

URBAN STREAM REHABILITATION – LESSONS (TO BE) LEARNED FROM URBEM PROJECT

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Abstract

One of the most important aspects in the urban development of the modern world is that the urban streams and rivers are modified to meet the needs of the urban population and the small ones often act as conduits for wastewaters. Throughout historic development urban watercourses have gradually been converted from natural river beds to confined narrow river corridors with the channels canalised in concrete and other man-made materials forming both the bed and banks of the river. In many cases they have been culverted and converted into covered combined sewers.

Management and control of urban watercourse are used to prevent or reduce bank erosion, flooding and increased pollutant loads, but may also be used for the protection of the natural hydraulic conditions and urban aquatic habitats. The urban communities expect protection from floods and preservation of public health and aesthetic or amenity value. Resolving the conflicts over watercourse functions is particularly complex in urban areas, and urban watercourses are seen as an important element in an integrated urban water management cycle (Maksimović & Tejada-Guibert, 2001)

Modification of watercourses is recognised in European legislation through the Water Framework Directive (WFD), which defines a “heavily modified water body” as a “body of surface water, which as a result of physical alterations by human activity is substantially changed in character”. The WFD provides the basis for long-term, sustainable development, enhancement and planning of European rivers with an emphasis on natural ecosystems, and intrinsic wildlife value. Improvement of the river systems through urban areas in terms of quality, ecology, aesthetics and amenity values is vital in the movement towards an environmentally sustainable future for cities in Europe.

The URBEM project (<http://www.urbem.net/theproject.html>) investigated various aspects of new techniques and materials for bringing life back to urban streams in order to provide long term sustainable solutions and to enhance the visual and ecological values. The approach of URBEM is based on the belief that the whole river corridor and its interactions with the urban environment are an integral part of the system (Gardiner, 1992).

This paper (and the lecture that follows) present the educational – capacity building component of the project. The educational tool (Training Module – TM) that will be developed at the end of the project, is an overarching framework which integrates the educational elements of the other 10 work packages and presents them in the form suitable for running various forms of training – capacity building of the three defined target groups: (a) top level decision makers, (b) water and environmental specialists and urban planners and (c) general public.

The main objective of the Training Module (TM) is to enhance the awareness of the general public and develop the capabilities to public, professional and environmental authorities about

how to plan, implement and maintain an urban rehabilitation scheme.

The TM is designed so that it can be tailored to suit the three selected target groups of audience with a different level of interest and understanding: top level decision maker (that includes high level ministerial officers, chief city planners and alike), professionals (water and environmental planners, developers and designers) and other stakeholders and general public. In addition to the conventional material (books, reports etc.) the TM includes guidelines for preparation and running training programs are series of Power Point slides sorted out in accordance with project deliverables and supported by written material. It is anticipated that those involved in the presentations will have an understanding of the subject area and the technical knowledge to undertake the training programme in the first place and than to get involved in rehabilitation project hopefully on the project developed paradigm.

The TM is provided on a CD with adequate number of folders and art designed slides (about 350). It can be used directly from the CD or copied on a hard drive and used from there. The slides provided are as follows: (a) individual, simple graphs and photos, (b) animated slides, consisting of several sequential images and (c) slides with buttons for more information about specific subject. presented in Power Point presentation (Fig 1):

Although each of the training blocks presents a self-contained unit is makes sense to refer to that other blocks when running the class with individual target group on a particular topic.

The principles of modern graphics design are used, and the slides are meant to be easy to understand to master their essence

The Training Module has been developed so that further updates and upgrades can easily be made. Separate modules can be specifically designed for various regions, written in the appropriate language and adapted to the local culture. Detailed examples and case studies can also be included. Its translation into various languages would make it available to an even wider audience, and should enhance the process of creating additional local modules.

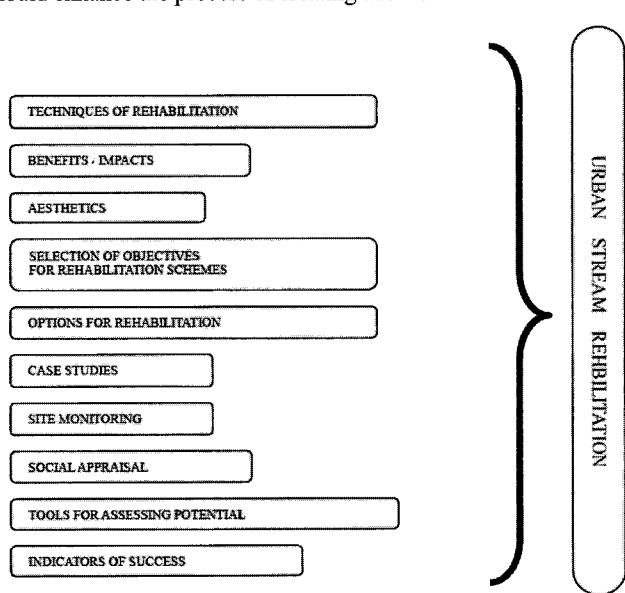


Fig 1. depicts the blocks of units used in the presentation