

BRIDGES NETWORK

BIORES

Analysis and news on trade and environment

VOLUME 8, ISSUE 3 – APRIL 2014



Sizing up farm and fish reform

AGRICULTURE

The dubious greening of European agriculture

GREEN GROWTH

Greening economics, greening economies

SUSTAINABLE DEVELOPMENT

Forests in the sustainable development goals



International Centre for Trade
and Sustainable Development

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Sizing up farm and fish reform



At the end of March the Intergovernmental Panel on Climate Change (IPCC) released its latest study, for the first time in seven years assessing the impacts of climate change. The UN panel warned, "In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans." In an unprecedented move, scientists chose to frame climate change as a series of risks, in order to prompt targeted remedies and appropriate preparation.

"If we want to take a smart approach to the future, we need to consider a full range of possible outcomes," said Chris Field, a co-chair of the working group charged with producing the document.

Among the risks cautioned are threats to global food security, negative impacts on ecosystems on land and in the oceans, as well as water shortages. The challenges these present are enormous; how to equitably provide food and water to the world's 9 billion inhabitants by 2050, without placing further strain on planetary boundaries?

This issue of BioRes offers several articles evaluating the reform of production systems both on farms and at sea, just as WTO members undertake the drafting of Doha Round work programme in which agriculture is expected to play an important role.

The EU concluded two major reforms in 2013, revisiting the rules governing common agricultural policies and common fisheries policies. In both cases, much was promised, but the journey was long and complex. Our various authors offer an overview of the outcomes, assessing both the trade and environment implications.

Across the pond, the US finally sealed a deal on its own new domestic farm practices. David Blandford outlines the programmes designed to protect farmers' yields and revenues from shocks that are likely to become more commonplace due to climate change. He also reflects on what these new policies might mean for international trade.

Last month the international community also saw days dedicated to forests and water follow in quick succession on 21 and 22 March respectively. Both are key for sustainable development, and both require careful management. But can global economic governance rise to the challenge?

As always, we're happy to hear from you. Be a part of the conversation by [writing to us](#) and we may publish your letter in a future issue. You can also follow us on [Twitter](#) and [Facebook](#). We appreciate both your time and your feedback.

The BioRes Team

Letters to the editor



Navigating the wildlife trade debate

In the previous issue of BioRes we published two papers offering a glimpse into a few of the many conservation options advocated when addressing the intersection between wildlife and trade, as well as a separate article on transboundary traditional knowledge. We appreciate the feedback received.

The BioRes Team

Protecting widely shared traditional knowledge

Dear editor, as usual, Manuel Ruiz Miller has provided us with an impeccable overview on the current status of traditional knowledge negotiations in different international fora. However, it is amazing that such an important issue – which lies at the core of benefit-sharing of genetic resource (GR) use and hence in the value of GRs as a conservation tool given the benefits afforded to local communities – should remain unresolved after so many years of discussions and in spite of the major step forward represented by the adoption of the Nagoya Protocol.

Lic. Victoria Lichtschein, Environment and Sustainable Development Secretariat, Argentina

Can free trade agreements work for wildlife conservation?

Dear editor, we read Nav Dayanand's article with interest. As the caretaker of a global forest certification programme, the Forest Stewardship Council (FSC) welcomes the emphasis placed on managing natural resources responsibly, while providing social and economic benefit. Our 28,000 strong complement of certificate holders around the globe are a testament to the fact that the planet's natural resources can be managed to protect the environment, produce financial benefit, and meet the needs of those living in and around forests.

Karen Van der Westhuizen, Forest Stewardship Council, Germany

Legal rhino horn: A viable conservation alternative?

Dear editor, in response to Mike t'Sas-Rolfe's article, I am generally cynical enough to believe that when more rules and regulations are imposed – especially in areas such as trade restrictions, embargoes or sanctions – greater opportunities are created for evasion, corruption, and continuing trade. Mike is undoubtedly correct that responsible wildlife trade is species- and context-specific. Interestingly, he mentions nothing about the actual markets for ivory and rhino horn. Can a pro-trade position be taken without knowing at least the following; which countries are we talking about? Which of their regions or cities host the key trading hot spots or consuming markets? Which socio-economic groups are the buyers and users? How much ivory is enough for an individual or family? How much demand is based on ignorance that ivory comes from a dead elephant and not from naturally-shed teeth?

History shows that trade bans, embargoes, and sanctions fail when there are substitute products or sources, or alternative trade routes to be developed. But ivory and rhino horn are not like machine parts, for there are no effective or acceptable product substitutes and their living owners cannot be recreated once driven to extinction. Hence, we must research the markets, increase awareness of the impacts of the demand for ivory and rhino horn, while persisting with creative and effective conservation measures in the range states, expensive though these will be while ivory and rhino horn retain their irrationally high values. We also need to assess the scale of sustainable supply, and what this might involve: a periodic clipping of rhino horn will be more difficult than an annual sheep shear, and with many, greater risks.

Economics likes logic, but conservation considers risk across alternative solutions. A ban on trade in ivory and rhino horn must be the prudent strategy. Even the most ardent supporters of trade liberalisation would have to agree that trade restrictions are necessary if there is a significant risk that the trade will drive the supply to extinction.

Mark R Stanley Price, Senior Research Fellow, Wildlife Conservation Research Unit, University of Oxford, UK

AGRICULTURE

The dubious greening of European agriculture

Ariel Brunner and Trees Robijns

The EU has a new framework for governing its now 28 member states' agricultural policies, for the period 2014-2020. But what are the possible future trade and environment implications of this reform?

Over the last four years, the EU has busied itself with a reform of the bloc's Common Agricultural Policy (CAP), which broadly speaking, governs food production across the membership. In the inaugural issue of *Bridges Trade BioRes* in 2007, we argued that solving the grave environmental problems linked to farming and land management in the EU required deep reforms to both the bloc's CAP and to the definition of WTO green box subsidies. While negotiations in Doha round have yet to change the international governance of farm subsidies, the EU sealed a political agreement for a new 2014-2020 CAP in June 2013, formally adopted in December of the same year.

Originally touted as the most significant overhaul of the CAP since the Fischler reform of 2003, the two main goals of the most recent reform round were equity and the promotion of public goods delivery. These ambitions translated into a Commission proposal that included relevant elements for improving the sustainability of European farming and making way towards a more equal distribution of farm payments. In this article we will focus mainly on the environmental aspects of this reform.

Significantly, it was suggested that 30 percent of direct payments – namely the untargeted income support that forms the bulk of the CAP – would be linked to three greening commitments. First, maintaining seven percent of the farm surface as “ecological focus areas,” targeting ecologically valuable landscape elements such as hedgerows, wildflower covered field margins, and small wetlands. Secondly, the diversification of crops, to avoid monoculture across a given farm's entire area, and finally a requirement to protect permanent pasture – essentially grasslands – from being converted to arable or permanent crops.

Although the Commission's “greening package” fell short of what was both needed and feasible, it at least would have been a start towards improving the agro-ecological performance of a large set of EU farmers. The proposal also included a continuation of cross compliance, introduced with the 2003 reform, which makes relevant environmental legislation and some basic good practices a condition for receiving subsidies. Specifically a suggestion was included to expand the scope of cross compliance to cover EU water and pesticides legislation.

Reform outcome

From the start, the reform was met with huge resistance from the farm lobby and became bogged down in the complex legislative bargaining process between the 27 – and then 28 – member states and the European Parliament. During negotiations, seemingly every bit of the reform was watered down and a mind-boggling array of exemptions and loopholes were introduced.

The process was also overridden by the 2014-2020 EU budget negotiations, which ended up dealing out a disproportionate cut to the CAP's more progressive rural development pillar that includes agri-environment schemes. Furthermore, almost complete freedom has been given to member states to shift money around between the direct payments and rural development pillars. In some countries, rural development is now being eroded as money is transferred to beef up income payments. In other countries, however, funds are being moved the other way round.

Agriculture at the WTO

The Agreement on Agriculture – negotiated in the WTO's 1986-94 Uruguay Round – set international rules for farm trade. Measures that cause no or minimally distorting effects on agricultural trade are referred to as green box measures. The green box does provide for the use of direct payments to producers where these are not linked to production decisions. Measures that are trade distorting are in the amber box, which are, with some exceptions, subject to reduction commitments.

Other major results include the weakening of cross compliance, which has not been expanded to cover the pesticide and water legislation. Existing standards have actually been watered down by removing elements such as legislation against the persecution of wildlife. Controls and sanctions have been reined in, making it even easier for farmers to receive subsidies while breaking the rules. The greening intentions have been retained, but their content can only be characterised as a mess, with a hollowing out of the requirements. For example, a bizarre weighting system allows landscape elements to be counted as twice as large as they really are so that reaching the requirement of now-five percent ecological focus areas is made much easier. Another striking loophole allows intensively managed cropland to be counted as an ecological focus area.

And in a bid to give member states even more greening flexibility, countries can substitute greening obligations with the enrolment of farmers in agri-environment schemes, or in private certification schemes that could make monoculture maize growers replace crop diversification with winter soil cover. Small farmers are exempted from any greening commitments, as are organic farmers.

Specific loopholes are also created for farmers with significant grassland areas and farmers that are close to forests. No greening commitments are required on rice fields, olive plantations, and all other permanent crops. The list goes on, such that it is clear at this stage that many farmers will be exempted from changing their behaviour. To give one example, BirdLife estimates that up to half of EU farmland and almost 90 percent of EU farmers would be exempted from the obligation to have ecological focus areas.

Overall, it is unlikely that the new complex CAP will improve public goods delivery by incentivising subsidies beneficiaries to switch to sounder agronomic and ecological practices, as was originally intended. Worse still, the reform also seems to have brought about alarming steps backward that are likely to harm the environment, distort trade, and throw up serious questions on the WTO green box compatibility of some CAP subsidies. Particular issues include the introduction of an "active farmer" definition and the return to "coupled" production payments, namely those that are linked to production.

Worse still, the reform also seems to have brought about alarming steps backward that are likely to harm the environment, distort trade, and throw up serious questions on the WTO green box compatibility of some CAP subsidies.

Active farmer challenge

Reacting to past criticism over farm subsidies going to airports, golf courses, and absentee landowners, EU decision makers sought to bring in new rules on subsidies. Certain types of beneficiaries have been ruled out from CAP disbursements altogether. Furthermore, beneficiaries of most CAP payments are now required to prove "minimum activity" as well as keeping land in "good agronomic and environmental conditions," as per previous stipulations. The list of banned beneficiaries can be completed by member states, which also hold the right to decide on minimum activity stipulations. Agriculture ministries are currently drafting both the list of banned beneficiaries and the minimum activities.

It remains to be seen how this will be implemented across the bloc, but these requirements could raise serious question marks over the claim that subsidies are decoupled from production. If minimum activities turn out to broadly overlap with agricultural production, CAP direct payments will likely be open to a WTO challenge. It is worth noticing that the EU now reports almost the entire CAP as being green box compatible.

Anecdotal evidence is also starting to appear, suggesting that agriculture ministries are using the new active farmer clause to exclude from payments many categories that are crucial for public goods delivery, but do not conform to the standard of commercial intensive farmer. Examples include NGOs that manage agricultural land, part time farmers, as well as traditional farmers that graze livestock extensively on semi-natural habitats.

Coupled payments creep back

The reform also marks a potential break from the CAP reform trajectory that started in the mid-80s, which saw a progressive move away from subsidising production towards income support and rewarding environmental stewardship.

The new CAP increases member states' leeway to introduce coupled payments that directly push farmers to produce politically favoured commodities, listed in the [Direct payments](#) legislative text, Title IV, Chapter 1, Article 52 onwards. While such payments register under the WTO amber box, further serious uncertainties hang over the decoupled nature – and hence green box compatibility – of income payments when these are combined with coupled production support, and on top of that are linked to the active farmer test.

These subsidies could play a positive role by propping up beneficial practices such as certain extensive grazing systems, but could also end up supporting polluting and destructive practices that push for further intensification.

On the environmental side, it remains to be seen which sectors will end up harvesting the expanded subsidies. These subsidies could play a positive role by propping up beneficial practices such as certain extensive grazing systems, but could also end up supporting polluting and destructive practices that push for further intensification.

The new complex agricultural policies

A last remark is that the two most salient characteristics of the new CAP are its fragmentation and its complexity. Every member state, and in many countries every region, will end up with their own significantly different CAP, riddled with exemptions and loopholes, each giving preferential treatment to different crops and farming systems.

In a sense we can now change the wording of the Common Agricultural Policy to the Complex Agricultural Policies – note the plural. The ability of the Commission to control, monitor, and assess this whirlpool of contradictory policies will be seriously tested. And the risk of a lack of any real scrutiny over both environmental and green box claims may well further undermine the credibility of the EU as an honest player in the international trade and sustainability scenes.



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AGRICULTURE

Risk management and trade in the new US farm legislation

David Blandford

As the risks of crop-damaging climate change increase, a shift towards insurance-based subsidies could be a source of tension in international trade.

Farming can be a risky business. Agricultural prices and yields can be quite volatile. Farmers do not know what price they will receive when they plant a crop and they cannot predict the weather during the season. Livestock farmers also face uncertainty about prices for their products and risks of losses due to weather or disease. Climate plays a key role in generating risk in farming, and the greater variability foreseen with climate change is likely to increase risk and uncertainty for the industry.

The latest version of agricultural legislation or "farm bill" in the United States – the Agricultural Act of 2014, signed into law by President Obama on February 7 – places a major emphasis on risk management. It authorises a range of farm programmes that address price and output risk, and the combined effect of these on revenues or on the margin between costs and returns. A key aim of the Act is to provide a safety net to protect farmers from the vagaries of the weather and market volatility.

Complex legislation

Because the issues are complex, the legislation is also complex. It took almost four years from the start of discussions to reach a compromise via legislation in the House and the Senate. The process was complicated by mandated reductions in federal spending and by the difficulty of obtaining consensus in an increasingly politically polarised Congress. One of the major sticking points was how much total projected expenditure would be reduced under the new legislation and how that reduction would be distributed. Farm legislation includes a range of provisions including commodity programmes that benefit farmers, domestic and international food assistance, and programmes promoted by environmental groups. Layered on top of structural complexity, farmers in different parts of the United States or those producing different products often have differing interests in the legislation. Balancing the wide range of competing interests poses a major challenge.

The new Act is a significant departure from earlier legislation and relatively few major provisions for commodities have been retained from the previous version of the farm bill. The most important survivor is the marketing assistance loan programme, which provides subsidies to farmers when prices of major crops fall below pre-determined levels. A programme that made payments to farmers regardless of prevailing market conditions – known as direct payments – was eliminated, primarily because of the difficulty of maintaining these under pressures to reduce federal spending.

Safety net provisions

The provision of a safety net for farmers is addressed through two different components of the Act – Title 1 covering commodity programmes and Title XI dealing with crop insurance. Crop insurance has become a much more prominent feature and the insurance concept has been extended to other areas, for example to milk production.

For the 2014/15 crop year farmers will have a choice of being covered under two different commodity programmes. The first is the price loss coverage (PLC) scheme – essentially a deficiency payments programme – in which payments are made if crop prices fall below predetermined levels. The second is the agricultural risk coverage (ARC) scheme, which provides payments to farmers when revenues fall below a benchmark figure calculated

using country or farm average yields. Producers have the option to update the area and yield of crops on their farms used in determining payments when they enrol in the scheme of their choice.

Layered on top of these commodity provisions are a range of crop insurance options. Under the federal crop insurance programme, private companies market and manage the delivery of crop insurance policies covering yield or revenue risks. The Federal government provides reinsurance, and reimburses administrative and operating expense to the companies. It also subsidises premiums at rates varying between 38 to 80 percent, depending on the level of coverage and options chosen by producers. Proponents argue that high levels of subsidy are necessary to make the products affordable to producers. Opponents argue that the subsidy encourages producers to plant on land where production is risky.

There are several additions to the suite of insurance options in the new legislation. Beginning with the 2015 crop year, farmers who elect to participate in the PLC scheme will have a Supplemental Coverage Option (SCO) that provides area-based insurance based on county average yield or revenue. The subsidy rate for premiums is 65 percent. Cotton producers will have a special scheme called the Stacked Income Protection Plan (STAX) in place of PLC and ARC. The subsidy rate for premiums is 80 percent. An important feature of these insurance options is that unlike commodity programmes there are no payment limitations or eligibility restrictions based on income.

Insurance-based approach in the WTO context

The shift towards an insurance-based approach in the new farm bill is the most striking feature of the legislation, but the provisions are far removed from those allowed under Annex 2 – the green box – of the WTO Agreement on Agriculture for government participation in income insurance and safety-net programmes.

The small losses in revenue compensated through traditional crop insurance and new schemes such as SCO and STAX mean that these do not qualify for the green box as being minimally distorting for production and trade. Consequently, subsidies provided under US safety-net programmes must be notified to the WTO under the aggregate measurement of support (AMS). With high commodity prices in recent years notified support under the product-specific category of the AMS has been relatively low. For their part, insurance subsidies have accounted for virtually all of the US\$9 billion of support notified under the non-product-specific AMS category. But that is substantially less than 5 percent threshold of the total value of agricultural production which would require such support to be counted against the US total AMS commitment of US\$19.1 billion.

Many economists argue that risk management will become increasingly important for farmers as the effects of climate change become more pronounced, and that the use of insurance should be encouraged. But US programmes can be criticised for the high levels of subsidy that they provide and their potential impact on production and trade. Wealthy countries, such as the US, can afford to subsidise risk management options for farmers, but poorer countries may be unable to do so.

Brazil, which won a case at the WTO on US cotton support, may soon reopen its case on the basis that the new legislation continues to provide an unfair competitive advantage to US cotton producers. If commodity prices fall sharply, as they sometimes can, there is a risk that the United States will notify much higher levels of support to the WTO. This may not be a problem under the current ceiling on total support, but a proposed reduction to US\$7.6 billion under the draft Doha agreement on agriculture could prove to be more problematic. More broadly, the issue of the extent to which governments should be involved in helping farmers to manage risks associated with climate change, and how much financial assistance they should provide seems likely to be heavily debated as the importance of the issue increases.



David Blandford

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FISHERIES

Taking stock of EU fisheries restructuring

Aimee T. Gonzales

The EU reached agreement on legislations to govern the bloc's fisheries activities in May 2013 and on the related financing in January 2014. Although the reform could have gone further, WWF welcomes concrete moves on transparency measures, which are critical to effective fisheries management and a practical element the EU should bring to the multilateral level.

The Common Fisheries Policy (CFP) sets rules on who can fish where, how, and when in EU waters. It has far reaching ramifications because it also applies to EU fleets fishing beyond the bloc's waters, the marketing of fisheries and aquaculture imports and exports, as well as how much and what measures to fund to effectively implement the policy in a six year budget time frame. Historically, CFP reform was dealt with by the Council of Ministers on the basis of a legislative reform proposal from the Commission. As a consequence of the Lisbon Treaty, the latest CFP reform cycle was for the first time subject to co-decision between the Council of Ministers and the European Parliament.

The CFP is reviewed every ten years. From WWF's perspective it offers an unparalleled opportunity to turn the tide on overfishing, as well as to put the EU on track towards sustainable fisheries management and healthy oceans. In April 2009, the Commission launched the latest reform process with a release of a Green Paper that depicted the dire state of most European fisheries. The Green Paper admitted that the EU had failed so far on several key points. First, it stressed that most stocks have not recovered since the 2002 reforms. Secondly, the percentage of overfished stocks still hovered at about 88 percent. The paper also noted that overall EU fleet capacity remained virtually unchanged – at a level two to three times higher than appropriate. Finally, the Commission drew attention to the persistence of a lack of political will to override scientific advice in setting catch levels.

Eurozone crisis and impact on reform

The Commission then called for bold and sweeping reforms to rectify the listed failings. This proved difficult to execute, particularly in light of the Eurozone fiscal crisis that touched many industries in Europe, including the fisheries sector. Political priorities focussed on preserving jobs and maintaining the status quo. Responding to the economic turmoil, WWF and other allies argued that fisheries reforms that enable fish stocks to return to sustainable levels will result in an increase in landings, profit, and income for the fisheries sector and fishermen.

Some positive outcomes, will these be enough?

Amidst the challenging economic and political hurdles, the concerted efforts by like-minded organisations and individuals from the European Parliament, key member states and environmental groups helped deliver a final legislation with some positive elements.

For example, conservation targets were set to "maximum sustainable yield" for all stocks, i.e. a limit on the catch to no more than what the stock can reproduce in a given year. This is unprecedented and will, hopefully, put an end to politicians ignoring scientific advice when setting annual catch allocations and quotas from now on. EU policymakers also agreed on measures to reduce discards at sea, as well as to add new commitments for a regionalised approach to fisheries management, with acknowledgement of stakeholders playing a key role in the decision making process. Elsewhere, provisions were strengthened to withhold financial assistance in case of non-compliance with CFP obligations. More importantly, EU distant water fishing fleets will now only get access to fish surplus in third countries and there are new and improved measures to prevent flag hopping – where owners seek to register their vessels in more lax jurisdictions. Whether or not these measures will add up to fulfil the commitment to end overfishing in the coming years remain to be seen. The critical part of implementing the agreed measures and commitments on the CFP is

just starting. The Commission has now organised a consultation process to develop the implementation guidelines, with the responsibility to carry these out placed on member states.

Funds to support CFP implementation

The EU policy makers also agreed to allocate €6,396 (\$US 8,798) million to finance the implementation of the CFP for the period 2014–2020. €4,340.8 (\$US 5,985.6) million will be shared between the EU and the member states for the "sustainable development of fisheries and aquaculture." The rest of the funds will be used to support improved data collection, control and enforcement, the implementation of the [Integrated Maritime Policy](#), and aid for producer organisations in case of crisis until 2018.

As part of the funding negotiations, it was disappointing that EU policymakers – despite all the scientific warnings and advice – still agreed to provide direct subsidies to modernise engines for fishing vessels, including trawlers. The move could hamper efforts to reduce fishing capacity and end overfishing. On the positive side, they upheld a 2002 ban on subsidies for the construction of new vessels. Support was provided for a package of jobs for young fishermen and training for sustainable fishing practices, as well as a number of other measures intended to improve the conditions of coastal communities. Significantly, it was agreed to increase investments for data collection, control, and enforcement measures. These critical fisheries management measures were one of the key demands made by a coalition of environmental NGOs – BirdLife Europe, Greenpeace, Seas at Risks, Oceana, OCEAN 2012 and WWF – working on CFP reform other than calling for an end to incentives to overfishing.

Effective management and transparency measures beyond the EU

Effective data collection, control, and enforcement are essential prerequisites for responsible fisheries management. It can help improve the situation of data-limited fish stocks in European seas and allow for better scientific assessments. It also introduces greater accountability in fishing activities and will give fisheries authorities a chance at fighting illegal fishing, which accounts for a rough average of 40 percent of landings in EU ports, according to a [report](#) by the Pew Environment Group.

Effective data collection, control, and enforcement are essential prerequisites for responsible fisheries management.

In the global arena, the EU is a key player on fisheries negotiations – given the size of its market and subsidies – under the Doha Development Agenda of the WTO. But while WTO trade negotiations have admittedly moved at a snail's pace, pushing for increased transparency and reporting on fisheries subsidies would be an opportunity for the EU to galvanise support from willing WTO members. This could make a real difference even without further negotiations. Subsidies notification and trade policy review processes help to improve access to information about national programmes, promoting information exchange and continued discussion of national subsidy policies within formal WTO conversations. Enhancing access to information and transparency with regards to subsidy notification is one element of the fisheries subsidies reform agenda where practical solutions are available and achievable, but this will require the right political will. At the WTO Ministerial Meeting in Bali, Indonesia in December 2013, the EU missed an opportunity to join a group of governments who reaffirmed their commitment not to introduce any new subsidies that contribute to overfishing or the overcapacity of fishing fleets. The EU could do a lot more to reduce global overcapacity and overfishing. As a first step, however, championing improved transparency would be one easy and practical way where the EU could play a constructive role at the WTO once again.



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GREEN GROWTH

Greening economics, greening economies

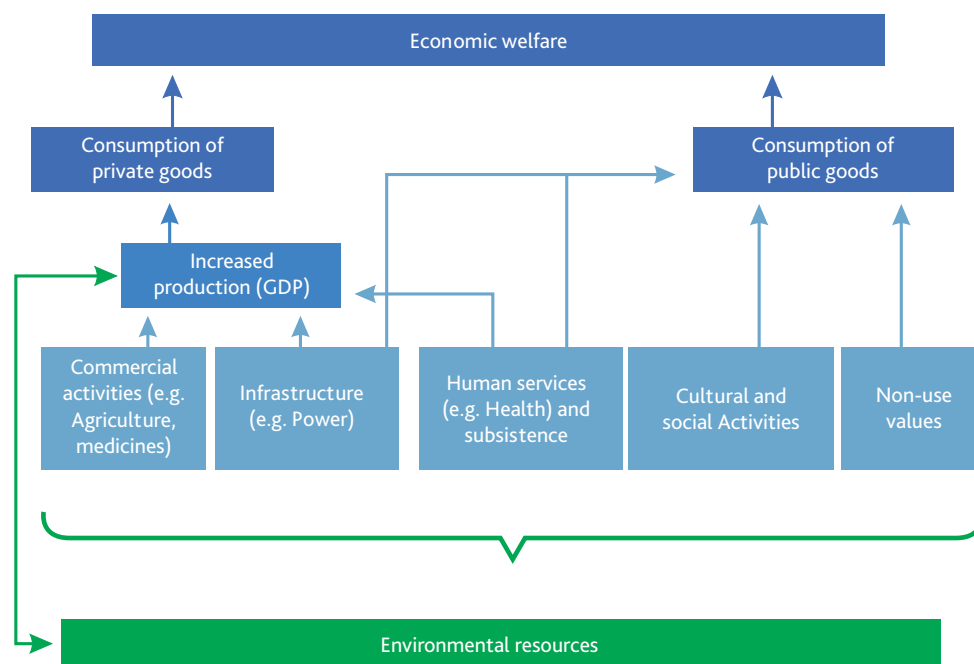
Amar Breckenridge and David Appels

The road towards the green economy necessarily requires sign-posts. Labelling, as well as metrics that seek to guide consumption choices may offer useful prompts, but are unlikely to capture environmental interlinkages and trade-offs, which suggests the need for more holistic indicators.

Sir Nicholas Stern, in his landmark report on the economics of climate change published in 2007, famously described climate change as the “greatest market failure” in the history of humanity. The expression “market failure” is a technical term economists use to describe a situation when the actions and decisions that seem privately desirable to the individuals and organisations that take them are not consistent with the welfare of society, or societies, as a whole. In the case of environmental matters, the concern is that market prices do not reflect the social costs associated with the depletion of environmental resources that occurs in the production and consumption of goods, and hence that neither producers nor consumers take sufficient account of the damage caused by their actions. As Stern put it in relation to climate change, “Those who damage others by emitting greenhouse gases generally do not pay.”

While Stern’s work on climate change brought the concept of market failures to the attention of the public at large, it is important to understand that the concept is one that mainstream economics has grappled with for well over a century. Indeed, it is central to understanding the way economists think about all environmental questions. To understand how market failure fits into the relationship between economics and the environment, consider the schematic below.

Figure 1: Schematic overview of economic approach to environmental management



Source: Author

The fundamental aim of economics is to promote the welfare of society by allocating social resources, which are limited and have alternative uses, to the ends that are most valued by society. Drawing on a utilitarian ethical framework, the concept of what is valued has

been defined in terms of the satisfaction of preferences. Because such satisfaction is hard to measure objectively, economists have further defined – some would say reduced – the concept of value in terms of consumption, since this is objectively measurable..

People consume both private and public goods. Private goods and services are usually transacted through markets, and their value at market prices is what ends up recorded as GDP. Public goods involve things like clean air, the value of biodiversity, the enjoyment derived from natural assets, and these are typically not provided through markets, or at least not without very specific forms of policy intervention. All goods, and ultimately economic welfare, depend in part on environmental resources, illustrating the adage coined by GA Nelson – the US politician who founded Earth Day – that the economy is a wholly owned subsidiary of the environment.

As the diagram points out, environmental resources are apportioned to some combination of private and public goods. The difficulty is that historically, the scarcity value of environmental resources used in the production of private goods has not been reflected in transactions, and neither has the value of public goods that are intrinsically tied into the preservation of environmental assets. This had led to an over-allocation of resources to activities in the left hand side of the diagram, and an under-allocation to those on the right. This is simply a broader illustration of the problem of market failure discussed above. The diagram also helps to illustrate why the often cited metric of GDP is recognised by economists and environmentalists alike as an insufficient indicator of social wellbeing. For a start, it only captures a subset of the activities that contribute to wellbeing, namely those that can be priced in markets. Secondly, it does not reflect non-market goods and services that are foregone because of the choice to allocate environmental resources to marketed goods and services. Moreover, it does not capture the fact that the use of environmental resources is usually irreversible – once ecosystems have been consumed to make shopping malls or car parks, these cannot then be converted back into ecosystems.

The fact that environmental resources are chronically undervalued in economic decision-making and in popular metrics such as GDP, has prompted a search for alternative ways promote greener economies by ensuring that the scarcity of environmental resources is captured and that consumers, producers, and governments can act accordingly.

Alternative measurement

The fact that environmental resources are chronically undervalued in economic decision-making and in popular metrics such as GDP, has prompted a search for alternative ways promote greener economies by ensuring that the scarcity of environmental resources is captured and that consumers, producers, and governments can act accordingly.

One approach is to try and guide consumers as to the broader environmental consequences of their choices. The idea is that if these consequences are not reflected in the price of a good or service, then conveying information through some other means may help consumers switch from purchases that have high environmental impacts to ones that do not. The expectation is that this will in turn create incentives for suppliers to select greener modes of production. Labelling initiatives – for example, as to whether fish products are derived from activities that avoid damaging impacts on other forms of marine life or energy efficiency ratings – are examples of these.

The Green Economy Initiative

Set up in 2008, the UNEP-led Green Economy Initiative provides policy analysis to support investment in green sectors, as well as to tackle a transition to an overall low carbon, resource efficient, and socially inclusive economic model.

Recently, attempts have been made to develop more sophisticated metrics that attempt to capture the use of a scarce environmental resource in the production of a good or service. The concept of food miles, for example, has been advanced as a way of measuring the environmental impact of various food products by drawing attention to greenhouse gas emissions associated with bringing these to market. But the measure is fundamentally flawed as a mechanism to address underlying concerns about greenhouse gas emissions. For a start, these measures focus only on the energy used in transport, and ignore the possibility that producers in other regions may have more energy efficient practices involved in the production of the particular commodity.

In fact, the food miles concept appears at odds with a wider consideration of resource costs. Several recent studies have shown that local production can be more energy-intensive than production of the same good further away, even factoring in the energy use involved in transportation. This should come as no surprise when we learn that the transport task is a minor cost component of total production, measured in either dollar or energy terms. As a result it is not possible to draw reliable conclusions from food miles about the total energy used in producing and supplying a product to the consumer's plate. In addition, the linear measure of food miles cannot capture information about multi-faceted issues such as the agronomic practices used in production — for example, how the landscape was managed, whether biodiversity was threatened, how much fertiliser or pesticide was required, whether soil was eroded, whether water quality was threatened or whether salinity was increased.

Another metric that is sometimes put forward is the concept of virtual water. Virtual water measures estimate the total amount of water used in producing a specified good or service — including water from surface and groundwater resources and from rainfall. Some virtual water calculations also attempt to estimate the water content of inputs used in production. The idea is that, guided by virtual water estimates, consumers may assist in alleviating water scarcity by selecting products with low virtual water content.

The estimates of virtual water use can be spectacular and thought-provoking, given the water volumes used in production of our food and clothes can be orders of magnitude higher than the volumes of water we directly use. The concept is intuitively plausible — in a situation of water scarcity, the ability to work out what is less, rather than more water intensive seems valuable. This is especially the case when there is no formal mechanism, such as tradeable water rights, to mediate between competing uses of water.

However, the simple metric of virtual water is not an accurate reflection of the true scarcity value of water. Recall from our schematic that what we are really concerned about is the opportunity cost of resources — that is the alternatives, specifically environmental goods dependent on water, which may be sacrificed by allocating the water instead to marketable commodities such as pasture to support beef production or irrigation to support rice. Further, water is one input into the production of goods and services. Even if there is substitution from more water intensive products to less water intensive products, there is no guarantee that environmental or societal outcomes will be superior. So although metrics such as virtual water can act as a useful illustrative device or rule of thumb, they are less reliable in providing a guide to decisions on how systematically to allocate resources across competing claims.

The main difficulties with approaches discussed above is that they focus on selected subsets of environmental issues, and, while they may provide general rules of thumb, do not accurately capture the true scarcity value of environmental issues and hence the social cost associated with their use. Moreover, they largely attempt to address problems by trying to persuade consumers to change their choices. What is instead needed is a more comprehensive approach that helps to estimate the economic costs associated with environmental damages, and creates the right incentives across the whole economy, especially including incentives on the production and investment side. The idea is to find ways of making environmentally-friendly decisions systematically more profitable, in order to better align private self-interest with the public good.

Systematic green economy indicators

One example of such an approach is the [Green Economy Initiative](#) launched by the United Nations Environment Programme (UNEP). An important component of this initiative lies in helping countries develop indicators that measure the incidence of specific environmental problems, the inter-relationships between these, their overall impact on welfare, and that also help to identify the policy responses required to address these problems. For example, where water scarcity is an issue, an appropriate policy response could be to define tradable rights. Such a system allows governments to manage the allocation of water between environmental and market uses, while also allowing users of waters, such as irrigators and pastoralists, to trade water allocation so that the environmental good is allocated to the uses that are valued the most.

Tradable rights — of which carbon emissions permits are another example — are part of a class of instruments that are known as market-creating instruments. That is, they attempt to solve the resource allocation problem discussed at the start of this paper by establishing markets that would not otherwise have existed. In so doing they establish prices for resources such as water or clean air that would otherwise be considered a free good and hence used without giving any consideration to their true scarcity. Pricing resources creates precisely the sorts of incentives that are required to encourage producers and consumers to substitute greener alternatives to less green alternatives. Other price-based mechanisms such as taxes and subsidies can have the same effects, and often need to be supplemented by more coercive measures such as specific regulation, for example limits on emissions or discharges into rivers.

Including a focus on production

Whereas approaches based directly on labelling products are intended to guide consumer choices and thus create incentives for producers, the more systematic approach described above seeks to identify the appropriate policy response, and for this to send incentives for appropriate resource management through the production side of the economy. Because producers will, to some extent at least, pass on to consumers higher costs associated with the pricing of scarce resources, there will be incentives for consumers to modify their choices. But this will happen as a result of factors affecting their wallets directly, rather than the persuasive force associated with labelling.

More generally the approach described above is consistent with two general rules of economic policy-making. The first is that sound policies require a sufficient number of instruments to meet the selected targets with precision. The indicators do that by identifying and quantifying the sources of market failure, and suggesting approaches to address these. While metrics that yield general rules of thumb, such as virtual water concepts are a useful starting point, greater precision is needed to support good policy, and address the multiple trade-offs that inevitably attend policy implementation.

The second principle is that the management of risks should be allocated to parties that are best able to control them and manage them. Encouraging consumers to make environmentally sound choices is laudable. However, the reality is that they are often too far removed from the source of market failures to efficiently manage these — all the more so in a world in which supply chains are geographically decentralised. What is likely to work better is to ensure that the prices producers and consumers face better reflect the true scarcity of environmental resources that may be damaged or depleted as a result of economic activity.

In sum, the framework for addressing environmental issues within mainstream economics is well established. Much attention has been given to measuring resource scarcity and to identifying ways of ensuring these are properly considered when production and consumption decisions are made. The most promising approaches are ones that account for the opportunity cost of scarce resources, and which suggest policy responses to tackle market failures at their source. As these techniques become more refined, the remaining challenges are likely to lie in mobilising the political will to implement the appropriate solutions.

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SUSTAINABLE DEVELOPMENT

Forests in the sustainable development goals

James Mayers

With the negotiations ongoing to pin down a new set of development goals that target integrated economic, social, and environmental outcomes, how to harness the power of trees and forests, key to delivering numerous multi-faceted benefits?

Forests make big targets – for better or worse. Planting trees, or cutting down forests, has major consequences. If we manage forests well they will give us goods and services that we cannot live without. If forests disappear we lose any prospect of sustainable development. Forests and trees are rooted in life and livelihoods. They can be grown, improved, and looked after – they are renewable. It would be hard to find a simpler and more universal way of changing the world for the better than by planting and managing trees.

At the Rio+20 summit in June 2012, member states agreed to create a set of universal and integrated sustainable development goals (SDGs) to ensure the promotion of an economically, socially, and environmentally sustainable future, framed in the context of the “Future we want” outcome document. The latter expressed strong support for eradicating poverty and mainstreaming sustainable development to tackle other major challenges such as hunger, health, and climate change, as well as to transition to a green, inclusive economy. Among other things, references were made to the important role of ecosystems in development. The part played by forests and trees was also acknowledged throughout the document, as well as in a specific stand-alone thematic section, where delegates emphasised, “We highlight the social, economic and environmental benefits of forests to people and the contributions of sustainable forest management to the themes and objective of the Conference.” Efforts to reverse deforestation and degradation were called for on the one hand, balanced by need to promote trade in legally harvested forest products.

The negotiations to outline the SDGs are now well underway. In February, the co-chairs of the Open Working Group on Sustainable Development (OWG) – the UN body charged with developing a first proposal to forward to the General Assembly in September – released a list of 19 focus areas, later revised in March. Although not a zero draft, the document was designed as a stocktaking exercise of OWG’s eight previous discussion sessions, as well as to focus delegates’ minds on the task ahead. OWG has now moved into its second, negotiating phase. At the Group’s most recent meeting, delegates were invited to consider the focus areas in eight clusters. At the meeting’s close, the co-chairs indicated they will provide another revised focus areas document based on these discussions for the next session in May.

Against this background, where might forests best be placed in order to maximise their ecological, cultural, social, and economic development benefits? The co-chairs’ focus areas document positions them for consideration under an “Ecosystems and biodiversity” headline, which is reportedly still generating wide-ranging discussion at this stage of the negotiations. Possible policy actions put forward for consideration include promoting sustainable forest management, halting deforestation and conversion of forest to crop lands, restoring degraded forest ecosystems and increasing relevant protected areas, as well as supporting forest-related employment and ensuring indigenous peoples benefit from forest conservation and sustainable use.

Full integration of the benefits of trees and forests in the SDGs is both desirable and feasible. Aspirations for trees and forests can be both universal and differentiated to local circumstance. This paper presents concrete options for the inclusion of forests and trees within a sustainable development framework. These options are based on views expressed during a meeting of Europe-based experts held in Geneva, Switzerland on 22-23 January,

The Rio Conventions:

1. The Convention on Biodiversity (CBD)
2. United Nations Convention to Combat Desertification (UNCCD)
3. United Nations Framework Convention Climate Change (UNFCCC)

convened by the UN Economic Commission for Europe (UNECE), Committee on Forests and the Forest Industry, and the Food and Agriculture Organization (FAO), European Forestry Commission. Participants at the meeting stressed the importance of properly recognising the role of forests in sustainable development, the green economy, and poverty eradication. Well-formulated forest targets will ensure that forests will enhance their role in sustaining people's livelihoods and the environment.

Forest goal options

Many forest related targets already prevail in international policy instruments. These include the interlinked [Rio Conventions](#) – on Biodiversity, Climate Change, and Desertification – which derive directly from the 1992 Earth Summit. Also important are various forest sector specific instruments such as the [Non-Legally Binding Instrument on All Types of Forests](#) agreed by the UN Forum on Forests in 2007, as well as the [International Tropical Timber Agreement](#) that entered into force in 2011, and related international food and agriculture goals such as the UN Zero Hunger Challenge and FAO's Global Goals and Strategic Objectives. Last, but by no means least, trade and economic development conventions and initiatives including the Convention on International Trade in Endangered Species (CITES) and the European Union's Forest Law Enforcement, Governance and Trade (FLEGT) programme.

But although there is much good work already being done; further efforts could be made to scale-up the protection and sustainable use of forests as part of a new, integrated development framework.

But although there is much good work already being done; further efforts could be made to scale-up the protection and sustainable use of forests as part of a new, integrated development framework. At the Geneva experts meeting, three main options were considered. The first would see a "stand-alone forests goal," with its own targets and indicators. This would bring very useful attention to the massive potential benefit of forests for sustainable development, as well as focusing efforts on realising this potential through a balanced and holistic approach.

A second option would be to include forests targets and indicators as part of a natural resources or ecosystem services goal, as positioned in the current OWG's focus areas document. This would catalyse the necessary integration of forests and trees with related sectors, but would likely result in fewer forest-linked targets and indicators than either of the other options. Another route would be to take advantage of the mandated integrated nature of the new framework, and include forest-relevant aims across several or most of the SDGs. The first and third options are now perhaps unlikely given the current shape of the negotiations. Nevertheless, including forest-related targets in some way is critical to focus attention on the huge potential benefits that management of forests and trees can deliver to a full range of goals for sustainable development.

Consider, for example, the implications of detailed findings from around 8,000 households spread across 24 countries in a study released late March by the Poverty and Environment Network steered by the Center for International Forestry Research. It shows that income from natural forests and other non-man-made areas accounts for 28 percent of total household income, nearly as much as crops, and that women generate about the same amount of income from forests as men do.

Hybrid combinations of the above options for forest targets may occur. The renewable, manageable, multifunctional nature of forests and trees means each is valid. Accordingly, the January workshop in Geneva generated a list of suggested targets and indicators that could be integrated into the SDG framework.

10 key targets for forest and trees in SDGs

Based on strong evidence and public opinion in a wide range of countries worldwide, and substantial existing levels of international agreement, 10 key targets – here arranged in three groups – could be justified and incorporated into the SDGs, as illustrated in Figure 1. These targets will need to be further developed to be specific, time-bound, and measurable. The meeting in Geneva did not discuss or develop indicators for these targets, but two tentative examples of the kinds of indicators that may be needed are also offered under each target outlined below.

Group 1: Social and cultural benefits from forests and trees improved

1 Income and employment from forests and trees in rural areas increased

- Income per household from forest products and services, disaggregated by gender
- Number of jobs and wages paid in forest resource production and management

2 Rights, tenure and governance of forests strengthened

- Percentage of secure local land and resource tenure
- Percentage of forest products from legal and sustainable sources

3 Food security and nutrition contribution of forests and trees enhanced

- Percentage of households with access to nutritious forest foods and wood fuel
- Percentage change in adoption of tree-based agricultural and soil conserving practices

Group 2: Resilience and ecosystem benefits of forests enhanced

4 Forest resources quantity increased and/or quality improved

- Hectares under approved forest management plans
- m3 and quality/composition of trees outside forests

5 Biodiversity of forests conserved and improved

- Hectares under protection and management for optimising biodiversity
- Percentage change in number/area of in situ and ex situ conservation of forest genetic resources

6 Water quantity and quality contribution of forests enhanced

- Percentage change in water quality and quantity in and from forest areas
- Hectares of forests contributing to management for watershed conservation

7 Climate resilience and mitigation contribution of forests strengthened

- Percentage change in forest management and trees in farming systems for climate adaptation
- Percentage change in carbon stocks in forest and tree biomass and forest soil

Group 3: Green economy contribution of forests and trees increased

8 Energy from forest resources increased, safe and sustainable

- Percentage of forest biomass in total energy supply
- Percentage change in safety and efficiency in forest biomass energy

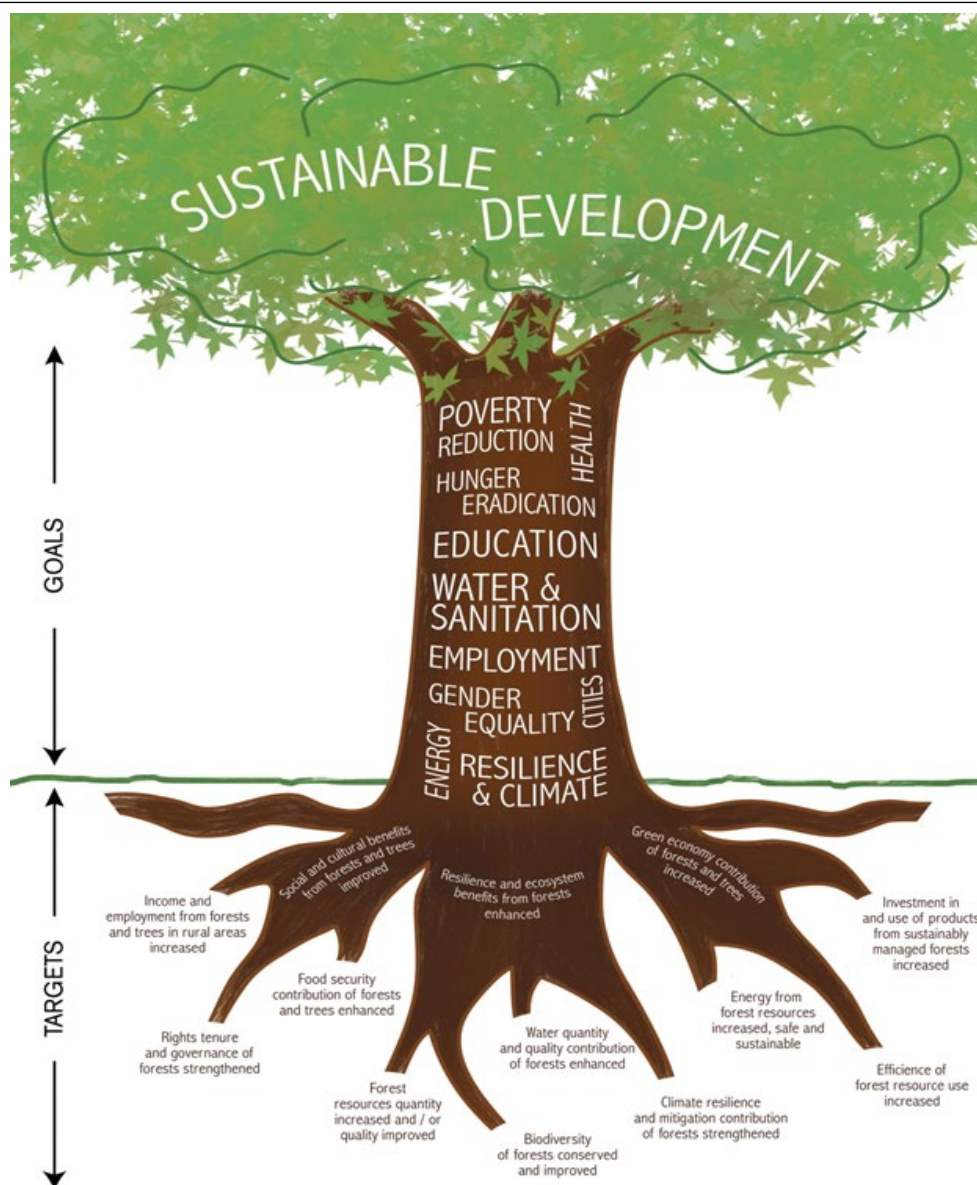
9 Efficiency of forest resource use increased

- Percentage change in efficiency of production and processing of wood and non-wood products
- Percentage change in efficiency of use of wood and paper products

10 Investment in, and use of, products from sustainably managed forests increased

- Dollar value change in investments in sustainably managed trees and forests
- Dollar value change of exports and imports from sources verified as legal and sustainable

Figure 1: Root causes, suggested targets on forests and trees in the SDGs



Source: Author

Key elements in the process needed from now on

During the remaining three OWG negotiation sessions, the formulation of the SDGs will likely see more twists and turns. As the negotiations forge ahead, two areas in particular would benefit from increased attention and specific initiatives, which would help address forest concerns, as well as other salient areas. Dialogue with less clearly-heard voices and geographies will be crucial for obtaining a balanced outcome. Targeted multi-stakeholder dialogue is needed, involving particular mixes of existing SDG framework "insiders," with other relevant sectors, disciplines and major groups, and both public and private sector actors – in Africa, South Asia, and Latin America in particular. Secondly, substantial efforts will be needed to develop country-level capacity to adapt and apply the SDG framework in ways that are driven by national priorities, experience and the building blocks available. Initial consideration of the practicalities of SDG implementation could usefully help shape the framework itself. In conclusion, it is hoped that these actions proceed not through "special pleading" for forests, but by demonstrating and developing understanding of how trees and forests can be best incorporated in the SDG framework, in a way that secures wide ecological, cultural, social, and economic benefits.



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This paper is based on views expressed during a workshop convened by UNECE and FAO, held in Geneva, Switzerland, January 2014.

CLIMATE CHANGE

UN panel warns of far-reaching climate consequences

The UN's climate science panel has released its latest study, which for the first time in seven years, assesses the impacts of climate change.

The Intergovernmental Panel on Climate Change (IPCC) released its latest global climate science study at the end of March, indicating that the effects of climate change had already left their mark on "all continents and across the oceans," with the effects felt everywhere. Although ambitious climate actions are called for that could stem many potential consequences, the study acknowledges that a certain amount of consequences are already locked-in. "Nobody on this planet is going to be untouched by the impacts of climate change," said Rajendra K. Pachauri, chairman of the panel, at a news conference.

The UN body – established in 1988 – periodically assesses the state of climate change. The most recent study represents the second part of its Fifth Assessment Report, following the first part which was published last September. The findings, together with the final instalment due out in mid-April, will likely add fuel to the ongoing climate negotiations to pin down a universal climate pact by the end of next year.

For the first time in seven years, the panel makes observations on the impacts, adaptation needs, and vulnerabilities caused by climate change. Listed observations include affected food production and threatened future food security. Ocean ecosystem shifts have led to certain fish species extinctions, while other populations could alter their migratory patterns, with the potential to reduce fish catches in some areas of the tropics by as much as 60 percent. Furthermore, sea ice in the Arctic is collapsing, while continued altered snow and ice melts are predicted. Heat waves and heavy rain intensification are also on the agenda.

The study – which represents input from a total of 309 lead coordinating authors drawn from 70 countries – also warns of major economic consequences caused by rising emissions, suggesting that a 2 degree Celsius temperature increase above pre-industrial levels could cut global economic output by between 0.2 and 2.0 percent a year. In its previous September instalment, the scientists focused on the cause of global climate change, confirming a 95 percent probability that it is primarily influenced by human activity. In the panel's previous report, issued in 2007, scientists had put that same figure at 90 percent. (See BioRes, [2 February 2007](#)).

The Nobel-prize winning IPCC faced a slew of criticism after the 2007 report, which incorrectly cautioned that the Himalayan glaciers could melt as early as 2035. In a move seemingly designed to address the past mishap, the latest report's executive summary notes that the volume of scientific publications for assessing climate sciences has more than doubled between 2005 and 2010, with significant increases in publications related to adaptation.

Risk assessment, mitigation, and adaptation

The study also takes the unprecedented step of framing climate change as a series of risks. These include risk of death for those in low-lying coastal zones, severe ill-health and disrupted livelihoods for urban populations, further mortalities due to extreme weather, eco-system degradation, and loss of livelihoods, particularly among rural communities.

Three broad categories are put forward as affecting climate risk – vulnerability or lack of preparedness, assets or people in harm's way, and climate hazards. The study contends with high confidence that both adaptation and mitigation choices in the near future will affect the scale of climate risks throughout the 21st century.

"We live in an era of man-made climate change," said Vicente Barros, co-chair of the working group charged with producing the document. "In many cases, we are not prepared for the climate-related risks that we already face. Investments in better preparation can pay dividends both for the present and for the future," he continued.

"When we look ahead to the possibilities of changes in climate that are much larger than the ones we've already seen, the risk of much greater impacts is very clear," said fellow co-chair Chris Field, echoing his colleague's comments. But Field also signalled that adaptation based on sound risk assessment was feasible. "Climate-change adaptation is not an exotic agenda that has never been tried. Governments, firms, and communities around the world are building experience with adaptation," he said.

Poverty impacts, climate finance hurdle

Among the vulnerable populations identified, the study suggests that climate-related hazards may disproportionately affect those least able to cope economically.

The 2,500-page tome includes [language](#) noting the gap in available funding for climate change responses in developing countries. "Therefore, there is a related need to design delivery channels so that funding benefits the poor, as they often are most vulnerable to the impacts of climate change and climate-related disasters," the authors continue. According to the New York Times, detailed references to the issue were scrubbed out of the executive summary, destined to be read by top policymakers, with several developed countries suggested the finance language was too controversial.

Funding for climate action has been one of the most difficult issues to resolve in international climate negotiations. The troubled 2009 Copenhagen climate meet saw developed countries agree to provide US\$10 billion per year as "fast start" financing for the years 2010-2012, as well as to establish a separate Green Climate Fund (GCF) that would offer US\$100 billion by 2020 to help developing countries tackle rising emissions and adaptation challenges. Although rich nations initially provided a degree of financing, subsequent contributions have been more limited. A number argue the agreed-upon sum is far too high, given the lack of public funds due to domestic hardship and fragile economic recovery.

At the Warsaw climate conference last year, red lines were once again seen around financing, with developing countries seeking to operationalise previously negotiated and unspecified language on "institutional arrangements" to help them deal with extreme weather events. A key stumbling block of the meeting, the outcome document referenced a "Warsaw international mechanism," although the governance of the body remains unclear. (See BioRes, Warsaw Update No. 2, [24 November 2013](#)).

Author controversy

A high-profile row clouded the release of the study, with a senior author requesting that his name be removed from the executive summary. Professor Richard Tol of the University of Sussex – who had been working as a senior economist on a chapter addressing climate change's economic impact – called the report "alarmist," telling the Financial Times that identifying people in war zones as more vulnerable to climate change was "silly." Tol's comments caused backlash from other members of the climate community.

Next instalment leaked

Coming hot on the heels of March's news, Reuters reported that it had seen a chapter of the next study in the series, due out mid-April. The news agency said that the draft text would call for tougher curbs on greenhouse gases, by both rich nations as well as emerging economies, in order to keep global warming from breaching an internationally agreed-upon 2 degree Celsius limit above pre-industrial levels.

ICTSD reporting

Additional sources, THE NEW YORK TIMES, REUTERS, FINANCIAL TIMES, THE GUARDIAN

WTO

WTO panel finds Chinese export restrictions on rare earths illegal

The global trade arbiter recently ruled against China's claim that its export restrictions on rare earth elements could be justified for environmental protection reasons.

A WTO dispute panel has found that China's restrictions on rare earths exports are in breach of global trade rules, in a highly-awaited ruling that focused heavily on how to balance natural resource policies with international trade obligations.

The restrictions cited in the dispute involve a series of duties and quotas that Beijing imposed in recent years upon the export of various rare earths, together with tungsten and molybdenum. China, the world's leading producer of such minerals, had claimed that the limits were necessary to protect these exhaustible natural resources and the environment, given the extremely damaging impacts of the extraction process.

These 17 rare earth elements have unique magnetic, heat resistant, and phosphorescent properties and are crucial ingredients in the manufacturing process of many high-tech and green energy products, including wind turbines, engines for electric and hybrid vehicles, and medical equipment.

Despite a recent turn towards other sources such as Greenland and Australia, China is still responsible for 90 percent of all rare earths production, according to the US Geological Survey, while having just under a quarter of the world's supply of these minerals.

The dispute was first lodged at the WTO in early 2012, with the US, EU, and Japan each submitting nearly identical complaints against the Asian economic powerhouse. The group had argued that the Chinese export restrictions were aimed at increasing global prices of these minerals - which had spiked following the implementation of these measures - while also favouring domestic industry, rather than for the natural resource conservation goals that Beijing had outlined.

"China's decision to promote its own industry and discriminate against US companies has caused US manufacturers to pay as much as three times more than what their Chinese competitors pay for the exact same rare earths," US Trade Representative Michael Froman said.

Export duties: "No basis" in accession protocol

In its ruling, the panel found that there was "no basis" in the accession protocol, which China agreed to when joining the WTO in 2001, for justifying the use of export duties under Article XX of the General Agreement on Tariffs and Trade (GATT).

Article XX establishes a number of justifications for otherwise illegal measures on the grounds that they are needed to fulfill greater public policy objectives, such as resource conservation or public health. Beijing had argued that this article justified the use of export restrictions, if deemed necessary to protect human, animal, or plant life and health.

The panel found that paragraph 11.3 of Beijing's accession terms, which requires the Asian economy to eliminate all of its export duties, does not include any basis for justifying export duties by invoking the GATT Article XX exception. The finding was in line with a 2012 Appellate Body ruling on Chinese export restrictions on nine raw materials, which also found those measures to be WTO-illegal; Beijing had asked the panel to re-examine that finding in this case.

Notably, one of the three panellists reviewing the dispute disagreed with this assessment, arguing that China can indeed rely on Article XX for a possible exception. However, the dissenting panellist said that even if Beijing did have recourse to that article, it has not made a strong enough case to justify the use of these duties.

Panel finds export quotas unjustified

With regard to export quotas, the panel found that Beijing's use of these measures appeared to be related more to its industrial goals, rather than to the conservation objectives that China had outlined in its defence.

Beijing had argued that it could involve Article XX(g), an exception that requires a measure to relate to the "conservation of exhaustible natural resources," if these are "made effective in conjunction with restrictions on domestic production and consumption."

"No WTO member has, under WTO law, the right to dictate or control the allocation or distribution of rare earth resources to achieve an economic objective," the panel said in its report, adding that members' right to adopt conservation schemes "is not a right to control the international markets in which extracted products are bought and sold."

The dispute panel did qualify that assessment by adding that WTO members can consider their industrial and developmental goals, together with conservation ones, in designing conservation policies.

Regarding Beijing's claim that it has made efforts to also limit domestic production and consumption, the panel said that it was not able to conclude whether these attempts were, indeed, "restrictions." Even if they were, they said, the burden of the country's conservation policy is not split between foreign and domestic consumers in an "even-handed" way, as Beijing had claimed.

"In our view, China has not explained how the export quota operates and works together with restrictions on domestic production or consumption for the conservation of rare earths," they said. "On the contrary, the panel considers that China's export quota and the restrictions on domestic users or producers of rare earths referred to by China do not seem to work coherently towards the goal of conservation."

This latter finding was praised by the complainants, who stressed in their public statements that they did not object to China's goal of putting in place environmental policies, but rather to their design and implementation. "The verdict is clear: export restrictions cannot be imposed supposedly to conserve natural resources if domestic use of the same raw materials is not limited for the same purpose," the EU said upon the report's release.

Sovereign right question addressed

Notably, the dispute had raised the difficult question of how to balance a country's international trade obligations with the UN principle that gives members permanent sovereignty over their natural resources. In its ruling, the panel found that rare earths - once extracted and put on the market - are subject to WTO rules.

Next steps

Both the complainants and respondents have 60 days to appeal the findings of the panel. Under WTO rules, the Appellate Body can review aspects of law - such as legal interpretation - but generally will not interfere with the factual findings of the original panel.

Chinese officials have said that they are reviewing the panel report and will move forward in line with WTO dispute settlement procedures, without specifying whether that will involve an appeal. However, many trade observers expect the case to advance to the appeals stage, given the systemic questions involved.

WTO

Farm subsidies: Cairns Group paper riles India, China

Evaluating the impact and nature of agricultural subsidy trends is important, but data gaps have caused tension between member states.

An informal paper by the Cairns Group of farm exporters has found that trade-distorting agricultural subsidies in developed countries are four times those of poorer countries, as a share of the value of production. However, the paper, which was presented at an informal WTO meeting in late March, has sparked concern from India and China, who question the methodology used to calculate their own farm support levels.

Trade sources told BioRes that the two developing country trading powers were upset that the Cairns Group analysis conflated subsidies that are capped under WTO rules with others that are not subject to any current ceiling on spending. "China and India strongly objected to the approach," one negotiator said.

The Cairns paper shines a spotlight on agricultural subsidy trends in ten major farm trading countries, by looking at how these domestic support patterns have evolved over time. The WTO members included in the analysis are Australia, Brazil, Canada, China, the EU, India, Indonesia, Japan, the US, and Russia.

Data gaps

The Cairns Group noted that backlogs and delays in official data reporting to the WTO have meant that significant holes remain in the analysis. "The lack of complete and timely notifications makes it difficult to observe current trends in domestic support," they said. For example, Indonesia "is currently working to fill in certain gaps," the sponsors explained, in particular by providing information on its public stockholding programmes.

At the WTO's ninth ministerial conference in Bali, Indonesia last December, members agreed to refrain from bringing trade disputes over public stockholding programmes for food security purposes in developing countries, so long as they provide new data on spending levels to the global trade body.

However, to date no country has formally asked to take advantage of the additional flexibility that was agreed at the conference. Members have also pledged to work towards a "permanent solution" to the constraints on public stockholding identified by developing countries in the run-up to the Bali meeting.

How green is "green"?

Farm support in the EU and US has declined "dramatically," the group finds, when defined as the current total aggregate measure of support – in other words, the "amber box" spending, including "de minimis" support, that is seen as most trade distorting under WTO rules. For example, EU support fell from US\$35.3 billion to US\$8.5 billion from 2001 to 2010, while in the US payments fell from US\$14.5 billion to US\$4.7 billion from 2001 to 2011.

Trade-distorting payments in the EU have fallen as successive reforms have moved the bloc away from market price support and coupled farm payments that link subsidies to production, and towards decoupled income support payments. In the US, high prices for farm goods in recent years have also meant that government schemes to support farmers when prices drop have not paid out as they have in earlier periods.

At the same time, both trading powers have greatly expanded their reliance on green box payments, which are exempt from any ceiling under WTO rules, on the basis that they cause not more than minimal trade distortion. While some green box schemes, such as food stamps for poor consumers, are widely seen as minimally trade-distorting, other types of payments - such as investment aids or decoupled income support payments - are viewed by some analysts as having a more significant impact on trade and production.

Low-income, resource-poor producers

India and China have objected to the use of a new measure of "total trade distorting support" (TTDS) to calculate subsidy levels, trade sources said. "The paper creates a new term - a new concept," one trade official said.

While current WTO rules allow developing countries to provide unlimited amounts of input and investment subsidies to resource-poor, low-income producers, the Cairns Group figures include these payments along with other types of farm support that would be capped by the de minimis ceiling on trade-distorting support.

This is set at ten percent of the value of production for most developing countries, with separate provisions for payments that are product-specific and those that are not. Exceptionally, China is subject to a lower ceiling of 8.5 percent. Both China and India have large populations of small farmers, although to date only India has made substantial use of the provisions allowing developing countries extra leeway to provide input and investment subsidies to these producers.

Cairns members report that TTDS levels in China rose from US\$320 million in 2001 to US\$13.9 billion in 2008, and in India from US\$8.2 billion in 2001 to US\$37.6 billion in 2008. Using the same measure, they found that support in the EU fell from US\$36.1 billion in 2001 to US\$10.3 billion in 2010, and in the US from US\$21.5 billion to US\$14.4 billion between 2001 and 2011.

While there is no precedent at the WTO for using TTDS to measure support, a draft deal negotiated under the Doha Round would have included cuts to overall trade distorting support - in other words, the sum of trade-distorting amber box, blue box, and de minimis payments. It would also have provided for separate cuts to each of these categories, and new limits on product-specific payments.

Reinvigorating Doha?

While the Cairns paper was shared with members as a contribution to the normal review process in the WTO's Committee on Agriculture, some trade sources consider its analysis to be potentially relevant to the current efforts at preparing a Doha Round "work programme" by end-2014, as mandated by ministers at their meeting in Bali, Indonesia, last December. "Substantial reductions" in trade-distorting support were among the issues members had agreed to address when the current round of talks were launched in the Qatari capital in November 2001.

At a WTO meeting late March to discuss the work programme, members clashed over whether draft Doha texts tabled six years ago should remain the basis for future talks on farm trade, ahead of a December deadline for agreeing to the new work programme.

Developing countries said the 2008 texts should still be the starting point for any new deal at the global trade body. However, the US argued for a fresh start, and called for countries to focus on updating data on trade policies before moving ahead with the negotiations. Other WTO members said that, although markets and policies had evolved, the Doha drafts were still an important reference point and could not be disregarded entirely.

The chair closed the meeting by urging members to intensify talks amongst each other, trade delegates said.

The newsroom

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UN court slams Japanese scientific whaling

The International Court of Justice (ICJ) has ruled that Japan's Antarctic whaling operations are in violation of its international commitments on the subject. The case was brought to the Hague based court in May 2010 by Australia's former Labour government.

Tokyo has persistently argued that its current whaling programme is consistent with authorised research exceptions to a 1946 whaling treaty, and is sustainable.

The global court agreed with Sydney that the number of animals lethally sampled was disproportionate in relation to the scientific results obtained.

In an unusually unequivocal move, the ruling ordered Japan to revoke all permits issued under the current programme, and refrain from issuing new ones. Commentators suggest, however, that Japanese whaling may continue through revised catch limits.

Commission proposes law on conflict minerals

The European Commission has proposed a self-certification scheme to better regulate mineral imports into the trading bloc from conflict-affected and high-risk areas. Using an integrated trade and foreign policy approach, one stated aim is to stop profits from traded minerals being used to fund armed groups.

The regulation targets tin, tantalum, tungsten – dubbed the “Three Ts” – and gold. The EU represents one of the largest markets for each of these sensitive minerals.

The draft regulation targets the early part of the supply chain, with the onus placed on the EU's approximately 400 importers. While the proposal would not carry strict legal liability, EU officials say the goal is to promote transparency through threat of public scrutiny.

Some campaigners expressed disappointment, having called for tougher legislation. Some officials, however, fear that stricter rules would cause investment flight.

Fund aims to help cut methane emissions

Rich countries are in talks to establish a new fund to pay for methane emission reduction projects in developing nations, as part of a broader effort to slash greenhouse gas emissions globally by 2020.

UN climate negotiators are aiming to have a global emissions deal by next year, for the post-2020 period.

The proposed fund, which would have US\$100 million in pledges, would be administered by the World Bank. Once enacted, the Methane Abatement Facility would buy and cancel carbon credits, starting with emissions-cutting projects at landfill waste sites.

The White House also recently announced a strategy to cut back domestic methane emissions, which will likely include revised standards for oil and gas production on public lands. Environmental groups welcomed the move, while some business associations expressed concern.

EU blacklists fish imports from three countries

The EU has announced restrictions on fish imports from Belize, Cambodia, and Guinea, due to the countries' alleged failure to cooperate in tackling illegal fishing activities.

This decision follows a November 2013 Commission recommendation to formally blacklist these countries based on their noncompliance with international Illegal, Unreported and Unregulated (IUU) fishing standards.

“[These decisions] demonstrate that the EU is leading by example in the fight against illegal fishing,” said Maria Damanaki, European Commissioner for Maritime Affairs and Fisheries.

The EU's ban has been welcomed by a number of observers, who say the new trade restrictions are a vital step forward. Moving forward, Brussels will continue to work with these countries to reopen trade, but only if the latter demonstrate significant steps towards compliance with IUU standards.

US pushes for trade deal on green goods

The Office of the US Trade Representative has officially notified Congress of its plans to negotiate a new plurilateral trade pact on environmental goods, two months after the initiative was launched on the sidelines of the World Economic Forum in Davos, Switzerland.

Back in January, the US, EU, China, and 11 other WTO members agreed to negotiate a binding deal that would slash tariffs on such products.

The group aims to build upon a separate "green goods" initiative launched by the Asia-Pacific Economic Cooperation (APEC) group in 2012.

"By eliminating tariffs on the environmental technologies we need to keep our air and water clean, for example, we can make them cheaper and more accessible to everyone," USTR Michael Froman told Congress.

Under US law, the executive branch must notify Congress at least 90 days before formally engaging in any international trade negotiations. These notifications are then followed by congressional hearings.

EU delays energy decision over Ukraine crisis

EU leaders delayed plans to discuss the bloc's 2030 energy targets during a leaders' summit in Brussels last month, shifting their attention instead to the ongoing crisis in Ukraine. The energy decision has been postponed until the European Council's next summit in October.

The March talks were meant to focus on the European Commission's proposal for a 40 percent greenhouse gas reduction rate and 27 percent renewable energy target.

Some critics have pointed out the irony in delaying energy policy decisions while the EU remains dependent on imports of Russian natural gas.

The 28-nation bloc's energy ties to Russia have largely been blamed for the EU's initial reluctance to impose sanctions on Moscow in response to its recent annexation of Crimea.

As the situation has worsened, however, the Council has taken an increasingly strong stance toward its Eastern neighbour, imposing visa bans and asset freezes on individuals involved in the crisis while calling for a diversification of EU energy sources.

Burma bans raw timber exports

Naypyidaw moved to prohibit exports of raw timber as of 1 April, citing extensive deforestation of the country's timber reserves.

Although Burma has some of Asia's largest remaining expanses of forests, official data suggest that cover has been reduced from 57.9 percent of the country's total land area in 1990 to 47.6 percent in 2005.

Government figures indicate that timber exports in 2013 totalled 1.24 million cubic tonnes, worth over US\$1 billion in revenue.

Analysts note that although the ban will almost certainly hurt the forestry industry, it may also encourage a shift towards the domestic processing of timber products. Burma is the only country that still exports raw teak logs from natural forests.

The Environmental Investigation Agency, an independent campaign group, has said the measures were unlikely to have significant effect, given that as much as 72 percent of Burma's log exports in recent years have been illicit.

Fishing nations pledge cooperation

Six of the world's leading fisheries nations have pledged to scale up efforts to counteract the overcapacity of fishing fleets, following an international conference held in Greece.

"We note that when overcapacity contributes to overfishing, it constitutes a serious threat to the conservation and sustainable exploitation of living marine resources in the world's oceans," read the statement, which was signed by the US, the EU, Japan, Philippines, Indonesia, and Colombia.

The group stressed the importance of international cooperation in this area, including using instruments adopted at the global level to provide binding frameworks for managing fishing capacity in a sustainable way.

The heightened international political commitment from fishing nations of this scale was welcomed as a useful step forward by some observers. Others, such as environmental group Greenpeace, called for additional efforts in this area, while also hailing the move as "critical and long overdue." Other analysts also cautioned that attention to national agendas would be equally as important.

Publications and resources



Global Forest Watch – WRI – 2014

This online forest monitoring and alert system, a collaborative project convened by the World Resources Institute (WRI) empowers people worldwide to better manage forests. The website unites satellite technology, open data, and crowdsourcing to guarantee access to timely and reliable information about forests. Global Forest Watch aims to put decision-relevant information in the hands of governments, companies, NGOs, and the public.

The site can be accessed at <http://bit.ly/1mj4QF8>



Tapping the Markets: Opportunities for Domestic Investment in Water and Sanitation for the Poor – World Bank – January 2014

Drawing on case studies from Bangladesh, Benin, Cambodia, Indonesia, Peru and Tanzania, this report finds that cooperation between public and private water and sanitation sectors holds huge market potential for businesses and enormous development dividends for millions at the "Base of the Pyramid" (BOP). The report discusses opportunities and constraints for the domestic private sector and offers suggestions for addressing market and policy challenges.

The report can be found at <http://bit.ly/1epXQlv>



Measuring Pesticide Ecological and Health Risks in West African Agriculture to Establish an Enabling Environment for Sustainable Intensification – The Royal Society – February 2014

This paper uses new risk assessment models to provide the first extensive analysis of pesticide risks in West Africa. The paper suggests a three-pronged approach to pesticide risk management, including monitoring systems to enable science-based decision-making, functional regulatory systems and effective farmer education programmes.

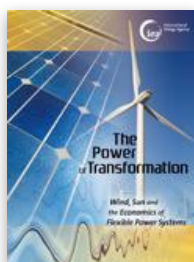
The paper can be found at <http://bit.ly/1dGy8Wk>



Unconventional Wisdom: Economic Analysis of US Shale Gas Boom and the Implications for the EU – IDDR – February 2014

This study from the Institute for Sustainable Development and International Relations (IDDR) assesses the US shale gas boom and its implications for the EU. The perceived economic and energy security benefits of the US unconventional oil and gas revolution have sparked debate over the EU's climate and energy policies. This study addresses questions around the current and projected economic, energy sector and emissions impacts of the shale evolution in the US, and evaluates whether the EU should fundamentally revise its energy and climate objectives.

The study can be found at <http://bit.ly/OAIQaJ>



The Power of Transformation – Wind, Sun and the Economics of Flexible Power Systems – IEA – February 2014

This book aims to show how power systems with high shares of variable renewable energy (VRE), such as wind and solar, can remain reliable and cost-effective. The book summarises the results of the International Energy Agency's (IEA) Grid Integration of VRE (GIVAR) project, and is based on seven case studies from over 15 countries. Its key finding is that well-designed systems generating high percentages of renewables need not come with a high price tag.

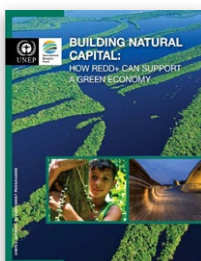
The book can be accessed at <http://bit.ly/1jbFdS4>



The Problem with the Problems of Water Scarcity in South Asia – GWF – February 2014

This discussion paper, published by the Global Water Forum (GWF), argues that water scarcity is mainly a problem of poor governance and not of resource depletion or population growth, as is commonly believed. Using examples from India and Pakistan the author shows that prevailing ideas about water scarcity lead to supply-side responses that ignore social and political tensions, and the demand-side solutions needed to address them.

The paper can be found at <http://bit.ly/1eq0DuM>



Building Natural Capital: How REDD+ can support a Green Economy – UNEP, IRP – March 2014

This joint report by UN-REDD and the International Resources Panel (IRP) provides an overview of the elements necessary for integrating REDD+ into a Green Economy. The report highlights the need for US\$30 billion in funding to ensure REDD+ implementation, concluding that REDD+ can aid the green economy by increasing the resource efficiency of many sectors, as well as supporting green industries, eco-tourism, and other components. The report presents a number of recommendations to maximize links between REDD+ and the green economy.

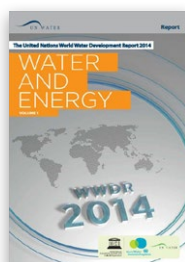
The report can be accessed at <http://bit.ly/1o3EV6e>



The GLOBE Climate Legislation Study – GLOBE – February 2014

This report provides an overview of global climate change legislation, specifically looking into the climate legislation of 66 countries, which together are responsible for 88 percent of manmade greenhouse gas emission (GHG). The report finds that countries are increasingly passing domestic laws aimed at tackling climate change; however more work must be done to meet the internationally agreed goal of limiting the global temperature rise to two per cent.

The report can be accessed at <http://bit.ly/1kM5Ej3>



World Water Development Report 2014 – UN Water – March 2014

This year's UN Water World Water Assessment Programme publication focuses on the water-energy nexus. Stressing the importance of both water and energy for poverty alleviation, the report seeks to outline their inter-linkages, potential synergies and trade-offs, as well as highlighting the need for appropriate responses and regulatory frameworks that account for both water and energy priorities. The report also provides a comprehensive overview of major and emerging trends from around the world.

Volume I can be found at <http://bit.ly/1dp7jLC> and Volume II at <http://bit.ly/1dp7mqV>



The Shale Gas Revolution: Implications for Sustainable Development and International Trade – ICTSD – March 2014

This paper, published by the International Centre for Trade and Sustainable Development (ICTSD) seeks to contribute to the debate on shale gas as an energy source that is transforming energy prices, industrial competitiveness, and geopolitics in a number of countries. The author aims to shed light on these complex issues and calls on governments, industry, and international agencies to evaluate the full effects of shale gas on the environment and climate change to determine how it can best fit into a sustainable development agenda.

The paper can be found at <http://bit.ly/1pfbqKb>

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