

wood energy issues in Africa: some perspective and priorities

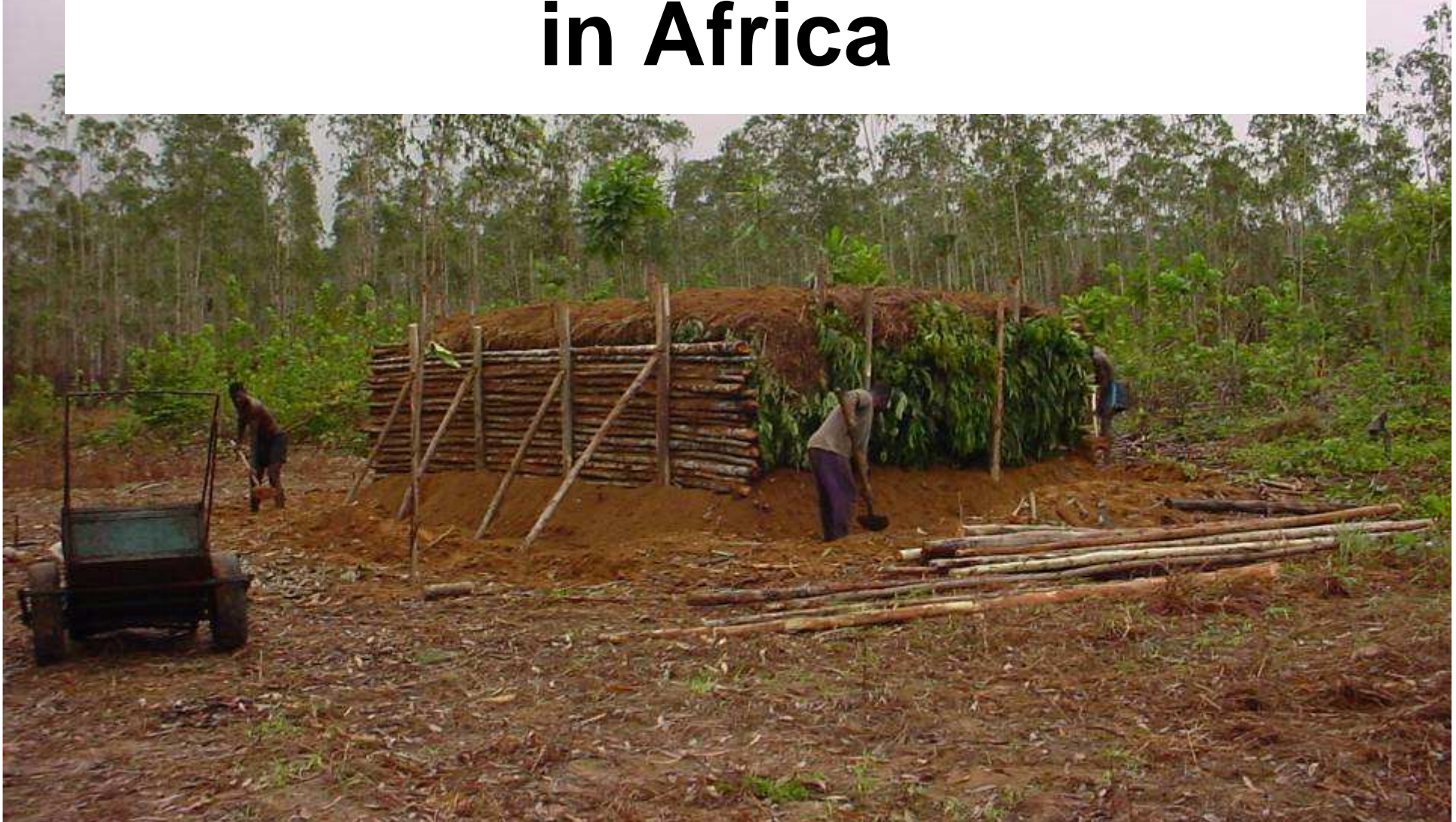
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Wood for energy

A complex and evolving issue in Africa



Fuelwood and charcoal in Africa

The first source of domestic energy

nearly 80 % of domestic energy supply, increasing

A major component of forest degradation and deforestation

more than 80% of total wood removal from forests, often related with agriculture

An important source of revenues for poor and/or rural populations

More important than formal wood industry in most countries

A rapid evolution in all countries

Consumption increase, resource depletes, costs increase



No unique situation, but many gradients and local variations

From dry semi arid savanas to evergreen equatorial rainforests

From rural areas to big cities

From wood resource to markets and final consumers

By product of shifting agriculture or specific production for energy

Unformal (but very organized) supply chains adapted to local conditions

Various levels of consideration by politics and national institutions



Some key data in Africa

	1970	2000	2030	
fuelwood	261	440	544	millions m3
charcoal	8	23	46	millions tons

Consumption wood energy	0,25 à 1 m3/hb/an
wood energy / total energy	70 à 95 %

Part of forest carbon release in central Africa: 80 %

One to ten times the quantity of commercial (formal and unformal) sawnwood production

Main drivers of wood energy in Sub Sahara Africa

Wood resource sustainability

Mostly from non managed forests and agriculture; more remote; resource scarcity increases

Social issues for poor/rural populations

Only source of energy for most populations, with health and gender considerations
Adaptation of the supply to the consumption needs, but unsustainability

Economic of unformal supply chain, from forests to markets

Often more important than formal wood industry
Costs increase

Institutional implication and governance

Low consideration on most legal frameworks
Relatively new question in central Africa

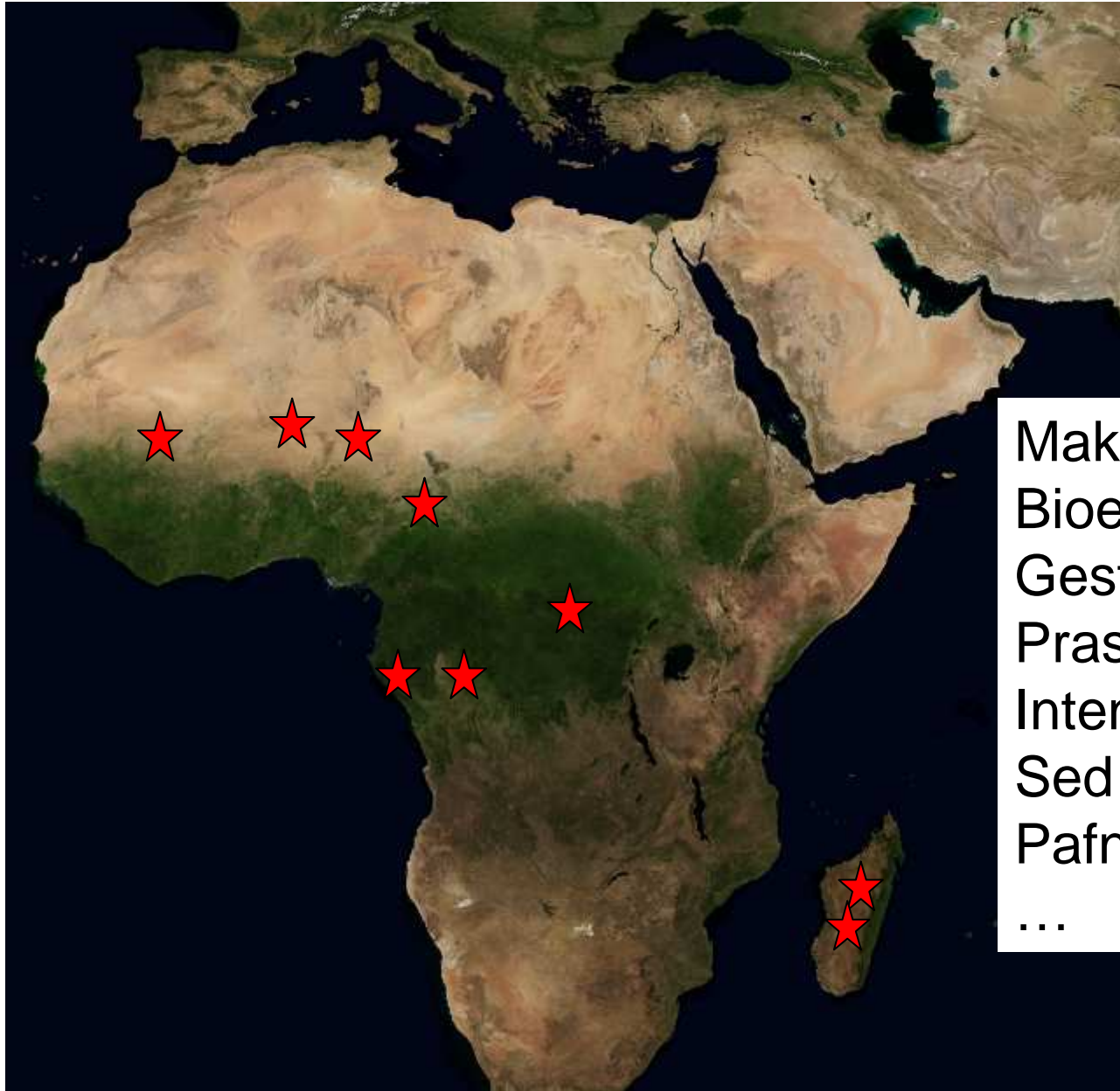
Environmental impacts

degradation of most periurban and rural areas
Potential important carbon issue (REDD)
Spatial and time scales



Ongoing activities





- Makala
- Bioenergelec
- Gesforcom
- Prasac
- Intens&fix
- Sed
- Pafn
- ...

Cirad involvement in wood energy issues in Africa

Resource management

Spatial and environmental impacts of increasing demand for cities

Creation and/or sustainable management of wood resource

Supply chains

Supply chain organization through domestic energy strategies implementation and rural markets

Social impacts of rural markets development

Social and economics of supply chains

Institutions

Impacts and dynamics of institutional changes in forestry regulations

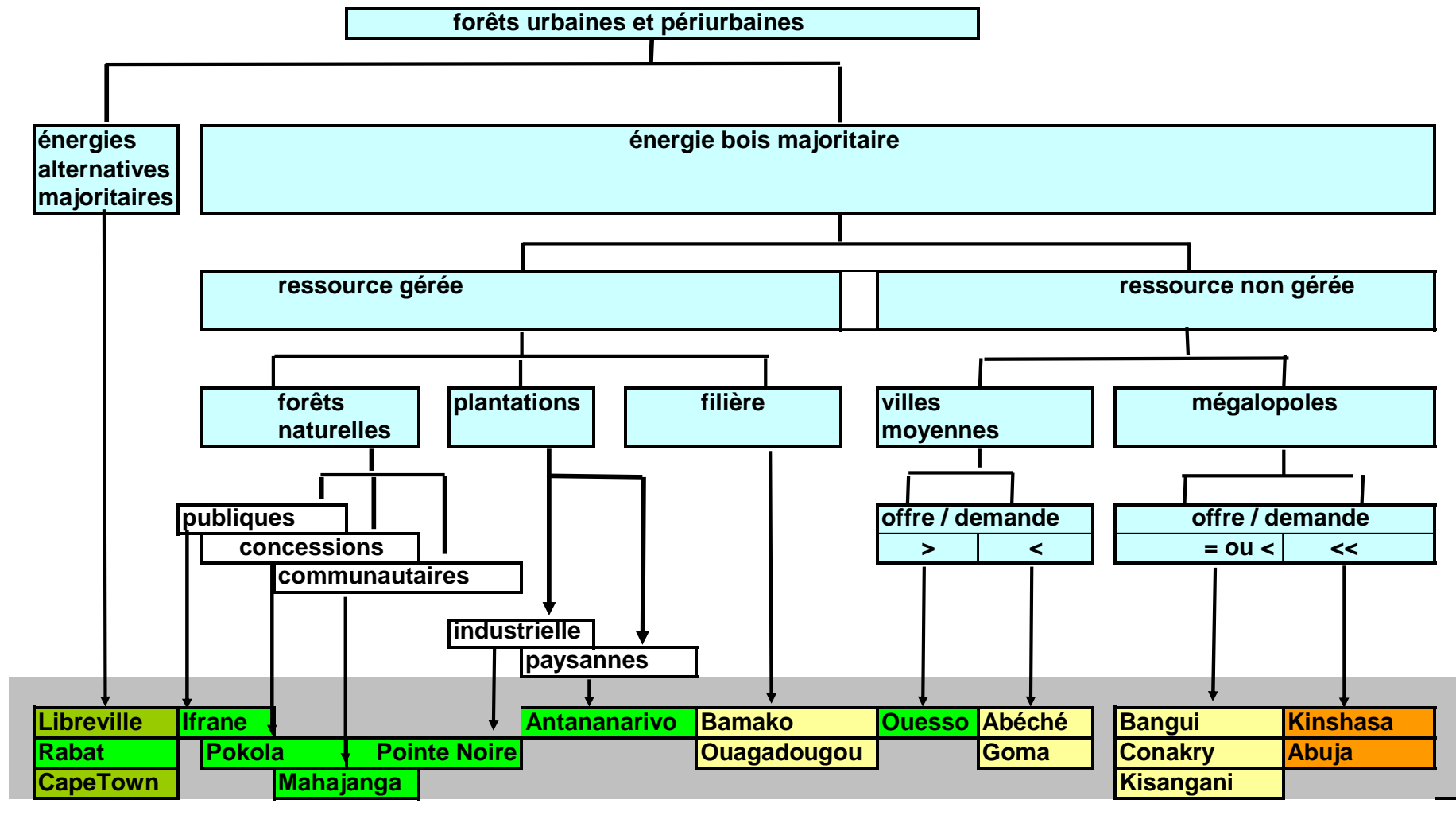
land tenure and territorial organizations to improve local appropriation and benefits

Carbon economy; Redd+ and wood energy.

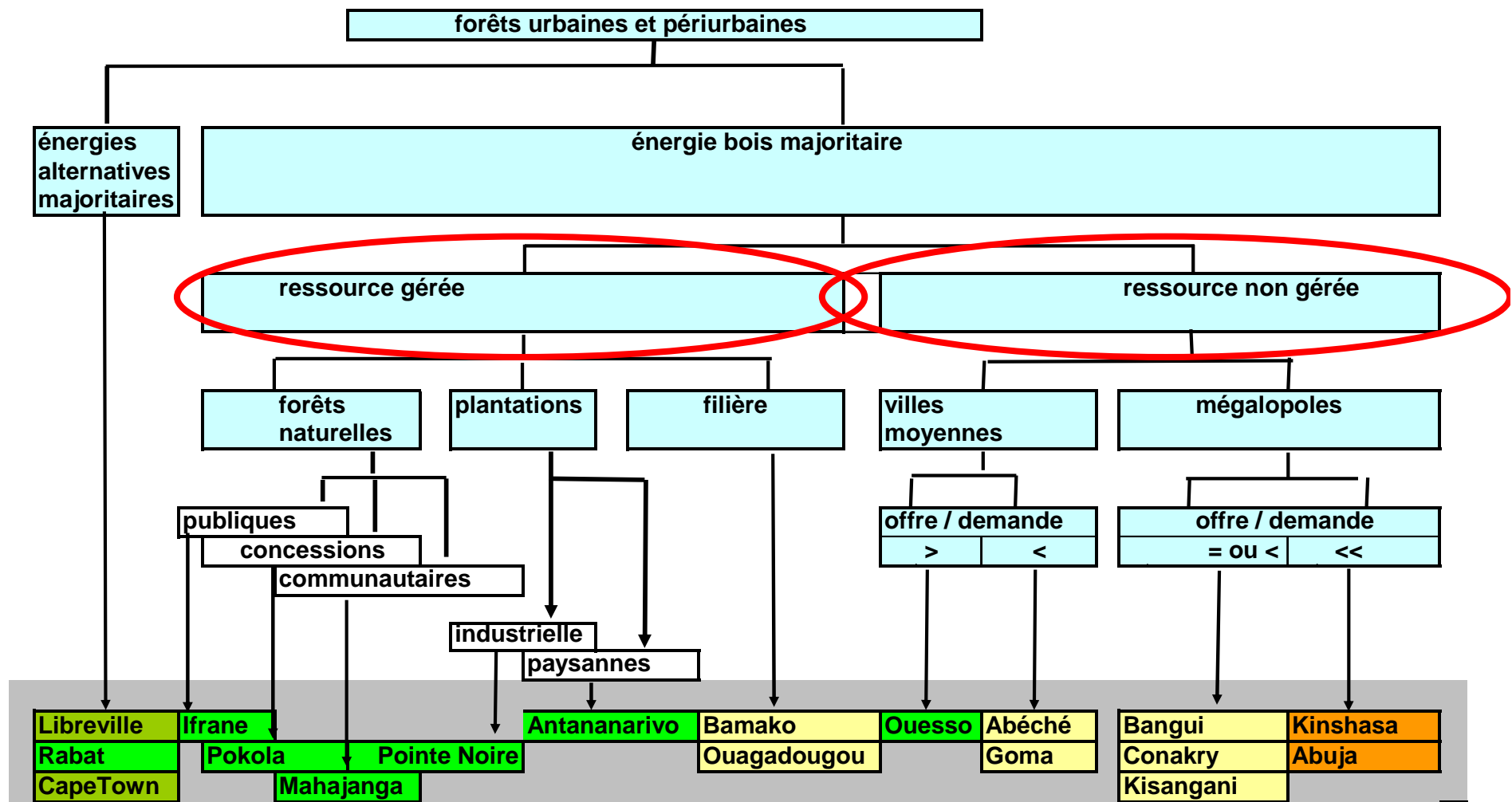
Improvement of wood energy

Wood technology and quality for energy

Rural power development using wood biomass



	pression réduite, risque faible
	pression significative, mais contenue
	dégradation significative, mais dans un périmètre restreint
	dégradation accélérée et généralisée de la ressource

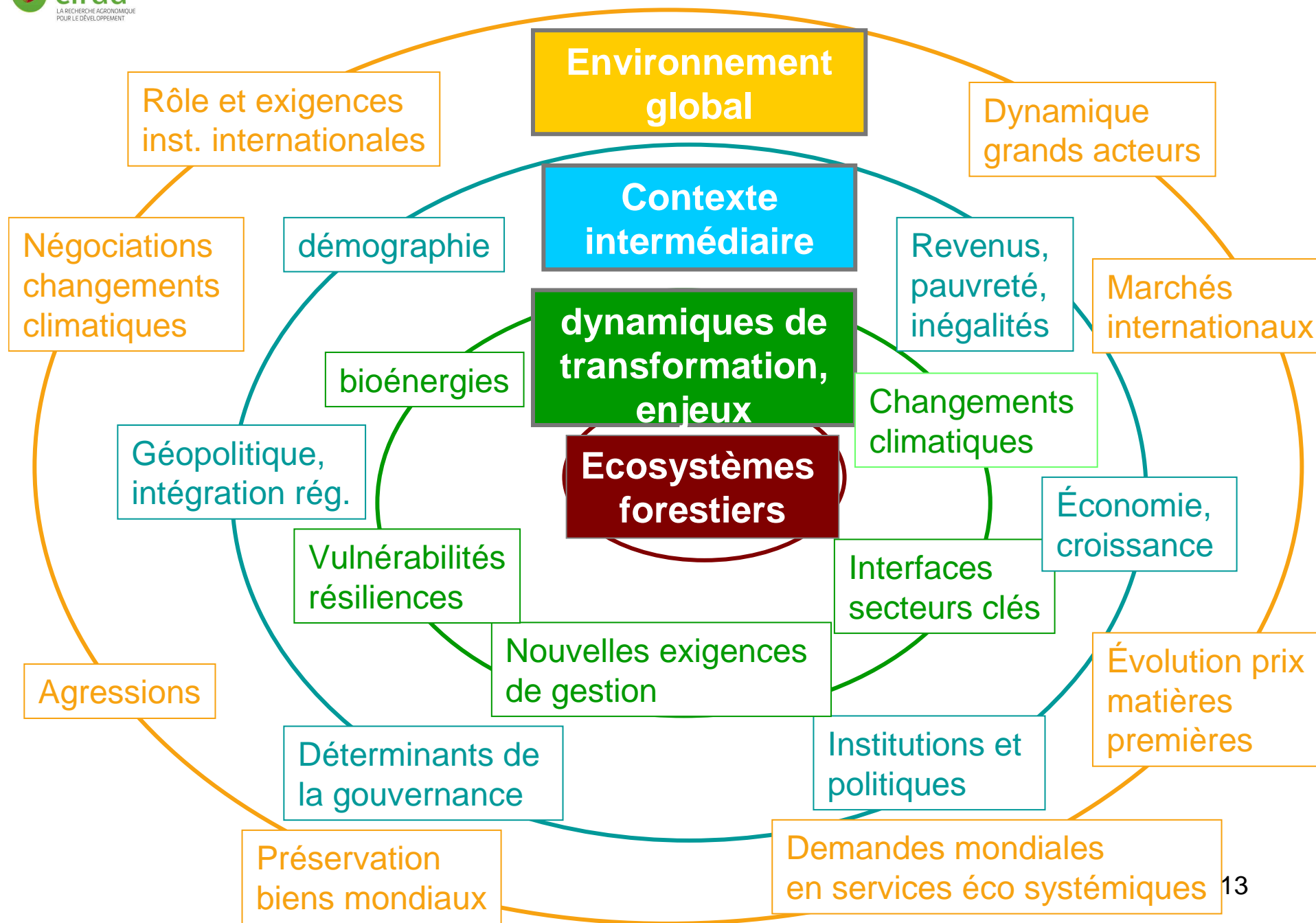


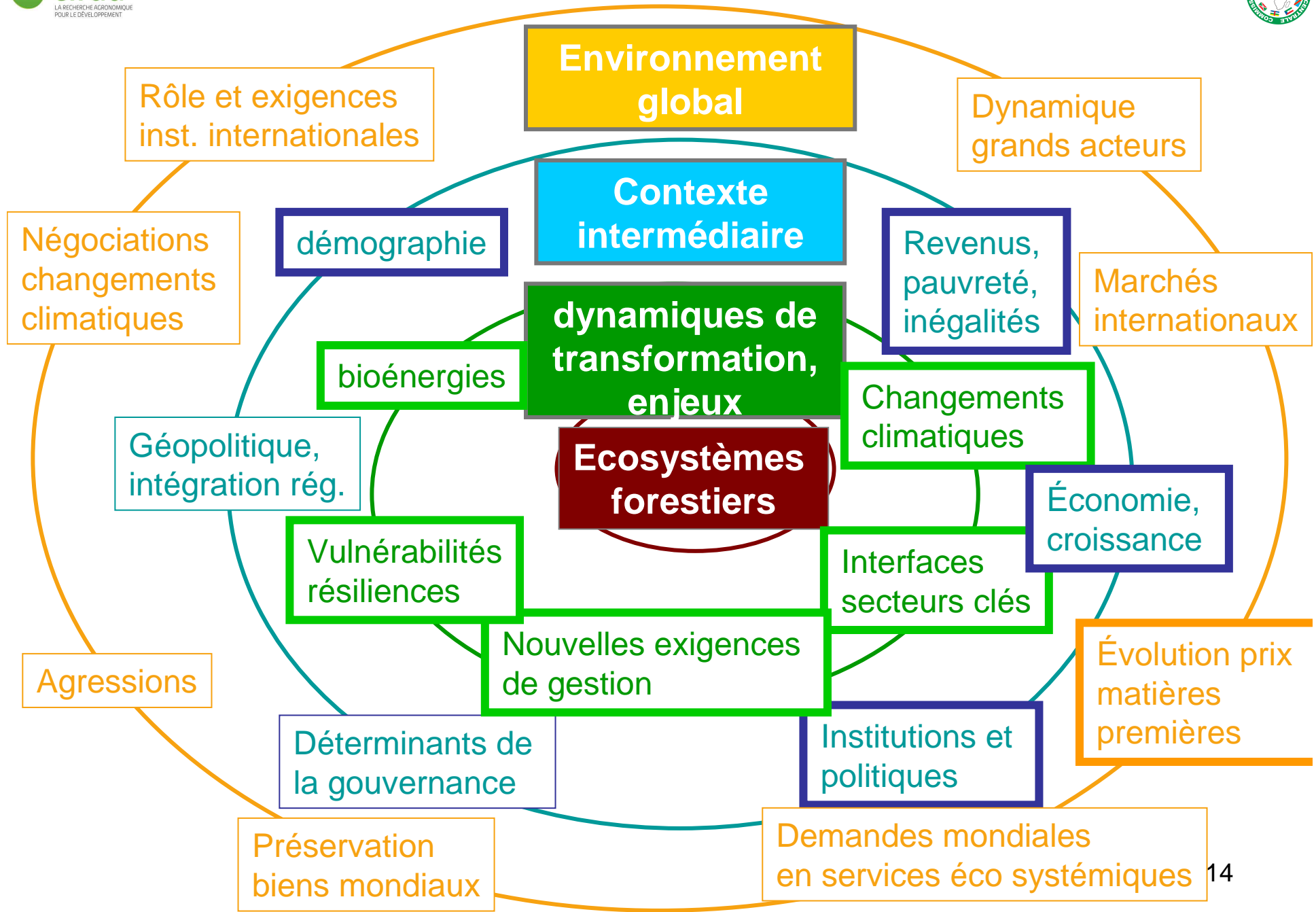
The key level: wood resource availability and management

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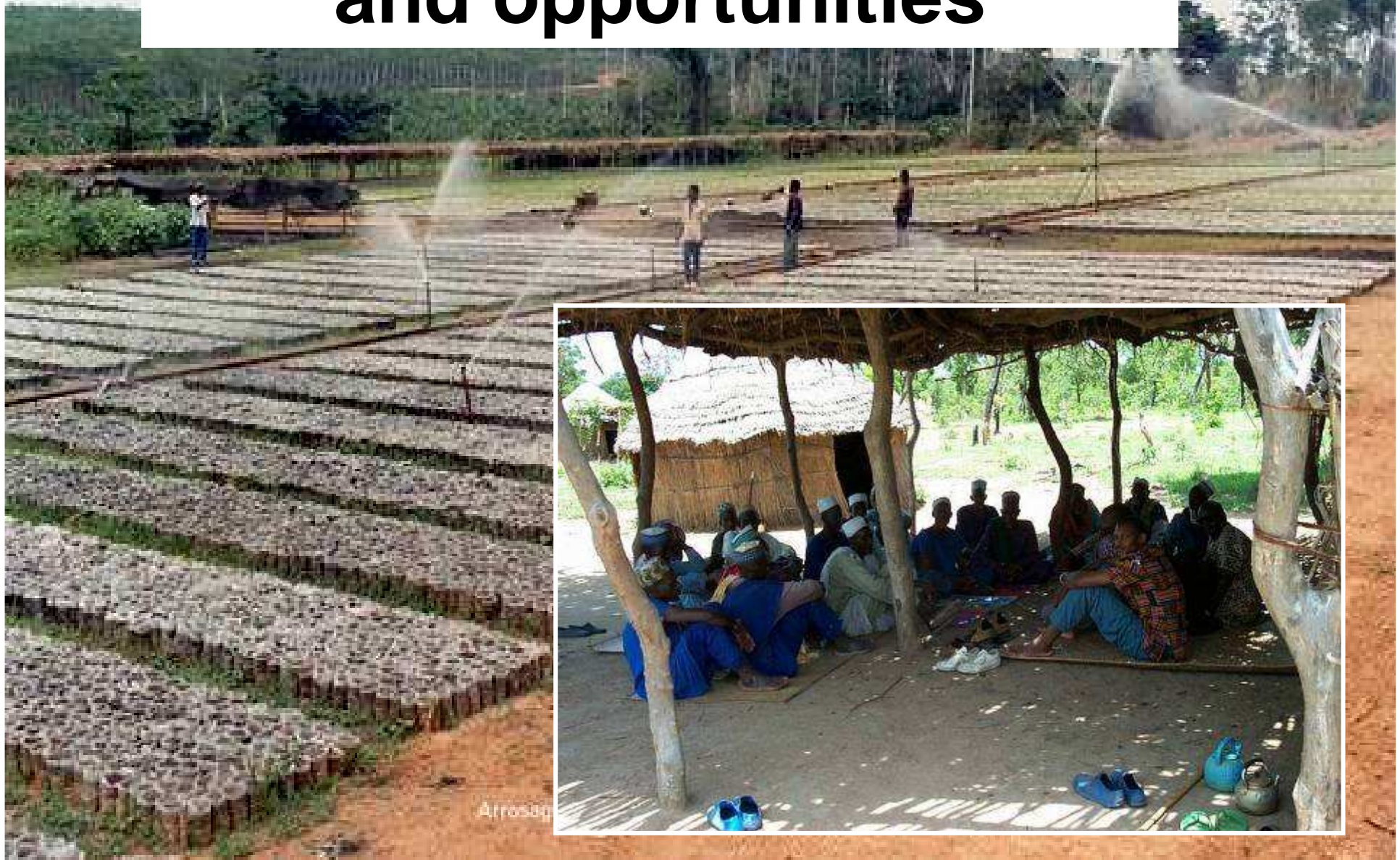
Prospective analysis: Wood energy at the heart of future evolutions







New questions, challenges and opportunities



Wood for energy

Has long been considered as an energy for the poors and bad for environment

Is more and more actual as demography and urbanization increase

When properly and sustainably managed, must at the opposite be considered as a powerful tool against poverty, maintaining jobs and creating revenues in rural areas

Give value to low productivity or degraded forests instead of deforestation for agriculture

Management allows quick adaptation to climate change effects

Support local development though power plants using biomass

Agroforestry systems, with N fixing trees and improved fallows, allow sustainable wood production, agriculture and soils rehabilitation

New challenges

We can now share a global and coherent vision on wood energy issues

Availability and access to the resource, especially for the poorest (markets, cities..)

Secure supply in a context of expensive and/or rare and/or fossil alternative energy

Sustainable management of forests (created or natural)

Promote complementarity with small agriculture (agroforestry) and community management including energy

Increase energetic efficiency through resource quality and/or use (stoves,..)

Contribution to social welfare and economic development at family and local levels

Industrial uses of charcoal (power, cogeneration,...)

Second generation fuels



Some issues for further actions at resource and supply chain levels

Define and implement adapted and efficient strategies

Taxes, controls and regulations

Land use and rights

Territorial organization, management planning and stakeholders appropriation

Carbon related issues, LCA on the whole supply chain

Interface agriculture x forests and urban areas

Payment for environmental services

Increase and share knowledge

Applied and operational research (social, economic, environment)

Learning and capacity building (academic and technicians)

Natural forests dynamics

Promote large scale operations

Plantations, agroforestry, natural assisted regeneration

Valorize recent results (positive as negative)

Economic vision,

C&I sustainable management

Thank you for your attention



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