ESTABLISHMENT AND RESTORATION OF RIPARIAN BUFFERS

OBJECTIVE

Reducing the run-off of sediments and pollutants reaching the watercourse and increasing groundwater recharge at the same time contributing to reducing vulnerability to floods.

DESCRIPTION

Vegetated and unfertilized buffer zones alongside watercourses can significantly contribute to improving micro-climatic conditions as they act as a shield against overland flow from agricultural fields. A general, multi-purpose, riparian buffer design consists of a strip of grass, shrubs and trees between the normal bank-full water level and the cropland. Riparian Buffer Strips are linear bands of permanent vegetation adjacent to an aquatic ecosystem intended to maintain or improve water quality by trapping and removing various nonpoint source pollutants from both overland and shallow subsurface flow. Buffer strips also provide (additional) habitat for aquatic species and may result in increased recharge of groundwater.

EXPECTED RESULTS

Cooling of water body, increased air humidity and temperature stabilisation, and water retention.

RESULT INDICATORS

Decreasing air temperature [°C]

INVOLVED ACTORS

Local stakeholders involved in the use and management of watercourses.

EXPECTED TIMELINE FOR ACTION

- Long term (> 10 years)

BEST PRACTICES

- Italy
- Poland
- Germany
- Netherlands

CRITICALITIES

Lack of incentive programmes, poorly defined goals, lack of maintenance operations and opposition from landowners.

SCOPE OF THE ACTION

- Adaptation

TYPE OF PROPOSED ACTIONS

- Green

SECTOR OF ACTION

- Agriculture / Forests / Land use
- Biodiversity / Conservation of ecosystems
- Water resource management

CLIMATE IMPACTS

- Change or loss of biodiversity
- Drought
- Floods

IMPLEMENTATION SCALE

- Association of municipalities
- Municipality
- Province

SOURCE

https://climate-adapt.eea.europa.eu/metadata/adaptation-options/establishment-and-restoration-of-riparian-buffer-s