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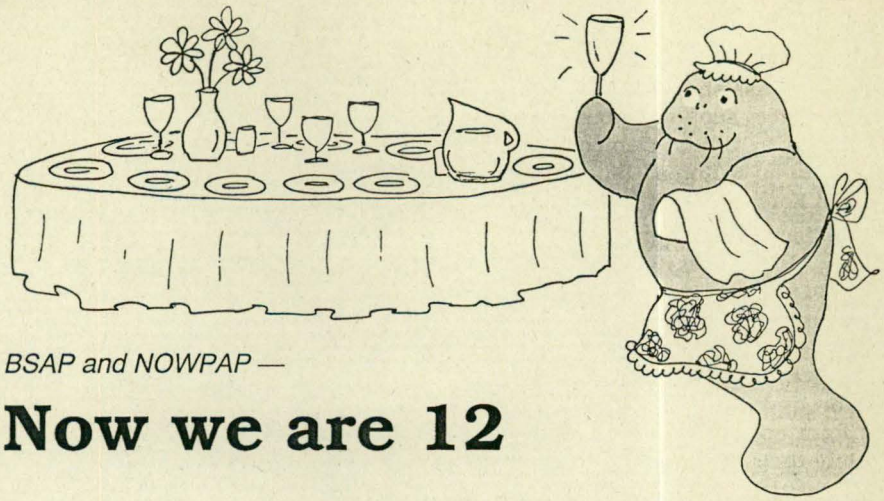
NEWS FROM UNEP'S OCEANS AND COASTAL AREAS PROGRAMME



BSAP and NOWPAP —

Now we are 12

UNEP OCA/PAC is setting up two new regional action programmes — for the Black Sea and the North-West Pacific.

Each region was singled out in a decision of UNEP's Governing Council in 1989 calling for "preparation of new action plans for seas not yet covered by the Regional Seas Programme".

"The proposal is to follow the general pattern used by UNEP in the development of Action Plans for the 10 other regions covered by the Regional Seas Programme," explained Ivan Zrajevskij, a Senior Programme Officer with OCA/PAC who is supervising development of the two plans. All countries will prepare national reports assessing the environmental problems of their coastal and marine areas of the Black Sea and suggesting activities for the Action Plan.

"The Secretariat would put together a consolidated regional report and a first draft of the Action Plan," Dr Zrajevskij added. "An experts meeting would be convened to adopt the national reports, regional overview and draft Action Plan and agree on the future course of action."

The Turkish Undersecretary for Environment, Mr Halit Kara, told *The Siren* during the UNEP Governing Council: "We are all ready to sign an agreement because we agree on all points that need to be included. The Action Plan will be

similar to the one for the Mediterranean. Turkey has been taking part in that Programme since the beginning, so we know the benefits and how such activities work. The Black Sea Action Plan will enable us to coordinate our efforts so that we will not waste time or money."

Contact meeting

To explore interest in developing a North-West Pacific Action Plan (NOWPAP), UNEP Assistant Executive Director Sven Evteev sent out letters to UNEP focal points in China, Democratic People's Republic of Korea, Japan, the Republic of Korea and the USSR.*

The initiative had almost immediate results. Representatives of the five States got together in Nairobi on 29 May for a contact meeting. It is believed to be the first time that Government representatives of the two Koreas have sat down around the same table — as distinct from opposite each other — and certainly their first known contacts on environmental issues, observers said.

* Please note: the name USSR was still in use when this issue was prepared.

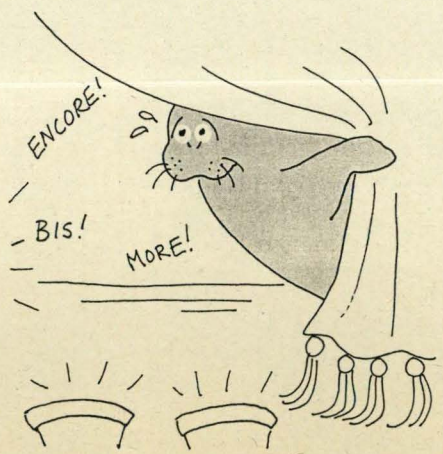
The Siren is back!

The Siren No 43 is the first to appear for two years, a time of tumultuous changes in the Programme and new responsibilities for OCA/PAC's officers. For this reason you will find news of activities summarized in this issue for 1990 and the first half of 1991, broadly until the UNEP Governing Council in May. Our next issue will continue the story of the Ocean and Coastal Areas Programme from the Governing Council until the end of 1991. For readers who use the Meetings List as a record of activities, we have included details for 1991.

Brighter future for the Black Sea

A UNEP/FAO/IOC Task Team for the Black Sea region, in one of 15 regional assessments, reported last year that about 50% of the water from rivers running into the Black Sea goes back into the systems without sufficient treatment. The world's largest land-locked inland sea, it suffers from a natural deficiency in oxygen in 90% of its water volume — that below 50-70m — despite being a rich source of seafood in past centuries. The survey, published as *UNEP Regional Seas Reports and Studies No 124*, noted that the Black Sea "has been exploited and degraded in many ways, such as the unregulated and unplanned freshwater withdrawal for irrigation purposes, hydro- and thermal-power generation, the use of coastal areas for permanent human settlements, and the many untreated industrial and agricultural wastes discharged into rivers that drain into the sea."

One quarter of the population of the USSR lives in the Black Sea catchment area, though it accounts for only 4% of



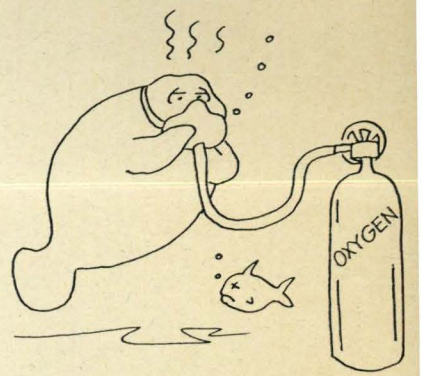
Soviet territory. It is a region of important economic activity. Major dams for hydroelectric power and diversion of water to arid areas, started during the 1950s, have considerably reduced the quantity of water reaching the Black Sea. Discharges from industry and agricultural effluents have lowered the quality.

Fish and shellfish yields have declined substantially in the Sea's northern region, including the Sea of Azov, a drop attributed to the cut-off in freshwater inflow. Commercial fishing in the Dnestr estuary has virtually come to an end. Fish catches in the Dnepr estuary have crashed to a fifth of their 1950s levels. Valuable species such as pike, perch, roach, bream and vimba have disappeared altogether.

Almost 20% of Turkey's population lives on the Black Sea coast. Industrialization in some parts has put severe pressure on agricultural land. In Romania, coastal engineering to protect the shore and enlarge harbours has dumped large amounts of material into coastal waters, affecting water quality: biomass has declined drastically to only 3% of the 1979 figure. The perennial brown alga *Cystoseira barbata*, once abundant and sheltering a rich fauna, has suffered greatly.

Severe coastal erosion has appeared because of reduced sediment loads resulting from major engineering works and modification of nearshore currents produced by coastal engineering over the past 20 years. In the central part of the Black Sea coast some beaches have lost about 12m a year, while in the north spring storms lead to important damage from wash-offs.

"It is expected that the Black Sea coast will continue to develop rapidly," the



Task Force reported. "New townships and industries, through an increased input of wastes, will further stress the Black Sea. Hypoxia has become a frequent phenomenon in certain areas. Mass mortalities of the major species of the food chain accompany the hypoxia in water masses as large as 3,500 km^3. The change in the ecology of the Black Sea is indicated from the persistent explosion in jellyfish population. (...) Last but not least, significant amounts of oil emanating from some Black Sea countries are transported across the Black Sea. It is evident that this traffic poses a threat to the Black Sea, and will continue to do so. This requires serious monitoring efforts and regulatory measures."

The Task Force noted that some Black Sea countries have joint projects on monitoring eutrophication, heavy metals, mariculture and fishing. They also exchange scientists and organize joint expeditions. In 1986 Turkey launched a long-term national pollution monitoring programme for the Black Sea. Data have been collected sporadically in Bulgaria on the nature and concentration of pollutants, while physico-chemical, biological and microbiological parameters are being monitored along the Romanian coastline. "There is an urgent need

for intercalibration among the Black Sea countries carrying out pollution studies," the international scientists advised.

They also made a strong plea for international cooperation: "Biotic and abiotic changes in the Black Sea are not limited by national boundaries. Because of the north-south circulation, water from rivers entering the north-western part of the Black Sea influences the sea water of the USSR, Romania, Bulgaria and Turkey. Romanian wastewater disposal may affect the Bulgarian coast. Eutrophication is a common phenomenon of the western part of the Black Sea. To assess such effects, especially long-term ones, international cooperation is necessary."

Population, discharges and red tides

Fish are a major resource in the North-West Pacific. People in Japan, DPR Korea and the Republic of Korea eat more than 40kg per person annually.

Population pressures, however, cause major marine problems. In the eastern Yellow Sea, red tides — which stem from eutrophication caused by a combination of pathogenic bacteria, parasites and high concentrations of pesticides — and ocean disposal cause the most serious problems, according to a study by David Livengood, an OCA/PAC intern in 1989.

Between 1972 and 1979, there were 100 red tides near oyster-growing areas and local fishing grounds near the southern coast of Korea. Industrial and port-related activities, as well as river runoff, cause marine pollution in the Sea of Japan. Nearshore sites have high levels of mercury as a result of coastal industry, and oil is found in high concentrations along the Japanese coast. Dumping of debris, particularly plastics and netting, causes more sea-based problems.

In the western part of the Yellow Sea, marine pollution comes from domestic sewage, industrial wastewater, oil discharges from vessels and ports, oil and oily mixtures from exploration, and chemicals. In his University of Oregon Master's thesis on the North Pacific and Regional Cooperation, Mr Livengood reported that 60% of all oil pollution in the Yellow Sea comes from domestic sewage and industrial sewage and industrial wastewater. Ships and coastal oilfields make up 39.7%.

A report in *Marine Policy* for May 1991 said the majority of estuaries, harbours and nearshore waters in China are seriously polluted, threatening fishing grounds. The current harvest is about 5 kg per inhabitant a year — a total of 3.6 million tonnes. "To compensate for decreasing catches, fishermen have begun to use other, illegal methods, such as poison, explosives and electrified wire nets," the study by Fan Zhijie and R.P. Côté observed. "The increase in fishing vessels also accentuates the marine pollution problem. There are about 120,000 fishing vessels in the coastal waters of China, which discharge approximately 7000 tonnes of oil into the sea per year. Because these fishing vessels release oily pollutants indiscriminately and are difficult to control, they have become a significant source of pollution in coastal waters." In Guandong province, the annual catch of each boat — traditionally 16 tonnes — had gone down to seven by 1989, putting 14,000 fishermen a year out of the business recently.