

Buffer zones

Buffer zones are 6-20m wide, year-round vegetated, non-cultivated zones next to a watercourse. The main purpose is to reduce surface run-off and erosion in order to minimize load of particle-bound phosphorus.

Similar terms: buffer zone, buffer strip, riparian zone, vegetated buffer

The perennial vegetation slows down surface run-off and binds nutrients. Roots of the vegetation stabilize the edges of the field, reducing erosion. Total phosphorus and total solids losses can be notably reduced this way.

Buffer zones can also make the field easier and faster to work on by reshaping difficult shape edges.

Buffer zones also reduce the amount of soil transferring in the ditches so less dredging of the ditches is required.²⁾

Maintenance

- Buffer zones should be mown or grazed annually (the plant material should be harvested because of the bound nutrients)
- Buffer zones should not be fertilized

Economics

- Costs vary to some extent in different areas and countries (e.g. ~500 €/ha in Finland, 400-1200 €/ha in Denmark)¹⁾
- About 50% of the cost comes from the loss of income and the rest is establishment and management costs
- Subsidies can be applied in some countries

Application

Buffer zones are most effective on:

- erosion sensitive fields
- fields with high phosphorus level
- frequently flooded fields
- slopy fields

Buffer zones of different width should be applied along every water course, whether a draining ditch, a stream, a river or a lake.

If the fields slope is more than 10%, applying a wider >15 meters buffer zone should be considered.²⁾

Narrower buffer strips (<6m) should be applied along smaller ditches.



Photo: Turku University of Applied Sciences

Further information:

[Baltic Deal - Buffer zones](#)

Sources: 1) Maa- ja metsätalousministeriö. 2007. Suojavyöhykkeen perustaminen ja hoito (FI). ([Link](#))

2) Kulmala, A. 2012. Baltic Deal, buffer zones. Searched 3/2018. ([Link](#))