDRI's strategy was therefore twofold. It examined ways – in the context of the crisis – to strengthen and supplement European climate policy tools, especially the emissions trading system and the Energy Efficiency Directive, and methods to ensure that the transition to a low-carbon economy is part of the response made to the European crisis.

THE DURBAN AGREEMENT

In the agreement hastily obtained in Durban, there are three positive elements, even if the compromise is weak and the outcome still largely unsatisfactory. First, the Durban deal strengthens the principle that the international agreement on climate change in 2020 must be legally binding. However, the specific legal nature of the agreement will continue to be the subject of heated debate in the coming years, since the three options set out in the text are sufficiently dissimilar, and vague in certain cases, to give rise to differing interpretations. Next, the Durban agreement establishes the Green Climate Fund, which is intended to help developing countries by supporting their efforts to reduce greenhouse gas emissions and to adapt to climate change. The sources of funding for the 100 billion dollars per year from 2020 pledged during the Copenhagen summit nevertheless remain to be defined. Finally, the Durban deal acknowledges that there is a gap between the emissions reduction targets for 2020 and the actual reductions needed to have a reasonable chance of limiting global warming to 2°C by the end of the 21st century. New targets for 2025 or 2030 will therefore need to be adopted to provide the coherence required.

The EU Climate and Energy Package still has many shortcomings, which must be remedied to set Europe on the path to long-term GHG emissions reductions, and to ensure Europe's climate policy contributes to the recovery of its growth and to energy security. With this in mind, IDDRI, along with Climate Strategies and a number of European partners, set up a major project aimed at proposing reforms of the package (*see Highlight* "The EU Climate and Energy Package", p.19).

The emissions trading scheme is the mainspring of European climate policy, yet the price of allowances is still very low (less than 10 euros per ton). IDDRI actively participated in the debate on the short-term action and structural changes needed, suggesting that the set-aside of allowances for phase III should be included in negotiations on the emissions cap for phase IV, in order to raise the price in the short term by improving medium-term predictability[4].

More generally, the European debate on energy and climate policies has two major weaknesses. The first stems from the lack of articulation between the European level and the national level in the definition and implementation of energy and climate strategies. The second is the result of segmentation between climate policies on the one hand, and energy, industrial and broader economic policies on the other. To correct this imbalance, IDDRI has launched several initiatives. The aim of the first is to study the orientations of the energy and climate policies adopted by different Member States, as well as the possibilities for coordinating these policies to form a coherent whole at the European level. This is the framework for the research carried out with Global Chance to compare French and German energy systems and policies (*see Box* "Energy policies in France and Germany: an instructive comparison", p.21).[5] The goal of the second initiative is to highlight the linkages between climate and industrial policies. The work on renewable energy falls within this context[6]. The third, with ADEME, seeks to understand the impacts of climate policies on employment.

4 Spencer, T., Guérin, E. "Time to reform the EU Emissions Trading System (ETS)". *European Energy Review,* 23 January, 2012.

5 *L'énergie en Allemagne et en France - Une comparaison instructive. Global Chance*-IDDRI, 2011.

6 « Le développement des énergies renouvelables, ou comment concilier politique environnementale et politiqueindustrielle ? », Seminar, Paris, 20 September. With Céline Marcy.

HIGHLIGHT

The EU Climate and Energy Package

Climate Strategies and IDDRI launched a study which finds that there are two main reasons to strengthen the EU Climate and Energy Package (EU CEP). First, the current 20% emissions reduction target is too low to reach the long-term EU goal of reducing emissions by at least 80% by 2050 at acceptable costs. Reducing emissions by only 20% by 2020 would lead to a full decade of declining GDP between 2040 and 2050 to reach the 2050 goal. Second, the current EU CEP does not efficiently address competitiveness issues.

Increasing the emissions reduction targets and focusing on fostering low-carbon goods and services innovation would increase the competitiveness of European firms producing low-carbon technologies. In the meantime, estimates of the amount of production losses resulting from tighter ETS caps vary, but evidence suggests that free allocation is not a sustainable way to address leakage.

Immediate action is therefore needed on the EU CEP. To have maximum impact, action to strengthen the package should target sectors with high levels of inertia and long-lived capital stocks, such as infrastructure in the building and transport sectors, and foster low-carbon technology innovation, rather than simply delivering short-term abatement, for example through fuel shifting.

The study therefore recommends the implementation of new policies to meet the European 20% energy efficiency target, focusing on the two weakest links in current policies: the major retrofit of the existing building stock; and the modal shift from high- to low-carbon means of transport. The stringency and predictability of the EU ETS need to be increased. From an economic, environmental and political perspective, setting a stringent 2030 EU ETS cap is the most relevant, efficient, and realistic option. Evidence suggests that the order of magnitude of the 2030 cap should be 45-50% below 2005 levels. And further use needs to be made of the EU budget to support the achievement of climate and energy objectives in Central and Eastern European countries, while the auctioning of allowances during phase III of the EU ETS will also generate new fiscal revenue, at least 50% of which should be used for climate purposes.

Climate policies and socio-economic development in emerging countries

The active participation of the major emerging countries (the BASIC countries, China, India, Brazil and South Africa, but also South Korea, Mexico, Indonesia and Turkey, among others) in the collective effort to reduce GHG emissions is essential. It must be translated into the definition of low-carbon development strategies that are consistent with the goal of limiting global warming to 2°C, and into the adoption of policies and measures to meet these targets. These must take into account the requirements of this group of countries, especially their need to continue to grow rapidly in order to absorb the considerable pockets of poverty that subsist, as well as the characteristics of each of these countries.

However, similar efforts are underway in these countries and in Europe to represent the nature, obstacles and benefits of the transition towards a low-carbon economy, along with comparable attempts to implement policies that put a price on carbon and foster the creation of low-carbon industrial sectors.

China, for example, is expected to set up seven pilot emissions trading schemes by 2013 in several regions, provinces or cities, and is planning the launch of a national scheme in 2015. India is preparing to introduce an energy efficiency market from 2012, covering nine industrial sectors (including electricity). And South Africa is about to vote a law on the implementation of a carbon tax from the fiscal year 2013-2014.

In order to facilitate exchanges between stakeholders involved in the shift to a low-carbon economy, IDDRI launched the Learning Platform initiative on energy and climate policies in Europe, China, India and Brazil (*see Highlight* "The Learning Platform initiative", p.20).

Adaptation

In addition to its involvement in mitigation issues, in 2011 IDDRI continued to focus on the problem of adaptation to climate change. We are able to characterise the consequences of climate change with increasing accuracy, even if uncertainty persists as to the physical processes at work and the scale of their impacts, but the challenge now is to develop and implement appropriate strategies to prepare for this change. IDDRI supported the emergence of such strategies by working both at the heart of the scientific community and at the interface between science and decision making, while also considering "environmental changes" more generally and the risks they involve for human societies. This research revolved around four priority areas: vulnerability and adaptive capacity; migration, environment and development; environmental risk and security; and the global governance of environmental risk.

The Learning Platform initiative

The aim of the Learning Platform on Climate Policies, launched in 2011 with the support of the European Commission, is to enhance capacities within countries to implement climate policies and to build more trust between countries. The initiative promotes international experience sharing in order for countries to learn from each other's successes and failures. It also helps, through a better understanding of other countries' efforts and actions, to clear up suspicion, which often affects bilateral relations and international negotiations.

The Learning Platform supports three different types of activities: papers aimed at comprehensively describing all policies, whether already in effect or planned, sectoral or structural, that contribute directly or indirectly to emissions reductions in a given country; the identification of similar experiences in other countries to draw lessons from these; and analysis of how these lessons can be applied to a different context. Technical seminars provide policy makers with all the information and analysis they need to successfully implement climate policies. And public conferences and face-to-face meetings improve our understanding of other countries' efforts and actions in general, and provide a means of rapidly addressing specific issues when there is an obvious misunderstanding.

The Learning Platform is a multi-stakeholder process, which brings together policy makers responsible for the design and implementation of climate policies, policy analysts who assist policy makers in the design of these policies and assess their performance, and businesses, which are affected by and support the implementation of these policies.

The Learning Platform focuses on climate policies (Nationally Appropriate Mitigation Actions). However, working on policies is inseparable from working on modelling (Low Emissions Development Strategies) and on accounting and audit (Measurement Reporting and Verification). Specific issues addressed by the Learning Platform include: strengthening the European Emissions Trading Scheme (EU ETS); ensuring consistency between the EU ETS, energy efficiency and renewable energy policies; building carbon markets in China; comparing long-term energy modelling in China; building the energy efficiency trading scheme in India; and designing policies to reach the Indian carbon intensity target.

The Learning Platform already operates in the European Union (EU), China and India. It will be launched in Brazil and South Africa in 2012, and will be progressively extended to other countries.

DOMESTIC DEBATE AND ACTIONS

Compare the tools that are used for:
Ex-ante identification of abatement potentials
Ex-post assessment of policies

Draw the lessons from the implementation of policies aiming at reducing:
Energy per unit of output ratio
Emissions per unit of energy ratio

→ Build self confidence that high targets can be reached at low costs

INTERNATIONAL NEGOTIATIONS AND COOPERATION

Facilitate mutual understanding
What are other countries doing?
What challenges are they facing?

Indentify areas for cooperation
Technology
Finance

→ Build shared trust that other countries will deliver on their targets

www.iddri.org/Themes/Climat/Learning-Platform

The year 2011 marked the end of the European CIRCE project (Climate Change and Impact Research: The Mediterranean Environment), which IDDRI co-organised for four years and which generated an unprecedented level of mobilisation at the regional level to model climate change, assess its impacts and propose adaptation strategies. As part of this project, IDDRI pursued its efforts to develop analyses of vulnerability and adaptive capacity more suited to the needs of decision makers, from the local to the global level (*see Box* "Assessing vulnerability to climate change to inform policies and negotiations", p.21). Similarly, 2011 marked a transition on industrial vulnerability issues: what needs do industries have in terms of climate data (nature and time frame), and to what extent can climate scientists use modelling exercises to meet these requirements? The provision of "climate services" for adaptation to variability and climate change is crucial today, and IDDRI is working with climatologists and industries to improve these.

Finally, IDDRI continued to make environmental migration in general, and climate migration in particular, a priority area of its activity. Based especially on case *Studies* throughout the world and on climate change scenarios, the analyses conducted have revealed the need for scientific research on migratory processes, whether linked to natural disasters or to environmental changes with slower impacts. Better understanding the empirical reality of migration makes it possible to adapt policy responses, which are often limited to a deterministic approach (*see Highlight* "Environmental migration: towards better policy responses", p.22).

Around these different priority areas and projects, the need was felt in 2011 to consolidate and formalise a certain number of partnerships with key stakeholders in the field of adaptation and migration, in order to assure channels for delivering research more directly to the actors concerned. This is particularly the case with the International Organization for Migration, the Asian Development Bank and the Centre for Sustainable Development (Bangladesh). Through its activities and partnerships, IDDRI thus established itself in 2011 as an internationally recognised operator in adaptation and migration issues.

ENERGY POLICIES IN FRANCE AND GERMANY: AN INSTRUCTIVE COMPARISON

Comparing the energy situations in France and Germany and their evolution over the last 20 years enables us to avoid the most common clichés about the characteristics of these two countries in this field. The comparative analysis conducted by IDDRI and Global Chance shows similarities in the situations and changes observed, especially in terms of reducing energy intensity, but also notable differences at the level of both energy demand and supply, which are the result of the very different public policies implemented since the beginning of the 2000s. In Germany, when the toughest phase of massive reunification efforts ended, the government adopted nuclear phase-out as a medium-term objective, focusing on energy efficiency and, above all, renewable energy. The confirmed success of German industry (creation of activities and jobs) and its considerable lead in terms of exports raise questions, in comparison, about the constancy (or conservatism) of French energy policy. France, which has traditionally made considerable efforts in the field of energy efficiency, has continued to consume and especially to produce electricity in excess in order to support its nuclear policy, and has so far sacrificed the development of renewable energy.

ASSESSING VULNERABILITY TO CLIMATE CHANGE TO INFORM POLICIES AND NEGOTIATIONS

International funding for adaptation to climate change is intended to support the "most vulnerable" as a matter of priority. But aside from the sometimes rash assumptions made about the specific vulnerability of the poorest people, we are as yet unable to properly assess population vulnerability or accurately identify its determinants. This is why IDDRI launched the CapAdapt project in 2011 for a three-year period. Supported by the Agence nationale de la recherche (ANR), within the framework of its young researchers programme, its objective is to use case *Studies* in Bangladesh and Kiribati to analyse the determinants and types of vulnerability and the societies' capacity to adapt to climate change. Based on this empirical knowledge, the aim will then be to demonstrate how a better understanding of vulnerability and adaptive capacity can help to clarify the discussions underway on (i) the implementation of adaptation policies, plans and projects, (ii) the distribution of international funding, and (iii) "climate" migration.

Environmental migrations: towards better policy responses

For several years, IDDRI has been working to analyse environmental migration and to propose appropriate solutions to this problem: what is its empirical reality? How can migrant rights be better protected? Which policies would help to promote migration as an adaptation strategy?

One of the highlights of 2011 was the signing of a strategic partnership with the International Organization for Migration (IOM). This memorandum of understanding formalises cooperation that has existed for a long time, especially in the field of environmental migration *Studies*. A partnership of the same type was also established with the Centre for Sustainable Development (CSD) at the University of Liberal Arts Bangladesh (ULAB), which will make it possible to host researchers in the field in one of the countries most concerned by environmental migration.

Another key event of the year was the publication by IDDRI of the first volume of the *State of environmental migration*, in collaboration with the IOM and the Sciences Po Paris School of International Affairs (PSIA). This publication, which is intended to be an annual series, looks at the state of environmental migration in the world, and strives to describe and understand the complex relationships between environmental changes and migration flows through eight case *Studies*. It is based on papers written by students on the "environment and migration" course taught at Sciences Po.

Furthermore, the publication by the British government of the report entitled *Foresight: migration and global environmental change* provided a valuable summary of the state of the knowledge on environmental migration. IDDRI invited the authors of the report to present it in France, after having contributed to it by producing a critical review of the different estimations and predictions of the number of people who could be displaced in the coming years. This critical review was then published in the journal *Global Environmental Change*. More generally, this report reflects the growing interest of governments and international organisations in the issue of environmental migration. In June 2011, IDDRI thus participated in the Nansen Conference, organised by the Norwegian government to present guiding principles for a better protection of environmental migrants. And, in September 2011, IDDRI took part in a regional conference organised by the Asian Development Bank with the objective of facilitating regional cooperation on this question.

The protection of environmental migrants' rights remains a core element of IDDRI's work. In terms of research, IDDRI is participating in the ClimMig programmes (financed by the Austrian Climate and Energy Fund) and CADHOM (financed by the ANR), which are both aimed at examining the respect of these rights by international organisations and governments. The findings of a seminar co-organised by the universities of Columbia and Harvard in Bellagio were also published in the journal *Science*. The goal of this seminar was to define a framework for the protection of people forcibly displaced by their governments in anticipation of climate change impacts.

Urban Fabric

Although it is generally agreed that the city is both a subject and an object of sustainable development, a place of challenges, problems and solutions, and also an actor in its own fate and trajectory, there has been a simultaneous emergence of scepticism and criticism of this "façade", and two antagonistic reactions have surfaced: first, "enough of the environment"; and second, citizen empowerment in relation to the public authorities.

But almost 20 years after the Earth Summit in Rio (1992), the individual and collective responses to the problems of sustainable urban development (including urban sprawl and social cohesion) fall very short of the challenges. However, if climate change is to be addressed, this will have to be done in the cities: cities are responsible for 75% of CO_2 emissions, and the level (and therefore the reduction) of urban energy consumption depends on practices and ways of life, technologies and the spatial and functional organisation of cities.

So what can be done to ensure a collective will emerges and attitudes and behaviours change, along with technologies, systems and governance methods? What policy guidelines could be drawn up for sustainable cities? We still know very little about the city, a complex system that is often poorly understood. Urban developers (in the broadest sense) are therefore calling for analysis in order to better understand the workings of urban dynamics. Given the potential path dependencies, it is imperative that we inform and accompany these actors in order to jointly redirect and govern urban dynamics towards greater sustainability. This interface between the sphere of knowledge and that of collective action and behaviour is the backbone of the Urban Fabric programme launched by IDDRI in 2009, whose overall objective is to explain the mechanisms of the urban fabric, to thereby facilitate a shared understanding of the issues, to put them into a global perspective, and to accompany the transition towards a sustainable path.

For the Urban Fabric programme, 2011 was the second full year of implementation of the orientations of the multi-annual work programme. This programme continued to focus on the four areas identified in 2009: urban fabric stakeholders; public policies and urban development paths; the legitimacy of urban sustainability policies; and the role of cities and their networks in global governance.

Urban fabric stakeholders

The aim of this focal area is to examine the distribution of powers, competences and responsibilities (who governs what?), the use made of these (how?), the rationalities at work and the elements structuring these rationalities (why?). This involves analysing the interface between private and public stakeholders, the financialisation of real estate and its effects on city structure, and also the distribution between the different public levels of responsibilities and capacities to act and the uses made of these, especially by characterising the articulation between decision-making and technical forums.

In 2011 the Club Ville ("cities club") was set up, bringing together the different occupations and actors that make up the urban fabric, with the goal of 1) providing a shared understanding of the leverage for urban development relevant to the changes needed, 2) testing the recommendations made in specific fields or projects, and 3) conducting the necessary advocacy work. The Club Ville aims to overcome the fragmentation of positions and sectoral and/or disciplinary views, which may be contradictory, in order to integrate them into a pragmatic approach to sustainability (*see Highlight* "Club Ville", p.25).

IDDRI also continued its work on the financialisation of real estate and its effects on city structure, with the risks of failure so strikingly illustrated by the sub-prime crisis in the United States. In addition, IDDRI pursued the research project on financing access to safe water and sanitation in developing

cities, based on case *Studies* in Africa and Asia. This project is being conducted in partnership with the *Institut de Recherche pour le Développement* (IRD) and focuses on models of the distribution of long-term costs between stakeholders and the socio-political dynamics underlying these compromises.

Public policies and urban development paths

The key questions are: which regulations for which subject, for what purpose and along which path? This means examining the measurement of "sustainable development" performance in cities and in companies responsible for the delegated management of urban services, the desirable and possible paths for achieving sustainability targets, and finally the instruments, and therefore the quality of the signal given by public policies, enabling developments in the urban fabric. The debate on the quality of the message conveyed by public policies instantly raises the question of their articulation over time: how can public intervention meet the immediate demands of sustainability as well as being a signal and an organising factor in the long term?

IDDRI is helping to answer this question as part of a research project launched in late 2009 by the French National Research Agency (within its "Sustainable cities" programme) on local climate plans and the Integrated Territorial Economic Approach for the Climate (AETIC). The aim of this AETIC project is to develop an original methodology to define and prioritise the initiatives needed to meet local GHG emissions reduction targets, based on technical-economic criteria. The area chosen is the Grenoble urban district. We start with the premise that ambitious objectives must be accompanied by a rigorous framework for selecting and prioritising the initiatives needed, and ensuring the economic efficiency essential to the implementation of climate policies that are sustainable in the long run. As with any public policy, climate action must achieve a certain level of efficiency, which usually means developing new tools. We also consider that a systematic economic assessment of potential emissions reductions in a given area will help to better weigh up the importance of local action and the conditions for its expression, thereby making it easier to set up local climate plans. This research project is being conducted in partnership with French research entities and companies.

The urban fabric is characterised by the combination of public and private decisions within an area, determining the possible development paths, but also the irreversibilities. These issues are addressed in a doctoral thesis in economics on the costs of the transition towards low-carbon urban systems, more specifically in the transport-urban planning dimension, which defines urban structures. Based on the development of urban path scenarios for 2030 for the Grenoble urban district and of transport-land use modelling, the thesis provides a quantitative and qualitative economic analysis of the transition.

The legitimacy of urban sustainability policies

The core questions of this focal area first relate to the renewal of the legitimacy of political action at the urban level through the need for sustainability: how does sustainable development renew the discourse, tests and practices for justifying action, especially public action? Which forms of legitimacy are mobilised? Which criteria for justice are defined

CLIMATE CHANGE AND CITIES: FIRST ASSESSMENT REPORT OF THE URBAN CLIMATE CHANGE RESEARCH NETWORK (ARC3)

In 2011, Benoit Lefèvre was Coordinating Lead Author for *Climate Change and Cities: First Assessment Report of the Urban Climate Change Research Network (UCCRN),* published by Cambridge University Press. Like the IPCC, the UCCRN is an international network of experts in the urban dimension of climate change issues (adaptation and mitigation); it is administered by Columbia University, MIT and CUNY.
The chapter that Benoit Lefèvre coordinated (Chapter 6, "Climate change and urban transportation systems", Part III, "Urban sectors"), analyses the systemic relationships between current and future climate change, the infrastructure and organisational dimensions of the urban transport sector, and the dynamics of urban spatial organisation, especially in terms of the real estate market. This chapter also provides a framework for analysing the role and challenges of climate adaptation and mitigation for urban transport systems, and discusses the strategies to be implemented and the policies and financial instruments to be mobilised.

Club Ville

The aim of IDDRI's Cities Club is to foster an understanding, shared by the different stakeholders, of the appropriate urban development tools for the changes needed. Based on the examination of case *Studies*, a common conceptual framework will be defined to understand how the current urban fabric mechanisms are impacted by the objectives of sustainable development, in both its social and environmental dimensions. Overcoming the fragmentation of positions and sectoral and/or disciplinary views, which may be contradictory, in order to integrate them into a pragmatic approach to sustainability, is the goal, but also the challenge, for IDDRI's Cities Club. Thanks to its expertise in multi-stakeholder focus groups (at the French, European and International levels) and business clubs, as well as to its legitimacy with political and institutional stakeholders, IDDRI is a useful setting for developing this kind of forum for discussion, recommendations and advocacy, which is currently lacking.

IDDRI's Cities Club has identified a certain number of focal areas in order to provide solutions to the problem of financing urban production:

1) "Measuring and enhancing value creation": in the assertion that urban production is not profitable, the real issue is undoubtedly more one of "profitability" than of the means of production.

2) "Tools to facilitate the co-production of cities": the aim is to explore the barriers and tools of co-production between public stakeholders, between public and private stakeholders, and between private stakeholders.

3) "The development of new urban economic models": the issue of the economic model of the city (who pays for what in the city, and when?) is fundamental. How can the costs and benefits of the sustainable city be articulated, when they do not arise at the same time, they cannot necessarily be monetised, and they may not concern the same payers and beneficiaries?

The objectives include:

1/ taking stock and providing a global understanding of the dynamics that produce the city, in particular the partnership arrangements between public and private stakeholders in the definition and implementation of projects.

2/ putting the long-term perspective back on company and public authority agendas, by working in common areas;

3/ identifying the synergies possible between the actions of different stakeholders;

4/ rethinking public-private relations as well as the business models of private operators, and more generally the economic model of the city.

The members of IDDRI's Cities Club, limited in number, are primarily the companies that play a key role in urban production. All urban occupations and viewpoints are represented. French networks and regional authorities are also associated.

in the conduct of change and in the redistribution of gains and losses? Second, this focal area examines the integration of non-public stakeholders, especially from civil society, in the definition of public policies and, thus in the co-construction of the city. This dual approach involves several types of research: foresight *Studies* on behavioural changes, but also analyses to reformulate the environmental and social objectives of urban policies through the prism of long-term urban change.

This focal area was fuelled in 2011 by the continuation of the PROMOV research project (prospective analysis of urban lifestyles in 2050), in partnership with sociological, geographical and urban planning research laboratories, Futur Facteur 4 and Énergies Demain.

In 2011, a project was also initiated with funding from the French Ministry of Ecology, Sustainable Development, Transport and Housing (MOVIDA programme), establishing the partnership between IDDRI and CREDOC, on the determinants of the "emerging" behaviours of French people, focusing more

GRAND PARIS

The subject of Grand Paris (Greater Paris) has been emerging slowly but surely for the last three years, with a legal and institutional content that has resulted in the vote of the "Greater Paris law", and the creation of the Société du Grand Paris (Greater Paris transport network). At the same time, Paris Métropole (Metropolitan Paris) was developing within another institutional context, and, from a different perspective, has gradually incorporated a growing number of local authorities from the Paris urban area, thereby making their action coherent.

The Urban Fabric programme has been involved in this development on several levels, participating in different conferences, seminars and publications, especially the chapter on « Le développement durable du Grand Paris, un long point de suspension » published in 2010 by L'Harmattan, in the 4D Association's sustainable development collection, then « Le millefeuille glocal » in issue 1 of the *Revue du Grand Paris*. It also actively participated in the Grand Paris talks (entitled "Greater Paris: global city, community life") on 6 October 2011 and 24 February 2012, on the subject "towards a new regional economy". It is hoped that this series of seminars and corresponding publications, organised jointly by Véolia Environnement, EDF, the University of Paris Dauphine and the SNI group, will be continued.

Mobility, the other side to fuel poverty

Fuel poverty is usually approached through its building dimension, since this is better identified and understood than its transport/mobility component, which emerges as a more exploratory issue. Although the *Observatoire National de la Précarité Energétique* (national fuel poverty observatory) launched in 2011 and supported by the ADEME and the French Ministries of Ecology and the Economy includes this issue in its duties, it nevertheless concentrates on housing. This may be explained by the fact that there are relatively few stakeholders in the field capable of addressing this issue, compared with those dealing with housing[1], but also by a difference in how serious the impacts for the housing component are perceived to be (exposure to cold) in relation to those for mobility.

In this context, IDDRI felt it necessary to insist on the importance of this issue and on the analysis of the dual dimension of fuel poverty. The organisation of a seminar on this subject on 30 November 2011, in cooperation with the Sciences Po Chair in sustainable development and the SNCF (French National Railroad Company), is an example of IDDRI's work in this field; the Urban Fabric programme also works with EDF and VINCI to explore this question.

Some key points from IDDRI's work

Generally speaking, vulnerability is defined as a state of tension that may lead to a situation of fuel poverty. Vulnerable households are those which are the most exposed to hazards, whose impacts place them in a situation of insecurity where cumulative effects are then felt (debt, health and social impacts, etc.). Where fuel is concerned, poverty linked to transport and mobility is a considerable challenge, with 23% of households affected for an area such as the Lyon urban district.

From a social point of view, and contrary to belief, it is not necessarily the poorest households that are the most exposed to oil price increases. Vulnerability in fact concerns middle-income households living in the outer suburbs and travelling more than twice as many kilometres as the daily average. However, vulnerability as it appears in *Studies* about the 2000s is not the direct consequence of an increase in fuel prices – long-term trends show that the share of household budget spent on fuel has been relatively stable since the 1970s, as has the cost of energy services –, but rather the result of an urban system that generates automobile dependency and increases the distances travelled.

The analysis of fuel vulnerability and poverty and that of the solutions required must therefore be put back into the context of a debate on the mechanisms of urban production.

1 Indeed, there is a notable absence of "mobility" stakeholders in the list of organisations involved in the creation of the observatory, which could be equivalent to the housing stakeholders: Agence national de l'habitat, EDF, GDF SUEZ, Fondation Abbé Pierre pour le logement des défavorisés, Haut Comité pour le Logement des Personnes Défavorisées (HCLPD), Union sociale pour l'habitat (USH).

specifically on energy consumption in housing and transport. The aim of this project is to contribute to discussions on the appropriate institutional mechanisms and public policy instruments to accompany the lifestyle changes needed to achieve the "Factor 4" target (a 75% reduction in emissions by 2050).

The city, an international actor in sustainable development

The aim of this focal area is to analyse the role of cities and regional authorities in the global governance of sustainable development, and to help to mobilise city networks with a view to changing this governance. How can the city, as a place of governance, be articulated with the other organising powers? How can the different decision-making and technical forums be linked?

In 2011, this part of the Urban Fabric programme involved the continuation of discussions with the main city networks (Eurocities, UCLG) or advocacy groups (ICLEI), especially on issues relating to climate negotiations. IDDRI also developed its partnerships with sectoral networks such as Bridging the Gap or SLoCaT, which led to the production of *Policy Briefs* looking at progress in the inclusion of urban issues in international negotiations.

Cambridge University Press published the First Assessment Report of the Urban Climate Change Research Network (ARC3) in 2011, to which IDDRI contributed as Coordinating Lead Author. Finally, IDDRI was Lead Author for the draft versions of Chapter 16 of the IPCC Fifth Assessment Report on "Cross-cutting investment and finance issues", working particularly to introduce elements of local finance into this chapter (*see Box* "Climate change and cities: First Assessment Report of the Urban Climate Change Research Network [ARC3]", p.24).

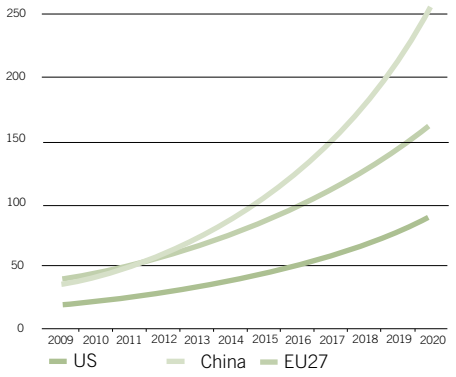
Governance

The year 2011 saw the financial crisis develop into a sovereign debt and euro crisis, with an acceleration of economic catch-up in the emerging countries, whose GDP growth rates have returned to their average pre-crisis levels, unlike Europe, which seems doomed to several years of low growth. Economic emergence, which characterised the BASIC countries (Brazil, South Africa, India and China), is turning into economic convergence, through the dual effect of a downturn in the OECD countries and an acceleration in the "South". Moreover, the economic catch-up is coupled with a political catch-up, as shown by China's initiatives to test an emissions trading scheme inspired by the European system (the European Union Emissions Trading Scheme, or EU ETS) in six of its provinces. The paradox of the convergence is that it is not (yet) accompanied by the diplomatic exercise of the power the BASIC countries have gained through their economic performance. Whether for finance and trade or for sustainable development in the broad sense, as these issues are debated in the preparatory committees for the Rio+20 summit, the BASIC countries have no common offensive strategic position in terms of cooperation on the challenges of the moment. They present a united front, but only take action individually, leaving global governance as it stands, clearly struggling to resolve the "global public bads" at the core of its mandate.

Europe and the emerging countries in the "green" race

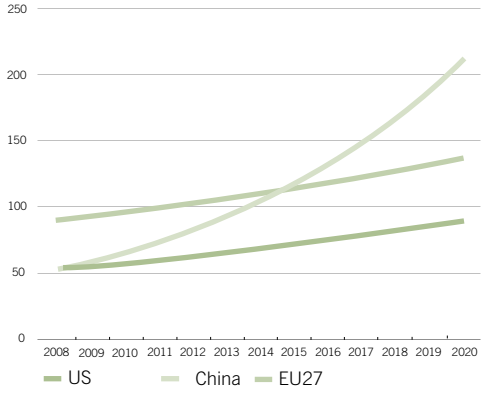
Since the highly publicised launch of the recovery plans in both emerging and OECD countries, the "green" race has had a special place in the political discourse. Presented alternately as an opportunity and as a threat, it establishes innovation, and especially technological innovation, as a key element giving the countries or firms that foster it a clear advantage.

Figure 1. Investment in clean energy technology
Evolution of the investment in clean energy technology (in billion $ 2009)



Source: IDDRI based on Pew Research Center

Figure 1. Installed renewable capacity
Evolution of the installed renewable energy capacity between EU27, China & US in GW



Source: IDDRI based on Pew Research Center

These two Charts are more interesting for what they reveal than for what they show. Computed on the basis of Pew Research Center forecasts, they reveal the fear of the US lagging behind China. Forecasts by European-based renewables associations such as European Wind Energy Association and European Photovoltaic Industry Association give a far less dramatic upsurge in China's installed renewable capacities until 2020.

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Climate policies and employment

Climate policies give rise to contradictory ambitions, as they are both criticised for their negative impacts on competitiveness and employment, and hailed as the miracle solution to the exhaustion of the Fordist growth model and the welfare State with which this system is associated. Recent talks in France on the carbon tax have shown, for example, that it was presented alternately as the core element of a redeployment of taxes from salaries to pollution and energy consumption, and as an additional burden for agricultural and industrial sectors that have been buffeted by globalisation.

What do we know exactly about the relations between emissions reductions and the creation or destruction of jobs? This question structured the workshop organised by IDDRI and ADEME (French Energy Agency) on 21 October 2011, which was attended by modellers, members of parliament, union representatives, senior civil servants and members of civil society. To begin with, the workshop focused on the reasons the climate policies emblematic of mitigation – carbon pricing policies – still face resistance, incomprehension and even hostility. Next, more specifically, it determined the extent to which employment is a key variable of political action or inaction on mitigation, among other explanatory variables.

The findings of the workshop first revealed the paradoxical nature of employment in the public debate: omnipresent in election campaigns, it is only imperfectly and marginally represented in most macroeconomic energy and climate policy simulation models. Work force movements between economic sectors and sub-sectors, as well as labour market entry and exit, are not detailed. The scientific communities specialising in the labour market seem to be disconnected from those working on climate policies, even if integration efforts are being made on both sides

The workshop was also the opportunity to challenge the overly naive assumption that public policy inertia is explained by the imbalance between the economic expertise available and the needs and demand expressed by policy makers and governments. Indeed, it appears that although macroeconomic simulation models have certain limitations in terms of their related social requirements, these limitations are stressed more by the modellers themselves than by decision makers or potential sponsors. The shortcomings of the models have very little to do with public indecision. The discussions held during the workshop suggested that the models contribute to the thought process, rather than to decision-making.

This workshop was part of the European research programme SustainableRIO, on the difficulties of ensuring the operational translation of sustainable development into public policy. The results of the project will be discussed during an international conference organised by IDDRI in late 2012.

THE INTERNATIONAL TRADING SYSTEM FACED WITH THE CHALLENGE OF CLIMATE CHANGE

The coherence of international trade rules and of those governing climate policies has been the subject of heated debate since 2005, which was the first year of implementation of the Kyoto Protocol. Since then, civil society and some governments have expressed fears of a loss of competitiveness and of carbon leakage, motivating in turn the creation of "carbon border taxes" or the outright postponement of mitigation efforts. The possibility of taxing carbon at the border raises a number of technical and legal questions. More substantially, the contribution of international trade and trade policies to the mitigation goals the UNFCCC member countries could set themselves for 2020 remains a moot point.

Informing the debate on the interaction between trade and climate policies was the objective of the international conference organised by the FERDI and IDDRI on 24 June 2011 in Paris, attended by American, Canadian, Swedish and French experts. The conference helped to identify the steps needed to avoid a "collision course" between trade policies and the operation of the multilateral trade system.

In the specific context of debt and low growth in European economies, IDDRI inaugurated a work programme in 2011 on the economic foundations of this green race, its content, its expected results in terms of growth and employment, and its implications for the distribution of value added in the two sectors chosen as the first field of application for its research, photovoltaics and wind power.

Presented to the European Parliament in autumn 2011 and published by IDDRI, this initial work helped to better identify the conditions (public policy, domestic market capture, access to credit, etc.) for the emergence and deployment of innovative technologies, and refutes the idea that disruptive innovation is the key to trade leadership and growth. Current competition between "green" sector operators depends less on patents than on gaining market share using public instruments – access to public procurement, public investment, feed-in tariffs, trade defence

Challenges and opportunities for carbon pricing

The economic instruments aimed at pricing carbon are now increasingly present in the range of public solutions to tackle climate change. As part of its activities, IDDRI is analysing both the political processes and the economic impacts of the (sometimes failed) implementation of these instruments.

In France, while the government is attempting to curb its mounting debt, taxes are back on the political agenda. Nevertheless, projects for future tax reform leave out the introduction of a carbon tax. The SustainableRIO project examined the rejection of the French carbon tax in 2010: IDDRI looked at why the implementation of the fiscal instrument to tackle climate change failed, even though theory concurs with its environmental and economic efficiency. The qualitative analysis of comments made in 2011 by 60 senior civil servants, members of parliament and experts, and the findings of the workshop entitled "Miracle or curse: climate policies and employment" on 21 October 2011, enabled us to suggest two avenues for thought, linked to political acceptability and the relationship between science and decision-making. First, considering that the approach to the implementation of a carbon tax was neither environmental (carbon leakage) nor budgetary (because of the lump sum that was contemplated), and that this tool represented a constraint for the economy, the majority of the political elite remained sceptical about its effectiveness, if not its usefulness. Second, the econometric models used by the French government departments to inform decision-making processes struggle to highlight the macroeconomic effects – which are nevertheless positive according to experts – of carbon taxation in the short term. The results of this unprecedented survey will be presented during an international conference in late 2012.

In China, the 12th Five-Year Plan (2011-2015) continues along the path of low-carbon development and growth sustained by the emerging and strategic sectors (new technologies, renewable energies). Economic instruments for carbon pricing are of growing importance to the Chinese government, which aims to achieve this pathway at least cost. Pilot projects for an emissions trading system will be launched in 2013, followed by a national market in 2015. An environmental tax would be introduced, including a potential carbon tax. According to IDDRI's analyses in association with its Chinese partners, a carbon price of 1 euro/tCO_2 would have a very low impact and could be politically acceptable. However, to have a significant effect in terms of the low-carbon economy, a price of 10 euros/tCO_2 would be preferable and efficient with a redistribution of wealth. Our *Studies* also show that the development of the trading system is more advanced than that of the tax for institutional reasons. Questions about the design of the scheme, such as which sectors to include, the ceiling and the allocation of permits, remain to be determined during the pilot phase. With regard to feasibility, the current statistical system should guarantee the successful launch of the emissions trading scheme, although further work is needed on the MRV (measurement, reporting and verification) mechanism.

policies (anti-dumping, countervailing measures), indirect subsidies or export restrictions. For all of these policies, known in trade jargon as behind-the-border measures, the World Trade Organization rules are the least precise, unlike those governing the border measures that have underpinned the legitimacy of the GATT for the last 65 years. The conditions of international competition for renewable energies, and more generally for "green" sectors, seem to be the real problem facing Europe, much more so than the potential technological leadership of one country outstripping all of its competitors through the magic of a patent. This does not relieve Europe or its trade partners of the need to invest in research and development and to encourage companies to follow suit; but the result of this investment provides only one guarantee – staying in the race –, which depends on the use of proactive public policies. Hence the importance of regulating the use of these policies though agreed multilateral rules.

Conducted from a European perspective, this preliminary research is intended to be continued and developed in Europe's trade partner countries where other production and innovation mechanisms are at work. This is the case of the BASIC countries, where the amount of investment made and the increase in export market share in specific segments of the renewable energy sectors seem to justify in retrospect the publicity surrounding the concept of the green race in the American and European discourse. The motivations and the context of catch-up or leadership for the BASIC countries in green technologies nevertheless still need to be clarified, as do the exact conditions of competition and the prospects for the international division of labour within these globalised sectors. Let us recall that IDDRI has been working since the Copenhagen climate summit to set up an initial benchmarking exercise with the BASIC countries on the specific content of their climate policies. The Governance programme

is extending and developing this activity through the integration of renewable energy and green technology policies in a context of globalisation.

Changing emissions, growth and employment trajectories

Since 2009, IDDRI and its Governance team have been endeavouring to identify the factors of inertia in the implementation of sustainable development policies, and in particular of climate policies in Europe and the rest of the world. Combating global warming is a clear priority for the EU. Its commitment to reducing greenhouse gas emissions is based on the argument, which has become a familiar one since the Stern Review, that the cost of inaction is higher than that of mitigation. In short, it is in the interest of the European countries to rapidly commit to tackling climate change because of a cost-benefit calculation enabling them, in the long run, to reap the rewards of efforts made today. This argument means that early action makes economic sense, but its application nevertheless remains politically difficult. Indeed, internalising the cost of emissions by placing a price on carbon explicitly affects activity – GDP – and therefore implicitly affects employment. The concept of the green economy has certainly been put forward, particularly since the financial crisis of 2008, to counter the idea that carbon "pricing" implies a net loss of employment. However, although "green jobs" could be created to accompany the transition to a low-carbon economy, there is a persistent belief that this shift would be detrimental to employment in the short term. This view is a factor of political inertia, and because of its implications for public action or inaction, it should be examined in the light of available scientific knowledge. This was the goal of ADEME and IDDRI as part of a project focusing on the impacts of climate policies on growth and employment.

This work was composed of three different activities: a literature review of macro-climate models; interviews with senior civil servants, members of parliament and union representatives on the reasons for abandoning the carbon tax (*see Highlight* "Challenges and opportunities for carbon pricing", p.29) and the potential liability for expected impacts on employment; and finally the structuring of two workshops, the first bringing together those who commission, use and provide models, and the second attended by two distinct communities, macroeconomists and social science researchers specialising in climate issues.

Our research enabled us to measure the gap between the importance given to employment and unemployment in the political discourse (especially during election campaigns) and their under-representation in the macroeconomic models dealing with mitigation and energy transition. In all of the interviews conducted to date as part of the project, as well as during the two workshops we organised, employment and unemployment were the core variables of the discussions, but also the ones omitted by the models, as if a kind of resignation led those commissioning and producing models to consider unemployment as a disaster that cannot be defined by reason or equations, a fatality specific to political decisions that no policy could challenge (*see Highlight* "Climate policies and employment", p.28). Solving the conundrum posed by the under-representation, or even absence, of formalised determinants of employment

RIO+20, LOOKING BACK AT 20 YEARS OF SUSTAINABLE DEVELOPMENT

In order to contribute to preparations for the United Nations Conference on Sustainable Development (Rio+20, June 2012), IDDRI produced several publications in 2011 aimed at identifying its challenges and objectives. First, Lucien Chabason (*"20 ans après Rio, un développement qui n'a rien de durable"*) painted a mixed picture of the goals set by Agenda 21 in 1992: although certain institutional mechanisms have gained real political and legal legitimacy, the implementation of the Rio principles is proving inadequate. More specifically, Raphaël Billé, Elisabeth Druel and Julien Rochette (*"Advancing the oceans agenda at Rio+20: where we must go"*) then highlighted the main options available for making headway in the protection of marine ecosystems at Rio. In addition, Sébastien Treyer, Raphaël Billé, Lucien Chabason and Alexandre Magnan (*"Powerful International Science – Policy Interfaces for Sustainable Development: organise their proliferation, accept and clarify their political role"*) called for a global governance of sustainable development based on more efficient science-policy interfaces, which play a strategic and political role. Finally, Laurence Tubiana and several leading figures from the world of research and policy-making launched an appeal to the international community: *"Now is the Time! Why "Rio+20" must succeed"*.

International interfaces between science and politics: design issues or power issues?

Through the various fields of international environmental negotiations (climate, biodiversity, but also food security), IDDRI is gaining experience of the multiple types of international interface systems that exist between science and politics.

These cross-cutting analyses were the subject of a panel of specialists on international relations at the International Studies Association's Annual Convention in March 2011 in Montreal, Canada, which resulted in a specific contribution to the consultation on global institutions for sustainable development in preparation for the Rio +20 conference.

In 2011, IDDRI continued to follow the international negotiation process on the establishment of the IPBES (Intergovernmental Platform on Biodiversity and Ecosystem Services), while participating in the work of the Foundation for Biodiversity Research (FRB), at the request of its partners, in the design of a French equivalent to the IPBES. The negotiation conference held in Nairobi in October 2011 specified the governance and modus operandi of the IPBES. However, there remained many crucial questions to discuss at the concluding negotiation (Panama, April 2012) before the decisions on the establishment of the IPBES could finally be made: regarding the legal aspects of its creation, the institutions that the secretariat will be affiliated to, its internal structures, the geographic location of the secretariat and its funding. Ultimately, the negotiation process is taking a considerable amount of time (compared to the more rapid establishment of the IPCC), which is likely to hinder the strengthening of biodiversity policies on a global ("Nagoya Strategy") and national scale. These delays are characteristic of the current state of international cooperation on the environment, which is marked by the chronic distrust of emerging countries regarding any new initiative, and a decrease of European influence in international environmental negotiations.

Faced with a proliferation of initiatives on the interface between science and decision-making in international environmental regimes, in November 2011 IDDRI published a contribution to the Rio +20 process, according to which the three major elements to ensure the effectiveness of these interfaces (credibility, legitimacy and relevance) cannot all be optimized within a single organizational system, meaning that tradeoffs will have to be made. We must therefore acknowledge and explain the strategic role of these interfaces, which differs from one theme to another: thus, for instance, while science put acid rain onto the agenda, an oft-cited example, this issue differs greatly from the need for the scientific evaluation of national agricultural and food policies, which is one of the critical issues for the expert panel on food security. It is only once this strategic role has been identified that it will become possible to determine the most appropriate organisation.

and unemployment in energy transition and macroeconomic models in the broad sense is one of the anticipated contributions of the project, which will continue in 2012.

Sustainable development institutions and their reform

The Rio Declaration of 1992, building on the Stockholm Declaration adopted some 10 years earlier, is a set of relatively innovative principles whose implementation has proved sometimes daring and often problematic. It places human beings, rather than nature, at the centre of concerns for sustainable development (Principle 1) and asserts the sovereign rights of States to manage the resources within their jurisdiction (Principle 2). This is therefore a far cry from the common management of the planet, especially as there is no reference here to heritage or common goods; States must nevertheless exploit their resources and achieve their development while limiting negative externalities and impacts in areas beyond their jurisdiction.

The effects of this assertion of national sovereignty and of the priority given to development are still being felt in international climate and biodiversity negotiations, and represent a real watershed in relation to the Stockholm Conference (1972). Indeed, although it became clear in the 1980s that environmental negotiations could no longer disregard development issues, it had not been envisaged, at least by environmental NGOs, that the Rio Summit would in fact mark the beginning of the loss of legal and political autonomy in environmental matters and their de facto subordination to development demands.

In the run-up to the conference to mark the 20th anniversary of the Earth Summit (Rio+20), IDDRI has continued its research activities to evaluate the performance of Rio (1992) and to suggest the basis for a reform of its principles, particularly highlighting conflicts of perception and interest and identifying methods for settling these disputes or disagreements (*see Box* "Rio+20, looking back at 20 years of sustainable development", p.30).

TASK FORCE POLICY AND MECHANISMS FOR ACHIEVING ENVIRONMENTAL TARGETS OF THE 12TH FIVE-YEAR PLAN (2011-2015) IN CHINA

This task force evaluates the performance of China's environmental policies during the 11th FYP (2006-2010), provides several policy recommendations based upon international experiences on key policy issues for ensuring the achievement of environmental targets during the 12th FYP, and designs a roadmap for long-term pollution reduction up to 2050. The task force is co-chaired by Ms. Wang Jirong, vice director of The National People's Congress Environmental Resources Committee, and former China's vice minister of Environment, and Dr. Dan Dudek, vice president of Environmental Defense Fund (EDF, United States). Several intermediate meetings have been held in China and the United States since the kick-off meeting in July 2011. Key proposals from partners will cover (but not limit to) areas such as pollution reduction performance evaluation system, inter-policy cooperation mechanism, sectoral total emissions control and restructuring policies, vehicle emissions control, agricultural emissions reduction, water treatment, etc. A final report will be completed and submitted to China's Premier by the next Annual General Meeting of the CCICED in November 2012. IDDRI contributes to this task force by working on European policies and experiences of air and water pollution controls.

IDDRI's institutional framework

Founded in 2001, IDDRI is a Foundation of public interest. The new statutes of the "Research Foundation Institute for Sustainable Development and International Relations", known as IDDRI (Institute for Sustainable Development and International Relations) were approved by the French Council of State on 4 November 2009.

Since 2007, two strategic partnerships structure IDDRI's activities: one with Sciences Po in Paris (complemented with a partnership with Columbia University under the Alliance Programme) and another one with the Foundation for international development studies and research (FERDI) in the framework of the Development and Global Governance Initiative (IDGM), launched in 2009 and supported by the French Development Agency. This initiative has been reinforced in 2011 by the IDGM+ project "Conception of new international development policies based on research results. Reinforcement of the Development and Global Governance Initiative". The project was selected by the Ministry for Higher Education and Research to be part of the Laboratoires d'excellence (excellency labs) projects (LABEX), financed through the government's Investissements d'avenirs (Invest in the future) programme. Put forward by FERDI, in partnership with IDDRI and CERDI (Centre for studies and research on international development), this project aims at developing a European interface of international scope, between research and policy recommendation concerning key themes regarding sustainable development and international development.

The questions under study concern on the one hand the evaluation of development policies and their reconfiguration in order to integrate sustainable development issues (climate change, biodiversity, trade and the environment) and on the other hand issues of international coordination and organisation of global governance.

IDDRI's board is made up of 15 administrators, divided into three constituencies

Founding members

- EDF, represented by Claude Nahon
- EpE, represented by Claire Tutenuit
- GDF-Suez, represented by Françoise Guichard
- Institut Veolia Environnement, represented by Jean-Pierre Tardieu
- Lafarge, represented by Kareen Rispal

Ex officio members

- Ademe, represented by François Moisan
- AFD, represented by Robert Peccoud
- CIRAD, represented by Pierre Fabre
- CNRS, represented by Francoise Gaill
- INRA, represented by Michel Eddi

Qualified persons

- Jean-Michel Charpin
- Michel Griffon
- Jean Jouzel
- Bruno Latour
- Jean-François Soussana

Executive board

- Jean Jouzel, Chair
- Françoise Guichard, Vice-Chair
- Claude Nahon, Treasurer
- Michel Eddi, Secretary

A **government's commissioner**, designated by the Ministry of Interior, attends the board's working sessions with an advisory status. He sees that the foundation's statutes and the public interest dimension of its activity are guaranteed.

A word from Jean-Michel Charpin

"Concerns for sustainable development were raised and carried out by activists, actors of the public debate. Now they have to be backed up by expertise, such as the one developed by IDDRI."

Scientific council

This multidisciplinary council ensures the monitoring of emerging scientific issues in order to guide the work of the teams and to support the board in identifying new areas of research. Claude Henry chairs the council.

In 2010, through its reflections on global public goods, the scientific council contributed to the formulation of IDDRI's new strategic project to re-establish the appropriate place for international coordination strategies in relation to other processes of change in public policies, and also to show the central role of innovation policies, and their limitations, in a world that is increasingly open but where a number of differentiated national and regional industrial policies are being rebuilt.

Following this initial contribution of the renewed scientific council, the meeting on 19th December 2011 enabled the fundamental issue of resource scarcity to be addressed, which is at the origin of major European policy initiatives («A resource efficient Europe») and also of the economic transformation project, that institutions such as the United Nations Environment Programme (UNEP) are seeking to put onto the Rio +20 conference agenda under the heading of "green economy". To what extent are the economic regulations already in place able to cope with resource scarcity and the degradation of natural capital? Are there planetary boundaries, that could highlight the need to implement public policies that more radically encourage a change in development modes?

While the notion of scarcity remains controversial, the scientific council has focused on the specific conditions of competition, unequal access, conflicts and vulnerability that emerge in situations where the accumulated demand for a resource brings it dangerously close to exhaustion. In this perspective, even if we hold the view that technological innovations will ultimately allow the substitution of such scarce resources with others, there remains a problem of shortages given the inertia of our technical and social systems, especially since the depletion processes of several resources (phosphorus and fossil fuels for agriculture, for example) are mutually reinforcing: and therefore social, political and economic turbulence must be anticipated. But how can the analysis account for both the risks and the costs of short-term shocks and long-term vulnerability? There is a question of innovation in terms of both analysis methodology and the intervention in political debates. The scientific council has therefore recommended a continuation of the the building of scientifically well grounded arguments that demonstrate the risks taken by countries when they refuse to take collective action, and also to design coalitions able to support these arguments in debates.

IDDRI's scientific council is made up of 13 members

- Philippe Aghion (Harvard University, Sciences Po)
- Scott Barrett (Columbia University)
- Ian Goldin (Oxford University)
- Pierre-Henri Gouyon (Muséum National d'Histoire Naturelle, AgroParisTech, Sciences Po, CNRS)
- François Guinot (CNRS, Académie des technologies)
- Alain Grandjean (climate-energy expert at the Grenelle de l'environnement)
- Claude Henry (Sciences Po, Columbia University)
- Sylvie Joussaume (CNRS)
- Georgina Mace (Imperial College London)
- Laurent Mermet (ENGREF-AgroParisTech)
- Shyama Ramani (United Nations University in Maastricht, École polytechnique)
- Lord Nicholas Stern (Grantham Research Institute on Climate Change and the Environment, and I.G Patel Professor of Economics & Government, LSE)
- Michel Vivant (Sciences Po)

A word from Georgina Mace

"The problems facing society are increasingly interconnected. IDDRI provides a refreshingly different forum to bring natural scientists, development scientists and policy makers into closer contact."

Advisory council

The council's objective is to discuss societal issues in order to steer the activities of the Foundation and to guarantee the relevance of its work. It is chaired by Daniel Lebègue. The new IDDRI advisory council held its inaugural meeting on 8 September 2011. It brings together, not only administrators but also a variety of stakeholders from French and European society in order to help IDDRI maintain its relevance in major societal debates. Several economic sectors, from agriculture to finance, trade unions, NGOs, research institutes and national and local public stakeholders are represented in the council. IDDRI's track record during its first ten years and the discussions on its new strategic project have enabled the advisory council to specify a number of major policy issues that will determine IDDRI's courses of action in the coming years. Firstly, the council has acknowledged the rising conflicts and tensions in terms of sustainable development as a major development in the political context of IDDRI's involvements. From this perspective, IDDRI's independence will therefore become a particularly strategic issue that we must continue to anticipate, as much in its intervention modalities and partnerships, as in its funding and governance.

The second major recommendation is that it appears crucial to be able to link IDDRI's «macro» approach, global or national, with the «micro» approach of processes of change and transition, to ensure a better analysis of the drivers of change and of local experiments and innovations, but also to provide a greater capacity for intervention and persuasion in political debates at different scales, by engaging in dialogue with a variety of intermediate level stakeholders.

The third element is the council's affirmation of the importance of new areas of expertise for IDDRI: in the social sphere, but also in terms of financial operators and markets, which may seem obvious in terms of sustainable agricultural or urban development, but is equally important for other IDDRI themes, from biodiversity to climate.

Finally, the council recommends that IDDRI develops strategic alliances with think tanks in emerging countries, so that South-South collaborations can be placed at the centre of the analysis, and also at the centre of a conceptual revival of global sustainable development.

The advisory council is made up of 24 members, representing the different stakeholders in society

Administrations

- Michel Badré (CGEDD)
- Pierre-Franck Chevet (Ministry of Ecology)
- Philippe Lacoste (Ministry of Foreign Affairs)

Research institutes and universities

- Patrick Duncan (CNRS)
- Michel Eddi (INRA)
- Sylviane Guillaumont (Auvergne University)
- Jean-Charles Hourcade (CIRED)
- Christian Lequesne (CERI)
- Marc Pallemaerts (IEEP)

Private sector

- Matt Christensen (Axa-Investment Managers)
- Pierre Ducret (Caisse des dépôts Climat)
- Françoise Guichard (GDF-Suez)
- Claude Nahon (EDF)
- Kareen Rispal (Lafarge)
- Jean-Pierre Tardieu (Institut Veolia Environnement)
- Jean-Pierre Tillon (InVivo)
- Claire Tutenuit (EpE)
- Gilles Vermot-Desroches (Schneider Electric)

Non-governmental organisations and trade unions

- Pierre-Yves Chanu (CGT)
- John Evans (TUAC)
- Timothy Geer (WWF International)
- Daniel Lebègue (IFA)
- Camilla Toulmin (IIED)

Local authorities

- Denis Baupin (Deputy to the Mayor of Paris)

Other participant

- Jean Jouzel

A word from Timothy Geer

"IDDRI is a natural partner for WWF as both contribute to shape the thinking of public and private actors able to move the agenda on natural capital and the role of ecosystems in sustainability. "

The Team

Noura Bakkour
Special Assistant to the Director

Pierre Barthélemy
Publications & Internet

Élie Bellevrat
Research Fellow Climate and Energy Policies

Raphaël Billé
Programme Director Biodiversity and Adaptation

Pauline Brücker
Research Fellow Migrations

Lucien Chabason
Senior Advisor

Lucas Chancel
Research Fellow Economics of Sustainable Development

Tiffany Chevreuil
Administrative and Financial Assistant

Claudio Chiarolla
Research Fellow Governance of Biodiversity

Julie Cohen
Outreach Assistant

Michel Colombier
Scientific Director

Élise Coudane
Events & Outreach

Lisa Dacosta
Secretary-General

Elisabeth Druel
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Laetitia Dupraz
Assistant to the Directors

François Gemenne
Research Fellow Climate and Migrations

Viviane Gravey
Research Fellow Agriculture and Climate Change

Emmanuel Guérin
Programme Director Climate

Reiko Hasegawa
Research Fellow Risks

Joanne Jordan
Research Fellow Adaptation to Climate Change

Renaud Lapeyre
Research Fellow Biodiversity and Environmental Services

Benoit Lefèvre
Programme Director Urban Fabric

Alexandre Magnan
Research Fellow Vulnerability and Adaptation

Benoît Martimort-Asso
Development & Communication Director

Romain Pirard
Research Fellow Forests and Climate

Vincent Renard
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Julien Rochette
Research Fellow Oceans and Coastal Zones

Andreas Rudinger
Research Fellow Energy and Climate Policies

Mathieu Saujot
PhD student Urban Fabric

Marie-Hélène Schwoob
PhD student Food security

Carole-Anne Sénit
Research Fellow Governance

Thomas Spencer
Research Fellow Climate and Energy Economics

Lucilia Tanchereau
Administrative and Financial Manager

Sébastien Treyer
Director of Programmes

Laurence Tubiana
Director

Elisa Vecchione
Research Fellow Governance

Tancrède Voituriez
Programme Director Governance

Xin Wang
Research Fellow Climate and Energy Policies - China

Yann Laurans
Associate Researcher

Joël Ruet
Associate Researcher

Carine Barbier (Research Fellow Cities and Energy), Benjamin Garnaud (Research Fellow Adaptation to Climate Change) and Céline Marcy (Research Fellow Climate and Renewable Energies) have completed their mission at IDDRI in 2011. Thomas Boulogne (Deputy Director) and Sophie Éclappier (Assistant) have also ended their mission at the Sciences Po Sustainable Development Centre (SDC). And Matthieu Wemaëre (Permanent representation of IDDRI to European Institutions in Brussels) is currently on a mission to represent Wallonia's Sustainable Developement Minisiter as Sherpa for international negotiations within the framework of the Rio+20 Conference.

Interns

Each year IDDRI welcomes several students as interns, working on its research areas.

Pauline **Brücker**
May 16, 2011 – August 12, 2011
Sciences Po
Research on environmental migrations issues

Loïc **Chappoz**
February 02,2011 – May 31, 2011
Sciences Po
Research on energy efficiency and energy demand policies in the European Union and Member States.

Cédric **Égal**
April 26, 2011 – October 26, 2011
Université Paris 1 - Panthéon Sorbonne
Study on the sustainability of European donors' agricultural models

Joshua **Glasser**
June 20, 2011 – August 08, 2011
Harvard School of Public Health
Contribution to *The State of Environmental Migration 2010* report, and research on health and climate change

Océane **Marcone**
March 21, 2011 – September 30, septembre 2011
École des hautes études en sciences sociales
Research and diagnosis on coastal zones management systems

Florence **Miroux**
May 20, 2011 – August 12, 2011
Dauphine University
Research on internal and external change due to information and communications technology (IT) penetration of the three-way relationship regulator-consumer-producer/operator of mobility

Ukwori **Onuma**
May 16, 2011 – August 05, 2011
Sciences Po
Research on examining policy space for developing countries in trade

Andreas **Rüdinger**
September 05, 2011 – March 05, 2012
Sciences Po Bordeaux
Research on European energy policies, and comparison between France's and Germany's situations

Nury **Palacio Aguilera**
March 07, 2011 – July 13, 2011
Paris Sud 11 University
Analysis of the economic development of renewable energies

Isabelle **Soler**
February, 28 2011 – June 03, 2011
Paris 1 - Panthéon Sorbonne University
Support to promoting IDDRI's specificities in its outreach tools and documents

Jamie **Stevenson**
February, 28 2011 – July 29, 2011
Vassar College (USA)/Internship in Francophone Europe
Research on international relations theories and international negotiations mechanisms

The Sciences Po Sustainable Development Center (SDC) Team

Laurence **Tubiana**, Director
Claude **Henry**, Scientific Advisor
Thomas **Boulogne**, Deputy Director (until July 2012)
Julie **Cohen**, Assistant
Elisa **Vecchione**, Research Fellow
Sophie **Éclappier**, Assistant (until April 2011)

Classes taught by IDDRI and SDC teams

Master of International Affairs (MIA), specialisation in Environment, Sustainable Development and Risks

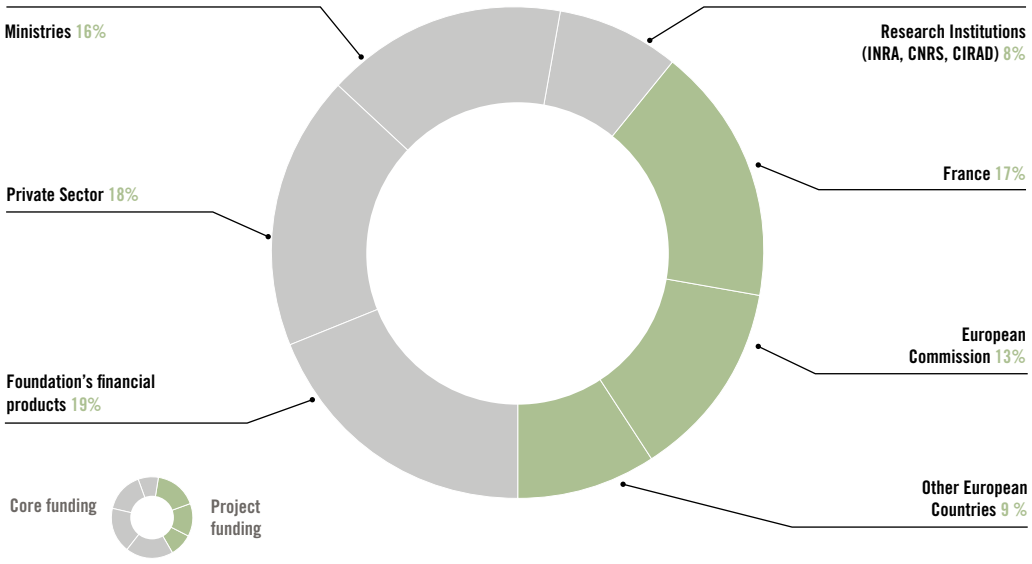
Professors

Élie **Bellevrat** ; Raphaël **Billé** ; Lucien **Chabason** ; Lucas **Chancel** ; Claudio **Chiarolla** ; Michel **Colombier** ; François **Gemenne** ; Emmanuel **Guérin** ; Claude **Henry** ; Benoit **Lefèvre** ; Benoît **Martimort-Asso** ; Romain **Pirard** ; Vincent **Renard** ; Sébastien **Treyer** ; Laurence **Tubiana** ; Tancrède **Voituriez**.

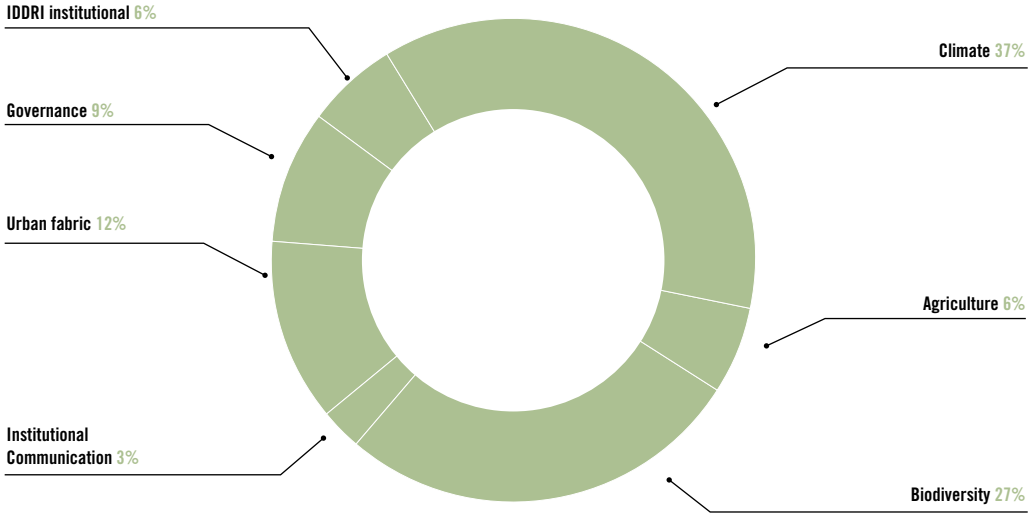
Budget

In 2011, the Foundation's budget was set at 3.4 millions Euros, including secondments' costs. Resources are provided by the founding members, research centres (in the form of staff secondments), ministries (Foreign Affairs, Ecology, and Research and Education), various national and international partners as well as European projects.

FUNDING SOURCES



DISTRIBUTION BY PROGRAMMES



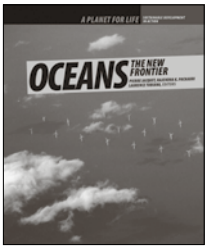
Key figures

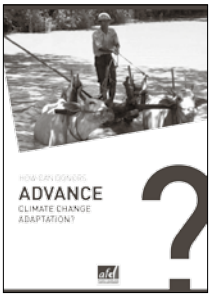
Website

- About a third of visits from outside of France (essentially coming from Europe, United States, Canada, and Maghreb) – rate constantly rising
- 22 videos of conferences and seminars posted online
  - > More than 16,000 views
  - > Most viewed videos: international conference "Market-based instruments for biodiversity: Nature at any cost?" (more than 3,700 views)

Publications

- **38 IDDRI publications:**
  - > 25 *Working Papers*
  - > 7 *Policy Briefs*
  - > 6 *Studies*
- **8 publications** specifically dedicated to the preparation of COP17 in Durban, South Africa (December 2011); 4 publications written within the framework of the Rio+20 Conference (June 2012)
- **4 books published with partners:**
  - > *L'Énergie en Allemagne et en France – Une comparaison instructive,* Global Chance-IDDRI
  - > *L'État de la Terre 2011,* Alternatives internationales-IDDRI
  - > *A Planet for Life 2011 – Oceans: the new frontier,* Armand Colin-AFD-TERI-IDDRI
  - > *How can donors advance climate change adaptation?* AFD-IDDRI
- **2 reports and briefings papers,** dealing with:
  - > European climate policies: *Strengthening the European Union Climate and Energy Package*
  - > The relationships between cities and climate change: *Climate Change and Cities*
- **150 quotes, interviews, articles** and op-eds in offline and online media
  - > 120 quotes in regional, national and international newspapers
  - > 3 interventions on TV
  - > 10 interventions on radio stations
  - > 11 op-eds in national daily newspapers
  - > About 40 quotes, interviews or articles published in the media before, during and after COP17 in Durban (December 2011)
- **40 external contributions**
  - > 60% of contributions published in foreign media
  - > 20 contributions published in scientific journals (including 1 article in *Science*: "Preparing for Resettlement Associated with Climate Change")
  - > 11 contributions in books or reports





Activities

- 11 international conferences
- 13 conferences and 5 workshops
- 116 interventions by the IDDRI team in conferences, workhops, seminars, etc.
- 10 sessions of the Sustainable Development and Economics of the Environment seminar, organised with the École Polytechnique-EDF Sutainable Development Centre and, since November 2011, Columbia Global Centers Europe at Reid Hall Paris.
- More than 300 participants attended the "Ecological Debt?" conference (November 7, 2011), and more than 200 participants attended the "Market-based instruments for biodiversity: Nature at any cost?" conference (June 8, 2011).

Please visit our website for a complete list of IDDRI's activities in 2011: www.iddri.org

Publications of the year

IDDRI's publications are available at: www.iddri.org.

GLOBAL ENVIRONMENTAL ISSUES

L'état de la Terre 2011. *Alternatives Internationales*-IDDRI

A Planet for Life 2011 - Oceans; the new frontier. TERI Press

GOVERNANCE

20 ans après Rio, un développement qui n'a rien de durable. Lucien Chabason, *Working Papers*, n°12

Compromising on a climate regime: on the importance of perceptions. Carole-Anne Sénit, *Working Papers*, n°09

"Now is the Time! Why 'Rio+20' must succeed". Laurence Tubiana

BIODIVERSITY

Assessing funding needs for biodiversity: Critical issues. Romain Pirard, Clément Feger, *Policy Briefs*, n°06

Advancing the Oceans agenda at Rio+20: where we must go. Raphaël Billé, Julien Rochette, Elisabeth Druel, *Policy Briefs*, n°05

Are ICZM Protocols the new silver-bullet for sustainable coastal development?. Raphaël Billé, Julien Rochette, *Policy Briefs*, n°03

A legal scenario analysis for marine protected areas in areas beyond national jurisdiction. Raphaël Billé, Sébastien Treyer, Elisabeth Druel, *Studies*, n°06

What's in a name? Market-based instruments for biodiversity. Romain Pirard, Emma Broughton, *Studies*, n°03

Offshore oil exploitation: a new frontier for international environmental law. Lucien Chabason, *Working Papers*, n°11

Marine protected areas in areas beyond national jurisdiction: The state of play. Elisabeth Druel, *Working Papers*, n°07

Les zones marines protégées en haute mer dans le cadre de la Convention OSPAR : état des lieux et perspectives d'avenir. Julien Rochette, Elisabeth Druel, *Working Papers*, n°03

CLIMATE

L'énergie en Allemagne et en France - Une comparaison instructive. *Global Chance*-IDDRI

Strengthening the European Union Climate and Energy Package - To build a low carbon, competitive and energy secure European Union. Emmanuel Guérin, Thomas Spencer, *Studies*, n°04

A legal form proposal for Durban and Beyond. Thomas Spencer, *Working Papers*, n°21

Climate policies in China and India: planning, implementation and linkages with international negotiations. Élie Bellevrat, *Working Papers*, n°20

2°C: the history of a policy-science nexus. Emmanuel Guérin, Béatrice Cointe, Paul-Alain Ravon, *Working Papers*, n°19

Key lessons from international financing mechanisms for the Green Climate Fund. Cécile Valadier, *Working Papers*, n°18

United States climate policy: What's next? EPA regulations as an alternative pathway to comprehensive federal action?. Emmanuel Guérin, Camille Serre, Alexander Ochs, *Working Papers*, n°15

Decarbonizing the EU Power Sector Policy Approaches in the Light of Current Trends and Long-term Trajectories. M. Colombier, E. Guérin, C. Marcy, T. Spencer, *Working Papers*, n°13

Le Fonds d'adaptation, laboratoire du financement du changement climatique. Sandrine de Guio, Julien Rencki, *Working Papers*, n°10

Is it in China's interest to implement an export carbon tax?. Xin Wang, Ji Feng Li, Ya Xiong Zhang, *Working Papers*, n°06

Chinese renewable energy and technology policies: Legal compatibility with WTO rules & Economic interactions with other countries' climate and industrial policies. Emmanuel Guérin, Joseph Schiavo, *Working Papers*, n°02

MIGRATIONS

Migrations et déplacements de populations dans un monde à +4°C - Scénarios d'évolution et options politiques. François Gemenne, Pauline Brücker, *Policy Briefs*, n°04

The State of environmental migration 2010. François Gemenne, Joshua Glasser, Pauline Brücker, *Studies*, n°07

ADAPTATION TO CLIMATE CHANGE

How can donors advance climate change adaptation? IDDRI-AFD

AGRICULTURE

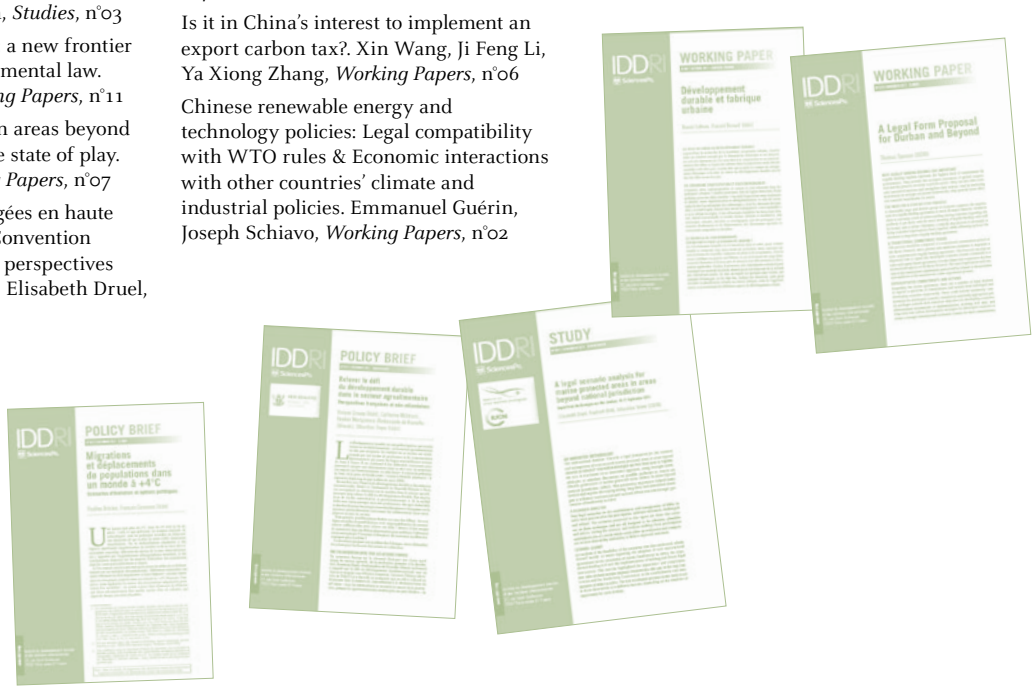
Rising to the sustainability challenge in the agri-food sector: perspectives from New Zealand and France. S. Treyer, V. Gravey, C. McIntosh, H. Montgomery, *Policy Briefs*, n°07

Réformer la PAC pour quoi faire ? Cartographie du débat PAC 2013. Viviane Gravey, *Working Papers*, n°04

URBAN FABRIC

Sustainable development and urban fabric. Benoit Lefevre, Vincent Renard, *Working Papers*, n°08

"Climate change and urban transportation system". Benoit Lefèvre, in *Climate Change and Cities: First Assessment Report of the Urban Climate Change Research Network*, Cambridge University Press



A Planet for Life,
an annual publication on sustainable development

A Planet for Life unravels the complexity of the processes underpinning sustainable development. It presents the many potentialities of this multifaceted concept through a study of the growing issues, mutations and highlights within the field of sustainable development.

Prepared under the scientific leadership of the French Development Agency (AFD, France), The Energy and Resources Institute (TERI, India), and the Institute for Sustainable Development and International Relations (IDDRI, France), the book is published by TERI Press.

Each year, *A Planet for life* addresses a key, transversal issue, of sustainable development, bringing together a great variety of expertise: academics from a variety of fields (economists, jurists, geographers, biologists, physicists etc.), practitioners, NGOs, from all around the world, under the scientific leadership of leading figures in this field. Previous topics have included energy policies, sustainable cities and governance. In its French edition (*Regards sur la Terre*), the book also comes back each year on the major events that have shaped the international agenda in issues of climate change, biodiversity, natural resources, governance, energy and development.

A Planet for Life 2011 - Oceans: the new frontier investigates the extent to which human community pushes the oceans' limits – and how the ocean frontier is constantly being redefined by new discoveries, technologies, national strategies and ecological imperatives. In a game rife with uncertainties, where risks and potentials live side by side, oceans are the last planetary frontier. They present a major challenge to all models of development: how can tomorrow's human activities be made compatible with the preservation of the greatest and richest space of our planet?

A Planet for Life 2012 - Towards Agricultural Change? focuses on agriculture and its relation to development, food and the environment. At the end of the 2000s, a consensus has emerged and points to the urgent need for massive investment in the agricultural sector, which is (once again) viewed as one of the prime engines for development and food security, as well as for poverty reduction. But what exactly does this consensus cover?

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