



Farmers observing pests in banana during agro ecosystem analysis (AES) (Iddiphonce Mwasikundima)

Community intergrated catchment ecosystem management (Tanzania, United Republic of)

Mfumo wa usimamizi wa ekolojia katika eneo bonde (Swahili)

DESCRIPTION

Adaptive Agro-ecosystem Micro-catchment Approach.

Aims / objectives: SLM knowledge skill generation and capacity building. Improved group and community strength, sustainability, organization and their capacity to benefit and invest in SLM. Motivation of community participation in SLM through use of quick win project, income generating activities, rural micro finance institutions, marketing and active engagement of disadvantaged groups.

Methods: Wider promotion of basket of choice of SLM technologies through SLM Farmer Field School, Demonstration plots and community related activities. Make use and build on already existing and new groups, existing institutions and the community as a whole. Strategic use of easily available and accessible available community institutions/ infrastructures (school and dispensaries sites) to demonstrate and promote basket of choice of SLM technologies. Learning by doing on the job, practical training, adoption and adaptation to local reality.

Stages of implementation: Site characterization through land degradation analysis (LADA) and development of community site specific SLM plan exemplifying SLM interventions needed to address the identified degradation types. Set up and identification of approaches needed to execute identified interventions complementary approaches. Sensitization and awareness creation to the community and actual execution of approaches.

Role of stakeholders: Individual groups: are core implementers and potential beneficiaries of the project.

Extension worker: Advisory and technical backstopping.

Elected and employed leaders at the sub-village, village and ward level: bylaw/law enforcement, supervisory and land provision.

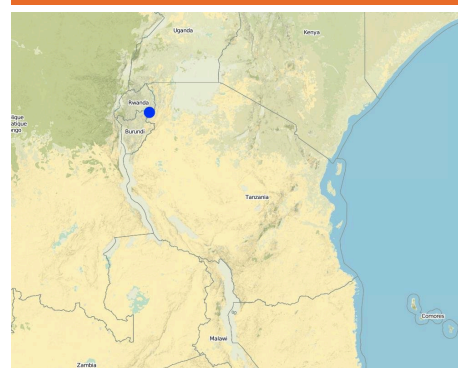
Relief for Development Societies NGO (REDESOS): Service provision and development partner in SLM.

Trans boundary Agro-ecosystem Management Project (TAMP): Provision of supportive resources (financial and technical).

Ngara district council: Supervisory, technical, policy interpretation, monitoring and evaluation, documentation, analysis and shairing .

Rugenge/Kirusha Micro catchment Committee: Supervisory, advisory and law enforcement.

LOCATION



Location: Ngara, Tanzania, Tanzania, United Republic of

Geo-reference of selected sites

- 30.56773, -2.4414

Initiation date: 2010

Year of termination: 2014

Type of Approach

- ☐ traditional/ indigenous
- ☐ recent local initiative/ innovative
- ☒ project/ programme based



Farmer Field School in training (Iddiphonce Mwasikundima (box 30 Ngara Kagera Tanzania))



Farmers observing pests in banana during agro ecosystem analysis (AESA) (Iddiphonce Mwasikundima (box 30 Ngara Kagera Tanzania))

APPROACH AIMS AND ENABLING ENVIRONMENT

Main aims / objectives of the approach

The Approach focused mainly on SLM with other activities (Motivating quick win income generation activities, rural microfinance institutions, marketing and HIV/AIDS controll.)

Knowledge/skill generation, demonstration and sustainability of SLM activities.
Motivate active participation of the community.
Inculcate a sense of community ownership/ community take charge of SLM activities.

The SLM Approach addressed the following problems: Lack of technical knowledge
Low investment capacity
Malpractice and mismanagement of local resources (e.g. fire burning, ploughing along the slope).
Adequate supervision, monitoring and law enforcement.

Conditions enabling the implementation of the Technology/ ies applied under the Approach

- **Legal framework (land tenure, land and water use rights):** The existing land ownership, land use rights / water rights helped a little the approach implementation: Hindrance is usually observant for approaches which need long term commitment of land resources (e.g perennial crops) but is minimal for short term (annuals and biannual). Open access land resources are difficult to manage.

Conditions hindering the implementation of the Technology/ ies applied under the Approach

- **Social/ cultural/ religious norms and values:** Negative cultural believes that fire burning can lead to one living long or reach older age. Treatment through the SLM Approach: Change of mind set through FFS training, demos and community sensitization.
- **Availability/ access to financial resources and services:** Low investment capacity and inability to access supportive resources Treatment through the SLM Approach: Easy access to TAMP supportive resources.
- **Institutional setting:** Narrow coverage of the district, local institutions not involved in in SLM. Treatment through the SLM Approach: Higher coverage, ope-rationalization of SLM in LGA system.
- **Legal framework (land tenure, land and water use rights):** Reluctance of the village to issue land, less protection of open access land resources. Treatment through the SLM Approach: land issuing for FFS/Demo use legally recognized through signing of Memorandum Of Understanding (MOU) between the village and land users/SLM groups. Bylaws reinforcement to protect mismanagement of open access land resources.
- **Knowledge about SLM, access to technical support:** Inadequate understanding and use of SLM technical knowledge (both scientific and indigenous) to address land degradation problems. Treatment through the SLM Approach: Up scaling use of scientific SLM knowledge. Documentation, evaluation, analysis and sharing of successful indigenous SLM technical knowledge.
- **Workload, availability of manpower:** High workload to extension officers (due to their shortage). Treatment through the SLM Approach: Build a local resource base in facilitating SLM activities through introduction of community SLM facilitators and Micro-catchment committee.
- **Other:** Low motivation due to long term realization of SLM benefits. Treatment through the SLM Approach: introduce SLM related quick win projects and income generation activities (IGA).

PARTICIPATION AND ROLES OF STAKEHOLDERS INVOLVED

Stakeholders involved in the Approach and their roles

What stakeholders / implementing bodies were involved in the Approach?	Specify stakeholders	Describe roles of stakeholders
local land users/ local communities	Core implementors. all gender, youth and elders . Widows, Orphans, People living with HIV/AIDS were actively indiscriminately involved in FFS, Demos and community related activities..	

SLM specialists/ agricultural advisers	all gender, youth and elders	
teachers/ school children/ students	all gender, youth and elders	
NGO		dvisory, technical back stopping, supervisory and monitoring.
local government		Advisory, technical back stopping, supervisory and monitoring.
national government (planners, decision-makers)		dvisory, technical back stopping, supervisory and monitoring.
international organization		dvisory, supervisory and monitoring.

Lead agency

Land user (all genders, youth and elders): consulted and made informed decision about the approach to be used. National specialists: potential facilitators in designing and community sensitization. International specialists: consultative and subject matter specialist (e.g. FFS specialist)

Involvement of local land users/ local communities in the different phases of the Approach

	none	passive	external support	interactive	self-mobilization
initiation/ motivation		✓			
planning				✓	
implementation			✓		
monitoring/ evaluation				✓	
Research				✓	

Community, groups, employed and elected leaders: participated in sensitization and awareness creation process.

Community, groups, employed and elected leaders: active participants and decision makers in planning e.g. selection of FFS community facilitators and formation of micro-catchment committee.

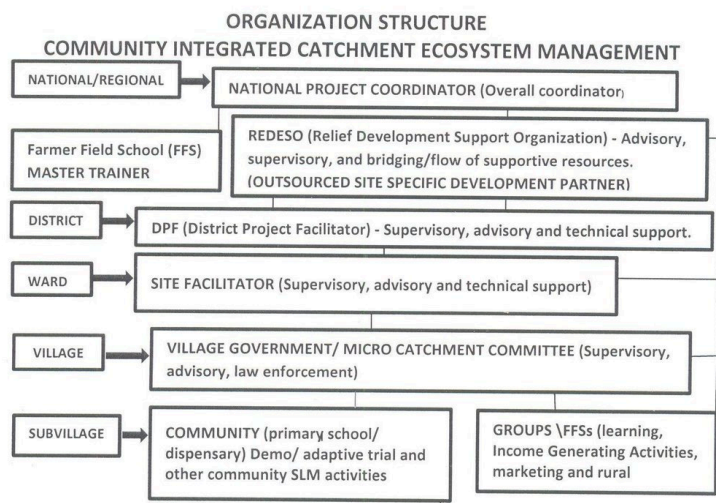
Community, groups, employed and elected leaders: core and key implementers of the approach.

Community, groups, employed and elected leaders: self mobilized and client interactive monitoring.

Community, groups, employed and elected leaders: site identification and active implementers of adaptive trials (e.g use of fanya juu/chini terraces, vertivar grass e.t.c). Adopters, users and promoters of the best bets technologies.

Flow chart

organization structure of community integrated catchment ecosystem management.



Author: Allan Isaka Bubelwa (Box 38 Kyaka Missenyi Kagera Tanzania)

Decision-making on the selection of SLM Technology

Decisions were taken by

- ☐ land users alone (self-initiative)
- ☒ mainly land users, supported by SLM specialists
- ☐ all relevant actors, as part of a participatory approach
- ☐ mainly SLM specialists, following consultation with land users
- ☐ SLM specialists alone
- ☐ politicians/ leaders

Decisions were made based on

- ☐ evaluation of well-documented SLM knowledge (evidence-based decision-making)
- ☐ research findings
- ☐ personal experience and opinions (undocumented)

TECHNICAL SUPPORT, CAPACITY BUILDING, AND KNOWLEDGE MANAGEMENT

The following activities or services have been part of the approach

- ☒ Capacity building/ training
- ☒ Advisory service
- ☒ Institution strengthening (organizational development)
- ☒ Monitoring and evaluation

Capacity building/ training

Training was provided to the following stakeholders

- ☒ land users
- ☒ field staff/ advisers
- ☒ employed and elected leaders

Form of training

- ☒ on-the-job
- ☒ farmer-to-farmer
- ☒ demonstration areas
- ☐ public meetings
- ☐ courses

Subjects covered

SLM related subjects

Advisory service

Advisory service was provided

- ☒ on land users' fields
- ☐ at permanent centres

Name of method used for advisory service: Farmer field schools (FFS); Key elements: Practical training and learning by doing, Basket of choice of Technologies/Demos, Group oriented and site specific; Adoption depends on farmers choice and ability to invest.

Advisory service is inadequate to ensure the continuation of land conservation activities; There is limited knowledge and low funding capacity.

Institution strengthening

Institutions have been strengthened / established

- ☐ no
- ☐ yes, a little
- ☒ yes, moderately
- ☐ yes, greatly

at the following level

- ☒ local
- ☐ regional
- ☐ national

Describe institution, roles and responsibilities, members, etc.

Type of support

- ☐ financial
- ☒ capacity building/ training
- ☐ equipment

Further details

Training provision to micro-catchment committee.

Monitoring and evaluation

bio-physical aspects were ad hoc monitored by project staff, government, land users through observations; indicators: hectare conserved bio-physical aspects were ad hoc monitored by project staff, government, land users through measurements; indicators: hectare conserved technical aspects were regular monitored by project staff, government, land users through observations; indicators: number of adopters technical aspects were regular monitored by project staff, government, land users through measurements; indicators: number of adopters socio-cultural aspects were regular monitored by project staff, government, land users through observations; indicators: % involvement of women socio-cultural aspects were regular monitored by project staff, government, land users through measurements; indicators: % involvement of women economic / production aspects were regular monitored by project staff, government, land users through observations; indicators: % increase in yield and income economic / production aspects were regular monitored by project staff, government, land users through measurements; indicators: % increase in yield and income area treated aspects were regular monitored by project staff, government, land users through observations; indicators: hectare conserved area treated aspects were regular monitored by project staff, government, land users through measurements; indicators: hectare conserved no. of land users involved aspects were regular monitored by project staff, government, land users through observations; indicators: number of adopters no. of land users involved aspects were regular monitored by project staff, government, land users through measurements; indicators: number of adopters management of Approach aspects were regular monitored by project staff, government, land users through observations; indicators: Number of FFS, Demos and IGA management of Approach aspects were monitored through measurements; indicators: number of FFS, Demos and IGA There were several changes in the Approach as a result of monitoring and evaluation: Introduction of FFS farmer facilitators and Micro-catchment committees. There were few changes in the Technology as a result of monitoring and evaluation: In the course of implementation adjusting or modifying technologies to suit agro-ecological condition or landforms

Research

Research treated the following topics

- ☐ sociology
- ☐ economics / marketing
- ☐ ecology
- ☐ technology
- ☒ adaptive SLM trials

Adaptive SLM trials run by community/district/ARI Maruku through demos where farmers can select the best bets to apply and try on their own fields.

Research was carried out on-farm

FINANCING AND EXTERNAL MATERIAL SUPPORT

Annual budget in USD for the SLM component

- ☐ < 2,000
- ☐ 2,000-10,000
- ☒ 10,000-100,000
- ☐ 100,000-1,000,000
- ☐ > 1,000,000

Precise annual budget: n.a.

Approach costs were met by the following donors: international (TAMP): 50.0%; government (Region/ARI Maruku.): 10.0%; local government (district, county, municipality, village etc) (Ngara district council, Villages and Ward): 20.0%; local community / land user(s) (Local community and groups with the microcatchment): 20.0%

The following services or incentives have been provided to land users

- ☒ Financial/ material support provided to land users
- ☒ Subsidies for specific inputs
- ☐ Credit
- ☐ Other incentives or instruments

Financial/ material support provided to land users

equipment: tools Working gears (gun boots, raincoats, T-shirts)	partly financed fully financed
Computers, cameras	
agricultural: seeds	
agricultural: seeds: fertilizers	
Manure	
Livestock Chicken, goats and bees	
Labour by land users was	
<input checked="" type="checkbox"/> voluntary	
<input type="checkbox"/> food-for-work	
<input type="checkbox"/> paid in cash	
<input type="checkbox"/> rewarded with other material support	

IMPACT ANALYSIS AND CONCLUDING STATEMENTS

Impacts of the Approach

Did the Approach help land users to implement and maintain SLM Technologies? Knowledge and skill acquired through FFS, Demos and community related intervention played significant role in improvement of SLM. Bylaw reinforcement significantly prevented malpractices/land resource mismanagement.	No Yes, little Yes, moderately Yes, greatly
Did the Approach empower socially and economically disadvantaged groups? Improved to livelihood mechanism/alternates to widow, orphan and people living with HIV/AIDS	
Did the Approach improve issues of land tenure/ user rights that hindered implementation of SLM Technologies? The approach involve signing of memorandum of understanding (MOU) over use of land resource between farmer groups running Demos and FFS and the village government. MOU is a strong and reliable legal acquisition of land resource to be used for conservation activities.	
Did other land users / projects adopt the Approach? On average each FFS member induced adoption to 2 household farmers.	

Main motivation of land users to implement SLM

- ☒ increased production
- ☒ increased profit(ability), improved cost-benefit-ratio
- ☐ reduced land degradation
- ☐ reduced risk of disasters
- ☐ reduced workload
- ☐ payments/ subsidies
- ☐ rules and regulations (fines)/ enforcement
- ☐ prestige, social pressure/ social cohesion
- ☐ affiliation to movement/ project/ group/ networks
- ☐ environmental consciousness
- ☐ customs and beliefs, morals
- ☐ enhanced SLM knowledge and skills
- ☐ aesthetic improvement
- ☐ conflict mitigation
- ☒ well-being and livelihoods improvement

Sustainability of Approach activities

Can the land users sustain what has been implemented through the Approach (without external support)?

- ☐ no
- ☒ yes
- ☐ uncertain

Farmers have realized the benefit of SLM. The village historical track records and experience indicate that farmers in Kirusha village usually continue what ever they come to realize is implemented for their own benefit. Further more, establishment of local human resource in SLM in terms of FFS facilitators and micro-catchment committee and their operationalization into LGA systems is an assure way towards sustainability. Motivation induced through quick win income generating activities (goat production, chicken, piggery, fruit tree nurseries and apiaries) and easy to manage demo set at Kirushya primary school and dispensary (reachable and easily accessible) are added assurance for project sustainability.

CONCLUSIONS AND LESSONS LEARNT

Strengths: land user's view

- Learning and acquisition of knowledge (How to sustain/ enhance this strength: continuation of FFS, Demo and community activities.)
- Cohesiveness and self help (How to sustain/ enhance this strength: Continue promotion of VICOBA and Market.)
- Spread of knowledge within and outside village. (How to sustain/ enhance this strength: Continue use of the approach.)

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

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

- Negative customs and believes (it is believed that one can live longer and reach older age by setting fire and burning of a large area). Discourage negative custom and believes
- Reluctance of household heads especially in patrimonial societies. Community sensitization to gender (gender be addressed as the basic component of the approach).

- Improved relationship, unity, cohesiveness and common voice. (How to sustain/ enhance this strength: Continue with promotion, strengthening and establishment of IGA, SACCAS and VICOBA.)
- More farmers are involved (rapid adoption and expansion) (How to sustain/ enhance this strength: Up scaling and strengthening of FFS, Demos, and IGA.)
- The approach is cost effective (benefit surpass costs) (How to sustain/ enhance this strength: Promote, expand and continue use of FFS, Demos and IGA.)
- Assured and promising elements of sustainability. (How to sustain/ enhance this strength: Strengthen ope-rationalization and use of micro-catchment committee and FFS facilitators.)
- Easy access to supportive resources (Land and financial) (How to sustain/ enhance this strength: strengthen and liaise FFS with service providers (Bank, SACCOS and Marketing))

- Failure and negative experience of past development projects and programmes. Change of mind set
- Shortage of inputs and working facilities Promote availability and accessibility of inputs and working facilities.

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

- Selfishness, individualism by some untrustworthy politicians and leaders. Combine SLM promotion with civic education training.
- Prone to natural calamities and disastrous events Introduce and strengthen use of Agro-based insurance.
- Largely relies on government or farmer willingness to release and offer land. Sensitize and encourage use of MOU.
- If not done in precaution can perpetuate dependency syndrome Encourage use of self mobilized farmer groups and their strengthening and ope-rationalization into existing systems.
- Reliable external supportive resource needed initially Reliable and timely supply of supportive resources.

REFERENCES

Compiler

ALLAN BUBELWA

Editors

Reviewer

Fabian Ottiger

Date of documentation: March 10, 2014

Last update: July 6, 2017

Resource persons

ALLAN BUBELWA (allan.bubelwa@gmail.com) - SLM specialist
 Bertha Munyaga (bkmunyaga@yahoo.com) - SLM specialist
 Philip Ileta (iletaphilip@yahoo.com) - SLM specialist
 Idephonce Mwasikundima - SLM specialist

Full description in the WOCAT database

https://qcat.wocat.net/en/wocat/approaches/view/approaches_2486/

Linked SLM data

Technologies: Natural forest conservation using apiaries https://qcat.wocat.net/en/wocat/technologies/view/technologies_1152/
 Technologies: Natural forest conservation using apiaries https://qcat.wocat.net/en/wocat/technologies/view/technologies_1152/

Documentation was facilitated by

Institution

- Bukoba district council (Bukoba district council) - Tanzania, United Republic of
- Ngara District Council (Ngara District Council) - Tanzania, United Republic of

Project

- n.a.

Key references

- Site characterization report: Kimamba Lyoba, :

This work is licensed under [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International](https://creativecommons.org/licenses/by-nc-sa/4.0/)

