

and the 'grey' lists of the treaty on land-based sources of pollution—not just to assess their sources, levels of pollution, and effects on people and marine life, but to propose concrete measures to do something about them. We are no longer merely furnishing facts. The substances I am talking about include, among many others, used motor oil, mercury, cadmium, radioactive ones, pesticides and other organic pollutants on the 'black' list and, on the 'grey' list, lead, zinc, tin, chromium, silver, crude oil, detergents, and pathogenic microorganisms.'

Shipping Industry Involvement

The European Community has been a very active participant in the Mediterranean Action Plan. Recently it sponsored a workshop on the shipping industry and the marine environment, in Athens, that was organized by the Hellenic Marine Environment Protection Association (HELMPEA). 'When we set out to interest shipowners, captains, and crews, in protecting the sea from pollution, I was very sceptical', admitted Dimitris Mitsatsos, Director-General of HELMPEA. 'Well, in only four years we have enlisted 400 ships, over 3,000 officers and sailors, and most Greek

shipowners. We have succeeded in very slowly changing the mentality of thousands of seafarers, and in getting through to their consciences. It is a measure of our success that the Athens workshop [in June 1986], under EEC auspices and with the participation of Beate Weber, the chairwoman of the Environmental Committee of the European Parliament, urged 'the general adoption and extension of HELMPEA's approach to merchant marines on a world-wide basis.'

The Director of UNEP's MAP, Aldo Manos, mentioned, as another indication of Mediterranean governments' seriousness, the ratification by Greece on 20 June of the treaty on Specially Protected Areas. This brought the number of ratifying countries to six *plus* the European Community, as a result of which the treaty will enter into force very shortly.

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Environmental Bankruptcy in Haiti

Christopher Columbus described Haiti as 'Filled with trees of a thousand kinds and tall'. But no longer is it so; indeed, if present trends continue, this small Caribbean island nation on the doorstep of the USA could be completely deforested within fifteen years.

Haiti is experiencing an environmental crisis as severe as are those of the African countries bordering the Sahara. Five years ago, FAO estimated that Haiti was losing the fertility of 6,000 hectares (*ca* 15,000 acres) of land each year. The rivers and streams are choked with mud, and far out to sea beyond the capital, Port au Prince, the water is stained brown with mud. Rapid population growth, hurricanes, and frequent droughts and flooding, have all contributed to the crisis, but the real blame lies with decades of neglect under the regimes of the Duvaliers, both father and son.

Evidence of that mismanagement is seen on the border with the Dominican Republic, where, on the Dominican side, there is thick forest, whereas on the other side the hillsides are bare. Neglect of investment in agriculture, forestry, and sources of energy, has left the vast majority of Haitians with no alternative other than to fell the trees and over-use the land. Haiti is one of the few countries where agricultural productivity is actually declining.

With fertile land becoming increasingly scarce, more and more villagers are turning to firewood collection. Virtually all the trees around the capital have been cleared, and the only significant stands left are in the remoter areas in the northern part of the island; but now these, too, are rapidly being felled. According to a World Bank Survey, the current 2.4 million cubic metres' deficit of firewood is destined nearly to treble by the turn of the century.

There are few energy alternatives. An American-built hydroelectric dam at Peligre in the mountains near the Dominican border is clogged with silt and operating at only one-quarter of its intended capacity. A recent expert survey concluded that it may have to shut down if siltation is not stopped.

Many villagers have no alternative other than to leave the land—the drift to the slums of Port au Prince has become a torrent. Virtually everyone you talk to in the slums is a recent arrival, their dream being to escape to the United States. The US Coastguard now keeps a permanent flotilla off Haiti, to intercept illegal immigrants who are prepared to make the risky crossing to Florida.

A massive relief effort is needed to help the post-Duvalier Government to begin the work of rehabilitation—by no means a hopeless task, as for example under a US AID \$8 million scheme, volunteer groups have encouraged villagers to plant 17 million trees in the past four years. Of those trees about 20% survive, which is a very respectable rate. But it is going to take more than tree-planting to rescue Haiti from such a long-term decline. According to UNICEF, 73% of all Haitian children of school age are suffering from some form of malnutrition. Sooner rather than later, the new Government will have to turn far more of its attention than currently to improving the lot of the vast majority of Haiti's poor, who must live with the day-to-day realities of environmental bankruptcy.

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New Northern Look

The Arctic Institute of North America, now of the University of Calgary, is updating its newsletter *Information North*, which it has published over the years as an informal

vehicle for keeping its subscribers informed. In the past, such newsletters tended to focus on membership matters, and accordingly to be cast in a chatty framework with sto-