

## Socio-economic context and role of agriculture

The Federal Democratic Republic of Ethiopia is a landlocked country in the Horn of Africa and is one of the most biologically and culturally diverse countries on the continent. With a population of about 92 million, Ethiopia is the second most populous country in Sub-Saharan Africa. Despite being one of the poorest countries, with a per capita income of US\$454 (substantially lower than the regional average), Ethiopia's recent economic and development performance is staggering; economic growth averaged 10.6 percent per year from 2007 to 2012. However, due in part to deficiencies in purchasing power and high inflation, Ethiopia is still heavily reliant on foreign aid, receiving 25 percent of global food aid destined for Sub-Saharan Africa.<sup>1</sup>

The performance of the Ethiopian economy as a whole is highly correlated with the agricultural sector. Having a share of roughly 44 percent of GDP, agriculture employs approximately 80 percent of the workforce and accounts for 70 percent of export earnings. The largest share of export value comes from cash crops such as coffee and sesame as well as livestock, which contributes 47 percent to agricultural GDP and 85 percent of farm cash income.<sup>2</sup>

Land degradation, deforestation and drought are among the most severe challenges for agriculture in Ethiopia. The majority of farmers are small holders, with 85 percent of households farming less than 2 hectares and 40 percent less than 0.5 hectares. From this small plot, most produce only half of their annual food intake requirements.

Selected indicators		2007	2009	2012	
SOCIO-ECONOMIC	GDP (current billion US\$) *	19	32	43	
	GDP per capita (US\$) *	241	375	467	
	Agricultural value added (% of GDP) *	46	50	49	
	Agricultural value added (annual % growth) *	(average 2007-2012)	7.05		
		(2012)	4.9		
	Total population (million)	80.4	84.8	91.7	
	Rural population (% of total)	84	83	83	
	Agricultural labour force (% of total labour force)	79	78	76	
Human Development Index **	(2012)	0.429 (ranking 173)			
AGRICULTURAL PRODUCTION & TRADE	Per capita cultivated land (ha)	0.19	NA	0.18	
	Area equipped for irrigation (ha)	290 000 (2012)			
	Value of total agriculture production (current million US\$)	6 798	7 887	11 029	
	Value of cereals production (current million US\$)	3 268	4 010	4 893	
	Yield for cereals (hg/ha)	14 390	16 825	20 468	
	Cereal import dependency ratio (%)	(2007-2009)	10.1 - Net imp		
	Top 3 commodities	Production quantity	Maize; Roots and Tubers; Whole fresh cow milk (2011)		
		Production value	Whole fresh cow milk; Indigenous cattle; Cereals (2011)		
		Import quantity	Wheat; Raw centrifugal sugar; Palm oil (2011)		
		Import value	Wheat; Raw centrifugal sugar; Palm oil (2011)		
		Export quantity	Sesame seeds; Green coffee; Dry beans (2011)		
		Export value	Green coffee; Sesame seeds; Fresh vegetables (2011)		
	Top 3 trade partners	Import value	Malaysia; Russian Federation; U.S.A. (2011)		
Export value		Germany; Somalia; China (2011)			
FOOD SECURITY & NUTRITION	Top 3 commodities available for consumption (2009)	Maize; Wheat; Other cereals			
	Per capita food supply (kcal/capita/day)	1 959	2 023	2 105 (2011)	
	General (g) and Food (f) CPI (2000=100)	184.8 (g), 214.3 (f)	289.4 (g), 354.4 (f)	517.6 (g), 641.2 (f)	
	People undernourished (million)	(2008-2010)	33.9		
		(2011-2013)	32.7		
	Proportion of undernourished (%)	(2008-2010)	40%		
		(2011-2013)	36%		
	Prevalence of underweight children under 5 years of age (%)	34.6 (2005)	NA	29.2 (2011)	
	Prevalence of stunting among children under 5 years of age (%)	50.7 (2006)	NA	44.2 (2011)	
Prevalence of wasting among children under 5 years of age (%)	12.3 (2005)	NA	10.1 (2011)		
Global Hunger Index ^	(2013)	25.7 (Alarming)			
Access to improved water sources (% of population) *	42	45	42		

Source: FAOSTAT; \*Source: WB; \*\*Source: UNDP; ^ Source: IFPRI. Note : Food CPI 2009, 2011: 2008=100; accessed on 19/09/2014

1 This paragraph compiles data from World Bank Indicators; please see: <http://www.worldbank.org/en/country/ethiopia/overview>; accessed 06/2014  
2 IGAD. 2013. The Contribution of Livestock to the Ethiopian Economy, Policy Brief No: ICPALD 5/CLE/8/2013



Furthermore, land use per capita is decreasing due to population growth, even though only 15 percent of the arable land potential has been cultivated.<sup>3</sup>

According to the 2013 MDG Report, Ethiopia is among the best performing countries in Africa, given their starting situation. HDI

value increased from 0.275 in 2000 to 0.396 in 2012 (an increase of 40 percent). However, the HDI as an aggregate measure conceals unequally distributed growth gains. The Gini index on the other hand, which measures inequality, rose from 30.0 to 33.6 from 2000 to 2011, likely driven by the increasing wealth gap between urban and rural populations.<sup>4</sup>

## 1. Government objectives in agriculture, food and nutrition security

The government's central economic strategy guiding the integrated and comprehensive policies aimed at achieving poverty reduction and broad based economic growth is **Agricultural Development Led Industrialization (ADLI)**. Launched in 1991 in cooperation with the World Bank (WB) and International Monetary Fund (IMF), this long-term strategy aims to transform the economic structure of the country in a shift from subsistence to commercial agriculture for the growth of industry and services. In order to fulfil this development vision, two 5-year plans have been implemented over the 2007-2013 review period. During the **Plan for Accelerated and Sustained Development to End Poverty (PASDEP) 2005/06 to 2009/10**, Ethiopia achieved rapid agricultural development led economic growth and witnessed progress in the targeted growth of the service sector. Yet, the growth and development targets for the current **Growth and**

**Transformation Plan (GTP) 2010/11-2014/15** are even higher: to maintain or exceed an average GDP growth rate of 11 percent and to achieve MDG targets by 2015. More specifically, the plan aims to enhance and strengthen productivity of small holder farmers and pastoralists, marketing systems, private sector engagement, irrigation and infrastructure, and to significantly reduce the number of chronically food insecure households.

The **Policy Investment Framework (PIF) 2010-2020** aims to operationalize the GTP, ADLI, and the CAADP Compact signed in 2009 by prioritizing and planning investments, and securing finance needed from government and international development partners. The **Agriculture Growth Program (AGP) 2010-2015** also falls under the broader ADLI and GTP, attempting to increase productivity, market performance and processing along the entire value chain of several key commodities.<sup>5</sup>

## 2. Trends in key policy decisions (2007-2013)

### 2.1 Producer-oriented policy decisions

Over the last decade, Ethiopia's support to the agricultural sector has been evident: they have either met or surpassed their 10 percent CAADP commitment; implemented several medium and large scale irrigation projects; developed and disseminated strong agricultural research and technology; and increased access to agricultural finance. Innovative and integrated actions to modernize and facilitate the transformation from subsistence to commercial agriculture are being implemented by the Ministry of Agriculture and Rural Development (MoARD), many based on strategies derived through the Agricultural Transformation Agency (ATA). Created in 2011, the ATA has the mandate of identifying systemic constraints in the agricultural sector and addressing them through collaboration with a wide range of stakeholders

including private sector, civil society, government ministries and development partners.

#### *Strengthening linkages between agricultural research and extension for value chain development*

A core target of the government's agricultural expenditures has long been the public agricultural extension system.<sup>6</sup> Although the share in overall agricultural support has dropped from 15 percent in 2006 to 2 percent in 2012, an average of US\$ 155 million was spent annually on extension during this period.<sup>7</sup> The Agricultural Technical and Vocational Education and Training (ATVET) centres are at the base of the human capital creation and utilization system, training Development Agents (DAs) who in turn train farmers through the Farmer Training Centres (FTCs).<sup>8</sup>

<sup>3</sup> This and the previous paragraph utilize information from the African Economic Outlook 2011/12 and USAID. 2011. Ethiopia Country Profile: Property Rights and Resource Governance

<sup>4</sup> This paragraph was composed using information from UNDP. 2014. MDG Report 2013 and UNDP. 2013. Ethiopia: HDI values and rank changes in the 2013 Human Development Report and World Bank Indicators; <http://data.worldbank.org/indicators>; accessed on 28/03/2014

<sup>5</sup> This section was composed using information gathered from the MoARD. 2010. Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010-2020, The GoE website: <http://www.ethiopia.gov.et/policies-and-strategies1> accessed on 01/04/2014, and the ATA website: <http://www.ata.gov.et/priorities/national-growth-transformation-plan/>; accessed on 01/04/2014

<sup>6</sup> The field-level extension service has a strong foundation of FTCs and trained development agents (DAs) already in place in the field. Roughly 8,489 FTCs have been created throughout Ethiopia, and about 62,764 DAs have been trained in total, with a reported 45,812 staffed on location; for more information. Davis, K. et al. 2010. In Depth Assessment of the Public Agricultural Extension System of Ethiopia and Recommendations for Improvement. IFPRI

<sup>7</sup> MAFA: Public Expenditure database; accessed on 09/07/2014

<sup>8</sup> Jones, K. The Role of Agricultural Technical and Vocational Education and Training in Developing Countries. Pennsylvania State University.

Vital linkages between research institutions and this vast extension program are being developed and reinforced. Just one example of this collaboration between the the ATA, MoA and Ethiopian Institute for Agricultural Research (EIAR) is the National 2013 Working Strategy for Strengthening Ethiopia's Tef Value Chain that aims to double productivity by 2018 through dissemination of improved agronomic practices, namely, Improved teff varieties, Reduced seed rate and Row planting (known collectively as TIRR). The TIRR programme has been progressively scaled up since 2011 where the first pilot farmers achieved yield increases of 30 to 80 percent. In 2012, 400 000 farmers were trained by 25 000 DAs and reached more than 2 million farmers in 2013. This type of hands on training is an important first step in revamping the extension system and its ability to respond to the needs of farmers. Currently, the majority of DAs and district level staff have strong technical skills and theoretical knowledge, yet are lacking in practical skills to assist farmers. With increased production, the GoE envisions in the long term, a major policy shift to export teff by 2016/17.

### **Improving availability of and access to agricultural inputs for efficiency and sustainability**

The seed sector is undergoing a modernization process that promotes public-private partnerships, moving away from the state led regulations developed in 2000. The new Seed Proclamation was ratified by Parliament on January 24 2013, as part of a seed sector strategy aimed at increased inspection and certification, genetic consistency and greater seed supply. The main objective of the seed proclamation and strategy is to increase private sector participation in seed development, multiplication and distribution. This seed proclamation is launched as part of the G8 New Alliance commitments.

Fertilizer use in Ethiopia has increased but yields have been constrained by a limited variety of increasingly costly imported fertilizers, namely diammonium phosphate (DAP).<sup>9</sup> The GoE in partnership with the ATA are taking initiative to address soil depletion caused primarily by intensive cropping and over grazing with the end goal of sustainably increasing productivity. The Fertilizer Blending Program was launched in February 2013 to oversee the establishment of four high-capacity blending facilities and testing at 5 000 training centers and 50 000 farmer plots. The Integrated Soil Fertility Management System (ISFM) and the Ethiopian Soil Information System (EthioSIS) are designed to map and assess the soil nutrient needs of each area, aiding the creation of optimal fertilizer blends and informing application rates.

A new directive for the disbursement of agricultural inputs has been developed by the MoA in partnership with the ATA and was presented to stakeholders nearing the close of 2013. Credit will be available through micro-finance institutions (MFIs) in the form of vouchers as opposed to cash provided through farmer cooperatives. This is intended to relieve pressure from the regional agricultural bureaus which, under the current system, are responsible for the 100 percent guarantee to the Commercial Bank of Ethiopia in case of default.

### **Continued efforts to increase tenure security for small and large-scale rural investment**

In line with Ethiopia's objectives to encourage private investment (domestic and foreign) in large-scale commercial farms, the Agricultural Investment Support Directorate (AISD) was created within the Ministry of Agriculture and Rural Development (MoARD) in 2009. The Directorate's mandate was to negotiate long term leases for over 2.8 million hectares of land with the objective to boost productivity, employment, develop infrastructure, promote energy security through biofuel production and facilitate technology transfer. This policy, however, and the subsequent large-scale, long-term leases that followed have been highly controversial in terms of transparency of lease contracts and adequate consultation of current users.<sup>10</sup> Furthermore, since businesses were not utilizing the land, the Ministry suspended land provision in March 2012.

In order to address these issues and improve the enabling environment for investments, two important actions have been taken: 1) the MoA is establishing an Agricultural Economic Zone (AEZ), identifying suitable land and correspondingly appropriate crops with a focus on commercial crops such as cotton, rubber and palm; and 2) a new autonomous federal agency has been created with the mandate to facilitate and oversee all agricultural investments and land administration, tasks that were previously dealt with separately and through decentralized regional offices. Formed in September 2013, the Agricultural Investment Land Administration Agency replaces the AISD and is working to secure land tenure rights, improve access and land-use management.

## **2.2 Consumer-oriented policy decisions**

In an effort to mitigate the impacts of future environmental or economic hazards, Ethiopia has focused on resilience building through safety nets, nutrition, and price stabilization. Furthermore, in light of these and other objectives, the National Social Protection Strategy (2014-2019) was drafted in 2012, aiming to institutionalize employment, health, educational and other social support mechanisms.<sup>11</sup>

<sup>9</sup> Currently, there is only one state company importing fertilizer and prices are set by MoARD which may not fully capture all relevant elements in price formation. For detail, please see; Heffernan, P. et al. Ethiopia Fertilizer Assessment. IFDC and ATA. 2013. Status of soil resources in Ethiopia and priorities for sustainable management

<sup>10</sup> For more information, please refer to; Land Deals in Africa: Ethiopia | oaklandinstitute.org, IRIN Africa | ETHIOPIA: The great land-grab debate | Ethiopia | Economy | Food Security | Human Rights  
<sup>11</sup> Ayliffe, T. 2014. National Social Protection Strategy: Second Draft

### ***Building resilience in efforts to promote graduation from safety net programmes***

The long-term objective of the Food Security Program (FSP) 2005-2009/2010-2014 is to achieve sustainable food security for chronic and transitory food insecure households in rural Ethiopia. The Productive Safety Net Program (PSNP), aims to smooth consumption<sup>12</sup> of chronically food insecure households, thereby preventing distress sale of assets. A combination of food and cash is provided, often in return for labour on public works.<sup>13</sup> However, 20 percent of client households are unable to supply labour and receive an unconditional transfer known as direct support.

The PSNP has grown immensely since its inception in 2005-2006: from a budget of US\$ 70 million and about 5 million beneficiaries, to 175 million in Phase II (2007-2009) covering over 7.5 million beneficiaries. Phase III (2010-2014) however, despite a budget increase to 1.3 billion, has recently witnessed a decrease in beneficiaries to 6.9 million. Graduation from PSNP occurs when a household is 'food sufficient' by crossing a regionally determined asset threshold.<sup>14</sup> Through the Household Asset Building Program (HABP), a component of the FSP since 2010, rural people can become not only food sufficient but also sustainably food secure, enabling them to graduate from the PSNP and eventually the FSP altogether. The focus of this and other complementary interventions include micro-credit for agricultural inputs, strengthening and establishing Rural Savings and Credit Cooperatives, and technical support for productive investments in irrigation, terracing, livestock fattening and other activities such as beekeeping.<sup>15</sup>

Critics on the other hand, highlight that food sufficiency and resilience are more complex than asset accumulation and suggest that the use of assets as a proxy for measurement of food sufficiency is flawed and avoids the necessity to address other important factors that constrain livelihoods. Furthermore, there seems to be a lack of understanding below the woreda level of graduation requirements and many clients were unsure of why they were graduated. Government and development partners realized at the beginning of Phase III that moving millions people out of chronic food insecurity by 2014 might be unrealistic and so have already begun undertaking steps toward a post-PSNP program.<sup>16</sup>

### ***Grain reserves in transition from emergency to safety net and price stabilization purposes***

The Emergency Food Security Reserve Administration (EFSRA) has played a crucial role in mitigating the impact of droughts and emergencies since its establishment in 1982.<sup>17</sup> The EFSRA has functioned as a grain custodian, lending to national and international agencies as an immediate source of food in times of crisis. Grain Reserve policy coordination is headed by the MoARD and the Disaster Risk Management and Food Security Sector (DRMFSS)<sup>18</sup> which is also acting as an early warning and response system by recording production, consumption, stocks and supplies from all reserves as well as meteorological data.

Since the introduction of the PSNP in 2005 and the coinciding rise in grain prices, grain withdrawals for emergency operations have drastically reduced from 74 percent (1994-2009) to 28 percent (2005-2009), whereas those intended for safety net and price stabilization have increased from 21 and 5 percent (1994-2009) to 57 and 15 percent (2005-2009), respectively. During the food price crisis of 2008-09, the government and international relief agencies relied heavily on the reserves but only 45 000 out of a total distribution of 212 000 tonnes went to emergency operations, which was less than half the 95 000 tonnes withdrawn for price stabilization in major urban centres. The Ethiopian Grain Trade Enterprise is the parastatal responsible for procuring grain for price stabilization purposes, usually by importing or borrowing from the EFSR and then selling to millers at subsidized prices. This constitutes considerable expenditure effort by the government and national bank.<sup>19</sup>

### ***Scaling up nutrition programmes***

The National Nutrition Strategy / Programme (NNS/NNP) 2008-2012 and 2013-2015 is a multi-sectoral plan comprising seven ministries with the key objective to ensure that all Ethiopians secure adequate nutritional status in a sustainable manner. The objectives of the current phase are to both strengthen and scale up current nutrition interventions and to include new initiatives targeting the most vulnerable (women and children) such as the Accelerated Stunting Reduction Initiative and the National Food Fortification Programme.

The Ministry of Education launched the National School Health and Nutrition Strategy (SHN) in 2012 to improve access to services for 19 million school-age children through public and private

12 PSNP provides transfers to food-insecure households, equivalent to 15 kilos of cereal per household member per month for six months a year. Households that are required to work for this transfer must work for five days to receive the transfer for one person.

13 "Some 60 per cent of public works projects are in soil and water conservation, with the main aim of improving agricultural and natural-resource productivity in these areas and thus helping to address one of the root causes of food insecurity: low productivity in agriculture in rural Ethiopia." Lieuw-Kie-Song, M.2011. Integrating Public Works and Cash Transfers in Ethiopia

14 A household graduates as food sufficient when "in the absence of receiving PSNP transfers, it can meet its food needs for all 12 months and is able to withstand modest shocks."

15 This paragraph is composed from several sources; GoE/CAADP. 2013. Nutrition Country Paper, Halle, B. Ethiopian Food Security & Nutrition Program. MoA, and Lieuw-Kie-Song (2011)

16 Devereux, Stephen, et al, 2014. Graduation from the Food Security Programme in Ethiopia: FAC Ethiopia Final Report and Berhane, G. et al. 2013. Ethiopia Strategy Support Programme

17 Rashid, S. & Solomon Lemma. 2011. Strategic Grain Reserves in Ethiopia. IFPRI

18 Other relevant agencies represented within the DRMFSS are; the Ministry of Health, the Central Statistics Agency and the National Meteorological Agency.

19 Haberli, C. 2013. Ethiopia's Food Reserve Policies and Practice. NCCR

schools. The Ministry of Health and other NNP partners have taken measures to ensure universal salt iodization. Through the Health Extension Program (HEP), 11 million children under 5 now receive Vitamin A supplements and de-worming medicine.

### 2.3 Trade-oriented policy decisions

In combination with market development and currency devaluation, Ethiopia has made the promotion of commercial agriculture a priority. The MoARD developed the Master Plan (2005-2010) to boost market-oriented production for priority crops and livestock commodities in order to enhance competitiveness in international markets.

#### *Implementation of ad hoc trade and market measures to stabilize food prices*

The Government of Ethiopia has dealt with food price instability primarily on an ad hoc basis. Measures have included export bans, retail price controls, and distribution of subsidized food. Export bans have been imposed intermittently on staple cereals; for example, an export ban on maize, wheat and sorghum was imposed in 2006, extended to all cereals in 2008, lifted in 2010 after a good harvest then finally re-imposed in 2011. In October 2008, an US\$ 800 million petroleum subsidy was transferred to stabilize grain prices. Untargeted price caps on 18 essential food items were put into effect January 2011 and then lifted 4 months later. In the same year, subsidized imports of wheat, sugar and palm oil were distributed: a measure estimated to have cost the government US\$ 137 million.

#### *Establishment of a market institution to streamline major exports*

The Ethiopia Commodity Exchange (ECX) was established in 2008 by the Government of Ethiopia (GoE) to handle marketing of export commodities, eliminate middlemen and improve price signal transmission for farmers. Trade is currently limited to spot/cash exchange but processes are well under way to introduce online trading and establish remote trading centres in key agricultural locations across Ethiopia.<sup>20</sup> Currently, three major export commodities are traded through the ECX: coffee (alone accounting for 25 percent of foreign exchange earnings), sesame and haricot beans. In fact, it has been illegal to trade coffee outside of the ECX since 2009 and sesame since 2010. Furthermore, it is illegal to sell export quality coffee on domestic markets, even if the price is higher.

In 2010, in a response to the recent international demand for high quality, socially responsible coffee, the ECX took a new approach to marketing. The Direct Specialty Trade (DST) approach allows the traceability of specialty coffees, a precondition for most quality certification such as Fair Trade, Rainforest Alliance or Organic, and employs a quality grading system that is internationally recognized.<sup>21</sup> Despite the high volumes and earnings of cash crop commodities through the ECX, there are major challenges regarding the inclusion of staple grains.

#### *Tapping export potential of the livestock sector*

Efforts to generate foreign exchange from livestock and derivative products including meat, raw hides and skins have resulted in measures to regulate informal trade, improve animal health and traceability, establish facilities and abattoirs, and acquire safety and quality certifications. The live animal and meat export-oriented Ethiopia Sanitary & Phytosanitary Standards and Livestock & Meat Marketing (SPS-LMM) programme (2005-2011) has transformed the sector through contributions such as: (i) creating and building capacity of the Animal and Plant Health Regulatory Directorate (APHRD), (ii) improving disease monitoring systems, (iii) introducing HACCP in export abattoirs, and (iv) improving the cold chain for meat exports such as cold storing and packing facilities.<sup>22</sup> Value addition is also being encouraged in the tannery sector through the introduction of a 150 percent tax on semi-processed or raw hides.

In an effort to regulate informal trade, accounting for 75 percent of all foreign livestock trade, a new bill will replace the 14-year old proclamation guiding the entire livestock market.<sup>23</sup> The new law is designed to increase efficiency through the elimination of middle-men. Markets will be identified and classified as primary or secondary, all traders will be licensed and all animals registered.



*Central livestock market, Mekele. Ethiopia has Africa's largest livestock population, serving diverse functions; they are a source of food, income, draft power and manure for crop production and fuel.*

<sup>20</sup> "The ECX has 17 delivery centers, 57 warehouses and traded volumes of 601,000 million tons of commodities such as coffee, sesame, maize, wheat and pea beans in 2012, compared to 47,734 million tons in its first year of operation. It has traded commodities with a combined value of USD 5 billion in its first five years" see news source at: [http://www.zawya.com/story/ECX\\_seizes\\_commodity\\_momentum-ZAWYA20140205072558/](http://www.zawya.com/story/ECX_seizes_commodity_momentum-ZAWYA20140205072558/)

<sup>21</sup> In collaboration with USAID's Agricultural Growth Program-Agriculture Market Development Project (AGP-AMDe), the ECX began implementing the Q Coffee Quality Certification System (recognized in the United States, Europe and Asia) of the Coffee Quality Institute (CQI) in 2010.

<sup>22</sup> This programme was funded by USAID but worked in close collaboration with government institutions; Norman Borlaug Institute for International Agriculture/MoA of FDRE/USAID. 2011. SPS-LMM Final Report (2005-2011)

<sup>23</sup> First presented in October 2013, the bill was passed in January 2014 after full consultative process overseen by the Ministry of Trade and the Ministry of Industry.

In addition to the centre in Adama, two other international quarantine centres are being established under the auspices of the APHRD in Mille (Afar) and Haroessa (Somali) as last points before export to Middle East and North Africa (MENA) countries.<sup>24</sup>

An independent Livestock Development State Ministry, under the auspices of the Ministry of Agriculture and Rural Development (MoARD), was created in March 2013 and will focus primarily on increasing production and productivity, animal health, feed production, and facilitating private sector participation.

### 3. Areas for further research

#### *Biofuels production and food security*

The 2007/08 food price crisis hit Ethiopia months before world food prices spiked; however, food prices did closely follow global crude oil prices, indicating that price transmission in food markets in Ethiopia may be more closely linked to fuel prices than global food prices.<sup>25</sup> The Biofuel Development and Utilization Strategy of Ethiopia, drafted in 2007, aimed to save part of the 80 percent of total export earnings spent on fuel importation. Production of jatropha and sugar cane crops for biodiesel and bio-ethanol were considered essential to save foreign currency and at the same time generate by-products for livestock feed and contribute to rural development and employment.

Ethanol from sugar cane production is on the rise, with the existing and new sugar factories expected to reach full production capacity in 2020.<sup>26</sup> Since 2009, approximately 42 million litres of blended benzene have been supplied to the local market, saving the country over US\$ 30 million.<sup>27</sup> According to the ministry of Water Irrigation and Energy, the country plans to increase ethanol production to increase its share in total fuel from the current 10, to 15 percent by 2015.<sup>28</sup> This intention is evident also in the major irrigation projects on the rise intended for sugar cane plantations. On the other hand, jatropha, said to be drought tolerant, turned out to require high rainfall and fertile soil to produce sufficient seed for fuel production, making the crop unsuitable for 'marginal lands' as originally intended.<sup>29</sup>

#### *Accession to the WTO and protection of genetic resources*

Although the government had planned to finalize accession to the WTO within the four year term of the GTP (by 2014), according to the Ministry of Trade, Ethiopia will not be ready until 2015. In 2002, Ethiopia formally applied for accession and since the Memorandum of Foreign Trade Regime was distributed to members in 2007, the Government has been responding to hundreds of questions from members. Regarding the agricultural sector, there are several bones of contention such as import tariffs, export bans on major grains, and foreign exchange control.

One area of dispute is the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement of the WTO, in particular the article referring to the patenting of genetic material, believed to contradict the Convention on Biological Diversity, an agreement that Ethiopia has been party to since 1994.<sup>30</sup> Article 27.3 (b) of this agreement obliges plant varieties to be provided some form of IPR protection. Ethiopia's position for over a decade has been against the patenting of life forms and in favor of community rights recognition, reflected in the 2006 proclamation on Access to Genetic Resources and Community Knowledge, and Community Rights.<sup>31</sup> According to the European Commission, these agreements are not in opposition, legally speaking, but the assurance of their positive synergy will depend on the legal and negotiating capacities of the country hosting the genetic resources.<sup>32</sup>

24 Previously, animals had to be re-quarantined in Djibouti at US\$50 per head, a price that reflects the monopoly on livestock quarantine in Djibouti.

25 Dillon, B. & Christopher B. Barrett. 2013. Global Crude to Local Food: An Empirical Study of Global Oil Price Pass-through to Maize Prices in East Africa

26 Gebreyohannes Hiben, Yacob. 2013. Long-term Bioethanol Shift and Transport Fuel Substitution in Ethiopia. SEI/ KTH, Stockholm

27 For more information, please see; <http://www.thenational.ae/news/world/africa/ethiopia-ends-fuel-subsidy-and-moves-to-stabilise-food-prices>

28 For more information, please see; Israeli company secures \$100 million loan for Ethiopian sugar project : Biofuels Digest

29 According to a study by the African Biodiversity Network (ABN) in 2010 however, Jatropha requires higher nutrient soil and rainfall for productive yields. Sun Biofuels thus closed their 5 000 hectare operations in Mancha in 2009 and other companies are working with out-grower contracts, where farmers earn much less than they would from traditional food crops. African Biodiversity Network, the Ethiopian Society for Consumer Protection and the Gaia Foundation. 2010. Biofuels – A Failure for Africa

30 "The TRIPS Agreement of the WTO, in particular its Article 27.3(b), forces all member states to allow the patenting of microbiological 'inventions' and the protecting of plant varieties by patents or by some other effective legal means. It also allows, but does not force, them to patent animals. An 'invention' in this sense is not necessarily a product of modern biotechnology." Please see; TWN. The TRIPS Agreement of the WTO and the Convention on Biological Diversity: The need for coordinated action by the South

31 WIPOLex; Ethiopia: Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation No. 482/2006 and Nnadozle, Kent, 2003. African Perspectives on Genetic Resources: A handbook on laws, policies and institutions. Environmental Law Institute, Washington, DC.

32 EC (2001), Review of the Provisions of Article 27.3(b) available at; WTO | intellectual property (TRIPS) - agreement text - standards



The FAPDA initiative promotes evidence-based decision making by collecting and disseminating information on policy decisions through a freely accessible web-based tool. For more information, please visit:

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This brief was prepared by the Food and Agriculture Policy Decision Analysis (FAPDA) team, with contributions from the Monitoring and Analysing Food and Agricultural Policies (MAFAP) programme. Information reported in this brief is derived from the FAPDA tool as well as the review of primary and secondary data sources.

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