

# Environmental toxicology. oil spills

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Long-Term Ecological Effects of Oil Spills Following the American Psychological Association Guidelines One of the largest witnessed oil spills in history happened in the Bay of Campeche of the Gulf of Mexico as a result of explosion on at the Ixtoc I platform in 1979. The disaster was caused by failure of blowout preventer functioning and subsequent fire, which resulted in crash of Sedco 135F drilling tower releasing gigantic quantities of oil into the water. The government-owned oil company Permex was trying to stop the leak for more than nine months using several methods and finally drilling two relief wells. Until that moment around 140 million gallons of oil had gushed from the well into the water causing substantial changes in the life of the region.

The catastrophe instantly hit the dwellers of neighboring regions as about 6000 metric tons of oil were observed along the beaches in Mexico and even the United States, and the rest of the oil sank to the bottom of the Gulf. It resulted in a drastic reduction (up to 70 percent) of amount of fish as was marked by the locals (Arne, 1981). This predictably had an impact on economical life of the region as most of the dwellers earned their living by fishing.

Migliorini (2010) in his article claims that a number of factors decreased harmful consequences substantially. Among them it is possible to name high sea temperatures, which contributed to faster oil diffusion, and the flows in the part of the sea. Nevertheless, the long-term effects of the oil spill can still be witnessed in Mexico. According to Arne (1981), the decline of flora and fauna in the tidal zone was marked by reduction of certain species of crabs and fish as well as extinction of several species of algae, sea grasses, and

corals. Due to its chemical toxicity (in the vicinity of the well) and through its physical properties (stickiness) the oil from the Ixtoc I blow-out acutely affected the species by changing their distinctive properties in the Campeche Bay area. Even after three decades the remnants of the oil spill linger in water and on land: it is possible to find tar mats (almost the same materials as the asphalt on the highways) among the reefs. Despite scientific evidence, dwellers of the area are persuaded that strange black formations of coagulated oil noticed along the coast are the heritage of the catastrophe on Ixtoc I (Miglierini, 2010). Moreover, the most unpleasant evidence were contamination of brooks and sandy bays which resulted in decrease in reproduction of certain species of fish and birds.

Nevertheless, few decades later the scientists marked the populations of endangered species were half restored, but this is due to the constant renewal of ecosystems and allegedly favorable conditions of Ixtoc I oil spill such as high temperature in the Gulf. Therefore, it is impossible to predict the exact time of recovery from the oil spill.

#### References

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