

# Part - 2

## The World's Largest Oil Spill:

### The Gulf War

### Kuwait, 1991

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## The World's Largest Spill: The Gulf War – Kuwait, 1991

### Geography of the Persian Gulf

The Persian Gulf is to all effective purposes a shallow semi-enclosed inland sea. A little fresh water flows into it from the Tigris and Euphrates Rivers via the Shatt-al-Arab and a few intermittently flowing creeks. It averages a mere 50m deep, but is nearly 1,000km long and has a surface area of about 750,000sq km. It is replenished by the inflow of sea water through the Strait of Hormuz (which is 85 km wide)<sup>i</sup>

### The Kuwait War Oil Spill

This is the world's largest man-made oil spill and the only one in recent times resulting from the deliberate actions of the people who caused it. Estimates vary, but the average considers that a minimum of 350 million gallons to a maximum of 560 million gallons of oil were discharged into the Persian Gulf.

As the Iraqi forces retreated from Kuwait, they opened the oil well valves and blew up many of the onshore wellheads producing over 300+ oil gushers that created lakes of oil. Initially 240 million gallons of crude oil flowed into the Persian Gulf creating a huge oil slick that slowly moved down the coast with at least another 250 million gallons supplementing the initial spill over the next few months. In places the oil on the water was 10cm thick.

### The Environmental Damage to the Persian Gulf

The environmental impacts of the Gulf War were expected to be severe. Indeed, the atmosphere was damaged to some extent from the smoke produced from oil fires as Iraqi troops set fire to over 600+ oil wells in several Kuwaiti oil fields. As early as 1993 it had been concluded that the Gulf would recover from the oil spills, but that it would be a different environment after the recovery. Moreover, it was estimated that it could take decades for specific ecosystems to recover (Sadiq and McCain 1993). Essentially, the impact of the Gulf War on various segments of the environment was expected to be obvious for a long time.

Despite all the predicted environmental hazards caused by the Gulf War, the acute environmental effects of the war never appeared to be as severe as scientists had initially forecast. It was eventually (and reluctantly) conceded that in many cases, the natural cleaning process would be the primary method of repair with the oil spills. 'Natural processes' includes waves and abrasion, the Sun's UV rays, chemical reactions and microbial and algal feeding as factors helping the process along.



## The Prophets of Doom<sup>ii</sup>

The effect that the oil fires had on the Gulf environment was enormous. Even before the wells began burning, the catastrophists warned that rising smoke may cause changes in the Earth's weather patterns (Zimmer, 1992). Shortly after the first oil wells began to burn, Carl Sagan (the exceptionally well presented astronomer and author of 'Cosmos') appeared on the Nightline programme in New York and predicted that "...the net effects would be similar to the explosion of the Indonesian volcano Tambora in 1815, which resulted in the year 1816 being known as the year without a summer." (Zimmer P37, 1992). Yet, scientists at the other end of the spectrum projected that the smoke's effects would be "marginal at worst" (Zimmer P37, 1992). In short, the title 'scientist' gave no better an insight into the effects and possible results of the fires and pollution than could be provided by random guesswork. Interestingly, in view of the current AGW alarms many of the conclusions were reached as a result of computer modelling. *Once again, if you construct a model on biased and false assumptions then feed in the 'right' data and you can achieve whatever result you want!*

Catastrophic global effects were predicted including the fear that the smoke would affect the monsoon causing a drought and crop failures in Bangladesh with subsequent famine. In fact, the smoke caused local temperatures in Kuwait to cool (Zimmer, 1992) and had no discernible effect on the 1991 monsoon. Other serious problems were predicted from the precipitation of acid rain from the burning oil and that people with respiratory problems or other diseases could be dangerously impacted by smoke-clogged air. For instance, public health experts attending a conference at Harvard University projected that the air pollution would kill approximately 1,000 Kuwaitis over the following year (Zimmer, 1992). The Kuwait Government in fact sued the United Nations and The United States for the damage done to their country resulting from the war that liberated them! No compensation for damage has been paid to date nor has any gratitude for the liberation of their country been forthcoming from the beneficiaries of the war.

The Gulf's ecosystem was not spared during the war. Oil continued to be released into the Arabian Gulf from January 1991 to May 1992 (Sadiq and McCain 1993). This spill is more than forty times larger than the Exxon Valdez spill and more than twice as large as the previous world record (Zimmer, 1992). More than 800 miles (1,250km) of Kuwait and Saudi Arabian coastline was oiled and marine wildlife was devastated. Oiled birds regularly appeared on CNN supposedly presenting an accurate picture of the occurrences in the Gulf. Thousands of birds undoubtedly lost their lives (Sadiq and McCain 1993) but the picture painted by the News Services was of the worst affected areas and not of the average. Along with the migratory birds, the National Commission for Wildlife Conservation and Development (NCWCD) investigated the Gulf beaches and determined that some turtles had died and that most Karan Island green turtles had lesions (NCWCD Report, 1993). Furthermore, at least 80 ships were sunk during the Gulf War, many of which carried oil and munitions. These ships, along with those deliberately sunk during the Iraq-Iran War, will remain a chronic source of oil contamination in the Arabian Gulf for many years.



**Heavily contaminated Kuwaiti coastline 1991**



athing. On most days an ominous haze  
ing over the city, like a thick fog. On  
ter days the smoke obliterated the sun  
mpletely and day was turned into night.  
e first rain had fallen as black as diesel  
il, streaking homes and buildings with  
ik grime. Oil droplets stained cars and  
shing. The entire country was blanketed  
a layer of sticky, black soot.

Where camels once grazed,  
Iraqi vehicles are submerged in  
lakes of oil. Overleaf, further  
scenes of contrast.

**Iraqi Army trucks wallow in a lake of oil**

### **The Persian Gulf Cleanup and Recovery**

Coalition forces managed to seal off some of the open pipelines using smart bombs, but most recovery efforts had to wait until after the war. At that point 25 miles (40 km) of booms (orange rope-like products that contain the oil that is floating on top of the water) and 21 skimmers (machines that separate oil from water) were deployed in the gulf, mostly to protect the water intakes of desalinization plants, industry and power plants. Together with vacuum trucks, about 58.8 million gallons of oil was recovered from the gulf. In less than a year all 600+ well fires were extinguished.

As stated in the section on the chemistry of oil spills, the kerosene's (light oils) had evaporated from the oil spill that at one point stretched all the way down the coast to the Strait of Hormuz (where it eddied up to a metre deep).

A combination of ultraviolet rays, warm sea water (which is saltier in the Persian Gulf, and therefore contains more chemicals than the open sea) and 1<sup>st</sup> year school chemistry turned these balls of oil and tar into nuts of coke. Eventually the coke rocks became saturated and sank, carpeting the seafloor. Carbon being the stuff of life, and a basis for fertiliser nutrients, caused the seagrasses to explode in a huge bloom. Seagrass was the food of fish and within 5-years the '*greatest man-made ecological disaster of all time*' had the Gulf teeming with more fish than had ever existed there before. By the end of the initial 5-years the beaches were again pristine and the fish and sea creatures were more abundant than ever.

*It is now twenty years since the spill. The sea grasses are declining as the oil spill sourced food is running out. Without replenishing the nutrients via another oil spill the fish food source will decline and the previous semi-desert on the sea floor will return as the nutrients from the few rivers entering the Gulf are insufficient to sustain a vibrant community of species. Is this somewhat contrary to the environmentalists' story of all oil spills being an unmitigated catastrophe?*

*I sometimes despair that humanity can ever improve our civilisation when our baseless emotional 'belief systems' are used to make far-reaching policy decisions. When a 'belief' is shown to be a total fabrication, or just totally wrong there is no retribution or scorn pointed at the usual suspects who made these false alarms - they just move on to making their next alarmist prediction - and the one after that, all eagerly reported as 'fact' by the media under the heading 'Experts claim ....' or Experts predict ...'. It is a rarity to see any retrospective analysis on how the claims and predictions worked out. Perhaps if there were we would give the alarmists the degree of credibility they deserve.*



**Dubai 2004**

**Abu Dhabi 2008**

### **Long Term Effects and the Situation in the Persian Gulf Today**

As early as 1992 it was already obvious that to a great extent, everyone predicting an ecological disaster was wrong. Sagan and others had arrived at their conclusions based on computer models of a nuclear winter fall-out scenario in which smoke would remain entrapped in the upper atmosphere, and cause temperatures to drop radically on earth below. However, from the start of the Gulf War, it was widely believed that the amount of smoke produced from the Kuwait oil fires would be far less than that created by a full-scale nuclear war; subsequently, the comparison was determined (with the benefit of hindsight) to be irrelevant. In short, every prediction of long-term detriments was proved wrong in less than 5-years

The largest oil spill the world has seen exacted little permanent damage on coral ecosystems (considered by many environmental alarmists as being extremely fragile) and local fisheries, according to a report by the Intergovernmental Oceanographic Commission at UNESCO. The study concluded that about half the oil evaporated, one-eighth of it was recovered and another quarter washed ashore, mostly in Saudi Arabia. The remainder fertilised the sea floor to the enormous benefit of the environment and its wildlife!

### **Endnotes – Part-2**

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<sup>i</sup> [http://en.wikipedia.org/wiki/Persian\\_Gulf](http://en.wikipedia.org/wiki/Persian_Gulf)

<sup>ii</sup> <http://www1.american.edu/ted/ice/kuwait.htm> This site was written in the early 1990's and shows some signs of the 'catastrophe prejudices' prevalent then. However, it remains useful as another example of the 'Perils of Prediction', particularly those preaching 'tipping points' and irrecoverable doom.