



Community Based Area Closure in Abagerima Watershed. This photo shows tree, grass, shrubs and bush vegetation. (Bekalu Bitew)

Community-Based Closed Area Management () Area Closure

Area closure is a protection system to improve land with degraded vegetation and/or soil, by excluding livestock grazing and applying initial inputs and continuous maintenance. Once recovery is taking place through natural regeneration, area closures can become part of the agricultural system, thereby improving forage quantity and quality and also enhancing the fertility of land.

The area closure technology has been applied in community-based watershed development in Abagerima since 2012.

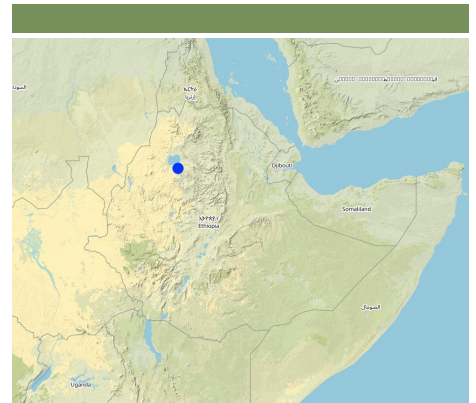
The area was closed from livestock free grazing, allowing grasses, bushes and trees to recover, thereby conserving soil and water, improving soil moisture, and preventing on- and off-site erosion.

Area closures serve as buffer zone by preventing siltation, acting as meteorological regulator, enhancing the water cycle, and improving the productivity of the land.

Generally, area closures can enhance the livelihoods of the community in social, economic, political, environmental and cultural aspects.

The major activity at the beginning is to create community awareness about the technology. After that, construction of trenches, planting of trees (e.g. *grevillea rubusta*) and some maintenance is needed.

Area closures have many benefits, like economical, reducing conflicts, etc., and most land users know these benefits and thus accept the technology.



: near Bahir Dar, the capital of Amhara region, Amhara Region, West Gojam Zone, Bahir Dar Zuria,

: 2-10

- 37.49022, 11.65524
- 37.49022, 11.65524

: (0.1 km²)

?:

10 () : 2012;



(> 50)

/



Abagerima community-based closed area management (Bekalu Bitew)



Area closure comprising an area of about 11 ha around the hill in the background, with a view of Lake Tana behind it, which is the source of the Blue Nile. (Hans Hurni)

- ✓
- ✓
- ✓
- ✓
- ✓
- ✓
- ✓
- ✓
- ✓
- ✓

... / ...



• ... / ...
 : - ... , ...
 ? ...
 : , , ,

-	1656
	600
	280
	180
	4300



• ... / ...
 Tree types (... / ...): Acacia senegal,
 Grevillea robusta
 : , , , /

- ✓
- ✓
- ✓

- ✓
- ✓
- ✓

... / ...



, Wg: - Wt:



- Et: , Ed:



- Pc:



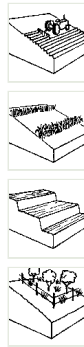
, Bh: / - Bc: / , Bs:
 - Hs: / ,
 Hp: /

SLM

(

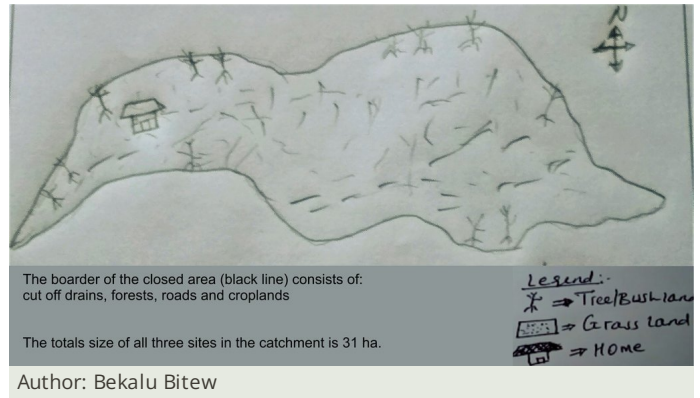
SLM

)



/ , A1: / , A2:
 , A5:
 - V1: / , V2:
 2
 , S4: - S2: / , S3:
 - M2: /
 , M3:
 , M5: /

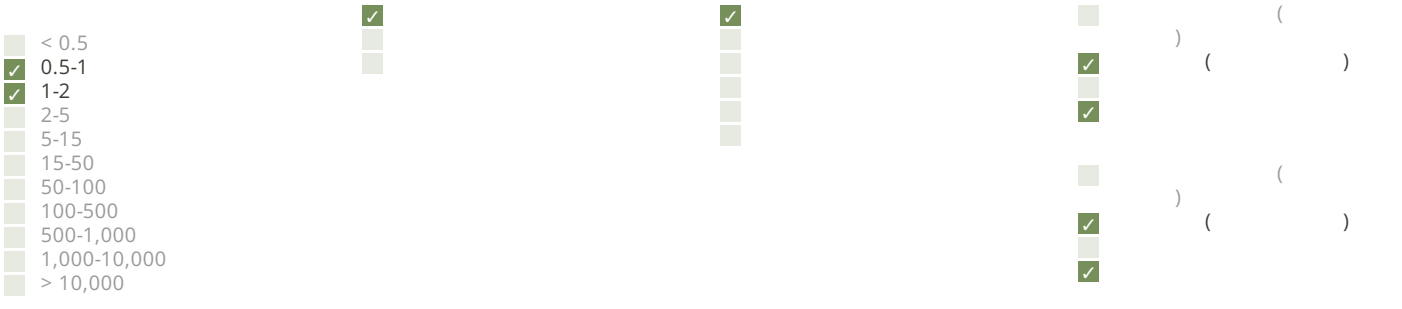
This picture represents a typical sample of a closed area within Abagerima Watershed. Unlike for the described technology there are no hillside terraces shown in this sketch, while the technology contains such structures for tree planting.



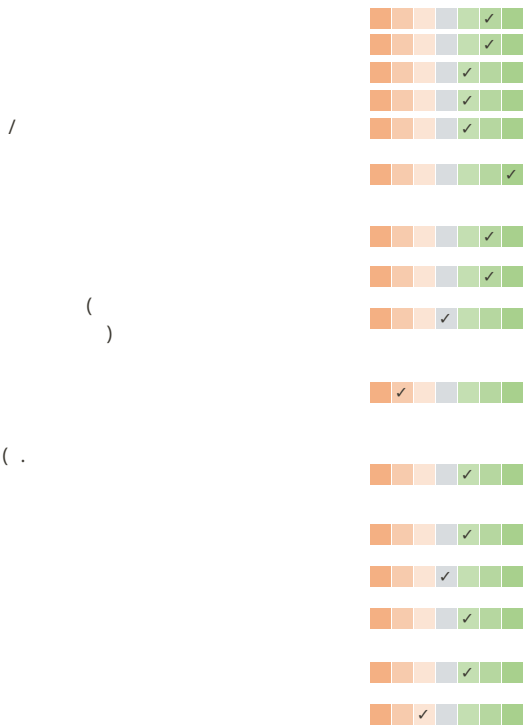
- (11 ha) labour availability and timing
-
- () 1 USD =
- 3.0

1. surveying (/ : October (after the main rainy season))
2. preparing materials (/ : October)
3. community awareness (/ : October)
4. design and layout the structure (/ : November)
5. implementation (/ : December to February (main dry season))

						%
hillside terraces (13 x 400 m)	person-days	65,0	3,0	195,0	75,0	
hand tools	Number	100,0	3,0	300,0	50,0	
waterlevel	Number	24,0	4,0	96,0		
seedling	number	2500,0	0,5	1250,0	50,0	
seed	Kg	50,0	2,0	100,0	50,0	
preparing pit	Number	2500,0	0,04	100,0	100,0	
				2'041.0		
				2'041.0		



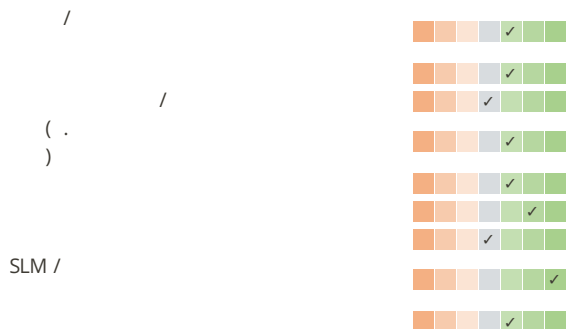
- < 0.5
- 0.5-1
- 1-2
- 2-5
- 5-15
- 15-50
- 50-100
- 100-500
- 500-1,000
- 1,000-10,000
- > 10,000



we refer to grass production

closed area management needs more rules and regulations and cannot be freely managed any more

collection of scrubs and deadwood as wood for cooking

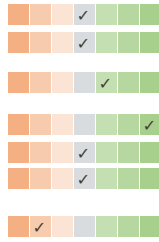


) (



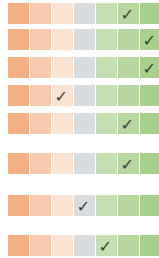
) (

/

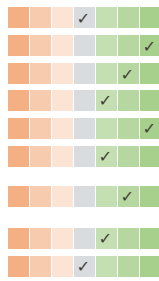


we refer to evapotranspiration

/
/
/

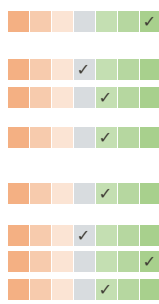


/
()
/



we refer to immediate surface runoff during storms

/
/

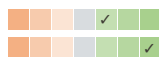
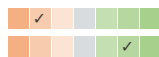
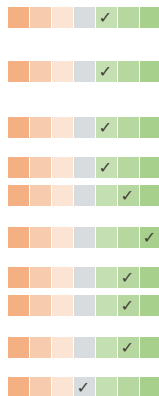


(-springs)

()
) (

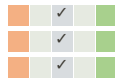
/

/



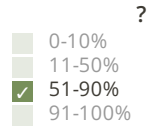
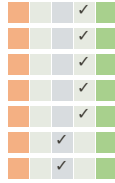


()



:

/



480 in Abagerima Watershed



- Area closures prevent and protect from runoff which creates an on-site and off-site erosion problem.
 - Uncultivated land is protected from free grazing, it increase land productivity and regeneration of natural vegetation species.
 - Closed area management generates income for poorer land users, and it thus reduces conflicts among neighboring communities.
- :
- The closed area management technology has economical, political, social, cultural and environmental benefits.

- land users cannot freely graze their livestock any more give extension service
 - Closed areas are a job burden on females who cut and carry grass and wood create awareness to organise work jointly
 - allocation of resources and management of livestock is not organised well consider resource allocation per livestock
- :
- Area closures create job burdens on females introduce gender equality discussions



Editors

Bekalu Bitew

: 25

2018

Tatenda Lemann

: 12

2023

Melese Bililign -

SLM

https://qcat.wocat.net/km/wocat/technologies/view/technologies_4135/

SLM

Cbp: https://qcat.wocat.net/km/wocat/cbp/view/cbp_6712/

- Bureau of Agriculture - Amhara Nation Regional State - Bahir Dar (amhboard) -
- CDE Centre for Development and Environment (CDE Centre for Development and Environment) -
- Water and Land Resource Centre (WLRC) -

- Carbon Benefits Project (CBP)

• none:

• none: [None](#)

This work is licensed under [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International](#)

