



Institutions in the Agriculture Sector

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A. Governing institutions

Governance of the global agriculture sector is shared between an increasing number of institutions from national to international levels. Formally, international agriculture policies and guidelines are set by the United Nations (UN), primarily through the Food and Agriculture Organisation (FAO), and policies relating to trade of agricultural commodities are governed by the World Trade Organization (WTO). The World Bank and larger regional development banks also have a considerable impact on the agriculture sector in developing countries through their financing. Over the past few decades, transnational corporations, large private foundations and civil society organizations have gained influence in agricultural governance as well. In the wake of the 2007-2008 global food crisis, new institutions like the G-8 and the G-20 became involved, and institutions already dealing with agriculture increased their focus on food security, rural development and environmental concerns. The food crisis also increased collaboration among international organizations through mechanisms such as the UN High Level Task Force and Committee on World Food Security.

UN Institutions. The UN has a variety of mechanisms and institutions that take part in governing agriculture globally. Most predominant is the Food and Agriculture Organisation, with the role of conducting and sharing research, advising on policy, developing conventions and guidelines, leading agricultural development programs and acting as a forum for policy-makers to meet.¹ In response to the food crisis in 2007-2008, the FAO negotiated the reform of their Committee on World Food Security (CFS), a multi-stakeholder body for coordination and policy advice on food security issues in the UN system. The reformed CFS includes a mechanism for civil society representation, is placing a relatively high priority on environmental concerns, and is an active participant in UN climate talks, Rio+20 and other key climate policy forums.² An across-the-board High Level Task Force on the Global Food Security Crisis (HLTF) including the heads of UN agencies, the World Bank, the International Monetary Fund, the WTO and the OECD was established as a short-term response in 2009 by the UN Secretary General to create a framework for action and participate in multilateral food security debates. The HLTF's 'Comprehensive Framework for Action' had recommendations on a wide array of topics including emergency responses, structural change to agricultural systems, environmental impacts, gender equality, public and private investment, trade and food reserves.³ While attention to agricultural adaptation and mitigation at Conferences of Parties (COPs) for the UN Framework Convention on Climate Change (UNFCCC) has been increasing since COP-15 in 2009, no formal inclusion of agriculture had been agreed upon as of COP-18 in Doha.⁴

¹ McKeon, N. *Global Governance for World Food Security: A Scorecard Four Years After the Eruption of the "Food Crisis"*. Berlin: Heinrich Böll Stiftung, 2011; *Food and Agriculture Organisation of the United Nations: About FAO*. 2013. Available at: <http://www.fao.org/about/en/> (accessed 2013).

² Wise, T. and Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012.

³ Ibid.

⁴ Beddington, J.R., Asaduzzaman, M., Clark, M.E., et al. "What Next for Agriculture After Durban?" *Science* 335, 2012: 289-290.

The G-20 and G-8. Neither institution has a formal mandate to deal with food security and agriculture, but the G-8 and G-20 have included these topics in their agendas in the wake of the 2007-2008 food crisis. The G-8 has primarily influenced agricultural development by negotiating aid programs like the L'Aquila Initiative, Global Agriculture and Food Security Program and the New Alliance for Food Security and Nutrition but it has also made policy recommendations on food stocks, price volatility and trade. The G-20 has no formal institutional structure and thus has less accountability than the G-8 or other international institutions.⁵ For example, the 2011 'Action Plan' for agriculture went forward despite criticisms from many non G-20 institutions. The G-20 has also issued policy mandates to other institutions on climate finance and agricultural aid that have conflicted with UN work on these topics.⁶ Although the G-20 has recognized the FAO's CFS as the leader in global food security governance, critics have argued that the G-20's new involvement in agriculture governance have hindered UN efforts while failing to bring about any concrete reforms.⁷

Outside of their influence through distributing concessional loans and grants (e.g. ODA), **Multilateral Development Banks (MDBs)** primarily influence the agricultural sector by setting conditionalities and objectives relating to government spending and agriculture projects. However, there has been a general trend towards reducing the level of conditionality while making design and objectives of financing more country-specific and country-owned. The World Bank Group, in particular, has a degree of indirect power through loan conditions relating to government spending, although the conditionality and thus the influence of these loans has decreased markedly since the 1980s and 1990s.⁸ The provision of environmental issues, such as specific safeguards, is increasingly important for MDB financing.⁹ Similarly, Regional Development Banks, such as the African Development Bank, the Asian Development Bank and the Inter-American Development Bank influence the sector through their distribution of loans.

The **World Trade Organization** regulates international trade in agricultural products through the 1995 Agreement on Agriculture,¹⁰ committing members to limit domestic support to agriculture identified as trade-distorting to 5% of agricultural GDP for developed countries and 10% for developing countries. It also has a set of maximum tariffs for imports of all agricultural products for each WTO member state, commitments for members to reduce their average tariffs on agricultural imports, and limits the use of export subsidies to specific situations. The WTO's current round of negotiations to update their trade agreements started in 2001 but have been stalled repeatedly primarily due to agricultural issues, thus changes to the regulations governing agricultural trade in the future are uncertain.¹¹ However, it is important to note that Article XX of the WTO's General Agreement on Tariffs and Trade provides exemptions from multilateral trade

⁵ McKeon, N. *Global Governance for World Food Security: A Scorecard Four Years After the Eruption of the "Food Crisis"*. Berlin: Heinrich Boll Stiftung, 2011.

⁶ Wise, T. and Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012.

⁷ Ibid; McKeon, N. *Global Governance for World Food Security: A Scorecard Four Years After the Eruption of the "Food Crisis"*. Berlin: Heinrich Boll Stiftung, 2011.

⁸ McKeon, N. *Global Governance for World Food Security: A Scorecard Four Years After the Eruption of the "Food Crisis"*. Berlin: Heinrich Boll Stiftung, 2011; Schenggen, F. and Rao, N. *Public Spending in Developing Countries: Trends, Determination, and Impact*. Environment and Production Technology Division, International Food Policy Research Institute, 2003.

⁹ Lipper, L. and Conrad, B. "Module 14 Financing Climate-Smart Agriculture." In: *FAO 2013. Climate-Smart Agriculture Sourcebook*. Rome: Food and Agriculture Organisation of the United Nations, 2013.

¹⁰ World Trade Organization. *Agriculture: World Trade Organization Agreements Series 3*. World Trade Organization, 2003.

¹¹ Wise, T. and Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012; McKeon, N. *Global Governance for World Food Security: A Scorecard Four Years After the Eruption of the "Food Crisis"*. Berlin: Heinrich Boll Stiftung, 2011.



rules in cases where it is necessary for a country to pursue its environmental objectives, and this would likely allow for most kinds of international climate change policies affecting agricultural trade that could be introduced in the future.¹² High levels of agricultural subsidies can distort trade by simulating over-production and limiting imports of certain commodities, decreasing demand for agricultural products from countries with lower subsidies.¹³ Different types of subsidies can also contribute to or help prevent environmental degradation by altering patterns of land and resources use. In keeping with recommendations and regulations from the WTO and other international organizations, OECD countries have generally reduced subsidies that are linked to trade distortion, replacing them with those that are considered to be trade neutral, which have constraints to inputs and that are not based on output.¹⁴

Civil society organizations (CSOs) have recently played a larger role in governance of agriculture at the global scale with increased local, regional and international coordination and inclusion in UN entities¹⁵ as well as in partnering with private initiatives for corporate social responsibility and sustainability. For example, pressure from CSO alliances is largely credited in the inclusion of nutrition issues on the UN HLTF's Common Framework for Action and they have played a large role in ensuring the transparency and accountability of the international institutions controlling agricultural policy.¹⁶ While previous consultation was on an ad-hoc basis, the reformation of the Committee on World Food Security now includes CSOs on its advisory group. As a result of the growing strength of CSOs the needs of small-scale farmers and women, environmental issues, and the weaknesses of international markets in ensuring food security are getting more attention in global agriculture policy.¹⁷

Private foundations are increasing their role in agricultural governance as well, with the Bill and Melinda Gates Foundation as the most notable example. Outside of the Gates Foundation's influence from its sizeable contributions to agriculture and rural development, it has also acted in an advisory capacity to the G-20 on agriculture policy.¹⁸ The Rockefeller Foundation has also played a leading role in the green revolution, especially in the 1960s and 70s, co-founding permanent agriculture research facilities with the Ford Foundation in a variety of developing countries, disseminating the technologies they developed, and helping to establish the Consultative Group on International Agricultural Research (an alliance that links agriculture research centers to grant-making organizations). Today, the Rockefeller Foundation's largest agriculture program is the Alliance for a Green Revolution in Africa that was co-founded by the Gates Foundation. The Ford Foundation referenced above is another private grant-making foundation, with stated goals to "strengthen democratic values, reduce poverty and injustice, promote international cooperation and advance human achievement."¹⁹

¹² Meridian Institute. *Agriculture and Climate Change: A Scoping Report*. Meridian Institute, 2011.

¹³ International Centre for Trade and Sustainable Development (ICTSD). *Information Note: Tackling Perverse Subsidies in Agriculture, Fisheries and Energy*. Geneva Switzerland: International Centre for Trade and Sustainable Development, 2012.

¹⁴ Organisation for Economic Cooperation and Development (OECD). *Agricultural Policy Monitoring and Evaluation 2012: OECD Countries*. Paris: Organisation for Economic Cooperation and Development, 2012.

¹⁵ Wise, T. and Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012.

¹⁶ Carrasco, E.R., Carrington, W., and Lee, H.J. "Governance and Accountability: The Regional Development Banks." *Boston University International Law Journal* 27, 2009: 1; Wise, T. and Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012.

¹⁷ Wise, T. and Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012.

¹⁸ Ibid.

¹⁹ Ford Foundation. 2013. Available at: <http://www.fordfoundation.org/about-us/mission> (accessed 2013).

B. Donors

Donor/ Initiative	Share of agricultural assistance	Focus	Mitigation	Notes
Bilateral Donors				
United States	4.9%	Sub-Saharan Africa and Asia, 19 focus countries	Focus area 'Climate-smart development' but focus on adaptation	Significant increase in funding with "Feed the Future" Program
Japan	3.6%	Strong focus on Asia, 72 eligible countries	Focus on adaptation	Established a dedicated climate change fund, currently not covering mitigation
France	3.9%	Sub-Saharan Africa and Asia, 55 focus countries	Included as a an 'emerging sector to target' in their 2012 climate change strategy	Agricultural funding focuses on research (more than half of spending)
Multilateral Donors				
International Development Association	7.1%	Sub-Saharan Africa, South East Asia	Target for higher lending share in 2013-15	
European Commission	4.5%	Sub-Saharan Africa, Europe	Included as a priority	Funding mostly channeled through UN organizations
International Fund for Agricultural Development	63.4%	Sub-Saharan Africa and Asia, 97 lowest income countries eligible	Climate change strategy, incl. linking farmers to climate finance for mitigation and scaling up 'multiple benefit'	
African Development Fund	14.4%	40 lowest income countries in Africa	Priority	Strong focus on country-specific activities and country ownership
Philanthropy				
Bill and Melinda Gates Foundation	14.2%	Sub-Saharan Africa, South Asia	Focus on adaptation (via improved crop varieties, agronomic practices), mitigation so far not included	'Alliance for Green Revolution' cofounded with Rockefeller Foundation, largest agricultural program focused on food security in Africa

Table 1: Major donors to agricultural development and their contribution to climate change mitigation.²⁰

²⁰ Organisation for Economic Cooperation and Development: *Creditor Reporting System*. 2013. Available at: <http://stats.oecd.org/Index.aspx?QueryId=33364> (accessed May 2013); United States Agency for International Development: *Who We Are*. 2013. Available at: <http://www.usaid.gov/who-we-are>; Wise, T. & Murphy, S. *Resolving the Food Crisis – Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute and Institute for Agriculture and Trade Policy, 2012; Japan International Cooperation Agency: *About JICA*. 2013. Available at: <http://www.jica.go.jp/english/about.index.html>; Japan International Cooperation Agency: *Agricultural and Rural Development*. 2013. Available at: http://www.jica.go.jp/english/our_work/thematic_issues/agricultural/activity.html; DonorTracker: *Financing and Policy Making for Global Development in France*. 2013. Available at: <http://www.donortracker.org/sites/default/files/SEEK%20Donor%20Profile%20France%20EN%20April%202013.pdf>; Agence Francaise de Developpement (AFD): *AFD and Climate Change*. 2012. Available at: <http://www.afd.fr/webdav/shared/PORTAILS/PUBLICATIONS/PLAQUETTES/AFD-climate-change.pdf>; International Development Association (IDA): *What is IDA?* 2013. Available at:

C. Private organizations and voluntary initiatives

The food system has increasingly moved towards an industrialized model with a small number of large agricultural and agro-industrial corporations along the value chain with significant influence and power in the global agriculture sector due to their market shares (see Figure 2 for an approximate categorization of companies).

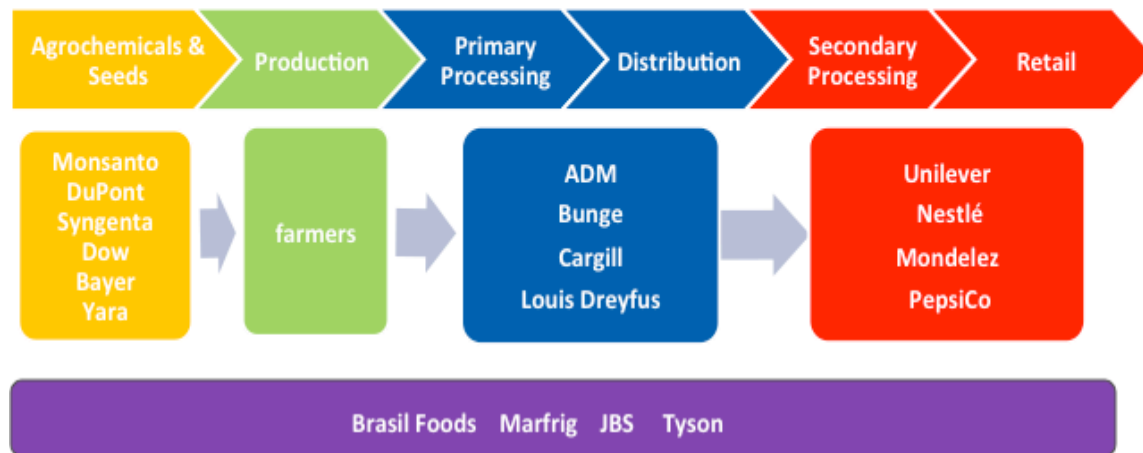


Figure 2: Value chain categorization of transnational corporations in agriculture. Note that this categorization is only approximate and only covers some examples of corporations.²¹

Many agriculture and food companies are developing private standards and corporate social responsibility initiatives, which create market pressure to change agricultural land-use and practices, often in cooperation with environmental or social NGOs.²² Examples for corporate initiatives range from sustainability reports and strategies to quantifiable commitments for sustainable sourcing, supply chain tracking, improved carbon footprints or compensatory measures (e.g. biodiversity and reforestation programs near palm oil plantations). In its 'Sustainable Living Plan', Unilever, for instance, has committed to source 100% of their top 10 agriculture raw materials sustainably by 2020 and has to date reached more than one third of this target. They have adopted a Sustainable Agriculture Code accompanied by implementation

<http://www.worldbank.org/ida/what-is-ida.html>; The World Bank. *World Bank Group: Agriculture Action Plan 2013-2015*. Washington, D.C.: The World Bank. *World Bank Group: Agriculture Action Plan 2013-2015*. Washington, D.C.: The World Bank, 2013.; International Fund for Agricultural Development (IFAD). *IFAD at a Glance*. Rome: International Fund for Agricultural Development, 2013; International Fund for Agricultural Development. *Climate Change Strategy*. Rome: International Fund for Agricultural Development, 2010; African Development Bank (AfDB). *AfDB in Brief*. Tunis-Belvedere: African Development Bank External Relations and Communication Unit, 2013; *African Development Bank: Agriculture and Agro-industries*. 2014. Available at: <http://www.afdb.org/en/topics-and-sectors/sectors/agriculture-agro-industries/> (accessed 2013-14); *Gates Foundation What We Do: Agricultural Development Strategy Overview*. 2014. Available at: <http://www.gatesfoundation.org/What-We-Do/Global-Development/Agricultural-Development> (accessed 2013-14); *Gates Foundation Who We Are: Foundation Fact Sheet*. 2014. Available at: <http://www.gatesfoundation.org/Who-We-Are/General-Information/Foundation-Factsheet> (accessed 2013-14).

²¹ Source: Authors.

²² Fuchs, D. Kalfagianni, A. and Hayinga, T. "Actors in private food governance: the legitimacy of retail standards and multi-stakeholder initiatives with civil society participation." *Agriculture and Human Values* 28(3), 2011: 353-367.

guides.²³ Another example was in 2007 when Cargill, with pressure from Greenpeace, helped coordinate a 2-year moratorium on purchase of soymeal from newly deforested areas in Brazil between some large grain traders.²⁴ Initiatives have been largely aimed at addressing deforestation and biodiversity loss, but there have been efforts to address direct agricultural emissions as well, for example with the use of low-carbon fertilizers or soil conservation methods. For instance, the fertilizer producer Yara offers a carbon footprint guarantee for fertilizers produced with low greenhouse gas emissions.²⁵

Partnering with environmental organizations and civil society, the industry has established various international, multi-stakeholder initiatives and platforms to promote corporate social responsibility and sustainability (see Table 2). Notably, industry has played an important role in establishing several commodity roundtables, which are private, multi-stakeholder initiatives aiming to improve the sustainability of specific commodity supply chains. The Roundtable for Sustainable Palm Oil (RSPO) is the most advanced and has achieved wide participation of multiple stakeholders and significant market shares. It provides a platform for sustainability principles, standards and certification, with the objective to function as a trademark. With respect to mitigation, roundtables are mostly focused on land use change and energy-related emissions.²⁶ Many other private sustainability certifications for agricultural commodities exist, though not formally called roundtables, such as Rainforest Alliance or UTZ, which are not multi-stakeholder and were developed solely by NGOs.²⁷

The pragmatic approach of voluntary, multi-stakeholder initiatives such as the commodity roundtables is both their strength and limiting factor. It allows certifications to be developed and gain market share much more quickly than government regulation or NGO-only initiatives. However, they have been criticized for not setting stringent enough criteria to truly avoid environmental damage.²⁸ The RSPO standard, for instance, has been described as a minimum requirement rather than an eco-label,²⁹ because no agreement could be reached on critical aspects such as a clear restriction of deforestation. In some cases, roundtables are encountering limits to voluntary certification and are seeking collaboration with governments to improve their capacity.³⁰ For example, roundtables have been largely unsuccessful in trying to prevent land-use change emissions as they are only able to oversee the behavior of certified members and not the industry as a whole, resulting in land they do not clear for farming merely being cleared by other producers.³¹ Another major factor for the success of voluntary certification efforts is their dependence on consumers; the demand for certified products and their willingness to pay a price

²³ Unilever: *Sustainable Living. Targets and Performance*. 2013. Available at: <http://unilever.com/sustainable-living/betterlivelihoods/targets/index.aspx>.

²⁴ Koneswaran, G. and Neirenberg, D. "Global Farm Animal Production and Global Warming: Impacting and Mitigating Climate Change." *Environmental Health Perspectives* 116(5), 2008: 578-582.

²⁵ Yara International: *Food and Climate*. 2013. Available at: http://www.yara.com/sustainability/commitment_and_policy/sustainable_agriculture/food_and_climate/index.aspx.

²⁶ Schouten, G., Leroy, P. and Glasbergen, P. "On the deliberative capacity of private multi-stakeholder governance: The Roundtables on responsible soy and sustainable palm oil." *Sustainability in Global Product Chains* 83, 2012: 42-50.

²⁷ Ibid.

²⁸ Ibid.

²⁹ World Wildlife Fund Germany. *RSPO – Kein Ökolabel sondern Mindestanforderung*. World Wildlife Fund Germany, 2013.

³⁰ Schouten, G., Leroy, P. and Glasbergen, P. "On the deliberative capacity of private multi-stakeholder governance: The Roundtables on responsible soy and sustainable palm oil." *Sustainability in Global Product Chains* 83, 2012: 42-50.

³¹ Colchester, M., Jalong, T. and Chuo, W.M. *Conflict or Consent? The Palm Oil Sector at a Crossroads*. Forest Peoples Program, 2009.



premium.³² Voluntary sustainable certification initiatives for commodities that are prominent in the final consumer product and that have relatively condensed supply chains have generally been more successful in gaining a significant market share.³³

Initiative	Description	Members
Sustainable Agriculture Initiative Platform	Global food industry organization that facilitates sharing of knowledge and initiatives to support the development and implementation of sustainable agriculture practices at the precompetitive level; Provides many resources addressing various aspects of sustainability, e.g. principles, practices, benchmarking of standards, practical tools for the farm level (e.g. self-assessment tool), sustainability performance assessment tool, commodity specific working groups; In December 2013, the Sustainable Agriculture Initiative published voluntary principles for sustainable beef farming (see Table 3).	50 member from global food industry, created by Nestlé, Unilever and Danone.
Roundtable on Sustainable Soy	Private multi-sector partnership between soy producers, users, investors and environmental NGOs established in 2005 to develop globally applicable criteria for responsible soy. Has recently launched a responsible soy credit trading platform.	150 members including producers, industry, trade, finance, and civil society entities. Members include much of the Brazilian soy lobby, Bayer, Bunge, Cargill, Carrefour, Monsanto, Rabobank, Shell, Syngenta, Waitrose, Marks & Spencer, the Nature Conservancy and WWF
Global Roundtable for Sustainable Beef	Multi-stakeholder partnership aiming to improve the sustainability of the global beef value chain through leadership, science and multi-stakeholder engagement and collaboration. No certification currently in place or under development.	24 members, including national producer organizations, environmental organizations (such as WWF, Rainforest Alliance), agricultural science and technology companies, restaurant and fast food chains, big beef processors, and national roundtables
Roundtable on Sustainable Biomaterials	International initiative that brings together farmers, companies, non-governmental organizations, experts, governments and inter-governmental agencies concerned with ensuring the sustainability of biomaterials production and processing. Participation in the Roundtable on Sustainable Biomaterials is open to any organization working in a field relevant to biomaterials sustainability.	Roundtable on Sustainable Biomaterials members are divided into seven chambers: 1) farmers and growers of biomass; 2) industrial biofuel/biomaterial producers; 3) retailers/blenders, transportation industry, bio-product industry, banks/investors; 4) rights-based NGOs and trade unions; 5) rural development or food security organizations and smallholder farmer organizations or indigenous peoples' organizations or community-based civil society organizations; 6) environment or conservation organizations and climate change or policy organization; and 7) intergovernmental organizations, governments, standard-setters, specialist advisory agencies, certification agencies, and consultant experts.

³² Ibid.

³³ Ibid.

Roundtable on Sustainable Palm Oil	Private multi-sector partnership established in 2004 to develop globally applicable criteria for responsible palm oil.	More than 1000 members from 50 countries including large and smallholder producers, processors, retailers, investors and social/environmental NGOs; some of the huge food retail companies, as well as Germany, UK, Netherlands, France and Belgium who have committed to 100% RSPO certified palm oil (e.g. Carrefour, Unilever, Walmart, Nestle, Johnson & Johnson, P&G, Migros, WWF, Unilever, Kraft Foods, Rabobank, HSCB, Oxfam)
Consumer Goods Forum	Global industry network for knowledge exchange and initiatives on non-competitive matters, with primary focus on emerging trends, sustainability, safety & health, operation excellence and knowledge sharing & people development in any consumer goods industry	400 retailers, manufacturers, service providers and other stakeholders
World Economic Forum	Foundation that aims to engage business, political, academic and other society leaders to shape global, regional and industry agendas. Their Agriculture & Food Security section has an agriculture plan that aims to make country-level partnerships, notably the forum coordinated with the African Union's New Partnership for Africa's Development to start Grow Africa, a private investment initiative for sustainable agriculture development in 7 African countries.	Agriculture & Food Security Section led by 29 global partner companies of the WEF, including Bayer, Bunge, Cargill, Dupont, General Mills, Monsanto, Nestle, PepsiCo, Rabobank, Syngenta, Coca-Cola, Unilever, Yara International
Carbon Disclosure Project	Organization that works with shareholders and corporations disclose their greenhouse gas emissions; currently piloting reporting methods for companies to include emissions from agricultural primary production	772 investor signatories, 65 members who will disclose supply chain emissions in 2013 (Marfrig, Nestle, PepsiCo, Coca-Cola, Unilever, Walmart are some main food related members), 4100 companies responded to their annual climate change questionnaire in 2012

Table 2: Examples for private initiatives around sustainable production in the agricultural sector.³⁴

³⁴ Sustainable Agriculture Initiative Platform 2013; *Roundtable on Responsible Soy: What is RTRS?* 2013. Available at: http://www.responsiblesoy.org/index.php?option=com_content&view=article&id=6&Itemid=9&lang=en; *Roundtable on Sustainable Palm Oil: History*. 2013. Available at: <http://www.rspo.org/en/history>; *Consumer Goods Forum: Sustainability Pillar*. 2013. Available at: <http://www.theconsumergoodsforum.com/sustainability.aspx>; *World Economic Forum: History*. 2013. Available at: <http://www.weforum.org/history>; *Carbon Disclosure Project: Supply Chain Program*. 2013. Available at: <https://www.cdproject.net/en-US/Programmes/Pages/CDP-Supply-Chain.aspx>.



ITEM	PRINCIPLES
Soil	Good biological and physical soil health is maintained both in the short as well as the long term; soil erosion, compaction, nutrient depletion and contamination with harmful physical, chemical, biological or radiological substances are prevented whilst good soil biodiversity, fertility and structure are maintained.
Grasslands	Grasslands and pastures should be managed to avoid over-grazing and limit damage caused by grazing cattle. Areas of permanent pasture / grassland should be protected and maintained in a productive state.
Climate Change	Efforts are made to continually reduce the direct and indirect greenhouse gas emissions per unit of output that arise from the beef enterprise.
Land Use	Site selection and expansion is not at the expense of areas designated as High Conservation Value Land, areas of outstanding and critical importance due to their environmental, socio-economic, biodiversity or landscape values, incl. forested areas that play a role in controlling climate change through photosynthesis and carbon storage.

Table 3: Sustainable Agriculture Initiative (SAI) Voluntary Principles for Sustainable Beef Farming relevant for climate change mitigation.³⁵

³⁵ Sustainable Agriculture Platform Beef Working Group. *Principles for Sustainable Beef Farming*. 2013. Available at: <http://www.saipatform.org/uploads/Modules/Library/sai-platform-principles-for-sustainable-beef-farming-final.pdf>.