

## TOGO

# Potentials and Possibilities for German Collaboration in Agriculture



## CONTRIBUTORS TO THE COUNTRY DOSSIER TOGO

- ITRA: Alpha Todje, Gbakenou Koffi Inyese
- FARA: Yemi Akinbamijo, Fatunbi Oluwole Abiodun
- ZEF: Heike Baumüller, Joachim von Braun, Annapia Debarry, Katharina Gallant, Tigabu Degu Getahun, Christine Husmann, Hannah Jaenicke, Oliver K. Kirui, Ehsan Eyshi Rezaei, Yasmin Smith, Justice Akpene Tambo, Detlef Virchow, Katharina Zinn

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## Table of Contents

1	General background information of the agricultural and food sectors .....	3
1.1	Pan-African policies and strategies .....	4
1.2	National (and regional) policies and strategies .....	4
1.2.1	Togo’s agricultural development plan .....	4
1.2.2	Strategy for Accelerated Growth and Employment Promotion (SCAPE) .....	5
1.2.3	National Agricultural Investment and Food Security Program (PNIASA).....	6
1.3	Data on food and nutrition security in Togo .....	8
1.4	Data on most relevant crops and value chains .....	8
1.4.1	Production .....	9
1.4.2	Consumption and nutrition status .....	9
1.4.3	Trade.....	10
1.5	National (and regional) innovation system.....	11
1.5.1	Research system and organizations .....	11
1.5.2	Innovation Platforms .....	12
1.5.3	Extension system and organizations .....	14
1.5.4	Private R&D activities .....	14
1.6	Key challenges, emerging needs and potentials in the agricultural sector .....	14
2	Most relevant value chains in the country .....	17
2.1	AIC Value Chains.....	17
2.2	Other relevant VCs .....	17
3	Innovations in value chains in the past 20 years .....	18
3.1	The most crucial limiting factors in Togo / AIC region / in AIC-Value Chains .....	18
3.2	The most important / beneficial innovations in the relevant Value Chains of Togo .	18
3.2.1	AIC-VCs .....	18
3.2.2	Other VCs and cross-cutting innovations.....	18
3.3	Most promising approaches for farmer and small business related VC innovations	18
4	Suggestions for collaboration .....	18
4.1	Promising agricultural products and value chains .....	19
4.2	A systematic assessment of promising partnerships for each promising innovation area.....	20
4.3	Some potential partners for the German collaboration: in science and research, private sector and NGOs and governmental organizations.....	20
4.4	Needed implementation research .....	20
5	References .....	21

## **List of Tables**

Table 1: Selected national economic and health-related data .....	8
Table 2: Top 10 crops produced by area, volume and value .....	9
Table 3: Overall agricultural growth indicators.....	9
Table 4: Food supply by tons, kg per capita and kcal per capita .....	9
Table 5: Togo's imports .....	10
Table 6: Togo's exports .....	10
Table 7: Country level Performance Indicators.....	15
Table 8: Selection of promising agricultural products /value chains.....	19

## **1 General background information of the agricultural and food sectors**

Togo is located in West Africa, bordering the Bight of Benin, between Benin and Ghana. Its total land area is 56,785 km<sup>2</sup>, the climate is tropical in the southern region and semiarid in the North. Of the total land area, 44% is utilized for cultivated crops, while another 2% supports permanent crops such as fruit- and nut-bearing trees. Agriculture is the most important sector of the economy of Togo. It employs 75% of the active population, the sector also accounts for 41% of GDP and it is the predominant livelihood means for the population. Food crops (mainly cassava, yams, maize, millet and sorghum) account for two-thirds of the production and are mostly used within the country. The cash crops produced in Togo are cocoa, coffee, cotton and, to a lesser extent, palm oil. These crops provide substantial income for smallholder farmers, and constitute 40% of the country's export commodities. Togo is a net importer of food. The main imported foodstuff is rice, although local rice production has increased significantly in the last two decades.

Togo's agricultural export is dominated by cotton. Cotton production is recovering after a long crisis and reached 82,000 tons for the 2012-2013 campaign. Growth in cereal production (including maize) has also increased remarkably, rising from 741,000 tons in 2000 to 1,265,000 tons in 2012, so that Togo has now become a net exporter of maize in the sub-region.

Environmental issues facing Togo include deforestation due to slash-and-burn agriculture, the use of wood for fuel and water pollution. Soil degradation is an emerging problem threatening the cotton commodity. Most cotton farmers are under production contract with a private company, which has the sole export and processing rights for cotton. Cocoa and coffee production appears less important than cotton, but a lot of informal cross-border trade affect the state records on these commodities. Togo is also known for the export of its rock phosphate, which constitute a major industry driving the economy—Togo is the world largest exporter of rock phosphate.

Agricultural productivity is low in Togo for several reasons, including lack of access to production assets, minimal training in the use of advanced production techniques, soil fertility maintenance issues, poor access to inputs and output market, amongst others.

The government of Togo put together the National Agricultural Investment and Food Security Program (PNIASA) that aims to transform the sector and ensure reduction of poverty and national development. The program concentrates on the following issues: (i) improving water management, (ii) the sustainability of farms, (iii) improved management of other natural resources, (iv) the development of the agricultural sector and the strengthening of the market, (v) the consolidation of institutions.

The agricultural investment plan will address five sub-programs as follows: (i) promotion of plant sectors, (ii) development of livestock production, (iii) development of fishery products, (iv) agricultural research and consultancy, (v) institutional strengthening and sectorial coordination.

The agricultural research capacity in Togo is sub-optimal and requires consistent upgrading to foster innovation. Togo's ASTI evaluation (<http://www.asti.cgiar.org/togo>) showed that the number of agricultural researchers in Togo increased rapidly in response to a general public-sector recruitment competition in 2009, which prompted the influx of a large number of (mostly MSc-qualified) researchers. Togo's agricultural researchers are either in their

thirties or their fifties. Given that a large number of researchers are set to retire in the coming years, further recruitment efforts are urgently needed. Agricultural research in Togo lies with the Institute Togolaise de Recherche Agronomique (ITRA), which was heavily dependent on the support it received from the World Bank through the National Agricultural Services Support Project (PNASA). A number of other research organization and NGOs are also carrying out research activities in Togo.

### **1.1 Pan-African policies and strategies**

*- pending further information -*

### **1.2 National (and regional) policies and strategies**

The Comprehensive Africa Agricultural Development Program (CAADP) is the focus of efforts by African governments at the initiative of the African Union (AU) and the New Partnership for African Development (NEPAD) to accelerate growth and reduce poverty and hunger in Africa. The main objective of CAADP is to help African countries to reach a higher level of economic growth through agriculture-led development, to reduce hunger, poverty and food insecurity and enable the development of exports.

In West Africa, the Economic Community of West African States (ECOWAS) is the responsible body for the implementation of CAADP/NEPAD. Based on CAADP policies, ECOWAS developed its regional agricultural policy (ECOWAP), which was adopted in January 2005.

In Togo, the ECOWAP/CAADP implementation process started with the harmonization of its policies, strategies and programs with the principles and objectives of CAADP. Togo is the first West African country to have signed a CAADP compact in 2009. Togo has not met the CAADP 10% expenditure target. The country has, however, surpassed the CAADP 6% growth target in 2005, 2008, and 2011

#### **1.2.1 Togo's agricultural development plan**

Togo's main objectives are reflected in the **SCAPE** (Stratégie de Croissance Accélérée et de Promotion de l'Emploi) document, which is based on lessons learned from the implementation of the interim and comprehensive poverty reduction strategy documents. It is a medium-term development framework (2013-2017) to achieve the objectives of the Government Policy Statement (GPS), the MDGs and the Authorities' Vision for an emerging Togo by 2030.

A scenario considered for that purpose is a strong and sustainable growth of about 7.1%, supported by ambitious policies such as the modernization of agriculture. Thus, the general objective of the **National Policy on Agricultural Development** (NPAD) of Togo is to promote sustained agricultural growth of at least 6% per year, and to substantially improve the income of producers in order to support an annual rural poverty reduction especially for the most vulnerable (women, youth) of at least 5%, and sustained improvements in food and nutrition security. The attainment of these objectives depends, among other things, on creating rural wealth through a competitive and sustainable agriculture, which is based on the promotion of small and medium-sized agricultural holdings by professionals and organized small producers. Also, these projects are consistent with (i) the PRSP-C (Comprehensive Poverty Reduction Strategic Paper) with regard to the strategic objective 1 (increase in agricultural productivity) in area 3 (promoting sources of growth) of Pillar 2 (consolidation of the foundations of strong and sustainable growth) and (ii) the **National**

**Agricultural Investment and Food Security Program (PNIASA)**, that serves as reference for all activities in the agricultural sector which mainly aims at increasing the income of farmers and improve their living conditions on a sustainable basis.

### 1.2.2 Strategy for Accelerated Growth and Employment Promotion (SCAPE)

In the long term, the strong political ambition is to bring Togo to reach in the next 15-20 years the group of emerging countries. To do this, comparative tracking of emerging countries indicates that Togo will have to profoundly transform the current structure of its economy to develop the secondary sector and more particularly the manufacturing industry, intensify the primary sector and improve the service sector from its informal stage to a more efficient and more professional level. All the same, it must reach the stage of middle-income countries in which the employment and income will be better distributed and poverty will be highly reduced.

This industrialization effort must obviously be based on the development of infrastructure, improvement of the business environment, reduction of factors of production costs and a more innovative and open to the world financial system fully assuming its financial intermediation mission. In its **National Sustainable Development Strategy (NSDS)**, Togo intends to build, by 2030, a society based on a harmonious social and economic development, environment friendly and safeguarding cultural heritage. The priorities identified by the government in the **Strategy for Accelerated Growth and Employment Promotion (SCAPE)** to accelerate progress towards sustainable development for the next ten years are reflected in the four strategic areas of the NSDS. These are: (i) the consolidation of economic recovery and the promotion of sustainable production and consumption, (ii) boosting the development of social sectors and promoting principles of social equity, (iii) improving environmental governance and sustainable management of natural resources, (iv) education and capacity building for sustainable development.

The mid-term (2013-2017) economic policy of the government will mainly seek to lay and strengthen the foundations of the vision for an emerging Togo by 2030. To achieve this, and in response to the challenges mentioned above, there is a need to adopt new priorities relating to: (i) accelerated growth, (ii) employment and inclusion, (iii) strengthening governance, (iv) reduction of regional disparities and the promotion of grassroots development. The first policy direction adopted focuses on strengthening the foundations of the economy and enhancing its potential to achieve an accelerated growth rate to respond to the double objective of improving income and creating jobs on one hand and consolidation of other export potential on the other. Over the coming years, investment will be the main driver of economic growth in Togo. The ambition is to achieve an overall investment rate consistently above 20% with a medium-term goal of 25% of GDP. The effort of public investment will be important initially and will be mainly channeled into the construction of basic infrastructure, production of essential public goods and capacity building and competitiveness of the domestic private sector, which must imperatively be enhanced to play a leading role in growth during the implementation of future economic programmes.

A large part of private investment, which is expected to grow gradually to supplement public investment in the mid-term, should indeed come for from foreign direct investors and the diaspora. It could essentially focus on mining, agriculture, infrastructure with a proved economic and financial profitability, finance sector and construction.

Finally, to make growth inclusive and pro-poor, investment in human capital is also a priority. To ensure the sustainability of economic growth, the government will seek to lay the foundations of growth on development poles better distributed across the country and consolidate the sub-regional economic integration of Togo by the effective implementation of the strategic concept of development corridors.

### **1.2.3 National Agricultural Investment and Food Security Program (PNIASA)**

The first stage in the national implementation of CAADP was the adoption of the **National Agricultural Investment and Food Security Program (PNIASA)**, through the signing, by the different partners, of a treaty spelling out the stakeholders' responsibilities in the implementation of this program. The PNIASA is the Priority Action Plan (PAP) of the PRSP for the agricultural sector. It is part of the Pillar II devoted to the consolidation of foundations for strong and sustainable growth. This second strategic pillar reflects the willingness of the Government to create, over the next three years, a new foundation for a progressively strong, sustainable and sustained growth. To do this, interventions to promote growth are channeled through nine priority areas. These are: (i) strengthening structural reforms, (ii) improving the business environment, (iii) promoting the sources of growth, (iv) developing growth-supporting infrastructures, (v) strengthening regional integration, (vi) managing effectively of natural resources, the environment and the living environment, (vii) redistributing growth fruits, (viii) creating job and (ix) promoting research.

For the implementation of the ECOWAS/CAADP/NEPAD project, Togo developed a PNIASA operation plan with a hierarchical framework of actions to be undertaken in the agricultural sector so as to meet the objectives of poverty reduction and food insecurity by 2015. By 2015, the PNIASA aims to attain an agricultural annual growth of at least 6%. It is organized into five sub-programs, among which three focus on essential subsectors, namely agriculture, livestock farming, and fishing. Two cross-cutting sub-programs focus on agricultural research and advice and on institution strengthening and sector coordination. The program is based on sustainable investments for achieving an annual growth rate estimated at 6% for plant production, 4.1% for animal production and 4.3% for fish production by 2012.

#### **PNIASA's Sub-programmes**

##### *Sub-programme 1: Promoting the plant industry*

This sub-programme aims at meeting the country's needs in terms of food products, increasing exports of traditional products and promoting new export crops. This sub-programme involves a farming workforce estimated to 1,500,000 in 2009 and divided into farmers' organizations and farming over 45,000 ha in 2008. The first component of this sub-programme is focusing on the sustainable management of natural resources. It focuses on the fight against the deterioration of natural resources, the restoration of wasted lands and resources due to anthropic activities and the promotion of forestry. The second component—rural infrastructures—is devoted to the full control of the water needed to the increase of production and to infrastructures that can foster the marketing of products. With regards to the third component—food products—PNIASA focuses on intensive production of cereals, particularly maize, rice and sorghum, roots and tubers including cassava and yam. For the fourth component—promoting and diversifying export products—PNIASA's investments will primarily focus on traditional value chains, notably: (a) cotton, whose annual production will reach more than 75,000 tons in 2015, (b) coffee, whose production will reach 26,000 tons,



(c) cocoa, whose production will be about 14,300 tons in 2015. Apart from these products, PNIASA aims at promoting new export products including pineapple, cashew nut and banana. The objective is to reach 65,000 tons in 2015 with an induced growth of 22.5%.

*Sub-programme 2: Animal production*

It aims to meet the national needs in terms of livestock products through intensive production of livestock farming and fostering small and middle scale enterprises in that sector. According to 2009 estimates, the actions of this sub-programme will benefit 1,225,100 livestock farmers. PNIASA also plans to support the promotion of small and medium enterprises (SMEs) to develop agribusiness value chains such as eggs, meat, and milk.

*Sub-programme 3: Fish production*

It will contribute to meet national needs in terms of fish products through the development of fish farming on one hand, and the development of continental and maritime fishing on the other hand. The first component—intensification of fish production—will cover the following key activities: construction and pond management, production and distribution of fry, production and distribution of feedstuffs. It will cover a target population in 2015 estimated 8,500 fish farmers. The second component aims to support continental and maritime fishing. Targeted production and growth objectives in 2015 are 39.59 tons and 6.5% respectively.

*Sub-programme 4: Agricultural research and advice*

Thus sub-programme is essentially dedicated to development research and aims to increase productivity and adapt to climate change through the development of new genetic materials, the development of integrated management technologies for soil fertility, phytosanitary and zoosanitary protection, processing products, and sustainable funding of research to sustain the intensification of crop systems and increasing production of growth-generating products.

*Sub-programme 5: Institution strengthening and sector coordination*

It aims to establish a political, legal and institutional environment for the development of agriculture and the achievement of food security. It will contribute to: (i) improve the institutional environment of the sector, (ii) capacity building of public officials and the profession, (iii) improving service delivery by public and private structures, (iv) developing an agricultural development policy, (v) centralizing information on the performance of the sector, (vi) improving planning, implementation, and concerted monitoring and evaluation of investment operations, (vii) improving the absorption capacity of funding and (viii) improving food and nutrition security in Togo and in the sub region.

### **1.3 Data on food and nutrition security in Togo**

The following section includes information about important socio-economic indicators, production and trade data and data on consumption and nutrition status.

**Table 1: Selected national economic and health-related data**

<b>Indicator</b>	<b>Data</b>	<b>Year</b>
Population, total	6,993,244	2014
Population growth (annual %)	1.7	2014
Rural population (% of total population)	61	2014
GDP per capita, PPP (constant 2011 international \$)	1,387	2014
GNI per capita, PPP (constant 2011 international \$)	1,228	2014
Poverty headcount ratio at \$2 a day (PPP) (% of population)	73	2011
Poverty headcount ratio at \$1.25 a day (PPP) (% of population)	52	2011
Poverty headcount ratio at national poverty lines (% of population)	59	2011
Rural poverty headcount ratio at national poverty lines (% of rural population)	73	2011
Agricultural land (% of land area)	71	2012
Agricultural irrigated land (% of total agricultural land)	no data	
Agriculture value added per worker (constant 2005 US\$)	681	2014
Agriculture, value added (% of GDP)	42	2014
Access to electricity, rural (% of rural population)	9	2012
Employees, agriculture, female (% of female employment)	48	2006
Employees, agriculture, male (% of male employment)	61	2006
Employment in agriculture (% of total employment)	54	2006
Literacy rate, adult total (% of people ages 15 and above)	60	2011
Ratio of female to male secondary enrollment (%)	53	2007
Mortality rate, under-5 (per 1,000 live births)	85	2013
Malnutrition prevalence, weight for age (% of children under 5)	17	2010
Malnutrition prevalence, height for age (% of children under 5)	30	2010
Maternal mortality ratio (modeled estimate, per 100,000 live births)	450	2013

Source: World Bank, <http://data.worldbank.org/country>

### **1.4 Data on most relevant crops and value chains**

The most relevant crops in Togo include tubers (cassava and yams), maize, millet and sorghum. Cash crops include cocoa, cotton and palm oil. Production and consumption data are provided below.

### 1.4.1 Production

**Table 2: Top 10 crops produced by area, volume and value**

Area harvested (ha)		Production volume (tons)		Production value*	
Top 10	Share of Total	Top 10	Share of Total	Top 10	Share of Total
Maize	31.3	Cassava	25.5	Maize	15.5
Beans, dry	15.7	Yams	20.1	Yams	13.9
Sorghum	11.6	Maize	19.3	Meat, chicken	9.7
Cassava	8.0	Sorghum	6.7	Meat indigenous, chicken	9.7
Cocoa, beans	5.7	Oil, palm fruit	4.0	Cassava	9.0
Seed cotton	5.4	Rice, paddy	3.9	Cocoa, beans	7.2
Millet	4.0	Vegetables, fresh nes	3.7	Sorghum	6.5
Yams	3.9	Beans, dry	2.9	Eggs, hen, in shell	4.5
<b>Groundnuts</b>	<b>3.6</b>	Seed cotton	2.1	Beans, dry	3.8
Rice, paddy	3.1	Cocoa, beans	1.7	Rice, paddy	3.4
Rank 18: Cashew nuts	0.3	Rank 13: Groundnuts	1.2	Rank 16: Groundnuts	1.6
Rank 24: Soybeans	0.2	Rank 26: Cashew nuts	0.2	Cashew nuts	no data
		Rank 34: Soybeans	0.03	Soybeans	no data

\* Gross Production Value (constant 2004-2006 million US\$)

Note: AIC value chains are marked in red; nes refers to Not elsewhere specified.

Data: average 2011-2013, FAOStat, accessed 9 July 2015

**4Table 3: Overall agricultural growth indicators**

years	Total factor productivity	Agricultural productivity	Budgetary allocation (%)	Contribution of Agricultural to GDP (%)	Agricultural GDP (million US\$)
<b>1995</b>	0.091	-0.004	3.7	37.76	413.1
<b>1996</b>	-0.082	0.131	4.1	40.83	589.6
<b>1997</b>	0.007	0.030	4.2	42.19	666.2

### 1.4.2 Consumption and nutrition status

**Table 4: Food supply by tons, kg per capita and kcal per capita**

Food supply quantity (tons)		Food supply quantity (kg/capita/yr)		Food supply (kcal/capita/day)	
Top 10	% of total	Top 10	kg	Top 10	kcal
Cassava and products	21	Cassava and products	112	Maize and products	579
Yams	15	Yams	81	Roots & Tuber Dry Equiv	567
Maize and products	13	Maize and products	70	Cassava and products	336
Roots & Tuber Dry Equiv	10	Roots & Tuber Dry Equiv	53	Rice (Milled Equivalent)	231
Rice (Paddy Equivalent)	7	Rice (Paddy Equivalent)	35	Rice (Paddy Equivalent)	231
Sorghum and products	4	Sorghum and products	24	Yams	222
Rice (Milled Equivalent)	4	Rice (Milled Equivalent)	23	Sorghum and products	188
Vegetables, Other	4	Vegetables, Other	20	Sugar (Raw Equivalent)	101
Wheat and products	2	Wheat and products	12	Sugar, Raw Equivalent	101
Sugar, Raw Equivalent	2	Sugar, Raw Equivalent	10	Sugar, Refined Equiv	101

Data: average 2009-2011, FAOStat, accessed 22 July 2015

### 1.4.3 Trade

**Table 5: Togo's imports**

Import volume (tons)		Import value (US\$)	
Top 10	Share of Total	Top 10	Share of Total
Rice – total (Rice milled equivalent)	20.8	Sugar refined	14.7
Sugar refined	15.7	Wheat	11.6
Wheat	14.2	Food prep nes	9.4
Oil, palm	8.4	Rice – total (Rice milled equivalent)	7.0
Sugar Raw Centrifugal	6.9	Cigarettes	6.7
Food prep nes	4.6	Oil, palm	6.7
Tomatoes, paste	2.3	Malt	3.8
Malt	2.1	Meat, chicken	3.5
Oil, linseed	2.1	Sugar Raw Centrifugal	2.8
Meat, chicken	2.0	Tomatoes, paste	2.5
Oil, groundnut	0.3	Oil, groundnut	0.3
Oil, soybean	0.1	Oil, soybean	0.1

Data: average 2010-2012, FAOStat, accessed 31 Oct 2015

Note: AIC value chains marked in red: nes refers to Not elsewhere specified.

**Table 6: Togo's exports**

Export volume (tons)		Export value (US\$)	
Top 10	Share of Total	Top 10	Share of Total
Cocoa, beans	29.4	Cocoa, beans	47.8
Cotton lint	19.9	Cotton lint	28.9
Beverages, non alcoholic	6.9	Beverages, non alcoholic	3.8
Sugar refined	6.3	Sugar refined	1.9
Maize	3.2	Coffee, green	1.8
Coffee, green	3.0	Sugar confectionery	1.7
Ice cream and edible ice	2.7	Oil, palm	1.5
Flour, wheat	2.4	Ice cream and edible ice	1.5
Bran, wheat	2.4	Maize	1.0
Oil, palm	2.3	Milk, skimmed dried	1.0
Cashew nuts, with shell	1.0	Cashew nuts, with shell	0.2
Soybeans	0.3	Soybeans	0.2
Cake, groundnuts	0.8	Cake, groundnuts	0.1
Cake, soybeans	0.4	Cake, soybeans	0.1

Data: average 2010-2012, FAOStat, accessed 31 Oct 2015

Note: AIC value chains marked in red.

The import of rice accounts for more than 20% of the import volume, but for only 7% of the import value. Sugar accounts for more than 14% of the import value, followed by wheat and prepared food. Cocoa and cotton are the most important and most valuable export goods and together account for about half of the export volume and for more than 76% of the

export value. The AIC value chains, groundnut, cashew and soy, account for only small shares of import and export trade in Togo.

## **1.5 National (and regional) innovation system**

### **1.5.1 Research system and organizations**

#### **1.5.1.1 International**

Some of the international organizations active in Togo's agricultural research are listed below:

- Africa Rice Center (AfricaRice)—focus on rice;
- International Institute of Tropical Agriculture (IITA)—focus on crops;
- International Center for Tropical Agriculture (CIAT)—focus on crops and soils;
- Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)—focus on crops, livestock, food and energy security, public policy.

#### **1.5.1.2 National**

The Togolese Agricultural Research Institute (ITRA) was established by Decree No. 97-105 / PR on 23rd July 1997 and its main mission is to coordinate the national agricultural research system and conduct research to promote agricultural development across the country. ITRA's institutional vision is to be a research institute that meets the needs of Togolese farmers and addresses international issues of agriculture and sustainable development. It has a scientific strategy based on the division of the country into four agro-ecological zones for research (CRA). CRAs are centers of excellence for research on specific products:

- CRA - Coast (SARC) based in Davie;
- CRA - Forest area (CRAF) based in Kpalime;
- CRA - Wet Savannah (CRASH) based in Kolokopé;
- CRA - Dry Savannah (CRASS) based in Kara.

ITRA has five priority research areas:

- Natural resources management;
- Food and industrial crops;
- Animal and fish production;
- Food technology, nutrition and quality;
- Socio-economic studies, technology transfer and training of partners.

The organization of activities in research programmes hosted in the CRAs based on their agricultural vocations. A concerted schedule of research activities with producers through a participative mechanism to diagnose the challenges, to approve the research budget of the year. Existence of a transfer mechanism of technologies with the Support Mechanism for research system, which also contribute to assess transferred technologies, as well as assessing their adoption and impact. Existence of a Supervisory Board (at the ministerial level), a Board of Directors and Science Board to endorse programme budgets for research and monitoring and evaluation of activities.

The list below presents some of the national research organizations that carry out research activities in the agricultural and food sectors of Togo:

## ***Program of Accompanying Research for Agricultural Innovation (PARI)***

- Government:
  - Direction de la Protection des Végétaux (DPV), Ministère de l'Agriculture, de l'Élevage et de la Pêche (MAEP)–focus on crops;
  - Direction des Statistiques Agricoles de l'Information et de la Documentation (DSID), MAEP–focus on socio-economics;
  - Institut Togolaise de Recherche Agronomique (ITRA), MAEP–focus on crops, livestock, natural resources, off-farm post-harvest, river and lake, socio-economics.
- Higher Education:
  - École Supérieure d'Agronomie (ESA), Université de Lomé–focus on crops, livestock, pastures & forages, off-farm post-harvest, forestry, agricultural engineering, socioeconomics;
  - Faculté des Sciences (FS), Université de Lomé–focus on crops
  - École Supérieure des Technologies et Biologies Alimentaires (ESTBA), Université de Lomé–focus on off-farm post-harvest.

### **1.5.2 Innovation Platforms**

#### **1. FARA Platforms**

The Promotion of Science and Technology for Agricultural Development (PSTAD) project led by the Forum for Agricultural Research in Africa (FARA) used multi-stakeholder innovation platforms in its the Dissemination of New Agricultural Technologies in Africa (DONATA) initiative. The innovation platforms were used to facilitate the rapid dissemination and adoption of innovations along the value chains of cassava and maize in Togo, Benin, Burkina Faso and Sierra Leone. The DONATA constituent of the PSTAD was implemented in Togo from 2011 to 2014. Activities were implemented in the Northern region of Togo, notably in the Kara and Savannah regions. Quality protein maize (QPM) and particularly, *Obatanpa*, was the technology promoted.

In the implementation of the project, six innovation platforms were developed including four in the Kara region and two in the Savannah region. All platforms were developed around the production of maize grains and seeds, marketing of the product, its usage in cooking local dishes and baby cereals. Today, six innovation platforms are operational at different levels, based on actors' motivation. They are run by management committees and some of them have signed a Memorandum of Understanding among actors.

The platforms helped in addressing the constraints of poor access to product markets and low prices following good harvests. The platforms also created a strong collaborative environment, which increased trust among stakeholders along the value chain. Some constraints that affected the success of the initiative include the inadequate understanding and application of the concept of an innovation platform, and the lack of effective technical backstopping support to facilitate the innovation platforms (Arinloye *et al.*, 2013).

#### **2. CORAF Platforms**

The West and Central African Council for Agricultural Research and Development (CORAF/WECARD) established six innovation platforms in Togo, Niger and Mali to test improved white pepper varieties. The women platform actors who organized themselves in a

cooperative gained US\$ 9,000 in 2012 which increased to US\$ 16,000 in 2013 (Njoya *et al.*, 2015).

***Platforms within the framework of the Programme de Productivité Agricole en Afrique de L'Ouest (PPAAO)***

Today, five innovation platforms are in a development process led by actors in the five economic region of Togo. These include:

- Savannah Region: guinea fowl
- Kara Region: rice
- Central Region: soya
- Plateau Region: small ruminants
- Coastal Region: tomato

***Innovation platform of the livestock-market gardening project (PLM):***

A platform for Wangash cheese was developed within the context of the Milk and Market Gardening Project in 2011 in the Eastern zone of the Coastal Region. It is still operational and needs to be evaluated and supported.

***GIFS CORAF Platforms***

To manage soil fertility in the West of the Savannah Region and in the East of Kara and Coastal Regions, innovation platforms were developed as part of the implementation of CORAF's competitive project "Development and Promotion of Integrated Management of soil fertility through a production improved system conducive to increase the productivity of key food products in Benin, Togo and Burkina Faso."

***Promoting crop integrated management technologies to increase plantain productivity among small producers in Western and Central Africa***

The CORAF/WECARD competitive funds project "Promoting crop integrated management technologies to increase plantain productivity among small producers in Western and Central Africa" was implemented in Togo from 2011 to 2013, based on a Memorandum of Understanding for a sub-grant signed between the African Centre for Research on Banana and Plantain (CARBAP) and the Togolese Institute for Agricultural Research (ITRA). The project was also implemented in Benin, Cameroon, Congo, Ghana, and the Democratic Republic of Congo (DRC). The following activities were undertaken to achieve the targeted objectives: (i) conduct a survey to define the baseline situation for the plantain baseline, (ii) creation of a pilot center to host the infrastructures needed in the implementation of activities, (iii) creation of innovation platforms, (iv) capacity building for actors, (v) development and monitoring of experimentation plots and a seed manufacturer, (vi) support to regional and national monitoring and evaluation missions, (vii) coordination of activities.

There are achievements, but there were also challenges in the implementation of these activities, including: the vagaries of the weather, particularly the scarcity of rains, which disturb the development of experimentation plots and plants, and other challenges related to platform operations.

### **1.5.3 Extension system and organizations**

The public institutions providing extension services in Togo include the Ministry of Agriculture, Livestock and Fisheries, the Togolese Agricultural Research Institute (ITRA) and Ecole Supérieure d'Agronomie (ESA), Université de Lomé. ITRA is Togo's main agricultural research and development (R&D) agency, accounting for more than 70% of agricultural researchers in the country in 2011. A farmer-based organization, Federation des Unions de groupements des Producteurs de Café et de Cacao du Togo, also provides extension services. The Farmer Field School extension model has been used in a few agricultural projects. Extension services in Togo are presently limited by a decline in the number of extension officers, weak organization of producers, particularly of small-holder farmers, lack of harmonization of agricultural extension strategies, and lack of an extension policy.

### **1.5.4 Private R&D activities**

There is no known NGO or private-sector company conducting in-house R&D activities in Togo. Some NGO's or private companies, however, outsource their research to the Togolese Agricultural Research Institute (ITRA) or the Université de Lomé (Stads *et al.*, 2014).

## **1.6 Key challenges, emerging needs and potentials in the agricultural sector**

Challenges of Togo's agricultural sector include:

- Climate change: For instance, the floods of 2010 caused 21 deaths, inundated 3,947 houses and destroyed 7744.24 ha of farms and several bridges. Also, there is erratic rainfall;
- High rate of deforestation;
- Limited access to improved seeds and fertilizers;
- Very low agricultural productivity;
- Land insecurity;
- Weak extension and advisory services;
- High rate of post-harvest losses (between 25% and 60% of production).
- Additional issues which affect the agricultural sector directly or indirectly include human health and nutrition. Malnutrition rates in Togo are alarming: infant mortality rate is 78/1000, prevalence of weight insufficiency is 16.6%, growth delay is 29.7%, and the rate of babies underweight is 11.1%. Excessive malnutrition and lack of micro-nutriments coexist. According to the 2010 STEPS Survey report, 22% of Togolese suffer excessive malnutrition. In view of this problem and based on recommendations and multiple significant commitments by State authorities, many strategies are envisioned and set as government priorities in the fight against malnutrition in all its forms.

Based on the general approach (see Africa-wide study Chapter 4) and in pursuit of efficiency and effectiveness, investment by Germany into the agricultural and food sector are suggested in those African countries, which:

- Show actual progress in sustainable agricultural productivity driven by related innovations, as indicated by comprehensive productivity measurement and innovation actions on the ground;
- Have a track record of political commitment to foster sustainable agricultural growth, as indicated by performance under CAADP, and



- Prioritize actions for hunger and malnutrition reduction and show progress, but where agricultural and rural development and nutrition interventions are likely to make a significant difference, as indicated by public policy and civil society actions.

Based on this approach, investments into the agricultural and food sector of Togo are unlikely to have a significant effect on food and nutrition security improvements in the country.

**Table 7: Country level Performance Indicators**

Indicators	Index	Performance (%)
1. Number of Years with more than 6% agricultural growth (2005 to 2014)	4	40
2. Percentage point change in TFP index between 2001 and 2008	-6	0
3. Number of years with more than 10% government expenditure (2005 to 2014)	0	0
4. Average share of agricultural GDP spent on R&D (2005 to 2011) in %	0.4	43
5. Steps in CAADP completed	6	75
6. Percentage point improvement in undernourishment between 2001 and 2011	9.8	60
7. Global hunger index (2014)	13.9	30
<b>Total score (weighted)</b>		<b>35</b>

Source: Own computation based on World Bank (2015), FAO (2015), ASTI database and von Grebmer *et al.* (2014)

Note: the % performance (rounded) is defined as follows for the respective indexes: 1. % out of 10 years; 2. classes: if <1, or negative= 0; 1 – 7= 30, 8-15= 60, > 15= 100; 3. % out of 10 years; 4. % of the AU target value of 1% spent on R&D; 5. % of the desired 8 steps; 6. classes: if < 2 = 0; if 3-5= 30; if 6-10=60, if>10=100; 7. classes: if < 12= 0; 12-16: = 60; 17-20: = 60; > 20= 100.

Total score (weighted) performance and need to invest: (sum of (1.+2.)/2 (expected growth performance); + sum of (3.+4.+5.)/3 (expected government commitment); + sum of (6.+7.)/2 (performance in food and nutrition security and need)) divided by 3.

#### Results of assessment (Table 7):

##### Expected agricultural growth performance:

- Togo has increased its agricultural growth by more than the annual 6% agricultural growth target defined by CAADP only for four years, between 2005 and 2014 ([www.resakss.org](http://www.resakss.org)).
- In addition, total factor productivity in Togo has declined by 6% between 2001 and 2008 (Fuglie and Rada, 2011). This indicates that Togo's innovation performance over this period was poor.

##### Government commitment:

- Togo has a track record of political commitment to foster sustainable agricultural growth by being active in the CAADP process and having completed six of the eight steps in the CAADP process ([www.resakss.org](http://www.resakss.org)).
- However, the Togo government has not shown willingness to invest in agricultural sector. In no single years the government has invested more than 10% of total government expenditures (CAADP target) in the agriculture between 2005 and 2014 ([www.resakss.org](http://www.resakss.org)).
- In addition, Togo spends only 0.4 % of its agricultural GDP on agricultural research and development, which is much lower than the Sub-Saharan Africa average ([www.asti.cgiar.org](http://www.asti.cgiar.org)) and the AU target value of 1% spent on R&D. This entails that

the country's commitment to research and development into the agricultural and food sector is not yet sufficient.

Food and nutrition security progress and need:

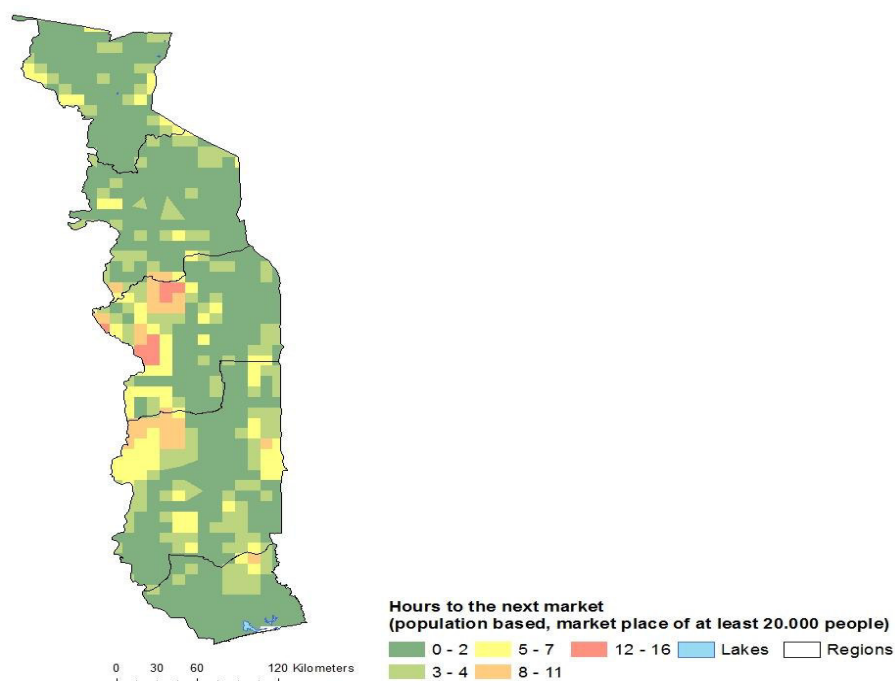
- Togo is prioritizing actions for hunger and malnutrition reduction and show a slightly less than 10% improvement in undernourishment between 2001 and 2011 (FAO 2014).
- In addition, Togo has the GHI score value of 13.9 reflecting a serious level of hunger (von Grebmer *et al.*, 2014)<sup>1</sup>. This makes the investment into the agricultural and food sector in Togo very urgent to fight the high numbers of food insecure people.

Over all, the economic, political, and social/nutrition framework in Togo does not seem to suggest accelerated investments into the agricultural and food sector of the country.

Nevertheless, there are **potentials** in the agricultural sector, which include the large land area still not cultivated. At present, only 45% of the 3.4 million cultivable hectares are under cultivation. There is a high potential for rice production: an estimated 86,000 ha of land is suitable for irrigation and a total of 185,000 ha of lowlands in total are usable for rice production, but only 29,000 ha have actually been developed.

Transport intensive products should be promoted in areas that are well connected to markets, whereas the remote areas should focus on low volume and livestock value chain segments as shown in Figure 1 below.

**Figure 1: Distance to markets**



Data sources: Hours to next market - HarvestChoice, 2015;

Administrative areas: <http://www.gadm.org/>, accessed 20.9.2015

Inland water bodies: <http://www.diva-gis.org/gData> (water bodies), accessed 20.9.2015

<sup>1</sup> GHI score Values less than 5.0 reflect low hunger, values from 5.0 to 9.9 reflect “moderate” hunger, values from 10.0 to 19.9 indicate a “serious” level of hunger, values from 20.0 to 29.9 are “alarming,” and values of 30.0 or greater are “extremely alarming”(IFPRI,2014).

## 2 Most relevant value chains in the country

### 2.1 AIC Value Chains

#### Groundnut

In Togo, groundnut is produced mainly in the regions of Plateaux, Kara and Savanes.

#### Cashew

There was a decline in cashew production from 32,000 tons in 1983 to about 17,000 tons in 2012. There is increasing interest in reviving the cashew industry in Togo since the sector has a huge potential for job creation either at the production, processing or marketing level. A cashew processing plant, Cajou Espoir, was established in Tchamba in the central region of Togo in 2004. It employed about 40 women who processed 12 tons of cashew in 2005. In 2012, the same processing employed about 350 women who were able to process about 1,200 tons of cashew.

#### Soy

Soybean farming in Togo has led to some women boosting their income by cooking and selling soy-based products (e.g. doughnuts or tofu) in their communities. Togo has a service provider and producer organisations (SPPOs) known as *Soja Nyo*, which is an innovative mechanism for including small producers in the soy supply chain. A French company, Jules Brochenin SA in partnership with Label d'Or are implementing a project aimed at producing and supplying quality organic soybeans in Togo. In 2014, they had about 2,783 smallholder producers working on 3,072 ha, and obtained a yield of 6,620 tons of organic soybean. With support from the programme Cadre Intégré Renforcé (CIR), the government of Togo recently launched an ambitious project to improve the production of soybean for the period 2015 to 2017. The project aims to contribute to increased export earnings and revenues from soy.

### 2.2 Other relevant VCs

The ([www.2scale.org](http://www.2scale.org)), which was funded by the Netherlands government and implemented jointly by International Fertilizer Development Center (IFDC), International Centre for development oriented Research in Agriculture (ICRA) and Base of the Pyramid Innovation Center (BoP Inc.), created a domestic market and value chain for yellow maize to reduce importation of yellow maize for poultry feed in Togo.

The project has created new income streams for small-scale maize farmers, and helped poultry producers stay in business despite a dramatic increase in feed costs. For instance, in 2009, maize farmers involved in the project sold 114 tons of yellow maize to poultry producers, earning revenues of € 26,000. In 2012, they sold 300 tons, earning over € 70,000.

The West and Central African Council for Agricultural Research and Development (CORAF/WE CARD) with technical backstopping by the International Institute of Tropical Agriculture (IITA), created maize value chains in Togo within the Promotion of Science and Technology for Agricultural Development (PSTAD) project. Maize was the selected crop because of its contribution to food security as the region's main staple food crop and major source of producers' incomes.

### **3 Innovations in value chains in the past 20 years**

#### **3.1 The most crucial limiting factors in Togo / AIC region / in AIC-Value Chains**

The limiting factors include:

- Decline total agricultural R&D spending in Togo;
- Only a very limited amount of the funding ITRA receives from the government is allocated to actual research programmes; hence, ITRA is highly dependent on unstable donor support (Stads *et al.*, 2014);
- Weak extension and advisory services;
- Low productivity in smallholder farming systems.

#### **3.2 The most important / beneficial innovations in the relevant Value Chains of Togo**

##### **3.2.1 AIC-VCs**

In Togo, service provider and producer organisations (SPPOs) are a new type of grouping that have been established with support from the Centre International de Développement et de Recherche (CIDR), to enable small producers to gain sustainable access to high value markets by involving them in strategies and decisions about what happens downstream in the supply chain (Pernot du Breuil and de Romémont, 2008). A well-known example of such SPPO in Togo is *Soja Nyo*, which is an innovative mechanism for including small producers in the soy supply chain. A benefit for producers in the SPPOs include higher and secure income, and better nutrition. It enables farmers to stock food products and sell them when prices are higher. It has also improved their social capital.

##### **3.2.2 Other VCs and cross-cutting innovations**

In the 2 SCALE project, poultry producers buy grain from maize farmers, and sell poultry manure back to the farmers as organic fertilizer.

#### **3.3 Most promising approaches for farmer and small business related VC innovations**

Service Provider and Producer Organizations (SPPOs) are considered one of the most promising approaches to support innovation.

### **4 Suggestions for collaboration**

Efforts that will yield good agricultural innovation in Togo agriculture should give attention to the issues of:

- Low productivity of the smallholder system, through generation, dissemination and use of new and improved production technologies. This will call for good support of the research system to generate demanded technologies;
- The development of effective agricultural input delivery system to meet the demand of the smallholders;
- Facilitation of an efficient policy system that engages all stakeholders in developing supportive policies for trade within and outside the country;
- Encouraging sustainable market orientation and the establishment of economic structures, such as producer cooperatives, supply contracts, and business services.

The innovation systems approach should be entrenched as the mode for implementing agricultural research and development activities.

#### 4.1 Promising agricultural products and value chains

Besides assessing the returns of investments into institutional innovations in Ethiopia, analysis to choose the most promising value chains in the country is also undertaken. In compliance with the availability of data and the purpose of the study four criteria that focus on poverty and market potential are used to select the five most promising agricultural products from the long list of agricultural products the country produces and sells. The first indicator, the trade potential (revealed comparative advantage (RCA) index), is computed to identify value chains over which the country has revealed (but not potential) comparative advantage. In the present case, the RCA index compares the share of a given agricultural product in Togo's export basket with that of the same product in total world exports. The second indicator, yield gap, is used to assess the expected return of the envisaged Germany investment on the given AIC country value chains. A third indicator, average yield growth, is used to examine the potential of the product for poverty reduction. The production share of total supply is also used to assess the present integration of the poor in the market (relevance).

The summary of the five most promising value chains based on Revealed Comparative Advantage (RCA) index, average yield growth and relative yield gap is reported in Table 8 below. The production share, RCA index, actual yield growth and relative yield gap for the GIZ-selected value chain(s) is also reported at the bottom of the table, when they are not included in the list of the first five most promising value chains.

**Table 8: Selection of promising agricultural products /value chains**

Rank	Rank by RCA		Rank by yield progress**		Rank by relevance of crop	
	Name of agricultural product	RCA index (2011)*	Name of the crop	Average annual yield growth (2005 to 2012)	Name of agricultural product	Production share of supply (2011)*
1	Cocoa, beans	32	Sweet potatoes	26	Cottonseed	146
2	Cake, cottonseed	15	Seed cotton	7	Nuts and products	117
3	groundnuts	14	Sorghum	3	Cassava, products	115
4	Flour, roots and tubers	5	Rice, paddy	3	Cocoa Beans	111
5	Sesame seed	2	Groundnuts, with shell	1	Yams	103
GIZ Selected products	Cashew nuts, with shell	1.04	Soybeans	0.28	Soybeans	100
	Cake, soybeans	0.00	Cashew nuts, with shell	-0.13	Groundnuts (Shelled)	100

Source: \*Own computation based on FAO 2015 data.

Note: \*\*a minimum of 0.5% production (volume) share threshold is used as a screening (crop relevance) criteria.

Results of assessment (Table 8):

- The trade potential (revealed comparative advantage (RCA) index) is above 1 for cocoa beans, cotton seed, ground nuts (GIZ selected value chain), roots and tubers, and sesame seed. This indicates that Togo has comparative advantage (in the export) of these commodities. The RCA value for one of the GIZ selected value chain, cashew, is also above 1 again unveiling the country's revealed comparative advantage in the export of Cashew. On the other hand the revealed comparative advantage index for the other GIZ selected value chain, soybean, is less than 1 indicating that Togo has comparative disadvantage (in the export) of these crops;
- In Togo, the average yield progress of all the relevant crops (those that satisfy the 0.5% production volume share) except sweet potatoes<sup>2</sup> was either modest or dismal over the CAADP period (2005 to 2012). In relative terms, the yield performance indicating progress suggests that sweet potatoes and cotton seed are the most promising crops in Togo. The GIZ selected value chains experienced a dismal yield growth performance;
- In terms of relevance (production share of supply) cottonseed, nuts and products, cassava and products, cocoa Beans and products and yams are the leading. The total production of the all of these products exceeds the total supply. The total supply of two of the GIZ selected products (soybeans and groundnut) is domestically produced.

#### **4.2 A systematic assessment of promising partnerships for each promising innovation area**

**GIZ:** Pineapple and poultry value chain in the Coastal region, coffee-cocoa in Plateaux Region, cashew in the Central region; training on agricultural entrepreneurship, training field.

**FARA:** Concept of IAR4D, dissemination of technologies and agricultural good practices, promotion of innovation platforms.

**CORAF/WECARD:** Promotion of crop integrated management technologies.

#### **4.3 Some potential partners for the German collaboration: in science and research, private sector and NGOs and governmental organizations**

A good partnership between Germany and Togo would be a fruitful collaboration between the two countries. In perspective, the partnership should include a relation with the Ministry of Agriculture, Livestock, and Waterworks, Research institutions (ITRA, Universities), Development institutions (ICAT), farmers' organizations, civil societies, non-governmental organizations and the private sector.

#### **4.4 Needed implementation research**

*- pending further information -*

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<sup>2</sup> The average yield growth of sweet potatoes would have been only 6%, had the 2005 yield growth, which is 145%, truncated.

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