



Protecting U.S. National Interests in the Event of a Major Oil Spill in the Straits of Florida

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According to the International Tanker Owners Pollution Federation Limited, more than 84 million gallons of oil move through the Straits of Florida every day. This is a tremendous amount of oil, and an accident could cause enormous environmental harm.

Any policymaker, emergency responder, or scientist addressing the issue of marine and coastline protection in the southeastern United States would likely notice an anomaly in U.S. oil spill preparation. Although the United States has response agreements in place with Mexico, the British Virgin Islands, and Panama, it does not have any such accord with Cuba. What are the possible consequences of this lack of preparation and what would be the impact on U.S. interests in the event of a major oil spill in the Straits of Florida? Any effort to include Cuba in preparations for such an event must be carefully considered within the context of U.S. policy toward Cuba. If some degree of cooperation is desirable, what are the logical first and subsequent steps?

DEFINING THE ENVIRONMENTAL RISK

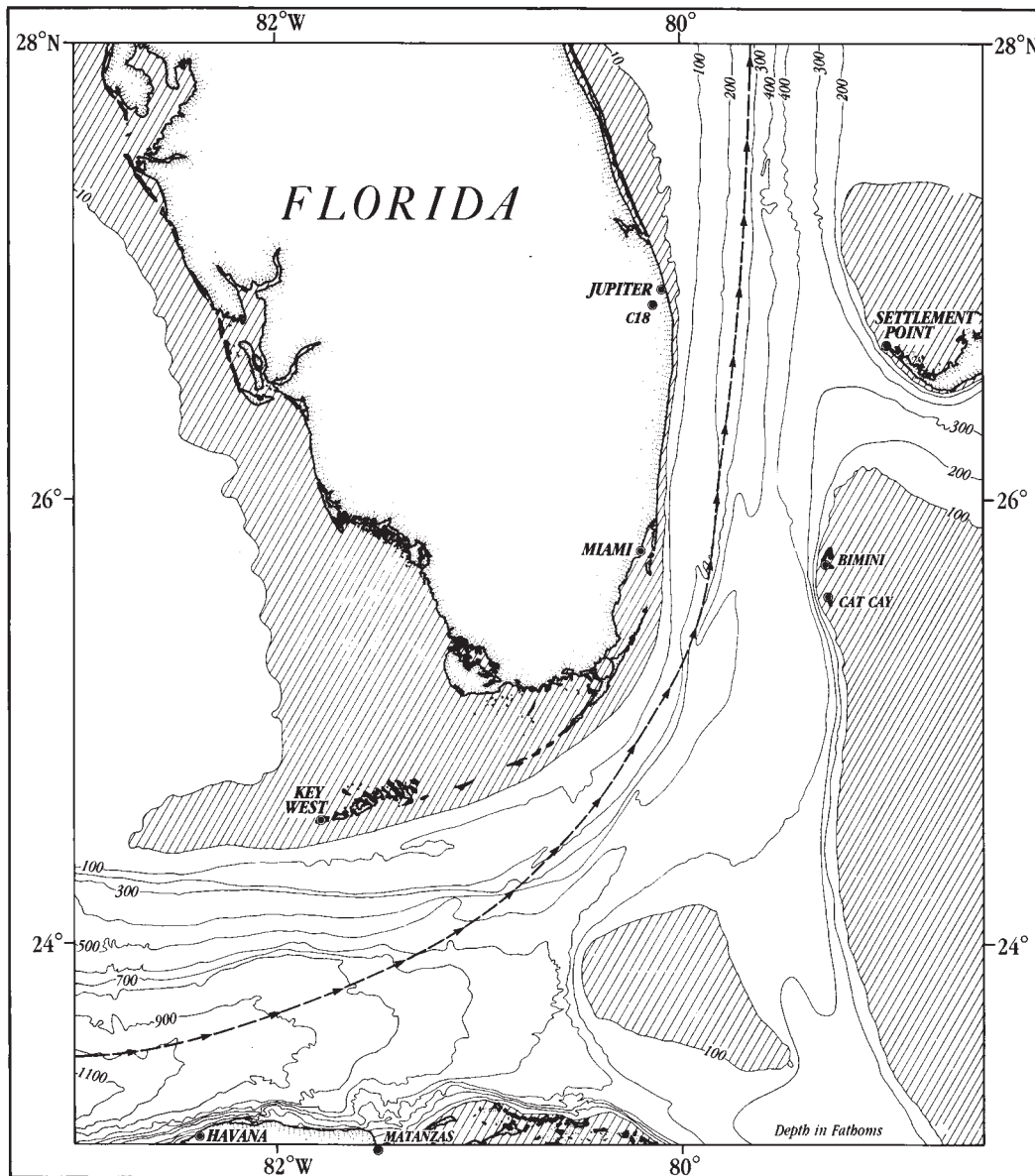
Effective planning for environmental protection and response requires familiarity with the environment at risk and the exact causes of that risk.

U.S. government agencies rely upon an "environmental risk assessment" to evaluate the probability and consequences of an oil spill in a specific marine environment. In this instance, such an assessment would take into account the volume and characteristics of the oil being transported through the Straits of Florida. Additionally, it would consider the sensitivity of the environment, weather, wind, and currents, and the potential impact of an oil spill on tourism, livelihoods, fishing, and commerce. Each of these factors would be considered when developing different response strategies for mitigating environmental damage resulting from an oil spill.

Florida would face serious consequences from an oil spill. According to Florida's Area Contingency Plan, the state's sensitive shoreline ecosystem is home to the largest acreages of mangroves and sea grass and the highest density of endangered sea turtle nesting beaches in the United States. The state also has at least eight national wildlife refuges as well as the country's second largest national marine sanctuary and an extensive coral reef ecosystem. The complex coastal physiography of the area makes these ecosystems among the most difficult to protect in a spill event. There are more than three thousand miles of shoreline, more than twenty-five hundred islands, numerous inlets, passes, and tidal creeks, and extensive areas of shallow water less



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Source: National Oceanic and Atmospheric Administration

The Straits of Florida separate Cuba and the United States. The Gulf Stream, which originates in the Gulf of Mexico, flows eastward out of the Gulf of Mexico with a mean surface velocity of four to six miles per hour and a width of up to 95 miles. This current could potentially spread oil from a spill along the coasts of both countries as well as the Bahamas.

than three feet deep. The Florida Keys National Marine Sanctuary alone has 1,722 islands and 1,857 shoreline miles. This sanctuary will probably soon be designated as a Particularly Sensitive Sea Area (PSSA) by the International Maritime Organization (IMO), a specialized agency of the United Nations responsible for issues related to international shipping. The coral reef ecosystem of the Keys would be the third area in the world selected for this designation, joining the Sabana-Camagüey Archipelago in Cuba and Australia's Great Barrier Reef.

A PSSA is an area that needs special protec-

tion through action by the IMO because of its significance for recognized ecological, socio-economic, or scientific reasons and that may be vulnerable to damage by international maritime activities. The criteria for the identification of PSSAs include ecological criteria, such as a unique or rare ecosystem, diversity of the ecosystem, or vulnerability to degradation by natural events or human activities; social, cultural, and economic criteria, such as significance of the area for recreation or tourism; and scientific and educational criteria, such as historical value or importance to biological research.

Although U.S. interests are paramount to Washington decision makers, Cuba too is not without incentive to prepare for a major oil spill. Examples of what would likely be at risk in Cuba include the roughly seven thousand species of indigenous plants, more than half of which are found only on the island. Some

groups of mollusks and amphibians would likely be threatened; 90 percent of the former and 80 percent of the latter are endemic. If one of these unique species were impacted by an oil spill, that creature or plant could be eliminated. The island's coral reefs are among the best preserved in the Caribbean Sea and extend out for many miles, which puts them at risk for contamination by pollution. As was indicated above, the IMO designated the Sabana-Camagüey Archipelago as a PSSA in 1997.

If a Straits of Florida environmental risk assessment were conducted, it would also

determine how large a spill might result from a disaster at one of the many oil platforms in the Gulf of Mexico or at the platform operating off Cuba's northern shore. According to a 16 July 2001 article in the (South Florida) *Sun-Sentinel* newspaper, Cuba was expected to launch its first deep-sea oil explorations in the Gulf of Mexico this summer. Partnering with a Spanish oil company, Cuba was to begin seismic studies of the Gulf floor as early as August 2001, with plans to start drilling next year. Any risk assessment would have to take this initiative into consideration.

A large spill occurring close to either country's shoreline could prove disastrous. . . .

Historical weather data suggest that portions of an oil spill occurring in the middle of the Straits of Florida might not reach shore until it had traveled, via the Gulf Stream current, up the eastern side of the United States. A large spill occurring close to either country's shoreline could prove disastrous to any or all of the sensitive areas discussed earlier in this section. A spill could also affect other countries, such as the Bahamas.

THE CARTAGENA CONVENTION

Cuba and the United States are both parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, also known as the Cartagena Convention. This Convention is the region's only legally binding environmental treaty. The Convention and its supporting protocols constitute a legal commitment by the participating governments to protect, develop, and manage their common waters individually or jointly. The Convention was adopted in Cartagena, Colombia in March 1983 and entered into force in October 1986 as part of the efforts of the UN Environment Program (UNEP). There are three supporting protocols designed to address special issues and to initiate concrete actions:

- the Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region (Oil Spills Protocol);
- the Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (SPAW Protocol);
- the Protocol Concerning Pollution from Land-

based Sources and Activities in the Wider Caribbean Region (LBS Protocol).

Of the three protocols, the Oil Spills Protocol is the only one that has been ratified by both the United States and Cuba.

The Cartagena Convention stipulates that the contracting parties "shall endeavour to conclude bilateral or multilateral agreements, including regional or subregional agreements, for the protection of the marine environment of the Convention area." One of the general obligations of the Convention calls for the contracting parties to "assist each other in fulfilling their obligations under this Convention and its protocols." Article 11 of the Convention states that the contracting parties "shall co-operate in taking all necessary measures to respond to pollution emergencies in the Convention area, whatever the cause of such emergencies, and to control, reduce, or eliminate pollution or the threat of pollution resulting therefrom." This article goes on to state that the contracting parties "shall, individually and jointly, develop and promote contingency plans for responding to incidents involving pollution or the threat thereof in the Convention area." Furthermore, when a contracting party "becomes aware of cases in which the Convention area is in imminent danger of being polluted or has been polluted, it shall immediately notify other States likely to be affected by such pollution, as well as the competent international organizations." It shall also inform these entities of "measures it has taken to minimize or reduce pollution or the threat thereof."

The United States and Cuba have clearly committed themselves via the Convention to protecting the wider Caribbean environment, including the Straits of Florida. Additionally, the countries have agreed to support each other's efforts in this area, as well as those of the other Caribbean nations who have signed the Convention. To date, however, they have had no discussions regarding how mutual support could be organized and executed.

THE U.S. NATIONAL RESPONSE SYSTEM

Any joint response plan with Cuba would need to take into account existing U.S. mechanisms. To coordinate U.S. operations, a four-tiered National Response System (NRS) has been developed under which sixteen federal agencies are brought together. The NRS National Response Team is chaired by the U.S. Environmen-

tal Protection Agency (USEPA), with the U.S. Coast Guard as the vice-chair. There are ten regional response teams, broken down by USEPA's regions throughout the United States, and more than forty coastal local area committees, broken down by federal on-scene coordinators' areas of responsibility. ("Federal on-scene coordinator" is a legal term used to describe the federal official designated as being responsible for assuring that pollution spills are cleaned up in his or her area of jurisdiction.) Additionally, there are Incident Specific Management Teams that are formed to respond to specific pollution incidents. This system provides for maximum flexibility, expands or contracts to fit the size of the response, and recognizes the importance of local area planning and exercises.

The United States and Cuba have clearly committed themselves via the Convention to protecting . . . the Straits of Florida.

Planning for response to oil spills and hazardous material releases within the United States is guided by the U.S. National Oil and Hazardous Substances Pollution Contingency Plan, referred to as the National Contingency Plan (NCP). This overarching document guides both response operations and planning. Regional Contingency Plans ensure that planning is coordinated throughout each of the ten USEPA regions and allocates the areas of responsibility between the U.S. Coast Guard and the USEPA federal on-scene coordinators. Area Contingency Plans are developed at the local level and involve all levels of government, industry, and contractors to ensure good communications and strong cooperation well before an incident occurs. Area Contingency Plan practice exercises are conducted regularly.

For emergency environmental response in the Straits of Florida, a plan similar to an Area Contingency Plan could be considered. The United States has already worked closely with Mexico and Canada to develop this type of joint contingency plan. The U.S.-Mexico Plan in particular could be used as a model for a U.S.-Cuba joint contingency plan.

The most important feature of the U.S.-Mexico Plan is its provision for bilateral cooperation in response to pollution incidents that could seriously affect the coastal waters and regions of

both countries. It also applies to cases where the impact on the waters of one country would be of such magnitude as to justify a request to the other country for assistance. The plan is activated only when both countries agree. Response objectives are to prevent, control, mitigate, or eliminate the threat of an incident, to minimize adverse effects on the marine environment, and to protect public health and welfare.

CUBA'S RESPONSE PROCEDURES*

Any joint response plan would also need to take into account existing Cuban mechanisms.

Under the Cuban State National Contingency Plan, overall responsibility for oil spill response resides with the National Civil Defense; however, the lead agency responsibility is dependent upon the size and location of the spill. For small spills within port or terminal limits, the facility authorities are responsible for responding and reporting actions taken to the chief of the Municipal Civil Defense. In some cases, the Maritime Survey and Safety Division of the Ministry of Transport may monitor the spill response operations.

For larger spills or spills outside of terminal limits, the Municipal Civil Defense Council would assume responsibility for coordination of the cleanup. Other agencies would be called in to assist and would form an advisory group in the spill response command post. The chief of the appropriate Municipal Civil Defense authority would be responsible for coordination of all response operations. The advisory group would include representatives from the state marine services company, Maritime Safety and the coast guard, the harbormaster, pilots, fire brigade reservists, the Center for Engineering and Environmental Management of Bays and Coasts, and CUPET (Cuba's national oil company). The director of community services would carry out shoreline cleanup activities. Larger spill cleanup would be directed by either the Provincial Civil Defense Council or (in incidents requiring national-level involvement and assets) the National Civil Defense Office. CUPET is responsible for responding to spills from its installa-

* Information on how Cuba coordinates response operations was derived from the International Tanker Owners Pollution Federation Limited (ITOPF) Internet Web site at <http://www.itopf.com>, which has country profiles that outline how various nations respond to oil spills.

tions as well as for providing assistance for cleanup of spills from vessels or facilities in the vicinity of one of its installations. CUPET's contingency plan covers all of Cuba with specific plans for certain facilities and areas. CUPET has five regional, twenty-four-hour response centers at various locations on the island and has agreements in place for the exchange of equipment and expertise with petroleum companies in Mexico, Venezuela, and Costa Rica.

POSSIBLE STEPS TO MITIGATE A DISASTER

Discussion

Both Cuba and the United States understand the critical importance of protecting the environment, and both countries have taken steps to address environmental concerns. The first step toward fulfilling the Cartagena Convention and working together to mitigate an environmental disaster is simply to meet and discuss Straits of Florida environmental concerns. This step would open communication and facilitate a mutual understanding of each other's response organization and capabilities.

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One possible venue for discussing and planning for spill response is the biennial International Oil Spill Conference, which is typically hosted in the United States. Both countries also participate in regularly scheduled meetings in the wider Caribbean area under UNEP, which present an opportunity for preliminary discussions.

Combined Risk Assessment

Early discussions between the U.S. and Cuban responders could include a common "environmental risk assessment" as discussed above. Having a common understanding of the risks and the potential problems associated with a major spill is a necessary early step.

Jointly Prepared Emergency Response Plan

The framework for a jointly prepared emergency response plan could easily be derived from plans that have already been put in place by the United States and other countries. The plan could address critical issues such as the following:

- What might a worst-case discharge scenario be?
- Who in which country would take the lead in a joint response?
- What resources could each country bring to a response?
- Where could a joint command post be established to direct a response?
- How could the countries best share information?
- Which areas of each country's respective shorelines are considered the most sensitive, requiring priority in terms of protection and response assets?
- What are the response times for various resources?
- How could ship traffic be rerouted?
- What response platforms could be used?
- How useful would dispersants or other chemical treatments be?
- Is in situ burning an option?
- Where could cleanup waste be taken for disposal?
- How would the two countries coordinate overflights tracking the movement of the spill and the progress of the cleanup?

Advisory and Liaison Coordinator

A key position that could be established and activated is what the U.S.-Mexico plan terms an advisory and liaison coordinator (ALC). The ALC would report to the government entity directing the response efforts. If Cuba were directing the response, a U.S. ALC would be provided to assist Cuba. For a U.S.-directed response, a Cuban ALC would be designated. The ALC would be responsible for facilitating the necessary exchange of information and coordination between the two governments at the command post level. Detailed information regarding the availability of resources and technical assistance would be coordinated through this position.

The ALC would also assist with the development of official information regarding the incident, including materials for the media and press conferences. The ALC would be an adviser or consultant responsible for making recommendations to the on-scene coordinator concerning the response and measures to improve the joint coordination. This position is key, even if resources are not immediately deployed from both countries' response arsenals, because the

spill incident could worsen, in which case additional resources might be needed. The ALC would be able to alert and if necessary immediately tap into his or her country's response resources.

Observing an Exercise

One small step that might serve to initiate conversation in the general area of oil spill collaboration would be a planned pollution-incident exercise hosted by either country. The United States participates in and hosts a number of locally, nationally, and internationally coordinated spill exercises. Visitors from other countries are often invited to observe these events. Should the U.S. political leadership so choose, Cuban representatives could be invited to observe a response exercise that involves the United States. It would be equally advantageous for the United States to observe and learn more about how Cuba would respond to a major spill.

Planning for a Combined Response

Addressing and incorporating the coordination of response resources in a plan would assure that disagreements are worked out prior to an emergency, saving valuable time. Both Cuba and the United States have a number of resources that could be deployed to support a response effort. Everything from technical specialists such as scientists to boom and skimming vessels would be needed. Making certain that the right equipment shows up and is deployed in concert with any equipment already on scene is crucial to ensuring that the responders are not working at odds. Coordination of observational flights over the impacted area would be necessary, as would coordination of the various response teams on scene and the location of on-scene command posts. Discussing the coordination of response resources and developing strategies to maximize their utility is critical to the success of the response and ensures that no efforts are duplicated or lost along the way.

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Exercising the Response Plan

Practicing or "exercising" a response plan is useful in fine-tuning cooperation in joint re-

sponse arrangements involving the United States. Exercising the plan helps to assure that it works and identifies areas for plan improvement. It also helps responders to know, before a crisis, how the response will be managed and coordinated. Various types of exercises can be conducted. Some of the most useful include notification exercises, tabletop exercises, and equipment deployment exercises.

Notification exercises involve testing the existing notification procedures in order to ensure that important information would be passed successfully between the countries if a crisis occurred. For instance, as an exercise, the United States and Cuba could test the telephone numbers that are to be called in a pollution emergency. Doing so verifies that the emergency numbers work, confirms that language barriers will not impede information transmission, and builds familiarity with the notification process.

Tabletop exercises involve gathering key response players in the same room and giving them a spill scenario. These players discuss the scenario and explore how they might respond to the situation. Such exercises give personnel the opportunity to meet their counterparts and learn how they operate. This process also helps clear up issues that may not have been identified in the planning process. Tabletop exercises are relatively inexpensive and work best when facilitated by an outside party who administers the spill scenario and guides the exercise process.

Equipment deployment exercises are the most comprehensive response exercises. This type of exercise closely mirrors an actual response. Notifications are made, information is passed, response teams are assembled, and equipment is deployed to the location where the spill has been "reported." These exercises are the most useful, because, in addition to the benefits of the other types of exercises, there is the added reality of actually responding. Doing so increases awareness of how fast or slow response times are. This exercise tests the response plan, the efficiency of the response teams, and the effectiveness of internal and external communications. Additionally, actual deployment of equipment is a good test for ensuring that it works and can be operated effectively. An equipment deployment exercise demonstrates the preparedness of the response organization.

Such exercises require a great deal of planning and can be quite expensive.

POLICY CONCERNS

U.S. policy has been, and continues to be, one of not engaging the government of Cuba except on a case-by-case basis in instances where doing so is clearly in the U.S. national interest. Within the United States, there are several arguments against pursuing an environmental response agreement with Cuba. Some observers believe that the Cuban government is not sincere about environmental matters, so that such collaboration would give Havana public relations “points” without significantly improving environmental protection. Others fear that U.S. negotiations with the current Cuban government would enhance the regime’s legitimacy to an unacceptable extent. Yet another argument holds that the current government may not be in power for long, so that there is no point in reaching accord with it. Lastly, some experts assert that Cuba does not have the financial resources to implement its side of a joint response, which would include providing fuel, ships, equipment, and personnel. Thus, they argue, there is no point in joint planning because the United States would have to do all of the cleanup on its own anyway.

These arguments may have merit and enjoy varying degrees of support within the U.S. body politic. Nonetheless, experts on oil spill matters argue that the potentially serious economic and environmental consequences of a major oil spill in the Straits of Florida call for at least minimal preparations.

CONCLUSION

The question of oil spill cleanup collaboration with Cuba has scientific, economic, diplomatic, and political dimensions. To a scientist, the most significant concern may be that a spill in the Straits of Florida could affect areas of important biodiversity. An economist might be more preoccupied with tourism revenue generation and possible interruption of shipping traffic. To a diplomat, the most important consideration may be whether an oil spill collaboration agreement would convey the right signal regarding U.S. intentions toward the Cuban government. To an elected political leader, the salient issue may be how constituents would react to such an accord. The intent of this paper has been to explore the implications of a major oil spill in the Straits of Florida as well as possible steps to mitigate the risks and consequences of such an event, not to prescribe any particular policy regarding U.S.-Cuban interaction on oil spill matters.

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