

TRADE AND ENVIRONMENT

A RESOURCE BOOK

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Agriculture

Malena Sell

“While the numbers quoted for the amount of subsidies developed countries pay their farmers vary across sources, one thing is clear: the subsidies amount to billions of dollars per year, and developing countries have no way of competing.”

Agriculture lies at the heart of the current round of trade negotiations.

This is an area in which developing countries are seeking to rectify historic imbalances due to massive developed country **subsidies** and high levels of protection, including tariff escalation. Certain developing countries are looking for new market opportunities, while others are seeking to protect their vulnerable rural populations consisting mainly of subsistence farmers. While some developed countries have offensive interests, others are seeking both to continue to support their farmers in addressing “non-trade concerns”—such as the environment, rural landscapes and food security—and to manage the adjustment of a highly distorted sector towards greater market orientation, which will involve dealing with powerful vested interests.

Agriculture is a major polluter and driver of global environmental change. The environmental impacts of agriculture are expanding as the agricultural frontier reaches more remote areas. This expansion takes place at the expense of natural habitat, leading to biodiversity loss. Habitat protection also leads to the maintenance of important **ecosystem services**, such as **carbon sequestration** and **watershed management**, which have no market value.

The Millennium Ecosystem Assessment has singled out agriculture as one of the major drivers of ecosystem conversion and degradation. Sustainable agriculture itself is also closely linked to the provision of ecosystem services, including the maintenance of healthy soils and **agrobiodiversity**. Unsustainable farming practices, on the other hand, produce environmental **externalities**, such as soil degradation and erosion. **Agricultural runoff**, in turn, leads to fresh-water and marine pollution in adjacent areas, including the build-up of silt and **eutrophication**. Unsustainable water use and irrigation triggers falling water tables, the depletion of aquifers and salinization of soils. In addition, current high-input, intensive agriculture is a major source of pollution from fertilizers and pesticides, and is heavily dependent on the input of climate change-inducing fossil fuels.

Agricultural pollution is difficult to deal with given that it is not clearly identified as **end-of-pipe**, but rather as a **non-point source of pollution**. There are no quick fixes; solutions are mainly related to better management practices. Highly industrialized farming as practiced in developed and certain developing countries can be juxtaposed with small-scale subsistence farming, often in marginal areas, which adds pressure on the land. Both come with their own set of environmental implications.

Current agricultural subsidies are usually not geared towards environmental protection, but rather towards promoting increased production, and have often led to the exacerbation of environmental problems associated with agriculture. In the ongoing negotiations, developed countries are generally pressured to decouple their subsidies from production, which would ease the pressure on the land, make a dent in overproduction and possibly open up global markets for developing countries which are currently dominated by subsidized developed country products.

Change will not come rapidly, however. Negotiations addressing the “three pillars” of agriculture—export subsidies, domestic support and market access—began in 2000 under the WTO Agreement on Agriculture’s (AoA) “built-in agenda.” In 2001, these issues were folded into the **Doha Round**. This means that Members have to strike deals and make trade-offs across all trade sectors rather than being constrained to agriculture alone. As part of the **single undertaking**, agriculture negotiations were originally set to be completed on January 1, 2005. This deadline has passed, and the negotiations are progressing step-by-step, with partial agreements struck in Geneva and Hong Kong since the breakdown of negotiations in Cancun in September 2003. Delegates are moving from a framework for negotiating modalities, towards pre-modalities and ultimately towards the actual modalities—the reduction formulae including percentages for tariff and subsidy cuts, criteria for domestic support, schedules, deadlines and transition periods. After the modalities are agreed, WTO Members fill in the individual schedules of tariff and subsidy reduction, with on-the-ground implementation coming only gradually following the conclusion of the trade round.

In the agriculture negotiations, the fate of all three pillars will determine the outcome from an environmental perspective: the amount of tariff reduction will be decisive with regard to

what extent more international trade in agricultural products actually takes place. In addition, the current round seeks to discipline the amount of subsidies available to agriculture, with export subsidies set to be phased-out.

Subsidies under the AoA are categorized into three “boxes.” The **Amber Box** includes most domestic support measures that are considered to distort production and trade. These measures are slated for reduction, if not complete elimination. **Blue Box** measures are an exemption from the general rule that all subsidies linked to production must be reduced or kept within defined minimal levels. The measures typically include production-limiting programs, i.e., payments made according to acreage or animal numbers on condition that milk/meat production quotas are not exceeded. The only Members that have notified Blue Box measures to the WTO are the EU, Iceland, Norway, Japan and the U.S. **Green Box** measures should not have distorting effects in agricultural markets; at the very worst, their effects must be minimally trade-distorting. They include funds for research; exceptions for the promotion of food security stocks; direct payments to producers that are decoupled from current prices or production levels; **structural adjustment** assistance; safety-net programs; environmental programs; and regional assistance programs. These measures, which tend not to be aimed at particular products, must be funded from government revenue, and must not involve price support.

In terms of domestic support, the greatest pressure is on lowering trade-distorting Amber Box support. Amber Box and Blue Box support to production-limiting programs will be capped. The Green Box, or Annex II of the AoA, includes subsidies for environmental purposes (among others). These are allowed to be, at the most, “minimally trade-distorting,” although no functional definition of this concept exists.

Interests and Fault Lines

In the context of the WTO, environmental issues have been clustered with other non-trade concerns, such as food security, **structural adjustment**, rural development and poverty alleviation. In practice, the environment debate has been confined to a discussion of the Green Box and the future of subsidies for environmentally friendly farming practices.

While negotiations related to the Green Box will have important implications for the future environmental impacts of agriculture, this will be but one determinant, and one more relevant for developed countries given that they are the big subsidizers. Environmental issues related to sheer scale effects of agriculture and globally shifting cropping patterns fall outside the discussion at the WTO.

Negotiating Groups and Positions

The fifth WTO Ministerial Conference in Cancun in September 2003 marked a shift in negotiating dynamics. This shift was mainly triggered by imbalances in the area of agriculture. In the lead-up to Cancun, the U.S. and EU drafted a joint compromise text on agriculture, which, in practice, served as the basis for negotiations. Developing countries reacted with outrage, feeling that their interests had not been incorporated—and banded together into a new grouping, the **Group of Twenty (G20)**, to challenge the status quo. The group was led by Brazil, South Africa, India, Argentina and China. While commentators immediately began the countdown for the break-up of the group, it held together. Negotiations following Cancun have shown that the new dynamic had come to stay and a new set of five countries—Australia, Brazil, the EU, India and the United States—has emerged at the heart of the deal-making.

This does not, however, mean that developing countries make up a unified group on agriculture at the WTO. Developing country

Agriculture, environment and social justice

By **Adriano Campolina**



Any analysis of the impacts of agricultural trade on the environment needs to consider the often-overlooked diversity that exists within the agricultural sector. Considering the enormous differences within the sector, it is necessary to look carefully at how trade policies can have different impacts on different agricultural areas and, therefore, different impacts on the environment.

It is possible to devise various analytical categories upon which to base a thorough analysis of the agricultural sector. Scholars have, for example, suggested the existence of three “rural worlds,” comprised of: (a) wealthy and industrialized farmers, who are connected to global markets through contracts with agribusiness, have superior access to resources and capital, and use input-intensive methods of production; (b) small-scale and family farmers, who face declining returns and increased risks, lack capital, information and resources, and are vulnerable to globalization; and (c) subsistence farmers and landless labourers, who are seasonal, migrant or family labourers, with little or no land.

In Brazil, the government has recognized these different categories in the agricultural sector and their different circumstances and needs and devised two separate credit systems. The first focuses on the so-called *agricultura patronal*, which encompasses larger farms, defined as containing more than two permanent labourers. The second is *PRONAF* (the National Program for Strengthening Family Farming), which benefits small-scale farmers who use family workers, are located in rural areas and generate at least 80 per cent of their earnings from farming activities. The recognition of the special needs of family farming was a result of years of struggle by the Brazilian

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peasant movement. As a result, PRONAF credit now offers lower interest rates, among other measures.

It is also necessary to recognize the different circumstances and needs of rural agricultural communities with respect to trade policy. ActionAid has analyzed the impacts of trade liberalization on small- and large-scale farmers in Brazil during its unilateral liberalization in the 1990s. During that period, the large-scale farmers tended to defend trade liberalization policies, particularly improved market access. The priority of small-scale farmers, on the other hand, was to seek protection from dumping and cheap imports. Given Brazil's active membership in the Cairns Group, the government had mostly responded to the needs of the large farmers and its agenda had centred on eliminating export subsidies, reducing domestic support and increasing market access. Analyzing the evolution of the prices of the crops in this period, ActionAid found that prices fell much more for family-farmed agricultural products (decreasing by 4.74 per cent per year), than for large-scale agriculture (decreasing by 2.56 per cent per year).

If we look at the environmental impacts of agriculture, once again the different agricultural "worlds" will have different impacts. Using the case of Brazil again, 45 per cent of the country's area is used for agriculture. The impacts of commercial agriculture based on Green Revolution techniques—e.g., high use of fertilizers and agrochemicals, monoculture, mechanization, large-scale farms and intensive irrigation—include deforestation, soil erosion and contamination and biodiversity loss.

On the other hand, agriculture can also provide many environmental services, such as soil and water conservation, and sustainable use and conservation of biodiversity. Some experts suggest that small-scale farmers are best placed to provide these environmental services. This is because: (a) their economic logic is not based on maximizing capital returns or short-term profits, but on attending to family needs and maintaining the long-term productive potential of the land (perceived as family patrimony); (b) as a production and consump-

tion unit, small-scale farmers value diversity through shared crops and diverse livestock distributed in a balanced way; (c) the organization of labour in the small-scale farming unit favours the technical practices required for sustainable agriculture; and (d) family farmers have a long-lasting, deep-rooted and positive relationship with their land and can recognize the particular potential of the agroecosystem and use it in their economic reproduction strategies.

We need to urgently review our approach to trade negotiations in the agricultural sector, considering how trade liberalization impacts small-scale farmers, how this sector is well-placed to provide environmental services and that most of the global poor are small-scale farmers, peasants, landless or rural labourers. The main outcome of trade negotiations should be a set of rules that enable, strengthen and protect small-scale farmers.

It is crucial to remove the trade distortions that currently allow rich countries to dump their agricultural products on Southern markets. However, putting an end to dumping should be closely linked with ensuring the rights of developing countries to protect and consolidate their small-scale farming. It is, therefore, important to eliminate export subsidies and reduce domestic support in the North. Yet, it is equally important to ensure special and differential treatment (S&DT) for developing countries to allow them to protect the key crops of their small-scale farmers to enable a stable economy and food security (i.e., Special Products), including the right to raise tariffs and create a Special Safeguard Mechanism.

Trade rules should allow developing countries to implement the public policies they deem appropriate in order to strengthen, consolidate and develop their peasant and small-scale agricultural sectors. Such an approach could maximize the positive interactions among agriculture, environment and social justice.

However, this approach will require concerted efforts to defeat strong protectionist interests

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interests in agriculture are as varied as the countries themselves. The G20 is generally perceived as focusing on expanding agricultural export opportunities—this is, however, a truth with modification, as India is one of the dominant forces of the G20 and clearly seeks protection for its small and vulnerable farmers and their livelihoods. The **Group of Thirty-Three (G33)**, an alliance of developing countries including many from Africa, the Caribbean and the Pacific (ACP), focuses on securing the designation of effective “**Special Products**” for developing countries—for which lower tariff reductions would be required—and a “**Special Safeguard Mechanism**” to shield developing countries against import surges. There is a certain overlap between the members of the G20 and the G33, and India and China coordinate closely with the G33.

The **Group of Ninety (G90)**—the largest coalition of Members operating in the WTO—comprises least developed countries (LDCs), the ACP countries and the African Union. The group has actively coordinated positions around major events such as Ministerials. The group argues that any agriculture deal should allow its members to pursue agricultural policies that are supportive of their development goals, poverty reduction strategies, and food security and livelihood concerns. A special case within the G90 are the so-called net food-importing developing countries (NFIDs)—many of them also LDCs—which do not produce enough food domestically, and actually benefit from low world market prices and cheap imports.

Among other players, the Cairns Group—a coalition of 17 agricultural exporting countries, which account for one-third of the world’s agricultural exports, including Australia, Canada, New Zealand and developing countries such as Chile, Thailand, Argentina and Indonesia—has focused on market liberalization both in terms of tariff and subsidy reduction. While the Cairns Group has called for substantial tariff decreas-

es across the board, the G20 underscores the need for **special and differential treatment (S&DT)** of developing countries, meaning less onerous commitments on their part. Both the G20 and Cairns Group tend to place little emphasis on non-trade concerns. Regarding the environment specifically, Argentina made a proposal early on in the negotiations noting that developing countries have a strong interest in preserving their natural resource base.

The EU—which is reforming its internal Common Agricultural Program (CAP) in parallel with WTO negotiations—has agreed to give up export support. The EU takes a cautious approach to tariff reduction, and is betting on designating “**Sensitive Products**” for which smaller tariff cuts would have to be made, thus protecting local producers. Regarding domestic support, the EU generally argues that cuts should be made on trade-distorting support and the Green Box should be left alone (the EU is in the process of moving much of its support into the Green Box, an area in which the U.S. is far ahead).

On non-trade concerns, viewed as legitimate societal goals and extended to include animal welfare, the EU argues these should be addressed in a targeted, transparent and non-distorting way under the Green Box. European consumers are also demanding action on food safety. There is much public concern regarding issues such as hormone-treated beef and **genetically modified organisms (GMOs)**.

The U.S. has been arguing that both developed and developing countries need to contribute to a substantial increase in real market access opportunities both by cutting tariffs and dismantling trade-distorting subsidies. The U.S. has indicated that special and differential treatment has to be applied on a need-basis, indicating that major exporters such as Brazil and Argentina can hardly expect the same treatment as poorer, more vulnerable countries. Non-trade concerns,

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that lobby to maintain high levels of subsidization in much of the developed world. It will also require a shift in the trade negotiating strategy of developing countries from simply prioritizing market access to include an emphasis on special and differential treatment, as well as ensuring provision for the tools necessary to protect and develop their small-scale farming sector.

This change in the focus of agricultural negotiations represents both a challenge and an opportunity for developed and developing countries.

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according to the U.S., should be dealt with in the Green Box exclusively.

In this regard, the **Group of Ten (G10)**, a group of net food importers including Switzerland, Norway and Japan, has taken a broader approach supporting the integration of non-trade concerns into all aspects of the agreement. These countries with uncompetitive agriculture sectors have high tariffs and subsidies, and wish to maintain them given that they do little harm in the way of exports or international competition. According to the group, agriculture is “special” because of its provision of critical **public goods**. The group asserts that agricultural products are unique to every society, and agriculture is “multi-functional,” contributing to the viability of rural areas, food security, the cultural heritage and environmental benefits such as the agricultural landscape and agro-biological diversity. While most other Members are of the view that non-trade concerns can be accommodated in the Green Box, the G10 argues public goods often are only provided

“jointly” with production, and therefore support should sometimes target production, especially in uncompetitive mountainous, remote or climatically disadvantaged areas.

What Future for the Green Box?

While the numbers quoted for the amount of subsidies developed countries pay their farmers vary across sources, one thing is clear: the subsidies amount to billions of dollars per year, and developing countries have no way of competing. Therefore, the general position among developing countries is that these subsidies have to go, and there is widely held suspicion regarding the supposedly non-distorting measures of the Green Box. As long as developed countries provide their farmers with massive subsidies, there is no level playing field, be it for hyper-efficient large-scale sugar producers in Brazil or for farmers hand-picking their cotton in Mali. On the other hand, developing countries do argue that they should be able to retain the right to subsidize in order to strategically promote their own development; and especially to support low-income and resource-poor farmers.

As part of current agriculture negotiations, the Green Box is to be reviewed and clarified. Disagreement immediately emerged over what this should entail. The EU and G10 were of the opinion that the review should be just a “health check-up.” The G20 and Cairns Group preferred a much more substantial review, including the tightening of criteria and improved monitoring and surveillance to ensure that the new disciplines are being adhered to. While environmental measures as such were not the concern, developing countries worried that “box shifting” would take place—i.e., that developed countries would simply make slight modifications to their current Amber Box subsidies and then move them into the Blue or Green Box.

In short, significant disagreements persist on the likely or desirable future of the Green Box.

Organic Production, Agricultural “Environmental Goods” and Standards

Organic production is often promoted as a possible win-win for developing country exporters and the environment. In practice, however, developing countries find it challenging to comply with the myriad of standards and labelling requirements importers impose on organic goods. Organic agriculture has, nonetheless, generated interest in current negotiations on environmental goods and services slated for accelerated tariff reduction and removal.

Most industrial goods considered environmental are of developed country interest; the idea of agricultural environmental goods, in which developing countries would have a comparative advantage, has emerged as a counterbalance. In this context, clean-burning low-carbon **biofuels**, such as ethanol produced from sugar cane, are of potential interest. Biofuels can be used to displace some petrol, and have the advantages of being more highly processed and generating new rural jobs. While the greatest demand for biofuels is in developed countries seeking to fulfill their obligations under the Kyoto Protocol on climate change, they are produced at a competitive cost only in the South.

As standards regarding food safety and hygiene have been increasing in developed countries, these non-tariff barriers have been characterized by some developing countries as the new frontier of protectionism. A number of standards and **eco-labelling** schemes—often imposed by the powerful supermarkets chains—are expensive for producers to comply with.

Dispute Settlement Driving Negotiations?

In addition to the negotiations themselves, the fate of agriculture subsidies is influenced by the outcomes of key dispute settlement cases at the WTO.

Dealing with the hidden agenda on agricultural subsidies

By Vangelis Vitalis



One expected outcome of the “Doha Development Round” will be commitments by developed countries to reduce and eliminate some, if not all, agricultural subsidies.

Unfortunately, however, there is also a very real possibility that this process will be undermined by attempts to retain certain subsidies and limit overall reductions. This is not surprising. What is perhaps surprising is the vehemence with which environmental arguments are being used to defend such moves.

Particularly striking is the argument advanced by some sectoral interests and an assortment of non-governmental organizations (NGOs) and politicians. They argue that reductions in agricultural subsidies in some countries in the Organization for Economic Cooperation and Development (OECD) should be limited or frozen altogether because this may cause output in developing countries to increase with potential negative consequences for the environment there and/or globally.

It is important to be clear at the outset about what the argument underpinning this approach is. Basic principles are a good starting point. There is no doubt that a reduction, or indeed an increase, in subsidies *will* affect the environment in a number of ways. These impacts occur through *changes* in the structure of production across countries, scale of economic activity, mix of inputs and outputs, and production technologies.

Nevertheless, these changes should not be used as a reason to freeze or limit subsidy reform. After all, developed-world living standards are built on the conversion of natural resources into intellectual and human resources. This substitution of natural capital

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with human capital is a trade-off that every country rightly regards as its own sovereign choice and was reaffirmed by the Rio Declaration.

If the developed world is really so concerned about the potential negative effects on the environment by subsidy reductions, then the right response is not to freeze reform, but to improve the targeting of technical and development assistance. Here's a practical real world example. OECD member subsidies to cotton farmers lowers world prices by some 25 per cent. A reduction in such support would certainly have a positive effect on economic growth through improved market access and global prices for a number of developing countries.

One of the reasons suggested for retention of such support, however, has been the likely negative effects on the environment as a consequence of raised production in developing countries and the pressure this might have on resources like water and energy. Uzbekistan is a case in point. It has significant cotton interests. Improved world prices would certainly have positive implications for poverty reduction and economic growth in this Central Asian economy where nearly 80 per cent of the population lives on less than US\$2 a day. It is also true that increased output in response to improved market access may have negative implications for water, which is already a scarce resource that is drawn almost exclusively from the Aral Sea. Currently, more than 40 per cent of the water taken from the severely stressed Aral Sea to irrigate the cotton fields of Uzbekistan evaporates before it even reaches those fields (Uzbek farmers use open channels, not closed pipes, for irrigation). Further pressure on the Aral Sea water resource would have significant negative spillovers to other parts of the Uzbek economy.

If those groups and countries citing their concern for the environment are serious, then the answer is not to stall subsidy reform, but to focus on how technical and development assistance might plug the gaps. Thus, when market access is improved for Uzbek cotton as a consequence of subsidy reductions with the attendant benefits in terms of farm incomes, developed country policy-makers should be in a position to consider how best to fund flanking measures to ameliorate any potential environmental problem (such as enhanced technical assistance for improved irrigation techniques. Put simply, install pipes to replace the open irrigation ditches in Uzbekistan.). A win-win outcome in action.

In sum, fundamental reform of agricultural trade must be pursued with the vigour and indeed the rigour it requires. It should not be derailed by spurious environmental considerations. There is no question that trade negotiators should bear the sustainability aspects in mind when negotiating agricultural trade liberalization. They should, however, be looking to international assistance and other sources to address these kinds of issues, rather than restricting the growth prospects of developing countries.

These are urgent issues. Negotiators must not shy away from them in their pursuit of improving the global inter-linkages and complementarities between social, economic and environmental development—that is, sustainable development.

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For example, Brazil won a challenge it brought against U.S. cotton subsidies. Part of the challenge focused on subsidies the U.S. claimed were non-distorting and hence fell under the Green Box. The panel, however, found the subsidies to be connected to production, meaning they cannot be classified under the Green Box, but must be counted towards trade-distorting support. This case highlighted the need for clearly defined criteria related to the Green Box, and provided challengers of the Green Box with new negotiating capital.

Brazil, Thailand and others also initiated and won a similar case against EU sugar subsidies. Other cases, such as on soy, may also be launched by developing country exporters against developed country subsidies. In the future, care must be taken to ensure that environmental programs do not lead to trade-distorting effects. As an example, subsidies to biofuel production could become tricky—while subsidies focusing on better management practices regardless of which crop is being produced can hardly be seen as affecting trade, subsidies to certain crops used as feedstock for biofuels could cause problems.

Trends and Future Directions

Global agriculture is characterized by volatile and declining commodity prices, as well as strong market concentration and vertical integration of agribusiness. Farmers are retaining less and less of the profits derived from agriculture and, with liberalization, the pressure to become more efficient (and cut corners) will increase. Farm size is on the increase; the number of farmers on the decrease. The likely medium-term outcomes of the Doha Round agriculture negotiations will change the global distribution of agricultural production, and lead to more agricultural products being traded internationally.

The accompanying environmental changes and challenges will surely be enormous, but

are not well understood. Take climate change: agriculture can serve both as a source of carbon emissions and a carbon sink, while also being directly impacted by atmospheric carbon fertilization and a changing climate, including unpredictable local weather patterns and increasing extreme weather events. Increased global transport of agricultural commodities and produce leads to higher emissions of carbon dioxide. Different crops and different regions of the world will be affected by climate change in different ways; but exactly how, is not yet known.

According to recent Dutch modelling exercises, liberalized trade, increasing incomes and population growth are likely to lead to increased agriculture and related pressures on tropical forests by 2030, particularly in Asia and Africa. European agriculture is expected to become less intensive—certainly not decimated—especially under scenarios in which climate policy drives more land into the production of biofuels rather than food crops. In terms of the use of marginal lands for agriculture rather than to harbour valuable biodiversity and pressure on the agricultural land itself, the dismantling of harmful production-linked subsidies in developed countries can help support the local environment. On the other hand, some of the intensive farming practices might just relocate to developing countries, with a few agribusiness transnationals reaping the economic benefits without paying the environmental costs. Agrobiodiversity has also declined, with 75 per cent of the food in the world now being derived from seven crops only (wheat, rice, corn, potatoes, barley, cassava and sorghum). The genetic variability of crops has similarly decreased, meaning those widely used varieties are more vulnerable to diseases and climate change. This trend is likely to continue.

Some opportunities for environmental improvement also exist, however. With the current disciplines being negotiated at the WTO, the emphasis on subsidies is shifting towards non-distorting measures, such as

those promoting environmental protection. Outside the WTO as well, producers and consumers are recognizing the importance of sustainable agriculture. As expressed by Argentina in its submission on non-trade concerns and natural resources: “These are the

assets on which our agriculture is based. We are good at producing agricultural products and therefore we have to take special care of land and water protection. To do so we need to implement sound environmental policies.”