



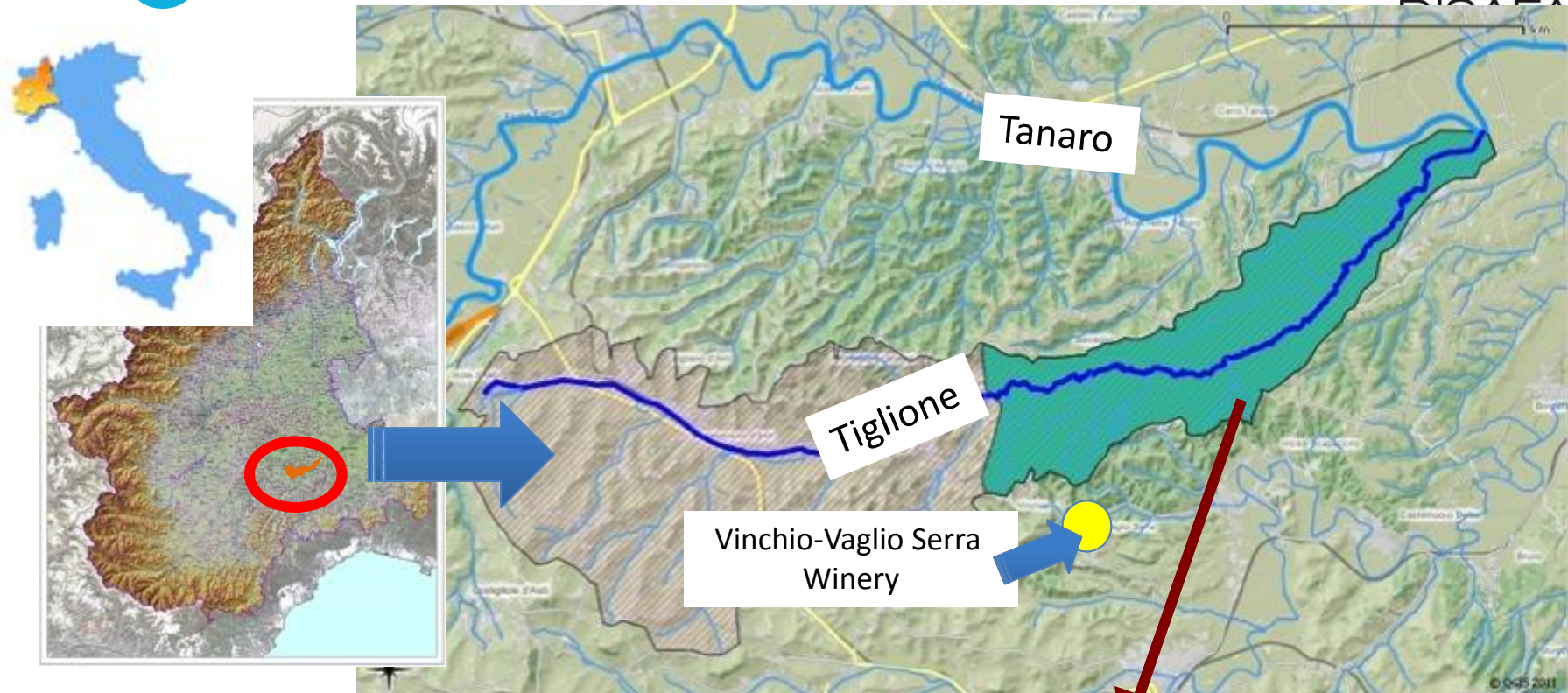
TOPPS ACADEMY
15-18th June 2015
Grugliasco (TO)



FIELD DIAGNOSIS: THE TIGLIONE VALLEY

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RUNOFF team

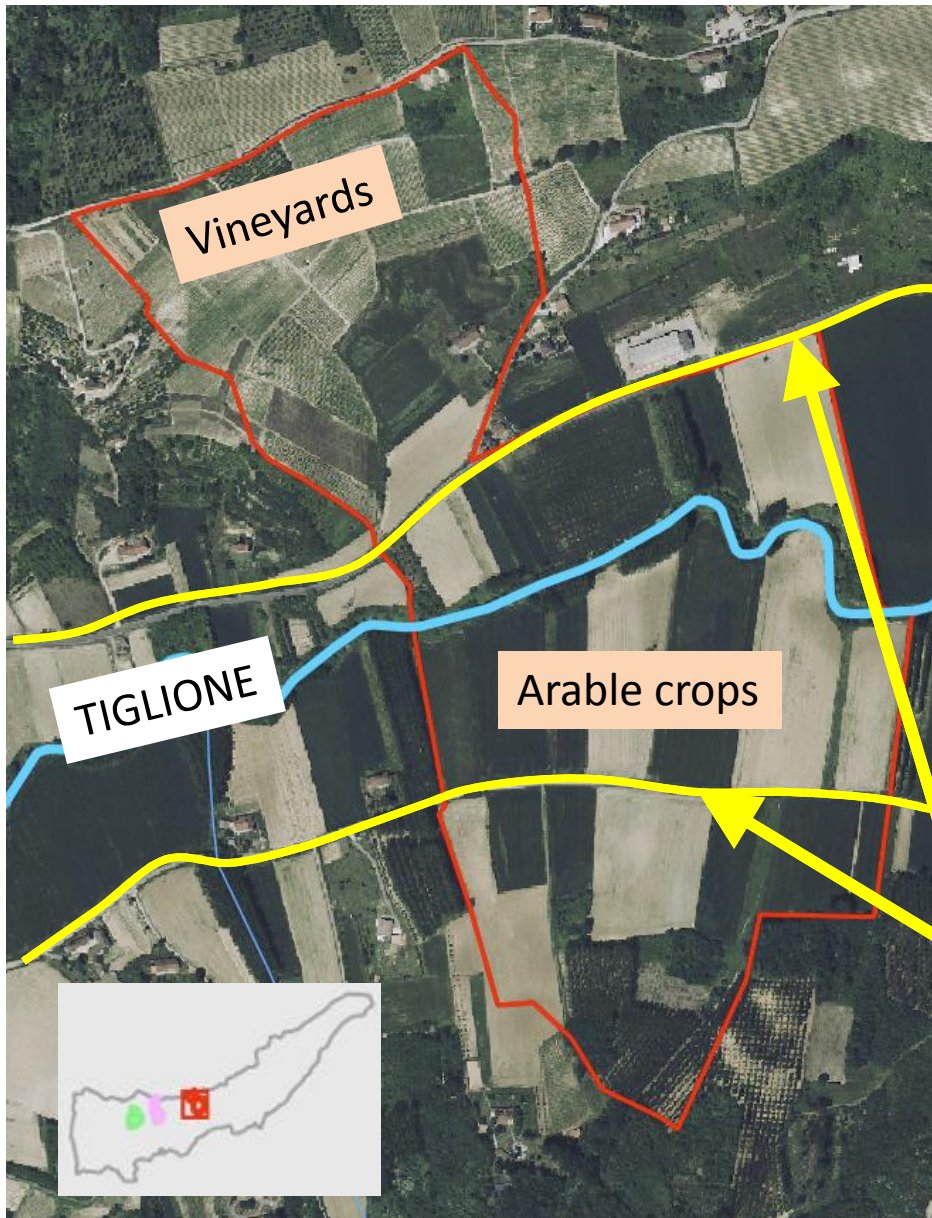


Tiglione catchment
about 6900 ha
2 provinces (Asti, Alessandria)
17 municipalities
Tiglione stream
total length: 25.7 km

Sub catchment
about 3300 ha
2 provinces (Asti, Alessandria)
9 municipalities
Tiglione stream
length in the sub-catchment: 18.0 km

Hilly and plain areas





Demonstration Catchment areas

each area includes

•slopes

- alluvial plain** of Tiglione (both on right and left sides)

crops

- **slopes:** vineyards or natural vegetation
- **alluvial plain** cereals, patches of permanent meadows and some poplar plantations

accessibility

- two roads run ~ parallel to the two sides of Tiglione (150-300 m)

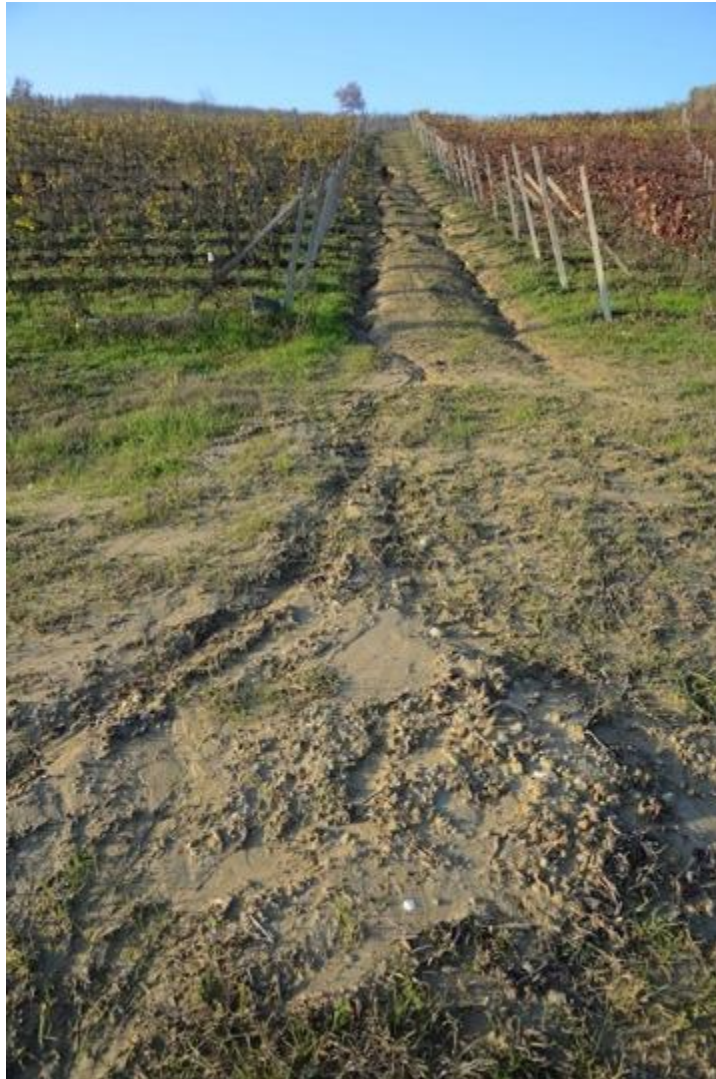




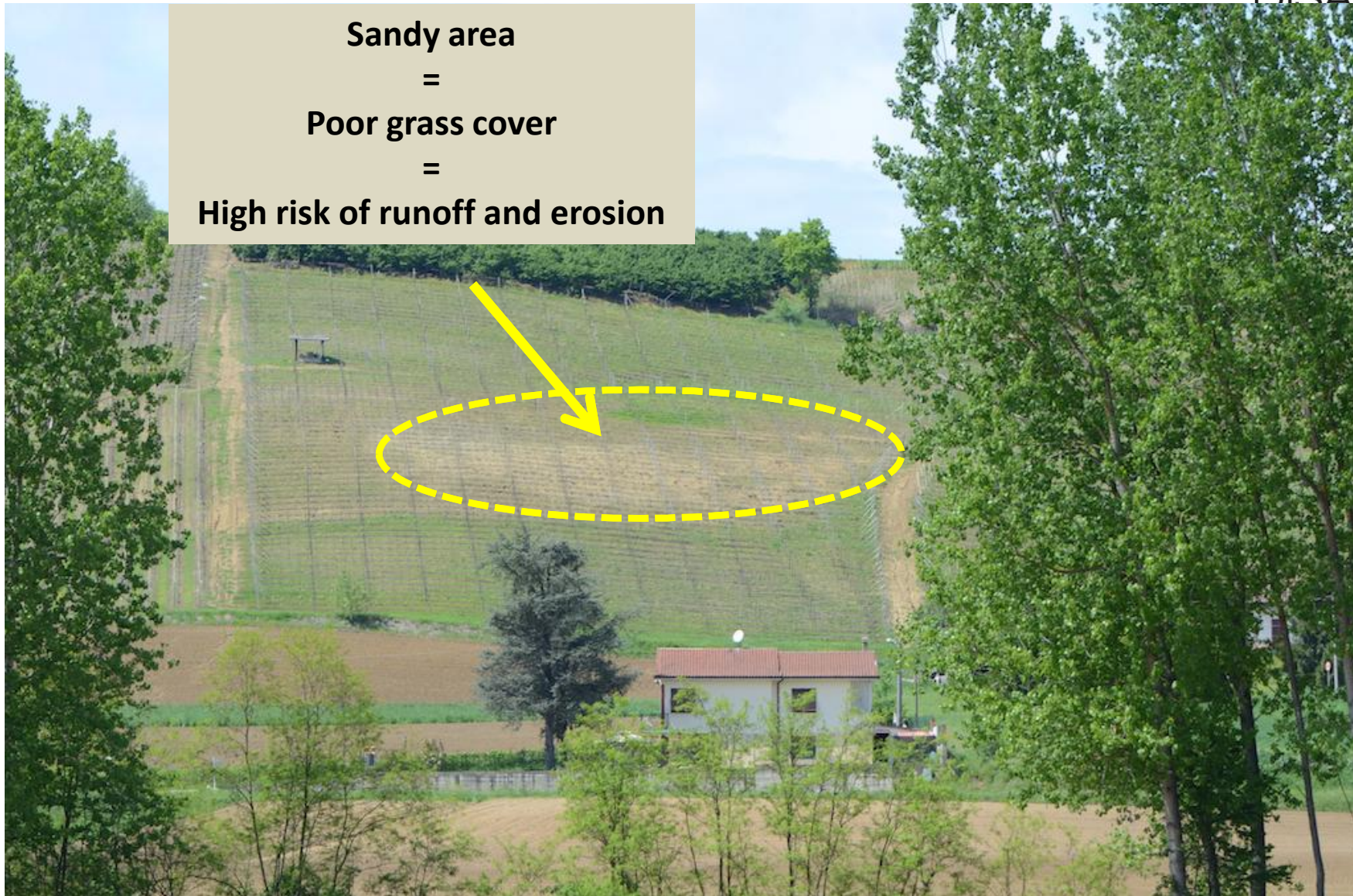
Signs of runoff (with erosion)



Erosion on the hillside zone



**Sandy area
=
Poor grass cover
=
High risk of runoff and erosion**





**3 years vineyard
High sand content
(poor vegetation)**



**3 years vineyard
Low sand content
(partially grassed)**

Runoff accumulation in a headland

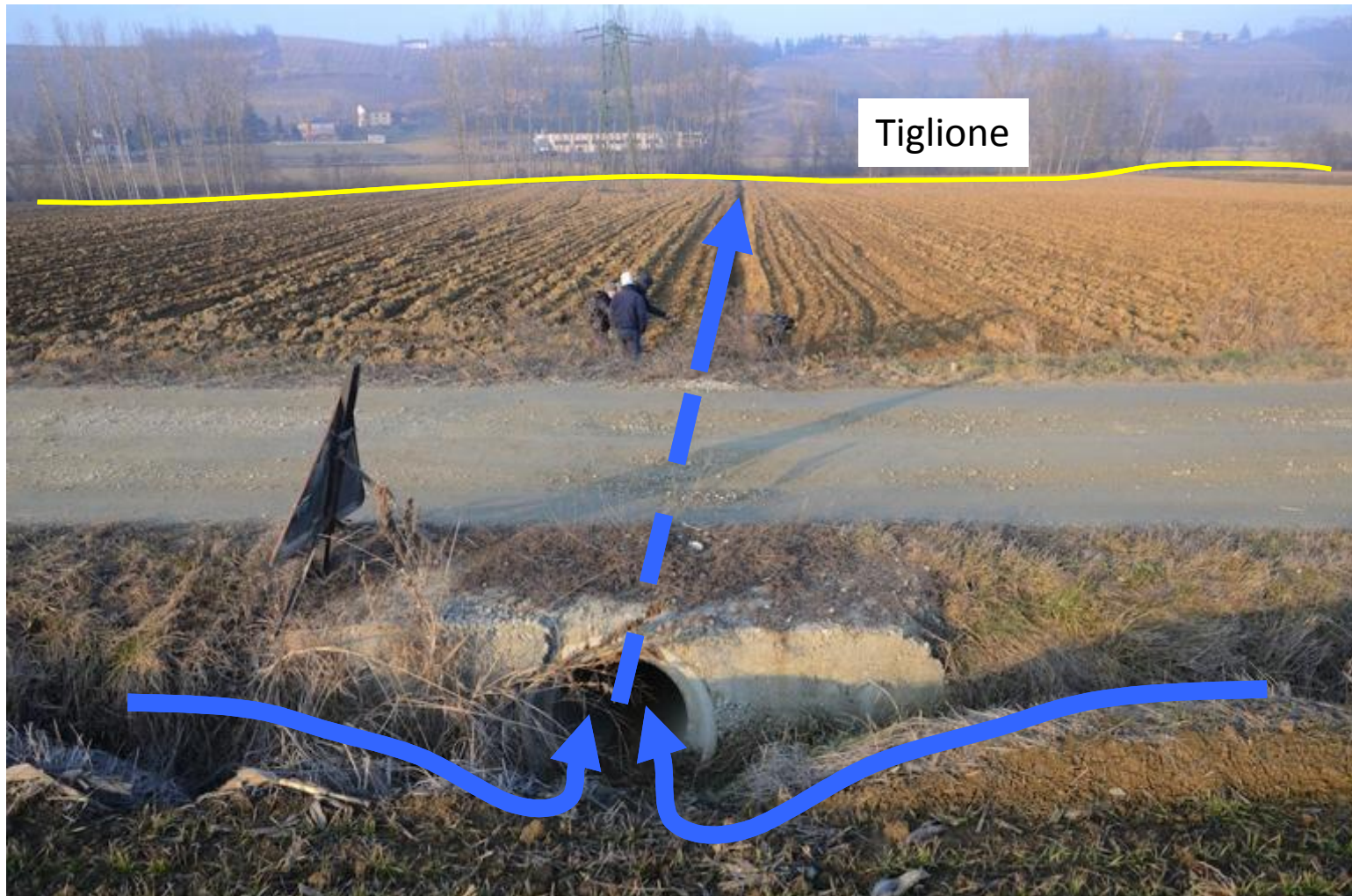


Concentrated runoff with erosion in thalwegs



Presence of short cuts

(direct connections between hillside zone and river)

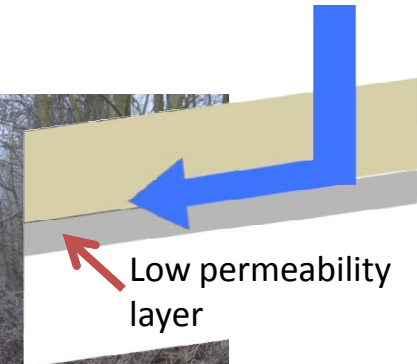


Landslides

May 2012



Landslides



Check status of riparian vegetation



Check status of riparian vegetation



Check status of riparian vegetation



Excessive tillage depth



- 💧 Presence of infiltration restriction runoff mainly
- 💧 Serious problems of stability along the Tiglione banks
- 💧 Several short-cuts
- 💧 Occurrence of severe erosion problems in the hillside



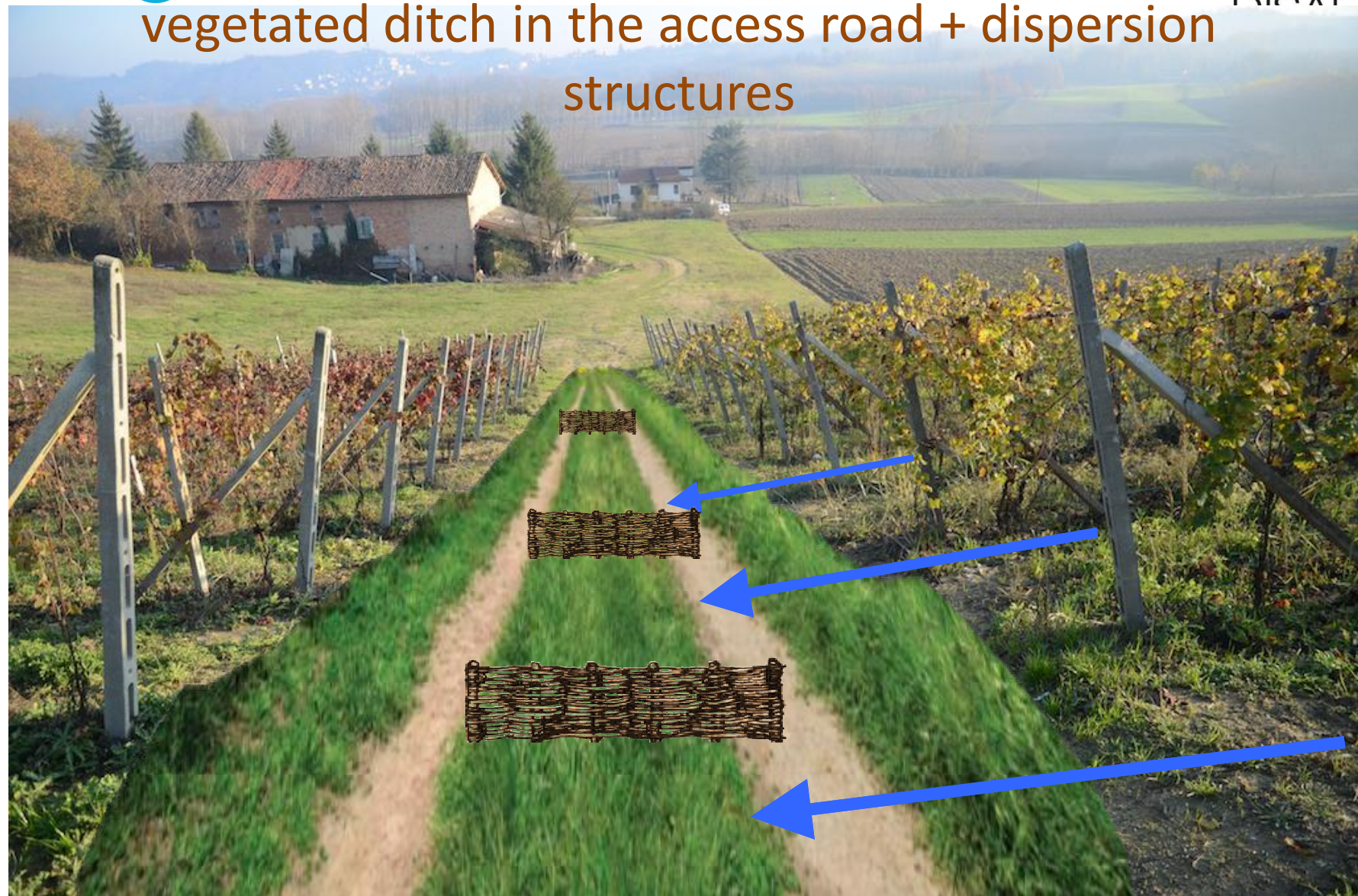
Possible mitigation action:

Grassed buffer strip and tree



Dispersion structures and vegetated ditches







- Sowing of *Medicago sativa* and *Cynodon dactylon* in the vineyard access road.
- Construction of little wood barriers in the center of the drainage ditch.



September 2014

