

<http://www.nytimes.com/2010/05/20/science/earth/20noaa.html?ref=science&pagewanted=print>

Read the highlighted text in red if nothing else. **This is why we keep following the water masses that originated from the spill site using sequential image analysis.**

Scientists Fault Lack of Studies Over Gulf Oil Spill

By [JUSTIN GILLIS](#)

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Tensions between the Obama administration and the scientific community over the gulf [oil spill](#) are escalating, with prominent oceanographers accusing the government of failing to conduct an adequate scientific analysis of the damage and of allowing BP to obscure the spill's true scope.

The scientists assert that the National Oceanic and Atmospheric Administration and other agencies have been slow to investigate the magnitude of the spill and the damage it is causing in the deep ocean. They are especially concerned about getting a better handle on problems that may be occurring from large plumes of [oil](#) droplets that appear to be spreading beneath the ocean surface.

The scientists point out that in the month since the Deepwater Horizon oil rig exploded, the government has failed to make public a single test result on water from the deep ocean. And the scientists say the administration has been too reluctant to demand an accurate analysis of how many gallons of oil are flowing into the sea from the gushing oil well.

“It seems baffling that we don’t know how much oil is being spilled,” Sylvia Earle, a famed oceanographer, said Wednesday on Capitol Hill. “It seems baffling that we don’t know where the oil is in the water column.”

The administration acknowledges that its scientific resources are stretched by the disaster, but contends that it is moving to get better information, including a more complete picture of the underwater plumes.

“We’re in the early stages of doing that, and we do not have a comprehensive understanding as of yet of where that oil is,” Jane Lubchenco, the NOAA administrator, told Congress on Wednesday. “But we are devoting all possible resources to understanding where the oil is and what its impact might be.”

The administration has mounted a huge response to the spill, deploying 1,105 vessels to try to skim oil, burn it and block it from shorelines. As part of the effort, the federal government and the Gulf Coast states have begun an extensive effort to catalog any environmental damage to the coast. The [Environmental Protection Agency](#) is releasing results from water sampling near shore. In most places, save for parts of Louisiana, the contamination appears modest so far.

The big scientific question now is what is happening in deeper water. While it is clear that water samples have been taken, the results have not been made public.

[Lisa P. Jackson](#), administrator of the Environmental Protection Agency, told Congress on Wednesday that she was pressing for the release of additional test results, including some samples taken by boats under contract to BP.

While the total number of boats involved in the response is high, relatively few are involved in scientific assessment of the deep ocean.

Of the 19 research vessels owned by NOAA, 5 are in the Gulf of Mexico and available for work on the spill, Dr. Lubchenco said, counting a newly commissioned boat. The flagship of the NOAA fleet, the research vessel [Ronald H. Brown](#), was off the coast of Africa when the spill occurred on April 20, and according to NOAA tracking logs, it was not redirected until about May 11, three weeks after the disaster began. It is sailing toward the gulf.

At least one vessel under contract to BP has collected samples from deep water, and so have a handful of university ships. NOAA is dropping instruments into the sea that should help give a better picture of conditions.

On May 6, NOAA called attention to its role in financing the work of a small research ship called the Pelican, owned by a university consortium in Louisiana. But when scientists aboard that vessel reported over the weekend that they had discovered large plumes undersea that appeared to be made of oil droplets, NOAA criticized the results as premature and requiring further analysis.

Rick Steiner, a marine biologist and a veteran of the 1989 [Exxon Valdez](#) disaster, assailed NOAA in an interview, declaring that it had been derelict in analyzing conditions beneath the sea.

Mr. Steiner said the likelihood of extensive undersea plumes of oil droplets should have been anticipated from the moment the spill began, given that such an effect from deepwater blowouts had been predicted in the scientific literature for more than a decade, and confirmed in a test off the coast of Norway. An extensive sampling program to map and characterize those plumes should have been put in place from the first days of the spill, he said.

“A vast ecosystem is being exposed to contaminants right now, and nobody’s watching it,” Mr. Steiner said. “That seems to me like a catastrophic failure on the part of NOAA.”

Mr. Steiner, long critical of [offshore drilling](#), has fought past battles involving NOAA, including one in which he was stripped of a small university grant financed by the agency. He later resigned from the University of Alaska at Anchorage and now consults worldwide on oil-spill prevention and response.

Oceanographers have also criticized the Obama administration over its reluctance to force BP, the oil company responsible for the spill, to permit an accurate calculation of the flow rate from the undersea well. The company has refused to permit scientists to send equipment to the ocean floor that would establish the rate with high accuracy.

Ian MacDonald of [Florida State University](#), an oceanographer who was among the first to question the official estimate of 210,000 gallons a day, said he had come to the conclusion that the oil company was bent on obstructing any accurate calculation. “They want to hide the body,” he said.

Andrew Gowers, a spokesman for BP, said this was not correct. Given the complex operations going on at the sea floor to try to stop the flow, “introducing more equipment into the immediate vicinity would represent an unacceptable risk,” he said.

Thad W. Allen, the Coast Guard admiral in charge of the response to the spill, said Wednesday evening that the government had decided to try to put

equipment on the ocean floor to take accurate measurements. A technical team is at work devising a method, he said. “We are shoving pizzas under the door, and they are not coming out until they give us the answer,” he said.

Scientists have long theorized that a shallow spill and a spill in the deep ocean — this one is a mile down — would behave quite differently. A 2003 report by the National Research Council predicted that the oil in a deepwater blowout could break into fine droplets, forming plumes of oil mixed with water that would not quickly rise to the surface.

That prediction appeared to be confirmed Saturday when the researchers aboard the Pelican reported that they had detected immense plumes that they believed were made of oil particles. The results were not final, and came as a surprise to the government. They raise a major concern, that sea life in concentrated areas could be exposed to a heavy load of toxic materials as the plumes drift through the sea.

Under scrutiny from NOAA, the researchers have retreated to their laboratories to finish their analysis.

In an interview, Dr. Lubchenco said she was mobilizing every possible NOAA asset to get a more accurate picture of the environmental damage, and was even in the process of hiring fishing vessels to do some scientific work.

“Our intention is to deploy every single thing we’ve got,” Dr. Lubchenco said. “If it’s not in the region, we’re bringing it there.”

Robert Gebeloff, Andrew W. Lehren, Campbell Robertson and Matthew L. Wald contributed reporting.