





Protection of water bodies

Goal	Protecting water quality from agricultural runoff
Short description of the measure	<p>Many of the pressures affecting water ecosystems are directly related to agricultural management. Pollutants can enter surface water bodies through different routes. Most important are the losses from point sources (originating from the farmyard) and diffuse sources (originating from treated fields, e.g. surface runoff/soil erosion, drainage and spray drift)</p> <p>Diffuse pollution can suppose between 40-90% of total pollution (pollution coming from many small and widespread sources such as fertilizer run-off from agricultural land). These pollutants include sediment, nutrients, pathogens, pesticides, metals, and salts. Impacts from agricultural activities on surface water and ground water can be minimized by using management practices that are adapted to local conditions:</p> <ul style="list-style-type: none"> Management practices that control the volume and flow rate of runoff water, keep the soil in place, and reduce soil transport. Measures that avoid bare soil such as green covers. To combat nutrient losses, farmers can implement nutrient management plans that help maintain high yields and save money on fertilizers. Riparian strips (See AFS 24) Farmers and ranchers can limit discharges by storing and managing facility wastewater and runoff with appropriate waste management systems To reduce contamination from pesticides, farmers should use Integrated Pest Management (IPM) techniques based on the specific soils, climate, pest history, and crop conditions for a particular field
Quality elements of soundly implemented biodiversity measures	<ul style="list-style-type: none"> Avoid bare soil Integrated Pest Management applied Nutrient management plans implemented Riparian strips along water bodies (See AFS on riparian strips)
Effects on biodiversity (ecosystems, species, soil biodiversity)	 <p>Too much sediment can cloud the water, reducing the amount of sunlight that reaches aquatic plants. It can also clog the gills of fish or smother fish larvae.</p>
	 <p>Pollutants like fertilizers, pesticides, and heavy metals are often attached to the soil particles of sediments and wash into the water bodies, causing algal blooms and depleted oxygen, which is deadly to most aquatic life.</p> <p>Pesticides can poison fish and wildlife, contaminate food sources, and destroy the habitat that animals use for protective cover.</p>
	 <p>Runoff from poorly managed livestock facilities can carry pathogens such as bacteria and viruses, nutrients, and oxygen-demanding organics and solids that contaminate shell-fishing areas and cause other water quality problems. Ground water can also be contaminated by waste seepage.</p>

	 <p>Overgrazing exposes soils, increases erosion, encourages invasion by undesirable plants, destroys fish habitat, and may destroy streambanks and floodplain vegetation necessary for habitat and water quality filtration.</p>
Other positive effects/benefit for the farmer	Many practices designed to reduce pollution also increase productivity and save farmers money in the long term.
Indicator/key data	<ul style="list-style-type: none"> ▪ No bare soil / ha ▪ Riparian strips along water bodies (at least a width of 10 m) ▪ Integrated nutrient and pest management applied / ha
Reference	<ul style="list-style-type: none"> ▪ Protecting Water Quality from Agricultural Runoff. EPA ▪ European waters – current status and future challenges. EEA Report.

Further information: [Knowledge Pool](#)

This Action Fact Sheet belongs to the training package for managers of standard organisations and companies and was developed within the project LIFE Food & Biodiversity (Biodiversity in Standards and Labels of for the Food Industry). The main objective of the project is to improve the biodiversity performance of standards and sourcing requirements in the food industry by helping standard organisations to integrate efficient biodiversity criteria into their schemes and motivating food processing companies and retailers to include comprehensive biodiversity criteria into their sourcing guidelines.

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