

## *Final draft - Roma*

### Content and references

#### **7. Land infrastructure**

*This chapter 7 needs perhaps a kind of **introduction** (?) To define “buffer effect”? to define what is a “functional organization” of the hydrographic network and perhaps of a landscape?*

*We will try to think about that in Rome.*

*We made an attempt and wrote down a first draft dealing with the definition of hydro network.*

#### *Factsheet “7- intro”*

##### 7.1 Manage relationships between farms and rivers or streams

- Farm track sediment traps Inv-D2, 5/0
  - Disconnect farm infrastructure from sewerage or surface water Inv-D9, 6/3
- What does this mean? . Any idea or reference is welcome*

##### 7.2 Manage relationships between livestock and rivers or streams

###### **Factsheet 7.2: manage relationships between livestock and rivers or streams**

- Fence off rivers and streams from livestock UK39
- Construct bridges for livestock crossing rivers and streams UK40

##### 7.3 Manage riparian boundaries: riparian wetlands, river bank, etc,...

- Manage the ditch borders = Stop fertilizing + vegetation cover Inv-D5, 7/10

###### **Factsheet 7.3 Riparian wetlands (“natural”?)**

- Establish riparian buffer strips UK43
  - [=] Buffer zones with permanent grassland adjacent to lakes and streams DK16
  - [=] Environmentally sustainable embankment of ditches or streams Inv-D7, 4/4
  - Riparian zones Buffer / riparian zones SERA17
- Establish and maintain artificial (constructed) wetlands UK44

##### 7.4 Manage field boundaries, create or maintain buffers at field boundaries

###### **Factsheet 7.4 a : Re-site gateways**

- Re-site gateways away from high-risk areas (points of drainage) UK41, Inv-D3, 1/1

###### **Factsheet 7.4 b: Field boundaries and their potential buffer functions (overview and management)**

- Manage Field boundaries Inv-D6, 11/8
- Grass export, Immobilizing amendments to buffer zones Inv-D8, 5/
- Stop fertilizing ditch borders , Stop chemical weeding Inv-D5, 7/100
- Manage the ditch borders = Stop fertilizing + vegetation cover Inv-D5, 7/10

- Factsheet 7.4 c : Create and manage vegetated buffers at field boundaries**  
 - Create buffer zone or filter strip management , grass export, immobilizing amendments

SERA17  
 Inv-D8, 5/0

- Factsheet 7.4 d hedges and hedgerow planting**  
 Hedges; Establish new hedges (make fields smaller: see also land use change)

UK42, Inv-D4, 6/4

**OVERVIEW of LAND INFRASTRUTURE**

<i>general framework</i>	<i>Sub categories</i>	factsheets	Hydrology	Landscape component	Main impact
<i>Fluxes of animals and machinery in the landscape</i> 	<i>Manage relationships between livestock and watercourses</i>	<b>Fence off Bridges....</b>	Surface waters	Permanent streams	Sediment Low flows Bank erosion Particulate-P
	<i>Create, maintain or manage buffers at field boundaries</i>	<b>Re-site gateways</b>	Surface runoff Hydrological connectivity	Trails, roads and access for animals and machinery to fields	Water quality Erosion and associated pollutants Total-P
		<b>Overview</b>		soil surface and low vegetation cover (herbaceous)	
		<b>Create vegetated buffers at field boundaries</b>	Surface runoff		High flows
	<b>Hedges</b>	Surface runoff and sub-surface run off	Deep and surface soil layers ; trees and bushes	Both total-P and Nitrogen NO3 High flows (Water quantity )	
<i>Water Fluxes</i>	<i>Manage riparian boundaries:</i>	<b>Riparian wetlands</b>	Sub-surface runoff	Vegetation and hydromorphic soils	Nitrogen NO3 High and low flows

**GENERAL FRAMEWORK** ( DORIOZ et GASCUEL-AUDOUX)  
 (6/4/08)