REPUBLIC OF TOGO
Work – Liberty – Fatherland

MINISTRY OF AGRICULTURE
LIVESTOCK AND FISHERIES

(MAEP)

NATIONAL RICE DEVELOPMENT STRATEGY (NRDS)

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SUMMARY

One of the major challenges facing Togo is to reduce the volume of rice imports which are costing the country an average of four billion (4,000,000,000) FCFA annually.

However, Togo has land that is potentially suitable for rice production: irrigable land (alluvial plains, lowlands) and floodplains. It is estimated that potentially there are about 185,000 ha. of lowland. Paddy production has risen from 62,300 tonnes in 2000 to 85,540 tonnes in 2008 which represents an annual growth of 4%.

An analysis of the GDP for agriculture which amounted to approximately 40% of total GDP for the period from 2000 to 2008 shows that food production's annual contribution to GDP averaged 24.6%, of which 3% was for rice.

The Poverty Reduction Strategy Paper (PRSP) geared towards the Millennium Development Goals (MDG) acknowledges the role of the agricultural sector as the driving force behind economic growth and awards it an important place. Consequently, in its agricultural policies the Government of Togo is placing the emphasis on growth market crops such as maize, sorghum, rice, cowpeas, yams and manioc. In the case of rice, it plans to double production by 2015 through the National Agricultural Investment and Food Security Plan (PNIASA) which is rooted in the ECOWAP/CAADP. The PNIASA is the unifying framework for all the activities of the agricultural sector and its operation plan was co-signed by the national and international parties on 4 February 2010.

The choice made by Togo to increase rice production takes into account:

i) Consumer preferences and indications of an increasing demand in both the rural and urban environments for this food which has become part of the daily menu of the Togolese. The national annual per capita consumption of white rice averages 15 kg, representing requirements of 90,000 tonnes for a population of 6 million inhabitants (DSID 2010). According to the available statistics, local rice production can supply barely half of the country's needs and the deficit is still being made up by imports. These imports rose from 36,270 tonnes in 2000 to 73,976 tonnes in 2008, an increase of 103%. In terms of value, the cost of the imports during the same period rose from 2,048,000,000 FCFA to 4,166,000,000 FCFA.

ii) Concerning the comparative advantage of rice production:

According to the SOFRECO study (1996), rice cultivation as compared with the cultivation of other crops is more profitable in terms of revenue per hectare and earnings for a day's labour. Other research (KADJOSSOU, 1996) has shown that, as far as price is concerned, local rice produced in sufficient quantity can compete with imported rice. In an analytical study, KPERIM (2008) concluded that local rice production in Togo offers a comparative advantage in relation to imported rice.

To sum up, the development of rice production in Togo is a three-pronged issue: sovereignty and food security, the reduction of the volume of imports, and economic and social growth. Given the situation described above, Togo needs to tackle a number of basic issues related to land, to the supply and use of modern inputs (seed, fertilisers), new technologies, access to credit and especially to post-harvest activities and the marketing of the rice.

The Togo National Rice Development Strategy (TOGO-NRDS) has determined the following objectives:

- To increase the areas available for cultivation from 36,492 to 66,500 ha;

- To improve yields from 2.4. to 3.5T/ha;

- To increase production for the periods 2008-2013 and 2013-2018 from 85,540 to 232,750 tonnes of paddy, i.e. 139,650 tonnes of milled rice by 2018.

The above projected production based on the white rice requirements of the population by 2018 (see Table 5) will enable the country to stop importing rice and cover its needs to the level of 128%. If this is to be achieved, the fact that there are insufficient high quality human resources (researchers, technicians and extension officers will need to be remedied by timely and appropriate recruitment and training.

Consequently, the NRDS provides for well-targeted capacity building activities in relation to local stakeholders and farmers, and to rice production, processing and marketing. With respect to governance, the Togo NRDS will be part of the PNIASA coordination mechanism under whose authority it falls.

Determining requirements

Firstly, the NRDS defined needs by strategic axis, without taking any current or planned projects and programmes into consideration. Secondly, it analysed the comparison between the existing and planned projects and programmes intended to supply the requirements and fill the needs expressed by the NRDS. This comparison made it possible to identify the principal real needs (which will also be referred to as gaps).

ABBREVIATIONS AND ACRONYMS.

AfricaRice	:Africa Rice Centre
ANSAT	:National Food Security Agency of Togo
APIM-Togo	:Professional Association of Micro-Finance Institutions
CAADP	:Comprehensive African Agriculture Development Programme
CATI	:Technical Irrigation Support Centre
CILSS	:Inter-state Committee to Combat Drought in the Sahel
CIPS	:Inter-ministerial Strategic Steering Committee
CPC	:Affiliated Group of Cereal Producers
DA	:Department of Agriculture
DAER	:Department of Development and Rural Facilities
DRAEP	:Regional Office for Agriculture, Livestock and Fisheries
DGR	:Department of Rural Engineering
DSID	:Agricultural Statistics, Information, and Documentation Directorate
ECOWAS	:Economic Community of West African States
ESOP	:Service Company for the Farming Associations
FAO	:United Nations Food and Agriculture Organisation
FCFA	:African Financial Community Franc
FFS	:Farmer Field School
FMO STABEX	:Framework of Mutual Obligation for the Stabilisation of Exports
FUCEC-Togo	:Umbrella Body for the Savings and Loans Cooperatives of Togo
GDP	:Gross Domestic Product
ICAT	:Institute for Advice and Technical Support
IGA	:Income Generating Activities
INCV	:National Institute of Food Crops
IRAT	:Tropical Agricultural Research Institute

IRCC	:Institute of Coffee and Cocoa Research
ITRA	:Togolese Agricultural Research Institute
IVC	:Inland Valley Consortium
KG	:Kilogram
MAEP	:Ministry of Agriculture, Livestock and Fisheries
MAPTO	:Togolese Farming Alliance Movement
MDG	:Millennium Development Goals
MEF	:Ministry of Economics and Finance
MFI	:Micro Finance Institutions
NERICA	:New Rice for Africa
NRDS	:National Rice Development Strategy
OFID	:OPEC Fund for International Development
OP	:Farming Association
PADAT	:Support Plan for the Agricultural Sector in Togo
PAPD	:Djagblé Plain Development Plan
PARTAM	:Development and Rehabilitation Plan for the Agricultural Land in the Mission-Tové Zone
PBVM	:Agricultural Development Plan for the Mono River Basin
PIP	:Public Investment Programme
PLAR-IRM	:Participatory Learning Research and Action for Integrated Rice Management
PNIASA	:National Agriculture and Food Security Investment Programme
PRSP	:Poverty Reduction Strategy Paper
RNA	:National Agriculture Census
SAKSS	:Strategic Analysis and Data Management System
SME	:Small and Medium Enterprise
SOFRECO	:French consultancy for sustainable economic and social development
T	:Tonnes

TFP : Technical and Financial Partners

TSC : Technical Steering Committee

VAPE : Agricultural Development and Promotion of Livestock

WAEMU : West African Economic and Monetary Union

ZAAP : Planned Agricultural Development Zone

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INTRODUCTION

Rice is ranked as the second most produced food cereal in the world but only 6 to 10% is sold on the international market.

In Togo the consumption of this food ranks third after maize and sorghum and has become so much a part of the national diet that not a day passes when rice is not consumed in both the rural and urban areas. According to the DSID study on the project entitled "Reinforcement of the availability and accessibility of rice production statistics: a contribution to the emergency initiative for rice in sub-Saharan Africa", the average national annual per capita consumption amounts to 15 kg. With an average rate of population increase of 2.4% per annum, Togo's annual white rice requirements will reach 108,803 tonnes by 2018, according to NRDS estimates.

Local rice production does not cover the needs of the country and consequently, despite Togo's own potential to produce rice, the deficits in supply are still being made up by imports.

Following its experience with large irrigated areas for rice production, Togo is now inclining more towards the development of lowlands where private-sector initiatives are recording good results with respect to sustainable and appropriate achievements.

The statistics of the last 10 years show improved yields, which have risen from 1.2 T/ha. to 2.5 T/ha. Within the same period, national production rose from 62,300 tonnes to almost 90,000 tonnes of paddy, leading to a decreased volume of imports, which reached their peak in 2006 (104,191 tonnes of bleached rice).

The present National Rice Development Strategy draws its guidelines from the National Agricultural Investment and Food Security Programme (PNIASA) which is rooted in the ECOWAP/CAADP. The PNIASA is the framework of reference for all agricultural development activities in Togo. Its operating plan was co-signed by all the Partners in development on 4 February 2010. Being anchored in this way is important to Togo's plans to double national rice production by 2018 by increasing the land areas under cultivation and improved yields.

The comparative advantage of local rice in relation to imported rice was already demonstrated in 1996 by several studies (SOFRECO and KADJOSSOU) which resulted in two main conclusions regarding: (i) profitability in terms of revenue per hectare and earnings for a day's work and (ii) the potential for local rice to compete with imported rice on the basis of cost.

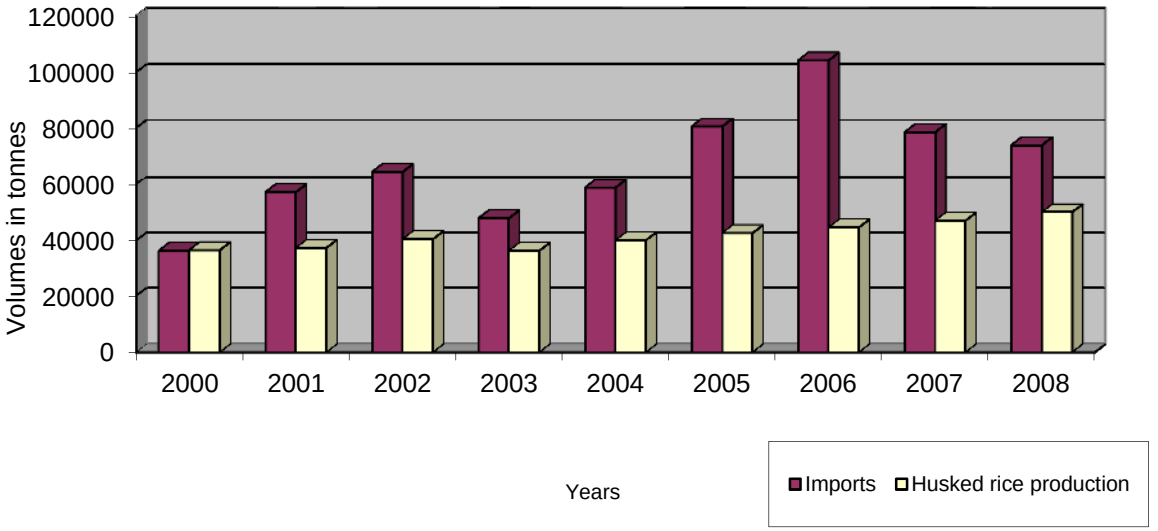
STATUS OF THE NATIONAL RICE SECTOR

2.1. The place of rice in national policies and strategies

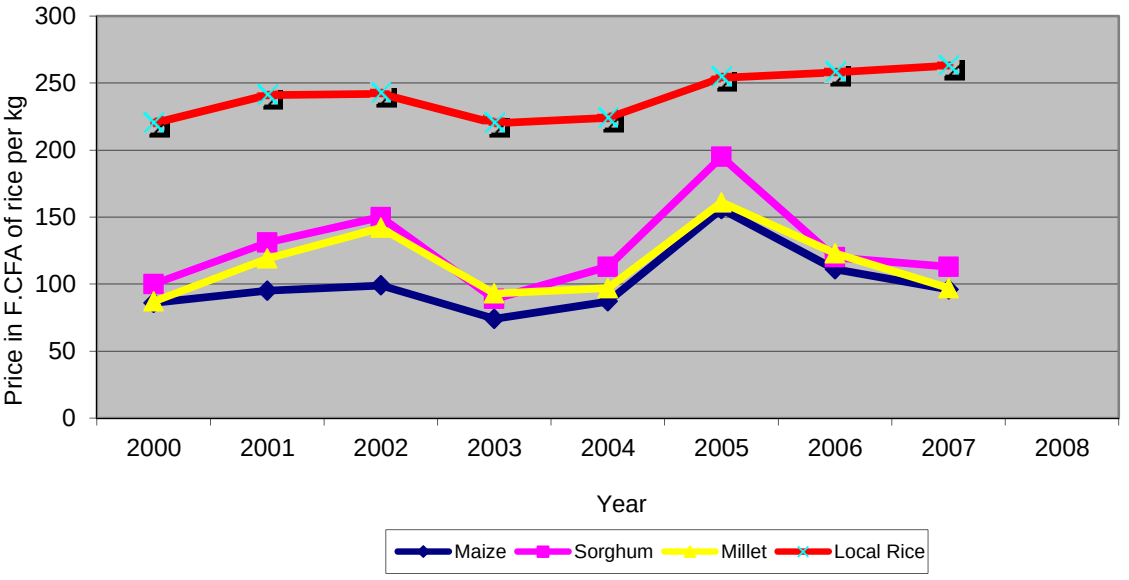
Overall, agriculture including livestock forestry and fishing represents Togo's leading economic sector. It employs the majority of the working population and is responsible for up to 36.6% of the Gross Domestic Product (GDP). Despite climatic uncertainties, the share of food production including rice in the agricultural GDP averaged 24.6% annually during the period 2000-2008; **rice accounted for about 3%.**

Togo possesses land that is potentially suitable for rice production: irrigable land (alluvial plains and lowlands) and floodplains. There is an estimated potential of 185,000 hectares of lowlands. Making use of this land capital requires some development. The rice cultivation areas in use are

developing from year to year and now amount to a little over 36,000 hectares. Some recent progress has been noted in rice production: production of paddy rose from 62,300 tonnes in 2000 to 85,500 tonnes in 2008 which represents annual growth of 4%. Graphs 1 and 2 below show the connections respectively between husked rice production and imports, and a comparison of the evolution of producer prices and three substitute products over the same period. The various agricultural development strategies and policies adopted by the country can be credited with the results outlined above.



Graph no. 1 : Imports and production of rice in tonnes



Graph no. 2: Producer price fluctuations of four key products

Source: DSID

The Poverty Reduction Strategy Paper (PRSP) adopted by Togo and geared towards the Millennium Development Goals (MDG) is based on four pillars, including the consolidation of the bases for strong and sustainable growth (Pillar 2). The PRSP rightly acknowledges the agricultural sector's role as a driving force behind economic growth and gives it an important place. It provides for an increase in agricultural productivity. The Government plans to achieve economic growth by making sure that it obtains the expected substantial benefits from production of foodstuffs, especially rice. It is convinced that to increase production, there must be absolute respect for technical specifications, water control, achieving the best producer prices, land security and agricultural practices that respect the environment. To transform these commitments into practice, the following measures are envisaged:

- creation of a department to be responsible for seed
- reinforcement of the structuring of the rural world, the professionalization of agricultural occupations and the development of joint trade organisations
- definition of a new land security policy
- rehabilitation of seed production and plant material centres
- promotion of local agricultural inputs supply services
- establishment of an appropriate information system on agricultural markets
- promotion of the integrated management of soil fertility in an effort to foster the use of organic fertilisers
- development and enhancement of hydro-agricultural sites, lowlands and small multi-purpose reservoirs

At the sectoral level, the National Agricultural and Food Security Investment Programme (PNIASA) has been drawn up and endorsed by all the partners in the development of the sector. The operational plan of the unifying framework for all the sector's activities identifies rice as a growth market crop. Consequently, the PNIASA plans to double national rice production by 2015 through increasing areas of cultivation and improving yields. Already through specific activities (Revival of Agricultural Production Strategy - Emergency Plan 2008 – 2010) production is expected to increase by 34%. The PNIASA, divided into 5 sub-programmes, with 14 sections, provides for annual growth of 6% for the plant sectors, including rice, through sustainable investment. Section1, *Intensification of food production,* from sub-programme 1,and plans to direct investment mainly towards:

- hydro-agricultural development
- improved seed production and distribution
- supply and control of fertilisers and pesticides
- mechanisation of agriculture
- processing, packaging and marketing of food products
- promotion of sustainable funding mechanisms for the food producing sectors
- support and assistance for the Small-Scale Farmers' Associations in production and operations management
- land security and the sustainable management of natural resources.

These measures will make it possible to achieve a significant reduction in rice imports which reached over 100,000 tonnes in 2006 (about 60% of consumption).

2.2 Consumer preferences

The consumption of rice has become part of the diet of the people of Togo. Consumed for centuries in the Danyi uplands and also in the Fazao Mountains, rice has gradually moved into the urban centres. In both the rural areas and the urban centres, it is now part of the daily menu. The budget and consumption survey carried out in 1987 showed that there was an annual per capita consumption of 21.9 kg and 8.6 kg respectively in the urban and rural environments, a national average of 15 kg. Subsequently, national consumption rose from 61,200 tonnes in 2000 to 74,000 tonnes in 2008.

Production does not fully cover the nation's requirements and it has to rely on imports. According to the available statistics, local production supplies only less than half of national requirements; the deficit is made up by imports.

Local rice is just as popular as imported rice. Price variations in imported rice have scarcely any effect on the price of local rice, suggesting that there is no correlation between the consumer prices of the two types of rice. Prices on the local market are based much more on the law of supply and demand for foodstuffs, especially maize.

2.3 The gender factor in production, processing and marketing activities

In Togo, the agricultural sector remains the sphere in which female labour is most present. In general, women account for almost 60% of agricultural workers, with the same proportion in the rice production sector.

In common with every other kind of food farming, production activities that require physical strength (clearing of land, ploughing, hoeing) are mainly carried out by men. Harvesting and post-harvesting activities including husking are mostly carried out by women and to some extent by children.

The marketing of rice is the preserve of women. Very active in the production areas and making advances in the informal sector, they collect and distribute white rice as both wholesalers and retailers.

The men, who tend to have a monopoly on access to land, are generally the owners of most of the rice farming operations. However, thanks to various income generating programmes for women, particularly rural women, it is not uncommon nowadays to see women setting themselves up in rice production.

2.4 The comparative advantage of domestic rice production

Togo has a number of advantages with respect to rice production. These include:

- land potentially suitable for rice production;
- diversity of cereal production (maize, rice, sorghum, etc.) which can operate in favour of rice with respect to production levels and ease of preparation;
- existence of national and regional markets;
- dynamism of the producers;
- the fact that the country has many micro-finance institutions.

According to the SOFRECO study (1996), rice cultivation is more profitable than other crops in terms of earnings per hectare and daily income. Other research (KADJOSSOU, 1996) has shown

that from the cost perspective, local rice produced in sufficient quantities can compete with imported rice.

KPERIM (2008) showed through an analytical study that the production of local rice in Togo offers a comparative advantage in relation to imported rice. He also studied the production processes which offer a comparative advantage in relation to importation.

To sum up, the development of rice production in Togo is a three-pronged issue: sovereignty and food security, the reduction of the trade balance deficit, and economic and social growth.

CHALLENGES AND OPPORTUNITIES RELATED TO THE DEVELOPMENT OF THE RICE SECTOR

The Government of Togo has long been attempting to respond to the challenge, among others, of water control to secure agricultural production and reduce poverty. It will then be able to (i) feed the population, (ii) improve producer earnings (iii) contribute to bringing in foreign currency (iv) create jobs (v) and successfully manage sustainable and competitive agriculture in harmony with the environment..

In fact, the policy of water control took concrete form in the decade between 1970 and 1980 with the development and provision of facilities for the large irrigated areas (Mission-Tové, Agomé Glozou, Koumbéloti, Tantiégou, Amou-Oblo, Sodo, Kpélé-Tutu) for rice production. But the fact that the beneficiaries themselves were only marginally involved and that the operations were on too large a scale made it impossible for the various projects to survive once foreign funding came to an end. Other activities followed in the framework of promoting small-scale irrigation, such as the technical irrigation support centres (CATI). In that instance also, for the same reasons, the projects did not survive.

In addition to this unfortunate situation, the rice deficit got worse every year as a result of strong urban demand and dietary changes in favour of increased consumption of rice, even in the rural environment. It rose from 10,000 tonnes in 2000 to 30,000 tonnes in 2006. The estimated rice production of over 70,000 tonnes in 2006 now supplies only about 50% of national consumption. Consequently, the country is obliged to import rice to cover the deficit despite the existence of water and land potential for growing rice.

3.1 Local rice potential

The policy of water control was reviewed from the standpoint of developing small areas, in particular the lowlands, and the rehabilitation of small water reservoirs with the effective involvement of the farmers in defining, designing and achieving improvements and in monitoring developments. This approach is currently the subject of extension activities and is already beginning to show signs of visible socio-economic interest: yields have risen from 1.2T/ha to 2.5T/ha in the rural farming environment. There is also an increase in cultivated areas and an increasing number of rice farmers.

Table 1: Development of rice production from 2005 to 2008

Crop	Item	Year			
		2005/2006	2006/2007	2007/2008	2008/2009
Paddy rice	Cultivation area (ha)	30,723	30,723	32,717	36,492
	Yield (T/ha)	2,202	2,553	2,834	2,689
	Production (T)	72,860	76,284	80,480	85,540

Source : DSID

It should also be noted that production and processing capacities (equipment and technology) are still at the traditional small-scale level and consequently need to be reinforced.

3.2 Social issues

In the rural environment, agricultural activity predominates through the number of people it employs (according to the national agricultural census of 1996); it is also in the rural environment that the highest poverty index is to be found (74.3% as against 61.7% at the national level) according to the results of the standard survey Questionnaire on the Basic Indicators of Well-Being (QUIBB) conducted in 2006. The most vulnerable sectors of society are women and young people who have more difficulty than men in gaining access to land and credit. Women represent 52% of the population of Togo as a whole and 75% in the rural areas. They constitute almost 60% of agricultural workers and are particularly involved in rice growing and market gardening.

3.3 The land tenure system

The land tenure system is governed by customary law and modern law. In Togo, there are two forms of landed property: state property and private property (both collective and individual). The property law has been in existence since 1974, but has not been enforced. There is evidence of serious land issues, varying from region to region. Various attempts to find solutions are suggested in the PNIASA, especially the creation of Planned Agricultural Development Zones (ZAAP) designed to reinforce secure and equitable access to land resources.

3.4 Cross-border and regional issues

Togo has a number of zones in common with neighbouring countries which would lend themselves to the integration of land and water resources management: the Volta Basin with Burkina Faso to the North, Ghana to the West and Benin to the East; the Oti plains in the North between Burkina Faso and Ghana; the Mô plain in the central region next to Ghana.

At present, only one experiment is under way with Benin. This is the development of the Mono river basin; Togo and Benin have pooled their resources to mobilise the surface water of the Mono River Basin and created the Nangbéto hydroelectric dam which released downstream the cultivation area of about 40,000 hectares of irrigable land divided between the two countries.

3.5 Lessons learned from previous rice cultivation research and development

Agricultural research activities began in Togo in 1940 with the creation of the French Institute for Agricultural Research. After the 1960s, a number of other institutes were created (IRAT, IRCC, etc.). In 1997, the agricultural sector was restructured with the National Agricultural Services Support Project (PNASA) and three institutions were created. ITRA, the Togolese Agricultural Research Institute, which is involved in agricultural research, ICAT, the Institute for Advice and Technical Support which is responsible for extension activities and for organising the farmers and the General Secretariat (GS) which is responsible for running the technical activities of the sector and designing agricultural policy.

ITRA carries out research and development activities in the following areas:

- Varietal improvement;
- Improvement of growing techniques;
- Crop protection;

- Description of the lowlands;
- Data collection on the lowlands;
- Basic development of the lowlands;
- Support for the adoption and distribution of the NERICA (New Rice for Africa) programme;
- Study of the economic impact of NERICA and other varieties on households.

3.5.1. Varietal improvement

Over 2,000 types or varieties of rain-fed upland rice, lowland rice or irrigated rice have been introduced and evaluated in cooperation with AfricaRice (formerly ADRAO) over the last 10 years. The results of these evaluations based on agronomic characteristics (yield, cycle, tillering, height, behaviour in relation to biotic and abiotic stresses and quality of grains) enabled the 70 most productive strains/varieties to be identified on site. The 70 varieties including the NERICA have been evaluated on the ground using the method of participatory varietal selection. At the end of the participatory evaluations, 21 varieties, including 10 rain-fed upland, 7 lowland and 4 irrigated, were selected by the majority of the producers.

3.5.2. Improvement of growing techniques

Participatory evaluations of growing techniques in a number of rice cultivation areas have enabled farmers to appreciate the diversity of the systems helping to improve soil fertility and making it possible to assess the level of profitability of the various sowing techniques and of the rice cultivation systems in the lowlands.

Training farmers in rice cultivation management using the methods of Participatory Learning and Action Research for Integrated Rice Management (PLAR-IRM) and Farmer Field Schools has resulted in a marked improvement in yields.

3.5.3. Crop protection

Experiments in the integrated management of rice diseases, pests and self-propagation, engaging in research in all the rice cultivation areas of the country, have made it possible to:

- ❖ recognise that the most serious diseases like Rice Yellow Mottle Virus that is rampant in other countries of the sub-region do not pose a threat to rice production in Togo;
- ❖ train the producers of the Zio Valley (a coastal region) and those of Kpélé–Tutu (high plateau region) to recognise the symptoms of the main diseases in their area; and
- ❖ provide the Zio Valley and Kpélé-Tutu producers with methods for the integrated management of these diseases;
- ❖ recommend that the first weeding should take place between 20 and 25 days after sowing and the second between 45 and 50 days after sowing to combat self-propagation.

3.5.4. Support for the adoption and distribution of NERICA

The involvement of the producers in the process of evaluation and development of new technologies through varietal selection programmes (VSP) (in the districts of Amou, Zio, Kpélé Adéta, Ogou, Anié, Bassar and Tone) allowed the farmers to assess the new varieties and choose among them using their own criteria. This led to the adoption of a number of new varieties including the NERICA and to the revival of rice production in these areas in 2003.

3.5.5 Study of the impact of the new varieties on households

The study of the impact of the new varieties on households carried out in the district of Amou revealed:

- improvement in the nutrition of the users;
- increased earnings which then enabled a number of family needs to be satisfied: health care, school fees, purchase of semi-urban land and bicycles, etc.

At the conclusion of its research and development activities, ITRA perfected a diversified range of productive varieties for the three different ecologies (upland rain-fed, lowland and irrigated) together with integrated and participatory management approaches to the rice production systems.

In order to make the production and distribution of rice more successful and thereby contribute to food security, it would be worth engaging in the following short, medium and long-term activities:

- supporting the distribution and adaptation of new varieties including the NERICA (New Rice for Africa) currently being introduced into the farming environment;
- building hydro-agricultural dams to irrigate the rice crop;
- increasing financial support for rice research and development institutions;
- promoting and structuring the rice sector to provide producers with good quality seed to ensure better production;
- making inputs available at a price that producers can afford;
- intensifying the use of organic fertilisers (green fertilisers, compost, manure, etc.);
- encouraging the use of herbicides and less toxic pesticides in the battle against the enemies of rice;
- advocating the basic development of the lowlands with simple and cheap investment which, most importantly, can be copied by the producers without recurrent burdens on the state;
- giving priority to local production over imported rice in the markets;
- encouraging certified training, refresher courses, etc.

3.5.6. Development and equipment of the lowlands;

Togo's agriculture, like that of the West African sub-region, is rain-fed. The success of the agricultural season is never guaranteed because there is no control over water. The State is making it a priority to rectify this situation. The results of the National Agricultural Census (RNA, 1996) provide an estimate of the resources that can be mobilised, namely 2.4% of arable land.

The irrigated areas currently with full or partial water control amount to only 2,300 hectares, or about 1% of potentially irrigable land. The developments are mainly based in the coastal, upland and savanna regions, where rice and sugarcane are being grown, together with involvement in market gardening.

In terms of achievements, the first development work related to rice production was initiated between 1965 and 1970 by the Chinese and involved large expanses of land. Later, in the context of promoting small-scale irrigation, Irrigation Technical Support Centres (CATI) were created, with

the support of French cooperation, through the Department of Rural Development and Equipment (DAER formerly DGR).

The most recent activities have aimed to foster a better knowledge of the lowlands and to stimulate small development projects and enhance these ecosystems. It was on that basis that ITRA, with the financial support of AfricaRice (formerly ADRAO), through the Inland Valley Consortium (IVC) of the FAO and the European Union (FMO STABEX 91-94), between 1997 and 2003 carried out the work of identifying and describing of the lowlands, as well as setting up a national data base. The FAO Special Programme for Food Security (SPFS) led pilot development and equipment projects of the lowlands in the coastal and Kara regions between 2000 and 2002. FMO STABEX did the same in the central and savannah regions.

Generally speaking, the activities conducted in the context of water control are more concerned with the large areas (alluvial plains) that are more difficult to manage than the lowlands. Most of the work being done in the context of the various projects is in a state of advanced decline because of the low level of involvement of the beneficiaries as regards the conception, the elaboration and the implementation of the projects. Despite the proclaimed policy, there has been little activity in the sphere of development and enhancement of the lowlands. The reasons can be found among the following:

- The low level of knowledge about the lowlands;
- The inadequacy of skills available to become involved in the sub-sector;
- The low level of extension support for the lowland farmers.

3.6 Human and institutional capacities

Although there is a need to build the human and institutional capacities of the Ministry of Agriculture, Livestock and Fisheries, in the present strategy, the stress in this domain is on reinforcing ITRA and ICAT which play an important role with respect to development and distribution of technologies.

ITRA has seven researchers (five agricultural engineers and two doctors) working on rice research. Of these seven, only two are working full time on rice. This situation creates some restrictions on successfully conducting the research into the different areas of specialisation.

ICAT also suffers from an insufficiency of staff, as regards both numbers and training.

PRIORITY ACTION AREAS

The priority action areas have been determined on the basis of the following facts:

- the lack of use of good quality seed;
- the seed sector is not well organised;
- research has perfected varieties suited to rain-fed rice production with which most farmers are not familiar;
- the lowlands responsible for over 60% of national production are mostly not developed;
- mechanisation of rice cultivation needs to be further developed;
- the producers cannot obtain credit for growing their crop.

In view of these realisations, particular emphasis will be laid on the following activities:

- organisation of the seed sector (planning, production and distribution);
- distribution of the varieties suited to rain-fed rice production, including the NERICA;
- making inputs (seed, fertilisers and pesticides) available to the producers;
- exemption from customs duties for the import of agricultural inputs and equipment;
- facilitation of access to credit for producers;
- improvement of the quality of local rice (packaging and presentation);
- facilitation of access to markets.

VISION AND SCOPE OF THE TOGO NRDS

5.1. Objectives

To double rice production by 2018, action will need to be taken to allow current production of paddy to increase by 17%, by taking action with respect to the four following major areas: seed, fertilisers, improved technologies, post-cropping and marketing.

The relevant production objectives are presented in the table below:

Table 2: Cultivation area, yield and production in 2008 classified by ecology and their projections to 2018

	Rain-fed upland ecology (10%)			**Lowland ecology** (60%)			**Irrigated ecology** (30%)			**Total**		
	Area. (ha)	Yield (t/ha)	Prod (t)	Area	Yield	Prod (t)	Area. (ha)	Yield (t/ha)	Prod- (t)	Area (ha)	Yield (t/ha)	Prod (t)
2008	6,934	1.23	8,554	20,070	2,56	51,324	9,488	2.70	25,662	36,492	2.34	85,540
2013	10632	1.42	15,108	30,776	2,94	90,650	14,549	3.11	45,325	55,957	2.70	151,083
2018	12635	1.84	23,275	36,575	3,81	139,650	17,290	4.04	69,825	66,500	3.5	232,750

Source: DSID and NRDS figures

To ensure that the NRDS can provide sustainable assistance for these actions, now is the time to build the capacities of the human resources (agricultural technicians and researchers) currently available. Table 3 below shows the situation of existing and required technical personnel.

Table 3: Existing and required personnel

Year	**Agricultural researchers with Masters or Doctorate**			**Research Technicians**			**Extension Officers**		
	Total	Specialist in rice cultivation (full time)	Specialist in rice cultivation (part-time)	Total	Specialist in rice cultivation (full time)	Specialist in rice cultivation (part time)	Total	Specialist in rice cultivation (full time)	Specialist in rice cultivation (part time)
2009	7	2	5	5	2	3	73	37	36
2014	13	6	7	8	4	4	83	47	36
2018	15	7	8	8	4	4	92	52	40

5.2 Actions to be carried out

The Togo NRDS will be constructed around three (03) main elements:

- Capacity building of local stakeholders and farmers;
- Support for production;
- Support for processing and marketing

5.2.1 Capacity building of the stakeholders

This will be done through training and motivation of the farmers who will be selected on the basis of rigorous criteria that need to be established. This innovative exercise will allow the beneficiaries to become professionals and consequently ready to take over the farming activities designed to serve future generations.

5.2.2 Support for production

Support will essentially take the form of modernising the irrigation infrastructures, building warehouses close to the production zone, organising the supply of inputs and hastening the creation of Planned Agricultural Development Zones (ZAAP) with a clear definition of the conditions for exploitation, in an effort to provide solutions to land issues and to open up production areas through the construction of rural roads.

5.2.3 Support for processing and marketing

This will consist of increasing the number of rice-processing plants (after rehabilitation of the two existing ones, at Kara and Dapaong), encouraging the development of parboiling the rice and the improvement of the quality of rice through compliance with the proper techniques of husking and drying: to this end, pamphlets will be published and distributed on the topic.

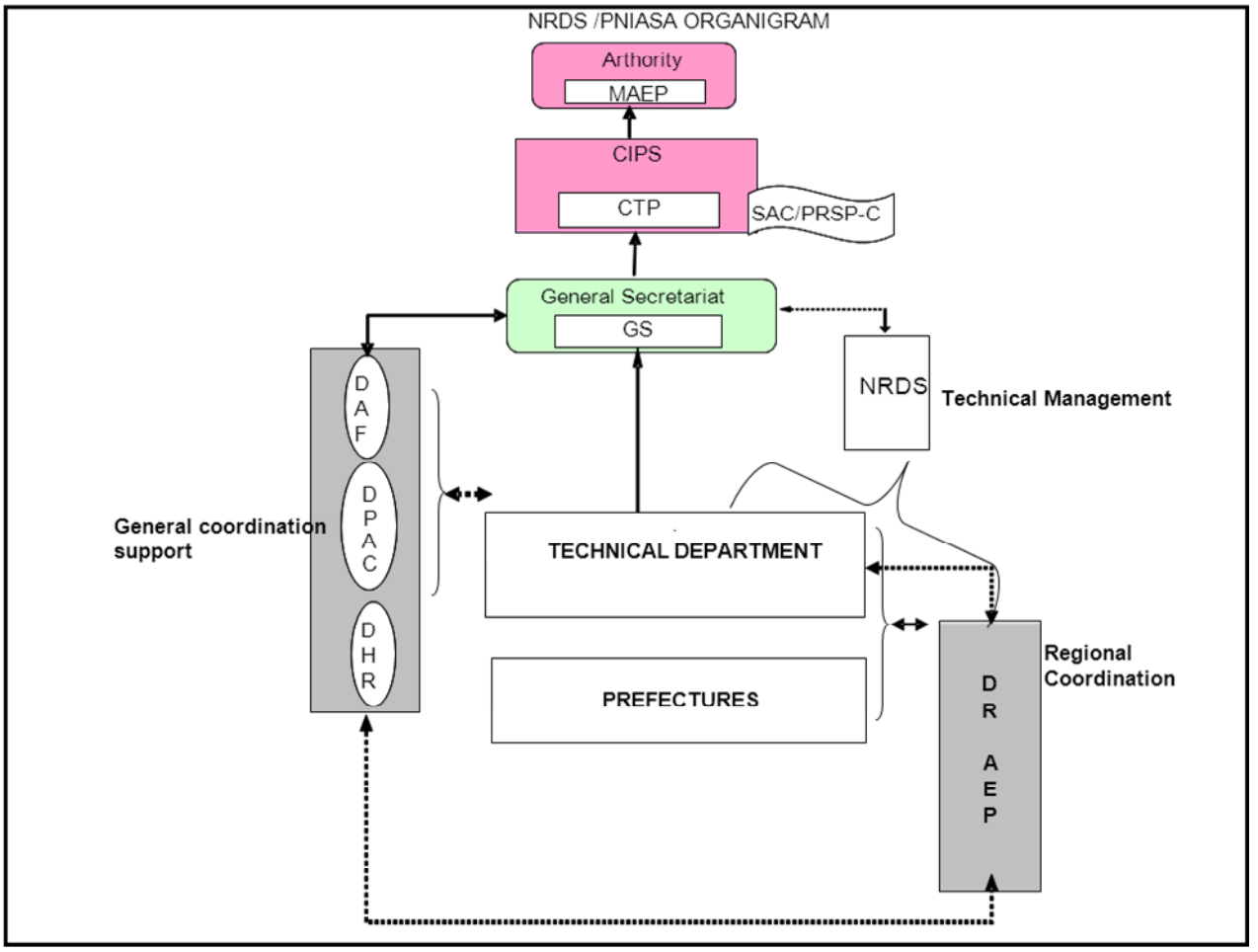
5.3 Governance of the NRDS

The NRDS will be implemented in compliance with the sectoral agricultural policies.

The NRDS is rooted in the PNIASA which is itself based on a sectoral approach plan with its own implementation, monitoring and evaluation mechanisms. As a result, the implementation, monitoring and evaluation of the NRDS will be coordinated by the single plan that is common to all the activities of the agricultural sector. This plan will be consistent with the approaches of the institutional framework of the PRSP. In this regard, the Ministry of Agriculture, Livestock and Fisheries (MALF) has full authority over the work of the NRDS and its Minister chairs the Inter-ministerial Strategic Steering Committee (CIPS). CIPS consists of all the ministerial stakeholders, representatives of the agricultural profession, civil society and the private sector and of the Technical and Financial Partners (TFP). The General Secretariat of the MAEP, because of its key role and responsibilities in organising, coordinating, and general supervision of the programmes and institutions and for maintaining inter-sectoral technical dialogue, will act as the base authority and will take charge of the technical coordination of the Technical Steering Committee (TSC) of the NRDS. The TSC, the only one in the framework of the PNIASA, consists of all the technical stakeholders of CIPS. At the regional level, actions will be implemented under the coordination of the Regional Departments of Agriculture, Livestock and Fisheries (DRAEP).

The Specialist Group on Plant Production of the national node of the Strategic Analysis and Skills Management System (SAKSS) run by the Department of Agriculture (DA) will run the NRDS coordination unit to monitor the implementation and management of the information required for following up what progress has been made, documenting successful outcomes and what lessons have been learned. This process of review and learning is intended to improve the formulation and implementation of the policies and programmes involved in carrying out the NRDS and to facilitate its monitoring in the framework of the Comprehensive African Agriculture Development Programme.

The institutional governance framework for the NRDS is below:



MAEP = Ministry of Agriculture, Livestock and Fisheries
CIPS = Inter-ministerial Strategic Steering Committee
TSC (CTP) = Technical Steering Committee
SAC/PRSP-C (CSA/DSRP-C) = Sectoral Agricultural Committee /Poverty Reduction Strategy Paper - Complete
GS (SG) = General Secretariat
DAF (DAF) = Department of Administration and Finance
DPAC (DPCA) =Department of Planning and Agricultural Cooperation
DHR (DRH) = Department of Human Resources
DRAEP = Regional Office for Agriculture, Livestock and Fisheries

5.4 Research and extension action plans

They will focus on:

5.4.1 Irrigated and lowland rice cultivation

The work in these production ecologies consists of:

- rehabilitation of formerly established and developed sites;
- extension of developed areas currently in use;
- basic participatory developments of new lowland areas;

- training farmers in water management and infrastructure and in the integrated management of rice growing.

5.4.2 Upland rain-fed rice cultivation

The production of upland rain-fed rice will be stimulated by emphasising the use of the NERICA varieties of rice. The method of participatory varietal selection will be used to introduce and evaluate new varieties in the farming environment, to identify and promote those for which producers and the consumers show a preference.

SUB-SECTOR STRATEGIES

6.1 Seed

The production of improved seed is a necessity in modern agriculture. Increased grower productivity depends upon it to a great extent because good quality seed contributes 40% to the yield that is obtained. All the other techniques are far more likely to be improved when the base element of a high-yield seed comes into play. Correct density of sowing and the use of fertilisers have greater impact when the seed is of good quality and higher performance.

The seed sector is not well-organised in Togo. Seed requirements are often not clearly determined and the points of sale are not well known and rarely situated in the proximity of the users. The rate of use of improved seeds is currently only about 5% for a number of reasons (ignorance, too expensive, unavailability, etc). The production of pre-basic and basic seeds is one of ITRA's responsibilities. The production of certified seed is entrusted to individual or groups of approved seed multipliers. They are supported by the technical experts of ICAT and ITRA. A Department of Seed was created in 2009 designed to reorganise the seed sector in Togo with improved coordination.

Since 2008, Togo has taken urgent measures to support rice producers with seeds and fertilisers. ICAT is responsible for helping the seed-producing farmers to achieve better production and distribution.

6.1.1 Current status

There are two main elements: the constraints and successes of the rice seed sub-sector.

Constraints:

These occur at various levels:

- ✓ *at the level of supply*: (i) the issue of supplying basic seed in sufficient quantity through research activity; (ii) the presence on the market of operators selling poor quality plant material; (iii) the absence of an appropriate seed production financing system; (iv) the lack of an effective network for the distribution and marketing of seed and plants;
- ✓ *at the level of demand*: (i) the ineffective nature of extension activities; (ii) the absence of a system to finance farmers; (iii) the small scale of farming; (iv) the very limited financial and technical capacities of the farmers.
- ✓ *lack of expression of requirements*
- ✓ *at the level of the institutional environment*: (i) the insufficiency and indeed the non-existence of coordination between the various links of the chain; (ii) the non-existence of a functional seed administration; (iii) the absence of legislation on the issue of seed capable of ensuring the security of the various operators and users.

Successes:

They are as follows: (i) the achievements of research and especially the resulting availability of a wide range of productive varieties; (ii) relatively adequate national expertise in number and quality at every level of the seed sector; (iii) a set of draft laws on the organisation and control of production and marketing of seed and plants; (iv) the very positive impact of research and

development activities on the rural environment; (v) the recognition of the advantages of using high quality seeds; (vi) the recognition of the advantages of seed quality control for users and operators.

The analysis of these constraints and benefits has led to the realisation that the current disorganised and disjointed situation of all the elements of the national seed sub-sector can only be rectified in the framework of a formal national seed policy based on consultation accompanied by a strategy for the harmonious development of the various elements of the sector. Isolated action affecting only one or a few of the links in the chain will never achieve the desired results.

This policy must take into account, among other things, the following priority actions: (i) the clear and unambiguous definition of the role of each actor in the seed sector. In this context, the mission and role of the seed administration must be clearly defined and set down; (ii) the definition of an appropriate legal framework which will be both flexible and provide incentives; (iii) operational capacity building of the various participants in both the public and private sectors; (iv) certified training (where necessary) leading to qualifications at every level of the seed sector; (vi) incentives for seed producers and distributors to become professionalized with assistance to help them to unite in a joint trade association.

However, there are a number of prior provisions to be put in place, as follows:

- making the technical departments of the MAEP capable of effectively identifying and steering the activities that will lead to the creation of the seed policy. This will require the creation of the Department of Seed to take concrete form by appointing staff and giving it the necessary premises to enable it to provide support for the entire future process of organisation and development of the seed sector;
- securing and perpetuating the activities of the seed farm of Sotouboua by providing it with land security which will consequently encourage its re-establishment;
- carrying out a second reading of the draft decrees on seed manufacturing activities in order to finalise them to be consistent with the planned seed policy and with the current regulations in force in the WAEMU/ECOWAS/CILSS space. To this end, the community regulations will need to be understood and known and interested parties must be informed of them;
- operational capacity building of the Department for Plant Protection to enable it to enforce the current laws relating to plant protection.

While awaiting the establishment of the national seed policy in its entirety, urgent action must be taken to improve the production and distribution system of improved seed and of good quality rice. This means supporting the organisation of the production and marketing of the improved rice seeds in all the rice producing zones in Togo.

6.1.2 Strategy

The overall purpose of the strategy is to make an urgent contribution to reinforcing food security through improving rice production capacity. Specifically, it aims to increase national rice production by facilitating access to improved good quality seed.

6.1.3 Axes of intervention

The actions to be undertaken are consistent with the State's desire to re-energise the rice production sector. They are based on three axes of intervention.

i. Support for the production of improved good quality rice seed

The objective is to increase production and to create rice seed stocks capable of satisfying the needs of producers in accordance with the objectives of the NRDS. This support will consist of:

- reinforcing production capacities of pre-basic and basic seeds;
- training rice seed producers in the techniques of certified seed production;
- fostering the use of appropriate inputs (fertilisers, pesticides, basic seeds) by certified seed producers.

ii. Support for the organisation of seed producers

The objective is firstly to facilitate seed producers' access to inputs (basic seeds, fertilisers) and agricultural equipment and secondly to combat the proliferation of pirated seed which has become a worrying phenomenon in Togo. Consequently, there will need to be:

- a census of rice seed producers and distributors (individuals and organisations) in the five regions of the country;
- an organisational analysis of the recognised seed growers associations which will make it possible to assess the current level of organisation (reliability, viability) of the seed producers;
- participatory drafting and establishment of a plan for structuring seed growers;
- the constitution of a computerised database of the seed growers' organisation which will be updated from time to time to provide reliable information on the national production of rice seed.

iii. Support for the organisation of a seed distribution system through the rice producers association.

The purpose is to ensure the distribution of seeds produced by the members of the Association of Seed Producers through the Rice Producers Association and other well-known distributors. It is an effective way to get rid of the poor quality seeds of dubious origins that are being injected into the market. This support will focus on:

- the constitution of a database
- the drafting of the seed distribution plan
- making seed distribution subject to contract (between growers and producers).

6.2 The preservation and use of genetic resources

Genetic resources constitute sources of genes that are indispensable to the creation and improvement of varieties. To prevent their disappearance they need to be collected, re- generated, described and conserved. ITRA had conducted collection activities throughout the entire country prior to 2005. But it must be admitted that most of what had been collected was lost during the process of conservation for a number of reasons (defective cold rooms, power cuts, breakdown of freezers, fire etc). At present, the remainder of the accessions and varieties are kept in the field every year. In order to ensure the availability of genetic resources of rice in Togo for immediate or future use, it has proved important to:

- engage in exploration and collection
- ensure conservation both *in situ* and *ex situ*

- ensure capacity building of human resources, equipment and infrastructure of conservation
- recruit and train personnel
- make agro-morphological descriptions
- make enzymatic descriptions with the support of AfricaRice (formerly ADRAO).

6.3 Innovations and technologies

With regard to innovation and creation of new technologies, ITRA through its programme of rice production research has created a reference base on rice in Togo and has essentially worked on the basis of three ecologies (rain-fed upland**,** rain-fed lowland and irrigated) on the following:

- varietal improvements (about 20 varieties selected and made available to rice growers);
- improvement in cultivation practices;
- rot in rice grains caused by *Sarocladium oryzae* which is one of the main diseases affecting rice production in Togo;
- description of the lowlands and the constitution of a data bank;
- basic development of some rice growing lowlands (Adéta, Nogyog, etc.) ;
- creation of pamphlets and specification sheets on rice production and processing and on basic rice growing systems in the lowlands

Capacity building of extension officers and rice growers is being conducted in relation to rice production and marketing.

Consequently, it is important to emphasise the implementation of a series of research and development activities related to rice focused particularly on the dissemination of the varieties through the organisation and holding of sessions on:

- participatory varietal selection **(**identification of criteria of choice of varieties and preferences of producers, dissemination of the new varieties (inter-specific and intra-specific);
- integrated management of rice through Farmer Field Schools;
- integrated management of soil fertility.

6.4. Fertilisers

Historically, the cultivation of the cotton plant had to be introduced in the 1970s to make producers aware (through the long-term effect of cotton fertilisers on cereal crops) of the necessity of using chemical fertilisers under food crops in order to increase productivity.

The types of fertilisers used are: NPK 15.15.15 and UREE 46% N, for the cultivation of maize in particular. Togo is importing chemical fertilisers (NPK 15-15-15, UREE 46% N etc) mainly from Europe (Ukraine, the Netherlands) and China. WABCO COTIA, established in Togo in 2008, is making bulk-blended fertilisers (from imported raw materials) that it is exporting to neighbouring landlocked countries.

In rice cultivation in particular, the use of these chemical fertilisers began rather hesitantly in the 1980s in the irrigated areas developed for the cultivation of rice. Since then, the practice of fertilising the rice crop with chemical fertilisers has had to compete with maize cultivation in using the same types of fertilisers (NPK 15.15.15 and UREE 46% N). This explains the increased need for chemical fertilisers expressed by the producers of cereals every season.

The Government of Togo has responded to the situation by increasing fertiliser imports every growing season since 2005, which it lets producers have at a subsidised cost. In fact the selling price of 50 kg of fertiliser has varied from 7,750 FCFA in the 1990s to 11,000 FCFA in 2009-2010 as a result of the subsidies. For the 2009-2010 season, for example, the cost price of a 50 kg bag was 23,000 FCFA.

In the context of rice production in Togo, the distribution of fertilisers is made much easier by the fact that the rice producers are better organised in clearly defined zones.

The NRDS will focus on the producer organisations to give them more flexible access to the credit they need to develop their farming.

The types of fertiliser used in Togo for rice production are the complex NPK 15.15.15 and UREE 46% N, but obtaining specific fertilisers such as phosphates could also be considered.

The establishment of the NRDS will make it possible to increase the areas under rice cultivation and will oblige the government to make more efforts obtain fertilisers for food crops.

6.5 Post-harvest and marketing of rice

To give the rice added value and have good quality rice, the post-harvest operations involve drying, winnowing, husking, packaging and marketing.

There are many serious and varied constraints still undermining the capacity of local rice to be competitive. The major constraints are impurities, the lack of professionals in the sector, the lack of modern equipment for drying, husking and storage, the lack of financial resources, the marginalisation of the packaging process, and the lack of innovation regarding the post-harvest segments. However, with the creation of the MAEP sub-Ministry for Rural Infrastructures, there is some hope that the constraints will be diminished. Current activities related to the milling and packaging of rice (training and distribution of pamphlets) are contributing to the improved quality of local rice. Note should also be taken of the activities of NGOs like ESOP, etc. which are involved in the post-harvest phase of processing and marketing of local rice.

On the question of marketing, ANSAT's activities are helping to create some pressure on behalf of the local rice market. However, the infrastructures for drying and storage are extremely limited, and the small producers are using haphazard drying areas where foreign bodies like grains of sand get mixed in with the paddy and affect the quality of the rice. It is essential that they be eliminated to meet the expectations of consumers who want to have local rice of the same quality as imported rice.

Some of the existing husking units belong to private individuals and consist of old husking equipment and machinery, resulting in a lot of broken rice during the manufacturing process. The post-harvest activities are also carried out by private individuals who buy the paddy from the producers and then husk and bag it.

If, in the first instance, there is effective interest from the rice growers in learning about the technical aspects of rice production processes, in ensuring the quality of manufacturing and the creation of added value to the locally produced rice, as well as making it competitive, it is important to subsequently envisage:

- organising training sessions for all of the stakeholders and especially those who are involved in post-harvest activities (parboiling, husking, storage, packaging, etc.) ;
- improving rice processing, packaging and storage conditions through the willingness of the rice farmer to buy adequate equipment and machinery to produce local rice of the same quality as that of imported rice.

The rice is marketed at the local level by selling paddy mostly to private actors who collect and mill it. Some producers also sell their milled rice on the spot. There are currently efforts underway by private actors and a number of rice farmer organisations to label their rice, which is first of all properly graded and then adequately packaged in bags of 5, 10, 25 and 50 kg.

6.6 Developing and maintaining genetic resources

With respect to research, ITRA which incorporates the rice research programme has updated, in cooperation with AfricaRice and other international research institutions:

- high yield potential varieties of rice that suit the tastes of the producers and consumers for the three ecologies of production;
- production systems for economically profitable rice;
- pamphlets and specification sheets for better rice production and economic development of the lowlands;
- soil fertility management techniques in rice cultivation .

The use of these new technologies will allow for increased production and will contribute to poverty reduction

6.7 Hydro-agricultural facilities /water control

Rehabilitation work on old irrigated schemes, formerly developed sites, development of new schemes, equipping with agricultural machinery and post-harvest are the main strategic axes which have been selected for irrigated rice cultivation.

6.7.1 Rehabilitation of old irrigated schemes (in progress)

The irrigated schemes concerned are the 360 ha of the Zio Valley and the Mono River Basin at Agomé-Glozou.

- The Zio Valley Irrigated Scheme was set up by the Chinese, using a gravity fed irrigation system. At present, the hydro-agricultural infrastructures are in a state of advanced dilapidation and they will need to be rehabilitated to increase the rice production yield in this scheme.

- The Mono River Basin irrigated scheme was set up in the 1980s by the North Koreans, using pump irrigation.

6.7.2. Rehabilitation of formerly developed sites

The sites in question are 225 ha. of non-operational, formerly developed sites: Tantiégou (65 ha) and Koumbéloti (80 ha) in the savannah, Amou-Oblo (50 ha), Sodo (30 ha) and Kpélé Tutu (30 ha) in the uplands. The rehabilitation of these sites will be centred around cleaning the water reservoir basins and the irrigation and drainage canals, re-engineering or constructing dykes or dykelets, protecting the sides of the dykes and water reservoirs by planting rapid-growing trees, levelling the rice-growing parcels, repair of the safety valves and the outlet pipes, distribution of the inlet pipes and feeder channels.

6.7.3. Extension of the irrigated schemes

The extension of the irrigated schemes will relate to the Zio Valley and the Mono River Basin.

- For the Zio Valley, the plan is to extend the irrigated scheme to a new cultivation area of 300 hectares.

- For the Mono River Basin, the extension will cover an area of 496.5 hectares.

N.B : These two projects (rehabilitation and extension of the irrigated schemes of the Zio Valley and the Mono River Basin) are currently in progress.

It should be noted that there are other irrigated schemes development projects at the technical and economic feasibility study stage. They are:

- development of the Djagblé plains,
- development of the Oti plains
- the Mô Plain Integrated Rural Development Project (IRDP)
- development of the Kara lowlands

6.7.4. Agricultural equipment and post-harvest

Purchase of agricultural machinery and equipment

To assist and support producers in intensifying production, producing and marketing good quality rice, the following equipment and machinery are needed in the context of the strategy: tractors, ploughs, motorised cultivators, motor-pumps, threshing machines, mechanical reapers, husking machines, winnowers, tarpaulins, weighing machines, crop sprayers, graders, etc.

This equipment will be deployed at different sites and installed close to the production zones. It will be subject to community management through internal local management committees which will be set up and trained for the purpose. Its distribution will be commensurate with the scale of production in each zone.

It is also planned to increase the number of rice farms.

Support infrastructures

The existing central warehouses for each region can house the stocks of inputs (seeds, fertilisers, herbicides and insecticides). The warehouses will be reinforced by the construction of others reserved for storing paddy and white rice. There are also plans to establish drying areas.

6.7.5. Support and assistance for producers

The issue here is gradually, by means of a participatory approach and regular accompanying support measures, to raise the level of the producers' knowledge of the technical guidelines and technology packages from soil preparation to marketing of the finished product. The focus will be on:

- producing and distributing specification sheets to producers;
- building the capacities of the producers through activities focused on: improving cultivation techniques related to the integrated management of rice farming; participatory varietal selection, water development, diversification of production, as well as topics related to public health, the environment, etc;
- facilitating access for rice products to lucrative markets;
- capacity building of the rural populations in the management of hydro-agricultural infrastructures.

6.8 Access to credit

Togo depends on foreign assistance to finance a large portion of its Public Investment Programme (PIP). Eighty percent of public investment is financed by foreign resources. Because of the suspension of donor support since the beginning of the 1990s, the level of public investment dropped from 13.8% of GDP in 1990 to 3.3% of GDP in 2005. With the return of the donors in 2006, the situation began to improve. The level of the state of Togo's investment in agriculture gradually increased through various sub-programmes of the PNIASA: for the year 2010, the budget allocated to the agricultural sector was 43,969,755,000 FCFA of which 6,188,005,000 FCFA, or 14%, was destined for investment mostly in the rice farming sector.

6.8.1 Strengths of the sector

They are as follows:

- Existence of laws: Law No. 95-014 of 14 July, 1995 regulating cooperative or mutual savings and loans institutions and its decree of implementation No. 96-038 of 10 April 1996.
- Notable improvements in governance and acceptance of a greater share of responsibility in the cooperative networks to be consolidated.
- Greater openness to refinancing on the part of the banking institutions and the adoption of guidelines to link up with the micro-finance sector.
- The increasing involvement of private players in the sector.

6.8.2 Weaknesses/constraints of the sector:

They are as follows:

- A large number of informal structures without technical support or sufficient critical mass to have the required demanding skills and authority to be able to exert proper control.

- The weakness of internal control in both the cooperative networks and the non-cooperative networks and the lack of support to strengthen it.
- The inadequacy of suitable management tools in the Micro Finance Institutions (MFI) and the need to renew them (procedural handbook, credit management, internal control).
- Excessive interest rates.
- The insufficiency of specialist products, especially for the rural sector and the SMEs.
- The low level of development of associated products (living conditions, insurance, medical aid societies, etc.).
- The inadequacy of financial resources, particularly in the medium term.

6.8.3 Strategy to develop financing for the agricultural sector

The vision of the strategy is to put the business micro-finance sector in order and to create an institutional framework for rural finance that is both viable and permanent, providing diverse and innovative financial services to the rural population and ensuring sufficient cover for demand throughout the country.

The overall development objective is to promote access to diversified micro-finance services suitable for low income households and agricultural micro-entrepreneurs throughout the country.

Strategic axes:

Strategic axis no.1: viable and permanent supply of appropriate products and services for the agricultural sector, which are innovative, diversified and available in the rice farming zones.
Strategic axis no.2: organisation of the institutional framework to ensure good structuring and efficient operation of the sector.

Role of the public sector:

- The government will ensure the development of an environment stimulating the efficiency of the markets, economic development in general, control of inflation rates, establishment of a legal and regulatory framework intended to facilitate the development of the MFIs, and guarantee protection for depositors, supervision of the financial sector in general and assistance to the development of the institutions.

- The technical departments of the MAEP will work on the following aspects:

  - consideration of how to establish products and services suited to the needs of the population;
  - search for appropriate finance and distribute it to the sector for the extension of the institutions;
  - experimentation and implementation of innovative mechanisms for risk control especially in regard to the financial products related to agriculture;
  - connecting the MFIs to the projects and programmes of the NRDS
  - establishment of guarantee funds for the institutions, following consultations

Actions to be carried out are:

- diversification/innovation of financial products (emphasis on the promotion of risk management like micro-insurance and harmonising the pay-out timeframe with the farming calendar) ;
- increasing the density of the MFI networks in potential rice farming areas;
- participation in refinancing and risk management of the MFIs;
- increasing the density of the activities of paddy processors and suppliers of agricultural inputs and equipment in the rice producing areas;
- strengthening knowledge of regional and world markets;
- raising awareness regarding the concept of added value and the calculation of profitability;
- raising awareness of producers on the benefits of forming groups;
- capacity building in the management of Income Generating Activities (IGA) and in agricultural companies.

KEY ACTORS OF THE NRDS AND THEIR RESPONSIBILITIES IN THE RICE SECTOR VALUE CHAIN

Rice farming is an activity practised by both men and women but their roles differ within the value chain.

7.1. Production

According to the DSID & ITRA study (2010), land ownership is mainly in the hands of men who are acknowledged to have the capacity for hard physical labour (land clearance, ploughing, etc.); 91% of rice farms are headed by men.

7.2. Harvesting/processing

This role is chiefly played by women who play a significant part in harvesting and processing; harvesting is done using a sickle and husking is done with a pounder. There are some traditional processing units owned by private players but there are not enough in the rice production zones. Of the two existing rice processing plants (Kara and Dapaong), only one is operational but not full time. At present more or less industrial milling is being done by two NGOs (VAPE and ESOP) whose activities should not be underestimated.

7.3. Marketing

In this sphere, too, women are very active but mostly operating in the informal sector. They collect and distribute white rice as both wholesalers and retailers. In short, as regards their roles in the rice production chain of values, women are much more present in rice producing activity than men. The latter have more of a monopoly of access to the land and consequently are the owners of the rice farms. These two categories of persons, whether or not they are affiliated to organised bodies (NGOs, Cooperatives etc,) fall into the private sector, which may be regarded as one of the champions for the implementation of the NRDS.

DETERMINING THE REAL NEEDS (GAPS)

In the first instance, the NRDS defined needs by strategic axis without taking current or planned projects or programmes into consideration. In a second phase, it went on to reconcile the supply (existing and planned projects and programmes) and the needs expressed by the NRDS. This reconciliation resulted in identifying a number of real needs, which we shall refer to as gaps.
The resulting supply of existing and planned projects and programmes are listed in table 6 while the main gaps of the NRDS are to be found in table 7 and take the form of empty boxes.

8.1 An analysis of the comparison between supply and the needs (gaps) of the NRDS

The analysis of the comparison between supply and the needs expressed by the NRDS revealed the following principal conclusions:

- **Seed**: the main realisations relate to: (i) inadequacy of infrastructures of production control and distribution, (ii) the future capacity building of human resources (manpower) and technical resources of the seed multipliers through the approaching implementation of PASA which will also emphasise supply, distribution and support for the private sector.

- **The preservation and use of genetic resources**: we note the existence of a unit responsible for the preservation and use of genetic rice resources. But we also note the insufficiency of financial support in this sphere.
- **Innovations and technologies:** "human resources" are covered only by PADAT which makes provision for training 1,200 extension officers in soil fertility management techniques. However, the staff of advisory and research institutions (ITRA and ICAT) as well as their institutional reinforcements (finance) and technology remain insufficient.

  As for the "supply/support," sector, it is catered for by four projects while three projects are responsible for technical capacity building for producers.
- **Fertilisers:** the actions undertaken are exclusively intended to promote supply and distribution of fertilisers to the producers. However, as PADAT and PASA will soon be implemented, they will be complemented by support to the private sector and the definition of new modalities for the management of subsidies.
- **Post-harvest operations and marketing**: efforts are mainly concentrated on the infrastructures (warehouses, drying areas, rural roads). PASA plans to support actions related to the partnership between producers and business and to the security of the stocks (securing goods by warrant).
- **The development and maintenance of genetic resources**: there is only one achievement to be noted, namely the development and popularisation of the NERICA varieties of rice by the ITRA with the support of AfricaRice.
- **Hydro-agricultural development**: the emphasis is largely on infrastructures (rehabilitation and development).
- **The improvement of quality:** currently, the problem of the quality of the product (one of the conditions that may help local rice to replace imported rice) is not benefiting from any specific interventions. In addition, this issue is not being tackled by the major projects and programmes currently in preparation (PADAT and PASA).
- **Access to credit**: this is one of the weak links in the sector with only two interventions located in the coastal region **(**PBVM and PARTAM**)**.

8.2. Identification of the main needs of the NRDS (gaps)

The gaps resulting from the comparison between the existing and potential supply and the needs expressed by the NRDS are as follows:

- **Seed:** the gap relates to production control and distribution infrastructures. Consequently, great attention needs to be paid to the rehabilitation of seed production and plant material centres.
- **The preservation and use of genetic resources**: not all the aspects are taken into account by the current or planned projects and programmes.
- **Innovations and technologies**: the gaps relate to policy and institutional issues and human resources (low numbers of researchers and extension officers) in the two institutes to which the state has respectively entrusted these missions. Consequently, these two institutes must be reinforced not only in technical resources but also in human resources (training and recruitment according to requirements). With respect to the producers, in addition to the extension activities related to innovations and

technologies which must be promoted, there must also be an emphasis on complying with technical guidelines.

- **Fertilisers:** the gaps concern (i) policy measures (the search for an effective and sustainable subsidy policy), regulatory (quality) and institutional (inspection and control authority for the types and qualities of fertilisers to be used), (ii) production and storage infrastructures and (iii) capacity building of producers with respect to techniques for using fertilisers with, in particular, the systemisation of integrated soil fertility management (GIFS) for improved development of the use of organic fertilisers.

- **Post-harvest operations and marketing**: Apart from the warehouses and drying areas whose numbers need to be increased as they are currently inadequate, notably in the rice farming zones, there are gaps in other areas.

  For example, to facilitate the flow of production to the markets, it needs to be intensified in order to open up the production zones.

  In addition, since "marketing under good conditions" is understood to mean a good correlation between supply and demand, the establishment of an information system on the agricultural markets is a necessity.

- **The development and maintenance of genetic resources**: actions to be strengthened relate to (i) capacity building for research and extension activities in technical and human resources whose insufficient numbers must be revised upwards and (ii) basic infrastructures.

- **Hydro-agricultural developments**: the gaps noted relate to (i) the development/control and management of water and land and (ii) capacity building for producers.

  Concerning investments in the construction of the facilities, efforts must continue to be made, notably for the lowlands (potential of 185,000 ha) and the small multipurpose water reservoirs.

- **Quality improvement:** The gaps relate to every aspect of this issue that is not dealt with by the current and planned projects and programmes. These gaps will have to be rapidly filled because quality is an essential condition for competitiveness.

- **Access to agricultural credit:** there is no adequate credit system for producers and private operators which is why, in view of the specific nature of the agricultural sector and particularly in relation to the production of food crops, it is essential to promote a sustainable mechanism for financing these ventures.

CONCLUSION

Togo's choice to double rice production by 2018 is in line with the country's desire to reduce, and in fact do away with altogether, the imports that are costing the country so dear.
The projections of production in relation to consumption needs are conclusive. Their fulfilment will enable the country not only to satisfy domestic demand but also to export the surplus. Therefore all attention must be focused on the gaps identified with respect to the NRDS and for which sustainable finance must be found in the context of the implementation of the PNIASA.

In fact, in view of (i) the important place of food producing operations in the composition of the annual GDP (68.5%), (ii) the relative advantage of local rice over imported rice, (iii) the major trend towards substituting rice for other cereals (ease of preparation, cost) and (iv) higher earnings than from other crops, there is an imperative need to develop the whole value chain of rice farming by filling the gaps of the NRDS.

ANNEXES

Table 4: Rice Imports from 2000 to 2008

Year	Imports in tonnes	Value in FCFA millions
2000	36270	2048
2001	57054	3489
2002	64613	3756
2003	47817	2248
2004	58700	2379
2005	80533	3047
2006	104191	4061
2007	78503	4127
2008	73976	4166

Source: *General Directorate for Statistics and National Accounting (2009)*

Table 5 : Evolution of the population and of the demand for rice in Togo from 2008 to 2018

YEAR	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
POPULATION	5715456	5856000	6000000	6144000	6291456	6442450	6597069	6755398	6917528	7083549	7253554
WHITE RICE REQUIREMENTS (Tonne)	85732	87840	90000	92160	94372	96637	98956	101531	103763	106253	108803

Source : NRDS-TOGO Study (2010)

Table 6 : MATRIX OF THE TYPES OF INTERVENTIONS BY SUB-SECTOR - Togo (current and planned project): List of results

Name of country TOGO	Policy / Institutional / Regulatory (in terms of measures)	Infrastructures	Human resources capacity (in terms of staff)	Supply / Support	Information / knowledge	Other
Seed	PASA[1]: regulatory framework		PASA [1]: reinforcement of seed multipliers	1) ZAPP [2]: supply 2) PDRP [3]: supply 3) PADAT [4]: distribution with World Bank supplement (PASA) and also with support for the Supporting Partner (SP)		
Fertilisers / Pesticides				1) ZAPP [2]: fertiliser supply 2) PDRP [3]: fertiliser and pesticide supply 3) PADAT [4]: distribution of fertilisers with World Bank supplement with (PASA) and to the SP and new modalities of management and subsidies.		

[1] PASA : Agricultural Sector Support Programme (in preparation, to be financed by the World Bank in 2011 – 2012)
[2] ZAAP : Planned Agricultural Zones Development Project (current)
[3] PDRP : Upland Rice Development Project: 2011-2013 with funding from an Italian NGO
[4] PADAT : Support Plan for the Agricultural Sector in Togo
[5] PBVM : Hydro-Agricultural Development Project for the Mono River Basin (current)

	Policy / Institutional / Regulatory (in terms of measures)	**Infrastructures**	**Human resources capacity (in terms of staff)**	**Supply/ Support**	**Information / knowledge (in terms of technical capacity building)**	**Other**
Development		1) PBVM [5]: rehabilitation of 89 ha , inlet pipes, pump station, development of 500ha 2) PARTAM [6]: rehabilitation of 360ha, development of 300ha 3) ZAPP [2]: development of selected sites, pipes for surface water 4) PAPD[7] : plain development 5) PAPO[8]: plain development				

		6) PDRI [9]: plain development 7) PARBF-K[10] [5] : lowland development 8) PADAT [4]: construction / rehabilitation (4,500 ha of simple development/facilities, 1,750 ha of lowland development				
Production **(Including all production factors)**	1) PBVM[5]: institutional support for umbrella organisations	1) PBVM [5]: warehouses, drying areas 2) PARTAM [6]:warehouses, drying areas 3) PADAT [4]: construction of warehouses, 350kms of road		1) PBVM[5]: machinery and equipment 2) PARTAM[6]: 20 motorised cultivators, 40 threshing machines and 60 winnowers 3) ZAAP[2]: bulldozers, tractors, motorised cultivators, combine harvesters, threshing machines, husking machines,winnowers. 4) PDRP[3]: agricultural equipment	1) PBVM[5]: producers and umbrella organisations 2) PARTAM[6] : 300 producers taught literacy skills and technical support for producers 3) ZAAP[2]: technical support and advice	

[6] PARTAM : Agricultural Land Development and Rehabilitation Project in the Mission-Tové region
[7] PAPD : Development of the Djagblé Plain Project (the Arab Bank for Economic Development in Africa [ABEDA] financing to be determined after completion of current feasibility study)
[8] PAPO : Development of the Oti Plain Project: (ABEDA funding for the study)
[9] PDRI : Rural Integrated Development Project for the Mô Plain (EIES study will be financed in 2011 from internal resources)
[10]PARBF-K : Lowland Rice Farming Support Project in the Kara Region / (formulation and study in progress for launch in 2011 with ABEDA financing of 4 billion FCFA)

Mechanisation / Post harvest		1) PBVM[5]: warehouses, drying areas 2) PARTAM [6]:warehouses, drying areas		1) ZAAP [2]: combine harvesters, threshing machines, husking machines, winnowers. 2) PDRP [3]: husking machines 3) PADAT [4] : 500 tarpaulins for drying, 150 threshing machines, 150 winnowers, 100 husking machines, roads and storage infrastructures		
Quality improvement						
Access to markets		1) PBVM[5]: construction of 11 kms of road, warehouses, drying areas 2) PARTAM [6]： construction of roads		1) PASA [1]: Producer-Business Partnership 2) Security of stocks (securing goods by warrant)		
Access to credit						
General policy instruments	ZAAP [2]: land security for 3000ha					

Development and dissemination of technologies to the fields (Research and Extension activities			PADAT [4]: training of 1,200 advisory agents in soil fertility management (GFS) techniques with possible World Bank supplement (PASA[1])	I ITRA/ Africa Rice, development of high yield rice variety	PADAT [4]: manure/fertiliser spreading, sowing density and 650 (integrated soil fertility management (GIFS**)** operations with possible World Bank supplement (PASA[1])	

Table 7: MATRIX OF THE TYPES OF INTERVENTIONS BY SUB-SECTOR (NRDS)-Togo

Assessment of the gaps

TOGO	Politicy / Institutional / Regulatory (in terms of measures)	Infrastructures	Human resources capacity (in terms of staff)	Supply/ Support	Information / knowledge (in terms of technical capacity building)
Seed	1) PASA [1] regulatory framework		1) PASA[1] : reinforcement of seed multipliers	1) ZAPP [9]: supply 2) PDRP[10] :supply 3) PADAT [11]: distribution with World Bank supplement (PASA) and also support for SP	1) PASA [1] : reinforcement of seed multipliers
Preservation and use of genetic resources, innovations and technologies					
			1) PADAT [4] : training of 1,200 extension officers in soil fertility management techniques with possible World Bank supplement (PASA)	1) PBVM [5]: machinery and equipment 2) PARTAM [6]: 20 motorised cultivators,40 threshing machines and 60 winnowers 3) ZAAP [2]: bulldozers, tractors motorised cultivators, combine harvesters, husking machines, winnowers. 4) PDRP[3] : Agricultural equipment 5) PADAT [4]: training 1,200 extension officers in soil fertility management (GFS)techniques with possible World Bank supplement (PASA)	1) PBVM [5]: reinforcement of producers and umbrella organisations 2) PARTAM [6] technical support for producers 3) ZAAP [2]: technical support and advice 4) PADAT [4] manure/fertiliser spreading , sowing density and 650 integrated soil fertility management (GIFS) operations

[1] PASA :Agricultural Sector Support Programme, (in preparation, to be financed by the World Bank during 2011 – 2012)
[2] ZAAP : Planned Agricultural Zones Development Project (current)
[3] PDRP : Upland Rice Development Project : 2011-2013 with funding from an Italian NGO
[4] PADAT : Agricultural Sector Support Project in Togo
[5] PBVM : Hydro-Agricultural Development Project for the Mono River Basin (current)

Fertiliser				1) ZAPP[2]:fertiliser supply 2) PDRP: fertiliser supply 3) PADAT [4] : distribution of fertiliser with World Bank supplement with (PASA) including to the Sp and new modalities of management and subsidy.	
Post –harvest and marketing		1) PBVM[5] : warehouses, drying areas 2) PARTAM[6]: warehouses, drying areas 3) PBVM[5]: construction of roads, warehouses, drying areas 4) PARTAM [6]: construction of roads		1) PASA[1] : Producer-Business Partnership 2) PASA[1] : Security of stock (securing goods by warrant)	

Development and maintenance of genetic resources				ITRA/ Africa Rice, development of high yield rice variety	
Hydro-agricultural developments		1) PBVM[12]: rehabilitation of 89 ha, inlet pipes, pump station, development of 500ha 2) PARTAM[13]: rehabilitation of 360ha, development of 300ha 3) ZAAP [2] : development of selected sites, piping for surface water 4) PAPD[14] : plain development 5) PAPO[15]: plain development 6) PDRI[16]: plain development 7) PARBF-K[17] : lowland development 8) PADAT[4] : construction / rehabilitation (4,500ha of simple development/facilities, 1,750ha of lowland development			

[6]PARTAM : Agricultural Land Development and Rehabilitation Project in the Mission-Tové region
[7]PAPD : Development of the Djagblé Plain Project (the Arab Bank for Economic Development in Africa [ABEDA] financing to be determined after completion of current feasibility study)
[8]PAPO : Development of the Oti Plain Project: ABEDA funding for the study)
[9]PDRI : Rural Integrated Development Project for the Mô Plain (EIES study will be financed in 2011 from internal resources)
[10]PARBF-K : Lowland Rice Farming Support Project in the Kara Region (formulation and study in progress for launch in 2011 with ABEDA financing of 4 billion FCFA)

Access to credit				1) PBVM[5]: credit 2) PARTAM[6] : credit	

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