

AGROFORESTRY, A POWERFUL TOOL FOR COMMUNAL FORESTS

**Paper presented at the 1st Congress Communal Forests of COMIFAC
Hilton Hotel Yaounde, 3-6 May 2011.**

Zac Tchoundjeu

Regional Director of ICRAF for West and Central Africa

Tel 77 70 75 82, Email: z.tchoundjeu@cgiar.org



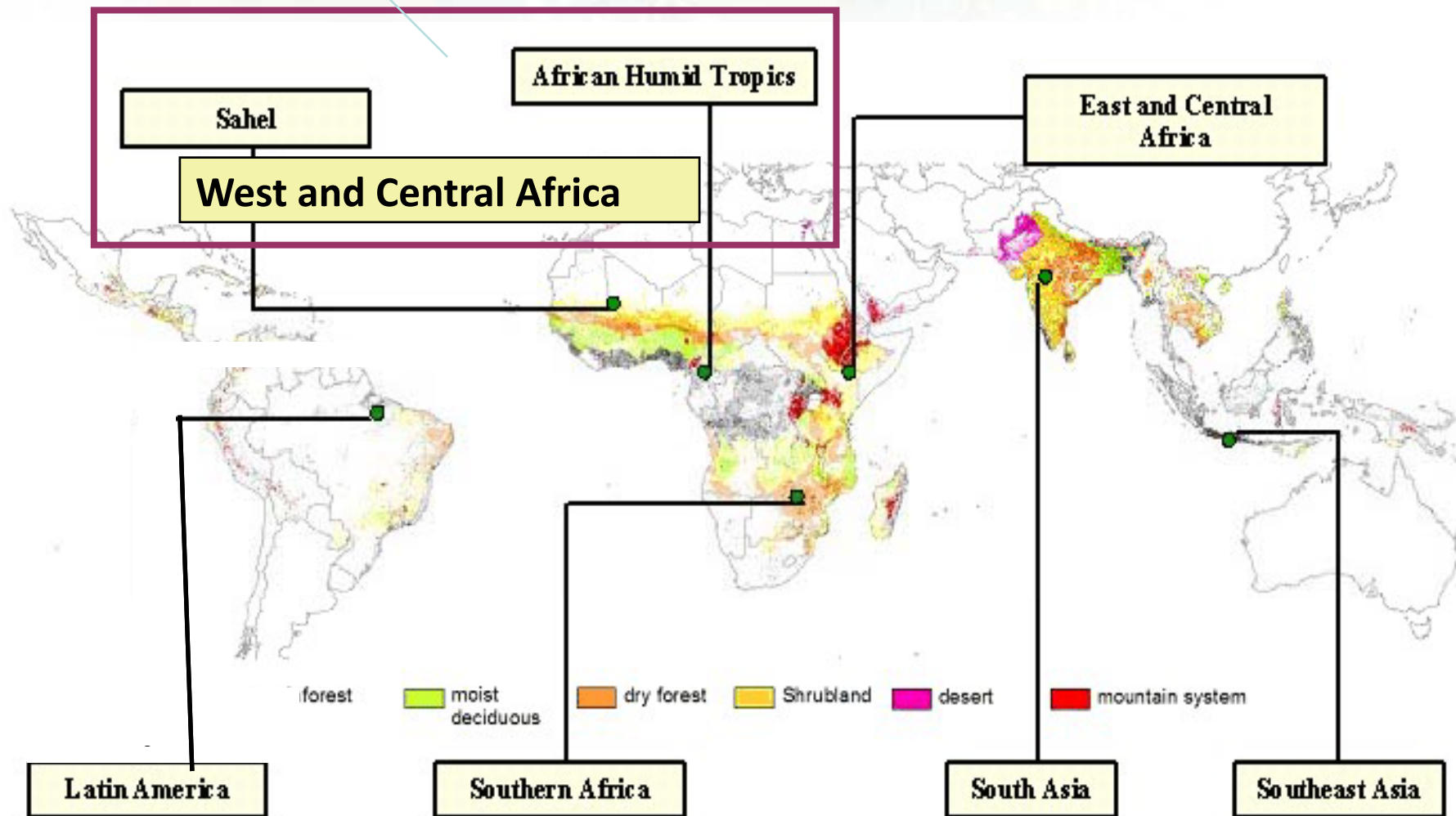
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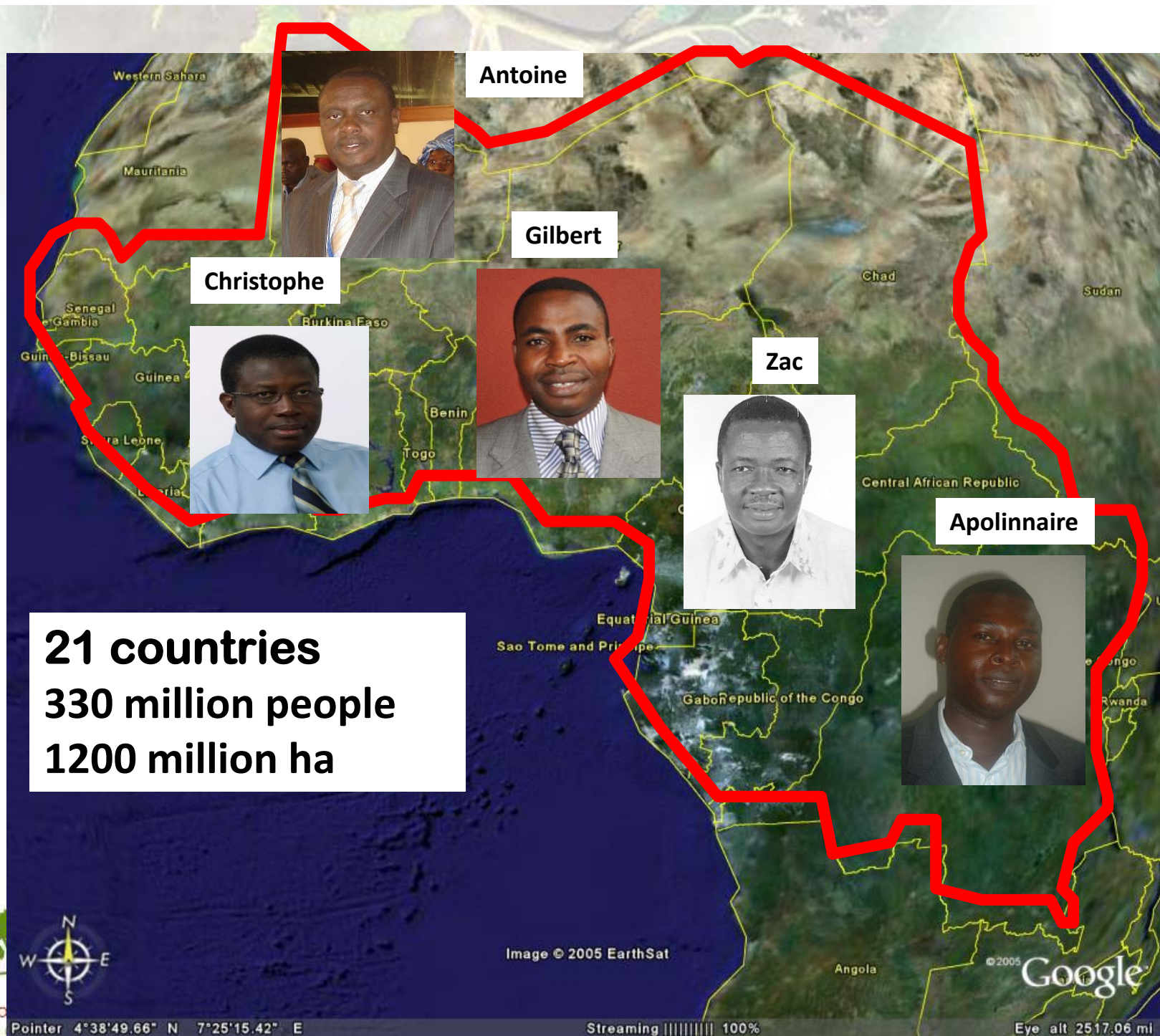
ARTICULATIONS

- 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





21 countries
330 million people
1200 million ha

Antoine

Gilbert

Christophe

Zac

Apolinaire

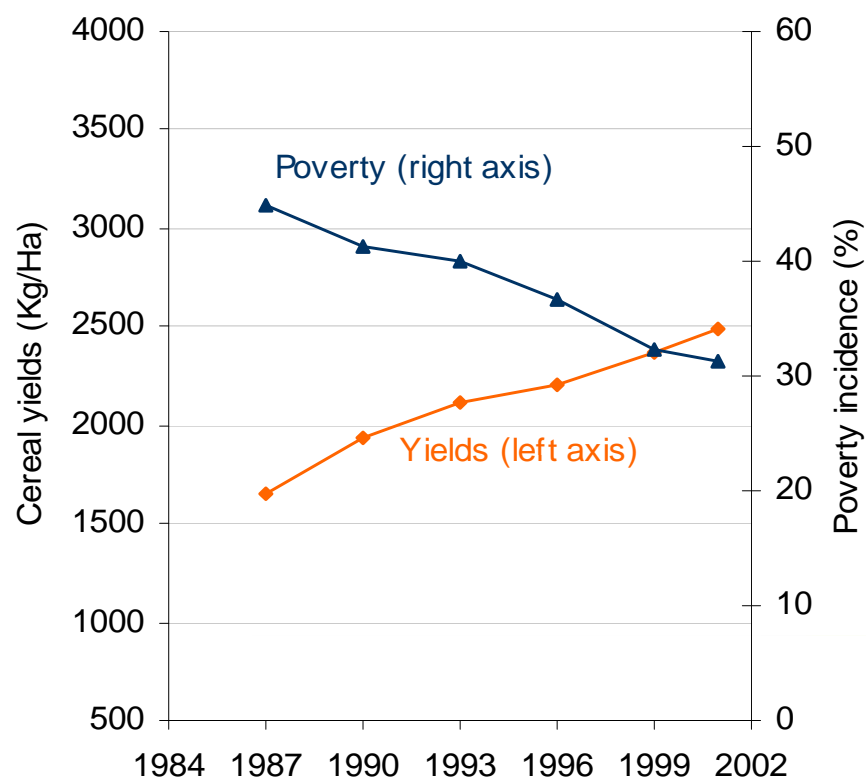
KEY CHARACTERISTICS OF WCA REGION

- 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**

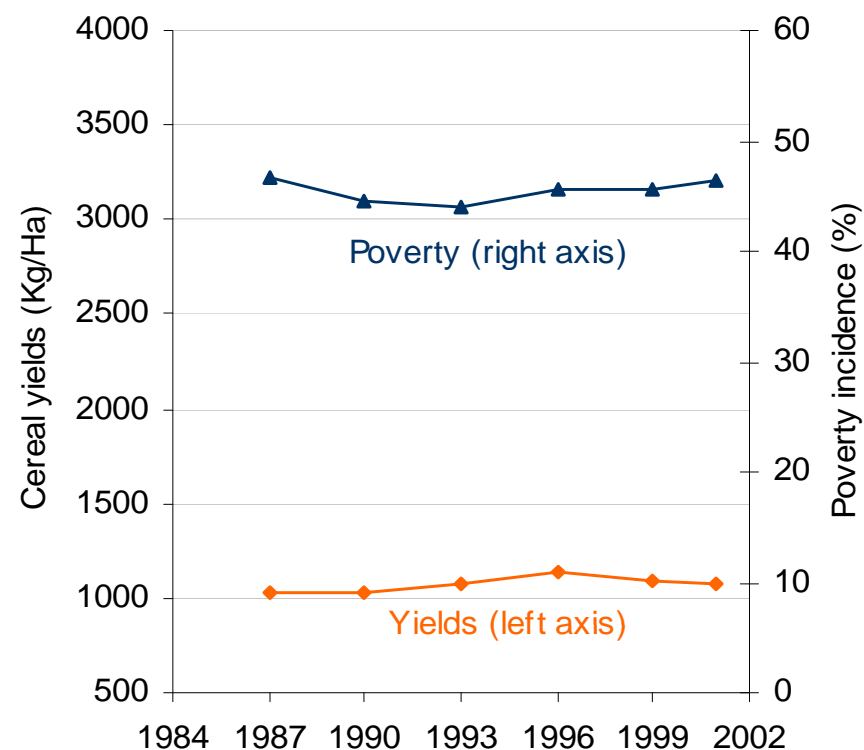


Increase Yields, Decrease Poverty

South Asia



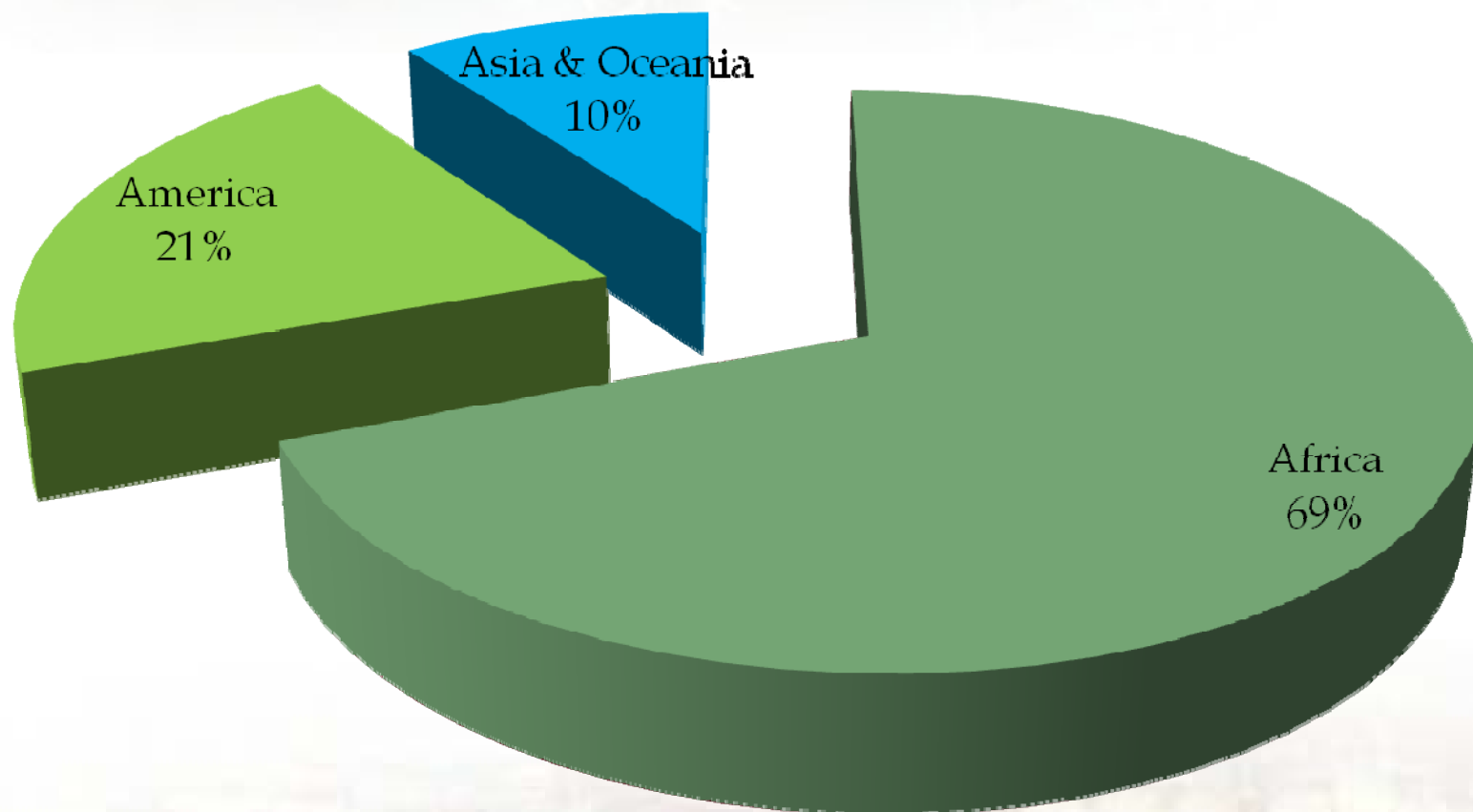
Sub-Saharan Africa:



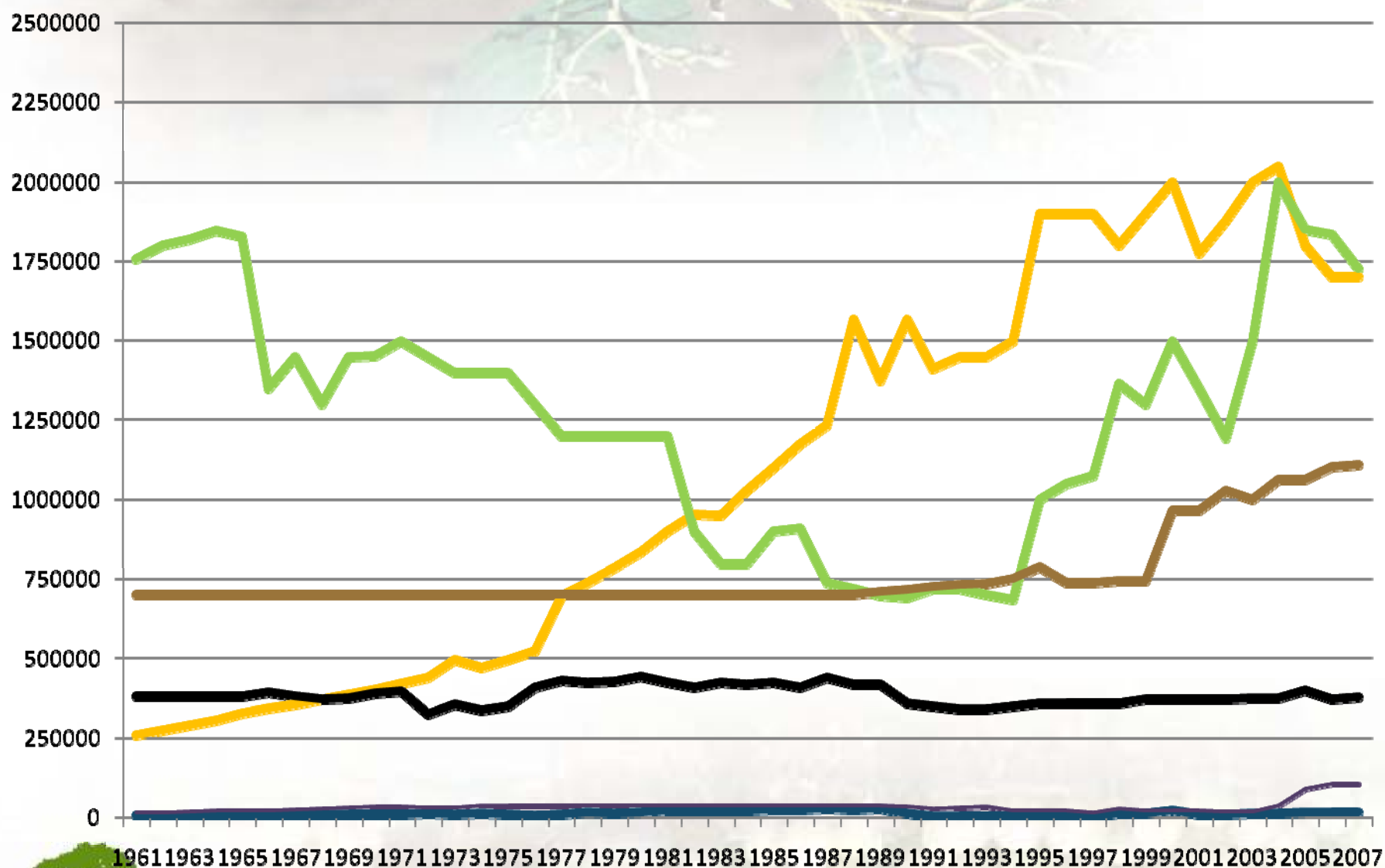
Source: *Agriculture for Development*, World Development Report, World Bank, 2008.

Distribution of Area under Cultivation By Zone

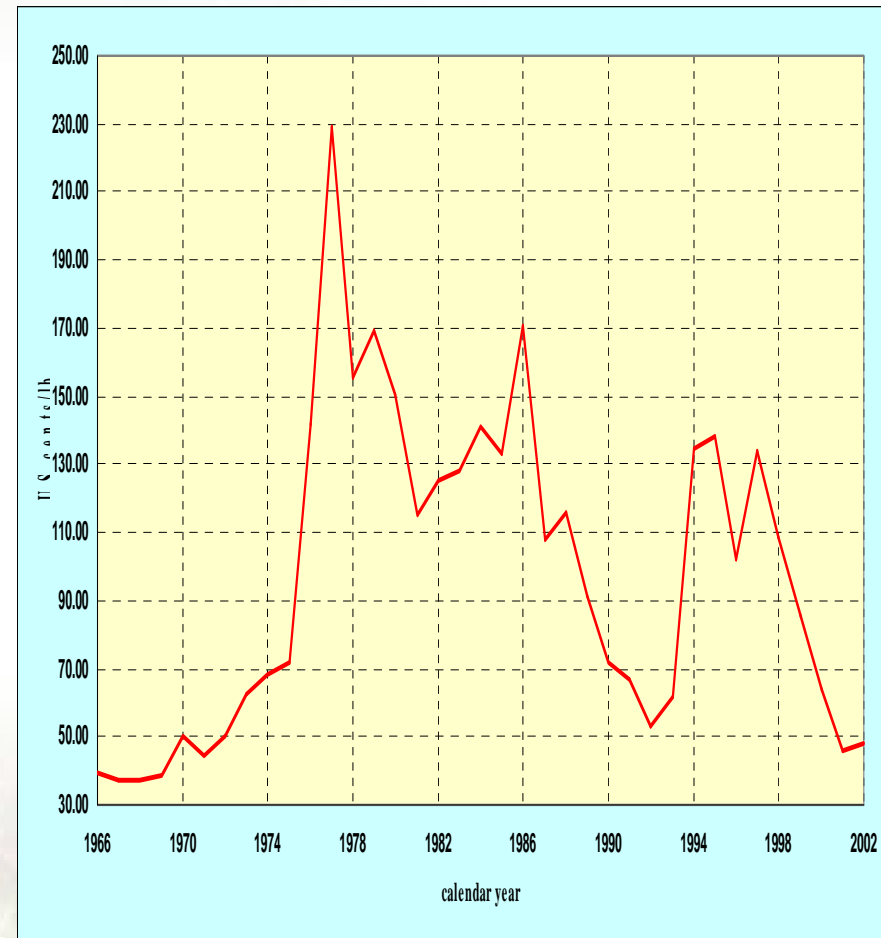
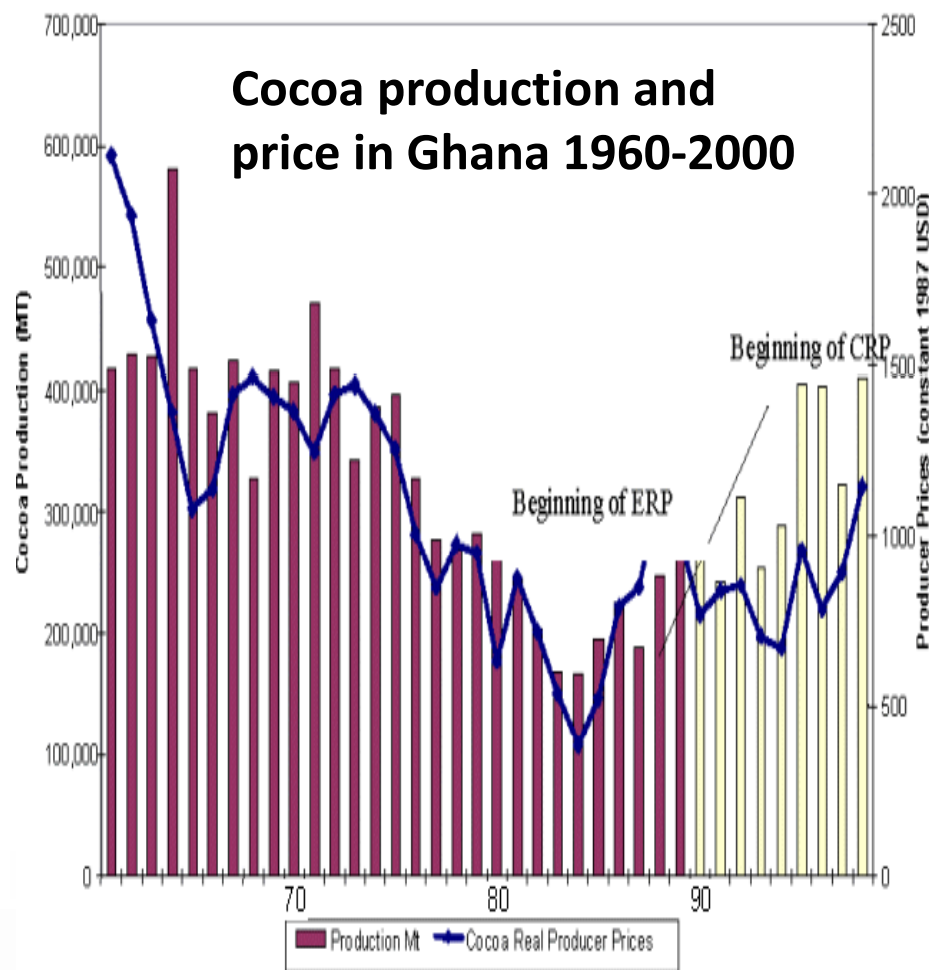
5-year Average (2003-2007)



Area under Cultivation



Constant Fluctuation in cocoa/coffee prices



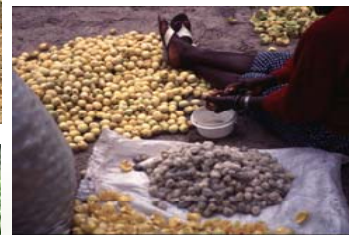
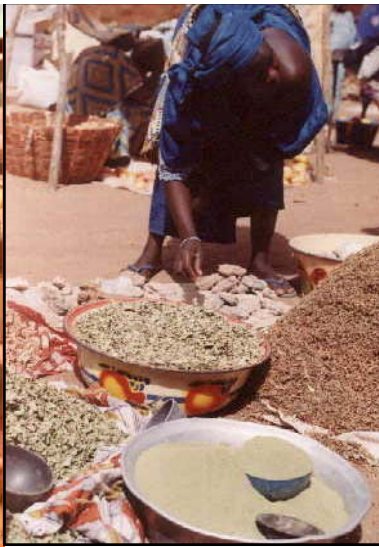
LES FORETS NE SONT PAS SEULEMENT LES GROSSES BILLES OU LES PLANCHES



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



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SPECIES UNDER DOMESTICATION

Kola nitida



Ricinodendron heudelotii



Irvingia gabonensis



Gnetum



Afrotyrax lepidophyllus



Monodora myristica



Garcinia cola (Bitter kola)



Zanthoxylum macrophylla



***P. Johimbe* cutting**



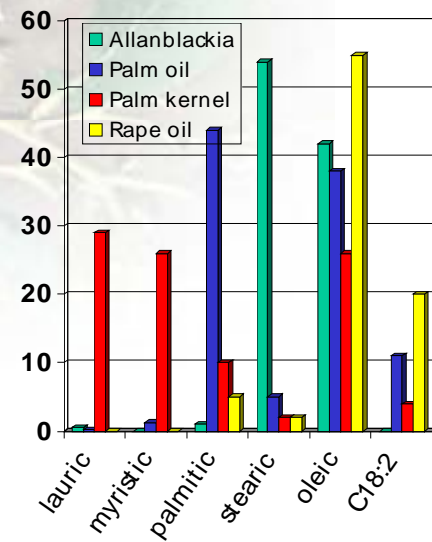
Prunus. africana



Enantia Chlorantha



***E. chloranta* for hepatitis A, B, D, E**





Allanblackia floribunda





BAOBAB VEGETABLE BANK







ICRAF's INNOVATIVE APPROACH: the Participatory Tree Domestication



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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



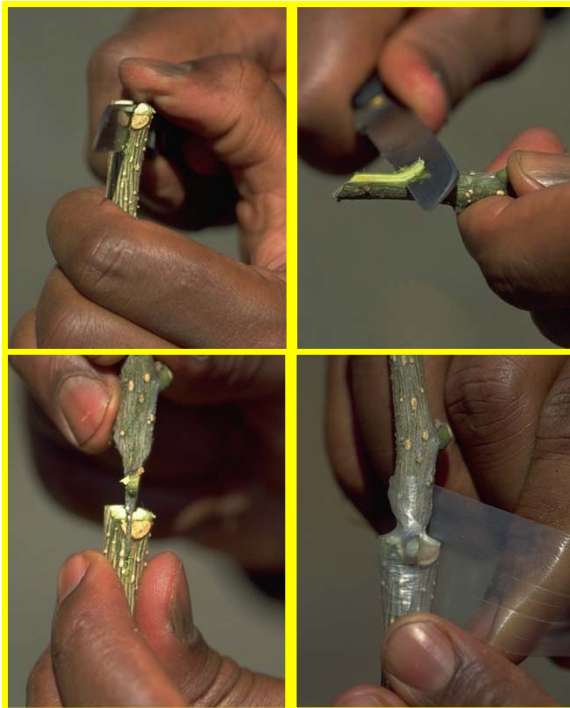


How to multiply the selected species: rooting cuttings



GRAFTING TECHNIQUES

- No new secrets but skills normally reside with station or research staff
 - Farmers, extension services need the techniques





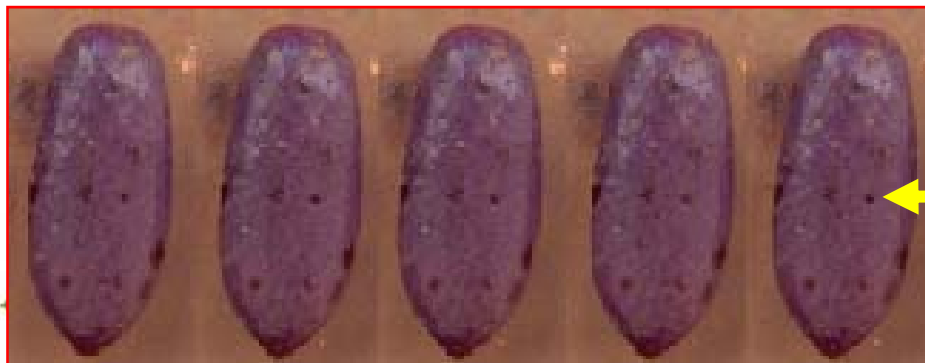
How to multiply the selected species: air layering

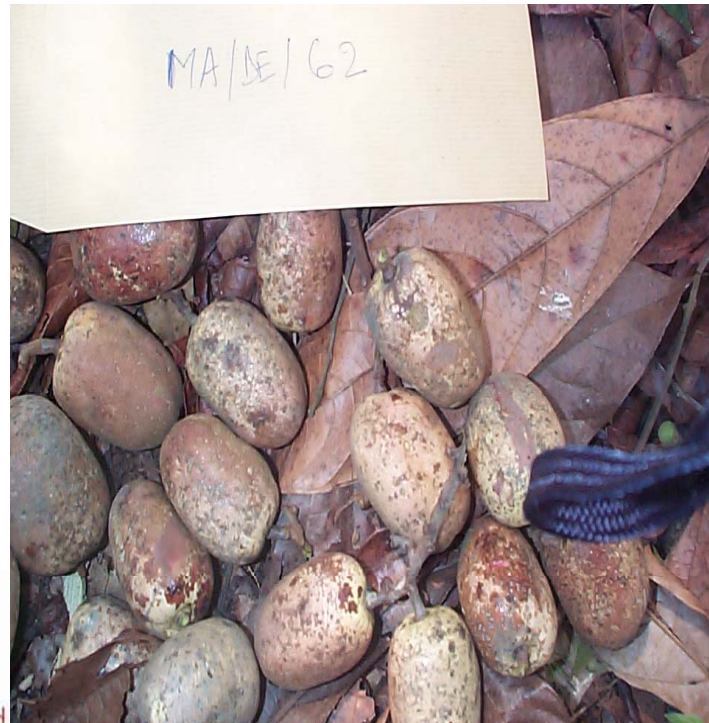
Creation of a cultivar

Dacryodes edulis

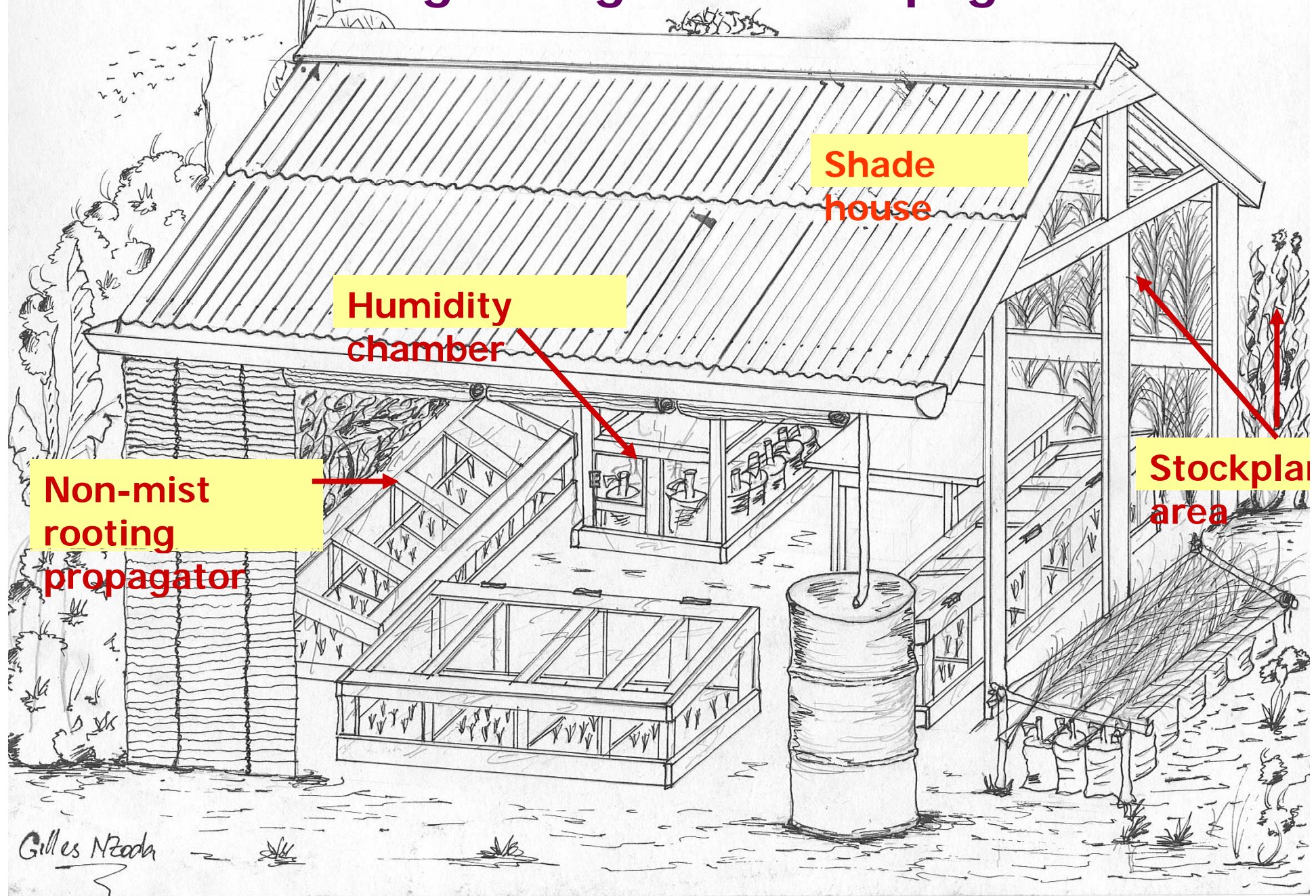


Earlier fruiting, smaller trees and uniform quality





Farmer-Managed Vegetative Propagation Unit



ENTREPRENEURIAL SPIRIT IN PILOT VILLAGES



DRC



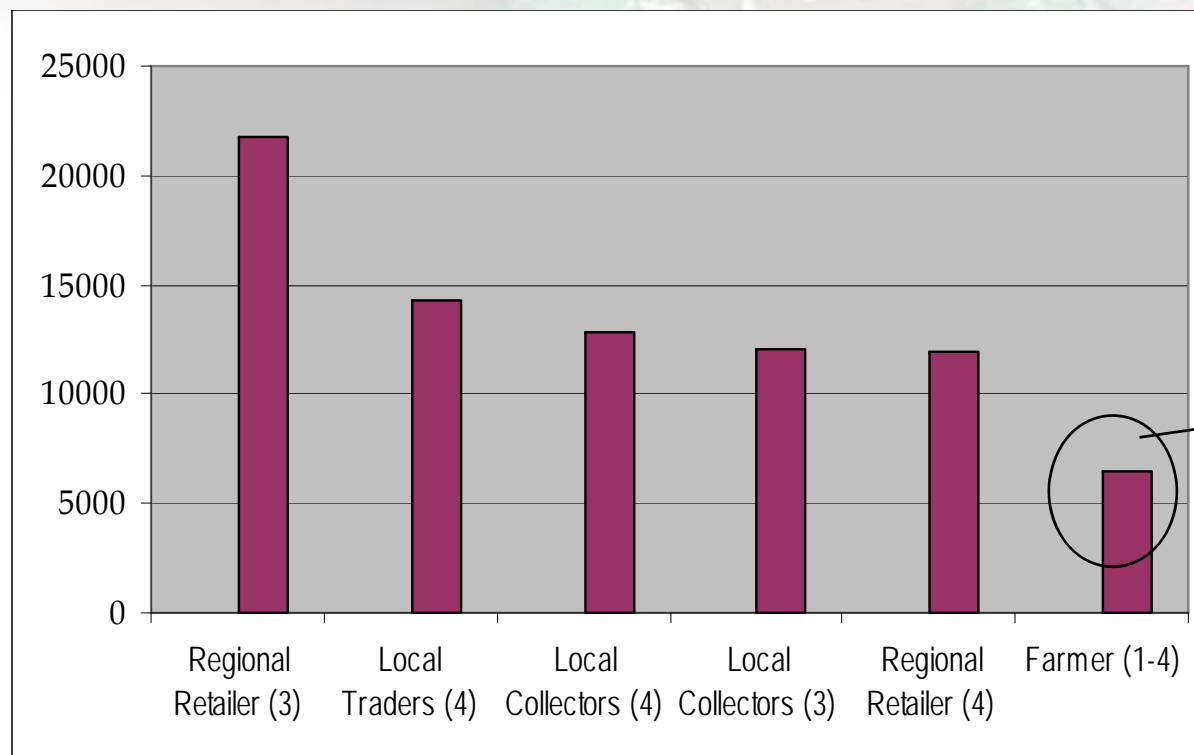
Nigeria



Cameroon

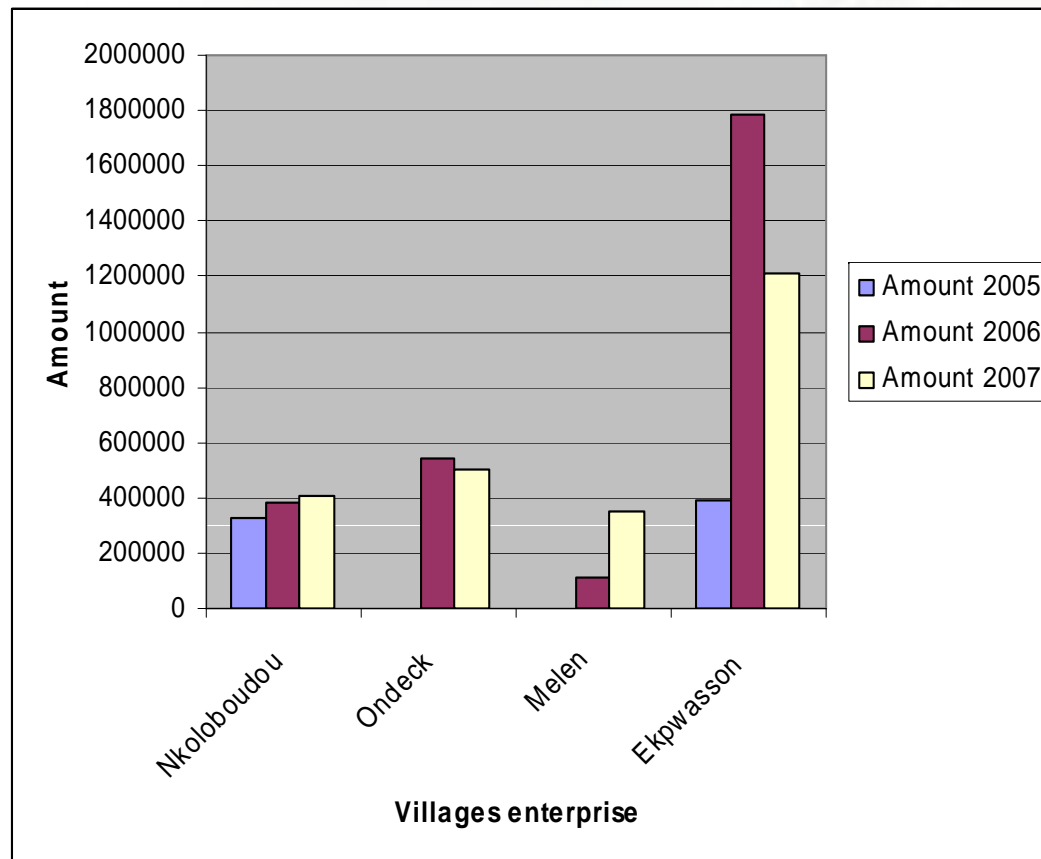


Approaches for linking rural communities to markets



Profit margin received by market actors

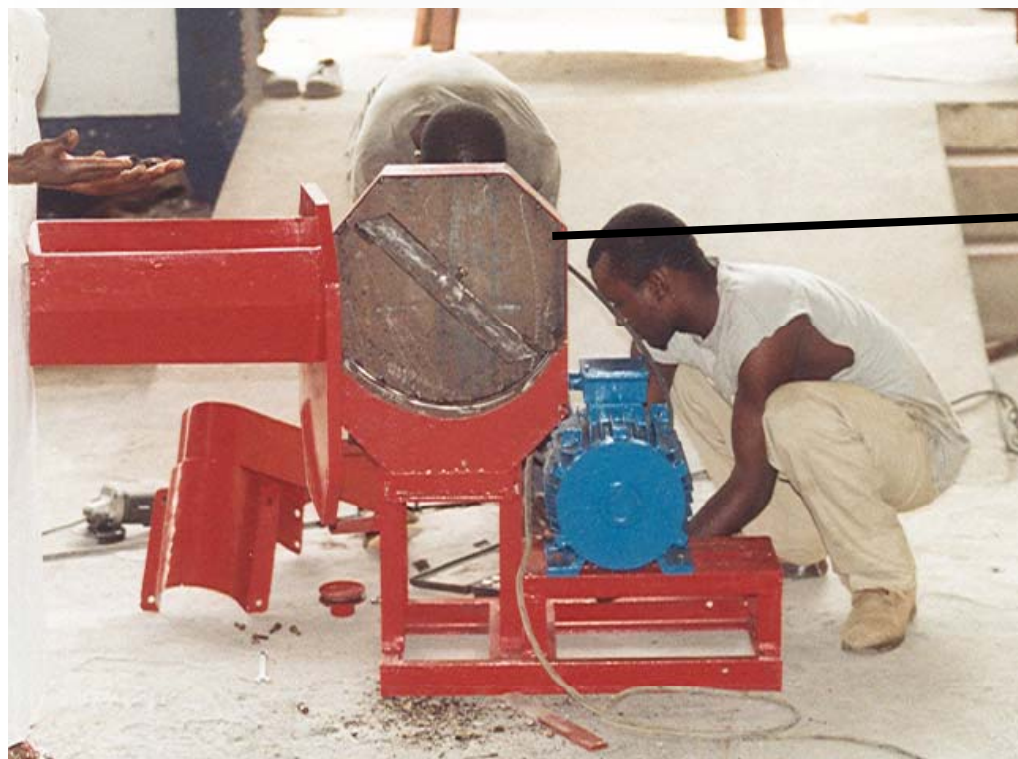
Some Results



- In 2005, 4 farmers enterprises generates received 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 %**



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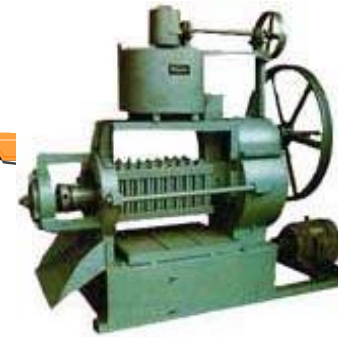
Wild picking / Harvesting



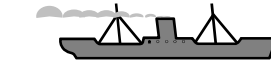
storage



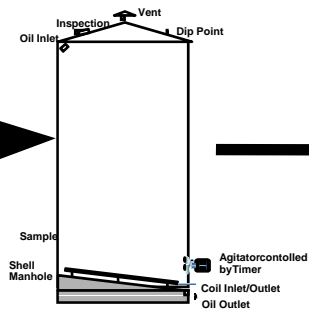
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Oil milling



T



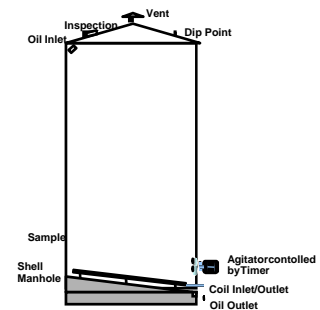
Crude oil storage



Oil refining



T



storage and blending

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



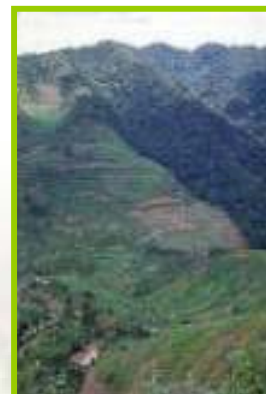
soil
fertility



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***



	LS Means BW	StdErr
USDA 484	7.28	0.4
USDA 374	6.90	0.34
CCN51	3.4	0.39

**New cultivars at 1.5 (left) and 2.5
(right) years in Ecuador**



Outcome and Impact Assessment



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, WWF, AWF and CARPE



*MANY THANKS FOR YOUR
ATTENTION*



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