AGROFORESTRY, A POWERFUL TOOL FOR COMMUNAL FORESTS

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Zac Tchoundjeu
Regional Director of ICRAF for West and Central Africa
Tel 77 70 75 82, Email: z.tchoundjeu@cgiar.org
ARTICULATIONS

• ICRAF IN WEST AND CENTRAL AFRICA REGION

• APPLICATION OF CONCEPT OF PARTICIPATORY TREE DOMESTICATION IN COMMUNAL FOREST

• STRATEGIC RECOMMENDATIONS TO LOCAL COMMUNITIES FOR EFFICIENT WAYS OF CREATING THEIR FORESTS
ICRAF REGIONS

- Sahel
- African Humid Tropics
- East and Central Africa
- Latin America
- Southern Africa
- South Asia
- Southeast Asia
21 countries
330 million people
1200 million ha
KEY CHARACTERISTICS OF WCA REGION

• Smallholder farmers of this region rely on rain-fed production systems and natural/traditional methods of soil fertility maintenance.

• Farmers have limited access to markets.

• Huge potential to intensify and diversify productivity with agroforestry as a primary delivery mechanism of multifunctional agriculture for food and export markets.
Increase Yields, Decrease Poverty

**South Asia**

**Sub-Saharan Africa:**

[Graphs showing trends in cereal yields and poverty incidence for South Asia and Sub-Saharan Africa from 1984 to 2002.]

Distribution of Area under Cultivation By Zone
5-year Average (2003-2007)

- Africa: 69%
- America: 21%
- Asia & Oceania: 10%
Area under Cultivation


Côte d'Ivoire  Ghana  Liberia  Nigeria  Togo  Cameroon
Constant Fluctuation in cocoa/coffee prices

Cocoa production and price in Ghana 1960-2000

Cocoa production (MT)

Beginning of ERP

Beginning of CRP

Producer Prices (constant 1987 USD)

Calendar year


30.00 50.00 70.00 90.00 110.00 130.00 150.00 170.00 190.00 210.00 230.00 250.00

US cents/lb
LES FORETS NE SONT PAS SEULEMENT LES GROSSES BILLES OU LES PLANCHES

Plus de 2/3 de 600 millions de peuple en Afrique dependent directement ou indirectement de la forêt pour leur survie.
SPECIES UNDER DOMESTICATION

- Ricinodendron heudelotii
- Kola nitida
- Gnetum
- Irvingia gabonensis
- Shetum
Afrotyrax lepidophyllus

Monodora myristica

Zanthoxylum macrophylla

Garcinia cola (Bitter kola)
Prunus. africana for hepatitis A, B, D, E
Allanblackia floribunda
BAOBAB VEGETABLE BANK
ICRAF’s INNOVATIVE APPROACH: the Participatory Tree Domestication
Participatory Tree Domestication (PTD)

Put simply PTD refers to:

- the means communities select, propagate and manage high-value indigenous fruit trees and medicinal plants and integrate them in the various farming systems,

- Species for domestication are mainly selected encompassing indigenous knowledge and genetic selection based on scientific principles

- A strong partnership is developed with scientists, civic authorities and private companies.

- PTD is a farmer driven and market lead process. It focuses on species farmers consume best with high potentials for local, regional and international markets
How to multiply the selected species: rooting cuttings
GRAFTING TECHNIQUES

• No new secrets but skills normally reside with station or research staff
  – Farmers, extension services need the techniques
How to multiply the selected species: air layering
Creation of a cultivar

**Dacryodes edulis**

Earlier fruiting, smaller trees and uniform quality
Approaches for linking rural communities to markets

**HOW TO INCREASE FARMER INCOMES**

Profit margin received by market actors
Some Results

- In 2005, 4 farmers enterprises generate 709,075 FCFA from the sale of njansang.

- In 2006, they generated 2,826,000FCFA.

- In 2007 they generated 2,472,150FCFA.
The Njansang Kernel Cracking machine:

Percentage of success 90 %
The supply chain of AB is very similar to other modern supply chains, like that of palmkernel oil, coconut oil or Shea nut oil.
The right tree for the right place

1. Trees for Products

fruit
firewood
medicine
income
sawnwood
fodder

2. Trees for Services

soil fertility
carbon sequestration
soil erosion
watershed protection
shade
biodiversity
3-month old scion grafted on mature tree

First flowers of 5-month old cocoa clones grafted on mature tree
New cultivars at 1.5 (left) and 2.5 (right) years in Ecuador

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Outcome and Impact Assessment

Prize award at UN summit at NY
STRATEGIC RECOMMENDATIONS TO LOCAL COMMUNITIES

• Involve local population in establishment and management of communal forests

• Participatory Tree Domestication is a powerful tool for regeneration and management of communal forest

• It helps farmers to be fully integrated in the management of the ecosystems as farmers could understand the rational between seeds and mature trees
STRATEGIC RECOMMENDATION TO LOCAL COMMUNITIES…

• It helps farmers to solve the problem of erratic seeds

• It helps farmers to plant known and desired materials

• It helps farmers to have quick returns in investments due to early fruiting materials
STRATEGIC RECOMMENDATION TO LOCAL COMMUNITIES…

- It helps farmers to achieve diversification which is the most stable system
- Farmers trained to participatory tree domestication could easily accept to plant forest species as their immediate needs are already satisfied
- Use new approaches in creation of plantations
- Rural Resource Centers are appropriate areas where farmers could be exposed and learn the participatory tree domestication and agroforestry technologies so far developed by the research.
KEY Donors and Partners

- Key donors are: Belgian Cooperation (DGDC), CFC, EU, IDRC, IFAD, RRIN, UNEP/GEF, USAID, USDA, DFID, ACDI, Government OF Finland, MARS COMPANY, Australian Government, etc.

- Key partners include universities and related networks (ANAFE, AU) and regional bodies including CORAF, COMIFAC, ECOWAS, FARA, NGOs, NARS from 8 countries, Farmers organizations and different ministries involved in Agroforestry, Forestry and Agriculture.

- Research activities of the region cover the 6 GRPs with active participation of scientists in CRPs particularly CRP 1.1, 1.2 and CRP6.

- Joint projects being implemented with IUCN, WWW, AWF and CARPE
MANY THANKS FOR YOUR ATTENTION