

## **Geographical differences of actors interests in pollution conflict**

### **By Sergio Graf**

Thus, the area is divided socioeconomically. It is also divided in the effects of pollution. The upstream towns located along the river nearest the discharges from the Ingenio and the cities are the most affected by the problem of pollution. In the towns situated along the channel, like El Tempisque, El Palo Blanco and El Aguacate, the impact is greatest because in this area, the only flows in the river arise from municipal sewage discharge, discharge from the Ingenio, and return flows from the valley irrigation system.

The downstream towns along the river, like Ventana, Zenzontla, La Cañita and Agua Mala are located below the confluence with the Arroyo Manantlan, which is an important contributor of clean water. While the water quality here is better, during the dry season, short periods occur when water quality is extremely bad due to massive discharges from the oxidation ponds of the Ingenio, or from chemicals used in the washing of the mills. Although the most evident impact occurs during these short periods, there is a continual process of damage to the river and its resources that directly affects the family economy, which depends in good measure on fishery resources. In addition, these are the same populations in the regions with the greatest deficiencies in health services, education, potable water and electricity.

Because there is no potable water supplied to the towns, the people are forced to dig filtration wells in the bed of the river to supply drinking water. River water is purified only by being filtered through the coarse sediments of the channel, with direct repercussions on health.

The differences in the impact of pollution on the municipalities also extend to their perspective and political response to the contamination.

El Grullo is at the same time an important generator of pollution, while it is also affected by pollution in its riparian areas. The nearness of the Ingenio to the municipal seat has also generated bad feelings among the inhabitants because of the fetid odors arising from the oxidation ponds.

As a result, El Grullo has taken an active position in the search for solutions to the problem, and environmental pollution in general, and has even entered into a direct confrontation with the Ingenio, establishing formal complaints all the way up to the presidency, requesting orders that the company improve the quality of its waste water.

On the other hand, the municipality of Autlán, since its population is not directly affected and because it has formal economic relations with the Ingenio through the collection of taxes, has taken a more distant and conservative position on the pollution problem.

The sugar industry plays a fundamental role in the economy of the region. It is an important source of direct employment as well as an indirect source through employment associated businesses and services principally concentrated in El Grullo. Since the start of operation, the Ingenio has dumped its wastes without any treatment directly into the river, while systematically denying its responsibility for pollution. This denial has only increased the anger of the affected populations. It is also important to note that until 1995, the Ingenio was state owned, which enormously complicated the ability of the riverine populations to obtain a suitable response from government authorities to their demands for wastewater treatment.

There are great differences among the growers of the region. Nevertheless, for our analysis, we can divide them into two large groups that differ in the way their activities contribute to degradation of the river, and their relations with the other actors.

The Union of Cane Producers are a group tightly linked to the future of the Ingenio. They are mostly residents of the municipal seats of El Grullo, El Limón and Autlán. The producers play a

complicated role. As citizens, they bear a responsibility for generating urban waste. As producers of cane, they also take part in the industrial pollution. However, as suppliers of only raw material, they do not consider themselves responsible for the contamination resulting from the industrial process. Nevertheless, in their words and deeds, they defend the interests of the Ingenio, which in the final analysis is their own interest. Interestingly, in their productive practices, this group is not identified by others as part of the problem, even though the burning of the cane fields, the use of chemical pesticides and fertilizers, and the degradation of agricultural soils represent significant environmental degradation.

The second group of producers farm on marginal lands o slopes, and are among the population most affected by the pollution of the river, This group includes ranchers as well as poor farmers and the impact of pollution on the family economy and welfare has different dimensions for each of them. Nevertheless, their productive activities also contribute to the degradation of the river since their cultivation practices, manner of grazing, forestry and fishing have an impact on the vegetative cover, soil erosion, forest fires and fish and crustaceans.

Whit the increase in population of Autlán and El Grullo and the consequent increase in water diversion and sewage, there has been a continuous decline in water quality and of the wellbeing of the affected population. As a result, they have recently adopted a more radical stance, threatening to seize installations of the Ingenio and public officials and set fire to the cane fields. As a result of the complaints by the towns affected by pollution, many of which are located in the Sierra de Manantlan Biosphere Reserve, the reserve has taken a leading role in seeking alternatives for environmental management of the Ayuquila