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CLIMATE CHANGE, AGRICULTURE, AND TRADE: A FULL POLICY AGENDA

“Climate change as well as policies and measures chosen to address climate change will have serious implications for agriculture and trade,” states IPC Chairperson Carlo Trojan, “and these must be carefully considered as policymakers and other stakeholders grapple with the policy agenda.” The three latest papers to be released under the ICTSD-IPC Platform on Climate Change, Agriculture and Trade, address a number of serious policy challenges.

Climate change challenges for agriculture make technology transfer issues even more pressing

“Climate change is yet another wake up call for the global community to address longstanding constraints to more effective technology innovation, transfer and adoption required for global food security,” explains IPC Chief Executive Charlotte Hebebrand. New crop traits and varieties will play an important role in facilitating adaptation, as will water management and production practices, post-harvest technologies, and improved services in information, forecasting and insurance. The Platform paper “Agricultural Technologies for Climate Change Mitigation and Adaptation in Developing Countries: Policy Options for Innovation and Technology Diffusion” by Travis Lybbert and Dan Sumner emphasizes the need for sound policies and institutions to address impediments to the development, diffusion and use of relevant technologies that can surface at several levels – from the inception and innovation stages to the transfer of technologies and access to agricultural innovations by vulnerable smallholders in developing countries.

Despite lingering controversies, agricultural biotechnology is identified as an especially promising set of tools for climate change adaptation and mitigation: increased yields reduce pressure on forests and no till allows greater carbon sequestration in agricultural soils, and traits such as drought tolerance promise to play a particularly important role. The process of transferring agricultural innovations across agro-ecological and climatic zones is often subject to agronomic constraints, and substantial investment and effort are required to develop varieties for local production. Agricultural biotechnology has relaxed these agronomic constraints but creates some new intellectual property constraints and requires that countries have sound biosafety and stewardship frameworks in place. Where IP seems to pose a problem, recent institutional and legal innovations provide a point of departure for effective remedies.

Carbon standards and developing country producers

“Issues surrounding the measurement of carbon embedded in internationally traded food and agricultural goods are rapidly emerging on the policy agenda, and have important implications for developing country producers,” warns ICTSD Chief Executive Ricardo Meléndez-Ortiz. Whereas earlier experiments have now been largely discredited, particularly those which singled out air-freighting of fresh fruits and flowers as a “carbon hotspot”, newer initiatives involve more sophisticated life cycle analyses to determine a product’s carbon footprint. There is no consensus on how to conduct such an analysis and it is difficult to define the boundaries of where a life cycle analysis should begin and end. Despite this complexity, labels must nonetheless be simple and easy to

understand if they are to be viable. Verification and monitoring add an additional layer of complexity and costs – especially for smaller producers.

The Platform Paper “Carbon Concerns: How Standards And Labelling Initiatives Must Not Limit Agricultural Trade From Developing Countries” by James Macgregor posits that carbon-labeling schemes could provide developing countries with new market opportunities and niches based on carbon efficiency, but they also run the risk of restricting market access. The paper emphasizes the need for technical assistance and support to developing country players, particularly smallholders, to help them participate in such schemes and also argues that transparency is needed to allay fears that the schemes are not just another developed country form of “green protectionism.”

National and international repercussions

While agriculture receives considerably less attention than China’s energy and manufacturing sectors, the Platform Paper “Climate Change and China’s Agricultural Sector: An Overview of Impacts, Adaptation and Mitigation” by Jinxia Wang, Jikun Huang and Scott Rozelle clarifies that it is not an insignificant source of emissions. Agriculture accounts for more than 15 percent of China’s total greenhouse gas emissions, nearly 90 percent of nitrous oxide emissions, and 60 percent of methane emissions. Excessive fertilizer use is not only fueling a major portion of the nitrous oxide emissions but also contributes to water pollution. “Yet there are important climate change mitigation opportunities in agriculture,” adds author and IPC member Jikun Huang, Director of the Center for Chinese Agricultural Policy, “for example through carbon sequestration and the adoption of production methods that reduce emissions.”

The paper also indicates that the potential impact of climate change on agricultural production and prices in China could have significant implications for not only the domestic market, but also for international markets, due to the sheer size of China’s domestic demand for agricultural products.

These three papers, along with other ICTSD-IPC Platform papers, and presentations made at Platform seminars held can be accessed at http://www.agritrade.org/events/Platform_001.html.

- Agricultural Technologies for Climate Change Mitigation and Adaptation in Developing Countries: Policy Options for Innovation and Technology Diffusion Issue Brief No. 6 by T. Lybbert and D. Sumner, May 2010
- Carbon Concerns: How Standards and Labeling Initiatives Must Not Limit Agricultural Trade from Developing Countries Issue Brief No. 3 by J. MacGregor, May 2010
- Climate Change and China’s Agricultural Sector: An Overview of Impacts, Adaptation and Mitigation Issue Brief No. 5 by J Wang, J. Huang, and S. Rozelle, May 2010

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About IPC

The International Food & Agricultural Trade Policy Council (IPC) promotes a more open and equitable global food system by pursuing pragmatic trade and development policies in food and agriculture to meet the world’s growing needs. IPC convenes influential policy makers, agribusiness executives, farm leaders, and academics from developed and developing countries to clarify complex issues, build consensus, and advocate policies to decision-makers. More information on the organization and its membership can be found on our website: www.agritrade.org.