

**Report of**  
**The Dialogue on Trade, Poverty and Climate Change**

**20-21 May 2010**  
**Gokarna Forest Resort, Kathmandu**

**Organized by**  
**International Centre for Trade and Sustainable Development (ICTSD), Geneva**  
**South Asia Watch on Trade, Economics & Environment (SAWTEE), Kathmandu**  
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## **Introduction**

The International Dialogue on Trade, Poverty and Climate Change was held on 20-21 May 2010 in Kathmandu. The Dialogue was one in a series of such meetings serving to inform a longer-term research and policy dialogue process initiated by the International Centre for Trade and Sustainable Development (ICTSD) to strengthen capacity in all actors to address poverty through the use of trade policy in a context of climate change.

The meeting in Nepal was organized by ICTSD in collaboration with South Asia Watch on Trade, Economics & Environment (SAWTEE), Kathmandu, and the New Delhi-based Centre for WTO Studies (CWS). Twenty-five individuals affiliated with the private sector, academia, research, non-governmental organizations, international organizations, national governments, and the donor community participated in the dialogue. They came from countries in Africa, Latin America, Europe, Southeast Asia and South Asia.

The key objective of the dialogue was to tease out aspects of the notion that there is a need for an international endeavour to provide analysis, research and policy dialogue on the inter-linkages between trade and climate change, with a focus on poverty. It served also as an opportunity to identify research, knowledge, analytical and action gaps on this theme, particularly in the context of Asia.

Following the opening session, which outlined the context and introduction to the dialogue, discussions proceeded in five technical sessions: a) Poverty in the context of trade and climate change: understanding the situation of the poor in different countries and regions; b) Trade in agriculture and forestry: what options for poor farmers and communities to mitigate and adapt to climate change?; c) Carbon standards and labeling: can they be turned into an opportunity and benefit the poor?; d) Fisheries and climate change: challenges and opportunities for poor people; and e) Where to go next?: The role for development assistance, climate financing and aid for trade. In the concluding session, the research, knowledge, analytical and action gaps identified on the basis of the preceding discussions were discussed, as were options to take this endeavour forward.

This report is organized as follows. The next section presents an executive summary of key findings. This is followed by summaries of the above-mentioned five technical sessions, each ending with the key knowledge, research, analytical and action gaps that emerged from the discussion, including those in the concluding session. The report concludes with options to move forward as they came up during the concluding session.

The meeting was held under the Chatham House rule; no attribution of views is provided here and the opinions expressed during the conference do not necessarily reflect those of the organizers.

## **Executive summary**

A consensus emerged from the dialogue that entering the trade and climate change debate through the poverty vector would be a worthwhile exercise. It would add significant value to other approaches to the problem of discerning best practices for the role of trade policy in addressing climate change. Similarly, it would help enhance understanding of how trade could contribute to the adaptive capacities of the poor, and how trade policy and associated regulatory frameworks could serve as enabling factors rather than obstacles to this goal. Analysis of the potential of trade policy to tackle challenges imposed by poverty in the context of climate change is still an under-researched area with plenty of knowledge, research, analytical and action gaps.

Climate change often serves to compound existing levels of vulnerability. The poor are the most vulnerable, given their high exposure to the effects of climate change and their meager means to adapt. Because climate change adds to existing threats and challenges, traditional responses need to be commensurately strengthened, and new ones developed. There is a need for tools and approaches specific to the abatement of poverty in the context of climate-exacerbated vulnerabilities and national economies that are increasingly integrated into global markets. A continuous multi-stakeholder policy dialogue, bringing together communities working on trade, climate and development policy as well as

affected and other interested actors, may be a powerful instrument in the search for effective responses to the new challenges.

While there is agreement on the channels through which trade impacts climate change, comprehensive studies— sectoral as well as economy-wide — are particularly needed in the context of developing economies. In order to meet the data demands to analyze the poverty impact of climate change, and the possible role of trade policy, information collection and systematization have to be improved. In order to enhance the credibility of research on the impact of climate change on livelihoods—to single out, as best as possible, the impacts of climate change—combining people's perceptions with science is the way forward. The development dimension and potential poverty reduction impact of climate change adaptation projects through the trade vector need to be analyzed.

Diverse circumstances particular to individual countries – not to mention sub national differences within single states -- need to be taken into account in the fight against poverty. Efforts to understand poverty issues must take into account the specificities of the sectors in which the poor earn their livelihood. Understanding of poverty should move away from a unidimensional, income-based one to a multidimensional, understanding based on the unique characteristics of the sectors, covering such areas as access to resources. Different sectors are affected differently by climate change and trade policies. A global contingency plan—which is front-loaded and preemptive—may be very helpful if put in place to help poor and vulnerable countries and people cope with change-induced disasters.

How far trade policy and its associated regulatory frameworks, whether in the World Trade Organization (WTO) or at other international level, will help reduce poverty in developing and least-developed countries will crucially depend on the organization and performance of their rural economy, including the agriculture sector, which tends to be highly vulnerable to climate change and on which the poor are overwhelmingly dependent for their livelihoods. Indeed, some participants brought up argumentation that points to the complex relationship between international trade and the agricultural sector, and questioned the ways in which trade has been traditionally presumed to contribute to lessening poverty. Whether trade at all contributes to poverty reduction was also asked in the dialogue. However, it was by and large agreed that increased trade in the presence of suitable flanking policies can lead to poverty reduction.

There is a need for more spatial and local studies on the impacts of climate change on agriculture; a better understanding of the impacts of CO<sub>2</sub> atmospheric release in fertilization; more integration of studies by natural scientists, economists and social scientists; detailed research on the impacts of climatic change on vulnerable farmers in poor regions, adaptation capabilities of indigenous species and breeds of plants and animals, and crop and ecosystem-specific vulnerability studies. Eco-labeling requirements, given the way they are created and enforced, may either add to the restrictiveness of developed-country import policies that pose barriers to the agricultural exports of developing and least-developed countries, or, ideally contribute to raising carbon-based standards of production. More research is required on farmers' contributions (existing and potential) to climate change mitigation, and how that can be leveraged for a sustainable improvement in their livelihood. Particularly, small farmers' role in mitigation needs to be further explored and promoted.

Understanding the linkages between climate change and the fisheries sector, an important sector for the poor, is rather weak at this stage. The effect of climate change on fisheries resources has been less discussed compared to agriculture and forestry. Introducing the trade and poverty variables, the understanding is poorer still. Likewise, on the mitigation front, the contribution of the sector to global warming is unknown; the estimation of embodied carbon in fish trade is not completed. Dialogue participants emphasized that the fisheries sector has always been a vulnerable sector, many problems in the sector are caused by poor management and climate change will worsen the state of the sector; so taking care of the outstanding problems, which policies so far have generally failed to solve, can take care of many of the climate-induced problems, with some innovations. The issue of climate vulnerability needs to be mainstreamed into National Adaptation Programmes of Action and (national) Poverty Reduction Strategy Papers. Extensive research is required on its potential for mitigation. If poor fishing communities are to benefit from carbon labeling, the “food miles” concept may need to be replaced with a “fair miles” concept, which takes a broader, a far more realistic approach to calculating the carbon embodied in a

product. There is a need to step up discussion on fisheries at the United Nations Framework Convention on Climate Change (UNFCCC), especially with regard to financing/carbon credits, to explore the possibilities of bringing fishery activities into the ambit of Clean Development Mechanism (CDM) and creating a REDD (reducing emissions from deforestation and forest degradation)-like funds for coastal vegetation.

With the growing use of carbon standards and labeling in developed countries, methodologies for assessing carbon footprints are going to be increasingly relevant for production and exports from developing and least-developed countries. As poor people are likely to be directly affected by carbon labeling and standards, it is necessary to assess in greater detail the impact of carbon labeling on the trade-related activities of the poor. At the same time, it seems critical to enhance capabilities of these countries, with broad-based stakeholder involvement, to participate in the global standard-setting processes, so as to make the standard regime science-based, fair and pro-poor.

The CDM, while in theory a mechanism aimed at rewarding developing and least-developed countries for adopting climate-friendly technology, has not been able to benefit the poor. Given the limitations of the CDM as it currently stands, attending the particular needs of the poor would require new and innovative financing approaches at the international level, as well as an enabling environment at the domestic level. Ways to monetize sustainable lifestyle and practices in developing and least-developed countries to address poverty as well as climate-related concerns may also need to be explored.

International assistance is also required for capacity building and technical support. Country- and situation-specific realities should be factored in and domestic baseline studies should be carried out in the context of needs assessments for development finance -whether placed under climate financing (CCF) mechanisms or aid-for-trade (AFT) frameworks. Methodologies and monitoring devices may need to be established to assess impacts and ensure that financing actually goes to the poor.

There is considerable scope for mutual compatibility between AFT and CCF initiatives and to build on the actual synergy between AFT and CCF projects. Development partners would do well to ensure additionality in AFT as well as CCF. Better coordination among donors, beneficiary ownership, no perverse conditionality and other principles of good practice in development cooperation would generally ensure higher effectiveness. Most studies seem to have been conducted on the inter-linkages between AFT and CCF focusing on African contexts; an extension of these to Asia and other poor critical regions would be helpful. Similarly, analyzing the development dimension and potential poverty reduction impact of climate change adaptation projects through the trade vector is a critical lacking area of research.

Regional-focused cooperative initiatives among developing and least-developed countries facing similar conditions and challenges may be explored in areas such as sharing of information, technologies and good practices on adaptation; similarly with respect to South-South synergies between AFT and CCF.

Participants suggested that as a way forward to the dialogue, comparative advantages of institutions represented would be tapped in order to effectively further identify knowledge, research, analytical and action gaps. In particular, it was mentioned that research should be decentralized and involve all regions. A desire was also expressed to define a mechanism for ground testing and validation of any research and analysis undertaken by this initiative. Moreover, the need for a parallel mechanism for international policy and integrative dialogues, that would results in effective sharing of country experiences and practices, was expressed. It was emphasized that it is important to involve policymakers at national and international levels at a rather early stage.

## TECHNICAL SESSIONS

### 1. Poverty in the context of trade and climate change: Understanding the situation of the poor in different countries and regions.

Discussions on poverty in the context of trade and climate change should take into consideration a number of global developments: the failure of Copenhagen, the campaign against the evidence of climate change, the global economic crisis, the Doha Round stalemate, and the new prospects of green growth and green protectionism in policy making.

While it is agreed that poor people are disproportionately affected by climate change and that the impacts of trade on climate change take place through three routes (scale, composition and technique effects), there are no comprehensive and conclusive studies on the climate change impacts of trade in the context of developing and least-developed countries. Therefore, sectoral as well as economy-wide studies are required.

As the literature on the environmental Kuznets Curve is inconclusive, there is a need to explore the linkages between economic growth and the development of the carbon footprint, and assess its applicability in the context of developing and least-developed countries. There is also a need to assess its implications for poverty.

Analyzing poverty in the context of trade and climate change at times requires data at the household level, which may not be available under the existing household expenditure surveys. Improving household expenditure surveys to allow such analysis is thus a critical need.

Among trade measures to deal with climate change, studies on the effects of carbon labeling and border adjustment tax (BAT) are largely inconclusive. Moreover, the methodologies of assessing carbon footprint are going to be increasingly important for developing and least-developed countries. It is necessary to assess the impact of labeling on trade and poverty. Standards and labeling issues and rules are so far decided by Northern countries.

Regarding BAT, high cost of implementation (in terms of valuation) and the risks for a use with protectionist intent are some issues of concern for developing countries. In addition, the sectors targeted by the United States (US) and the European Union (EU) for BAT application—energy-intensive sectors like chemicals, glass, paper—have serious implications for low-income countries competitive in such sectors and their populations dependent on the sectors.

Given that the World Trade Organization (WTO) has no appetite for climate change discussions at this point in time and most people working on climate change issues have little or no idea of trade issues, a multidisciplinary and multi-stakeholder triangulation (policy dialogue)—bringing together the trade, climate and development communities—is required to study poverty in the context of trade and climate change. Policy failure is an important determinant of poverty—for instance, national policy is one factor explaining the differential degrees of success in poverty alleviation in China and India. However, resources, institutions and historical antecedents are equally important determinants of poverty. Climate change is expected to further strain the poor's access to resources.

Different circumstances of different countries and regional differences within countries need to be taken into account in the fight against poverty. A global contingency plan—which is front-loaded and preemptive—should be put in place to help poor and vulnerable countries and people when climate change-induced disasters strike. Creative ways must be explored to handle disasters, which become more frequent as climate change takes its toll.

A case study of a village in Dhanusha district in south-eastern Nepal shows that the socio-economic impact of climate change is significant on the poor and marginalized, increasing their vulnerability,

reducing their resilience and deepening their poverty. Climate change has caused degradation of livelihood assets: natural (reduced productivity), financial (reduced income), physical (damage to infrastructure), human (affliction with infection diseases) and social (displacement and conflict). In order to enhance the credibility of research on the impact of climate change on livelihoods—to single out the impact of climate change—combining people’s perceptions with science is the way forward.

It should be noted that climate change is often only compounding existing levels of vulnerability. The poor are the most vulnerable because they have always been least adapted to climate variations. Climate change does not necessarily create a new threat, and responses need not always be necessarily new. Still, different tools and approaches are needed to fight poverty given that climate change is compounding it and national markets are increasingly integrated into international markets. The approach that China adopted to lift 300 million people out of poverty in 30-odd years, though a remarkable achievement, may not work for lifting the remaining 40-60 million poor people.

Mobilization of funds for the promotion of renewable small-scale energy technologies is an important issue for developing and least-developed countries that do not have such technologies. India and China can lead the way in South-South climate-friendly technology transfer.

Climate change issues should be looked at through the development lens. There is a need to change the development paradigm. China’s and India’s high growth rates are largely fuelled by coal and other fossil fuels. It is in the interest of these two countries to go for green development for energy security, if for nothing else, since if they follow the US model of growth, there will not be enough coal or oil in the world to meet their needs. The strategy should be to make investment in green development attractive. The afforestation drive in China, for example, has been successful for a commercial reason: developers plant trees around property to secure a premium. However, while the need for a shift in development paradigm may not be contested in principle, evidence is required that, for instance, green growth raises the living standards of the poor.

The relationship of the poor with the ecosystem, and the relationship between the poor and energy supply and use need to be studied in the context of climate change and possible climate policies. Global energy pricing is beyond the WTO’s remit, but an important issue for countries not endowed with fossil fuel resources. Moreover, there is a need to think about the trade-poverty-climate change issue from outside the WTO box.

How far trade will help reduce poverty in developing and least-developed countries will crucially depend on the performance of their agriculture, which is highly vulnerable to climate change and on which the poor are overwhelmingly dependent for their livelihoods. Technology transfer, including that of green technology, has not been happening to facilitate adaptation. While trade is surely an important driver of growth, a mechanism to ensure that the gains from trade trickle down to the poor is a must.

### ***Research, knowledge, analytical and action gaps***

- Comprehensive and conclusive studies—sectoral as well as economy-wide—on the climate change impacts of trade in the context of developing and least-developed countries
- Assessing the relationship between emissions and economic growth in the context of developing and least-developed countries, and its implications for poverty
- Improving household expenditure surveys to obtain data necessary for analyzing poverty in the context of trade and climate change
- Studying and improving methodologies of assessing carbon footprint so that developing and least-developed countries and the poor people there too can benefit from carbon standards and labeling

- Combining people's perceptions with science in order to enhance the credibility of research on the impact of climate change on livelihoods—to single out the impact of climate change
- Devising new tools and approaches to fight poverty given that climate change is compounding it and national markets are increasingly integrated into international markets
- Evidence showing green growth raises the living standards of the poor required
- Study the relationship of the poor with the ecosystem, and the relationship between the poor and energy supply and use
- Exploring ways to make investment in green development attractive
- A multidisciplinary and multi-stakeholder triangulation (policy dialogue)—bringing together the trade, climate and development communities—to study poverty in the context of trade and climate change
- A global contingency plan—which is front-loaded and preemptive—to help poor and vulnerable countries and people when climate change-induced disasters strike
- Mobilization of funds for the promotion of renewable small-scale energy technologies
- Different circumstances of different countries and regional differences within countries need to be taken into account in the fight against poverty
- Instituting mechanisms to ensure that the gains from trade trickle down to the poor

## **2. Trade in agriculture and forestry: what options for poor farmers and communities to mitigate and adapt to climate change?**

Some 90 percent of small and poor farmers live in developing and least-developed countries, and they consume almost all they produce, have little or no marketable surplus and have a meagre share in international trade. Many of them live in low altitudes, where yields are generally projected to decline due to climate change. For example, the impact of climate change on wheat and rice production—major staple crops—is projected to be negative in South Asia, where cereal production has not kept pace with population growth. This will worsen food insecurity. Despite their low share in global trade, for many poor countries, agricultural products constitute a major share of exports, making their export performance highly sensitive to climate change. Food insecurity has been a severe problem in parts of Asia even without climate change. Combined with growing population, climate change as well as policies adopted to combat climate change are expected to worsen food security.

Though a structural transformation in the Chinese economy in the last 30 years has led to a significant decline in the share of agriculture in the country's gross domestic product (GDP), the sector is still important in terms of employment and livelihood, particularly for the poor. China's success in poverty reduction is remarkable, but the opening up of its agricultural sector has implications for further poverty reduction. After China's WTO accession in 2001, its agricultural imports have grown at a faster rate than agricultural exports, with the result that it is running a deficit in agricultural trade. Likewise, in the post-accession period, the positive net exports of labour-intensive agricultural products have increased sharply, along with a concomitant sharp rise in negative net exports of land-intensive agricultural products. Poor farmers are more easily hurt, or enjoy less opportunities, due to agricultural trade liberalization (for instance, under various Doha Round proposals).

Given that China is a big country and the planting structure varies remarkably across regions, poor farmers in certain regions may still be hurt heavily, even though the farmers benefit in terms of the national aggregate (for example, on average, coastal areas stand to benefit while poor farmers in the north and west stand to lose). Trade policy arrangements do matter; hence, comprehensive assessments of the impacts on the poor under different liberalization scenarios are needed. Under a more liberalized

economy, China needs to continue to restructure its agriculture in favor of labour-intensive products, where it has a comparative advantage over land-intensive products, and support those who may be hurt by the implementation of Doha Round proposals.

To address equity issues in the context of trade liberalization, policy actions need to be taken to: a) support farmers in poorer areas to shift their production to more competitive products; b) increase the livelihood of farmers in negative affected areas (non-trade actions, e.g., off-farm employment); c) improve productivity through more research, extension, and infrastructure investment, particularly in poor areas; and d) make efforts to compensate farmers that will suffer from the Doha Round. When climate change enters the picture, things get complicated. While the overall impacts of climate change on agriculture are likely to be negative—research predicts a fall in the production of major food grains and a rise in their prices by 2030—the full consequences are still enshrouded in uncertainty (for example, predicted impacts differ depending on whether the impact of CO<sub>2</sub> is considered or not). Thus, there is a need for more spatial and local studies; a better understanding of the impacts of CO<sub>2</sub> fertilization; more integrated studies by natural scientists, economists and social scientists; and detailed research on the impacts on vulnerable farmers in poor regions.

A study on the impact of climate change on agriculture in the context of Nepal shows that indigenous species are more adaptable, and poor farm households and women are more vulnerable than others. Non-tariff measures like sanitary and phytosanitary (SPS) measures serve as barriers to the exports of agricultural and forestry products from a least-developed country (LDC) like Nepal. Developing and LDCs' potential in producing and exporting organic agricultural products, in which they have a comparative advantage and which carry a premium, is constrained by the present coverage of the definition of climate change-resilient technology, which excludes organic products. The subsidies doled out by developed-country governments to their agricultural sector are also artificially eroding the competitiveness of farmers in low-income countries. On the other hand, opening up to agricultural products with dubious climate-resilient properties (e.g., BT Brinjal in India) is hurting indigenous technology and skills. Domestic supply-side constraints also prevent such countries from realizing their export potential in agriculture and forestry products. Even if domestic supply-side constraints are addressed and the trade regimes at the bilateral, regional and multilateral level are made development-friendly, there will still remain a key challenge of putting in place a mechanism that enables the actual producers—often poor or belonging to the low-income group—to get a fair price for their produce.

Trade in agriculture and forest products at the regional level (in regional trading blocs like the South Asian Free Trade Area) needs to be promoted. Local and indigenous technologies and knowledge in agriculture should be promoted through community-based management approach (for example, as in Nepal). Traditional knowledge of farmers should be leveraged to adapt to and mitigate the impact of climate change. Climate change adaptation technologies and practices should be documented and shared among countries of the South. Processing at the local level to increase value addition should be stepped up through micro-enterprise development. Development of community seed banks and promotion of exchange of seeds among communities within and between countries can help farming communities adapt to climate change. An early warning system of weather forecasting is a must for reducing losses to farmers from extreme weather events.

There is a need for more research on adaptation to climate change by indigenous species and breeds of plants and animals. Adaptation options need to be tested in more extreme environments. Studies to expand the limited knowledge about the interaction of climate with other drivers of change in agriculture are also required. Methods and tools need to be developed to assess crop and livestock adaptation options. More research is required on farmers' contribution (existing and potential) in mitigating climate change.

As agriculture accounts for 14 percent of emissions and land use for 18 percent, the potential for mitigation through climate-friendly agriculture and land use practices should be explored. Under particular circumstances small farmers can sometimes produce higher yields than conventional large-scale farmers with much lower negative impacts on the environment. Asia, Africa and Latin America together are estimated to have about 350 million small farmers, cultivating about 700 million ha of land, which is 40 percent of the total cultivated area. They have an advantage in climate change mitigation as well as



adaptation. Two thirds of the greenhouse emissions from agriculture are due to shift in land use from forest to agriculture. Their farming systems, which are largely traditional with crop-livestock-agroforestry integration, use 80 percent less energy, with very low or negligible consumption of fossil fuel and fertilizer, compared to industrial monoculture farming. With further fine tuning to eco-agriculture, small farms can help in sequestering atmospheric carbon in the soil rather than releasing it to the atmosphere. When small farm production is well managed, it has the potential to capture about 450 billion tones of CO<sub>2</sub>, which is more than two thirds of the current excess in atmosphere, in 50 years. On-farm conservation of plant genetic resources by small farmers, who are major custodians of agro-biodiversity, amid climate change, promotes adaptive evolution to enhance coping capacity to physical and biotic changes. Promotion of agroforestry, besides helping mitigate climate change and adapt to climate change (the latter particularly in arid/semi-arid regions, typhoon-prone areas, high rainfall areas and coastal regions with mangroves), also increases farm productivity and incomes as it allows simultaneous planting of different crops and trees. Agroforestry-based strategies are also good options to revitalize the mountain ecosystem, which is under serious threat, especially in South Asia, and enhance the livelihoods of the people living there. Further comprehensive and rigorous research on the mitigation potential of agriculture and forestry is needed.

Participatory breeding and selection under specific production conditions of different communities could be used to strengthen adaptation and productivity of small farms. Development of technologies suited to small farms, free access to such technologies (better varieties, cropping and production systems best suited to drought, flooding, salinity, etc), and implementation of appropriate production, pricing and trade policies to enhance the economic viability of small farms may strengthen their role in climate change mitigation and adaptation.

Despite evidences of the potential of traditional local technologies and practices to cope with climate change, they may not always work, given the unpredictability of climate change impacts. Hence, sharing of information, technologies and good practices on adaptation among developing and least-developed countries facing similar conditions and challenges is required. Integration of traditional technologies with modern ones may also be helpful at times.

For African, Caribbean and Pacific (ACP) countries, where land is a scarce resource and which are net food grain importers, the impact of climate change on food grain production will be felt through the import channel, possibly in the form of supply shocks and high prices.

Many developing and least-developed countries can engage in the production of biofuels as a substitute for fossil fuels, which would not only contribute to mitigation but also be a source of cash crop for the poor. However, they must be careful in the selection of crops for biofuel production so that food security is not adversely affected. Crops that do not compete with food grains for land and water but with definite mitigation benefits should be identified and promoted.

### ***Research, knowledge, analytical and action gaps***

- What is the cost of adaptation at the macro and micro level? What are the possible sources of financing?
- Research on alternatives (produce/livelihood) in areas negatively affected by climate change and trade policies
- More spatial and local studies
- Understanding the impact of CO<sub>2</sub> fertilization
- More integrated studies by natural scientists, economists and social scientists
- Sector-specific vulnerability studies

- Studies on regional trade promotion options
- Studies on adaptation technologies and their scalability in the regional context, compilation of indigenous technologies and knowledge as well as climate resilient technologies, and region/crop specific adaptation strategies
- Research on information sharing and cooperation mechanisms
- Exploring/establishing climate change as a factor and other drivers of productivity
- Study of climate change impact on yields across different types of adaptation methods
- Exploring the relationship between productivity and land use; between productivity and energy intensive practices; and between productivity and food security/projected food needs
- Building the capacity of developing countries in agricultural adaptation and mitigation
- Assessing the potential of biofuels as a cash crop for the poor as well as the implications for food security
- Exploring the efficiency/viability/productivity of small farms and their contribution to mitigation
- Variety development as an option for farmers, and its linkages with international trade and intellectual property rights (exploring options like seed banks for the exchange of hardy varieties; looking into seed certification and testing issues)
- Research on new order on materials exchange, capacity exchange and capacity building (e.g., cooperation between countries of similar conditions and information sharing mechanisms)

### **3. Carbon standards and labeling: can they be turned into an opportunity and benefit the poor?**

The growing emergence of carbon standards and labels in world markets is presenting additional challenges for exporters from developing and least-developed countries, particularly for small producers and firms. Besides governments and non-governmental organizations (NGOs) supporting various eco-labeling schemes, private standards and labels are increasing in number. The high administrative costs of compliance, monitoring and verification are a burden for small producers and firms, even if the products entail lower emissions. While a complex methodology entails high cost, a simpler methodology is less reliable and may contain loopholes allowing relatively more emission-intensive products to pass as low-carbon products. There is no internationally agreed methodology for calculating the carbon footprint. It is a matter of concern for developing and least-developed countries that protectionist intent arising out of competitiveness concerns in developed countries is also driving the application of carbon standards and labeling. Even if these issues are resolved, the sustainability of projects in terms of carbon standards and labeling remains a key challenge, although sustainability is already embedded in some labeling schemes. In addition, there are some unresolved legal issues. For instance, should private organizations dealing with labeling schemes be considered as NGOs? Are private standards and labeling schemes taking advantage of some loopholes in the WTO's Agreement on Technical Barriers to Trade (TBT)? Along with the expansion of International Organization for Standardization (ISO) standards, private sector specifications have also increased. Comprehensive research is needed on the trend and causes of the growth of private standards even where ISO standards have been developed, and come up with solutions.

The concept of "food miles" has serious implications for poverty alleviation efforts in developing and least-developed countries. For example, two major retailers in the United Kingdom (UK) (Tesco, and Marks and Spencer) place plane stickers on fresh produce that is air freighted from abroad to indicate the carbon footprint of the products, while UK demand for fresh produce grown in Africa supports over 700,000

workers and their dependants in that continent. This is happening despite empirical evidence indicating that “food miles” is an unreliable indicator of carbon emissions, mainly because it only considers transportation.

Given that carbon standards and labeling are here to stay, ways to ensure an effective participation of developing and least-developed countries in the standard-setting process (for instance, at the ISO) must be found. This would help address their development concerns and enable them to turn carbon labeling into an opportunity. They can, for example, suggest methodological changes in the calculation of carbon footprint so that their interests are protected: a holistic approach to make the “food miles” indicator reliable and thus beneficial to poor producers, and reforming the current methodology of counting land use changes in measuring carbon footprint that favours developed countries. Efforts must be made to enlist the participation of a broad range of stakeholders in the standardization process and develop incentives to increase private sector involvement. Fostering regional cooperation among developing and least-developed countries on standards can aid in the move towards international harmonized standards. Capacity building is needed in developing and least-developed countries at the institutional and private sector levels.

### ***Research, knowledge, analytical and action gaps***

- Link carbon standards and labeling with the livelihoods of the poor
- Finding ways to ensure the sustainability of projects in terms of carbon standards and labeling
- Research on the trend and causes of the growth of private standards even where ISO standards have been developed, and provision of prescription
- Suggesting methodological changes in the calculation of carbon footprint so that the interests of developing and least-developed countries are protected (e.g., a holistic approach to make the “food miles” indicator reliable and thus beneficial to poor producers, and reforming the current methodology of counting land use changes in measuring carbon footprint that favours developed countries)
- Ensuring effective participation of developing and least-developed countries in the standard-setting process (for instance, at ISO)
- Ensuring participation of a broad range of stakeholders in the standardization process and incentives to increase private sector involvement
- Fostering regional cooperation among developing and least-developed countries on standards to aid in the move towards international harmonized standards
- Capacity building at two levels—at the institutional level and at the private sector level (e.g., small and medium enterprises).

### **4. Fisheries and climate change: challenges and opportunities for poor people**

Developing countries account for more than half of global fish export value, and are home to 95 percent of the fishers in the world. Some 75 percent of fisheries exports of developing countries are to developed countries. Nearly 86 percent of an estimated 43.5 million people working fulltime or otherwise as fishers in the world are in Asia, a region that accounts for 52 percent of global fish trade. The vast majority of them are engaged in small-scale and artisanal fishing. Economic stake of the sector from the export perspective for some countries is very high. Research on fish trade in Africa shows that trade is a necessary but not sufficient condition for poverty alleviation, and intra-regional (within Africa) trade in fish may be more appropriate for the continent’s people and economic development. Whether to use fish for

domestic consumption or exports is a tricky policy issue, not least because fisheries are also related to the food and nutritional security of poor communities.

The effect of climate change on fisheries resources has been less discussed compared to agriculture and forestry. Climate change impacts the sector in a number of ways: changes in production volumes and species mix and changes in aquatic environmental condition; changes in fishing methods used; changes in aquaculture production systems; changes in marketing chains; shifts in the balance between fishing, aquaculture and other livelihood activities, etc. Vulnerability of the fisheries sector to climate change is a function of exposure, sensitivity and adaptive capacity. The vulnerability of the fishing sector is usually the highest in LDCs. Crucial adaptation measures include disaster preparedness and responses, through improved weather information and storm warnings, and support for coastal infrastructures (fortification and/or restoration; better management of spoilage); and shifting fisheries management towards resilience management. There is a need to climate-proof investment in the fisheries sector, for which the aid-for-trade initiative under the WTO may be tapped. Climate change has brought forth new requirements for safe harbours and safety at sea. The issue of climate vulnerability of the fisheries sector should be mainstreamed into National Adaptation Programmes of Action (NAPAs) and (national) Poverty Reduction Strategy Papers (PRSPs).

On the mitigation front, the contribution of the sector to global warming is unknown; the estimation of embodied carbon in fish trade is not completed. Even so, based on available information, the sector has mitigation potential: for example, promotion of fuel-efficient/energy-efficient fishing methods (vessels, processing and other aspects of the supply chain). The promotion of small-scale fisheries over large-scale fisheries may contribute to mitigation as the former is usually more efficient in terms of fuel use. Environmentally friendly propulsion techniques should be identified and their usage promoted. Reducing the use of fossil fuels will also economically benefit small, poor fisher folks, for whom energy cost is a significant part of their total cost of production. Exporters, for example in Mauritius, are increasingly receiving eco-labeling-related demands from importers and supermarkets. If poor fishing communities are to benefit from carbon labeling, the “food miles” concept must be replaced with the “fair miles” concept. Measurement of carbon consumption remains an unresolved issue. For example, is consumption to be attributed only to the countries doing the fishing, or also to the vessels used in the fishing (e.g., ACP countries are bound to use European vessels as per trade arrangement).

How to share the burden needs to be worked out. Eco labels for fisheries may be difficult to implement in Asia in the short run due to deficiencies in fisheries management regimes. In the meantime, catch certification or certification of sustainable fishing methods can be opted for. There is a need to step up discussion on fisheries at the United Nations Framework Convention on Climate Change (UNFCCC), especially with regard to financing/carbon credits, to explore the possibilities of bringing fishery activities into the ambit of Clean Development Mechanism (CDM) and creating a REDD[reduced emissions from deforestation and forest degradation]-like fund for coastal vegetation.

From the perspective of protecting the livelihoods of small and poor fishers, it is essential to preserve policy space for developing and least-developed countries in the WTO fisheries subsidies disciplines. Transitional subsidies should be provided to poor fishers affected by climate change. Trade restrictions, including through SPS measures, in developed countries are hurting poor fishers. Developing and least-developed countries must strongly and persistently press for carbon standards and labeling requirements and suchlike TBTs to be strictly based on science. Benefits from duty-free-quota-free market access are limited by the fact that it is supermarkets that determine actual access to markets.

Rising air freight is denting the competitiveness of fisheries exports. There is a need to reconcile the conflict between competitiveness and sustainability. Compatibility between climate rules under UNFCCC and trade rules under WTO is necessary to help achieve sustainability in fisheries and enhance the trade competitiveness of the sector, particularly in developing and least-developed countries.

More funding for the fisheries sector, including support for climate-resilient infrastructure, by international institutions under better conditions is required, as is the promotion of public-private partnership in the sector.

Developing and least-developed countries should exercise caution in negotiating trade and investment agreements, including bilateral ones, which can have adverse impacts on fishing communities. The nature of trade and investment agreements has implications for fisheries sustainability.

In order to ensure the resilience of fish stocks to fishing pressure, growing demand and unpredictable consequences of climate change, there is a need to develop a coherent management framework for environmental and ecological, and social and economic dimensions of fishing, fish resources and fish habitats. Fishing capacity should be made subject to total number of fishing vessels a fishery can accommodate. Mechanisms to determine the usefulness of economic incentives (e.g., subsidies) should be devised.

Sustainable fisheries management practices are prerequisites for fish export promotion. Equitable distribution of the benefits from fish exports is a challenge but important for uplifting the living standards of poor fishing households. Improved fisheries management through strict monitoring by various international and regional fisheries bodies, NGOs, and bodies administering multilateral environmental agreement is an option. The voice of fishing communities should be strengthened and made heard at the decision-making level.

Efforts to understand poverty issues in the fisheries sector must take into account the specificities of the sector. There is a need to move away from a unidimensional income-based understanding of poverty in the fisheries sector to a multidimensional and dynamic understanding based on the unique characteristics of the sector, encompassing aspects such as lack of choice, sense of powerlessness, vulnerability, lack of assets, insecurity (resulting from ethnic, gender or social status) and social exclusion. High variability, uncertainty and seasonality in incomes should be addressed. Tackling poverty in fishing communities calls for a wide and comprehensive range of coordinated interventions. It must be noted that poverty is contributing further to natural resource degradation. Policymakers must recognize traditional ecological knowledge and arrangements that contribute to greater sustainability and equity in coastal fisheries. Alternative employment opportunities must be created in regions where fish stocks are declining. Rice-fish farming may be encouraged so that both rice cultivation and fish production are possible in the same land.

The fisheries sector has always been a vulnerable sector. Taking care of the outstanding problems, which policies so far have generally failed to solve, can take care of many of the climate-induced problems, with some innovations.

### ***Research, knowledge, analytical and action gaps***

- Climate change risk assessments for fisheries at the national level
- Assessment of climate change impacts on fish resources and ecosystems
- Developing more nuanced fisheries-specific indicators of climate vulnerability
- Finding the climate change mitigation potential of the fisheries sector
- What kind of adaptive measures are needed and what are their technical and political feasibility?
- Estimation of the economic cost of adaptation and mitigation options
- Assessing the possible need for additional flexibilities in the WTO fisheries subsidies disciplines for climate change adaptation and mitigation
- Exploring carbon credits/financing prospects for fisheries in the UNFCCC context (e.g. CDM, REDD-like fund for coastal vegetation, climate funding agreed at Copenhagen)

- Assessing the opportunities and challenges for using trade as an adaptation mechanism in the fisheries sector
- Assessing the implications of eco- and carbon labels for fisheries products for poor fishing communities
- Exploring eco-labeling that is not money-intensive and that the poor can comply with and benefit from
- Assessing possible training requirements for climate change adaptation for fishers
- Exploring the opportunities for redistribution of benefits from fish trade to strengthen climate resilience of fishing communities
- Exploring the opportunities for leveraging private finance to develop the fisheries sectors (e.g. public-private partnerships)
- Increasing climate-resilient investments in the fisheries sector (e.g. AFT, ODA, FDI)
- Strengthening fisheries governance overall as a way to deal with climate change impacts
- Clarifying the respective roles of domestic and international interventions to deal with climate change impacts in the fisheries sector

## **5. Where to go next? The role for development assistance, climate financing and aid for trade**

Developing countries need financial resources, technological know-how and capacity building for climate change adaptation and mitigation. The UNFCCC and the Kyoto Protocol recognize that current levels of financing and technology transfer are not sufficient, but there are no enforcement mechanisms. Private sector mobilization of financing through CDM has its limitations, as flow of investment and technology through this mechanism has been insufficient, especially for conception and implementation of low carbon growth initiatives. Ex-post crediting of emissions reductions has limitations as a method of financing projects: it is not effective in generating green investments. Then there are design limitations: additionality requirements; lack of recognition for ongoing initiatives; etc. Hence the need for newer approaches that suit the needs of developing and least-developed countries. A series of small schemes over a period of time may produce better results. For example, Bachat Lamp Yojna is a scheme to promote energy efficient lighting in India designed as a public-private partnership between the Government of India, private sector CFL suppliers and state-level electricity distribution companies. New and innovative financing approaches are required at the international level, and an enabling environment needs to be created at the domestic level. Ways to monetize sustainable lifestyle and practices in developing and least-developed countries to address poverty concerns should be explored. Creation of an enabling environment at the domestic level involves, inter alia, removal of incentives for chemical fertilizers, fossil fuels, etc, and offering investment incentives for green development initiatives.

Though the aid-for-trade (AFT) and climate change financing (CCF) initiatives have different geneses and objectives, there are some overlaps between the two. However, there are two opposing views on the relationship between AFT and CFC. One view is that since AFT already covers a very broad range of issues, discussing the climate change issue under this theme leads to further diversion. The other is that since AFT and CCF are complementary and mutually reinforcing, ensuring their mutual compatibility creates win-win outcomes.

There is considerable scope for mutual compatibility between the two types of financing. One can build on the existing synergy between AFT and CCF projects: for example, better coordination between NAPA and PRSP processes. Since Global Environment Facility projects require co-financing, AFT resources can fill the gap to the extent the projects fall into any of the various AFT categories. The donors are more or less

the same, though the modalities are different. CCF is better coordinated and nationally owned, whereas AFT is more rooted in development and poverty reduction goals—these experiences can be shared.

Development partners should ensure additionality in AFT, that is, it is over and above official development assistance (ODA). There should be better coordination among donors. There should be no conditionality. On their part, recipient countries should ensure coherence between PRSP and NAPA; inter-agency coordination; greater local ownership of and role in project design as well as implementation; local capacity building to implement and monitor the projects; and “good enough” governance. South-South cooperation possibilities on AFT and CCF should also be explored.

Research is required on the interlinkages between AFT and CCF in the Asian context, by replicating a study done ICTSD in African LDCs and small and vulnerable economies (SVEs). The development dimension and potential poverty reduction impact of climate change adaptation projects through the trade vector need also to be analyzed.

International assistance is also required for capacity building and technical support. Assistance must be prioritized. Domestic baseline studies should be carried out. A separate framework is required for climate assistance. Country- and situation-specific realities should be factored in. Involvement of key stakeholders is essential. Key players and donors should be mapped. Climate assistance/finance programmes should focus on government plans, national trade policies, development goals, and regional goals.

A mechanism must be devised to ensure that financing actually goes to the poor. How to put the Paris Principles of Aid Effectiveness into practice must be analyzed. Domestic institutional deficiency in absorbing assistance has to be rectified if climate assistance is to be effective.

The trade, climate change and development communities must be brought together for a holistic approach. Multiplicity of channels of funding has played havoc with effectiveness of assistance. Hierarchy of policy objectives must be dispensed with, and development concept made holistic. A global audit of AFT is required, as is a carbon audit of public policy.

### ***Research, knowledge, analytical and action gaps***

- How to monetize sustainable lifestyle and practices in developing and least-developed countries?
- New and innovative financing approaches are required at the international level, and an enabling environment needs to be created at the domestic level
- Sharing of good practices in the form of new approaches among countries
- Research on the interlinkages between AFT and CCF in the Asian context. How to integrate AFT and climate change finance?
- Domestic baseline studies on AFT and CCF
- Analyzing the development dimension and potential poverty reduction impact of climate change adaptation projects through the trade vector
- Exploring South-South cooperation possibilities on AFT and CCF
- Ensuring mutual compatibility of AFT and CCF
- Global audit of AFT and carbon audit of public policy

- How to ensure that financing actually goes to the poor and the universal principles of aid effectiveness are adhered to?

## **6. Way forward**

In the concluding session, it was agreed that entering the trade and climate change debate through the poverty vector would be worthwhile. As there are currently important knowledge gaps in the area, the partners would be taking the lead in the debate in continuing their work on this. Some ways forward were suggested for acting on the knowledge, research, analytical and action gaps that emerged from the discussions.

First, the comparative advantages of the institutions in the network of the organizers should be tapped in relation to the identified knowledge, research, analytical and action gaps. In particular, it was mentioned that research should be decentralized and involve all regions. Second, a mechanism for ground testing and validation must be instituted. Third, a parallel mechanism for international dialogue is required for the sharing of country experiences and practices. It is important to involve policymakers at national and international levels at a rather early stage.