

## The Impact of the oil spill

The Eastern Mediterranean basin has one of the most important ecosystems in the Mediterranean Sea. This oil spill has now impacted Lebanon but it is fast becoming a regional problem, endangering the Eastern Mediterranean basin as a whole. The impact of this oil spill has been growing in magnitude due to the fact that after more than a month (since the start of the spill) no cleanup operations have started yet.

### **Environmental Impact**

The environmental impact of the oil spill on marine biodiversity is expected to be devastating. It is too early to assess what the long term impacts will be. From previous studies we know that at least six years are required to reach a balanced ecosystem. Oil spills affect marine life by either physical contamination or smothering, or by the bio-accumulation of the toxic components of oil in animal and plant tissues.

In general, all marine and coastal species in the spill area will be impacted. The main Mediterranean species that will be directly affected by the oil spill are:

- **Sea turtles:** The Eastern Mediterranean region is very important for sea turtle nesting, including the Green Turtle which is endangered in the Mediterranean. Oil spills can prevent adult sea turtles from surfacing to breathe, and can trap baby sea turtles that start hatching in the end of July and try to reach deep water as fast as possible.
- **Bluefin Tuna:** During this time of the year, Bluefin Tuna are found in the Eastern Mediterranean. This commercially important specie is already exhausted by over fishing and like all the other tuna species they lay their eggs on the surface of the water. The oil spill will have serious consequences to its population size in the Mediterranean Sea.
- **Other fish species:** The Eastern Mediterranean has important fish spawning and nursery areas, especially on the rocky shallow waters in Northern Lebanon. Of the coast of Beirut, a very important area for shark spawning has been documented. The oil spill has already covered such areas, especially in Jbeil and Tabarja districts. Also, the longer the oil stays in the water, the more its toxic constituents will build up in fish tissues.
- Marine plants will also be heavily impacted by the oil spill, because the oil spill will block sun rays and oxygen absorption, which are needed for the plants survival.

### **Socio-Economic Impact**

The economic cost of the oil spill requires long term monitoring of the different sectors impacted by the oil spill. The estimated cost for the cleanup is between 100 million and 200 million dollars. This cost depends on how thorough the cleanup is. However, the

indirect cost of the oil spill on different sectors increases everyday and the current value is more than 250 million dollars.

The exact social impacts of the spill are also yet to be determined due to the war, which has greatly affected social life in Lebanon. Several unexpected social problems are expected to surface due to the oil spill. The main social impact will obviously be on local fishermen, who many of them have not been able to fish for the past month. Some fishermen have had their boats and gear damaged by the oil. The impact of the spill on fish resources will also reflect on the fishermen's income.

Beach-based tourism is a major economic activity in Lebanon and constitutes a major part of the Lebanon's gross domestic product (GDP). Many public and private beaches have been affected by the oil spill. Many private boats, ships or yachts, that were once used to transport tourists on water trips and to off land islands, currently lie idle in their ports.

Other social groups that depend on the sea, such as seafood restaurants, will suffer from loss of livelihoods, consequent unemployment, poverty due to absence of compensation and the long term inability to use the coastal areas due to pollution.

## **Health Impacts**

Oil has a direct effect on people through direct contact or inhalation of oil fumes. Short term adverse effects can include nausea, headaches and dermatological problems in fishermen, residents living close to the affected areas and beach visitors. Long term adverse effects of oil contact include cancer, pulmonary disease, skin diseases and hormonal disruptions.

Fish coming from the quays and wharfs along the coast from Jieh to Heri-Chekka, as well as, plant crops and animal products from coastal farms close to the oil spill sites need to be tested for hydrocarbon content and other oil impurities before being declared safe for consumption.

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