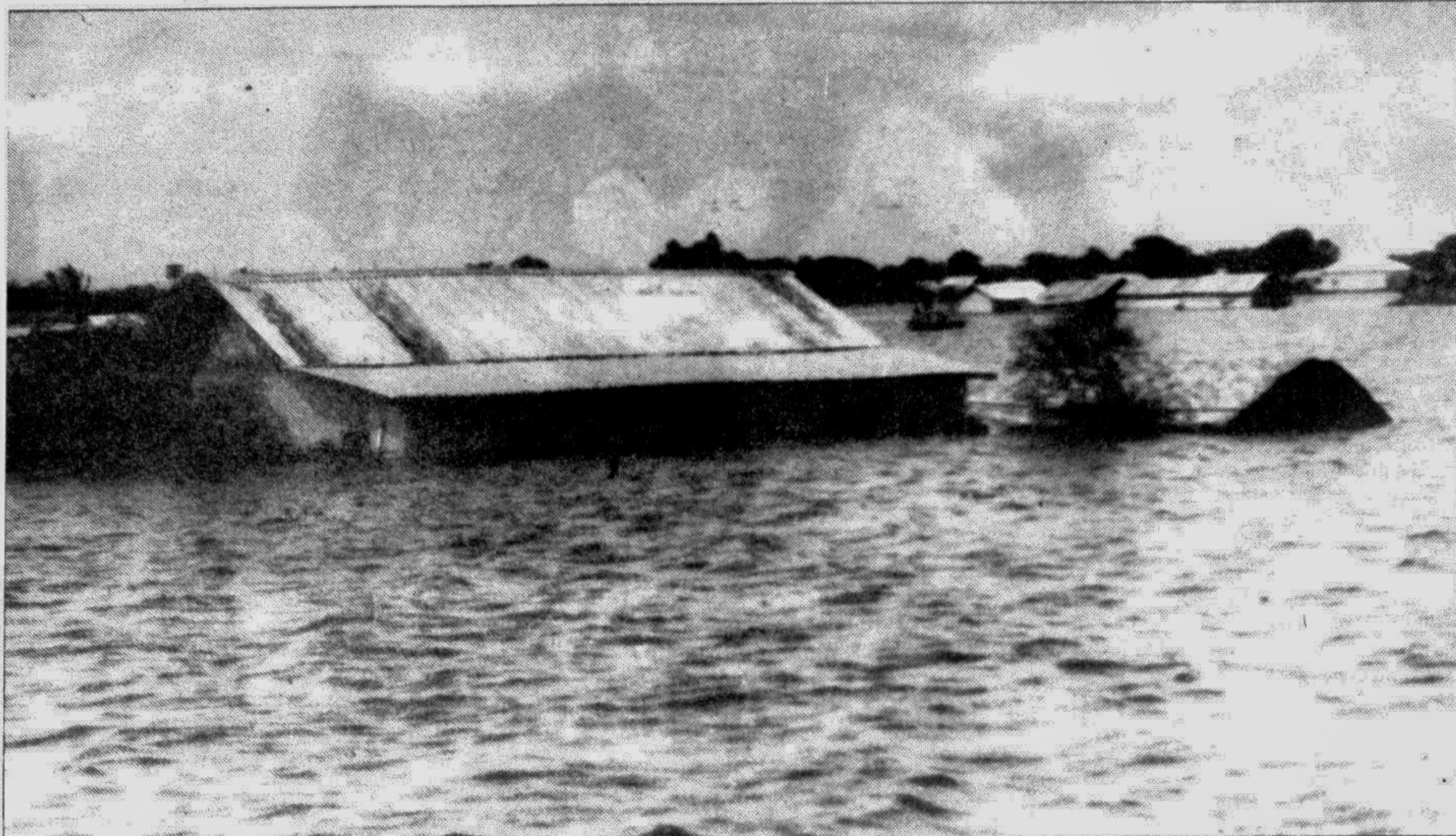


Dwelling in the Deluge



Trimohini: Water level swelling up

— Star photo by Enamul Haq



Bazarbag: It's getting risky

— Star photo by Enamul Haq

Photo Feature on Flood



Gulshan: Pursuit in desperation

— Star photo by A KM Mohsin



Maniknagar: Flooded main street

— Star photo by Enamul Haq

Doñana: A Disaster Waiting to Happen

THE Doñana wetland in southern Spain was hit by five million cubic metres of toxic sludge when the Apirsa mine breached its waste lagoon. As is so often the case with environmental tragedies, there is reason to believe that this was not simply an accident. But perhaps more important than laying blame is the question of how such catastrophes can be prevented.

On 25 April, Aznacollar, near Seville hit the headlines when waste from the Apirsa mine, owned by the Swedish multinational Boliden, polluted 40 kilometres of the river system. This was equivalent to spillage from 500 Exxon-Valdez tankers, and it affected 46,000 people and 5,000 hectares of farmland.

The chemical spill made big news because the downstream area is part of a national park. It is not only a World Heritage Site but also a Special Protection Area under the European Commission's Birds Directive. In addition, it is a candidate for Special Area of Conservation under the EC Habitats Directive.

For the World Wide Fund For Nature, Coto Doñana will al-

ways have a special relevance. "It is literally WWF's first conservation project," said Dr Chris Tydeman, Chief Scientist at WWF-UK. "In 1959, this 50-kilometre stretch of wetland was up for grabs by developers. It was the vision and tenacity of conservationists like Jose Valverde, Dr Luc Hoffmann and Max Nicholson that the natural diversity of Doñana was preserved."

Jane Madgwick, WWF's European Fresh Water Officer, believes the spillage was extremely serious — and that it could have been avoided. "The danger of this happening was predicted a year ago," she says. "There has been evidence of leaks over the last few years. This incident should not be described or treated as an accident. An inspection was carried out only hours before the massive leak."

Agricultural and fishing activities in the area have stopped. Already, there have been significant breeding casualties of important European birds and fish. There are concerns about increased toxic effects when the autumn rains come, and how these will affect

Someshwar Singh writes from Gland, Switzerland

When an area of huge ecological significance is devastated by tons of toxic waste, it is a catastrophe. But the crucial response is to learn the right lessons for the future.

at least a hundred bird species using the Doñana as a stop-over on their winter migration from Europe to Africa.

An added problem is the heavy metals contained in the water and sludge, such as lead, mercury and cadmium. Some of these may accumulate in animals and people as they pass through the food chain. There is concern for the long-term effects on the reproductive, nervous, immune and developmental systems of humans, animals, birds, fish and invertebrates from endocrine-disrupting chemicals.

The fate of the Iberian Lynx and the imperial eagle are also

of considerable concern. The Doñana is one of the last strongholds of the highly endangered Iberian lynx (*Lynx pardinus*). Only about 400 survive in Spain and Portugal, with 50 individuals in Doñana. An even rarer resident is the Spanish imperial eagle, with fewer than 30 surviving in the cork oak and pine forests.

The aquifer, or underground water supply, under Doñana is contaminated and hence a wider area will be indirectly affected. Drinking water supplies, agriculture, aquaculture and tourism will also be affected for many years to come.

At the current rate of removal, WWF estimates that it

will take more than three years to remove the toxic sludge. The disposal option chosen for the sludge is a disused mine area, but there are potentially new dangers here as aerial pollution of toxic chemicals is likely as the material dries.

For WWF, it is critical that the impact on both local people and the environment is kept to a minimum. So far, actions in the affected area appear to be slow and poorly planned, with little cooperation between local authorities and scientific advisers. WWF is appraising the local authorities' action plan for restoration to ensure that it is adequate for the longer term.

A legal inquiry into the situation has been started by WWF-Spain, considering the previous pollution records of the mine and the numerous calls for government inspections from non-governmental organisations in recent years. At the European level, WWF stimulated a debate in the European Parliament and has briefed about 20 MEPs on the situation.

WWF would like to see full accountability for the incident, and make sure that the recovery

programme will ensure the long-term ecological restoration of the Doñana area alongside the European Union's Sustainable Development Plan.

However, WWF fears there may be hundreds of toxic spills waiting to happen across Europe. For example, there are many reservoirs already leaking into precious freshwater resources, affecting aquatic organisms, land use and the marine environment. The large number of small pollution leakages are combining to cause significant pollution problems for example in the North Sea and the Baltic.

The Doñana tragedy should spur governments and international organisations to find — and make safe — these situations before tragedy strikes. The cost of preventing such accidents will be far less than the cost of restoration, which in the case of Doñana is estimated to be 100 million dollars.

— WWF Feature

The writer is a Press Officer with WWF International based in Gland, Switzerland.

Global Warming and Animals

GLOBAL warming is altering the habits, migration and breeding of animals, says a report of the World Wildlife Fund. Environmentalists say that this could eventually affect humans. Already, Costa Rican forest birds are migrating to cooler areas. Sea birds off the American Pacific coast might vanish in ten years.

While environmentalists around the world are campaigning for a reduction on greenhouse gases, there are some climate-watchers who doubt the theory of global warming affecting animal habits. They say that trends noted in the WWF report cannot be squarely on global warming.

Bert Bolin, a Sweden-based climate scientist who conducted a UN-sponsored study in 1995, had said that human activities were causing global warming. But "to say that global change in climate has already shown up in changes in birds and other animals' behaviour is a bit too sweeping for my taste," he said.

Environmentalists have not yet noted the impact of global warming on human food supplies. However, the first signs of future trouble could be in something like the decline in the population of ducks which are hunted in the US.

Copyright against Copycats

A US-based company Arbitron and aerospace giant Martin Marietta, have jointly developed a system that works on the same principle which is used to track enemy submarines by picking out their characteristic sound signatures. The method has been modified for the music and broadcast industry to help stop offence on the airwaves.

Advertisers can use the system that implants audio "watermarks" into sound recording, to check whether their TV and radio commercials are getting the correct airtime they paid for. The system can also be used to identify music. It may now be easy for copyright owners to keep track of their recording even through several conversions between analogue and digital state, digital compression to reduce the bit rate, copying and transmission over the Internet.

CSE/Down To Earth Features

TOM & JERRY



By Hanna-Barbera



IAN FLEMING'S

James Bond

DRAWING BY HORAK



A SHORT TIME LATER... MISTER RUBY ARRIVES AT THE HOTEL ROYAL...

