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## Fears Grow over Oil Spill's Long-Term Effects on Food Chain

Top US official describes the BP oil spill as 'one of the greatest environmental challenges of our time'

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ATLANTA, Georgia, May 31 (IPS) - As oil continues gushing from the ocean floor into the Gulf of Mexico, with no sign of stopping until a new well is finished this August, scientists, environmentalists and local residents are beginning to reckon with the reality of a massive annihilation of sea creatures and wildlife.

Dead animals are already washing up on shores. Birds have been found dying in pools of oil and dispersant, which have taken over their marshland habitats.

Several species in the Gulf of Mexico are already endangered, including the Kemp's Ridley and Leatherback sea turtles, the Sperm Whale, and birds such as the Piping Plover and the Gulf Sturgeon, according to the Arizona-based Centre for Biological Diversity (CBD).

As a result of the disaster, CBD has already petitioned the U.S. Environmental Protection Agency (EPA) to add the Bluefin Tuna to the endangered species list.

Assistant Professor Michael Blum of Tulane University's Department of Ecology and Evolutionary Biology warns that some species may be at risk of extinction.

"There are... hundreds of shorebirds



Workers clean up oil on a beach in Port Fourchon, Louisiana, May 24, 2010. Photograph: Daniel Beltra/Greenpeace/EPA

and marine mammals that are acutely sensitive to oil. You could potentially lose whole species, have extinction events. Brown pelicans were just taken off the endangered species list. On this threshold, a big dieback and mortality event, they would be pushed back into a situation where they could be endangered," Blum said in an interview.

"A lot of the species of most concern - sea turtles and dolphins - migrate, use our breeding grounds or they're a very important feeding ground," he explained.

While there are no dolphin species whose populations exclusively migrate through the Gulf, Blum

said those dolphins not impacted by the Gulf would be in such low numbers that they may not be able to reproduce at an adequate rate to avoid extinction.

The EPA admits the impact of the oil spill - and the unprecedented use of toxic dispersants to break up the oil - on wildlife is unknown. "We're still deeply concerned about the things we don't know. The long-term effect on aquatic life is unknown," EPA Secretary Lisa Jackson said in a conference call with reporters this week.

The agency says will require rigorous autopsies and necropsies to determine whether the animals

are in fact dying because of the oil and no other reason. It says soil and air sampling do not show dangerous levels of contaminants so far.

“They’re saying it’s really not clear - it’s a safe thing to say. As a scientist, one doesn’t want to overreach and reach erroneous conclusions,” Blum said. However, he added, “from a real world perspective, going down, seeing what’s happening and understanding the ecology of the system, we’re facing immediate effects of exposure.”

“Certainly when oil washes up against the shoreline you have immediate toxic effects on almost anything. If you’re a fish, you get oil on your gills and can’t breathe. If you’re a crab, same story. If you’re a plant, you get suffocated, it reduces photosynthesis,” he said.

Jackson, who has toured the Gulf Coast twice since the disaster began, told reporters, “It’s clear oil is piling up in marshes. It’s quite a bit.” She referred to the oil slick that has been reaching some shores and marshlands as “the goop”.

“We’re sampling the goop. There’s lots of speculation of what could be in this goop, we’ll look for dispersant chemicals as well as what else might be in there,” Jackson said. “BP has thrust upon us one of the greatest environmental challenges of our time.”

The Gulf marshlands are a breeding ground for many animals. Young shrimp, for example, mature in the marshlands, and then migrate

to the ocean where they become food for fish. In three or four years, if there are no adult shrimp to migrate out, the entire food chain could be affected.

“Really, there are cumulative effects over time. There’s immediate shock to system, immediate toxicity and immediate mortality - birds, dolphins, marine mammals oiled. The mortality is relatively small in comparison to the potential effect that may accumulate over time. Things are not as bad now as they likely will become,” Blum said.

Watchdog groups complain that the drilling plans submitted by oil companies like BP to the U.S. government reveal a cavalier attitude towards the risk posed to animals in the Gulf.

“One of the exploration plans I read said, if there is a spill, the wildlife can probably just navigate around it. So the burden is really on the wildlife,” said Miyoko Sakashita, CBD Oceans Director.

“Some animals have more keen sense and have stayed away. But there have been studies of sea turtles that go right through it,” Sakashita said in an interview. “Even if they can avoid the spill while it’s a plume in the water, that removes it from the habitat.”

The extent of the impact on Gulf Coast animals will depend on many factors, scientists say. It now looks like the spill will continue until August, although it is not clear whether the spill will continue at its current rate, or spew faster.

It will also depend on whether BP or the U.S. government can keep the oil away from the coast, using techniques like “booming” - the placing of barriers in the water - or possibly using tankers to suck up the oily water, separate out the oil, and return the clean water into the ocean.

Meanwhile, concerned citizens across the U.S. are taking matters into their own hands by sending absorbent materials like human hair and nylon stockings for use in soaking up the oil. Justin Fredericksen, a hair stylist at Mint Salon in Atlanta, got tired of feeling depressed about the disaster and decided to do something: last weekend, he organised local hairdressers to offer free cuts for customers who donate their hair to the cause.

Despite the relief efforts, if a hurricane were to hit the Gulf this storm season - which is predicted to be very active - it would bring much of the oil onto the shore.

Blum says it’s easier to separate oil from water than it is to separate oil from the marshlands, which he described as a “sponge”. Locals worry a hurricane this season could be the nail in the coffin for marshlands already teetering on the brink of destruction.

*\*This story is part of a series of features on biodiversity by IPS, CGIAR/ Biodiversity International, IFEJ and UNEP/CBD, members of Communicators for Sustainable Development (<http://www.complusalliance.org>).*