



Bois sacré du Roi d'Oussouye (CSE-LADA (Dakar, Sénégal))

Bois sacré (Senegal)

Kareng, Kalem (diola)

DESCRIPTION

Espace naturel protégé essentiellement à des fins culturelles, subsidiairement à des fins de protection

L'environnement de la ville d'Oussouye (Basse Casamance) se particularise par la présence d'un manteau forestier que l'on ne retrouve nulle part ailleurs au Sénégal. Dans cette partie du pays, les conditions bioclimatiques ont favorisé le développement de massifs boisés qui ont été bien préservés au fil du temps grâce à la mise en place de systèmes coutumiers de gestion, caractéristiques de la société traditionnelle diola. Les forêts reliques, qui parsèment le paysage urbain d'Oussouye, ont été particulièrement épargnées par la pression anthropique en raison de leur caractère sacré. En effet, les populations locales adhèrent à ce mode de gestion traditionnel, puisqu'il leur garantit un bien-être spirituel.

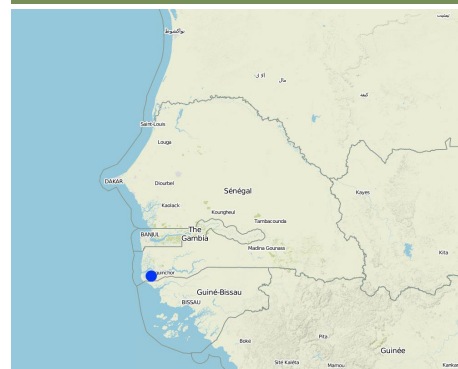
But de la technologie: Communément appelés bois sacrés, elles jouent un rôle principalement socio-culturel et religieux. Elles abritent les fétiches utilisés pour les rites initiatiques durant lesquels les connaissances sont transmises aux initiés. Certains bois sont destinés aux hommes (demeure des Rois, lieu de circoncision, etc.), d'autres aux femmes (maternité des épouses des Rois). Ils sont demeures de divinités auxquelles les populations vouent un respect et une crainte qui les dissuadent d'y pénétrer et de saccager les ressources naturelles qui s'y trouvent. Des cérémonies de libation y sont organisées pour la protection mystique de la société. Ils servent aussi de lieu de prière et de cimetières.

Véritables réserves écologiques, ces espaces verts embellissent le cadre de vie et offrent un microclimat frais et agréable. Elles participent au maintien de la stabilité du milieu naturel, régularisent le flux des eaux de ruissellement vers les zones de culture dépressionnaires et jouent un rôle de brise-vent qui réduit l'érosion des sols. Malheureusement, le rétrécissement des massifs forestiers a entraîné une rupture de la continuité de l'habitat qui, combinée à la proximité des habitations, ont entraîné la migration de la faune qui résume aujourd'hui à des reptiles, des rongeurs et des primates.

Activités d'établissement / maintenance et intrants: Les autorités traditionnelles gèrent exclusivement les ressources forestières sacrées. Le Roi en est l'autorité suprême. Il est appuyé, mais uniquement sur le plan technique (exemple reboisement), par le service des Eaux et Forêts. Les modalités de gestion sont dictées par des règles traditionnelles secrètes. Le bois sacré fait l'objet d'une protection intégrale qui rencontre l'adhésion totale des populations. Cependant, certaines activités sont tolérées : récolte de vin de palme et de fruits forestiers à titre d'usufruit pour les populations environnantes, sur autorisation du Roi.

Environnement naturel / humain: Aujourd'hui, ces espaces subissent des agressions extérieures qui sont le fait essentiellement d'allochtones. Cela s'explique entre autres par la non matérialisation de leurs limites. C'est pourquoi, des reboisements annuels sont effectués dans les zones périphériques afin de maintenir l'intégrité de ces forêts.

LOCATION



Location: Oussouye, Ziguinchor, Senegal

No. of Technology sites analysed:

Geo-reference of selected sites

- -16.545, 12.484

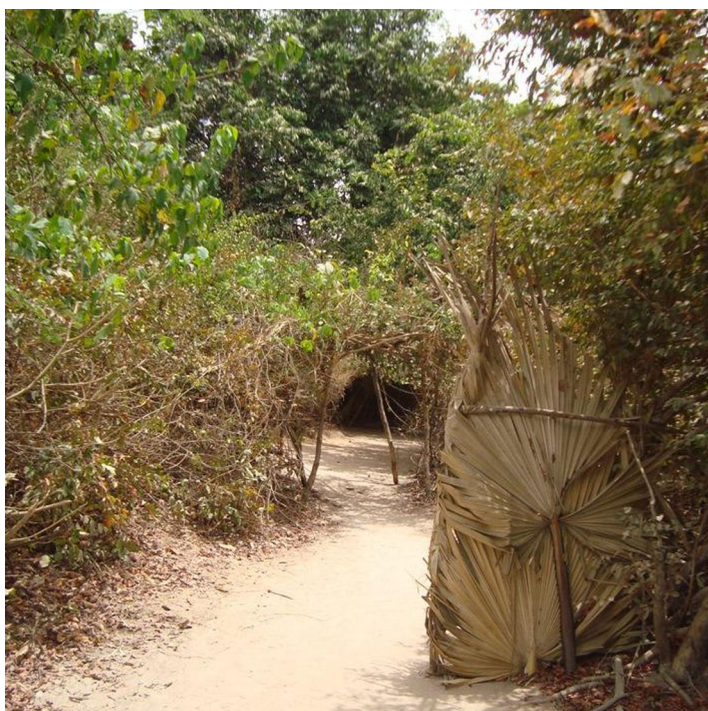
Spread of the Technology:

In a permanently protected area?:

Date of implementation: more than 50 years ago (traditional)

Type of introduction

- ☐ through land users' innovation
- ☒ as part of a traditional system (> 50 years)
- ☐ during experiments/ research
- ☐ through projects/ external interventions



Entrée du bois sacré d'Oussouye (CSE-LADA (Dakar, Sénégal))

CLASSIFICATION OF THE TECHNOLOGY

Main purpose

- ☐ improve production
- ☐ reduce, prevent, restore land degradation
- ☒ **conserve ecosystem**
- ☐ protect a watershed/ downstream areas – in combination with other Technologies
- ☐ preserve/ improve biodiversity
- ☐ reduce risk of disasters
- ☐ adapt to climate change/ extremes and its impacts
- ☐ mitigate climate change and its impacts
- ☐ create beneficial economic impact
- ☐ create beneficial social impact

Land use



Forest/ woodlands Products and services: Fruits and nuts

Water supply

- ☐ rainfed
- ☐ mixed rainfed-irrigated
- ☐ full irrigation

Purpose related to land degradation

- ☒ **prevent land degradation**
- ☐ reduce land degradation
- ☐ restore/ rehabilitate severely degraded land
- ☐ adapt to land degradation
- ☐ not applicable

Degradation addressed



soil erosion by water - Wt: loss of topsoil/ surface erosion, Wg: gully erosion/ gullying



soil erosion by wind - Et: loss of topsoil, Eo: offsite degradation effects



chemical soil deterioration - Cn: fertility decline and reduced organic matter content (not caused by erosion)



biological degradation - Bc: reduction of vegetation cover, Bh: loss of habitats, Bq: quantity/ biomass decline, Bf: detrimental effects of fires, Bs: quality and species composition/ diversity decline

SLM group

- windbreak/ shelterbelt
- area closure (stop use, support restoration)

SLM measures



management measures - M3: Layout according to natural and human environment

TECHNICAL DRAWING

Technical specifications

ESTABLISHMENT AND MAINTENANCE: ACTIVITIES, INPUTS AND COSTS

Calculation of inputs and costs

- Costs are calculated:
- Currency used for cost calculation: **n.a.**
- Exchange rate (to USD): 1 USD = n.a
- Average wage cost of hired labour per day: n.a

Most important factors affecting the costs

n.a.

Establishment activities

n.a.

Maintenance activities

n.a.

NATURAL ENVIRONMENT

Average annual rainfall

- ☐ < 250 mm
- ☐ 251-500 mm
- ☐ 501-750 mm
- ☐ 751-1,000 mm
- ☒ 1,001-1,500 mm
- ☒ 1,501-2,000 mm
- ☐ 2,001-3,000 mm
- ☐ 3,001-4,000 mm
- ☐ > 4,000 mm

Agro-climatic zone

- ☒ humid
- ☐ sub-humid
- ☐ semi-arid
- ☐ arid

Specifications on climate

Thermal climate class: tropics

Slope

- ☒ flat (0-2%)
- ☐ gentle (3-5%)
- ☐ moderate (6-10%)
- ☐ rolling (11-15%)
- ☐ hilly (16-30%)
- ☐ steep (31-60%)
- ☐ very steep (>60%)

Landforms

- ☒ plateau/plains
- ☐ ridges
- ☐ mountain slopes
- ☐ hill slopes
- ☐ footslopes
- ☒ valley floors

Altitude

- ☒ 0-100 m a.s.l.
- ☐ 101-500 m a.s.l.
- ☐ 501-1,000 m a.s.l.
- ☐ 1,001-1,500 m a.s.l.
- ☐ 1,501-2,000 m a.s.l.
- ☐ 2,001-2,500 m a.s.l.
- ☐ 2,501-3,000 m a.s.l.
- ☐ 3,001-4,000 m a.s.l.
- ☐ > 4,000 m a.s.l.

Technology is applied in

- ☐ convex situations
- ☐ concave situations
- ☐ not relevant

Soil depth

- ☐ very shallow (0-20 cm)
- ☐ shallow (21-50 cm)
- ☐ moderately deep (51-80 cm)
- ☒ deep (81-120 cm)
- ☐ very deep (> 120 cm)

Soil texture (topsoil)

- ☐ coarse/ light (sandy)
- ☐ medium (loamy, silty)
- ☒ fine/ heavy (clay)

Soil texture (> 20 cm below surface)

- ☐ coarse/ light (sandy)
- ☐ medium (loamy, silty)
- ☐ fine/ heavy (clay)

Topsoil organic matter content

- ☐ high (>3%)
- ☒ medium (1-3%)
- ☐ low (<1%)

Groundwater table

- ☐ on surface
- ☒ < 5 m
- ☐ 5-50 m
- ☐ > 50 m

Availability of surface water

- ☐ excess
- ☒ good
- ☐ medium
- ☐ poor/ none

Water quality (untreated)

- ☐ good drinking water
- ☐ poor drinking water (treatment required)
- ☐ for agricultural use only (irrigation)
- ☐ unusable

Water quality refers to:

Is salinity a problem?

- ☐ Ja
- ☐ Nee

Occurrence of flooding

- ☐ Ja
- ☐ Nee

Species diversity

- ☒ high
- ☐ medium
- ☐ low

Habitat diversity

- ☐ high
- ☐ medium
- ☐ low

CHARACTERISTICS OF LAND USERS APPLYING THE TECHNOLOGY

Market orientation

- ☐ subsistence (self-supply)
- ☐ mixed (subsistence/ commercial)
- ☐ commercial/ market

Off-farm income

- ☐ less than 10% of all income
- ☐ 10-50% of all income
- ☐ > 50% of all income

Relative level of wealth

- ☐ very poor
- ☐ poor
- ☐ average
- ☐ rich
- ☐ very rich

Level of mechanization

- ☐ manual work
- ☐ animal traction
- ☐ mechanized/ motorized

Sedentary or nomadic

- ☐ Sedentary
- ☐ Semi-nomadic
- ☐ Nomadic

Individuals or groups

- ☐ individual/ household
- ☒ groups/ community
- ☐ cooperative
- ☐ employee (company, government)

Gender

- ☒ women
- ☒ men

Age

- ☐ children
- ☐ youth
- ☐ middle-aged
- ☐ elderly

Area used per household

- ☐ < 0.5 ha
- ☐ 0.5-1 ha
- ☐ 1-2 ha
- ☐ 2-5 ha
- ☐ 5-15 ha
- ☐ 15-50 ha
- ☐ 50-100 ha
- ☐ 100-500 ha
- ☐ 500-1,000 ha
- ☐ 1,000-10,000 ha
- ☐ > 10,000 ha

Scale

- ☐ small-scale
- ☐ medium-scale
- ☐ large-scale

Land ownership

- ☒ state
- ☐ company
- ☐ communal/ village
- ☐ group
- ☐ individual, not titled
- ☐ individual, titled

Land use rights

- ☐ open access (unorganized)
- ☒ communal (organized)
- ☐ leased
- ☐ individual

Water use rights

- ☐ open access (unorganized)
- ☐ communal (organized)
- ☐ leased
- ☐ individual

Access to services and infrastructure

health	poor			good
education	poor			good
technical assistance	poor			good
employment (e.g. off-farm)	poor			good
markets	poor			good
energy	poor			good
roads and transport	poor			good
drinking water and sanitation	poor			good
financial services	poor			good

IMPACTS

Socio-economic impacts

Socio-cultural impacts

cultural opportunities (eg spiritual, aesthetic, others)	reduced							improved
community institutions	weakened							strengthened

Ecological impacts

surface runoff	increased							decreased
groundwater table/ aquifer	lowered							recharge
evaporation	increased							decreased
soil moisture	decreased							increased
soil cover	reduced							improved
soil loss	increased							decreased
nutrient cycling/ recharge	decreased							increased
soil organic matter/ below ground C	decreased							increased
biomass/ above ground C	decreased							increased
plant diversity	decreased							increased
habitat diversity	decreased							increased
emission of carbon and greenhouse gases	increased							decreased
fire risk	increased							decreased
wind velocity	increased							decreased

Off-site impacts

COST-BENEFIT ANALYSIS

Benefits compared with establishment costs

Benefits compared with maintenance costs

CLIMATE CHANGE

Gradual climate change

annual temperature increase	not well at all						very well
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Climate-related extremes (disasters)

local rainstorm	not well at all						very well
local windstorm	not well at all						very well
drought	not well at all						very well
general (river) flood	not well at all						very well

Other climate-related consequences

reduced growing period	not well at all						very well
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ADOPTION AND ADAPTATION

Percentage of land users in the area who have adopted the Technology

	single cases/ experimental
	1-10%
	11-50%
	> 50%

Of all those who have adopted the Technology, how many have done so without receiving material incentives?

	0-10%
	11-50%
	51-90%
	91-100%

Has the Technology been modified recently to adapt to changing conditions?

	Ja
	Nee

To which changing conditions?

	climatic change/ extremes
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- changing markets
- labour availability (e.g. due to migration)

CONCLUSIONS AND LESSONS LEARNT

Strengths: land user's view

- Protection mystique du village
- Lieu de prière
- Préserve les paysages (esthétique)
- Micro-climat

Strengths: compiler's or other key resource person's view

- Protection intégrale des îlots forestiers
- Adhésion totale des populations

Weaknesses/ disadvantages/ risks: land user's view how to overcome

Weaknesses/ disadvantages/ risks: compiler's or other key resource person's view how to overcome

REFERENCES

Compiler

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Full description in the WOCAT database

https://qcat.wocat.net/af/wocat/technologies/view/technologies_1441/

Linked SLM data

n.a.

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Project

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Key references

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