



**CASE STUDY**

# Chile: Integrated strategy for the recovery of water resources of Talcahuano



## Summary

The Municipality of Talcahuano because of rapid urbanisation is subjected to natural resource degradation. Action was taken and a municipal strategy was created, assigning the municipality as the institution in charge of administering and combating natural resource degradation. This case illustrates the appropriateness of the municipal level of government in successfully addressing the recovery of water resources and environmental management.

## Background

Talcahuano is one of the nine municipalities within the Province of Concepción, capital of the Bío-Bío Region, located some 500 km to the south of Santiago, Chile. The Municipality of Talcahuano, due to its geographic location, natural conditions and closeness to energy supply centres, such as coal from Lota and Coronel, had from the 50s an important economic growth, a greater military presence, and an increased port capacity; all this led to an accelerated urban growth.

The co-existence of active urban and industrial areas in an uneven territory, with abundant water bodies and a surface area of only 142.8 km<sup>2</sup>, have made the city specially sensitive to natural resource degradation.

The situation was made critical and gave rise to the municipal strategy started in 1993. This situation was being aggravated by the chronic scarcity of resources in the Municipality and the lack of infrastructure and control mechanisms faced with environmental deterioration.

The Municipality, as the institution in charge of administering this serious environmental deterioration

that affected the quality of life of its inhabitants, in co-ordination with other public, private and community organisations, manifest their outmost commitment and concern for decreasing water contamination.

A program to appropriately zone the city in order to harmonise the different activities was implemented.

## **Actions taken**

According to the Environmental Directorate of the Municipality, recovery work in the area of Talcahuano started out towards the end of 1990, undergoing a major boost as a result of the alarm generated by the fire in the San Vicente Bay in March of that same year and planned in 1995. The deterioration in the quality of life of its inhabitants, the contamination of water, air and soil and the image of it being one of the most contaminated municipalities in Chile harboured in the municipal

authorities the commitment to start on a recovery strategy, starting out with those problems which, being the most serious, allowed for a speedy solution. This manifestation was given credibility by the community and businesses, allowing for the design of participative strategy under community leadership, having a shared view of development; "Talcahuano, balanced city, opportunity for all", to be started in 1995 with the execution of the three instruments for which there was funds for the Strategic Plan, the Development Plan and the Municipal Regulator Plan.

The key element achieved through participation was that each resource user be held accountable for the sustainable management of the resource; applicable to national and regional government, business, the community and the Municipal Government itself. The municipality also took on the responsibility of seeking a balance between the different interest at play, such as economic development, the protection of natural resources and the quality of life of people living in the municipality. Under these criteria, the Municipality undertook to initiate the following actions:

1. Territorial and environmental regulation of the municipality, with community participation, through a new Regulation Plan, financed by the Municipality and with national government contributions.
2. Plans for Improving the Quality of Water, Air and Soil resources, with industrial finance.
3. Plan for Integral Sanitation of all municipal sectors, funded by the Municipality.
4. Integral clean-up plan for all municipal areas, funded by the Municipality.
5. Urban Solid Residue Integral Management Plan, funded by the Municipality.
6. Training and Awareness raising program, funded by the Municipality.
7. Permanent Supervision plan and Regulation Application, in accordance to impact severity, technically demonstrated through monitoring, funded by the Municipality and Public Services.

## **Outcomes**

The Strategic Development Plan was designed under an integral sustainability approach, which included the protection of the environment and local resources, developed in conjunction with Regional Government and its own Development Strategy for the Bío-Bío Region. Thus allowing for the integration of the community, businesses and institutions under a shared vision of the economic and social future in the mid to long term of the municipality, under the slogan "Talcahuano, port city integrated with the sea and its natural and historical values, in harmony with its varied and contrasting activities, destined to be the main port of the South Pacific". The Municipal Development Plan became a guiding instrument for those in charge of administration, investors and other players interested in local development. It set down zoning guidelines and as such it was useful for, in conjunction with the Strategic Plan, in guiding the Municipal Regulator Plan. The latter one set the guiding lines for land use in order to lay down criteria for the location of productive activity and residential areas.

## Lessons Learned

It is a good example of application of an IWRM approach, within the possibilities of a local level government having modest resources, in terms of its concern regarding equitable and sustainable use of resource, by different social and productive sectors.

The experience analysed indicates that Municipalities may achieve this by exercising efficient and informed conduction and which employs a strategy capable of combining interests and negotiating efficient associations with the community, private companies and national and regional government.

It is very important to disseminate this case in Latin America, as the capacity demonstrated by the Talcahuano Municipality in obtaining the co-operation of national and regional governments, that of private sector, and the ability to manage funds and resources.

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**Supporting Materials**

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**Related IWRM Tools**

Policies with Relation to Water Resources, National IWRM Plans, Groundwater Management Plans, Evaluating Water Investments, The Rights of Rivers

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