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## The ecological network as a means of preserving biodiversity: three pilot projects for redeveloping ecological corridors in the Veneto Region.

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Biodiversity conservation requires the definition of planning strategies to ensure a level of connection of natural areas to guarantee the maintenance of the dynamic distribution of plant and animal species. The ecological network in Veneto, adopted in February 2009 with the Regional Territorial Coordination Plan, was thus conceived as a set of heterogeneous interconnected territories and functional to the preservation and maintenance of biodiversity.

The network, which covers just over 40% of the entire region, is divided into core areas (about 415,000 hectares) and ecological corridors (about 305,000 hectares) in addition to natural cavities forming a lattice underground very fragile and with a high biological importance.

The ecological corridors provide connection between the core areas, which are the areas with the highest biodiversity values of the network. To achieve the objectives of the ecological network, the Veneto Region, has recently partnered with the municipalities of three cities - Verona, Vicenza and Belluno - and with other public and private partners, with the aim of achieving strategic interventions for the rehabilitation of network and in particular to improve the functionality and quality of ecological corridors.

The actions proposed by the three partner cities include improving and restoring ecological value of riverbeds, to increase the permeability of biological function of the role of the corridor and to rebuild their habitats river environment. Among the components of the system of ecological connectivity, in fact, the waterways are the preferred directions for movement and dispersal of species.



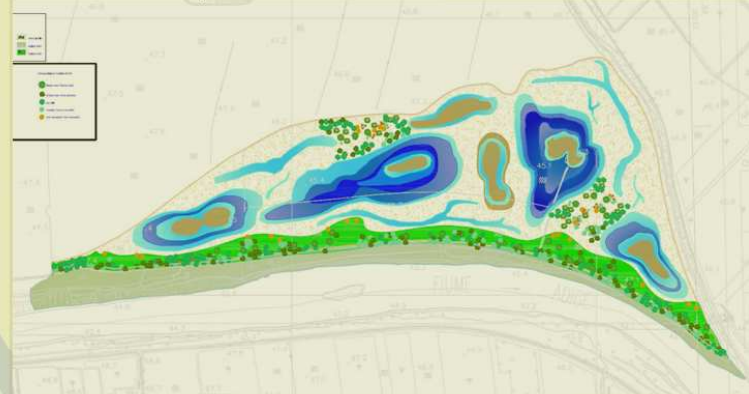
2. integrated project for the hydraulic safety of the Adige river and ecological enhancement of the role of the river and its appurtenances in the City of Verona.



### ACTIONS

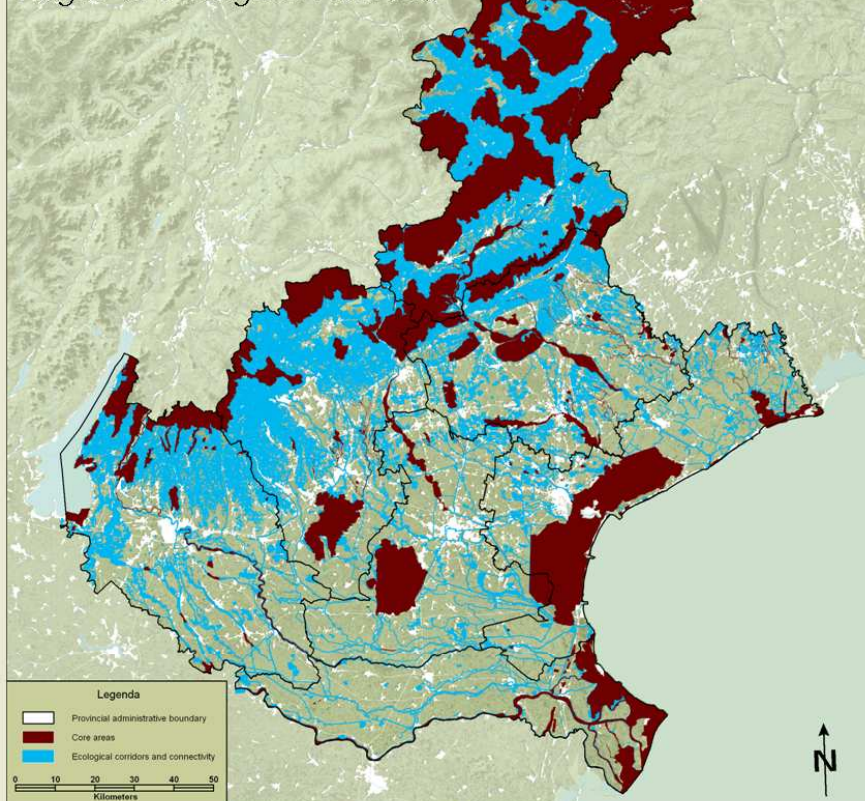
1. Regeneration of riparian vegetation along the banks of the river
2. Construction of a wetland

### Construction of a wetland



- Morphological modelling of the basin (creating islands, sinuous profile of banks, modelling banks with variable slope);
- Introduction of plant communities typical of wetlands (Coenosis in phragmites, coenosis in carex, Coenosis in Nuphar luteum and Nuphar alba, Riparian forest)

### Regional Ecological Network

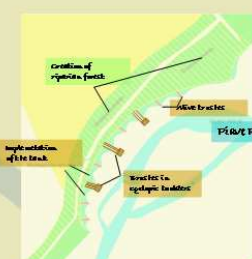


1. Strategic Project of the Piave River in the city of Belluno



### ACTIONS

1. Measures to protect species *Salmo trutta marmoratus*;
2. Measures to prevent loss of habitat area;
3. Measures to rehabilitate some point sources of pollution;
4. Enhancement of the ecological and environmental aspects of floodplain river;
5. Recovery of ecological connection with the construction of a ramp block for ascending fish.

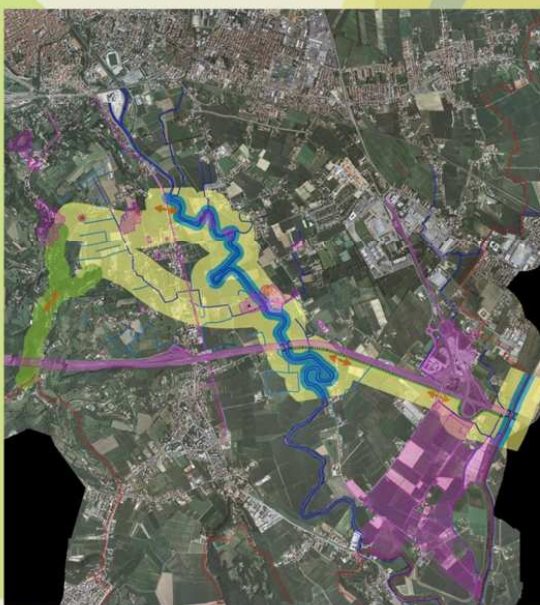


### Measures to counter the loss of habitat area

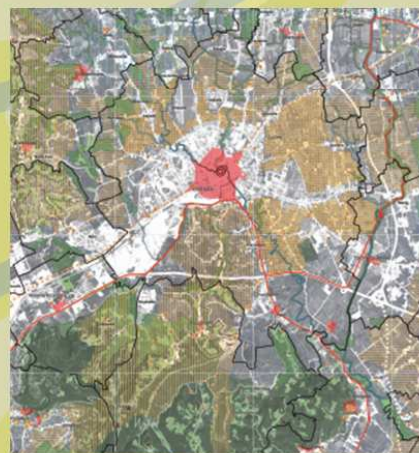
To counter the erosion of the banks operations involve the construction of groin system in cyclopean boulders. The groins will be carried out in association with willow cuttings to be inserted in the interstices of the rocks themselves in order to obtain quickly a widespread reforestation of the banks and a masking works. In places where the banks are in contact with the farmland will be implemented a range of afforestation to restore the ecological and hydraulic functions of riparian forest.



3. Redevelopment project of the ecological corridor Berici - Bacchiglione - Tesina in the city of Vicenza



### Ecological network of Vicenza and the surroundings



### ACTIONS

1. Redevelopment of the Bacchiglione watercourse;
  - Restoration of riparian vegetation along the banks, introduction of riparian species, elimination of those that are not compatible and the substitution of alien species.
2. Creations of systems of wildlife crossing along human made barriers such as roads and canals;
3. Construction of a bird-watching structure;
4. Planting of hedges with shrubs and trees;
5. Regeneration of forests on the ridge slopes in the west side of the city (woodland cleaning; logging, disposal timber, consolidation of erosive slopes);
6. Environmental regeneration of the state-owned property;
7. Environmental regeneration in non urbanized rural areas.