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Climate-resilient agriculture and multilateral trade rules



International Centre for Trade
and Sustainable Development

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A changing climate landscape?



As delegates from nearly 200 nations prepare to head to Lima, Peru for the latest round of UNFCCC talks, there are positive signs suggesting progress toward a 2015 global climate agreement. Word of a China-US deal in November came as a surprise to many in the climate community, as the two economic giants – once at loggerheads over climate action – unveiled plans to cut emissions, including post-2020 climate targets.

And just over a week later, the Green Climate Fund – geared towards helping poor countries tackle climate change and transition to low-carbon growth – received an influx of formal financing pledges at a meeting held in Berlin, Germany. Progress on the Fund has been held up as a key signal of trust and solidarity between participating nations in the climate talks.

Both moves add to other important developments this autumn, including the New York UN climate summit, which saw 125 world leaders point to climate change as a national priority, and the October announcement that the 28-nation EU reached political agreement on new climate and energy targets for 2030.

At the same time, however, warnings from climate scientists and experts on the state of the planet are becoming increasingly ominous. A UN panel recently released a synthesis of more than 5000 pages of climate science warning of the far-ranging climate consequences if current growth models continue unabated. Additional reports unveiled in recent weeks from other UN bodies, think tanks, and civil society add to this core message.

As key events unfold in Lima and elsewhere, many following the negotiations – particularly those in vulnerable communities most at risk to the effects of climate change – are wondering if the world will manage to sufficiently cut emissions and shift to greener economic models. This latest issue of BioRes joins the conversation with several articles focused on the multidimensional issues at play at the nexus of climate and trade policy.

While shifting to a cleaner energy mix will play a key role in tackling climate-warming emissions, bringing down tariffs and non-tariff barriers around certain core environmental goods is crucial to helping reduce costs and deploying sustainable energy. With this in mind Rene Vossenaar looks at how to secure goods with climate potential in the ongoing plurilateral negotiations by 14 WTO members towards an Environmental Goods Agreement.

In addition Harro van Asselt reflects on potential trade and economic issues in the EU's new climate and energy targets while Ramesh Sharma asks questions around trade policy and climate-resilient agriculture.

Be sure to join the conversation! Do [write to us](#), follow us on [Twitter](#) and [Facebook](#), and comment on our website. As in previous years, BioRes will be reporting from the UN climate talks, providing regular coverage with a particular focus on trade and sustainable development issues as the negotiations unfold. Also, be sure to look out for our BioRes Lima Updates, featuring on-site reporting by our team.

ENVIRONMENTAL GOODS

Securing climate benefits in the Environmental Goods Agreement

Rene Vossenaar

Shifting to a cleaner energy mix is essential to limit the far-ranging consequences of climate change caused by ballooning greenhouse gas emissions. Trade policy can play an important role in this transition but a number of challenges will need to be addressed in a future Environmental Goods Agreement.

As is now well-known, a group of 14 WTO members in July launched plurilateral negotiations aimed at achieving maximum “global free trade” in a wide range of environmental goods. In a [joint statement](#) participants said that the global challenges of environmental protection and climate change required urgent action. The removal of tariffs and non-tariff barriers (NTBs) to trade may reduce the costs of environmental goods in the domestic markets of importing countries and holds the potential to play a role in climate mitigation policies such as tackling greenhouse gas emissions by scaling up renewable energy (RE) use.

The “Environmental Goods Agreement” (EGA) will become operational once a critical mass of WTO members join, in other words, countries covering a large portion of world trade in the goods selected for liberalisation. The benefits of tariff elimination will then be extended to all other WTO members on a most favoured nation (MFN) basis. Determining the exact critical mass threshold will be a key part of the talks. WTO members involved in the Information Technology Agreement (ITA), which was also negotiated on an open plurilateral basis, agreed to a 90 percent threshold. In theory EGA participants could adopt any threshold considered large enough to reduce concerns about free riding – where non-participants benefit from the tariff reduction and elimination without having to reduce or remove their own tariffs – as a prerequisite to the agreement’s entry into force.

Selecting the goods

Determining which goods get included is of course where the rubber hits the road in such negotiations. Current EGA participants have said that they will build on the [APEC List of Environmental Goods](#) endorsed by leaders from the 21 Asia-Pacific Economic Cooperation (APEC) economies at a meeting held in Vladivostok, Russia in 2012. The aim is to reduce MFN-applied tariffs on a negotiated list of environmental goods to five percent or less by next year. Applied tariffs are the customs duties levied at the border. In contrast, some EGA members have indicated they would like to reduce bound tariffs, namely the maximum duty ceiling levels WTO members could potentially set. It is expected that bound tariffs for all goods covered by the EGA will be reduced to zero.

The APEC list classifies environmental goods under 54 6-digit level Harmonised System (HS) subheadings. The HS is a nomenclature, developed by the World Customs Organization, to classify internationally-traded products in a uniform way. Only few HS subheadings exclusively or predominantly include environmental goods. The APEC list uses the term “ex-out” to indicate that just one part of a particular HS subheading may be considered as an environmental good, in accordance with additional product specifications and remarks provided by APEC economies.

Tariffs are then applied at the level of tariff lines (TL) in national – or regional in the case of the EU – tariff schedules, whereas global trade data is only available at the level of entire HS subheadings. Some national tariff schedules may include certain codes for single-use environmental goods that are part of the subheadings of the APEC list, for example, solar cells. One challenge is that most environmental goods are dual-use products that also have non-environmental applications. Examples include items such as gas turbines and AC generators. Meanwhile, other environmental goods may fall under national tariff lines

EGA members

The original EGA participants include Australia; Canada; China; Costa Rica; the EU; Hong Kong, China; Japan; Korea; New Zealand; Norway; Singapore; Switzerland; Chinese Taipei; the United States. Turkey and Israel have also applied to join.

that also include unrelated products, which in some instances are highly traded. Where a specific TL for an environmental product is available in a WTO member's tariff schedule, implementing a tariff cut is straightforward. Where TLs are more broadly defined than the environmental good targeted for tariff liberalisation – as will often be the case – a WTO member could eliminate tariffs for the full TL or create a new TL that captures the environmental good more narrowly.

Trade liberalisation driven by an agreement in environmental goods may go beyond just environmental goods, because as explained, it may be difficult to specifically target the latter. In general, this is a welcome development, because trade liberalisation has wider potential economic benefits. Nevertheless certain WTO members joining an Environmental Goods Agreement may want to use existing national tariff lines or create new ex-outs in their own tariff schedules, where possible, in a manner that allows them to keep their right under WTO rules to apply tariffs to unrelated products. Using ex-outs may help in achieving tariff reductions that better target environmental objectives and could make negotiations easier. Creating new ex-outs may also involve costs, however, and in certain cases additional work for customs officials. There may be a need for technical work among EGA participants wishing to create tariff lines that specifically capture environmental goods or a product's environmental end-use. It will also be interesting to see how APEC economies, where necessary, implement changes in their national tariff schedules to execute the APEC tariff-reduction commitment. At their latest annual meet held in November in Beijing, China, APEC leaders called on officials to submit implementation plans by next year's APEC trade ministers gathering, in line with earlier commitments.

How much trade?

In the period 2011-13, trade in the subheadings of the APEC list amounted to around US\$400 billion per year measured either by exports or imports, excluding intra-EU trade. This represents approximately three percent of total world trade and four percent of world trade in manufactured products. A more detailed look at the APEC list reveals, however, that trade in environmental goods accounts for only a small portion of all trade in many subheadings. One study argues that 46 of the 54 HS subheadings on the APEC list reflect goods that are not used primarily for environmental purposes¹. On the other hand, the APEC list includes only part of today's internationally-traded environmental goods. In addition, multiple-use products with certain environmental applications may be traded under HS subheadings not usually included in analyses of trade in environmental goods.

Based on COMTRADE data it is estimated that the 14 WTO original EGA participants accounted for 86 percent – 78 percent of imports and 93 percent of exports – of global trade in the 54 APEC subheadings in 2012. This figure includes re-imports and re-exports, as well as intra-EU trade, the exclusion of which would round the numbers down somewhat. Mainly due to developments in photovoltaic (PV) trade – such as the fall in solar PV prices, policy uncertainty in several countries, and the effect of antidumping and countervailing duty actions – the group's trade in the subheadings declined in value terms compared with 2012, whereas trade by non-EGA participants increased. If a key issue in the EGA talks proves to be concerns around free riding, participants could eventually give more weight to their more than 90 percent share in global exports.

Non-EGA participants with the largest value of total trade in the 54 subheadings of the APEC list for the period 2011-13 are, in descending order, Mexico, Malaysia, India, Russia, Thailand, Brazil, Turkey, South Africa, Indonesia, Saudi Arabia, the Philippines, Israel, and Vietnam. Turkey and Israel have now applied to join the EGA.

Identifying climate potential

Whereas the APEC list will be taken as a starting point, EGA participants are committed to exploring a broad range of additional products. The September round focused on what goods might be included in the EGA on two fronts, namely, air pollution control and solid and hazardous waste management. During a third discussion round, scheduled for the first week of December, participants are considering products related to wastewater

Timeline

November 2001: Environmental goods and services included as part of the Doha Development Agenda at the WTO's Fourth Ministerial Conference.

September 2012: APEC forum agrees to liberalise tariffs under 54 product lines in Vladivostok, Russia.

January 2014: 14 WTO members announce in Davos, Switzerland their intention to pursue talks towards global free trade in environmental goods.

July 2014: 14 WTO members formally launch negotiations towards an Environmental Goods Agreement in Geneva, Switzerland. First round of talks held focused on the framework and structure of the negotiations.

September 2014: Second round of EGA talks held in Geneva, Switzerland. EGA participants reach agreement on categories to serve as a basis for negotiating the final list of products. Discussion begins on two categories, namely, products related to the reduction and mitigation of air pollution and solid and hazardous waste management.

December 2015: Third round of EGA talks held in Geneva, Switzerland. EGA participants will discuss wastewater management and water treatment, environmental remediation and clean-up, as well as noise and vibration abatement.

management and water treatment, environmental remediation and clean-up, and noise and vibration abatement. Goods related to cleaner and renewable energy, as well as energy efficiency are slated to be reviewed early in the new year, while a later discussion round is due to tackle environmental monitoring, analysis and assessment, as well as environmentally-preferable products, and those related to resource efficiency.

One of the most significant developments in the energy sector in recent years has been the decline in the cost of renewable energy technologies for electricity supply. The recent New Climate Economy report confirms that renewable energy, particularly wind and solar power, is increasingly cost-competitive and in many places able to keep up with fossil fuels without the help of subsidies. The elimination or reduction of tariff and non-tariff barriers to trade in renewable energy equipment and components could further facilitate the use of renewable energy in the overall energy mix while trade liberalisation may also provide opportunities for exports and economic development.

The APEC list provides a reasonably good coverage of certain RE supply products particularly in the solar PV and wind-power sectors. The list also includes products that may contribute to enhancing access to clean energy, for example small hydro, ocean, geothermal and biomass gas turbine generating sets. On the other hand, some RE sectors are not included. For example, equipment used in hydropower applications does not make the cut for the APEC list. While the list does include both RE equipment and parts – which may be useful for a value-chain approach to reducing costs – certain segments of value chains are missing. For example a range of downstream components used in solar PV systems, such as solar inverters, are also not included perhaps because the relevant HS subheading includes products that are principally applied for other uses.

Drawing on earlier submissions made in the WTO and those identified in work carried out by the International Centre for Trade and Sustainable Development (ICTSD), the publisher of BioRes, additional products and components relevant for RE and access to clean energy could also be considered. These include, for example, Fresnel mirrors and reflector modules used in concentrated solar power (CSP) applications, heat pumps, as well as parts and components used in RE supply technologies. Some of these products are multiple-use with relatively large values of trade, such as switchboard and control panels, gearboxes, and ball bearings used in RE installations. Some other recent ICTSD studies have also highlighted products that contribute to improved access to clean energy, in particular, off-grid solar appliances. Opportunities for including such products in the EGA could be explored although lack of data may be a problem. For example, off-grid markets and trade flows for solar home-systems, mini-grids, solar pumps, solar cooking stoves, and solar lighting appliances are difficult to trace. Certain products that may be required in off-grid solar applications such as batteries, charge controllers, and energy converters have been included in earlier submissions to the WTO, but not in the APEC list, and they could also be part of possible additions for the EGA.

The selection of additional products for the EGA will likely face similar challenges as those detailed around the APEC list. Some criteria may therefore be developed to guide the possible inclusion of additional products in the EGA, which should be driven primarily by environmental considerations. Possible impacts of tariff elimination and practical factors, such as the ease of implementing tariff cuts taking into account HS classifications and existing national tariff schedules, including the costs and benefits of creating new TLs, might also be considered.

Moving forward there is also a need to explore ways to arrive an accurate picture of trade in more narrowly-defined environmental goods. Analysis of available information on trade in national tariff lines of key trading partners may give some insights on how to interpret trade flows estimated at the level of certain HS subheadings that include unrelated products. Additional indicators and business surveys of markets for environmental goods and services could be useful for that purpose.

Possible impacts

While a tariff-cutting EGA is certainly a welcome step forward, the impact on tariff levels in environmental goods is likely to be relatively small, given that MFN-applied tariffs in most EGA participant countries are already low. For the APEC list the overall simple average MFN-applied tariff is only 1.67 percent. This very low average can mostly be explained by the large number of duty-free items and more than half of all imports are fully duty-free on an MFN basis. Considering only those dutiable items, the simple average MFN-applied tariff at 4.3 percent is more significant, although still modest. However, even where tariffs are low their elimination may make certain RE technologies more cost-competitive, including by reducing the impacts of cumulative tariffs facing products that cross borders several times in the context of global value chains.

Bound tariffs among the largest participants are also already low. For example, the simple and trade-weighted averages of bound tariffs are only around 1.5 percent in both the EU and the US, although this figure sits at 5.2 percent for China. Tariffs for nine subheadings of the APEC list, including subheading HS 854140 that provides for trade in solar cells, panels, and modules are already fully covered by the ITA. Since all the EGA participants are ITA signatories they have already bound their tariffs at zero percent in these subheadings. For further tariff liberalisation to occur in these areas a non-ITA country would need to join the EGA. Addressing NTBs at some stage could facilitate renewable energy deployment. The EGA could also play a role in helping to prevent trade friction.

Boosting low-carbon deployment

To date the EGA participants dominate the global renewable energy market. Total renewable energy investment weighed in at US\$214.4 billion in 2013, according to a joint report, with China, the EU, US, Japan, Canada, and Australia together accounting for 80 percent of this amount. International trade in renewable energy goods has played an important role in spreading the benefits of technology cost reductions around the world, including falling prices for solar panels and wind turbines. Such cost reductions, in combination with domestic clean energy policies, are an important driver of RE investment in developing countries. For the period 2011-13 imports of solar PV equipment in non-EGA developing countries increased significantly in value terms, and even more in volume terms, for example in South Africa, the Philippines, and Chile. A large portion of emerging import demand for RE equipment in developing countries is currently met by China.

Furthermore, the reduction and eventual elimination of import tariffs for intermediate products may lower the costs of renewable installations in importing countries, while at the same time also allowing certain developing countries to participate in global value chains. Some national tariff schedules, such as those of the US and China, include specific codes for wind-energy components. US import statistics show that certain non-EGA developing countries are key suppliers of specific components. In 2012, Vietnam was the largest foreign supplier of AC generators for wind-powered generating sets to the US market, whereas Mexico accounted for around 70 percent of US imports of parts for such generators. Brazil was the largest foreign supplier of wind-turbine blades and hubs, accounting together with India, for more than half the value of US imports.

Next year will mark a watershed moment in international climate governance as governments seek to pin down a global emissions-cutting deal that could send a major signal to energy markets. In this context, opportunities lie ahead to achieve climate, sustainable development, and trade benefits from the reduction or elimination of tariffs and NTBs to environmental goods and services, including through a future EGA. Also in the climate context, EGA negotiators will have to dive down into the details to make sure trade liberalisation negotiated in the eventual deal can make a significant contribution to the deployment of cleaner and renewable energy technologies, thereby facilitating emissions reductions around the world.



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① R. Reinvang (2014), The APEC list of environmental goods: An analysis of content and precision level, ISBN 978-82-8126-149-5, Vista Analysis AS Report number 2014/08.

CLIMATE CHANGE

Assessing the EU's new climate and energy framework

Harro van Asselt

The world's largest single market has shown its hand on cutting emissions in the medium term. This article takes a look at some of the economic and competitiveness issues raised by the proposed 2030 targets.

In October, as UN climate negotiators met in Bonn, Germany, EU heads of state and government adopted a new climate and energy framework for the 28-nation bloc to govern the period up to 2030. The framework offers important new directions for the medium term by outlining three major EU-wide targets for 2030; a 40 percent greenhouse gas emissions reduction target compared to 1990 levels; a 27 percent target for renewable energy; and a 27 percent indicative target for energy efficiency improvements. However, while the agreement on the proposed framework can be viewed as a necessary step forward for EU climate policy and the bloc's credibility in the international climate talks, some key questions remain unanswered.

The adoption of the framework also needs to be viewed in the context of several developments in international politics and governance. First, the EU's climate policies have been crafted with one eye on the ongoing UN climate negotiations towards a global emissions cutting deal. The framework's announcement can be viewed as one of the opening bids by a major player in these talks – in economic terms the bloc accounts for 24 percent of global GDP – in the run-up to the pivotal UN climate summit due to be held next year in Paris, France. Second, the EU's policy package is drawn up against the background of mounting energy security concerns. The dramatic events that unfolded in Ukraine this year have raised questions about the continuing reliance by some member states on Russian natural gas exports. The new framework offered an opportunity to eventually reduce dependence on Russian gas by promoting renewable energy and boosting energy efficiency. At the same time, uncertainties related to gas supply led some member states to push harder for more flexibility to continue to invest in fossil fuels, including coal, liquefied natural gas, and shale gas.

Emissions reduction: High or low ambition?

The 40 percent reduction target offers plenty of ammunition for those wishing to criticise the EU's climate change leadership aspirations. For example, from the perspective of staying below a two degrees Celsius temperature increase from pre-industrial levels, it is hard to see how the EU target can be considered ambitious. Assessing a number of different approaches to distribute the global mitigation effort, Intergovernmental Panel on Climate Change (IPCC) author Niklas Höhne suggests that the 40 percent target is at the lower end of the ambition spectrum for the bloc. Furthermore, compared to the EU's own targets of achieving an 80-95 percent emission reduction by 2050, the 2030 goal seems to lack aspiration. It suggests that whereas the first 40 percent of emissions were to be reduced over 40 years (1990-2030), the remaining 40-55 percent would need to be cut in only half that time (2030-2050). If anything, the target postpones significant emission reductions, increasing the burden for future generations.

The target also falls short if the EU's current climate mitigation efforts are taken into account. A few days after the framework was released, the European Environment Agency reported that the bloc has by now almost met its 2020 target of a 20 percent reduction, and that it is likely to exceed this target by a few percentage points, or perhaps even more according to some environmental groups. Yet this evidence that the EU is actually over-achieving its existing targets seems to have had little impact on the bloc's ambition levels.

Largest global economies

According to World Bank data the top ten wealthiest nations based on aggregate GDP in 2013 were the US; China; Japan; Germany; France; UK; Brazil; Russia; Italy; and India. The 28-nations of the EU counted together are the world's largest economy and trade bloc. The EU is the top trading partner for 80 countries.

Valid though these criticisms may be they do not, however, paint the entire picture. Indeed against other benchmarks the bloc's targets could well be deemed lofty. The EU is one of the first groups in the international arena to come forward with a medium-term emission reduction target in the run-up to the December 2015 climate talks. This is significant from a political perspective, as it puts at least some pressure on other developed states and major economies to follow suit, and submit economy-wide emission reduction targets that go beyond what has been agreed thus far. Although it is doubtful whether the EU's announcement contributed to the mid-November deal between the US and China to reduce emissions, the step was necessary for the bloc to retain credibility in the multilateral climate talks.

The framework also offers some indications that the EU is serious about reducing emissions. The Council conclusions state that the emissions reduction target should be at least a forty percent reduction indicating that this is the minimum required. While there is no guarantee that the EU will indeed raise ambition before 2020, the wording "at least" implies that adjustments upwards are possible for the next decade, and EU leaders promised to revert to the issue after Paris.

In an interesting move, the target only covers emission reductions at home, over offsetting in carbon reduction projects abroad. Unlike previous targets, which allowed member states to achieve emission reductions abroad through international offsetting mechanisms such as the UN Clean Development Mechanism (CDM), the 2030 target suggests that member states have to adopt more ambitious policies for their own emitting sectors.

This may lead to a paradoxical situation for the international negotiations. Whereas the EU is one of the key players pushing for the expansion of carbon markets internationally – for example through the World Bank's Partnership for Market Readiness or discussions on a new market mechanism under the UNFCCC – it is giving a signal that there will be no demand for international offsets that may emerge from such markets. According to some member states, there is a distinct possibility that any increase in the EU's ambition level will be accompanied by allowing for international offsets, but at present the signals provided by the bloc around international carbon markets are decidedly mixed.

However, while international offsets appear to be excluded for now from the 2030 framework, some new flexibility is granted elsewhere. For instance, the land use, land-use change, and forestry sector will be included in the EU's mitigation framework by 2020, which could reduce the pressure on other sectors to take mitigation action given that the sector already sequestered over 300 megatonnes of carbon dioxide equivalent emissions in 2011. Moreover, intra-European offsetting will be enhanced to lower the costs for the sectors not integrated into the EU's Emissions Trading System (ETS), and some member states with relatively high targets will be allowed to reduce their ETS allowances to cover for emissions in non-ETS sectors. The latter means that countries such as Denmark will have a one-off opportunity to use ETS allowances to meet their targets in non-ETS sectors such as agriculture and transport.

Finally, taking into account the political realities of the past few years, the EU's target can also be considered an achievement. The 28-nation bloc has faced several recent existential challenges, notably the ongoing financial and economic challenges following the recession in the late 2000s and rising levels of scepticism with the European project itself. Putting in place EU-driven policies that are likely to be perceived as costly by domestic constituencies was always going to be a hard sell. In addition the 2030 proposals by the European Commission faced significant resistance from several Eastern European member states.

In light of these challenges, it is noteworthy that the emission reduction target was agreed in the first place, and that differences between "old" and "new" member states were overcome. Yet important questions remain. Specifically, even though the Council conclusions offer basic guidance on the bloc's medium-term emissions reduction ambition,

Top GHG-emitting nations

According to the World Resources Institute, in 2011 the ten largest aggregate emitters of greenhouse gases – including land-use change and forestry – were China; US; India; Russia; Indonesia; Brazil; Japan; Canada; Germany; and Mexico. Collectively, the 28-nations of the EU would come in as the third-largest emitter.

decisions still need to be taken around how this EU-wide target will be distributed among member states.

Reforming the ETS: Kicking the can down the road?

The Council conclusions also offer some indications around the reform of the EU's ETS, which has been both a flagship and troubled climate policy for the group. But while the Council conclusions underline its continued importance in the bloc's emissions-cutting strategy, agreement on crucial details have been delayed until next year. For some issues – such as the European Commission's proposed market stability reserve – no agreement was expected in October whereas for other issues – such as dealing with carbon leakage – the Council did provide basic guidance. However, for an instrument whose functioning so heavily depends on its design details, major decisions still need to be taken.

EU member states did reach agreement on a reduction of the emissions cap, meaning that emissions from the sectors included in the EU ETS will go down by 43 percent, compared to 2005. However, while boosting the stringency of the cap is generally expected to increase the scarcity of emissions allowances and hence hike up their price on the carbon market, the reality is that the EU currently has to deal with a major surplus of emissions allowances. As the environmental group Sandbag shows, at the end of 2013 this surplus amounted to 2.1 billion excess allowances, which could grow to 2.6 billion by 2020.

To tackle this burgeoning allowance supply, the Commission earlier this year proposed establishing a market stability reserve, which would serve as systematic panacea in the form of an "automatic stabiliser." This mechanism would remove some surplus allowances from the market if an upper threshold is exceeded – 833 million in the Commission's proposal – and would return allowances in case a lower threshold is passed – 400 million in the proposal. By doing so, the mechanism would help guard against the excessive surpluses that have plagued the EU ETS to date.

Yet while member states seem to have embraced the general idea, important battles remain to be fought, particularly around timing. Countries still need to agree on whether the reserve is launched before 2021, with Germany and the United Kingdom in favour, and several Eastern European countries opposed. The EU has also agreed on a temporary solution of "backloading" allowances – meaning that a set amount of allowances will be temporarily removed from the market – but the return of these between 2018 and 2020 would likely mean that the surplus will once again increase. Bringing the market stability reserve forward would address this risk. What is clear is that the decision on the reserve is essential for the functioning of the ETS and yet agreement on its functioning will depend on further debate between the European Parliament, the Commission, and the member states in the first months of 2015.

Another significant aspect of the framework agreed by the Council is its continued commitment to free allocation of emissions allowances for some sectors and countries and its specification of measures to address carbon leakage and competitiveness concerns. Despite an increase in the allocation of allowances through auctioning – usually the economists' preferred distribution method – the EU suggests that free allocation will remain necessary for sectors at risk of carbon leakage, namely, energy-intensive sectors such as cement, glass, and steel. While this policy has been in place for some years now, the agreement suggests that those sectors can be compensated for the direct costs of emission allowances, which has been the case thus far, as well as the indirect costs resulting from higher electricity prices due to the EU ETS. The Council conclusions do suggest free allocation will be better aligned with changing production levels rather than being based on historical production levels. Beyond these general statements, however, new rules for dealing with carbon leakage are not spelled out in extensive detail.

What is clear is that the initial approach adopted by the EU to tackle carbon leakage through free allocation is unlikely to change in favour of alternatives that have been on the table in the past, notably border levelling or border carbon adjustments. From the viewpoint of feasibility, continuing free allocation is attractive, with border levelling

having raised political and legal trade-related concerns. From the perspective of actually addressing carbon leakage concerns, border levelling may still be more effective.^① However, the Council conclusions do not mention this option in the context of addressing carbon leakage.

Free allocation also remains on the table for the energy sectors of low-income member states – defined as “member states with a GDP per capita below 60 percent of the EU average” – although the extent of free allocation is limited to 40 percent of the auctioned allowances. This is one of several concessions to Eastern European member states in the framework. The framework also proposes the creation of a new reserve funded by sales of two percent of the allowances, which would be dedicated to low-income member states, for the purpose of modernising their energy systems or increasing energy efficiency. Critics fear that this fund, which would be managed by member states with input from the European Investment Bank (EIB), would be used for the construction of new, more efficient coal-fired power plants.

Any improvements to the EU ETS will largely depend on how these proposals and various caveats will fare through the EU's legislative process next year. This process offers an opportunity to address some of the core challenges to the system's effectiveness but, as the compromises reflected in the 2030 framework proposal suggest, it is questionable whether appetite exists within the bloc to seize this opportunity.

Mixed progress on renewables, energy efficiency

Much of vitriol expressed by environmental groups upon the release of the framework was aimed at the ambition levels of the renewable energy and energy efficiency targets. Compared to the bloc's existing legal framework up to 2020 the decisions do seem rather like two steps backwards. Binding targets for renewable energy at the member state level will be abandoned, and there will no longer be an EU-wide binding target for energy efficiency, let alone targets for individual member states. Energy efficiency and renewable energy advocates have lamented the absence of stronger incentives. The European Wind Energy Association called the renewable energy target “disappointing,” while the Coalition of Energy Savings referred to a “meaningless” energy efficiency target.

Seen in a different light, however, the flexibility provided to member states might be a welcome development. Emissions trading proponents have long argued that the binding targets for renewable energy have undermined the smooth functioning of the EU ETS. After the release of the 2030 framework, the International Emissions Trading Association expressed concern that the inclusion of renewable energy and energy efficiency targets would still hamper the effectiveness of the ETS. However, as the International Centre for Trade and Sustainable Development (ICTSD)'s Sonja Hawkins argued earlier this year, if the low carbon price signal provided by the EU ETS remains unchanged, other policies may be necessary to ensure that a low-carbon transition takes place in the long run.

Lima ahead

The EU's 2030 framework reflects uncertainties around the positions of other major players in the international climate negotiations and in relation to how to shore up competitive energy prices. The framework also makes clear the bloc's internal struggles and the compromises necessary to move union-wide policies forward while catering to member states at different stages of economic development. Ahead of Lima the EU has provided important signals as to its climate ambition. Beyond the headline targets, however, much remains to be decided and details will need to be fleshed out. The real impact of the framework might be expected to increasingly come into focus as the legislative proposals are made and debated next year. Most importantly, the revisions to the EU ETS will determine whether the EU's flagship policy instrument will live up to its name, and whether the EU can demonstrate that it is possible to reduce emissions in a cost-effective manner.



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AGRICULTURE

Climate-resilient agriculture and multilateral trade rules

Ramesh Sharma

How supportive are multilateral trade rules of climate change adaptation measures? The interface between climate adaptation and trade rules looks like a good topic for UNFCCC work on agriculture.

A considerable amount of analytical work has been taking place on climate mitigation and adaptation measures in response to the projected impacts of climate change. This research is being undertaken by international and regional agencies, think tanks, researchers, and governments through national adaptation action plans.

In this context, the work on climate adaptation in agriculture initiated by the UN Framework Convention on Climate Change (UNFCCC) and one of its technical bodies, the Subsidiary Body for Scientific and Technological Advice (SBSTA), is most welcome. While the agriculture sector is responsible for almost a third of global greenhouse gas emissions, it also stands to be among the areas most affected by far-ranging climate change impacts, with vulnerabilities caused by extreme weather, floods and droughts, or changing environmental conditions.

To be effective, climate adaptation needs to be mainstreamed into overall national development frameworks, drawing on a range of policy tools. Trade rules might be an important area where synergies could be usefully deployed to address climate adaptation in agriculture.

Climate adaptation approaches and measures

Following in-session discussions and a workshop in earlier SBSTA sessions, it was concluded at the SBSTA 40 held in Bonn, Germany in June, that the body would undertake scientific and technical work in four areas of climate adaptation in agriculture.

In abridged form, these are: the development of early warning systems and contingency plans in relation to extreme weather events; assessment of risk and vulnerability of agricultural systems to different climate change scenarios; identification of adaptation measures, taking into account the diversity of the agricultural systems, as well as possible co-benefits and sharing experiences in research and development; and identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner.

In the meantime, SBSTA invited UNFCCC parties and observers to submit their views on these issues by March 2015 on the first two areas, and by March 2016 on the second two. The submissions are to be considered at SBSTA in-session workshops in June 2015 and June 2016 respectively.

An excellent source for details on various adaptation measures is the national adaptation programmes of action (NAPAs), a UNFCCC-supported and country-led process for least developed countries (LDCs), geared towards identifying priority activities that respond to this group's immediate climate adaptation needs. As of November 2013, NAPAs were prepared for 50 LDCs, with total priority projects numbering close to 500. The UNFCCC secretariat website houses a NAPA priorities database, with full details on suggested projects and cost estimates.

A paper by the UN Food and Agriculture Organization (FAO) has reviewed this NAPA database and found that 20 percent of all potential projects are categorised as related to

food security, followed by terrestrial ecosystems at 16 percent, and water or irrigation at 15 percent.^①

Other prominent areas include early warning systems, coastal management, education and capacity building, infrastructure, and cross-sectoral resilience. Furthermore a reclassification by the authors of all these measures produced the following five categories: cross-sectoral resilience projects; management of ecosystems; water management; crop production and livestock; and diversification and income.

This paper takes a look at the four areas outlined by the SBSTA agriculture work programme for the coming years, together with speculation as to the possible adaptation measures these might encompass, and their intersection with trade policy. The basic question asked in each instance is whether one or more trade rules are supportive of a potential adaptation area or measure. It is important to note, however, that this short paper is primarily aimed at flagging possible issues at stake rather than diving into detailed analysis.

Climate disasters

All writings on adaptation stress the importance of developing early warning systems (EWSs) for responding to extreme weather events. This is also one of the four areas of SBSTA's agriculture work programme given the sector's particular vulnerability in this respect. Several such systems operate for agriculture generally, for example, FAO's global information and EWS (or GIEWS), Famine EWS (FEWS), Livestock EWS (LEWS), and the FAO's programme for EWS of transboundary animal diseases.

Some recent research focusing on EWS in the context of climate resilient development and adaptation has been undertaken by the UN Development Programme. In the WTO agriculture rules, the phrase "early warning system" appears in the Agreement on Agriculture (AoA)'s green box paragraph 2(b) in the context of pest and disease control, but this measure could equally fall under "advisory services" in paragraph 2(d). National EWSs have not been an issue at the WTO, in the sense of being incompatible with global trade rules.

Moreover because climate change and extreme events have proximate and large impacts on water-related hazards such as droughts and floods, irrigation projects are a prominent adaptation response, an issue highlighted by the SBSTA. In the NAPAs submitted so far some 20 percent of all response projects belong to this category.

Regarding the interface with trade rules irrigation is considered to fall under the green box's paragraph 2(g), "infrastructural services," which lists services such as dams and drainage schemes, roads, market, and port facilities.

Strangely, despite its central importance, the word "irrigation" itself does not appear anywhere in the green box, although some of the language is clearly relevant. It should be noted that government outlay on irrigation has not yet been questioned at the WTO and is seemingly fully accepted as green box.

Green box paragraphs 7 and 8 have provisions for subsidised insurance and payments for relief from natural disasters that fall under the first two areas of future SBSTA agriculture work. There are eligibility conditions; for example, income loss should exceed 30 percent of the average of the losses in previous years, while the payments should compensate for less than 70 percent of the loss, and payment is to be related solely to income and not to the type or volume of production. In practice very few WTO members have notified having used these provisions. One reason may be that the criteria are restrictive for typical subsidised insurance schemes because these tend to be specific to crops or livestock.

A key question to ask moving forward is whether the green box insurance provisions should be made more accommodating to such climate adaptation requirements? In the 2008 Doha draft AoA modalities, some amendments along these lines were introduced

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 agriculture 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.

to green box paragraph 8 – “relief from natural disasters” – but none to paragraph 7. Therefore some fresh assessment might be needed around these provisions from a climate perspective, especially since the demand for subsidised insurance will only grow in parallel with more extreme weather events and elevated uncertainties, another issue the SBSTA should reflect upon.

AoA green box's paragraph 12 focuses on payments under environmental programmes. Several recent papers find this provision relevant for climate adaptation, assuming that the term “environmental” is inclusive of climate. There are two provision-specific criteria, meaning the payments must be firstly assigned for clearly-defined government environmental or conservation programmes, and secondly limited to the extra cost of compliance or loss of income.

Some studies maintain that it is fair that the payment is limited to the cost of compliance of adaptation. Others argue that the payment has to be attractive enough to induce adoption and so cannot be limited to the compliance cost. Indeed, it is argued that payment should exceed the compliance cost, because a climate measure may also generate negative externalities for which farmers need to be compensated.

Paragraph 12 has not been amended in the Doha draft modalities of 2008, but it could be with climate adaptation in mind by adding the word “climate” to that paragraph, and allowing the payment to exceed the cost of compliance so as to make a measure more attractive.

Finally, most adaptation measures discussed tend to be national or local in nature. But extreme climate events often have global repercussions, notably, through trade and food prices. This adds to adaptation costs in other countries. This was the case during the food price crises of 2008 and 2011. While climate shocks were the initial cause trade policy, namely export restrictions, magnified the crises.

With projections of more frequent extreme climate events becoming increasingly certain, food importers – the vast majority of countries – are worried. WTO rules on food export restrictions are weak and need strengthening, which should reduce the overall global cost of climate adaptation. Several good analyses have been published since 2008 on how the WTO rules might be strengthened.² Reflecting on work undertaken in SBSTA in this area could be a useful way to foster the necessary synergies between the trade and climate communities.

Research is key

The STBSTA's fourth targeted area of work could include research for climate-tolerant crop varieties and animal breeds. This might include investigation into the use of genetic resources to breed new varieties – for example, short-cycle crops, drought-, flood- and salinity-tolerant crops – improved farming practices for sustainable intensification and increased resilience to variability, drought or salinity, and increased resilience of livestock and pastoral systems.

In the WTO rules, research falls under green box in the AoA, and all programmes that qualify are exempt from spending limits. It also covers all extension and advisory services. Research is among the least controversial areas in the green box— which may be why no amendment was made to the AoA text while negotiating a new draft under the Doha Round — so this could be a useful positive policy area to invest in.

Access to essential germplasm and other such materials is crucial for such research, especially by scientists in some developing countries. According to one study on access issues, scientists in the Consultative Group on International Agricultural Research (CGIAR) have expressed concerns over the increasing difficulty around accessing such materials unlike in past decades, due to new national and global rules and regulations.³

The role that the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) plays in this regard is not clear, particularly Article 27.3(b) that deals with plant variety, but the topic has attracted some attention including at the WTO TRIPS Council. It might make sense for SBSTA, among others, to look into this area as well.

Trade to help, not hinder?

Most trade experts support a liberal trade regime for food and agriculture and the conclusion of the Doha Round negotiations as the way forward. There is a consensus that reductions in market access barriers as well as in export and domestic subsidies will benefit agriculture in some developing countries as production shrinks in countries that previously subsidised heavily, mainly rich countries, thus creating fresh opportunities for certain poor countries to raise production for import substitution and exports.

A significant portion of developing countries are also located in warm and tropical areas where climate change is projected to hit hardest. As mentioned, the Doha negotiations on agriculture essentially missed out on the climate-trade interface, but there are growing calls for revisiting the current drafts to make trade rules more climate-friendly.

One recent paper argued for returning to the rules on food stockholding in the AoA green box.⁴ Given the experiences of 2008 and 2011 and projected further tightening of the global food markets, more so with climate change, many food importing developing countries are scaling up public stockholding of foods as an adaptation response.

The words "climate change" do not appear anywhere in the WTO agricultural agreement. If there was a will to do so, it would be relatively easy to insert these words in the AoA's green box in particular, and would impart an important message.

For inspiration on mainstreaming climate issues in multilateral trade rules, one need look no further than the approach undertaken for food security in the AoA. For seven years of the Doha Round negotiations on AoA, much attention was given to food security as a crucial non-trade concern where trade policy nevertheless had an important role to play, leading to a revised text that is much more food security-friendly, namely the 2008 draft modalities.

Climate change too is an important non-trade concern and multilateral trade rules could have an important impact. In addition, given the rise of mega-regional and plurilateral agreements in the trade landscape, further reflection is perhaps also needed on the areas outlined in this paper in relation to regional trade agreements.

As climate change deepens and extreme events intensify, more effective adaptation measures will be needed, such as rules for food export restrictions and innovative incentive schemes for encouraging the adoption of good practices by private stakeholders.

The SBSTA, among others, is well placed to be looking into these issues as part of its work programme on adaptation and could provide guidance on how trade policy frameworks might foster climate-smart agriculture.



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BIODIVERSITY

Business and biodiversity: Towards sustainable use value chains?

Daniel Robinson

Based on current trends the future is bleak for biodiversity. Can private sector partnerships, trade frameworks, and legal architectures be geared towards its sustainable use?

Representatives from nearly 200 governments convened in Pyeongchang, South Korea in October to focus on shoring up biodiversity conservation and sustainable use. The twelfth meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) was particularly marked, however, by dire warnings on the state of the biosphere. The launch of the fourth edition of the CBD's flagship Global Biodiversity Outlook (GBO) publication put forward indicators suggesting that biodiversity decline is set to continue at alarming rates. The report shows many worrying trends around fish stocks, coral reef degradation, species extinctions, forest loss, diminishing plant genetic resources, and the harmful impact of pollution on biodiversity. The news raises serious questions around the future of basic ecosystem services, the species we rely on for food and medicines, and the health of the biosphere.

The report also highlights that the estimated US\$150-440 billion needed annually in biodiversity-related funding, aid and investment, is significantly less than the estimated US\$36 billion from domestic, overseas development assistance, and Global Environment Facility (GEF) funding currently dedicated to biodiversity-related issues. Against this backdrop, actors with an interest in the CBD are increasingly looking to business sources for biodiversity financing, evinced in the numerous side events at the last COP around business and biodiversity. The BioTrade Congress held on the occasion also highlighted the presence and interest of industry, with various sustainable use ventures showcased, and policymakers looking to industry to contribute more on biodiversity needs.

According to some observers the CBD and the biodiversity issues it treats have not traditionally been approached from an economic perspective. Yet one of the of the CBD's key objectives is sustainable development and use of biological resources. Helen Clark, the head of the UN Development Programme, at COP12 noted the need to deal with poverty, inequality, and environmental issues simultaneously, amidst calls for biodiversity to play a deeper role in the sustainable development goals (SDGs) that UN members are looking to put in place as part of the post-2015 development agenda. One approach to valuing biodiversity correctly, particularly in relation to trade, is through the principle of the fair and equitable sharing of the benefits arising from the utilisation of genetic resources enshrined as the CBD's third pillar. However, in order to harness potential buy-in for conservation and sustainable use from the private sector, the right legal and institutional frameworks and tools need to be put in place.

First steps for Nagoya Protocol

The entry into force of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization – known as access and benefit-sharing or ABS – and the first Meeting of the Parties (MOP) to the new instrument was a highlight of the Pyeongchang meet. The Protocol seeks to ensure genetic resources are appropriately valued and that benefit-sharing is provided as monetary or non-monetary compensation towards biodiversity conservation and sustainable use or, in other cases, towards the indigenous and local communities that hold useful traditional knowledge vis-à-vis the resource. Notably, ABS has been included as one of the targets under proposed SDG 15, as part of a suggested set of goals put forward by a UN working group this summer. A large part of the focus of the inaugural Nagoya MOP was on issues

Genetic resources

Defined as genetic material from plants, animals, and microbes containing functional units of heredity. The Nagoya Protocol definition extends this to include derivatives, in other words, biochemical compounds resulting from genetic resources.

related to compliance with the new instrument given that much of its success will depend on national implementation and laws.

A newly-formed compliance committee would oversee countries' commitment to the Protocol and be able to receive reports of non-compliance submitted by Nagoya parties. It was agreed that the committee could review a situation where a party fails to submit its national report on ABS or where it is having difficulties complying with the obligations set out by the Protocol. After some sparring around details, it was agreed that the CBD Secretariat could review submissions of information about non-compliance from indigenous and local communities (ILCs) against that provided by relevant parties, which helps to increase the voice of those often closely connected with genetic resources. Two ILC observers will also sit on the compliance committee.

A related ABS-Clearing House (ABS-CH) was also established with the support of an informal advisory committee (IAC) to provide technical advice around the ongoing refinement of the body and web portal which will receive recognised certificates of compliance from parties to the Protocol. These certificates will mirror permits provided by a party's competent national authority on ABS and provide a publicly visible checkpoint against the possibility of access to genetic resources and associated traditional knowledge without permission and/or without benefit-sharing – often termed biopiracy.

Putting ABS into practice

The MOP also included several discussions seeking to find ways to implement ABS on the ground, including capacity-building for governments implementing ABS systems, model mutually agreed terms for ABS contracts, and ABS-compliant value chains. The idea of an ABS-compliant value chain emerges out of concern about the likelihood of benefits arising from utilisation of genetic resources. Since the CBD came into force in 1993, a handful of ABS agreements or examples have been discussed at length including the San-Hoodia agreement, the Costa Rica InBio agreements, and the Shaman Pharmaceuticals venture. These focused primarily on pharmaceutical products that often failed to result in the "green gold," in other words millions in royalties from blockbuster drugs, which was originally anticipated from ABS agreements.

In the context of genetic resources and ABS, commentators have often focused on royalties and milestone payments as providing a long-awaited windfall, after several years or decades of research and development¹. However, this often leaves local resource providers or stewards with high expectations and low odds of eventual benefits, especially from natural products-based pharmaceutical research that may require decades of clinical trials and tens of millions in investment. This has led to the idea of ABS-compliant value chains, which are about ensuring more upfront benefits, sustained purchase of a natural product, and increasing value addition or at least greater value capture, at the producer end of a supply chain. These value chains could be structured in different ways and will depend on the product, biological resource, and industry.

This shift in the value chain can occur in different ways. In some cases, technology transfer, training, and quality control have led to increased production and income for producers. The establishment of ABS value chains may not always be successful but the aim is to increase the likelihood of earlier and more sustained benefits than under a royalty model of benefit-sharing. For example, a natural product supply of "mamala" (*Omolanthus nutans*) from Samoa began in the 1990s for research and development (R&D) towards the potential antiretroviral drug Prostratin. This could have been set up as an ABS-compliant supply chain. However, some challenges associated with extractions from the mamala plant supposedly led to synthetic production of Prostratin in the US for R&D towards the pharmaceutical industry, which was a lost opportunity for Samoan farmers some of whom had already planted additional mamala plants around their properties.

Although there are relatively few positive examples to draw upon, some are arising from cosmetic, skin, and personal care products, and their intermediary supply companies. This is likely due to the shorter R&D timelines when compared to pharmaceuticals,

Valuing biodiversity

Some estimates suggest that at least 40 percent of the global economy depends directly or indirectly on biological resources. This figure climbs to around 80 percent when evaluating the needs of the world's poorest communities.

growing awareness about ABS in this industry sector, the importance of a socially and environmentally responsible brand image, and the clearer legal direction offered by the Nagoya Protocol, which explicitly mentions biochemical derivatives from genetic resources.²

Securing sustainable development with Moroccan argan

Trade in argan oil from Morocco is estimated at over 700 tonnes per year, with most of the oil heading to Europe for use in cosmetics and hair care products, as well as alimentary oil. In the absence of a dedicated ABS law in Morocco, a specific corporate sustainability partnership has been established between an economic interest group (EIG) of argan oil producing women's cooperatives, named Targanine, as well as chemical company BASF as the intermediary ingredient supplier, and French cosmetics group L'Oreal, with the in-country support and training of the non-profit group Yamana.

This supply chain was established through progressive negotiations with EIG Targanine, their co-founder and a co-inventor on a number of patents – Professor Zoubida Charrouf from University of Rabat – and various other government permissions and interactions. These range from sanitary and phytosanitary certificates to guidance on compliance for the collection of argan fruits from the Moroccan authority dealing with water and forests. Harvest by local families and cooperatives is generally considered to be sustainable, but as the industry grows there is some evidence that its scale and several threats to the argan forest may be cause for concern, in relation to firewood or charcoal harvest, goat and camel herding, drought extremes and climate change.³

A rolling two year agreement for the supply of argan oil and related products has meant the expansion of the original Targanine cooperative to approximately 557 women in six cooperatives by the end of 2014. The payment is audited by organic labelling group EcoCert as fair trade, which means the bulk of their supply to Europe – estimated at approximately 80 tonnes of oil – is paid at a higher rate than usual, with the benefits going to the cooperatives and women. Aside from the oil, the attribution of funds from the pressed cake – namely, the hard residue derived from pressing kernels to extract the oil – that L'Oreal uses is at least 15 times that paid on the local market where it is purchased for use in soap or even as fodder for goats. As outlined in some recent papers, this dramatic premium, paid into a social fund administered by EIG Targanine and the cooperatives, is essentially benefit-sharing for use of a genetic resource derivative. This means that the tens of thousands of Euros paid to the cooperatives provide for Arabic literacy programmes, health care expenses, eye glasses and optometry clinics, festivals and weddings, crèches, and many other items chosen by the women. A quick check of the Annex to the Nagoya Protocol indicates that these are among the many suggested options for monetary and non-monetary benefit-sharing.

If we return to the idea of value-addition in the Targanine argan case, funds have been made available through the partnership towards the purchase of equipment that speeds up the production process for the women's cooperatives. Technology transfer is also noted as a form of benefit-sharing in the Nagoya Protocol Annex. For example, "de-pulpage" machines have been purchased which remove the sun-dried fruit from the argan nut, an otherwise tedious process that provides no immediate income to the women. By cutting the time spent on de-pulpage from hours to minutes, the women are able to focus on cracking nuts for almond kernels, which they are paid directly for. In addition, filtration devices and mechanical presses improve the quality control and productivity of the cooperatives, allowing them to charge a higher price for proven quality oil to their European buyers. With the assistance of Yamana and BASF this has also helped Targanine overcome phytosanitary and export hurdles to sell wholesale argan oil to the EU thereby increasing market access and economic opportunity.

While not perfect, and benefiting a relatively small group of producers, the argan example as outlined suggests that ABS-like arrangements are being deployed in a way that seeks to comply with the three pillars of sustainable development taking into account economic, social, and environmental considerations. Through partnership, some of the actors in

the argan industry are arguably helping to empower and improve participation of these women in the global economy, in the context of the sustainable use of a natural resource. This is the sort of positive example the proponents of the CBD and Nagoya are hoping to foster and also fits in with the narrative of a sustainable post-2015 development agenda.

Geographical indication protection for argan

Aside from currently working on a draft ABS law – Morocco has signed but not yet ratified the Nagoya Protocol – the government has also sought to safeguard the regionally-distinct uniqueness and quality of argan oil through geographical indications (GI) protection. This intellectual property tool is increasingly being used by a number of countries to protect products derived from biological resources and traditional knowledge. Morocco has had a geographical indications law since 2006, after which argan oil was registered in 2010 and a code of practice has been established against which cooperatives, such as those at Targanine and several other cooperatives in the Souss-Massa Draa region can be certified⁴. The GI protection has been sought such that the name argan/argane is only used by those from the region, notably there have been some European and US companies with trademarks close to or using elements of "Moroccan argan oil" that registered before Morocco had their GI protection in place, making them exempt under Article 24.4 of the WTO's Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement. The GI protection is also intended to ensure argan oil from the region is produced according to specific standards. To date, this protection has been limited to Morocco, with a pending application for Argane to become a Protected Geographical Indication (PGI) with the European Commission since 2011.

Further options for the expansion of GI protection at the multilateral level have been considered in recent years. This holds the potential for a trade-related tool to be made to work for sustainable development in the context of local communities and their relationship with natural resources. A group of 28 countries are party to the Lisbon Agreement, and its associated international registry, covering appellations of origin (AOs). These are a specific type of GI with a narrower scope than the GIs protected under TRIPS. Discussions are afoot in the World Intellectual Property Organization (WIPO) to expand the scope of the Lisbon Agreement. The move comes as efforts in the WTO talks remain stalled on extension of the higher level of GI protection availed to wines and spirits to other agri-food and handicraft products, and on a multilateral register for wines and spirits. At a recent preparatory meeting for a Lisbon Agreement diplomatic conference due to be held next May, disagreement emerged around whether observers to the instrument should be allowed to vote on its expansion, and what the best forum would be for moving forward with multilateral GI protection.

While much debate will continue on this issue, through various case studies such as the argan example, we are just beginning to see how trade and legal tools such as ABS and GIs might contribute to, market, and fund the sustainable use of biodiversity. In addition, initiatives like this are exactly what are being called for towards finding solutions to tackle poverty, environment, and inequality issues, against the backdrop of the anticipated SDGs and post-2015 development agenda.



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CLIMATE CHANGE

China confirms 2016 national carbon market plans

The world's largest carbon emitter has said it will use a market-based tool to help cut the country's ballooning emissions.

Just ahead of the kick-off of this year's UN climate talks in Lima, Peru, China confirmed plans to establish the world's largest carbon market in 2016. Su Wei, a top climate change official, told journalists at a press conference in Beijing that the rules for a national carbon permit trading scheme would be finalised in the coming months and that the government hoped the market would reach full maturity by the end of the decade.

The Asian giant already has in place seven regional pilot programmes as part of an effort to lay the groundwork for the country-wide policy. China is responsible for some 30 percent of all global greenhouse gas emissions and the world's top carbon emitter.

The news came hot on the heels a joint announcement earlier this month by Chinese President Xi Jinping and US President Barack Obama on post-2020 climate targets for both economies. For China this included a pledge to peak emissions by 2030 and scale up the share of non-fossil fuels in the energy mix to around 20 percent in the same period. The US will seek to reduce emissions by 26-28 percent below 2005 levels by 2025. (See BioRes, [13 November 2014](#))

The surprise move by two nations traditionally at loggerheads over emissions-cutting responsibility has boosted political momentum heading into the Lima talks, according to some experts. Others have questioned whether the two economic giants are going far enough in addressing climate-warming emissions.

China has previously pledged to reduce carbon emissions per unit of its gross domestic product (GDP) between 40 to 45 percent below 2005 levels by the end of the decade. Climate watchers had been waiting in anticipation, however, for Beijing to unveil an absolute limit on emissions.

The Chinese State Council has also recently announced a new energy strategy action plan for the period 2014-2020 that includes a cap on national coal consumption by 2020 at 4.2 billion tonnes, or no higher than 16 percent above the 2013 total. The government also aims to reduce coal's share in the country's energy mix to less than 62 percent by that year.

Coal is the most polluting fossil fuel and scientists have also pointed to this as a leading cause of Beijing's air pollution problems. The country is the world's largest producer and consumer of coal.

According to the energy strategy, the share of non-fossil fuels in the total primary energy mix will also rise to 15 percent by 2020, from 9.8 percent last year. Both moves are framed as part of bid to come through on the country's 2030 climate pledges.

September hints

A preview of the recent national carbon market announcement was leaked to the press in September following a conference held in the north city of Tianjin by the National Development and Reform Commission (NDRC), the country's top economic planner, and the Asian Development Bank. (See BioRes, [12 September 2014](#))

According to reports at the time, the new carbon trading scheme will cover approximately 3-4 billion tonnes of carbon dioxide per year, with the market worth between 60-400 billion yuan (US\$11-72 billion) annually by 2020. Officials also told journalists in September that the national scheme might be extended after 2020 to cover additional sectors and may be linked up with other carbon markets.

Yvo de Boer, head of the Global Green Growth Institute and former Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC) has said that China's decision to use a national emissions trading scheme was "an absolute no-brainer" and would help iron out some of the economies' inefficiencies.

Meanwhile delegates attending the UNFCCC talks in Lima have their work cut out for them to make progress on draft decisions on international standards for market mechanisms geared towards tackling climate change.

According to the World Bank, some 39 national and 23 sub-national jurisdictions have implemented or are set to put in place carbon pricing instruments, including emissions trading systems and taxes. Carbon markets around the world are currently valued at about US\$30 billion.

In a show of support of this mitigation tool, a high-level climate summit held in September at UN headquarters in New York saw some 74 countries, 23 regional governments, and more than 1000 business figures – collectively responsible for 54 percent of world greenhouse gas (GHG) emissions – sign on to support carbon pricing initiatives. (See BioRes, 30 September 2014)

Meanwhile delegates attending the UNFCCC talks in Lima have their work cut out for them to make progress on draft decisions on international standards for market mechanisms geared towards tackling climate change.

A framework for various approaches and a new market mechanism will be discussed in a subsidiary scientific and technical body during the first week of the climate talks. Delegates will also be racing to hammer out the draft outline for a post-2020 climate deal due to be sealed by next year's meet scheduled for Paris, France.

Ready in time?

China's carbon market news was welcomed by some stakeholders as a positive step forward for emissions trading and the country's climate strategy. Dirk Forrister, chief executive of the International Emissions Trading Association, told journalists that the news was "an encouraging sign of China's seriousness."

Forrister pointed out, however, that the timetable to put in place the market in 2016 was "tight" but "doable." The country has also allegedly been collaborating on relevant research with the World Bank.

Other experts have suggested, however, that the positive development may be tied to an overly ambitious timeline. The seven pilot schemes already on-the-go – which cover a total of around 1115 million tonnes of carbon dioxide emissions – have been implemented in different regions meaning that China might not easily be able to merge and scale these up.

Some analysts have pointed to different methodologies in place in the schemes with no common implementation standard. The measuring, reporting, and verification of the current schemes has also allegedly not been a simply issue, with experts having raised questions around whether it has been objective in all cases.

CLIMATE CHANGE

Montreal Protocol meet stalls on climate-warming chemicals

Delegates from over 190 nations met in Paris, France in November to advance work on ozone-depleting substances.

Efforts to establish a “contact group” to address ways to phase out hydrofluorocarbons (HFCs) – a potent greenhouse gas – failed to advance at a November meeting of the international instrument that deals with ozone-depleting substances (ODS). However, despite the HFC stalemate, the twenty-sixth of the parties to the Montreal Protocol did see progress on issues relating to exemptions, financial support, and compliance reporting on the substances regulated by the instrument.

Sealed in 1987, the Montreal Protocol sought to phase out chemical substances such as chlorofluorocarbons (CFCs), which were recognised as depleting the earth's stratospheric ozone layer. Scientists warned such damage could have negative impacts on ocean ecosystems, agricultural productivity, and raise health risks such as cancers and weakened immune systems.

However, while the Protocol has successfully tackled some 96 ODS in the past 27 years, HFCs have since come to the fore as an alternative replacement. Although these do not directly damage the ozone layer, HFCs have warming potential over a thousand times greater than carbon dioxide. As a result, the last five annual meetings of the Montreal Protocol have seen some discussion among the parties on whether and how to counter this risk, without being able to resolve their disagreements on the best way forward. However, bilateral pledges between the US and China as well as India, over the last 18 months had served to boost hopes that the Paris meet might witness a breakthrough.

Best approach?

At the beginning of the meeting, French environment minister Ségolène Royal urged delegates to form a contact group to discuss ways to address hydrofluorocarbons under the Montreal Protocol. Among the issues up for consideration by the suggested contact group would be whether safe, economic, and environmentally-friendly HFC alternatives exist; ways to act on HFCs before viable alternatives are available for all sectors; possible exemptions; technology transfer; and the principle of common but differentiated responsibilities.

An initial proposal on a contact group then put forward at the start of the meet by Canada, representing the North American position, was quickly shot down by some countries, which reiterated past arguments that HFCs as a greenhouse gas should be dealt with under the UN climate talks. Following a suggestion from the US, parties then agreed to convene an informal group to discuss a possible mandate for the contact group, with discussion taking place in this format on the last day. Later that day, the US introduced a new draft decision for a contact group on HFC management under the Protocol, building on the conversations from that day and during the week-long meet. The document suggested considering how to reduce HFCs, and establish synergies with the ongoing HFC reporting under the current climate regime, known as the Kyoto Protocol.

Although the proposal received a wide support, some opposition relating to process and substance remained and further consultations resulted in revisions to the US document, with a reference added to trade issues. Despite these amendments, parties were not able to reach consensus on the text, leaving it unclear how the Montreal Protocol will move forward with HFCs.

BIODIVERSITY

Sydney meet calls for increased conservation efforts to end of decade

An international meet resulted in an outcome document outlining plans for a global scaling up of protected areas on land and sea in a bid to shore up biodiversity loss.

Delegates from more than 170 countries have set out a pathway to achieve a global target to protect least 17 percent of the land and 10 percent of oceans by 2020. Both targets are part of a broader strategy agreed to over four years ago by the parties to the Convention on Biological Diversity through its Aichi Biodiversity Targets that set key conservation targets across a number of areas. The move came as part of a once-in-a-decade global forum on protected areas (PAs) held from 12-19 November in Sydney, Australia attended by around 6000 participants from government, international organisations, academia, the private sector, and civil society.

Known formally as the World Parks Congress (WPC), convened by global conservation International Union for the Conservation of Nature, the meet centred on ways to address challenges in eight key areas including; reaching conservation goals, responding to climate change, improving health and well-being, supporting human life, reconciling development challenges, mainstreaming development, respecting indigenous and traditional knowledge and culture, and inspiring a new generation.

A UN report released on the occasion confirmed that the world is on track to meet the targeted expansion of protected areas but a greater emphasis on ecosystem services would be important. Some 15.4 percent of terrestrial and inland water areas and 3.4 percent of global oceans are currently afforded protection around the world. The report finds that protected areas can play a key role in development and addressing climate change impacts, for example by reducing risks from natural hazards, and as carbon sinks through forests.

The WPC outcome document, entitled the Promise of Sydney, also includes conservation pledges from a range of actors. Among others, China outlined plans to increase PA coverage by at least 20 percent, host-nation Australia put forward AU\$14 (\$US12) million for conservation projects, while Madagascar promised to triple its marine protected areas, "We are placing biodiversity and natural resources at the heart of our new national development plan," said Madagascar's President Hery Rajaonarimampianina at one WPC side-event hosted by environmental group WWF.

Tackling wildlife crime

A series of high-level dialogues were also held at the Sydney event including one focused on the extent and impact of illegal wildlife trade. Participants described the illicit trade as a battlefield with no one easy solution. John Scanlon, Secretary General of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) said technologies used to address other black market activities were also important in this area.

Illegal wildlife trade sits at the nexus of development, conservation, and commerce. According to some estimates, illicit commerce in animal parts and wood products potentially runs to the tune of US\$19 billion a year, contributing to rapid biodiversity decline and depriving communities of essential assets. Rhino horns are among the most lucrative illegal racket, sometimes fetching between US\$20,000 to over US\$50,000 per kilo on black markets in Asia, a price higher than gold. A record 1020 rhinos have been poached so far in South Africa this year despite enforcement efforts, home to the majority of the world's remaining wild populations.

The newroom

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EU court rules on UK air pollution

The European Court of Justice in November delivered a ruling finding that the British government has failed to comply with the EU's air pollution rules. The court instructed London to come up with a plan to bring the country's policy in line as soon as possible.

Following the EU's air quality directive, the UK was given until 2010 to clamp down on traffic fumes that are a leading source of nitrogen oxide, a gas that can be linked to heart attacks and other health problems. The government has said that it might take until 2030 for major cities such as London, Leeds, and Birmingham to meet with the 28-nation bloc's standards.

The case was referred to the EU's apex court after the UK Supreme Court earlier this year said that the government was failing in its legal duty to protect citizens from the harmful effects of air pollution. While the UK could face fines as a result of breaching the EU directive, a number of experts suggest this is unlikely to take place immediately.

Canadian extractives strategy unveiled

Canadian officials in November announced a new corporate social responsibility (CSR) strategy geared towards shoring up good governance for companies operating abroad. Building on an initial strategy set out in 2009, key elements of the latest release include references to the Organisation for Economic Co-operation and Development (OECD)'s Guidelines for Multinational Enterprises, training and support for Canadian business in foreign markets, as well as the need to refer any disputes through formal channels.

The Canadian government will also withdraw support from mining and energy companies that run afoul of the new guidelines. International Trade Minister Ed Fast said that the new measures were designed to protect Canada's "brand" as a significant and responsible player in global resource industries. Ottawa is also set to put in place fresh transparency standards for the extractive industry, with new legislation requiring the reporting of all payments made to government actors at home and abroad.

New protections agreed for migratory animals

Delegates from 120 countries in November agreed to new conservation protections for 31 migratory species after six days of negotiations at the eleventh meeting of the conference of the parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS), held in Quito, Ecuador.

The new listings to the Convention's two appendices, which afford various degrees of international protection to the animals in question and their habitats, include an addition of 21 shark, ray and sawfish species, the polar bear, as well as certain birds and whales, among others. On a number of these, participants emphasised the importance of ongoing work with other multilateral institutions, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

The CMS functions as a framework convention, which means that parties act on its listings through bilateral arrangements, tailored to specific conservation needs.

EU extends ban on deep-sea shark fishing

EU fisheries ministers at a meeting in Brussels in November agreed to extend a ban on deep-sea shark fishing for at least another two years. The ban will apply from January 1 and to vessels in the bloc's waters as well as EU vessels in international waters.

Catch reductions were also approved for deep sea fish stocks such as the roundnose grenadier, black scabbardfish, and red sea bream for 2015-2016.

While the ban and catch quotas were made under the 28-nation bloc's newly reformed Common Fisheries Policy (CFP), which mandates a consideration of maximum sustainable yields (MSY), the reductions were less than those recommended by the European Commission.

Ahead of the meeting the EU executive had sought sizeable quota cuts to protect exotic deep-water species that are increasingly sought after as alternatives to depleted mainstay stocks such as cod and hake.

India set to increase coal production

Indian officials have said the country should double its coal production in the next five years to meet energy needs.

Speaking at an economic summit in Delhi in November, energy minister Piyush Goyal warned that lack of power access continued to be a problem in India, and encouragement of private-sector mining would be one solution to soaring energy demand.

Goyal also outlined a target of reaching power surplus in India by 2019, a move that would allegedly offer investors a US\$250 billion investment opportunity.

A ramping up of coal production would also be matched by a greater focus on renewable energy sources, the minister added.

Following election in May, Indian Prime Minister Narendra Modi pledged to develop the country's solar sector enough over the next five years such that each household would be able to run at least one light bulb using such power.

Renewable energy sources currently account for around six percent of the country's energy mix.

Chile introduces carbon tax legislation

In September, Chile became the first country in South America to introduce a carbon pricing instrument. Under the new law, thermoelectric power plants with capacity greater than 50 megawatts will be charged US\$5 per tonne of CO₂ released, although exemptions are included for thermal plants fueled by biomass and those of smaller installations.

The policy is geared towards encouraging a green economic shift and to help meet Chile's voluntary target of cutting greenhouse gas emissions by 20 percent from 2007 levels. The measure is due to take effect from 2018 and will cover around 55 percent of the nation's carbon emissions. Some experts have said that the tax could hurt Chile's economy, particularly its energy-intensive mining sector.

The legislation was welcomed, however, by a number of climate watchers. "Chile is developing something that's much more robust in terms of policies," Miguel Pinedo-Vasquez, a forest ecologist at Columbia University, told reporters in September. Advancing deserts attributed to changing climate and weather patterns have reportedly raised alarm bells in Chile.

Russia and China sign second gas deal

Russia and China concluded their second gas deal in November, which could eventually see gas from western Siberia channelled to China through the Altai pipeline, at a rate of 30 billion cubic metres (bcm) a year.

The agreement builds on an arrangement sealed in May between the two countries for 38bcm of gas per year to be supplied from gas fields yet to be developed in eastern Siberia.

Some analysts have interpreted both deals as a strategic shift away from reliance on European markets, currently Russia's primary customer, given biting EU sanctions and a souring of diplomatic relations between Moscow and Brussels over Ukraine. Others have also suggested that the Kremlin is seeking to get a handle on the Chinese markets before US imports of liquefied natural gas start to flow in. The latest agreement represents just another step forward in a long-running negotiation between the two countries, some experts have nevertheless cautioned, which might not result in concrete commercial deals.

For Beijing, the deals may be part of a bid to wean off dependence on coal, the most polluting fossil fuel.

Renewables investment drops in Australia

A report by Australian environmental think tank the Climate Council has found that investment in the country's renewable energy sector has dropped by 70 percent over the past year.

In contrast, China installed more renewable energy capacity than fossil fuels in 2013.

The Australian renewables industry has raised concerns around the uncertainty created for renewables investment given the current coalition government's delay over whether to extend a clean energy target. A number of projects are currently on hold as a result.

"Investment that could be coming to Australia is instead going overseas to countries that are moving to a renewable energy future," said Tim Flannery, co-author of the report.

Renewable energy sources around the world have climbed in recent years, accounting for 56 percent of net additions to the global energy mix in 2013 according to a report by REN21, which describes itself as a global renewable energy policy multi-stakeholder network.

Publications and resources



Better Growth, Better Climate: The New Climate Economy Report – Global Commission on the Economy and Climate – September 2014

This flagship report by a commission of global economic leaders, known as the Global Commission on the Economy and Climate, argues that economic growth and action on climate change can now be achieved in tandem. The report suggests various economic opportunities lie ahead to achieve strong growth with lower emissions, particularly around cities, land use, and energy. The report sets out a 10-point Global Action Plan of practical recommendations to achieve such win-win outcomes.

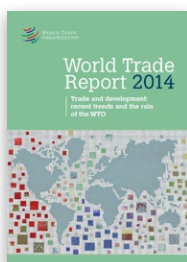
The report can be accessed at <http://bit.ly/1uEGUxX>



Pathways to Deep Decarbonisation: 2014 Report – SDSN & IDDRI – September 2014

This report, published jointly by the Sustainable Development Solutions Network (SDSN) and the Institute for Sustainable Development and International Relations (IDDRI), digs into how individual countries can transition to a low-carbon economy. The report finds this will require a systemic change in global energy systems by mid-century and steep declines in carbon intensity across all economic sectors. The report presents preliminary policy recommendations on feasible pathways to achieve this shift.

The report can be accessed at <http://bit.ly/1oBa0PA>



World Trade Report 2014 – WTO – October 2014

This flagship annual report, published by the World Trade Organization (WTO), examines four emerging economic trends that have influenced the relationship between trade and development. These trends include, the economic rise of the developing world; the expansion of global value chains; the higher commodities prices; and the increasingly global nature of macroeconomic shocks. The report suggests that WTO rules should be incorporated in the post-2015 development agenda.

The report can be accessed at <http://bit.ly/1CfZF1D>



Climatescope 2014 – Climatescope Project – October 2014

This report, by the Climatescope project, provides an overview of clean energy investment, development, and deployment across 55 emerging markets in Africa, Asia, Latin America and the Caribbean. The report finds that new clean energy sources have grown by an average of 19 percent a year since 2008 for these emerging economies, compared with 13 percent for a group of developed nations in the same period.

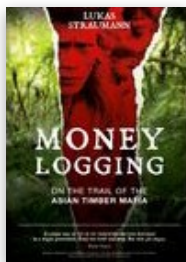
This report can be accessed at <http://bit.ly/ZWtW4c>



Climate Change Adaptation in Fisheries and Agriculture – FAO – October 2014

This study, published by the UN Food and Agriculture Organization (FAO), provides an overview of current types of climate change adaptation activities in the fisheries and aquaculture sector by highlighting specific examples. The document also provides an overview of climate change impacts on these sectors and is intended to serve as a strategic guide to policymakers, planners, and practitioners.

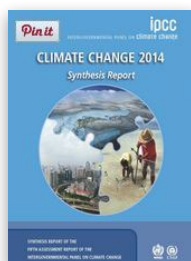
The document can be accessed at <http://bit.ly/1oB9VLL>



Money Logging – Bergli Books – November 2014

This book, authored by human rights campaigner Lukas Straumann, investigates the corruption behind large-scale deforestation in Sarawak, Malaysia. The author focuses on the former chief minister and current governor of Sarawak, Abdul Tahib Mahmud and his role in siphoning off profits derived from an illegal timber trade. Straumann argues that the Malaysian official has made up to US\$15 billion through illicit logging and charts the dynamics behind an international timber mafia.

The book can be accessed ordered at <http://bit.ly/1vCc5rH>



Climate Change 2014: Synthesis Report – IPCC – November 2014

This report, published by the Intergovernmental Panel on Climate Change (IPCC), pulls together more than 5000 of analysis on the science, impacts, and action required around climate change published over the last year. The UN panel's Fifth Assessment Report, as the three-part series is formally known, confirms a 95 percent probability that global climate change is primarily influenced by human activity. The synthesis report calls for a 40 to 70 percent drop in emissions in the next forty years relative to 2010 levels, with a move to zero by the end of the century, in order to avoid disastrous climate consequences.

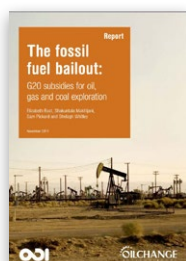
The report can be accessed at <http://bit.ly/11BPWTo>



Assessing Habitat Risk from Human Activities to Inform Coastal and Marine Spatial Planning – Natural Capital Project – November 2014

A group of scientists from the Natural Capital Project, an environmental group working on environmental accounting, have outlined a process used to calculate the risk of habitat degradation in marine spatial planning. Deploying such tools in future ocean management plans could help to shore up the sustainable use of ocean resources as part of a blue economy.

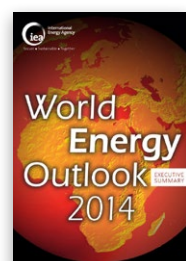
The study can be accessed at <http://stanford.io/1Ahy12m>



The Fossil Fuel Bailout: G20 Subsidies for Oil, Gas, and Coal – ODI – November 2014

This report, published by the Overseas Development Institute (ODI), finds that governments across G20 countries are spending US\$88 million every year subsidizing fossil fuel exploration. The authors suggest this trend could lead to a publically financed bailout for carbon-intensive economies, following uneconomic investments, which also threatens disastrous climate change impacts.

The report can be accessed at <http://bit.ly/1p1oSXT>



World Energy Outlook 2014 – IEA – November 2014

The International Energy Agency (IEA)'s flagship publication brings together the latest data and policy developments in the energy sector. In a first, the report presents projections for energy trends through to 2040, suggesting high growth in electricity demand. The report also provides an update on energy-related carbon emissions, fossil fuel and renewable energy subsidies, as well as progress towards universal access to modern energy services. The report cautions that the global energy system is in danger of falling short of expectations and that continued rise in emissions put the world on track for a 3.6 degree Celsius increase above pre-industrial levels.

The report can be downloaded at <http://bit.ly/1xP9luO>

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