



Paved and grassed waterways (

Feses (Amharic)

A waterway is an artificial drainage channel constructed along the steepest slope to receive runoff from cutoff drains and graded structures and drain to the natural waterway safely.

A vegetative waterway is constructed in areas where stone is not available and in gentle slopes. Paved waterways are suitable in steeper terrains and areas with large amount of stones. The waterway carries excess water to the river, reservoirs or gullies safely with out creating erosion. It is applicable in all areas where excess water is generated when high rains are received which are beyound the intake capacity of soils. The excess water then will have to be disposed sefely to natural outlets. Waterways are established a year or two before cutoff drains and field structures are constructed. Vegetative waterways are formed by digging earth channel across the contour in the direction of flow. After making the channel suitable grass species are planted or are made to establish naturally. Maintenance is very vital in waterways. Breaks in channel or embankments, moving of silt deposited or keeping the grass shorter in order that it does not obstract flow. Vegetative waterways could be stablized by planting short growing grasses, sodding or letting natural growth.



: Genbegna, Ayiba, Megish, South Gonder,

:

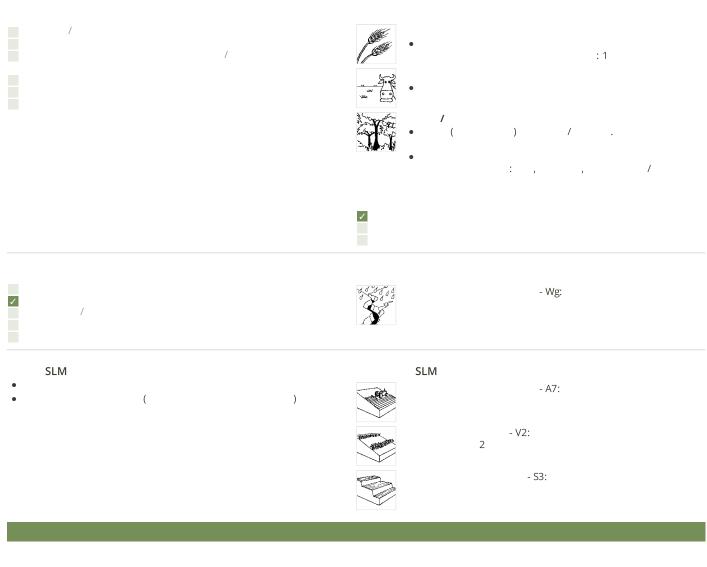
• 38.01, 11.84

: (approx. 10-100

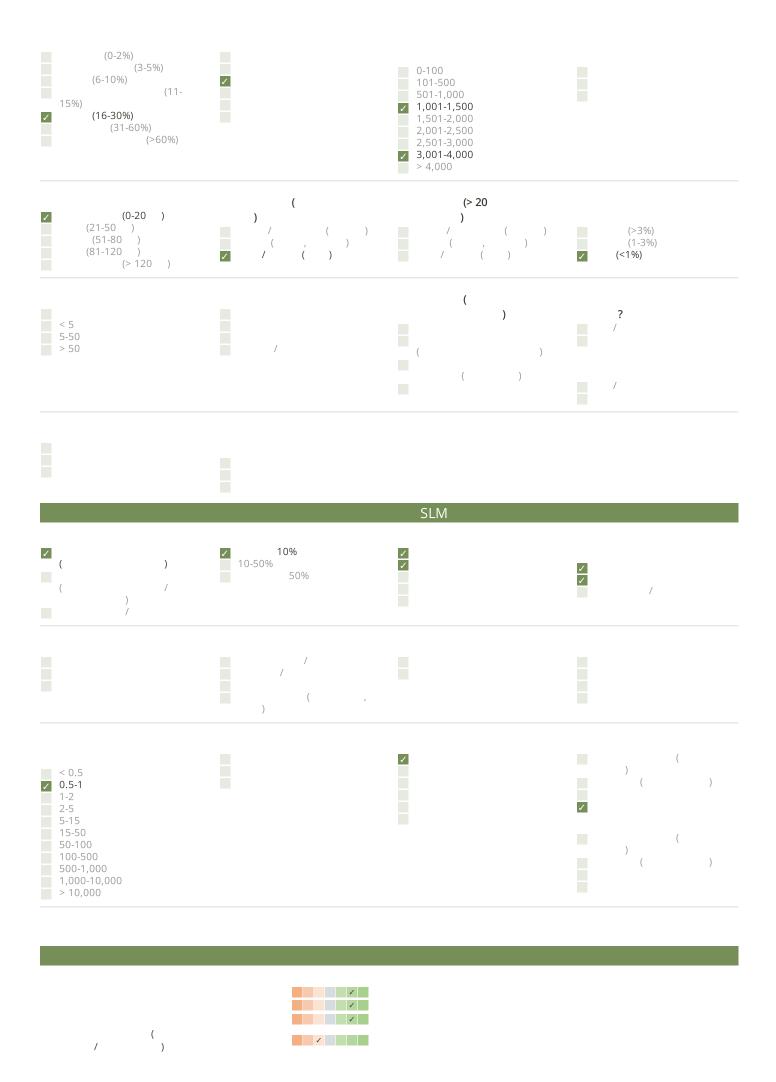
2)

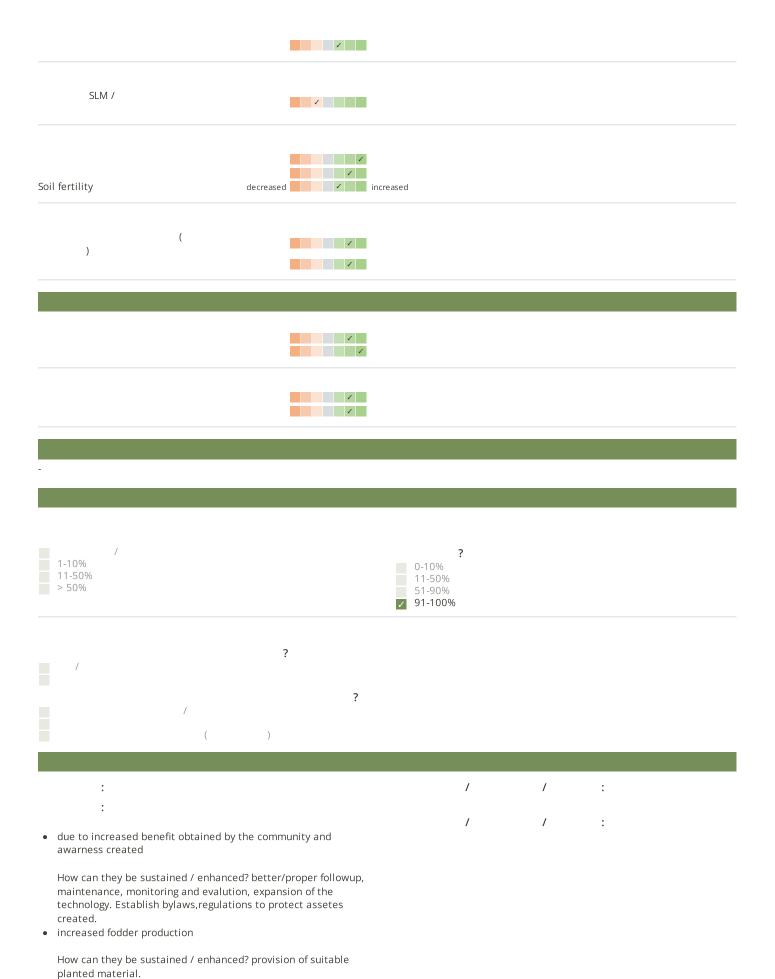
?:
() : 50





```
stone availability, finance, topography
                                              Birr
                                                 ) 1 USD = 8.6 Birr
                                         0.80
1. determine the drainage area (
                                         /
                                                       : dry season)
2. excavate and pile the soil on one or both side (
                                                                        : dry season)
3. sods-local grass ( /
                                         : dry season)
4. excavation and stone paving (
                                                      : dry season)
5. stone check (
                                      : dry season)
1. Collecting planting materials (
                                                      : beginning of rainy season /)
2. Planting on pits (
                                         : rainy season /)
3. resod-local grass (
                                          : after rain /once)
4. repairing the broken part (
                                                  : after ran/once)
5. Collection of stones (
                                             : dry season / annual)
6. Planting grass (
                                        : during rains / annual)
```





Wocat SLM Technologies Paved and grassed waterways 4/5

Editors

Berhanu Fentaw Fabian Ottiger
Alexandra Gavilano

Berhanu Fentaw - SLM Zena Estifanos - SLM

https://qcat.wocat.net/km/wocat/technologies/view/technologies_1079/

SLM

• Ministry of Agriculture and Rural Development of Ethiopia (Ministry of Agriculture and Rural Development) -

•

This work is licensed under Creative Commons Attribution-NonCommercial-ShareaAlike 4.0 International





