
Accelerating tariff elimination through beneficial environmental food products

Chapter 9. The link between agricultural trade, climate change and food security. Tariff elimination for environmentally efficient agricultural goods (EEAG)

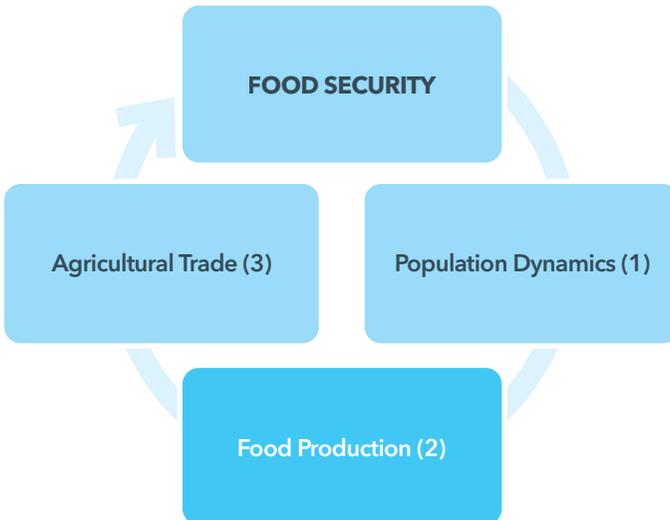
By Sabine Papendieck and Gustavo Idígoras

«Trade can be an ally of environmental conservation, not its enemy.» ... In a world without artificial economic borders, goods can come and go. You can trade freely. In this world, a country with a dry climate does not need to use its scarce water resources to maintain crops that need heavy water consumption and that can be imported. Thanks to trade, it can save its precious water resources. Also in that world, a country with limited access to the sea does not need to deplete its fish stocks to feed its people. Thanks to trade, it can import fish to stock up on food and manage its fishery resources sustainably. Trade can enable a more efficient distribution of all resources, including natural resources. In the public's view, it can be an ally of environmental conservation, not its enemy.»

Speech given by the General Director of the WTO, Mr. Lamy,
At the 2005 WTO Symposium on Trade and Sustainable Development

>> Challenge of Global Food Security: the population projection for 2050, the demand for food and the role of agricultural trade

Food security, as defined by the FAO World Food Summit in 1996, is achieved “when all people have permanent physical, social and economic access to safe, nutritious and sufficient food to meet their nutritional requirements and food preferences, and, in so doing, lead an active and healthy life”. This definition directly relates population dynamics, food production and trade to reach a positive balance.



Regarding the first variable in this tripartite relationship, the statistics on the global population dynamics (United Nations Population Fund) show that in October 2011 the world population was 7 billion. By mid-2015 it had grown to 7.3 billion people. Currently 60% of this population lives in Asia (4.4 billion), 16% in Africa (1.2 billion), 10% in Europe (738 million), 9% in Latin America and the Caribbean (634 million) and the remaining 5% in North America (358 million) and Oceania (39 million). China (1.4 billion) and India (1.3 billion) are still the countries with the largest population. Both have more than 1 billion people and represent 19% and 18% of the world population, respectively.

According to data from the United Nations Population Fund, the world population is projected to increase by more than 1 billion people over the next 15 years, reaching 8.5 billion in 2030, 9.7 billion in 2050 and 11.2 billion in 2100. Over half of the world's population growth by 2050 is expected to take place in Africa because of its current rate of population growth (increasing annually at a rate of 2.55% from 2010 to 2015). Next in line is Asia, which is expected to become the continent making the second highest contribution to the growth of the world population, with an addition of 900 million people between 2015 and 2050.

According to FAO data, one in nine people worldwide suffered from hunger in 2014-16. Therefore, Sustainable Development Goal (SDG) No. 2 - Zero Hunger - of the 2030 Agenda seeks to end all forms of hunger and malnutrition, by ensuring that all people have access to adequate and nutritious food. As a result, projected population growth through 2030 is expected to increase demand for food, energy and water by at least 50 percent, 45 percent and 30 percent, respectively. To meet this food challenge, it is estimated that a minimum 60/70 per cent increase in agricultural productivity will be required by 2050, including a 100 % increase in developing countries. Food security is no longer just a question of quality but, given the population dynamics projected, it must also address the problem of food availability. Faced with this new scenario, food-producing countries face a new challenge: to produce more to feed the world.

International agricultural trade must positively redistribute food production, increasing both quantity and quality in all regions, and thus ensuring food security on a global scale. Agricultural trade accounts for 10% of world trade (WTO data 2016). It is led by the EU (28), followed by the USA, Brazil, China, Canada, Indonesia, Argentina, Thailand, India and Australia. These countries make up the top 10 of the world's agricultural exporters, with a share of 73 percentage points, totaling US\$ 1.159 billion in 2016. In turn, the EU is the main importer of agricultural goods worldwide with a share of 35 percentage points, followed by the US and China.

Although work on food security is carried out in the Agricultural Committee at the WTO, to date there is no specific entity for agricultural trade research and analysis as a tool for food security. It was only in 2013 at the Bali Ministerial Conference that WTO Members agreed to negotiate and find a permanent solution to the issue of public stock programs for food security. They pledged not to penalize such programs if they exceeded the agreed limits of domestic assistance. Under these programs, developing countries buy and store food and distribute it to people in need. However, some programs involve granting aid to farmers and are therefore seen as causing trade distortion. During the 2015 Ministerial Conference in Nairobi, the commitment made in Bali was reaffirmed and members were encouraged to reach a definitive commitment. To date it has not been reached.

TABLE 1: Top 10 exporters and importers of agricultural products, 2016*(Billion dollars and percentage)*

	Value	Share in world exports/imports				Annual percentage change			
	2016	2000	2005	2010	2016	2010-16	2014	2015	2016
Exporters									
European Union (28)	598	41.9	44.2	39.3	37.7	2	1	-13	-3
extra-EU (28) exports	160	10.0	9.7	9.4	10.1	4	1	-12	2
United States of America	165	13.0	9.7	10.5	10.4	2	4	-12	3
Brazil	77	2.8	4.1	5.0	4.9	2	-3	-9	-4
China	76	3.0	3.4	3.8	4.8	7	6	-3	5
Canada	63	6.3	4.8	3.8	4.0	3	4	-7	-1
Indonesia a	38	1.4	1.6	2.6	2.4	1	3	-10	-4
Argentina	37	2.2	2.2	2.5	2.3	1	-10	-9	7
Thailand	37	2.2	2.1	2.6	2.3	1	-2	-8	1
Australia	34	3.0	2.5	2.0	2.1	4	3	-7	-6
India	34	1.1	1.2	1.7	2.1	5	-3	-19	-5
Above 10	1159	76.9	75.9	73.9	73.0	-	-	-	-
Importers									
European Union (28)	602	42.7	45.3	40.3	36.8	1	1	-12	2
extra-EU (28) imports	166	12.3	12.6	11.1	10.2	1	3	-10	0
United States of America	160	11.6	10.6	8.4	9.8	5	7	0	2
China	155	3.3	5.0	7.8	9.5	6	3	-6	-3
Japan	75	10.4	7.3	5.6	4.6	-1	-5	-10	2
Canada b	38	2.6	2.4	2.3	2.3	3	4	-5	-1
Korea, Republic of	32	2.2	1.9	1.9	2.0	3	5	-6	-3
India	29	0.7	0.8	1.3	1.8	8	12	1	5
Hong Kong, China	28	5	5	-6	3
retained imports a	18	1.1	0.8	1.0	1.1	5	6	-9	1
Mexico b	28	1.8	1.8	1.7	1.7	3	3	-8	1
Russian Federation b	26	1.3	1.9	2.6	1.6	-5	-8	-33	-6
Above 10	1162	77.5	77.9	72.8	71.1	-	-	-	-

a. Secretariat estimates

b. Imports are valued f.a.b.

Source: WTO

>> The role of conservation agriculture in the context of climate change

The world has entered into a new era of action for sustainable development. As human life depends on land as well as water for sustenance and survival, the process of climate change and the multilateral commitments consequently assumed by the international agreement, impose on agricultural production a new context: environmental efficiency. In this regard, SDG No. 12 - Responsible Production and Consumption and SDG No. 15 - Life of Terrestrial Ecosystems, of Agenda 2030, are urgent to reduce the environmental footprint of growth and economic development through efficient resource management that reduces the pressure on the environment.

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In the past two centuries, according to the FAO, humans have deforested or converted 70 percent of grasslands, 50 percent of savanna, 45 percent of temperate deciduous forests and 27 percent of tropical forests for agricultural use. Over the last 40 years, almost one third of the world's arable land has been lost to erosion and it keeps on disappearing at a rate of more than 10 million hectares per year. At the same time, greenhouse gas emissions from agriculture, forestry and other land uses account for between 20 percent and 24 percent of the total global gross annual emissions that contribute to climate change. While the contribution of food systems to total greenhouse gas emissions varies from countries to regions, according to the structure of supply chains, carbon dioxide emissions from agriculture can be attributed mainly to loss of organic matter above and below the ground, through changes in land use, such as the conversion of forests into grassland or cropland, and land degradation, resulting from grazing. Most direct emissions of methane and nitrous oxide are the result of enteric fermentation in livestock, rice production in flooded fields and application of nitrogen and manure fertilizers, all of which can be reduced by applying better management practices.

Unless necessary action is taken, UNDP projects that the impact of climate change will be 30% less agricultural production than at present | by 2080 and instability in food availability, due to the occurrence of extreme phenomena and greater variability in weather. According to the IFPRI, using the International Model for Agricultural Product and Trade Policy Analysis (IMPACT), it was estimated that, by 2050, approximately 50 million more people could be at risk of malnutrition due to climate change. In addition, studies show that climate change will also have a negative impact on the nutritional quality of key food crops and the safety of final food, by an increase in foodborne pathogens, as well as pollution or chemical changes that increase the incidence of toxic compounds in them.

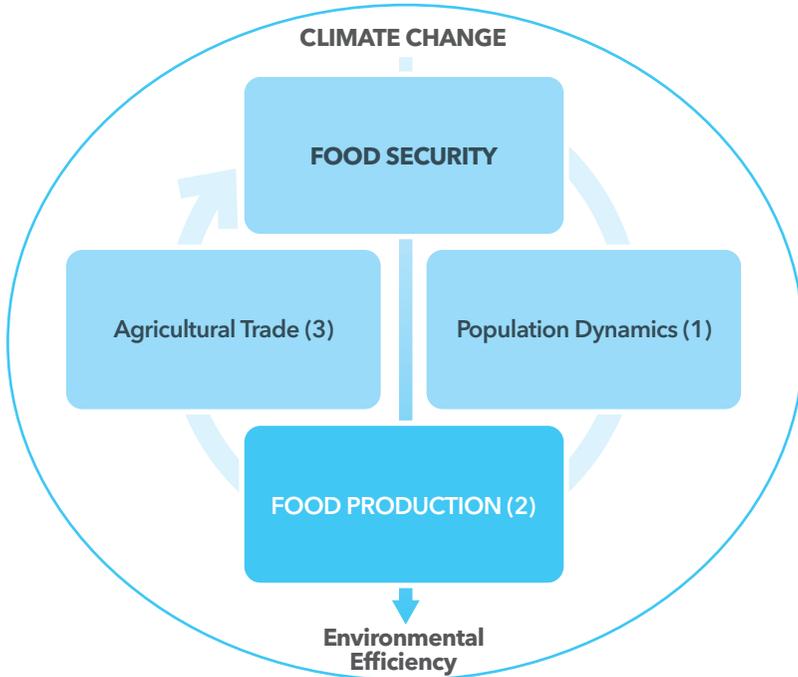
As a result, climate change in the agricultural sector further increases the gap between food production and food security. Therefore, it is concluded that population growth increases the pressure on the environment.

Consequently, **not only must we produce more food in a context of climate change but produce it efficiently by mitigating and/or neutralizing its environmental impact.** Agricultural production and climate change are posed as related challenges. As a result, a conservation or climate-smart agriculture, which is more productive with better yields without incorporating new land, is required in the short term, using the same or even smaller amount of resources currently used and reducing emissions through good environmental practices. According to the FAO, conservation agriculture has proven environmental benefits:

- Reduces soil erosion, increases organic matter and water conservation in the soil and improves soil structure and consequently its root structure
- Improves water quality
- Improves air quality
- Increases biodiversity

- Carbon sequestration.

In this new equation it is essential to emphasize that the agricultural sector, due to its physical nature, also contributes substantially to balancing the global carbon cycle favoring the capture of large amounts of atmospheric carbon dioxide. In agriculture, therefore, the concept of GHG inventory should be replaced by carbon balance, which accounts for gross direct and indirect emissions deducting them by CO₂eq capturing activities, resulting in net emissions from the sector (ISO 14064:2006)⁹⁸.



>> The WTO as a tool to promote sustainable agricultural development

In the light of the projected population growth and the proposed objective of food security, the global system faces a double challenge:

- 1) Producing more food.
- 2) Reducing the environmental impact of the food produced.

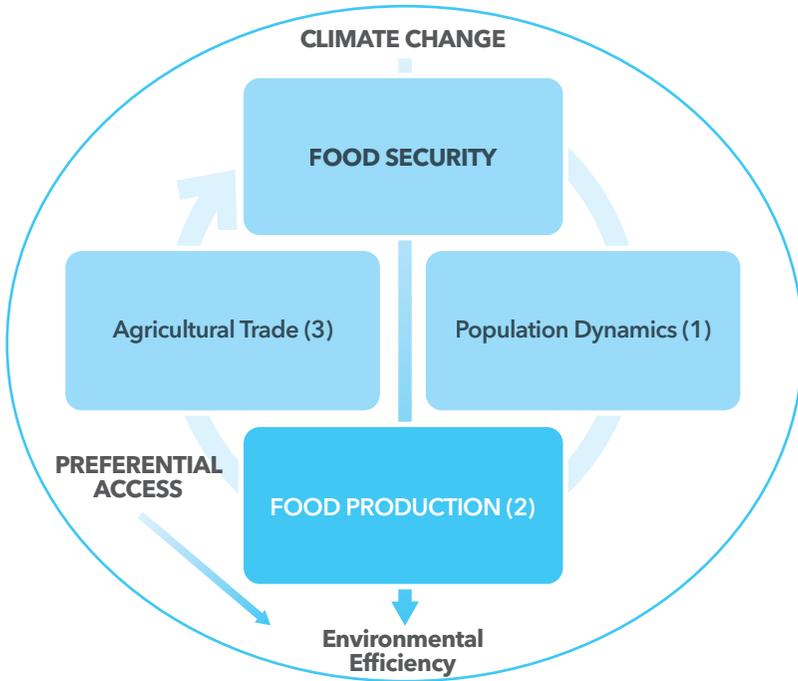
According to a UNDP estimate, the number of people at risk of malnutrition in developing countries by 2050 could be reduced by more than 120 million only by the widespread use of nitrogen-efficient crop varieties, for example. Despite this potential, farmers' adoption of improved practices is still very limited. Currently, there are 180 million hectares worldwide under the conservation agriculture system and although it has grown at an annual rate of 10 million since 2008, it is not a widespread practice today.

⁹⁸ In this reference on carbon balance please see E. Viglizzo (2017).

While there is a unanimous global consensus on the goal of producing more and better food, the market today is not paying the positive externality of conservation agriculture. There is currently no strong economic incentive to generalize and benefit environmentally from efficient agricultural activity on a global scale.

For this reason, there is a need for a guiding principle that is capable of integrating and harmonizing the environmentally efficient practices of millions of growers and that stimulates conservation agriculture, generating benefits for those who adopt them. The objective is to realign and integrate climate, agriculture and food security policies.

In this new perspective, international trade and its multilateral regulatory system are proposed as a tool to promote sustainable agricultural development. Greater openness of international trade, through preferential access for environmentally efficient products, would generate the economic incentive to reconvert current practices towards conservation agriculture on a global scale. Preferential international trade would generate the new environment that pays directly for the positive externality of climate-smart agriculture and indirectly reduce the environmental impact of agriculture by consistently increasing food production to achieve global food security.



a) The relation between climate change and trade in the WTO legal framework

Sustainable development and environmental protection and preservation are fundamental objectives of the WTO, reaffirmed in the Marrakesh Agreement within the concept of general welfare. Although there is no specific agreement dealing with the environment, as an exception, members may adopt commercial measures contrary to the principle of the Most Favored Nation (MFN) and National Treatment (NT), aimed at protecting the environment within the framework of WTO rules. This refers to Art. XX, paragraph B - to protect the health and life of humans and animals or to preserve plants.

In order to avoid covert protectionist purposes, it must first be demonstrated that the measure: protects legitimate public interests, is consistent with the domestic law of the country that establishes it, is effective in its objective, is necessary (for which it must be proven that there is not a less restrictive measure that equally meets the same objective), and there must have been a prior effort to reach the objective through international co-operation. In the second instance, under Article XX, it must be demonstrated that it is not applied in a manner that constitutes *“a means of arbitrary or unjustifiable discrimination between countries in which the same conditions prevail”* and that it is not *“a disguised restriction on international trade”*. Therefore, it is established in the legal framework that the burden of proof as an exception is extremely strict.

In turn, under the **TBT (Technical Barriers to Trade) Agreement**, non-discriminatory technical regulations, standards and conformity assessment procedures are expressly permitted. In the case of technical regulations, which are by their nature mandatory, the agreement states that they must be compatible with *“the protection of the environment”* (Article 2 (2)).

Likewise, in the Doha Mandate (paragraph 31 (iii) of the Ministerial Declaration), members are requested to conduct negotiations to reduce and/or eliminate tariffs and non-tariff measures on environmental goods and services. Accordingly, it assigns tasks to the Committee on Trade and Environment (CTE) in ordinary session. The CTE is open to the participation of all WTO members, and some international organizations have observer status. The work program of the CTE covers a number of relevant issues, from trade and the environment in general, liberalization and barriers to trade, and taxes, to various sectors such as services and intellectual property, and relations with organizations which deal with the environment. In recent discussions it has covered topics such as sustainable development, environmental requirements and access to markets, environmental labeling and testing.

As a result of this process and following the mandate of Doha, in a meeting held in 2014 outside the meeting of the World Economic Forum in Davos, negotiation commenced on an Environmental Goods Agreement (EGA). This open plurilateral agreement (which would come into effect once a certain percentage of global trade in goods by the signatory countries has been reached) would eliminate tariffs on environmental goods that can help meet environmental and climate protection objectives, for instance, through the generation of clean and renewable energy, more efficient use of energy and resources, battling air pollution, waste management, wastewater treatment, monitoring the quality of the environment and the fight against noise pollution.

Regarding the structure and functioning of the agreement, the draft currently considers:

- ▶ The elimination of tariffs would be through an annual tariff reduction schedule to be determined with differential treatment for developing and relatively less developed countries.
- ▶ There is no agreement on the definition of environmental good to date, but it is mainly aimed at facilitating access to technologies that favor environmentally efficient practices within clean development mechanism (CDM) projects.
- ▶ The draft of the current text of the agreement proposes a list of dynamic environmental goods, which can be incorporated over time and/or eliminated goods that become obsolete according to new scientific evidence.
- ▶ There is no consensus on the composition of the list of tariff items involved in the agreement. Taking a hybrid view of all submitted proposals (Australia, Colombia, Hong Kong, Norway and Singapore) to date each member state would have the power to submit its list of environmental goods to be included (national tariff line).

There would be a consensus list (where the submitted lists overlap) for which there would be a multilateral agreement between the parties and a complementary list of unilateral concessions. Additional lists could be included by bilateral negotiation, which would be extended to all members through the MFN principle. To date the lists exchanged include 409 tariff lines to a 6-digit harmonized system, comprising mainly machinery, electronics, metals, mining products, plastic, stones, glass, textiles, transportation, wood and chemicals.

- ▶ Regarding non-tariffs measures, the inclusion of this in the agreement has not advanced much even though it is intended to include customs procedures, standards, technical regulations, conformity procedures, labeling, intellectual property rights and patents.

At the moment there are 46 members, through 18 participants, who are working towards the finalization of this agreement, the benefits of which will be extended to all WTO Members. It means that they will enjoy better conditions in the markets of the participants in the Agreement on Environmental Goods.

This initiative makes it clear that WTO members recognize the need for consistent action by international institutions to address global environmental issues. The ongoing negotiations on the relationship between the WTO and Multilateral Environmental Agreements (MEAs) provide an exceptional opportunity to create positive synergies between trade and environmental programs at an international level.

b) Proposal: A new generalized system of preferences for environmentally efficient agricultural goods (EEAG)

Regarding agricultural and food trade, progress has been made multilaterally and specifically within the framework of the CTE in the descriptive analysis of private and public standards on the subject of sustainability, but there are no proposals for a trade system that makes a positive and significant contribution to curb environmental degradation. It is at this point that there is a proposal to devise a trading system that applies tariff preferences to environmentally efficient agricultural products (EEAG). EEAGs generate multiple profits per se:

1. Increased global agricultural trade through increased market access;
2. Lower food prices at a global level due to lower border tax burden;
3. Increase in food production;
4. Generalization of conservation agriculture and reduction of the environmental impact of agriculture through mitigation actions; and
5. Meeting global food security goals.

In short, the EEAGs respond to two growing uncertainties: food security and environmental security. Analyzing the progress that has been made, the proposal is to start a negotiation to create a generalized preferential system for environmentally efficient agricultural goods (EEAG):

- **Generalized:** without discrimination of origin - non-discriminatory treatment
- **Preferential:** reduction/elimination of import tariffs - schedule to be defined
- **Fixed list of agricultural goods - Tariff chapters included:** goods included in the WTO Agreement on Agriculture Annex I - the definition covers not only basic agricultural products such as wheat, milk and live animals, but also products derived from them, such as bread, butter and meat, as well as all processed agricultural products such as chocolate and sausages. It also includes wines, spirits and tobacco

products, fibers such as cotton, wool and silk, and raw hides of animals intended for the production of leather. Fish and fish products and forest products are not included.

Appendix 1 Agreement on Agriculture: Products Included

i) Chapters 1 to 24 of the HS except for fish and fish products, plus*:		
ii) HS Code	2905.43	(manitol)
HS Code	2905.43	(manitol)
HS Code	2905.44	(sorbitol)
HS consignment	33.01	(essential oils)
HS consignment	35.01 to 35.05	(Alloys, modified starches, glues)
HS Code	3809.10	(Finishing products)
HS Code	3823.60	(sorbitol n.e.p.)
HS consignment	41.01 to 41.03	(leather and furs)
HS consignment	43.01	(raw hides)
HS consignment	50.01 to 50.03	(raw silk and silk waste)
HS consignment	51.01 to 52.03	(wool and hair)
HS consignment	52.01 to 52.03	(Cotton wool, cotton waste and carded or combed cotton)
	53.01	(raw linen)
HS consignment	53.02	(Raw hemp)

- **Environmentally efficient:** carbon balance 0 or negative balance - ISO 14064: 2006 (ISO is a standardization organization recognized by the WTO). They are preferable environmental goods because they are produced in ways that have a lower impact on the environment. It is a broader definition of environmental goods than that considered in the EGA.
- **Consider a non-restrictive non-tariff treatment.** Do not apply additional non-tariff barriers at the border to prevent or limit the entry of these products that will have zero or lower tariffs.

>> Conclusions

International agricultural trade must positively redistribute food production, increasing both: quantity and quality in all regions, and consequently ensuring food security level on a global scale.

On the other hand, the world has entered a new era of action for sustainable development. As human life depends on land and water for sustenance and survival, the process of climate change and the multilateral commitments consequently assumed by the international agreement have imposed on agricultural production a new context: environmental efficiency.

The World Trade Organization (WTO) now has a historic opportunity to respond to the challenges of food security as well as to introduce parameters for improving world trade by advocating for measures in favor of climate change. To this end, food raw materials and food are especially important in this global challenge. The upcoming WTO Ministerial Conference in Buenos Aires could be the historic milestone for promoting a paradigm shift in agricultural negotiations, where the debate on market access that many countries are avoiding is resumed, linking it with the Sustainable Development Goals (SDG) in responding to food security and climate change. The link between these challenges is environmentally efficient agricultural goods (EEAG).

Promoting substantial reductions or elimination of border import duties, as well as the commitment not to establish non-tariff barriers to the EEAG, would produce a prompt response to food security as well as mitigation of the effects of climate change. The Ministerial Conference in Buenos Aires is the place for a historic agreement.

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