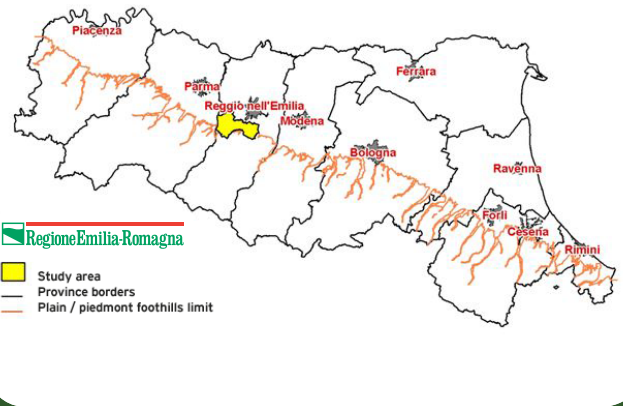


To fully achieve the result, timber river flow baffles will be built also to make the current sinuous. Finally, vegetation protection and improvement measures will be implemented to re-establish the ecological network along water courses (Pict. 3).

The substantially innovative character of the LIFE RII project is given not only by the individual prototypes specifically designed to solve specific hydraulic and environmental problems, but above all by the entire design process. Following a preliminary stage addressed to a multidisciplinary technical group, local stakeholder were also involved through a "participatory process", to agree on and define in detail the works to be developed.

The LIFE RII Project experience will be accomplished with the adoption of the Integrated program for the Hydraulic-Environmental Restoration of Water Streams in the large-scale study area, which will be designed on the basis of knowledge generated by the hydraulic, geomorphological and naturalistic in-depth studies, with the development of interventions, monitoring and the participatory process. The Project is finally aimed to design innovative legal-administrative instruments to support hydraulic flood risk management and environmental regeneration of the area in question.



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LIFE 11 ENV/IT/000243 RII Project

Integrated Hydraulic- Environmental Restoration of Water Streams within the Piedmont belt of the Emilia-Romagna Region

centro stampa regione emilia-romagna

Intervention strategies

September 2013

The project detailed description can be found at:

<http://ambiente.regione.emilia-romagna.it/life-rii>



Integrated Hydraulic-Environmental Restoration of Water Streams within the Piedmont belt of the Emilia-Romagna Region

Progetto LIFE11 ENV/IT/000243 RII

The LIFE RII Project on Integrated Hydraulic-Environmental Restoration of Water Streams within the Piedmont belt of a few Municipalities located in the Province of Reggio Emilia is implemented by the Emilia-Romagna Region, in its capacity as coordinating beneficiary, the Municipalities of Albinea, Bibbiano, Quattro Castella San Polo d'Enza, as co-funders and the Consorzio di Bonifica dell'Emilia Centrale (Central Emilia Land Reclamation Consortium), collaborating in the project implementation.

The total amount earmarked for this purpose is € 1.2 million of which 50% funded by the EU.

The LIFE RII Project 's main goal is to show that the key concepts underlying the European Directives on Water and Flood Risk, concerning the need to reduce the flood risk by improving the ecological status of water courses, can be applied also on the minor water stream network.

The interventions will be made in six streams (Rio Arianna, Bertolini, Bottazzo, Enzola, Lavezza and Quaresimo), characterized by a width ranging between 1-2 m and having a torrential regime.

These are very small watersheds with very steep slopes in the hilly part and less steep slopes in the densely urbanized high plains.

Additionally, streams were partially piped in urban areas with reduced hydraulic sections, which are insufficient to contain flood waves.



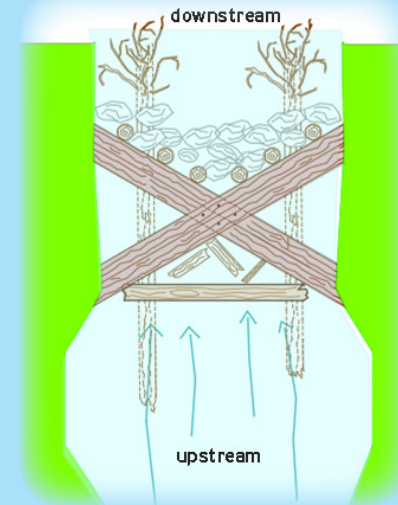
This condition of limited space availability and the need to find new and long-term economically viable solutions led to the decision to rule out the development of traditional works.



PICT. 1

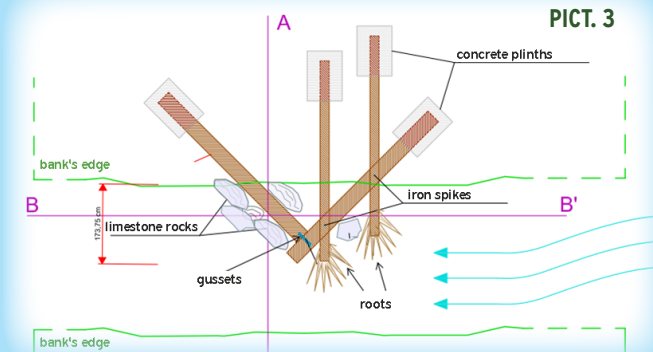
It was then decided to retain water uphill in the mountain section at most before they flow down reaching the urban areas, by making riverbed enlargements "closed" by narrowing sections downstream to retain water in case of flooding.

These narrowings will be obtained thanks to special artifacts. These prototypes have been specifically designed to operate in areas with highly valuable landscape, by planting local plant species so that, over the years, they will full cover artifacts, which will become completely invisible (Pict. 1).



PICT. 2

In addition, runoff water will be slowed with flexible weirs made up of trunks with roots anchored to the banks. These works, in addition to reducing the riverbed slope, provide an environmental improvement both for the diversification of the riverbed itself and for the creation of new habitats (Pict. 2).



PICT. 3

