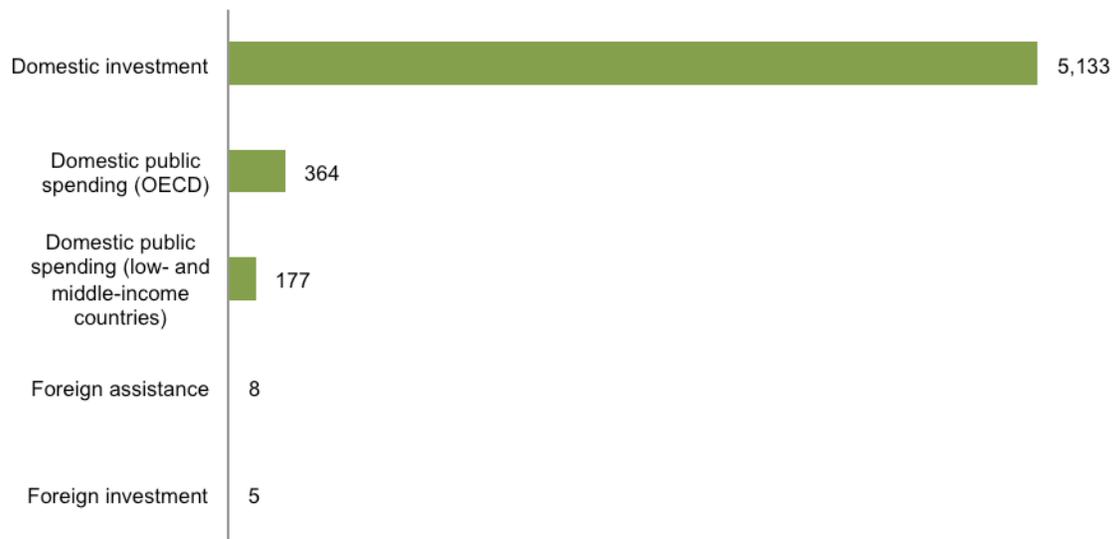




# Finance in the Agriculture Sector

**Authors:** Franziska Haupt, Bronwen Tucker, Lauren Stanley

Of all finance in the global agriculture sector, farmers themselves are by far the largest source of funding. Based on a rough comparison of available data, on-farm investment is estimated at USD 5trillion, compared to public spending in the order of several hundred billion, and foreign investment and development assistance in the order of several billion (see Figure 1). Total public agriculture expenditure is much higher in Organisation for Economic Co-operation and Development (OECD) member countries than developing ones, and within the OECD it is overwhelmingly concentrated in the United States (US) and the European Union (EU). Foreign investment in the agriculture sector accounts for several billion USD, but there is limited data as well as large gaps and inconsistencies. Therefore, estimates on investment expenditures in the agriculture sector vary significantly depending on the data source and few conclusions on trends and direction of flows can be made. The financial contribution in the form of foreign assistance in the agriculture sector is small compared to domestic investment or the revenues of large private corporations. However, following a long-term decline, agricultural assistance has been increasing as a consequence of the food crisis of 2007/08 and the resulting attention to agricultural development and food security. Assistance for agriculture predominantly originates from a few key donors and is mainly focused on Sub-Saharan Africa and South East Asia, with Africa receiving approximately half of total assistance.



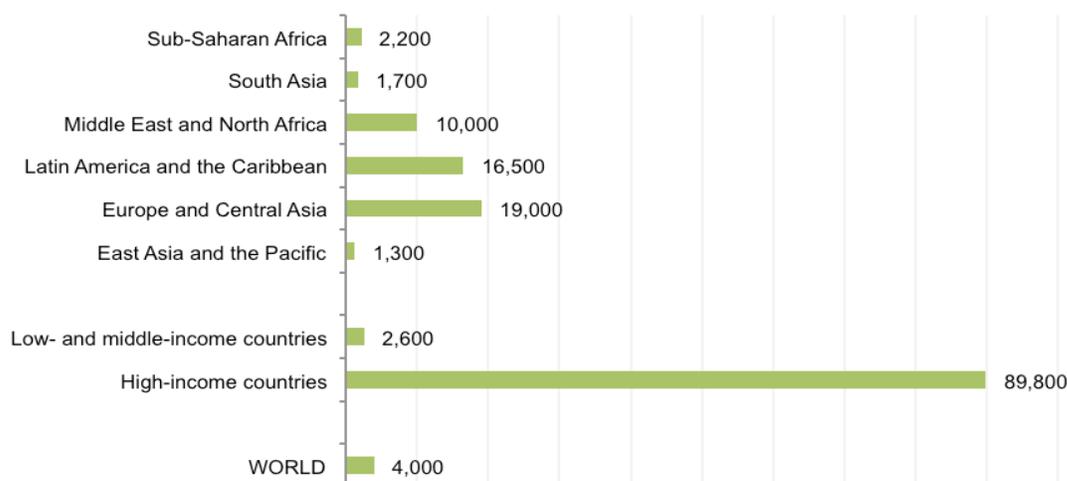
**Figure 1:** Global financial flows in the agriculture sector in billion USD.<sup>1</sup>

<sup>1</sup> Rough comparison based on latest available data: Domestic investment: 2007; Domestic public spending: 2011 for OECD and 2007 for low- and middle-income countries; Foreign assistance: 2011; Foreign investment: 2008. Sources: See text below.

## A. Domestic investment

The Food and Agriculture Organisation (FAO) of the United Nations<sup>2</sup> considers on-farm agricultural capital stock (i.e. the value of producers' fixed assets) the "most comprehensive data available" for estimating domestic private investment. FAO's database (FAOSTAT) includes only physical assets such as land development, livestock, machinery and equipment, plantations crops (e.g. trees, vines) and livestock structures. In 2007, on-farm agricultural capital stock amounted to more than USD 5,133billion, following a steady increase of about 20% since 1975.<sup>3</sup> This long-term trend has been largely influenced by economic and political conditions incentivizing investment. FAO expects the recent spike in commodity prices to have fuelled increased investments in capital stocks. The composition of capital stock differs for different income groups, e.g., high income countries hold the major share of capital stocks in machinery and equipment, while upper middle income countries hold most capital in livestock assets and for low-income countries capital is concentrated in livestock assets and land development.

Considering capital stock per worker, an important predictor of agricultural GDP, illustrates the large discrepancy of investment between low-income countries and high-income countries. Figure 2 compares capital stock per worker by region. At close to USD 90thousand (constant 2005 prices), average capital stock per worker in high-income countries is about 34 times higher than in low- and middle income countries, and 22 times higher than the global average. Low-income countries are generally characterized by low investment rates and a growing labor force, causing a decline in labor productivity and farm incomes.<sup>4</sup>



**Figure 2:** Average agricultural capital stock per worker 2005-2007, in constant 2005 USD.<sup>5</sup>

<sup>2</sup> Food and Agriculture Organisation of the United Nations. *The State of Food and Agriculture 2012 - Investing in Agriculture for a better Future*. Rome: Food and Agriculture Organisation of the United Nations, 2012.

<sup>3</sup> Food and Agriculture Organisation of the United Nations FAOSTAT. Available at: <http://faostat3.fao.org/home/index.html> (accessed 2013).

<sup>4</sup> Food and Agriculture Organisation of the United Nations. *The State of Food and Agriculture 2012 - Investing in Agriculture for a better Future*. Rome: Food and Agriculture Organisation of the United Nations, 2012.

<sup>5</sup> Ibid.

## B. Domestic public spending

Total public agriculture expenditure is much higher in OECD countries than developing ones, and within the OECD it is overwhelmingly concentrated in the US and the EU. For 2011, the OECD estimated the total support to agriculture in developed countries at USD 364 billion, with 69% of it as direct support for producers and 31% for general, whole-sector support.<sup>6</sup> With the exception of a few large emerging countries, in particular China, which is thought to have surpassed the EU and the US in total spending as of 2011, most developing countries have extremely low levels of government subsidies. In particular those in sub-Saharan Africa have less than a third of the average per worker public agriculture spending than the average for low- and middle- income countries.<sup>7</sup> In the last thirty years agriculture has been declining as a share of government expenditure in all regions but south Asia.<sup>8</sup> The International Food Policy Research Institute estimates public spending for low- and middle-income countries at USD 177 billion in 2007.<sup>9</sup>

High levels of agriculture subsidies can distort trade by stimulating over-production and limiting imports of certain commodities, decreasing demand for agricultural products from countries with lower subsidies.<sup>10</sup> Different types of subsidies can also contribute to or help prevent environmental degradation by altering patterns of land and resource use. For example, subsidies based on output level or those that reduce the price of inputs can create incentives for overuse of inputs like fertilizer and irrigation water.<sup>11</sup> In keeping with recommendations and regulations from the World Trade Organisation (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.<sup>12</sup> However the World Bank and the International Centre for Trade and Sustainable Development (ICTSD) amongst others have argued that some of these trade-neutral producer subsidies can still distort trade and have negative environmental impacts by increasing the likelihood of overproduction.<sup>13</sup> Table 1 presents a summary of agricultural spending and its composition for the EU, the US, and several emerging countries.

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<sup>6</sup> Organisation for Economic Cooperation and Development. *Producer and Consumer Support Estimates. Agricultural Policy Indicators STATExtracts*. 2013. Available at: <http://stats.oecd.org/index.aspx> (Accessed 2013).

<sup>7</sup> Ibid.; Food and Agriculture Organisation of the United Nations. *The State of Food and Agriculture 2012 - Investing in Agriculture for a better Future*. Rome: Food and Agriculture Organisation of the United Nations, 2012.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> International Centre for Trade and Sustainable Development. *Information Note: Tackling Perverse Subsidies in Agriculture, Fisheries and Energy*. Geneva: International Centre for Trade and Sustainable Development, 2012; International Centre for Trade and Sustainable Development. *Information Note Number 16: Agricultural Subsidies in the WTO Green Box: Ensuring Coherence with Sustainable Development Goals*. Cambridge: Cambridge University Press, 2009.

<sup>11</sup> International Centre for Trade and Sustainable Development. *Information Note: Tackling Perverse Subsidies in Agriculture, Fisheries and Energy*. Geneva: International Centre for Trade and Sustainable Development, 2012.

<sup>12</sup> Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2012: OECD Countries*. Paris: Organisation for Economic Cooperation and Development Publishing, 2012.

<sup>13</sup> The World Bank. *Leveling the Playing Field in International Agricultural Trade, Agriculture for Development Policy Brief 41393*. Washington, D.C.: The World Bank, 2012; International Centre for Trade and Sustainable Development. *Information Note: Tackling Perverse Subsidies in Agriculture, Fisheries and Energy*. Geneva: International Centre for Trade and Sustainable Development, 2012.

Country/ Group	Total (Billion USD)	Year	Main composition of spending (Billion USD)		Trade distortion
EU	102	2009- 2010	Decoupled income support for farmers	40	Trade-distorting support has been cut in favor of more neutral policies.
			Decoupled income support for disadvantaged farmers and regions	11.5	
			Direct subsidies	18	
			General services	9	
			Environmental programs	7.5	
			Investment aids	6	
USA	130	2010	Food aid	95	Trade-distorting support has been cut in favor of more neutral policies.
			General services	15	
			Crop insurance	5	
			Direct subsidies	10	
			Decoupled income support	~2.5	
			Environmental programs	~2.5	
China	85 (172)*	2008 (2010)	General services	>50%	Reported no use of WTO clause for low-income and resource-poor producers, but OECD notes continuing input support
			<i>of which: infrastructure</i>	18	
			<i>operating of agencies</i>	24	
			Public stockholding (wheat, rice)	8	
			Environmental programmed	10	
India	49	2010- 2011	Inputs (fertilizer, electricity, irrigation, credit)	21	High but within WTO limits, due to clause for low-income and resource-poor producers
			Support for specific crops	18	
			Food subsidies for staple crops	14	
			General services	2.3	
Brazil	10	2009- 2010	<i>of which: Extension</i>	0.8	Within WTO limits, due to clause for low-income and resource-poor producers (mostly support for cotton)
			Food aid	1.7	
			Stockholding	0.7	
			Low income support	1.7	
			Market price support, inputs, or linked to output level	3.5	

**Table 1:** Summary of agricultural spending and composition in billion USD.<sup>14</sup>

Public agricultural spending is standardized across the **European Union** under the Common Agricultural Policy (CAP), which was reformed in November 2013.<sup>15</sup> A key feature of the Commission's proposals for changes to the CAP was to strengthen the linkage between direct payments to farmers and environmental performance. This is referred to as the "greening" of the

<sup>14</sup> Source: WTO notification analysis; EU: "Trade-distorting Farm Payments Fall to New Low, EU says." *Bridges Weekly Trade News Digest*. Available at: <http://ictsd.org/i/news/bridgesweekly/150915/>; US: "Farm Bill Support Still Low, Despite Record Food Stamp Payments." *Bridges Weekly Trade News Digest*. Available at: <http://ictsd.org/i/news/bridgesweekly/146491/>; China: International Centre for Trade and Sustainable Development. *Agricultural Subsidies in the WTO Green Box: Ensuring Coherence with Sustainable Development Goals. Information Note Number 16*. Geneva: International Centre for Trade and Sustainable Development, 2009 \*estimated by Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2011: OECD Countries and Emerging Economies*. Paris: Organisation for Economic Cooperation and Development Publishing, 2011; India: estimated based on Hoda, A. & Gulati, A. India's Agricultural Trade Policy and Sustainable Development. *ICTSD Programme on Agricultural Trade and Sustainable Development*. Geneva: International Centre for Trade and Sustainable Development, 2013; Brazil: "Brasilia: Farm Subsidy Growth Not Distorting Trade." *Bridges Weekly Trade News Digest*. 2013.

<sup>15</sup> Ibid.

CAP. Such potentially positive aspects of greening include the promotion of crop diversification, the maintenance of permanent grassland, the creation of ecological focus areas devoted to environmental purposes on farms, and the application of penalties for non-compliance with environmental requirements. What has emerged as a result of deliberations in the Council, and more particularly in the Parliament, is a dilution of greening. A few changes are positive, such as a likely ban on plowing in Natura 2000 areas (nature protection areas established under the 1992 Habitats Directive). But overall, in comparison to the original Commission proposals, the environmental focus under Pillar I has been diluted substantially through exemptions and other changes.

In the **United States**, public spending on agriculture is regulated by the Food Conservation and Energy Act 2008-2012, commonly known as the Farm Bill. Measures for environmental protection are mostly included under the Conservation Title of the Farm Bill. While land retirement towards conservation uses has been the largest environmental aspect of the US farm policy in the past, recently environmental protection of agricultural lands themselves is also becoming a larger priority and is done through incentives for producers to adopt practices that reduce environmental problems. Prior to 2010, subsidies for biofuel crops were greatly increased, but were already being scaled back as of 2011.<sup>16</sup> On February 7, 2014 President Obama signed the Agriculture Act of 2014 into law, replacing the Food Conservation and Energy Act 2008-2012 which had been extended through September 2013.<sup>17</sup> Most notably, the Agriculture Act of 2014 eliminates direct payment subsidies to farmers, which amounted to approximately USD5 billion a year paid to farmers whether or not crops were grown.<sup>18</sup> Money was reallocated to programs such as government-subsidized crop insurance, which covers losses from poor yields or declines in revenue.<sup>19</sup>

**China** has had a long term trend of growth in agricultural subsidies, largely in support of their aim to reach 95% self-sufficiency in grains by 2020.<sup>20</sup> The OECD estimates the 2010 agricultural subsidies at about USD 172billion, more than double 2008 levels, which would put it above the EU and the US in terms of absolute public spending on agriculture.<sup>21</sup> While input subsidies that can create incentives to overuse resources and increase the rate of land degradation continue, China has some subsidies with environmental goals, such as payments for returning farmland to forest in fragile areas.<sup>22</sup> In 2008 these environmentally-minded programs were around USD 10billion, but due to uncertainty in grain security they are believed to have declined in favor of extensification.<sup>23</sup>

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<sup>16</sup> Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2012: OECD Countries*. Paris: Organisation for Economic Cooperation and Development Publishing, 2012.

<sup>17</sup> Nixon, R. "Congress Set to Begin Work on Farm Bill." *The New York Times*. 7 May 2013. Available at: <http://thecaucus.blogs.nytimes.com/2013/05/07/congress-set-to-begin-work-on-farm-bill/?ref=farmbillus>; Bureau, J.C., Laborde, D. and Orden, D. *US and EU Farm Policies: The Subsidy Habit. Chapter 6: Global Food Policy Report*. Washington, D.C.: International Food Policy Research Institute, 2012.

<sup>18</sup> Nixon, R. "In Signing Farm Bill, Obama Extols Rural Growth." *The New York Times*. 7 February 2014. Available at: [http://www.nytimes.com/2014/02/08/us/politics/farm-bill.html?\\_r=0](http://www.nytimes.com/2014/02/08/us/politics/farm-bill.html?_r=0).

<sup>19</sup> Nixon, R. "Farm Bill Compromise Will Change Programs and Reduce Spending." *The New York Times*. 28 January 2014. Available at: <http://www.nytimes.com/2014/01/28/us/politics/farm-bill-compromise-will-reduce-spending-and-change-programs.html>.

<sup>20</sup> Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2011: OECD Countries and Emerging Economies*. Paris: Organisation for Economic Cooperation and Development Publishing, 2011; "China to Intensify Farm Subsidies in Self-Sufficiency Drive." *Bridges Weekly Trade News Digest*. 2013.

<sup>21</sup> "China Farm Support Doubles, New Data Shows." *Bridges Weekly Trade News Digest*. 2011.

<sup>22</sup> Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2011: OECD Countries and Emerging Economies*. Paris: Organisation for Economic Cooperation and Development Publishing, 2011.

<sup>23</sup> Ibid.; "China Farm Support Doubles, New Data Shows." *Bridges Weekly Trade News Digest*. 2011.



Much of **India's** domestic support for agriculture focuses on obtaining maximum self-sufficiency in grains and alleviating poverty.<sup>24</sup> At USD 48 billion, support is still very low on a per-capita basis relative to developed countries. In 2008 the government released a National Action Plan on Climate Change that included a mission on sustainable agriculture focused on adaptation, although genetically engineered crops and soil carbon sequestration are identified as strategies for mitigation.<sup>25</sup>

**Brazil** has been increasing their level of agricultural support, in particular their general services for extension and advisory services, but at USD 10 billion subsidies are very low relative compared to their agricultural GDP and other developed-country spending.<sup>26</sup> The OECD has noted that the country increasingly includes environmental and sustainability criteria in their support programs, as well as specific programs that provide extra credit for sustainable practices. For example, their Low-Carbon Agriculture program (ABC) that provides loans for farmers to engage in specific low-carbon farming activities, but it has been criticized for slow uptake and as it also includes activities that do not necessarily reduce emissions, such as growing paddy rice or following organic practices.<sup>27</sup>

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<sup>24</sup> Hoda, A. & Gulati, A. *India's Agricultural Trade Policy and Sustainable Development. ICTSD Programme on Agricultural Trade and Sustainable Development. Issue Paper No. 49.* Geneva: International Centre for Trade and Sustainable Development, 2013.

<sup>25</sup> ActionAID. *Climate Change and Indian Agriculture - Implications & way forward.* Delhi: Heinrich Böll Stiftung and ActionAID, 2012.

<sup>26</sup> "Brasilia: Farm Subsidy Growth Not Distorting Trade." *Bridges Weekly Trade News Digest.* 2013.

<sup>27</sup> Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2012: OECD Countries and Emerging Economies.* Paris: Organisation for Economic Cooperation and Development Publishing, 2012; Angelo, C. "Brazil's fund for low-carbon agriculture lies fallow." *Nature,* 2012.

**Box 1: Agricultural subsidies and climate change mitigation**

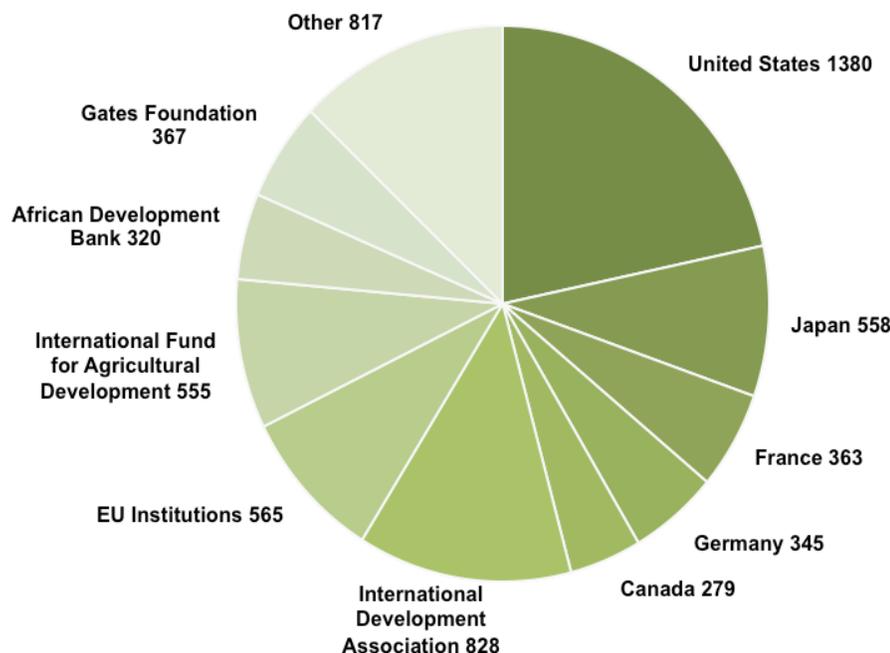
The use of domestic policy instruments for agriculture in response to climate change poses challenges for the international trading system. A key issue is the extent to which mitigation measures are consistent with existing international trade disciplines. There are a range of domestic policy measures that are used to achieve GHG mitigation, including taxes (levies on inputs or outputs linked to the contribution to GHG emissions), subsidies (generation and adoption of GHG-reducing technologies or compensation for losses associated with climatic events), and regulations (production processes, product standards, or mandates on the use of lower-emission substitutes). Payments under environmental schemes can also be linked to the promotion of mitigation activities, and standards such as carbon labeling initiatives--the majority of which are private voluntary standards by retailers--can estimate the amount of carbon generated in the production, processing and transportation of a given food product. Still, such domestic policy initiatives for agricultural mitigation require appropriate monitoring to avoid restrictions on or distortions of the international trading system, and there is currently a lack of consensus on appropriate monitoring methods.

There is overall very limited agricultural mitigation currently being targeted in domestic subsidies for agriculture. Many countries, including the EU and the US, have incentives in place for certain practices that reduce agricultural GHG emissions. The EU, Mexico, Norway, and Chile currently have more explicit government programs for agricultural mitigation being developed while Brazil, New Zealand and Australia already have ones in place.

**Sources:** Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2012: OECD Countries and Emerging Economies*. Paris: Organisation for Economic Cooperation and Development Publishing, 2012; Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2011: OECD Countries and Emerging Economies*. Paris: Organisation for Economic Cooperation and Development Publishing, 2011; Blandford, D. *Strengthening the multilateral trading system: International Trade Disciplines and Policy Measures To Address Climate Change Mitigation And Adaptation In Agriculture*. Geneva: The e15 Initiative, 2013.

## C. Foreign assistance

Following a long-term decline, agricultural assistance has been increasing as a consequence of the food crisis of 2007/08 and the resulting attention to agricultural development and food security. Gross disbursements reached nearly USD 8 billion in 2011.<sup>28</sup> Assistance is focused on Africa receiving approximately half of total assistance, mostly Sub-Saharan Africa and South East Asia, and predominantly originates from a few key donors.



**Figure 3:** Major donors of agricultural ODA and philanthropic assistance, gross disbursement in million USD (2011 constant prices), 2011 data.<sup>29</sup>

Important **multi-donor initiatives** emerged in response to the global food crisis. In 2009, the G8 and five other donors launched the L'Aquila Food Security Initiative, with an initial pledge of more than USD 22 billion, including USD 6.1 billion of additional financing within three years. Of this pledge, 42 % was specifically targeted at the agricultural sector, equivalent to about USD 9 billion.<sup>30</sup> By December 2012, the share of disbursements had reached two thirds.<sup>31</sup> The L'Aquila

<sup>28</sup> Authors' calculations based on *Organisation for Economic Cooperation and Development Creditor Reporting System*. 2013. Available at: <http://stats.oecd.org/Index.aspx?QueryId=33364> (accessed 2013).

<sup>29</sup> Ibid; For the International Fund for Agricultural Development, only commitment data was available, which is for most donors higher than gross disbursement.

<sup>30</sup> ONE. *Agriculture Accountability - Holding Donors to their L'Aquila Promises*. ONE, 2011. Source: WTO notification analysis; EU: "Trade-distorting Farm Payments Fall to New Low, EU says." *Bridges Weekly Trade News Digest*. 2012. Available at: <http://ictsd.org/i/news/bridgesweekly/150915/>; US: "Farm Bill Support Still Low, Despite Record Food Stamp Payments." *Bridges Weekly Trade News Digest*. 2012. Available at: <http://ictsd.org/i/news/bridgesweekly/146491/>; China: International Centre for Trade and Sustainable Development. *Agricultural Subsidies in the WTO Green Box: Ensuring Coherence with Sustainable Development Goals. Information Note Number 16*. Geneva: International Centre for Trade and

Initiative resulted in a new implementation mechanism, the Global Agriculture and Food Security Program launched in 2009 to finance country-led programs for long-term agricultural development with a pledge of USD 1.3 billion. Another initiative important for agriculture is the Global Donor Platform for Rural Development, founded in 2003 “to increase and improve the quality of development assistance in agriculture, rural development and food security.”<sup>32</sup> It comprises a network of 34 bilateral and multilateral donors, international financing institutions, intergovernmental organizations and development agencies.<sup>33</sup> While its initial role was to coordinate aid among donors, it has grown to advocate for best-practice agriculture and rural development interventions and facilitate knowledge exchange between its members.<sup>34</sup> In conjunction with the Consultative Group on International Agricultural Research it created the Commission on Sustainable Agriculture and Climate Change to research policy changes to achieve food security in light of climate change, with some focus on agriculture mitigation as well.<sup>35</sup>

The role of **private donors** is increasingly important for agriculture, especially the Gates Foundation with a strong focus on Africa. The Foundation Center (2013) reports the total amount of international grants for agricultural development at roughly USD 450 million in 2011. Other important foundations for agriculture include the Rockefeller Foundation, the Ford Foundation, the Howard G. Buffett Foundation (HGBF), and the Kellogg Foundation. The HGBF, for instance, spent close to USD 70 million (qualifying distributions) with around two thirds (65%) of contributions for food security, a category formerly defined as agricultural development and nutrition.<sup>36,37</sup> The World Bank, the G20, and the Canadian, American and German governments amongst others have all sought to increase private-public partnerships and private sector investment in their recent agricultural aid strategies.<sup>38</sup>

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Sustainable Development, 2009 \*estimated by Organisation for Economic Cooperation and Development. *Agricultural Policy Monitoring and Evaluation 2011: OECD Countries and Emerging Economies*. Paris: Organisation for Economic Cooperation and Development Publishing, 2011; India: estimated based on Hoda, A. and Gulati, A. *India's Agricultural Trade Policy and Sustainable Development. ICTSD Programme on Agricultural Trade and Sustainable Development. Issue Paper No. 49*. Geneva: International Centre for Trade and Sustainable Development, 2013. ; Brazil: "Farm Subsidy Growth Not Distorting Trade." *Bridges Weekly Trade News Digest*. 2013. Available at: <http://ictsd.org/i/news/bridgesweekly/160562/>.

<sup>31</sup> United States Department of State. *L'Aquila Food Security Initiative Final Report 2012*. Washington, D.C.: United States Department of State, 2012.

<sup>32</sup> *Global Donor Platform About - A joint donor initiative. Global Donor Platform for Rural Development*. 2013. Available at: <http://www.donorplatform.org/about> (accessed 2013-14).

<sup>33</sup> 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.

<sup>34</sup> Ibid; McGrath, M. "Database says level of global 'land grabs' exaggerated." *British Broadcasting Corporation (BBC)*. 10 June 2013. Available at: <http://www.bbc.co.uk/news/science-environment-22839149>.

<sup>35</sup> 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; *Consultative Group on International Agricultural Research: The Commission on Sustainable Agriculture and Climate Change*. 2013. Available at: <http://ccaafs.cgiar.org/commission/>.

<sup>36</sup> Numbers extracted from graph.

<sup>37</sup> The Howard G. Buffett Foundation. *Annual Report*. The Howard G. Buffett Foundation, 2012.

<sup>38</sup> Schwartz, D. "Should international aid serve Canada's commercial interests?" 28 March 2013. *CBC News Canada*. Available at: <http://www.cbc.ca/news/canada/story/2013/03/27/f-cida-dfait-merger.html>; German Federal Ministry of Food, Agriculture and Consumer Protection. *Bilateral Cooperation Programme of the BMELV*. Bonn: Federal Ministry of Food, Agriculture and Consumer Protection, 2012; The World Bank. *Implementing Agriculture for Development. World Bank Group Agriculture Action Plan: FY2010-2012*. The World Bank, 2009; Wise, T., and Murphy, S. *Resolving the Food Crisis - Assessing Global Policy Reform Since 2007*. Global Development and Environment Institute, Institute for Agriculture and Trade Policy, 2012.

**Box 2: Assistance for climate change mitigation and adaptation**

In 2011 more than USD 500million of bilateral assistance to the agriculture sector was targeted at climate change mitigation as a 'principal' or 'significant' objective, with EU institutions, Norway, Belgium, and France as the largest donors in these categories (e.g. EU institutions). While most donor institutions focus on agricultural adaptation and climate-smart development more generally, several donor institutions also include mitigation as a priority objective in their overall agricultural aid strategies.

Developed countries have acknowledged the need to support adaptation and mitigation activities in developing countries, and under the 2009 Copenhagen Accord agreed to provide USD 30billion in "fast start finance" during 2010-2012. Between 2010 and 2012, USD 35billion of fast start finance was mobilized, exceeding the original commitment. Of the overall fast start finance commitment, agriculture accounted for USD 745million, equivalent to 2.5%.

A number of dedicated funds provide financing for climate-related activities in the agriculture sector, e.g. the Global Environment Facility Fund and the Pilot Program for Climate Resilience. The focus of climate finance for agriculture has been on adaptation, but new developments suggest a shift towards integrated approaches. For instance, climate-smart agriculture emerged as a new funding priority in the draft financing strategy for the 6<sup>th</sup> replenishment of the Global Environment Facility fund. Significantly higher funding volumes are anticipated from the future Green Climate Fund, a new financial mechanism under the United Nations Framework Convention on Climate Change with an expected annual disbursement of USD 100billion until 2020. Another relevant initiative is the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) program, supporting nationally-led processes and efforts to reduce emissions from deforestation and forest degradation in developing countries. As of June 2013, total funding for REDD amounted to USD 172.4million. Multilaterals also provide an important source of grant-based climate finance, such as the Climate Finance Funds of the Regional Development Banks and the World Bank that supports pilot activities for low-emissions and climate-resilient development. Under this program, the most relevant initiative for agriculture is the Pilot Program for Climate Resilience, with a strong focus on adaptation. Examples of other relevant climate-related agricultural initiatives include the World Bank's Forest Carbon Partnership Facility and the African Development Bank's Congo Basin Forest Fund.

**Sources:** *Organisation for Economic Cooperation and Development Creditor Reporting System*. 2013. Available at: <http://stats.oecd.org/Index.aspx?QueryId=33364> (accessed 2013). Nakhooda, S., Fransen, T., Kuramochi, T. et al. *Mobilising International Climate Finance: Lessons from the Fast-Start Finance Period*. Overseas Development Institute, World Resources Institute, Institute for Global Environmental Strategies, 2013; Lipper, L. and Conrad, B. *Module 14 Financing Climate-smart agriculture*. In: Food and Agriculture Organisation of the United Nations. *Climate-Smart Agriculture Sourcebook*. Rome: Food and Agriculture Organisation of the United Nations, 2013; *About the UN-REDD Programme. United Nations Collaborative Programme on Reducing Emissions from Deforestation and Degradation in Developing Countries*. 2013. Available at: <http://www.un-redd.org/AboutUN-REDDProgramme/tabid/102613/Default.aspx>.

## D. Foreign investment

Data on foreign direct investment (FDI) in the agricultural sector is limited and has large gaps and inconsistencies. As a result, estimates vary significantly depending on the data source and few conclusions on trends and direction of flows can be made. Compared to domestic investment or the revenues of large private corporations, the financial contribution from foreign investors in the agricultural sector is small. Based on United Nations Conference on Trade and Development,<sup>39</sup> in 2008, the total flow of agricultural FDI for the 44 countries reporting was USD 5billion (current prices). Investments more than doubled between 2005 and 2008, attributed to the food price crisis, yet this increase was largely confined to upper-middle and high-income countries. Another source, the FDI markets database, which covers all activities related to food, beverages and tobacco, estimates investments at over USD 25billion (current prices) in 2009 and USD 13billion in 2011. Based on this dataset, agriculture has seen a massive increase in FDI as a consequence of the food crisis, but the trend seems to have reversed based on more recent 2011 estimates. Highquest Partners (2010), in a survey of 25 private, institutional investors focused on primary production, detected increasing demand and high potential for growth in agriculture and estimates that investment is at a range of 10 to 25 billion USD per year.

Based on the FDI markets data for 2003-2011 Europe was the main source (USD 70billion) and destination (USD 53billion) of investments, followed by the Americas (mainly the US) as the second largest source. Intra-regional investment is increasingly important, especially in Asia and South America. The third largest source of investment was Asia (USD 35.5billion), mainly Japan, China, Saudi Arabia and Thailand. China was the largest recipient of investment in Asia (around USD 14billion) followed by smaller flows to other countries, such as India (USD 6billion), Vietnam, Turkey and Indonesia. Africa received approximately 8% of global agricultural FDI. The Highquest Partners survey concludes that while historically, private institutional investment was focused on the US, Canada, Australia and New Zealand, more recently their sample indicates a noticeable shift towards South America, with Brazil as the “largest frontier for new farmland development”, and Africa.

The Land Matrix project provides some indication of foreign investment in agricultural lands and sheds light at the controversial ‘land-grabbing’ by compiling data on large-scale land acquisitions. Out of 27.5 million hectares of land acquisitions for agricultural use, more than half were concluded (but not necessarily implemented) in Africa (14.5 million hectares), followed by Asia (5.6 million hectares) and Oceania (2.3 million hectares).<sup>40</sup> A recently updated version of the database suggests that the phenomenon of land-grabbing was overestimated as concluded deals can turn out much smaller than initially intended and reported.<sup>41</sup> However, FAO notes that there is evidence that many deals remain unreported, therefore to some extent balancing deals that never or only partially come to fruition.<sup>42</sup> Researchers of the Land Matrix project also observe a trend of hidden foreign investments through contract farming or foreign stakes in local businesses.<sup>43</sup>

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<sup>39</sup> Food and Agriculture Organisation. *The State of Food and Agriculture 2012 - Investing in Agriculture for a better Future*. Rome: Food and Agriculture Organisation of the United Nations, 2012.

<sup>40</sup> *Land Matrix Agricultural drivers*. 2014. Available at: <http://www.landmatrix.org/get-the-idea/agricultural-drivers/>.

<sup>41</sup> McGrath, M. “Database says level of global ‘land grabs’ exaggerated.” *British Broadcasting Corporation (BBC)*. 10 June 2013. Available at: <http://www.bbc.co.uk/news/science-environment-22839149>.

<sup>42</sup> Food and Agriculture Organisation. *Trends and impacts of foreign investment in developing country agriculture - Evidence from case studies*. Rome: Food and Agriculture Organisation of the United Nations, 2012.

<sup>43</sup> McGrath, M. “Database says level of global ‘land grabs’ exaggerated.” *British Broadcasting Corporation (BBC)*. 10 June 2013. Available at: <http://www.bbc.co.uk/news/science-environment-22839149>.