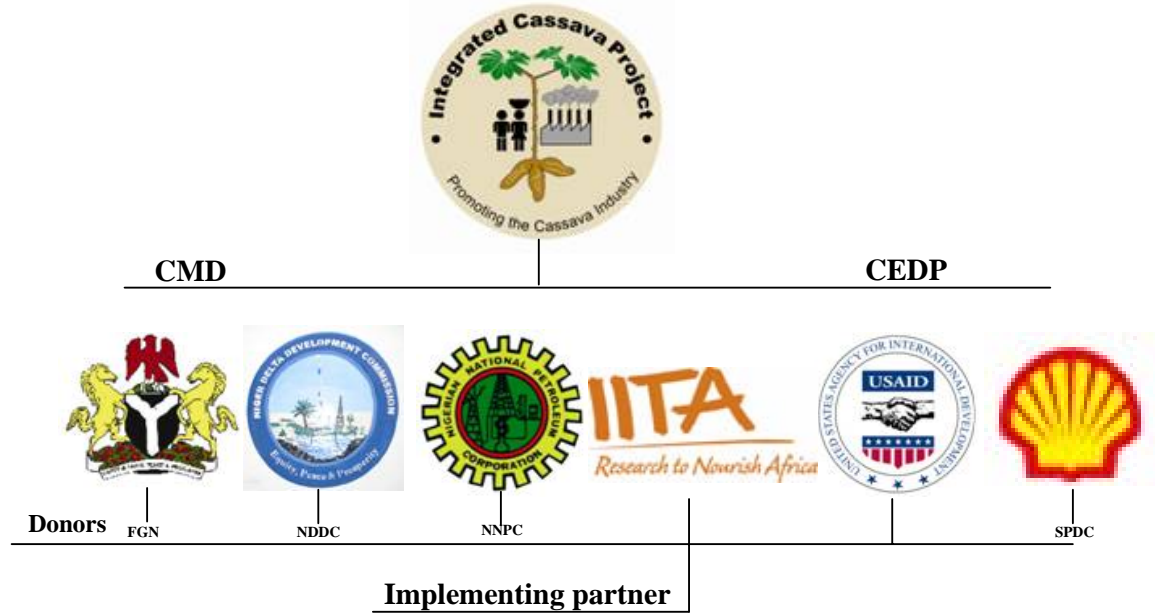


## A snap-shot of the Integrated Cassava Project (2003-2008)

### Cassava commercialization in Nigeria

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**Our philosophy: To alleviate poverty in Africa, agriculture should go beyond providing food on the table to putting money into the pockets of farmers through value-addition.**



*Cassava planter*



*Cassava farm*



*Improved cassava tubers*



*Cassava processing equipment*



*Beneficiary women group*



*Improved livelihood*



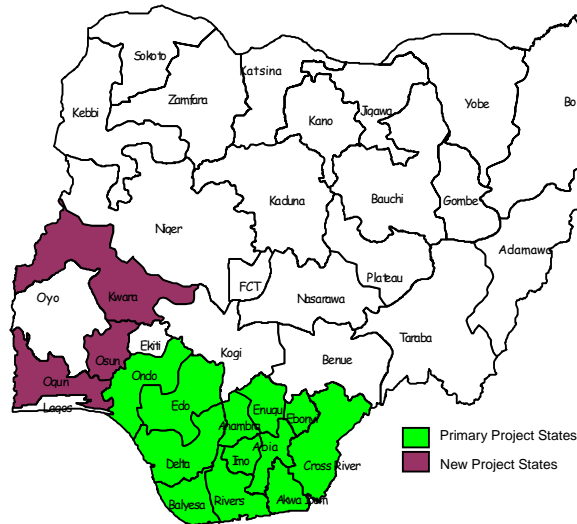
*DG IITA and VP FGN*



*Field visits*



## Integrated Cassava Project States



In further support of Nigeria's Presidential Initiative, United States Aid for International Development (USAID)/Nigeria and Shell Petroleum Development Company (SPDC) in association with the International Institute of Tropical Agriculture (IITA) provided \$11.3 million to promote cassava processing and commercialization through a public-private partnership. Funds from this 5-year Cassava Enterprise Development Project (CEDP) complemented the \$16.5 million of the CMD Project. The two projects (CMD and CEDP), both implemented by IITA form the Integrated Cassava Project (ICP). The CMD Project looked primarily at mitigating the impact of the CMD and increasing cassava productivity; CEDP focused on cassava processing and marketing.

### Objectives of the Integrated Cassava Project

The main objective of ICP was to increase economic opportunities through sustainable and competitive cassava production, processing, marketing and agroenterprise development in selected communities of South-South and South-East States of Nigeria. The specific objectives were as follows:

1. Mitigate the impact of CMD in Nigeria and West Africa through diversification, participatory evaluation, multiplication, and distribution of CMD resistant germplasm to farmers
2. Increase cassava productivity through the deployment of improved germplasm, soil amendments, integrated pest management options, and other proven best-practices.
3. Develop and expand postharvest processing, and marketing outlets for cassava products to increase incomes and improve livelihoods in rural areas.

### Implementation strategy

*Objective 1. Reduce the impact of CMD in selected communities in the Project States.*

New varieties, high yielding and with multiple resistance to diseases and pests, were developed and extensively multiplied and distributed through the establishment of strategic reserves, and the development of community-based cassava production schemes for planting material. The Agricultural Development Programmes (ADPs), Cassava Growers Association of Nigeria, Women in Agriculture, the organized private sector, schools, and religious organizations were the main avenues for these activities. Emphasis was on

developing clusters around demonstration trials and processing centers so that raw materials were readily available for processing plants. Commercially oriented bodies for the sale of cassava stems were identified and promoted.

### **Stem multiplication and distribution**



*Multiplication center*



*Communities*



*Schools*

*Objective 2. Increase the productivity of cassava through the generation, promotion, and adoption of demand-driven, competitive, and sustainable cassava production technologies*

To improve the productivity of cassava to the expected yields of 30-40 t/ha, Project activities included the recommendation and promotion of the use of chemical fertilizers (including micronutrients) and the introduction of N-fixing legumes into cassava-based systems. Efforts were also made in facilitating the use of laborsaving devices, such as tractors and power tillers for land preparation, cassava planters, and harvesters. The team also worked closely with herbicide and fertilizer companies to provide services at the farm-gate level. The continuous use of certified weed control groups ensured farmers had the benefit of unadulterated chemicals and at the same time the youth found employment in the Niger Delta. Farmers, extension agents, non governmental organizations (NGOs), and the private sector were trained in new technologies and adequate extension materials and leaflets were produced. Other stakeholders would be encouraged to play this role for sustainability.



*Mechanized farming*



*On-farm training*



*Input supplier*



*Weed control group*

*Objective 3. Develop and expand postharvest processing and marketing outlets for cassava products*

Through ICP a wide range of value-added products were introduced to the market, such as ethanol, odorless *fufu* flour, cassava flour for bread making, starch, and livestock feed. Emphasis was on establishing, upgrading, and functionalizing processing facilities for beneficiaries. Ways of making the enterprises more efficient included the continuous search for more appropriate drying facilities, empowering fabricators through training or the introduction of prototypes, and linking investors to fabricators for laborsaving equipment. A significant proportion of the activities also focused on enterprise development and market promotion to enhance profitability and poverty alleviation in communities. A Market Information Service was promoted with other stakeholders; information on processing was disseminated through posters, handbills, radio, TV,

newspapers, and exhibitions. Adoption and impact assessment studies were initiated in 2008 and a Stakeholders End-of-Project Workshop will be organized in September 2009.

### Processing facilities

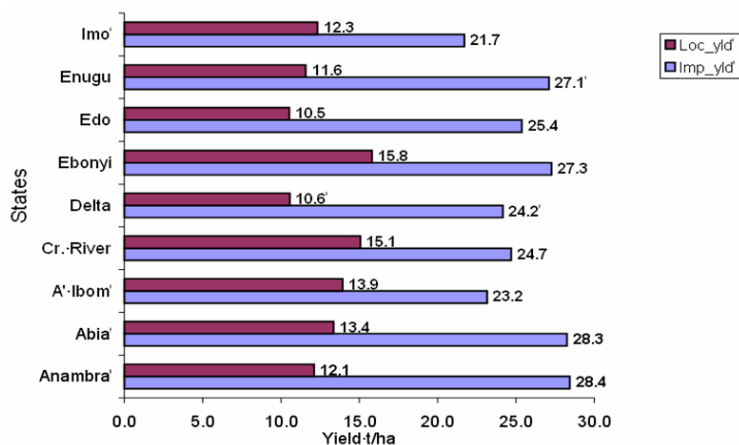


Mobile Grater Enterprise (MGE)    Micro-Processing Center (MPC)    Small/Medium Enterprise (SME)

### Achievements and impact

The achievements for the past 5 years are as follows:

- 43 improved CMD-resistant cassava varieties with a potential yield of over 30 t/ha were introduced. Ten of these have been released and seven more submitted for approval.
- Nearly 300,000 farmers are planting improved varieties and the area currently under sustainable land management is over 23,000 ha.
- The yield in farmers' fields has increased from 11 t/ha to 25.6 t/ha and there is at least a 25% decline in the incidence of CMD

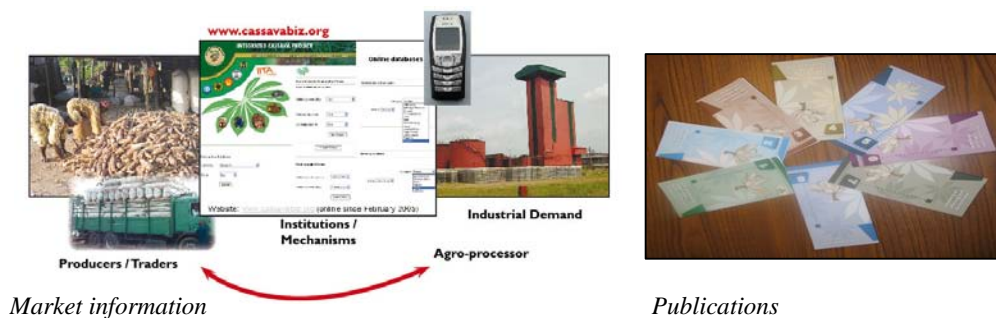


- Nearly 500 processing enterprises and over 10,000 new permanent jobs created. The three types of processing centers are SMEs (1-2 t/day), MPCs (<1 t/day) and mobile graters (0.5 t/day).
- Revenue of over \$50 million generated from gross sales of cassava products such as mash, *gari*, odorless *fufu* flour, high quality cassava flour for bread making, cassava chips, *cassavita*, starch, and ethanol.

Wide range of cassava products



- Ekha Agro Farms Limited, Ogun State, built the largest glucose syrup factory in Africa with cassava as its major raw material. This has saved Nigeria \$15 million per annum on importation
- Use of cassava as a livestock feed both as a waste disposal mechanism for the cassava peels and as a way of replacing more expensive maize. This reduced the current competition for maize by human beings and livestock The enterprises considered included poultry, snailery, small ruminants, grass cutters, piggery, and edible worms.
- Over 12,000 farmers have been trained, extension workers, and processors push farms on commercial cassava production techniques, processing and utilization, enterprise development, and environmental hygiene.
- Up to 300 sustainable cassava producer and processing associations have been formed 70% of these are women's groups
- Farmers were linked to service providers, such as chemical companies, tractor-hiring services, and micro-credit schemes. In collaboration with Syngenta weed control groups were formed in all the senatorial districts as a way of creating jobs for youths and at the same time providing reliable services for farmers
- Market information for 38 commodities from 80 markets spread over the 36 States of Nigeria and the FCT is now provided. Trade by linking producers, fabricators, and processors to local, national, regional, and international markets.



- The agroenterprise and publication units continuously provided investors with feasibility drafts for various cassava-based products to assist them in setting up successful businesses. In addition, a wide range of publications and a website was developed and maintained.
- The Project had over the years formed reliable partnerships with a wide range of institutions in the Project areas and at national, regional and international levels.
- In terms of advocacy, ICP hosted a wide range of visitors, including the former President of Nigeria, Chief Olusegun Obasanjo, the current Vice President Dr Goodluck Jonathan, former Ministers of Agriculture and Commerce, delegates from SPDC, the US Embassy, other Ambassadors, and donor agencies..



*DG Hartman and Former Minister of Agriculture*



*Field visits by USAID Officials*



*Field visits by US Embassy Officials*

- The Project produced award winners, farmers, processors, and scientists both locally and internationally in recognition of their contribution to the cassava industry in Nigeria and worldwide.

**Award winners**



*Bayelsa State*



*Dr G. Tarawali – PM CEDP*

- ICP served as a catalyst to other Cassava Presidential Initiatives in Africa (Sierra Leone, Liberia, Malawi, Zambia, Ghana, and Guinea).



*Liberian Minister of Agriculture*



*Ghanaian Deputy Minister of Agriculture*



*CFC in other African countries*

**Key challenges remain**

There are limited capacity of local fabricators, lack of capital by vulnerable groups, lack of access to inputs, inconsistent policies, high production cost (manual labor) due to limited access to farm machinery, need to ensure profitability and sustainability of processing centres, restive youths, militants, political problems, and poor infrastructure.

## Difficult Terrains



*Bayelsa State*



*Cross River State*

## Lessons learned

- Consult with beneficiaries before deploying equipment in communities
- Adopt measures that will ensure less disputes amongst groups– appoint strong leader
- Train more than one machine operator including women to avoid monopoly
- Apply the no-free-lunch concept. Communities must provide matching funds or make in kind contributions to ensure ownership and sustainability

Counterpart contribution: communities are putting up buildings for MPCs



*Akwa Ibom State*



*Edo State*

## The way forward

- As recommended by the USAID evaluators, conduct adoption and impact studies, and step publicity in the short-term. Request for second phase for the long-term.
- Encourage government institutions such as NDDC to promote CEDP activities. A joint NDDC-IITA project is currently being developed.
- Scale-up the CEDP model within Nigeria and other African countries to fine-tune technologies and build on successes.



*USAID external evaluation team*



*NNDC Director of Agriculture*

**Partners' roles and inputs**

USAID supported three States (Abia, Akwa Ibom, and Cross River) from among those in the South-South and South-East where the project is implemented. The criteria for the selection of these States included the following: USAID was already funding agriculture development activities there, particularly those involved in cassava enterprise development; there was the potential to link with other USAID-funded activities and to develop cassava clusters where agro-industrial demand would be linked through the supply chain to producers and intermediate processors.

SPDC was assisting eight States: these are Bayelsa, Delta, Edo, and Rivers in the South-South and Anambra, Ebonyi, Enugu, and Imo in the South-East.

IITA is the implementation agency for ICP.