



*Environmental improvement in the  
fluvial ecosystem*

*Alternative job creation*

*Infrastructure creation*

*Rehabilitation of wells and fountains*

*People in the region have come closer  
to their river*

*Path cleaning up and sign posting*

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The Life Guadiato Project has its backdrop in the region of Valle del Guadiato, in the north of the province of Cordoba, which is made up of eleven municipalities, whose core is the river Guadiato.

The mining sector was the responsible for the economical (and social) boost in the region. Moreover, it is this mining activity that caused such a huge environmental impact on the river and stream beds.

Today, the main pollutant agent of the river Guadiato is the urban waste, which is dumped straight into the river or streams, without having any treatment process. Furthermore, agricultural and livestock waste has increased in the last few years: purine dumping, chemical fertilizers, phytosanitary products,... being the source of a strong chemical contamination.

On the other hand, deforestation has caused an important erosion in the basin, and as a result, land loss and reservoir silting.

To sum up, it could be said that for a long time we have turned our back on the rivers and streams, turning them into waste drains. In view of the situation, it seemed really urgent to start up some performances in order to reach an improvement in river ecosystems in the region of Valle del Guadiato, as well as a change of direction in the conception of what a river is for most people.

That is why, the Community of Municipalities of Valle del Guadiato has managed the life Guadiato project for the last three years. This Project has incorporated the environmental perspective in the development strategy in the region of Guadiato. So that one of the main goals of the Project was to boost alternative economic activities to the current ones which generate jobs in activities related to environmental protection as well as a change in the way people 'see' the river. In order to achieve this, a flexible methodology was applied, based on a system where the population participation was constant, a system of information and spreading of the results which have been being achieved.



*Plantation descansadero silleró*

Both forest regeneration of our river and cleaning of surrounding areas have been one of the indispensable performances. In order to regenerate the extinct forest in the river banks, 29 hectares of banks have been reforested with 9,419 autochthonous species, half of which were grown at the nurseries of the Life Project. The maintenance activities have been carried out by contracting students who were educated in courses organized by the Project.

Cleaning activities have been carried out by young unemployed people from the region in six municipalities; more than one ton of both organic and inert waste has been removed.

A special case of reforestation which must be mentioned is the pilot experience of phytoremediation, which was carried out on the dump of an old mine. With this experience, we try to prevent erosion and contamination of the land through phytoremediation techniques as well as achieving the landscape restoration of dumps. In order to achieve this, 480 arboreous plants and 360 shrub-like plants were used. Survival rates have been 24,03% and 34,79% respectively.



*Fitorremediación*

Two nurseries of aromatic and forest plants have been set up. We have used these plants for the reforestation of the river banks and the leisure areas located in the traditional hydraulic infrastructure. This will be regarded as a model in future exploitations which can prove to be viable from an economic point of view.

By setting up these nurseries our intention was to offer the young unemployed people in the region the essential training to face this management initiative which was started by the Life Guadiato Project. So business initiatives which have proved to be viable are those related to marketing of aromatic and medicinal dried plants as well as essential oil.

All the results we got from these nurseries have been spread through conferences, seminars, visiting, workshops, and educative courses "Production of aromatic and medicinal plants" and "Operator of nurseries and gardens", these ones aimed to encourage young unemployed people. A handbook on aromatic and medicinal plants was published, where useful information was collected from the illustrative experience in the nurseries.





*Fish-pond La Granjuela*

In order to search for new options in the treatment of organic waste and optimization of plantations and growing in nurseries, an experience on compost of manure by means of earthworms was started up in the technique called vermiculture. The resulting compost has been successfully applied in different trials in the nurseries which are managed by the Life Guadiato Project. On the other hand, this experience expects to be the first step in the treatment of waste in the region of the river Guadiato.

As a pioneering activity in the region, we made periodic water analyses all along the course of the river, which characterized it from the physical, chemical and biochemical points of view. They gave us an exhaustive information about the environment they have proved to be an indispensable starting point for the actions aimed to improve the ecosystem of the river Guadiato. The analyses were based on the quality gauges for the classification of the ecological state of rivers described in the Appendix V of the Directiva Marco del Agua (2000/60/CEE).



*Ranunculos river Guadiato*

With the aim of reinforcing the performances for the improvement of water quality a Green Filter was implanted in the hamlet of La Coronada. It is an experimental innovative treatment system through a technique called "bed of reeds", which is unexpensive as for its implantation, exploitation and maintenance, so a high integration into the environment was achieved.

This way, we have decreased dumping and we have proved the effectiveness of this kind of technology in the treatment of sewage in small centers of population as well as its great potential of application in areas sharing similar characteristics.

In order to make ranchers and farmers aware of the need for respectful agricultural and ranching activities towards the environment, several seminars, conferences and formative courses took place in the region. The good farming practices, plant covers, agroenvironmental help, ecological agriculture and cattle raising, as well as the reuse of ranching waste were some of the topics dealt with. More than 250 people benefitted from these formative and spreading actions. As a didactic support to these initiatives several information booklets about ecological agriculture and handbooks on good farming practices were published.



*Days of agricultural residues*

As for the appreciation of the aquatic environment we have worked on the recovery of wells and fountains, as well as on the fitting-out of leisure areas. Ten infrastructures have been recovered in five small towns of the region, some of which had fallen into disuse or had disappeared.



*Well of Las Mulas*

Another performance was the adaptation of paths through clear-out and cleaning, as well as their signposting by emphasizing areas of great interest from the ecological and landscape points of view. For the last three years of implementation, 58 kms of paths were adapted and signposted.





*Cartel path*

Natural resources in the region of Valle del Guadiato are, no doubt about it, of a huge interest from the environmental point of view. From this starting point, we thought of the need for infrastructures and equipments which showed natural resources of the region and made people feel the river and its banks closer.

Thus, three bird observatories have been set up in the reservoirs of the region. These bird observatories have panels which show the richness and variety that can be found in the region. We published 10,000 copies of spreading and information booklets about these observatories and 4,000 copies of the guidebook of birds in the region, where we can find every marsh bird which lives in them.



*Observatory of birds*

Likewise, two new jetties have been created in the reservoir of Puente Nuevo as a reply to the incipient but growing demand of nautical sports in the region.

As a meeting and starting point where people could know and interpret everything the region can offer, a Nature Interpretation Centre was created. As for its location, we chose an old railway station, which has been restructured as a hostel.

Its innovative appearance stands out because of the three goods vans which recall a goods train. Inside we can pay a didactic interactive visit so we can get to know the region of the river Guadiato, its villages and small towns, customs and traditions, gastronomy, natural resources, the flora and fauna, paying a special attention to the river Guadiato.



*Visitors in the Center of interpretation*

Children and young people were the most important addressees when diffusion and spreading activities as well as environmental education were to be established, making them be aware of the need for us to preserve and improve our natural environment, as well as promoting participation of the people. Conferences, contests, campaigns, traveling exhibitions brought to schools and highschools in the region, working camps of both community and national nature, workshops, plantations and environmental camps were some of the activities carried out.



*Encampes La Granjuela*

For the general public, courses, workshops and conferences about water resources were organized in several towns.

The Life Guadiato Project was also present at other events where a lot of professionals and projects which were similar to ours came together.

In the middle of 2002 a service of environmental information was started up. We received more than 200 consultations, which shows the good reception that the service got among the people in the region.

Some international conferences called "Recovery of rivers and alternative development" took place as a completion of the Project. Here we let people know the final results of the Project; we shared our experience with professionals and people who were interested in the topics the Project dealt with.



*Inauguration of the International days*

A wide variety of publications have made people in the region be aware of the natural resources of the river Guadiato and the results of the Project: Manual of the flora and fauna in the river Guadiato, Manual of good agricultural practices, Information booklet about ecological agriculture, Manual "More water for everyone", didactics folders on water, Manual on aromatic and medicinal plants, etc.



*Publications Life*

As well as printed and electronic reports which have informed every three months of the activities carried out by the Project, which can be consulted at the website of Life: [www.infoguadiato.com/index\\_life.asp](http://www.infoguadiato.com/index_life.asp). Thus, after three years of development of the Project, the objectives we originally established were successfully fulfilled.

- Environmental improvement in the river banks
- People in the region have come closer to their most emblematic river
- Creation of a useful structure for the understanding of the richness of the river Guadiato: bird observatories, Interpretation Centre, rehabilitation of wells and fountains, fitting-out of current paths...

Through the sustainable running of the river Guadiato and its banks, a door has been opened towards knowledge of our own natural environment and towards people's environmental awareness.

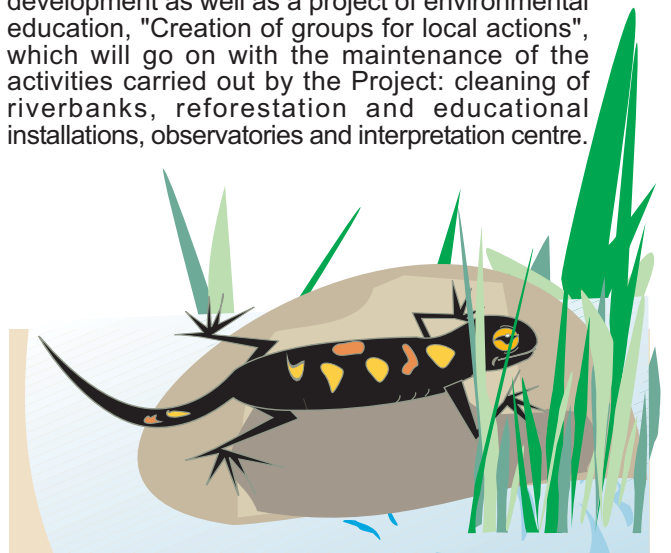
These specific results which have been achieved stand out from the rest:



*Bank of the river Guadiato*

- Environmental improvement in the fluvial ecosystem.
- People in the region have come closer to their most emblematic river.
- Creation of jobs related to the new deposits of employment and activities linked with the recovery of the course and banks of the river Guadiato.
- Spreading of the Project to other European regions which share similar conditions.
- Creation of a useful structure for the understanding of the richness of the river Guadiato: bird observatories, Interpretation Centre, rehabilitation of wells and fountains, fitting-out of current paths...

After these three years of implementation several projects have been achieved from the Life Guadiato. Thus, a project is going to be held in the region in order to elaborate a strategic plan of sustainable development as well as a project of environmental education, "Creation of groups for local actions", which will go on with the maintenance of the activities carried out by the Project: cleaning of riverbanks, reforestation and educational installations, observatories and interpretation centre.





Model for restoring and integrating water  
resources in a mining area.  
Actions for an alternative development.

# Life-Guadiato



Mancomunidad de Municipios  
Valle del Guadiato



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