## Venezuela: The population of Aguide on the alert to face damages caused by shrimp farms

Aguide is located in the coastal zone between the Zamuro and Uvero Points, and is part of the Parish of La Pastora, Acosta Municipality, in the northeast of the State of Falcon.

The population of Aguide is on the alert. A representative of a shrimp farm project is amongst them, gathering signatures to request a meeting where the "advantages" of the project for the locality will be announced. To face this, various neighbours have gathered to consider the effects the installation of a shrimp farm will have on the population and on the locality, basing themselves on other similar projects carried out in other localities of the State of Falcon and in the rest of the country, such as:

- \* Larvae nurseries: there is information on 5 of these, one installed in the Adicora zone (Municipality of Falcon) in the Paraguana peninsula in the State of Falcon;
- \* Shrimp farms to fatten up shrimps and process them. It is estimated that there are no less than 20 in the whole country, covering extensions of between 600 ha and 4,000 ha. The majority are found in the State of Zulia, followed by the State of Falcon, where an aggressive plan for their expansion in number and extension is in force. This is seen through the experience of RICOA (Municipality of Tocopero) that is presently under expansion, the shrimp farms in Mitare and the one proposed in Rio Seco (Municipality of Miranda); the plans in Casigua (Mene de Mauroa Municipality) to occupy some 4,000 hectares and the threat to the peninsular zone of the State caused by the projected installation of 10 shrimp farms in the zone of Cumaraguas (Municipality of Falcon), where, according to the neighbours, the population is protesting against "such a rash action." There is also the experience of the shrimp farm in the Piritu-Anzoategui Lagoon (www.unare.org), trying to demonstrate that this is a sustainable experience after almost 17 years, in the belief that all the impacts generated by its installation and expansion have been forgotten. Other smaller shrimp farms are also known, together with their impacts in other areas of the country (Coche-Nueva Esparta Islands) and plans for the Orinoco Delta zone.

The inhabitants of Aguide believe that they are still in time to prevent problems and conflicts such as those occurring in other places because of shrimp farming. Although this type of project usually promises job opportunities, the truth is that they are mostly seasonal jobs during the building phase (only while installation lasts) and then during operation at the time of the shrimp harvest and processing. Permanent jobs are few and are mainly for surveillance, shrimp feeding and maintenance of the ponds. The rest of the staff is technically specialized, brought in by the company from other countries or regions.

Furthermore, the population and the natural physical environment will be subject to a series of negative impacts, both during the phase of construction and operation of the shrimp farms and also when these are abandoned. In fact, it is a habit of the companies to abandon the site when activities become unproductive, leaving behind a whole series of environmental and socioeconomic damage. The neighbours have identified the following foreseeable impacts, among others:

- \* During the construction phase, the elimination of flora, fauna, soil and wetlands in the zone under intervention; the danger of zones protecting water courses disappearing; the effects on the Ostion channel where the population fish for crabs, shrimps, bass, shad, and others; deforestation and/or impacts on mangroves located along the coast and at the mouth of the El Cristo River and the Ostion channel; substitution of the present coastal landscape by extensions of land covered with nursery and fattening ponds, reducing the natural and cultural diversity of the location.
- \* During the stage of operation and maintenance: alteration of the beaches (erosion and siltation) because of changes in the movement of sea water due to its extraction by channels, breakwaters, and/or pumping and the discharge of waste water; contamination of water in the bay due to the quantity of nutrients, heavy metals and other chemicals (agro-chemicals, antibiotics, fungicides, conservation additives, disinfectants and others) used to clean the ponds and in the prevention and control of possible viral, bacterial or fungal infections, substances which in the medium and long term may generate unforeseeable impacts (the problem of eutrophication) on the coastal marine environment; competition for drinking water from the springs that supply the population of Aguide and/or the El Cristo reservoir supplying Mirimire (Municipality of San Francisco) and other populated centres; restriction on free access by the population to the whole coastal zone as the area where the project will be installed will become a totally private zone; the killing of birds and alteration of their flight dynamics to prevent them from approaching the ponds; alteration of the local climate on substituting a terrestrial system by an aquatic one affecting the surrounding flora and fauna; alteration of the water table level and salinization of soils in the zones under the influence of the shrimp farm, making them unsuitable for cultivation; soil subsidence due to the extraction of underground water; removal of larvae and juvenile fish and shell-fish due to sea water being pumped towards the ponds; increase in the disposal of solid waste in the zones surrounding the facilities; breeding of mosquitoes in the ponds or the waters retained around the ponds on changing the water flow; danger from the transmission of pathogens resistant to medication due to cultivated shrimps escaping to the sea or the estuary; danger of local species being displaced due to the aggressiveness of cultivated species (exotic species) that may escape; the local consumption of shrimps would be prevented as most of them would be exported.
- \* During the closure phase: abandoning of the facilities, causing persistence of some of the above-mentioned impacts. This usually happens when for various reasons the shrimp farms are no longer profitable, such as the impossibility of controlling a virus, the lack of demand for shrimps on the international market, the lack of funding from world banking, or social pressure. An example of this latter case is that of the shrimp farm abandoned in the Unare delta, in the State of Anzoategui. So far, no model is known in which a shrimp company has carried out remedial action following its closure to reduce environmental damage and enable the improvement of conditions in the area so that other sustainable projects can be carried out there, or that has reconditioned a zone to transform it into another ecosystem by means of ecological succession.

The degree of awareness and clarity of those attending the meeting regarding the problems set by the installation of a shrimp farm in the locality led to an engagement to: 1) continue to be alerted to the movements of the shrimp farm project; 2) find out about the existence of the project and demand the Ministry of the Environment to make available the environmental impact assessments that the company may have carried out; 3) call on the scientific community that has carried out or is carrying out research on the environmental characterization of the zone to make these studies available to the community of Aguide to enable them to better evaluate the environmental components of the location and to request the assessment of the project with the aim of scaling the magnitude of the environmental impacts, making them known on a local, regional and national level; 4) gain knowledge of community shrimp management as a strategy to reduce social pressure.

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