Introduction

This article questions the extent to which U.S. continental shelf seabed mining policy, as reflected in the U.S. administration’s recently issued five-year OCS development plan and accompanying agency regulations, is influenced by international environmental law, especially the deep seabed mining and environmental provisions (Parts XI-XII) of the United Nations Convention on the Law of the Sea (‘UNCLOS’) to which the U.S. has not yet acceded. It seeks answers in the first advisory opinion issued by UNCLOS’ International Tribunal for the Law of the Sea (‘ITLOS’) which sets forth the legal responsibilities and obligations of UNCLOS State Parties that sponsor deep seabed mining activities in international waters. The opinion is significant, for among other reasons, its review and incorporation of evolving international environmental legal norms not expressly included within original or amended treaty text, such as Principle 15 of the Rio Declaration on Environment and Development (i.e., the precautionary approach) and its consequent imposition of new legal duties on treaty Parties.

U.S. Outer Continental Shelf Policy and its Domestic Environmental Dimension

From Formal Suspension of Offshore Drilling Bans to Informal Suspension of Offshore Drilling

Outer Continental Shelf Lands Act and Accompanying Regulations

During 2008, the 110th U.S. Congress and former President Bush collectively removed decades-old congressional\(^1\) and presidential\(^2\) bans on offshore drilling along the U.S.

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\(^1\) “Congress enacted OCS moratoria provisions annually between 1982 and 2008 in Department of the Interior appropriations acts. Outside of the annual appropriations process, Congress also enacts legislation and approves treaties that affect leasing, exploring for, developing, or producing oil and gas in OCS areas… Moratoria provisions were enacted by Congress each year for 27 years…between 1982 and 2008…to address specific interests and to cover specific areas… In addition to those in the annual appropriations process, Congress has also enacted other moratoria provisions. For example, the Gulf of Mexico Energy Security Act of 2006 (GOMESA, P.L. 109-432) restricts oil and gas leasing in portions of the Gulf of Mexico until 2022. The moratorium went into effect in 2006, and is scheduled to end in 2022.” See Curry L. Hagerty, Outer Continental Shelf Moratoria on Oil and Gas Development, at Summary, Congressional Research Service (CRS) Report for Congress (R41132) (May 2011), at pp. 5-7, accessible at [http://www.fas.org/sgp/crs/misc/R41132.pdf](http://www.fas.org/sgp/crs/misc/R41132.pdf).
OCS. The U.S. Outer Continental Shelf Lands Act (OCSLA)\(^3\) and accompanying U.S. Department of Interior implementing regulations constitute the primary authority for permitting, and granting the U.S. Secretary of the Interior authority over, approved OCS leasing\(^4\) activities\(^5\) consisting of the exploration,\(^6\) development\(^7\) and production\(^8\) of minerals\(^9\). The OCSLA defines the OCS as “all submerged lands lying seaward and outside of the areas…[under state control] and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control.”\(^10\) In other words, the OCS “is a federal offshore area…[consisting of the submerged lands, subsoil, and seabed lying between]\(^11\)...the edge of state waters, usually starting at 3 nautical miles from shore…[and a]…seaward…distance of about 200 nautical miles, and may in special cases in the future extend out to 350 nautical miles.”\(^12\) The OCS lies below the U.S. exclusive economic zone (‘EEZ’) which generally includes waters

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\(^2\) “The President can determine some activities on the OCS and has done so under the authority to direct OCS leasing moratoria in the OCSLA [Outer Continental Shelf Lands Act], and under authority of the Antiquities Act of 1906. In contrast to annual moratoria in appropriations legislation, presidential directives usually authorize restrictions for durations of several years…On January 9, 2007, President George W. Bush modified the executive directive on OCS leasing withdrawal to reflect congressional moratoria in two areas—the North Aleutian Basin planning area offshore Alaska, and areas of the eastern Gulf of Mexico. On July 14, 2008, President Bush issued another executive order lifting constraints that generally matched the annual congressional moratoria (which also expired in September of that year).” Id., at p. 7.


\(^4\) “The term ‘lease’ means any form of authorization…which authorizes exploration for, and development and production of, minerals”. See 43 U.S.C. 1331(c).


\(^6\) “The term ‘exploration’ means the process of searching for minerals, including (1) geophysical surveys where magnetic, gravity, seismic, or other systems are used to detect or imply the presence of such minerals, and (2) any drilling, whether on or off known geological structures…” See 43 U.S.C. 1331(k).

\(^7\) “The term ‘development’ means those activities which take place following discovery of minerals in paying quantities, including geophysical activity, drilling, platform construction, and operation of all onshore support facilities, and which are for the purpose of ultimately producing the minerals discovered”. See 43 U.S.C. 1331(l).

\(^8\) “The term ‘production’ means those activities which take place after the successful completion of any means for the removal of minerals, including such removal, field operations, transfer of minerals to shore, operation monitoring, maintenance, and work-over drilling”. See 43 U.S.C. 1331(m).

\(^9\) “The term ‘minerals’ includes oil, gas, sulphur, geopressed-geothermal and associated resources, and all other minerals which are authorized by an Act of Congress to be produced from “public lands…”” See 43 U.S.C. 1331(q).


extending from 3 to 200 nautical miles from the U.S. shoreline. 13 The U.S. may exercise certain sovereign rights within its EEZ to facilitate the economic exploitation of natural resources, including those found in the OCS, and to legally protect those resources and the surrounding marine environment. 14

OCSLA prescribes “four distinct statutory stages to developing an offshore oil well: (1) formulation of a five year leasing plan by the Department of the Interior; (2) lease sales; (3) exploration by the lessees; (4) development and production. Each stage involves separate regulatory reviews [‘tiered reviews’] that may, but need not, conclude in the transfer to lease purchasers of rights to conduct additional activities on the OCS. And each stage includes specific requirements for consultation with Congress, between federal agencies, or with the States. Formal review of consistency with state coastal management plans is expressly reserved for the last two stages.” 15

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14 See National Oceanic and Atmospheric Administration Office of Survey, U.S. Maritime Limits & Boundaries, supra. “It is hereby declared to be the policy of the United States that... (1) the subsoil and seabed of the outer Continental Shelf appertain to the United States and are subject to its jurisdiction, control...” See 43 U.S.C. § 1332(1). “The Constitution and laws and civil and political jurisdiction of the United States are hereby extended to the subsoil and seabed of the outer Continental Shelf to and all artificial islands, and all installations and other devices permanently or temporally attached to the seabed which may be erected thereon for the purpose of exploring for, developing, or producing resources therefrom, or any such installation or other device (other than a ship or vessel) for the purpose of transporting such resources, to the same extent as if the outer Continental Shelf were an area of exclusive Federal jurisdiction located within a state”. See 43 U.S.C. §1333(a)(1).

15 See Sec’y of the Interior v. California, 464 U.S. 312, 337, 104 S.Ct. 656, 78 L.Ed.2d 496 (1984), accessible at: https://bulk.resource.org/courts.gov/c/US/464/464.US.312.82-1511.82-1327.82-1326.html. “OCSLA provides that Interior undertake a four-stage process in order to develop an offshore oil well...[T]he leasing program’s four-stage process is ‘pyramidal in structure, proceeding from broad-based planning to an increasingly narrower focus as actual development grows more imminent.’ This multi-tiered approach was designed ‘to forestall premature litigation regarding adverse environmental effects that...will flow, if at all, only from the latter stages of OCS exploration and production.’ See’y of Interior, 464 U.S. at 341, 104 S.Ct. 656. First, during the preparation stage, Interior creates a leasing program by preparing a five-year schedule of proposed lease sales. 43 U.S.C. § 1344... Second, during the lease-sale stage, Interior solicits bids and issues leases for particular offshore leasing areas. 43 U.S.C. § 1337(a). Third, during the exploration stage, Interior reviews and determines whether to approve the lessees’ more extensive exploration plans. 43 U.S.C. § 1340. Interior allows this exploration stage to proceed only if it finds that the lessees’ exploration plan will ‘not be unduly harmful to aquatic life in the area, result in pollution, create hazardous or unsafe conditions, unreasonably interfere with other uses of the area, or disturb any site, structure, or object of historical or archeological significance.’ 43 U.S.C. § 1340(g)(3). Fourth and final is the development and production stage. During this stage, Interior and those affected state and local governments review an additional and more detailed plan from the lessee, 43 U.S.C. § 1351. If Interior finds that the plan would ‘probably cause serious harm or damage... to the marine, coastal or human environments,’ then the plan, and consequently the leasing program, may be terminated. 43 U.S.C. § 1351(h)(1)(D)(ii).” See Center for Biological Diversity v. Department of the Interior, 563 F.3d 466, 473 (D.C. Cir. 2009). See also Executive Office of the President of the United States, Report Regarding the Minerals Management Service’s National Environmental Policy Act Policies, Practices, and Procedures as They Relate to Outer Continental Shelf Oil and Gas Exploration and Development (Aug. 16, 2010), at pp. 4, 10, accessible at: http://www.whitehouse.gov/sites/default/files/microsites/ceq/20100816-ceq-mmss-ocs-nepa.pdf.
Applicable U.S. Department of Interior (‘DOI’) regulations implementing OCSLA require lease operators intending to employ non-conventional production or completion technology to undergo a deepwater operations planning process that includes the submission of a deepwater operations plan (‘DWOP’) and a conceptual plan “before they conduct post-drilling installation activities”. These regulations also set forth the conditions under which such plans must be submitted as well as their contents, and they include reference to development and production plans (‘DPP’s) and development operations coordination documents (‘DOCD’s) which they supplement. BOEM must treat an operator’s DPP or DOCD that satisfies all regulatory requirements as having been ‘submitted’ within five working days of its submission to the agency.

In addition to taking other actions, BOEM must “also evaluate the environmental impacts of the activities described in the plan or document by preparing documentation pursuant to [the National Environmental Policy Act] NEPA...Federal agency actions—such as issuance of OCS oil and gas leasing programs, issuances of OCS leases and decisions to approve site-specific OCS oil and gas activities – often trigger NEPA’s environmental analysis requirements.” For example, federal agencies must prepare an environmental impact statement (‘EIS’) concerning the environmental impacts of a proposed ‘major federal action’ that would ‘significantly affect the quality of the human environment’. The EIS should “provide full and fair discussion of significant environmental impacts and...inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” An EIS must consider “impacts which have catastrophic consequences, even if their probability of occurrence is low”, when environmental

17 Id., referencing 30 C.F.R. §250.241–250.285 (describing the regulatory process relating to development and production plans (‘DPP’s) and development operations coordination documents (‘DOCP’s)), 30 C.F.R. § 250.286–250.299 (describing the regulatory process relating to DWOPs), and 30 C.F.R. § 250.296–250.299 (describing the regulatory process relating to conservation information documents). “The DWOP does not replace, but supplements other submittals required by the regulations such as BOEM Exploration Plans, Development and Production Plans, and Development Operations Coordination Documents.” See 30 C.F.R. § 250.286(a).
18 Id., referencing 30 C.F.R. § 250.286(a).
19 Id., referencing 30 C.F.R. § 250.267.
20 See 42 U.S.C.
21 Id., referencing 30 C.F.R. § 250.269.
impacts are "reasonably foreseeable". EIS may be prepared to evaluate not only individual oil and gas lease sales (‘specific actions’), but also "broader agency actions, including the development of new regulations or programs" (‘programmatic actions’). In Center for Biological Diversity v. Department of the Interior, the District of Columbia Circuit of Appeals “observed that the scope of BOEM’s NEPA analyses for OCS oil and gas actions may differ, depending on the stage of the OCSLA process that the agency is analyzing…The Court noted that BOEM may issue a broader EIS at the earlier ‘need and site selection’ stage of a program, and issue subsequent, more detailed environmental impact statements at the program’s later, more site-specific stage”. For example, BOEM has prepared a broad programmatic EIS for both its 2007-2012 five-year OCS oil and gas leasing program for its proposed final 2012-2017 five-year OCS oil and gas leasing plan which covers millions of acres of the OCS.

U.S. Administration Regulatory Response to Deepwater Horizon Incident

See 40 C.F.R. § 1502.22(b)(1).

See Andrew Hartsig, Shortcomings and Solutions: Reforming the Outer Continental Shelf Oil and Gas Framework in the Wake of the Deepwater Horizon Disaster, supra at 285, referencing 40 C.F.R. § 1500.4(i).

See Ctr. for Biological Diversity v. Dep’t of the Interior, 563 F.3d 466 (D.C. Cir. 2009).

See Andrew Hartsig, Shortcomings and Solutions: Reforming the Outer Continental Shelf Oil and Gas Framework in the Wake of the Deepwater Horizon Disaster, supra at 286-287, citing Ctr. for Biological Diversity v. Dep’t of the Interior, 563 F.3d 466, 474 and 40 C.F.R. § 1508.28.

See U.S. Department of the Interior Minerals Management Service, Outer Continental Shelf Oil & Gas Leasing Program: 2007-2012 Final Environmental Impact Statement, Vol. II (April 2007), accessible at: http://www.google.com/url?sa=t&rct=j&q=Outer%20Continental%20Shell%20Oil%20%26%20Gas%20Leasing%20Program%3A%202007-2012%20Final%20Environmental%20Impact%20Statement%20April%202007&source=web&cd=1&ved=0CDIQFjAA&url=http%3A%2F%2Fwww.boem.gov%2FOil-and-Gas-Energy-Program%2FLeasing%2FFive-Year-Program%2FIntroChapter4Chur4OilimpactsAlternativesCumulative.aspx&ei=UX8UN-GMw8ASmEo8usg=AFQjCNE8oJoaeWbr9x3-UYICGGNh4C3A&vq=bv.41248874.d.eWU (This EIS and the accompanying five-year plan were revised as the result of the Center for Biological Diversity lawsuit initiated under the OCSLA on July 2, 2007. See U.S. Department of the Interior, Bureau of Ocean Energy Management, 2007-2012 Outer Continental Shelf Leasing Program, accessible at: http://www.boem.gov/Oil-and-Gas-Energy-Program/Leasing/Five-Year-Program/2012-2017/History.aspx. (“On July 2, 2007, the Center for Biological Diversity filed suit for violations under the OCS Lands Act and the National Environmental Policy Act, followed by the Native Village of Point Hope, Alaska, in August 2007. These cases were consolidated. On April 17, 2009, the U.S. Court of Appeals for the District of Columbia Circuit (Court) remanded the 2007-2012 Program through court order, requiring the Interior Department to "conduct a more complete comparative analysis of the environmental sensitivity of different areas." The Court found the Department failed to properly analyze the environmental sensitivity of different areas of the OCS, thus hindering Interior’s ability to comply with the balancing requirement specified in the OCS Lands Act, which directs the Secretary of Interior to consider “the relative environmental sensitivity and marine productivity of the different areas of the outer Continental Shelf.”)"


"On July 2, 2007, the Center for Biological Diversity filed suit for violations under the OCS Lands Act and the National Environmental Policy Act, followed by the Native Village of Point Hope, Alaska, in August 2007. These cases were consolidated. On April 17, 2009, the U.S. Court of Appeals for the District of Columbia Circuit (Court) remanded the 2007-2012 Program through court order, requiring the Interior Department to "conduct a more complete comparative analysis of the environmental sensitivity of different areas." The Court found the Department failed to properly analyze the environmental sensitivity of different areas of the OCS, thus hindering Interior’s ability to comply with the balancing requirement specified in the OCS Lands Act, which directs the Secretary of Interior to consider “the relative environmental sensitivity and marine productivity of the different areas of the outer Continental Shelf.”"

During early 2009, in furtherance of such policy shift, the U.S. administration had declared itself ready to sponsor drilling activities along the Atlantic, Pacific and Arctic coasts and in the western portion of the Gulf of Mexico.\textsuperscript{31} However, as the result of the Deepwater Horizon incident which occurred later that year the administration reconsidered its decision on marine environmental protection grounds.\textsuperscript{32} For example, on July 12, 2010, the Secretary of the Department of Interior issued a memorandum instructing the Director, Bureau of Ocean Energy Management (“BOEM”), Regulation and Enforcement “to direct the suspension of certain offshore permitting and drilling activities on the OCS” in the Gulf of Mexico and Pacific regions based on his assessment under the OCSLA that OCS drilling posed a “‘threat’ of ‘serious or irreparable’ harm to the ‘marine, coastal, or human environment.’”\textsuperscript{33} One week later, on July 19, 2010, the White House Council on Environmental Quality announced that the president’s Interagency Ocean Policy Task Force had issued Final Recommendations calling for a substantial reform in U.S. oceans policy.\textsuperscript{34} Among its other key points, the

\textsuperscript{31} “Support for three national objectives coalesced in 2009, resulting in the removal of most congressional and executive constraints on oil and gas exploration and development: (1) promoting domestic energy production to improve the nation’s energy security, (2) enhancing federal revenue, and (3) spurring innovation and diversification in ocean energy technologies to help create new jobs. The shift to moratorium policy, along with two other developments—the start of federal offshore renewable energy projects (e.g., offshore wind farms) and expanded oil and gas prospecting in deepwater areas—increased the responsibilities of the federal offshore energy program.” \textit{Id.}, at Summary.

\textsuperscript{32} “In the aftermath of the April 20, 2010, Deepwater Horizon explosion and oil spill in the Gulf of Mexico, questions emerged about the federal offshore oil and gas program generally, and about the risks of deepwater drilling in particular. Heightened attention to concerns about the adequacy of safety measures for regulated offshore oil and gas operations has led to official review of the offshore program. Where concerns about safety were greatest, options to place limitations on oil and gas activity, including moratoria, were revisited as options for regulating activity on the outer continental shelf (OCS) in the Gulf of Mexico and in Alaska… In addition to the Administration’s moratorium in Alaska, the federal government temporarily suspended certain OCS permitting and drilling operations in response to the Gulf oil spill.” \textit{Id.}, at p. 1.

\textsuperscript{33} “I am directing BOEM to direct the suspension of any authorized drilling of wells using subsea BOPs or surface BOPs on a floating facility. I further direct BOEM to cease the approval of pending and future applications for permits to drill wells using subsea BOPs or surface BOPs on a floating facility. These suspensions shall apply in the Gulf of Mexico and the Pacific regions through November 30, 2010, subject to modification if I determine that the significant threats to life, property, and the environment set forth in this memorandum have been sufficiently addressed… The BOEM shall order any current drilling operations covered by this decision to proceed to the next safe opportunity to secure the well and take all necessary steps to cease operations and temporarily abandon or close the well… My interpretation of OCSLA and its implementing regulations finds ample support in the legislative history of the statute… Congress added 43 U.S.C. § 1334(a)(1) ‘to put some ‘flesh on the bones’ of OCSLA by providing the Department with clear authority to suspend operations when there is a ‘threat’ of ‘serious or irreparable’ harm to the ‘marine, coastal, or human environment.’” See Secretary of the United States Department of the Interior, \textit{Decision Memorandum Regarding the Suspension of Certain Offshore Permitting and Drilling Activities on the Outer Continental Shelf} (July 12, 2010) at pp. 1, 19, accessible at: \url{http://www.doi.gov/deepwaterhorizon/upload/Salazar-Bromwich-July-12-Final.pdf}.

\textsuperscript{34} See The White House Council on Environmental Quality, \textit{Final Recommendations of the Interagency Ocean Policy Task Force} (July 19, 2010), accessible at: \url{http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf}. [1][It is the policy of the United States to ensure: 1) “Healthy and Resilient Ocean, Coasts, and Great Lakes” (e.g., “Protect, maintain, and restore the health and biological diversity of ocean, coastal, and Great Lakes ecosystems and resources”); 2) “Safe and Productive Ocean, Coasts, and Great Lakes” (e.g., “Exercise rights and jurisdiction and perform duties in accordance with applicable international law, including respect for and preservation of navigational rights and freedoms…”); and 3) [Understanding of] Treasured Ocean, Coasts, and Great Lakes”. \textit{Id.}, at Section III – Policy, pp.14-15.
final recommendations emphasized that "[d]ecisions affecting the ocean, our coasts, and the Great Lakes…will…be guided by a precautionary approach as reflected in the Rio Declaration of 1992"; 35 that "[h]uman activities that may affect ocean, coastal and Great Lakes ecosystems should be managed using ecosystem-based management" and adaptive management..."; 37 and that the objective of these policies would be achieved, in part, by the U.S. "[c]ooperating and exercising leadership at the international level, including by joining the Law of the Sea Convention…".38 On the very same day, President Obama issued an executive order mandating federal executive agencies to adopt and implement the Ocean Policy Task Force’s recommendations under the guidance of a newly established National Ocean Council.40

Thereafter, on December 1, 2010, U.S. Department of Interior Secretary Ken Salazar announced that the administration would no longer permit offshore oil and gas exploration in the Mid- and South Atlantic, a portion of Alaska and the Eastern Gulf of Mexico, and would only “continue to consider…for potential leasing before 2017…[t]he Western Gulf of Mexico, Central Gulf of Mexico, the Cook Inlet, and the Chukchi and Beaufort Seas in the Arctic”.41 He explained that a drilling moratorium in those areas was necessary because of weaknesses in federal regulation revealed by the BP oil

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35 Emphasis added. The precautionary approach “states in pertinent part, “[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”. Id., at pp. 16. “Coastal and Marine Spatial Planning…CMSP would be guided by the precautionary approach as reflected in Principle 15 of the Rio Declaration, “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” Id., at p. 49.


37 Id., at p. 16.

38 Emphasis added. Id., at p. 15.


40 Id.

41 “As a result of the Deepwater Horizon oil spill we learned a number of lessons, most importantly that we need to proceed with caution and focus on creating a more stringent regulatory regime,’ said Secretary Salazar. ‘As that regime continues to be developed and implemented, we have revised our initial March leasing strategy to focus and expend our critical resources on areas with leases that are currently active. Our revised strategy lays out a careful, responsible path for meeting our nation’s energy needs while protecting our oceans and coastal communities’...As a result, the area in the Eastern Gulf of Mexico that remains under a congressional moratorium, and the Mid and South Atlantic planning areas are no longer under consideration for potential development through 2017. The Western Gulf of Mexico, Central Gulf of Mexico, the Cook Inlet, and the Chukchi and Beaufort Seas in the Arctic will continue to be considered for potential leasing before 2017.” See U.S. Department of the Interior, Salazar Announces Revised OCS Leasing Program - Key Modifications Based on Ongoing Reforms, Unparalleled Safety and Environmental Standards, and Rigorous Scientific Review, Press Release (Dec. 1, 2010), accessible at: http://www.doi.gov/news/pressreleases/Salazar-Announces-Revised-OCS-Leasing-Program.cfm.
During July 2012, the BOEM introduced a final proposed five-year plan for an Outer Continental Shelf (‘OCS’) Oil and Gas Leasing Program,44 “the first approved since the BP oil spill”.45 Although it provided some opportunities for development of the OCS in the Western and Central Gulf and portions of Alaska (“a total of fifteen potential offshore oil and gas lease sales in six OCS planning areas”),46 the plan nevertheless prohibited “new offshore drilling...new energy production and job creation...in portions of Alaska and the entire Atlantic and Pacific Coasts”.47 Indeed, even with respect to two of the three sites approved for drilling in Alaska - those in Cook Inlet and the Beaufort Sea - any potential lease sale would not be scheduled to take place before 2016 or 2017, at the earliest,48 while a de facto moratorium has all but been imposed with respect to the spill,”42 and that it would be imposed for a period of “at least seven years, until stronger safety and environmental standards were in place.”43

43 Id. See also CNN, Obama Bans Eastern Gulf Drilling for 7 Years, CNN Wire Staff (Dec. 1, 2010), accessible at: http://articles.cnn.com/2010-12-01/politics/obama.gulf.drilling_1_drilling-rig-oil-drilling-gulf-spill? s=PM:POLITICS.
46 Emphasis added. “In sum, the PFP schedules a total of fifteen potential offshore oil and gas lease sales in six OCS planning areas. Twelve of these sales are planned for the Western and Central GOM and the portion of the Eastern GOM planning area that was made available for leasing under the GOM Energy Security Act (GOMESA) in 2006. Oil and natural gas resource potential in the GOM is well-understood and the infrastructure to bring oil and natural gas resources to market and to respond in the event of a spill or other emergency is mature. The PFP also schedules three potential lease sales in planning areas off of the coast of Alaska – one each in the Chukchi Sea and Beaufort Sea planning areas that span the Alaskan Arctic and one in the Cook Inlet planning area offshore south central Alaska.” See U.S. Department of the Interior Bureau of Ocean Energy Management, Proposed Final Outer Continental Shelf Oil & Gas Leasing Program 2012-2017, supra at p. 3.
48 On March 27, 2012, BOEM issued a Request for Interest, with respect to the Cook Inlet planning area. In light of responses to the Request, BOEM decided to proceed with the pre-sale process for the Cook Inlet and to place the date for a potential lease sale in 2016 to allow time to complete the necessary steps under the Act, develop additional resource and environmental information, and conduct analyses under NEPA...Beaufort Sea Sale 242 has been postponed from 2015 to 2017 in recognition of the significant overlapping of subsistence use, resource distribution, species habitat, and to allow more time to analyze and
third approved site in the Chukchi Sea. The policy underlying OCSLA is clear. “[T]he outer Continental Shelf...should be made available for expeditious and orderly development, subject to environmental safeguards, in a manner which is consistent with the maintenance of competition and other national needs.” However, by arriving at these decisions with respect to BOEM’s final proposed five-year plan, the U.S. administration has effectively placed the protection of the marine environment above the energy and economic security the U.S. would otherwise enjoy by securing the “billions of barrels of oil and trillions of cubic feet of natural gas” potentially salvageable from the


49 It is all, but certain, that it has been the objective of both the U.S. Department of Interior and environmental groups to preclude drilling activities from being undertaken in the Chukchi and Beaufort Seas during the second Obama administration. “The US Department of the Interior has launched an expedited, high-level assessment of the 2012 offshore drilling program in the Beaufort and Chukchi seas, Interior Sec. Ken Salazar announced. The assessment, which will take 60 days, will review activities and identify challenges and lessons learned, he said. It will pay special attention to problems Shell Offshore Co. encountered in connection with certification of its containment vessel, the Arctic Challenger; the deployment of its containment dome; and operational issues associated with its two drilling rigs, the Noble Discoverer and the Kulluk...” See also Jeremy Hance, NGOs Call on Obama Administration to Suspend Arctic Oil Drilling After Series of Mishaps Prompt US Offshore Arctic Drilling Review, iNVEZZ (Jan. 9, 2013), accessible at: http://invezz.com/news/energy/1163-shells-mishaps-prompt-us-offshore-arctic-drilling-review. Arguably, Shell’s decision, during September 2012, to suspend exploratory drilling in the Chukchi Sea had been attributable to these same pressures. See, e.g., Royal Dutch Shell, Alaska Drilling Update, FE Investigate (Sept. 17, 2012), accessible at: http://www.invezz.com/news/energy/1163-shells-mishaps-prompt-us-offshore-arctic-drilling-review.

49 It is all, but certain, that it has been the objective of both the U.S. Department of Interior and environmental groups to preclude drilling activities from being undertaken in the Chukchi and Beaufort Seas during the second Obama administration. “The US Department of the Interior has launched an expedited, high-level assessment of the 2012 offshore drilling program in the Beaufort and Chukchi seas, Interior Sec. Ken Salazar announced. The assessment, which will take 60 days, will review activities and identify challenges and lessons learned, he said. It will pay special attention to problems Shell Offshore Co. encountered in connection with certification of its containment vessel, the Arctic Challenger; the deployment of its containment dome; and operational issues associated with its two drilling rigs, the Noble Discoverer and the Kulluk...” See also Jeremy Hance, NGOs Call on Obama Administration to Suspend Arctic Oil Drilling After Series of Mishaps Prompt US Offshore Arctic Drilling Review, iNVEZZ (Jan. 9, 2013), accessible at: http://invezz.com/news/energy/1163-shells-mishaps-prompt-us-offshore-arctic-drilling-review. Arguably, Shell’s decision, during September 2012, to suspend exploratory drilling in the Chukchi Sea had been attributable to these same pressures. See, e.g., Royal Dutch Shell, Alaska Drilling Update, FE Investigate (Sept. 17, 2012), accessible at: http://www.invezz.com/news/energy/1163-shells-mishaps-prompt-us-offshore-arctic-drilling-review.
Environmental Law Obligations

Revised U.S. Deep Sea Seabed Mining Policy Reflects UNCLOS and Other International Environmental Law Obligations

According to a recent GAO report, during 2011-2012, the U.S. government received offshore oil and gas royalty remittances totaling approximately $9.72 billion and $1.95 billion, respectively. 52 Apparently, the administration has followed the advice of certain legal commentators within the environmental movement “to make protection of coastal and marine ecosystems the paramount [OCSLA] policy objective.”53

Notwithstanding the modesty of BOEM’s five-year plan, on December 17, 2012, the nonprofit Center for Sustainable Economy (‘CSE’) instituted suit54 against BOEM in an apparent effort to derail this program. The suit alleged that this program had been hastily developed, had not considered all environmental impacts, and had been premised on “[i]ncomplete and flawed economic analysis...in violation of the National Environmental Policy Act, Outer Continental Shelf Lands Act, and Administrative Procedure Act.”55 The CSE action was apparently based on the results of a July 2012 GAO report56 and a prior CSE critique of the net benefits analysis BOEM performed in

51 "The government [had then] estimate[d] that the eastern gulf contains 3.7 billion barrels of oil and 21.5 trillion cubic feet of gas, while the Atlantic coast has 3.8 billion barrels of oil and 37 trillion cubic feet of gas. Taken together, that is roughly comparable to Norway’s proven oil reserves and Canada’s proven gas reserves.” See John Broder and Clifford Krauss, U.S. Halts Plan to Drill in Eastern Gulf, supra.


53 ‘The policy set forth in OCSLA states in part that the OCS should be made available for ‘expeditious and orderly development, subject to environmental safeguards.’ [43 U.S.C. § 1332(3) (2006)]. This policy falls short because it fails to make protection of coastal and marine ecosystems the paramount policy objective. Under the existing OCS policy, BOEM has focused on the extraction of oil and gas and has treated protection of the coastal and marine environment as a secondary consideration...Absent rigorous environmental standards, BOEM has the discretion to assign great weight to the benefits of oil and gas development and relatively little weight to the environmental risks of such development.” See Andrew Hartsig, Shortcomings and Solutions: Reforming the Outer Continental Shelf Oil and Gas Framework in the Wake of the Deepwater Horizon Disaster, supra, at p. 300

The author has called for the adoption of “a precautionary approach toward oil and gas activities in Arctic waters”. Id., at p. 324. See also Alaska Wilderness League, Center for Biological Diversity, Clean Air–Cool Planet, Defenders of Wildlife, Earthjustice, National Audubon Society, Natural Resources Defense Council, Northern Alaska Environmental Center, Ocean Conservancy, Oceana, Pacific Environment, Pew Environment Group, Sierra Club, The Wilderness Society, and World Wildlife Fund, Scoping Comments on the National Ocean Council’s Development of a Strategic Action Plan to Address Changing Conditions in the Arctic [76 Fed. Reg. 4139, 4139–41 (Jan. 24, 2011)] (April 28, 2011) at pp. 2-7, accessible at: http://www.whitehouse.gov/sites/default/files/microsites/ceq/arctic_comments_1.24.11-4.29.11.pdf. The author of the above article has also called for the coordination of U.S. OCS policy in the Arctic with, and for U.S. ratification of, the UNCLOS. Id., at pp. 2, 27.


Presumably, the allegation that BOEM’s economic analysis had been incomplete and flawed was gleaned from the tentative findings of a prior July 2012 GAO report. “In particular, questions remain about one aspect of Interior’s environmental NEPA analyses, which are required for exploration and development plans and play a critical role in assessing the potential effects of oil and gas development in the Gulf of Mexico. Interior completed a number of NEPA analyses without the most current, potentially relevant information—for example, in amendments to operator-submitted plans. Also, Interior technical staff reviewing the plans do not always coordinate with the agency’s NEPA staff to ensure that any information included in subsequent amendments would not need to be considered as part of a NEPA analysis and do not always document such coordination. As a result, some of these NEPA analyses may have been based on incomplete or inaccurate information. Interior officials acknowledged that the controls in place are insufficient to prevent the approval of plans with NEPA analyses based on inaccurate or incomplete information.”
support of its proposed five-year program. In other words, it challenged the economic cost-benefit analysis underlying BOEM’s five-year plan because the plan did not, in its opinion, sufficiently account for the costs of environmental externalities within those few geographic regions with respect to which OCS leasing permits are potentially obtainable.

Does the Revised U.S. OCS Policy Employ a Prevention Principle, a Precautionary Approach or the Precautionary Principle?

Apparently, CSE’s opposition to drilling is reflective of the larger environmental movement’s concern about “what environmental precautions would constitute adequate

Without ensuring that NEPA analyses are conducted on complete and accurate information to analyze the potential effects of a proposed project as required by NEPA, Interior risks making an erroneous assessment of the environmental risks associated with such a project” (emphasis added). See Government Accountability Office, Oil and Gas Management: Interior’s Reorganization Complete, but Challenges Remain in Implementing New Requirements, (GAO-12-423) (July 2012) at p. 102, accessible at: http://www.gao.gov/assets/600/593110.pdf.


BOEM’s NPB [Net Public Benefits] analysis only describes the no action alternative in terms of costs. According to the agency, one of the key economic benefits of the proposed Program is the avoided environmental and social costs associated with the forecasted energy mix that would replace foregone oil and gas development under the no action (no sale) option. The theory is that without an OCS leasing program, energy demand would be met from substitute sources including onshore oil and gas production (17% of the required substitution), imports (67%), coal (6%), electricity from non-fossil sources (3%), other energy sources (2%) and reduced demand (6%). This mix, under BOEM’s reasoning, has higher environmental and social costs than the mix associated with the proposed Program. According to the NPB analysis, such costs ‘mostly come from the risk of oil spills and air emissions from additional tanker imports and greater air emissions resulting from increased onshore production of oil, gas, and other energy substitutes such as coal.’ Putting aside any critique of the reasoning here, these costs are the only economic value assigned to the no action alternative – any benefits are neglected altogether. BOEM subtracts these costs from any environmental and social costs of the proposed Program to understand its net effects. By doing so, the proposed Program is transformed from one that generates $3.98 to $7.51 billion in environmental and social costs into one that yields $3.10 to $10.70 billion in net environmental and social benefits. Had benefits of no action been estimated, the math would work out very differently, and so failure to include these benefits introduces a serious source of bias into the NPB calculations.” See John Talberth and Evan Branosky, Net Public Benefits Analysis of the Proposed Outer Continental Shelf Oil & Gas Leasing Program - A Critique, supra at pp. 6-7. See also Oceana, Comments on The Proposed Outer Continental Shelf Oil and Gas Leasing Program for 2012–2017 (Feb. 8, 2012), accessible at: http://oceana.org/sites/default/files/reports/Oceana_Proposed_2012-17_Five-Year_Program_Comments_and_Appendices_2_8_FINAL.pdf (going beyond the "summarized[ed] findings from a 2012 report entitled “Net Public Benefits Analysis of the Proposed Outer Continental Shelf Oil & Gas Leasing Program: A Critique”…[a] report prepared by Center for Sustainable Economy indicating that BOEM had substantially overstated the potential benefits of the proposed program and could more effectively include the environmental and social costs of a catastrophic spill). Id., at pp. 2-5.
protection for the marine and coastal environments."59 OCSLA requires that “operations in the outer Continental Shelf should be conducted in a safe manner by well-trained personnel using technology, precautions, and techniques sufficient to prevent or minimize the likelihood of blowouts, loss of well control, fires, spillages, physical obstruction to other users of the waters or subsoil and seabed, or other occurrences which may cause damage to the environment or to property, or endanger life or health”.60 Several guidance documents (Notices to Lessees (‘NTLs’)) issued by DOI’s transitional Bureau of Ocean Energy Management, Regulation and Enforcement (‘BOEMRE’) during 2010 and by its newly created Bureau of Safety and Environmental Enforcement (‘BSEE’) during 2011, for example, require lessees and operators of OCS leases to provide the agency with additional information to ensure that lessee and operator deep seabed mining activities do not harm the marine environment or human safety.61 In addition, revisions to OCSLA-implementing regulations on oil, gas and

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60 See 43 U.S.C. 1332(6).

61 For example, NTL No. 2010-N06 mandated that new exploration plans, DPPs and DOCDs be accompanied by additional information, including a discussion of the potential for well blowouts, and proposed measures to prevent, reduce and manage such likelihood, to avoid “serious harm or damage to the human, marine or coastal environment”. See U.S. Department of the Interior Bureau of Ocean Energy Management, Regulation and Enforcement, Information Requirements for Exploration Plans, Development and Production Plans, and Development Operations Coordination Documents on the OCS (NTL No. 2010-N06) (Eff. June 18, 2010), accessible at: http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2010/10-n06.aspx. NTL No. 2010-N10 mandated that lessees and operators conducting operations using subsea blowout preventers or surface blowout preventers on floating facilities to submit with each application for a well permit a written signed statement “stating that the operator will conduct all authorized activities in compliance with all applicable regulations, including the Increased Safety Measures regulations (75 FR 63346).” It also informed operators that their submitted oil spill response plans will be reevaluated to see whether they contain “adequate information demonstrating that the operator has access to and can deploy surface and subsea containment resources that would be adequate to promptly respond to a blowout or other loss of well control”. See U.S. Department of the Interior Bureau of Ocean Energy Management, Regulation and Enforcement, Statement of Compliance with Applicable Regulations and Evaluation of Information Demonstrating Adequate Spill Response and Well Containment Resources (NTL No. 2010-N10) (Eff. Nov. 8, 2010), accessible at: http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2010/10-N10.aspx. NTL No. 2011-N09 established new mandatory policies with respect to safety and environmental systems (SEMs) developed, implemented and maintained by lessees, operating rights owners and holders, operators lessee agents, etc. The new policies require that SEMs include policies and objectives concerning environmental impacts over which such actors have control and can be expected to have an influence. They must ensure that relevant environmental requirements are addressed through all of phases of an SEM program, including planning, implementation and operation, verification and corrective actions, management review and continual improvement. The SEM program must also include a hazard analysis for all facilities that addresses management of safety and environmental impacts, a jobs analysis, management of change procedures, written startup operations procedures, safe work practices and contractor selection criteria, personnel training requirements, documentation confirming the inspection and testing of operator’s equipment and systems, and operator-conducted SEMS audit reports. The NTL also emphasized that BSEE will review SEMs to ensure their compliance with applicable regulations. See U.S. Department of the Interior Bureau of Safety and Environmental Enforcement, Guidance on the Development, Implementation and Maintenance of a Safety and Environmental Management Systems (SEMS) Program for Outer Continental Shelf (OCS) Oil, Gas and Sulphur Operations (NTL No. 2011-N09) (Eff. Oct. 21, 2011), accessible at: http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2011/11-N09.aspx.
sulphur operations in the OCS recently enacted by BSEE reflect that “lessees, operating rights owners, operators, and their contractors and subcontractors...[need to]...take precautions to keep wells under control at all times.”

Environmental Movement’s Preference for Europe’s Strong Precautionary Principle

In CSE’s view, the environmental risks inherent in OCS activity, which include potential threats such as “air and water degradation, oil spills, seabed disturbances, and harm to marine life”, are unacceptable because they are indeterminable, and thus, uncertain. Also, such opponents “often associate oil and gas consumption with greenhouse gas emissions and other global climate change concerns. From their perspective, only permanently restricting offshore development of conventional energy sources [via the imposition of moratoria] would protect against these risks to the domestic and global environment.” The environmental movement’s preference for permanent restrictions (de jure or de facto), however, would seem to go beyond the White House Ocean Policy Task Force final recommendation calling for the application of a precautionary approach

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64 See Curry L. Hagerty, Outer Continental Shelf Moratoria on Oil and Gas Development (May 2011) supra at p. 4.

65 “Resolving concerns about environmental risk is central to moratorium policy. Some contend that moratoria on oil and gas development are among the only effective ways to address concerns about environmental risk and that measures short of this do not sufficiently mitigate risk.” Id.

66 See Curry L. Hagerty, Outer Continental Shelf Moratoria on Oil and Gas Development (June 2010) supra at Summary.

67 “Governance of human activities in the Arctic Ocean is fragmented and weak. The new Administration should take the lead in proposing the adoption of a new framework environmental convention that would implement an integrated, ecosystem-based management approach to managing new and expanded industrial activity in the Arctic.

Legal commentators, including this author, have recognized a legal distinction between a precautionary approach contained in Principle 15 of the Rio Declaration and what the European Union refers to as the precautionary principle. This distinction is arguably relevant for purposes of gauging the implementation by different State Parties and non-Parties of UNCLOS' environmental obligations. At least one commentator has employed different language to explain the differences between a precautionary approach and a more formal precautionary principle. He describes a ‘weak’ precautionary principle as empowering regulators “to address risk in contexts of scientific uncertainty—that is, even before regulators fully understand the nature or extent of risk”. He claims that “the weak version of the precautionary principle is contained in the Rio Declaration”, as well as, implicitly in many U.S. environmental and international legal settings. However, the extent of U.S. implementation of this principle is limited by the BOEM’s five-year plan, which imposes moratoria delaying the consideration of potential drilling permits within most OCS areas until 2017. This approach appears to reflect the precautionary principle, where the administration is acting “more than a precautionary approach” to oceans management as reflected in Principle 15 of the 1992 United Nations Rio Declaration on Environment and Development. Given the BOEM five-year plan’s effective imposition of moratoria delaying the consideration of potential drilling permits within most OCS areas until 2017, it would appear that the environmental movement actually succeeded in convincing the administration to pursue more than a precautionary approach.


70 This author has performed extensive research confirming the law and politics-based distinctions between the Rio Declaration’s precautionary approach and the more extreme European version of it, referred to as the precautionary principle, which has been employed by the European Union to implement international treaty obligations cast in terms of the precautionary approach. See Lawrence A. Kogan, What Goes Around, Comes Around: How UNCLOS Ratification Will Herald Europe’s Precautionary Principle as U.S. Law, 7 Santa Clara J. Int’L L. 23, 83–167 (2009), accessible at: http://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1064&context=scujil (arguing that U.S. accession to the United Nations Convention on the Law of the Sea (“UNCLOS”) would require the enactment of federal implementing legislation and/or engender the issuance of presidential executive orders and memoranda that would have the effect of altering U.S. federal environmental laws and regulations by incorporating within them the European Union’s Roman civil law precautionary principle).

public health statutes having preventative goals, including the Clean Air Act and the Resource Conservation and Recovery Act. He describes the ‘strong’ precautionary principle, by contrast, as “suggest[ing] that some precautionary regulation should be a default response to serious risks under conditions of scientific uncertainty. Such regulation could range from a blanket prohibition on a proposed technology or a dangerous activity to less aggressive defaults, such as use restrictions or warning requirements. Furthermore, whereas ‘weak’ versions are primarily concerned with the timing of governmental decision making, the Strong Precautionary Principle explicitly places the burden on the private proponent of the risk-creating activity to overcome the default by proving that risks are acceptable or reasonable.” The “strong precautionary principle also represents a new and untested alternative to dominant risk-management paradigms such as cost-benefit analysis.”

Other commentators, including those conversant in the environmental provisions of UNCLOS, have identified a foundational distinction between a contentious justice-based common law precautionary approach and a preventive justice-based Roman civil law precautionary principle. The Roman civil law principle for environmental protection - *in dubio pro natura* – provides that, “[i]f in doubt, decide in favour of the environment…Ennaltavarautumisen periaate or varovaisuusperiaate (in Finnish), fdrsktighetsprincip (in Swedish), Vorsorgeprinzip (in German), principe de precaution (in French), *principio de precaucion* (in Spanish).” The principle of in *dubio pro natura* is otherwise known as the precautionary principle, a much more restrictive version of the precautionary approach employed by the European Union. By requiring “those undertaking any activity likely to transform the environment to demonstrate the absence of negative effects”, the precautionary principle effectively reverses the legal burden of proof (both the burden of production and persuasion) and eschews cost-benefit

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73 Id., at p. 1295. This definition of the strong precautionary principle “parallels the Wingspread Statement, a document on precaution—directed at emerging toxic risks, such as endocrine-disrupting chemicals.” Id., at p. 1296.

74 Id., at pp. 1290-1291.


77 “[T]he Precautionary Principle…entails a radical change in outlook: a reliance on progress and a basically favourable attitude to technology are here replaced by a need for caution. The principle of *in dubio pro natura* has been called into play: reversing the burden of proof, it is up to those undertaking any activity likely to transform the
To better understand these distinctions, it is necessary to discern first, whether U.S. OCS policy has changed from that of ‘prevention’ to that of ‘precaution’, and then, whether federal statutes and regulations actually implement a precautionary approach or the precautionary principle. European legal commentators have been rather prolific in discussing the distinction between prevention and precaution in explaining the precautionary principle. According to one commentator, “the prevention principle...requires those who wish to carry out an activity to prevent any related harm to the environment to demonstrate the absence of negative effects.” See François Ost, The Philosophical Foundation of Environmental Law: An Excursion Beyond Descartes (unpublished manuscript), available at http://www.dhdi.free.fr/recherches/environnement/articles/ostenvlaw.pdf (last modified Oct. 14, 2004).

Application of a precautionary approach, as defined in the recommendations (‘[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’), is consistent with and essential for improved stewardship. Moreover, the United States has already affirmed this exact wording in the 1992 Rio Declaration on Environment and Development. Many comments supported its inclusion while others were concerned it would be used to prevent activities from occurring. These latter comments, however, may have misinterpreted the precautionary approach here as mandating, for example, the prohibition of activities that present an uncertain potential for significant harm unless the proponent of the activity shows that it presents no appreciable risk of harm.

The Task Force has retained the precautionary approach as reflected in the Rio Declaration in its final recommendations, as it believes that we must be able to avail ourselves of timely, cost-effective stewardship measures, consistent with the approach articulated in the Rio Declaration. Some comments used the term ‘precautionary principle,’ but the United States has long taken the position that precaution is a tool or approach rather than a ‘principle,’ given the lack of a single definition or agreed formulation and the differing implications of its various forms” (emphasis added). See The White House Council on Environmental Quality, Final Recommendations of the Interagency Ocean Policy Task Force, supra at Appendix C-III.
to the environment or human health...[It addresses]...risks [that] are predictable since the causal link between activity and harm has been established.” As explained by another commentator, “If the risk is known (risk referring to a situation in which probabilities can be attributed to the consequences of different decision-making choices, including the choice to remain inactive, in contrast to the knowledge of the specific consequences of these choices under certainty), the Preventive Principle is to be applied; if the risk is uncertain, the Precautionary Principle comes into play – thus, the former deals with risks, the latter with any form of uncertainty [e.g., possible hazards].” Similarly, a third commentator observes that, “...while some risks can be calculated/quantified...others cannot. The latter can be called potential risks...risks that cannot be fully demonstrated or quantified or its effects determined because of the insufficiency or inconclusive nature of the scientific data. If a risk can be quantified, the prevention principle rather than the [Precautionary Principle] PP applies and risk managers can use the data to decide on whether or not to adopt measures, and if so, what these measures will be. The ‘uncertainty’ in such cases concerns the question when damage will occur, but not the chance whether damage will occur...[T]he [Precautionary Principle] PP only applies to potential risks”.

U.S. Administration’s Ostensible Preference for a Precautionary Approach

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81 See Jale Tosun, “Risk Regulation in Europe: Assessing the Application of the Precautionary Principle”, supra at p.40. “[T]he need for precaution arises because of the existence of uncertain risks, which pertain to complex situations that may result in various effects that are considered unacceptable by a sufficiently large number of societal actors. Uncertain risks can, for example, relate to the introduction of new substances or the adoption of new technologies. Put simply, uncertain risks are unpredictable risks, while certain risks are predictable since the causal link between activity and harm has been established. The distinction between certain and uncertain risks is also important for understanding the difference between precaution and a related concept, i.e., prevention. With certain risks it is not the precautionary principle that applies, but the prevention principle, which requires those who wish to carry out an activity to prevent any related harm to the environment or human health.” Id.

82 See Miriam Haritz, “An Inconvenient Deliberation: The Precautionary Principle’s Contribution to the Uncertainties Surrounding Climate Change Liability”, (Kluwer Law 2011) at p. 77, accessible at: http://books.google.com/books?id=GRcy2K4DaocC&pg=PA77&lpg=PA77&dq=prevention%2B+risk&source=bl&ots=5rY3qQ3Lo&sig=0eXKU2HnMz990CwJUkMswYYYd&hl=en&sa=X&ei=6ZH4UJ72OgW10OCZy4CwCw&ved=0CF4Q6AEwCDgK#v=onepage&q=prevention%20principle%20%2B%20risk&f=false. This author then cites other authors for the following syllogism explaining the relationship between the Prevention and Precautionary Principles: Prevention = risk aversion = objective probabilities = risk, while Precaution = suspected risks = subjective probabilities = incertitude (uncertainty). Id., at fn 295. See also Geert van Calster, Risk Regulation, EU Law and Emerging Technologies: Smother or Smooth?, 2 Journal of NanoEthics 61 (Springer April 2008), at Abstract, accessible at: http://ethics.iit.edu/NanoEthicsBank/node/1883 (“In this article, the author looks at recent risk analysis decisions of the European Union (EU) in regard to nanotechnology, and accesses its current trend towards adopting the precautionary principle rather than the prevention principle. Rather then looking at the formal definitions of these two theories, the author argues that cultural differences between the EU and the United States cause then to adopt either risk adverse legislation which advocates the prevention of risks before they happen, even in the absence of scientific proof, as in the EU, or legislation that advocates the prevention principle, and seeks to prevent known risks from being realized”).

It would appear that the DOI and the National Oceanic and Atmospheric Administration ('NOAA') have been tasked with implementing the Ocean Policy Task Force final recommendation that U.S. oceans management policy reflect the application of a precautionary approach. However, it remains questionable whether the BOEM five-year plan, in result, has achieved instead the precautionary principle, especially considering the U.S. Secretary of Interior’s prior interpretation of Section 5(a) (43 U.S.C. 1334(a)) of the Outer Continental Shelf Lands Act ('OCSLA') requiring a ‘harms’ determination. As noted above, the Secretary stated in his July 2010 memorandum to BOEM’s Director of Regulation and Enforcement that, “The OCSLA does not require that I conduct a balancing of harms analysis in connection with the suspension of drilling operations. The statute requires only that I conclude that there is a threat of serious or irreparable harm to life, property, or the marine, coastal, or human environment...Nevertheless, there are those that suggest that such a balancing of harms may be appropriate. Even if I had to engage in a balancing of the economic effects both of the BP Oil Spill and of the suspension of drilling operations, I would conclude that a temporary suspension of drilling operations is warranted.”84 In other words, judging from the Secretary’s remarks, the Department of Interior Secretary did not undertake a cost-benefit analysis prior to determining risk management measures even though Principle 15 of the Rio Declaration imposes cost-benefit analysis as one of two constraints upon State actors, as the ITLOS Seabed Disputes Chamber recently confirmed.85

Similarly, the BOEM five-year plan seems to reflect the interpretation that Section 18 of the OCS Lands Act (43 U.S.C. 1344) does not require a formal cost-benefit analysis.86 This is contrary to the previous position of the Minerals Management Service ('MMS')

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84 Emphasis added. See Secretary of the United States Department of the Interior, Decision Memorandum Regarding the Suspension of Certain Offshore Permitting and Drilling Activities on the Outer Continental Shelf (July 12, 2010), supra at p. 16. “There is no question that a suspension of deepwater drilling will have a significant, negative economic impact on direct and indirect employment in the oil and gas industry, as well as other secondary economic consequences. These economic impacts must be considered against the backdrop of the substantial economic effects associated with the on-going BP Oil Spill and the potential economic damage that would be caused by another deepwater accident under the current circumstances. Therefore, while the economic effects of any drilling suspension – in terms of employment, spending, energy production, and government revenues – are and will be significant, another accident or oil spill would exacerbate the BP Oil Spill’s effects on the economy and deal an unacceptable blow to the industry and the environment.” Id., at p. 17.


(BOEM’s predecessor agency), that Section 18 of the OCS Lands Act (43 U.S.C. 1344) “requires the Secretary to obtain a proper balance among the potential for environmental damage, the discovery of oil and gas, and adverse impact on the coastal zone, for which DOI uses cost-benefit analysis.” As an initial matter, there is no indication that the Secretary performed any cost-benefit analysis as part of the ‘winnowing process’ to arrive at the decision to eliminate most OCS areas from consideration as ‘program areas’ to be included within BOEM’s five-year OCS plan. The BOEM five-year plan reflects that the Secretary interpreted Section 18 in a manner that may have bestowed arguably disproportionate reliance upon the local and regional preferences of Pacific state governors and executive state agencies politically opposed to offshore oil and gas drilling but favoring development of renewable technologies along their states’ coastlines. In addition, the five-year plan describes the Secretary’s decision as being influenced by an ostensible lack of geological and

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88 “During the development of the plan, the Secretary must solicit and consider comments from the governors of affected states, and at least 60 days prior to publication of the plan in the Federal Register, the plan is to be submitted to the governor of each affected state for further comments.” See Adam Vann, Offshore Oil and Gas Development: Legal Framework, supra at p. 6, referencing 43 U.S.C. § 1331(f).

89 “The [California] State Lands Commission is generally responsible for oil and gas leasing. California currently has a general ban in place restricting any state agency from issuing new offshore leases, unless the President of the United States determines that there is a ‘severe energy supply interruption and has ordered distribution of the Strategic Petroleum Reserve..., the Governor finds that the energy resources of the sanctuary will contribute significantly to the alleviation of that interruption, and the Legislature subsequently acts to amend...[the law] to allow that extraction.’ The ban is limited to areas that are not currently subject to a lease.” See Adam Vann, Offshore Oil and Gas Development: Legal Framework, supra at Table A-1, p. 20. “The [Oregon] Department of State Lands is generally responsible for leasing state owned minerals, including oil and gas. Leasing of tidal and submerged lands is governed by separate provisions of law. There does not appear to be a ban in place.” Id., at p. 21. “In general, the Department of Natural Resources is responsible for mineral development on state lands. State law prohibits leasing of tidal or submerged lands ‘extending from mean high tide seaward three miles along the Washington coast from Cape Flattery south to Cape Disappointment, nor in Grays Harbor, Willapa Bay, and the Columbia river downstream from the Longview bridge, for purposes of oil or gas exploration, development, or production.’” Id., at p. 22.

90 Comments to BOEM’s draft five-year plan summarize comments received from California and Oregon expressing opposition to offshore oil and gas drilling and support for offshore development of renewable technologies. See U.S. Department of the Interior Bureau of Ocean Energy Management, Proposed Outer Continental Shelf Oil & Gas Leasing Program 2012-2017, at “Appendix A - Summary of Comments to January 21, 2009, Federal Register Notice Concerning Draft Proposed 5-Year OCS Oil and Gas Leasing Program for 2010-2015 and March 4, 2009, Federal Register Notice Concerning Extension of the Comment Period by 180 Days”, (Nov. 2011) at pp. 166-167, accessible at http://www.boem.gov/uploadedFiles/Proposed_OCS_Oil_Gas_Lease_Program_2012-2017.pdf. As the final five-year plan reflects, “This PFP does not schedule lease sales in the North Atlantic, Mid-Atlantic, South Atlantic or Straits of Florida planning areas, consistent with the principles of regionally tailored leasing that underlie the entire program. While certain Atlantic states are supportive of offshore oil and natural gas leasing in the Mid- and South Atlantic planning areas, many other Atlantic states expressed concerns about offshore oil and natural gas development off their coasts and in neighboring areas.” “The four planning areas off the Pacific coast were not included for potential oil and natural gas leasing in the PP, therefore are not available for consideration in this PFP under the section 18 winnowing process. This determination was consistent with the requirements of section 18 of the Act, which gives priority leasing consideration to areas where the combination of previous experience; local, state, and national laws and policies”. See U.S. Department of the Interior Bureau of Ocean Energy Management, Proposed Final Outer Continental Shelf Oil & Gas Leasing Program 2012-2017, supra at pp. 12, 14.
geophysical data necessary to properly evaluate potential Atlantic coast leasing areas for exploitation,91 and by a nondescript reference to a perceived risk to national security should mid-Atlantic coast OCS development proceed.92 These findings strongly suggest that the Secretary’s decision to exclude approximately 85%93 of OCS areas from potential mineral leasing activities until at least 2017 was not cost-effective, and thus, was not commensurate with a precautionary approach.

Furthermore, it is questionable whether the scope of the cost-benefit analysis that BOEM did actually perform to support its regionally limited five-year plan, which is subsumed within a much broader ‘net benefits analysis’ (‘NBA’), employs a precautionary approach rather than the precautionary principle. An NBA ‘nets’ the anticipated environmental and social costs attributable to OCS exploration, development production and mineral transport, first, against the anticipated “environmental and social costs attributable to a ‘No Action Alternative’ (i.e., the costs associated with energy production from sources that would substitute for OCS production in the absence of the Program)” and, then, against “any benefits (measured as ‘negative costs’) attributable to OCS oil and natural gas-related activities.”94 Significantly, although “a complete accounting of the net benefits (costs) attributable to a Five Year Program would include the value attributable to the increase in energy security provided by the program-related domestic production activity”,95 BOEM’s

91 Id., at p. 13.
92 Id.
94 See U.S. Department of the Interior Bureau of Ocean Energy Management, Forecasting Environmental and Social Externalities Associated with OCS Oil and Gas Development: The Revised Offshore Environmental Cost Model (OCS Study BOEM 2012-025) (June 2012) at p. 1, accessible at http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017_Five_Year_Program/OECM.pdf. A draft document describing the cost and benefit calculations BOEM had performed pursuant to the Secretary’s authority under Section 18 of the Outer Continental Shelf (OCS) Lands Act explained benefit-cost analysis differently. “Prior to the proposed program and the proposed final program…in each new 5-year program development cycle, the Bureau of Ocean Energy Management (BOEM) conducts a benefit-cost analysis by program area. The analysis examines the benefits to society from the production of oil and natural gas as well as the net environmental and social costs associated with the anticipated exploration, development, and production of those resources. The net benefits analysis considers the net economic value of production of OCS oil and gas anticipated from the program options, the associated economic and societal costs, and the consumer surplus created by the additional supply of energy…The overall methodology for the benefit-cost analysis is summarized in part IV of the proposed program decision document. Additional information on the methodology and economic assumptions can be found in the “Economic Analysis for the OCS 5-Year Program 2012-2017: Theory and Methodology” (BOEM 2011-050)” (emphasis added) See Industrial Economics, Incorporated, Applied Science Associates, Inc., Northern Economics, and Nicholas Z. Muller, Draft Description of the Cost and Benefit Calculations in the Offshore Environmental Cost Model, prepared for the U.S. Bureau of Ocean Energy Management (Dec. 2011), accessible at: http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017_Five_Year_Program/OECM%20DraftDescriptiontoPostl_2011-1220.COMBINED.pdf.
95 Emphasis added. Id., at p. 105.
‘Offshore Environmental Cost Model’ which is used “[t]o estimate the anticipated environmental and social costs attributable to oil and natural gas exploration and development activities on the OCS [did] not…provide a quantified estimate of energy security benefits, as there is not yet a single, widely accepted method for doing so.”

This result likely obtains because it is difficult to isolate and measure the national energy security benefits to be realized from potential oil and gas exploitation activities that are to be actually undertaken within the few ‘program areas’ approved. As noted above, BOEM’s net benefits analysis does not consider non-‘program’ areas - i.e., those areas along the U.S. OCS that continue to remain off limits to minerals exploitation.

Moreover, it is not clear that BSEE’s decision to enact new more extensive and restrictive safety and environment-related regulations aimed at preventing lessees, lease operators and drilling contractors from causing catastrophic spills on the OCS, and its plans to also develop “future regulations that will focus on preventative measures”, reflects the employment of a precautionary approach to oceans management rather than Europe’s precautionary principle. The EU, for example, has

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97 Emphasis added. Id., at p. 106.

98 “The Net Benefits analysis is a benefit-cost assessment by program area of the national gain from anticipated production of economically recoverable oil and natural gas resources expected to be leased and discovered as a result of the program. The results summarized in the decision document provide the Secretary of the Interior estimates of benefits and costs from holding a sale (or sales) or selecting the No Sale Option (NSO) in any or all of six program areas.” See U.S. Department of the Interior Bureau of Ocean Energy Management, Economic Analysis Methodology for the Five Year OCS Oil and Gas Leasing Program for 2012-2017. (BOEM OCS Study 2012-022) (June 2012) at pp. 2-3, accessible at: http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017_Five_Year_Program/PFP%20EconMethodology.pdf.

99 “Since the Secretary’s authority is confined to a decision on the leasing program options, the Net Benefits analysis focuses [only] on those options”. Id., at p. 2.


101 Id., at 77 FR 50866.

102 “In response to the Deepwater Horizon explosion and resulting oil spill in the Gulf of Mexico, the Obama Administration launched the most aggressive and comprehensive reforms to offshore oil and gas regulation and oversight in U.S. history. The reforms, which strengthen requirements for everything from well design and workplace safety to corporate accountability, are helping ensure that the United States can safely and responsibly expand development of its energy resources.” See United
undertaken efforts to incorporate the precautionary principle within various forms of proposed offshore drilling legislation. During 2011, the European Commission had proposed Deepwater Horizon-inspired precautionary principle-based regulations on offshore oil and gas safety capable of ensuring the protection of the EU’s marine environment.103 Thereafter, during September 2012, the European Parliament’s Environmental Committee called for the adoption, based on the precautionary principle, of an Arctic drilling moratorium in furtherance of the Commission’s proposed regulation,104 which was only narrowly defeated in a subsequent Parliament-wide vote. In its place, the European Commission’s Energy Committee adopted a proposal for a new directive that would require the submission of major hazard reports and emergency response plans and a showing of ‘adequate financial security’ to remedy any potential environmental damages before an offshore oil and gas drilling license could be granted.105

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103 See European Commission, Proposal for a Regulation of the European Parliament and of the Council on safety of offshore oil and gas prospection, exploration and production activities, COM(2011) 688 final 2011/0309 (COD) (10/27/11), accessible at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0688:FIN:EN:PDF. “this regulation is consistent with the Union’s environmental legislation and policy and its main tenets such as pollution prevention, control and the polluter pays and precautionary principles…Article 191 of the TFEU establishes the objectives of preserving, protecting and improving the quality of the environment and creates an obligation for all Union action to be supported by a high level of protection based on the precautionary principle and preventive action and to prudent and rational utilisation of natural resources.” Id., at pp. 5, 13.


U.S. Outer Continental Shelf Policy and its International Environmental Dimension

U.S. OCS Policy Influenced by UNCLOS and Other International Law

OCSLA and UNCLOS employ different terminology to define essentially the same offshore zone located within the national jurisdiction and control of the U.S., a coastal state. UNCLOS refers to a ‘continental shelf’ (as opposed to an ‘outer continental shelf’), which it defines as “comprising the seabed and subsoil of the submarine areas that extend beyond [a coastal state’s] territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.”106 Similar to OCSLA, UNCLOS provides that “a nation’s continental shelf cannot extend beyond 350 nautical miles from its recognized coastline regardless of submarine geology”.107

However, with respect to the offshore zone located beyond U.S. national jurisdiction and control, the provisions of the U.S. National Oceanic and Atmospheric Administration (NOAA)-administered Deep Seabed Hard Mineral Resources Act (‘DSHMRA’)108 and accompanying NOAA implementing regulations109 apply.110 They more closely correspond to the ‘continental shelf’ and other language of UNCLOS.111 DSHMRA establishes a mandatory licensing regime for the “environmental assessment,112 exploration,113 and commercial recovery114 of hard mineral resources115 of the deep

106 See UNCLOS Article 76.1.
107 See Adam Vann, Offshore Oil and Gas Development: Legal Framework supra, referencing UNCLOS Articles 76.4-76.7.
111 See 30 U.S.C. 1403 (2).
112 An environmental assessment entails an assessment of “the effects on the environment from exploration and commercial recovery activities, including seabased processing and the disposal at sea of processing wastes, so as to provide an assessment, as accurate as practicable, of environmental impacts of such activities”. See 30 U.S.C. 1419(a)(1). Cf.
113 “[E]xploration” means…any at-sea observation and evaluation activity which has, as its objective, the establishment and documentation of…the nature, shape, concentration, location, and tenor of a hard mineral resource…and…the environmental, technical, and other appropriate factors which must be taken into account to achieve commercial recovery…[It also includes]…the taking from the deep seabed of such quantities of any hard mineral resource as are necessary for the design, fabrication, and testing of equipment which is intended to be used in the commercial recovery and processing of such resource.”
As accompanying NOAA regulations indicate, the underlying purpose of such rules is to “ensure[] protection of the marine environment, safety of life and property at sea, prevention of unreasonable interference with other uses of the high seas, and conservation of mineral resources.” A license application must be accompanied by a statement of financial resources, a statement of technological experience and capabilities, an exploration plan, "physical, chemical and biological information for the exploration area, including relevant environmental information, if any, obtained during past exploration activities" that NOAA may utilize to prepare an environmental impact statement on the environmental impacts of the proposed activities, proof of U.S. citizenship, and a reasonable administrative fee. The grant of a license to an eligible applicant triggers NOAA’s obligation to conduct an

See 30 U.S.C. 1403(5). Cf. UNCLOS Annex III, Article 3(3); International Seabed Authority Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, Regulation 1(3)(b); Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area, Regulation 1(3)(b).

See 30 U.S.C. 1403(1). Cf. UNCLOS Annex III, Article 3(3); International Seabed Authority Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, Regulation 1(3)(a); Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area, Regulation 1(3)(a).

NOAA cannot issue an exploration license if it can "reasonably be expected to result in a 'significant adverse effect' on the quality of the environment." See 15 CFR 970.506, 970.701. “Each exploration license must contain such terms, conditions and restrictions, established by the Administrator, which prescribe actions the licensee must take in the conduct of exploration activities to assure protection of the environment”, as well as “resource conservation requirements”. Id., at Sections 970.518, 907.919, 907.702, 970.603.

See NOAA Office of the General Counsel, Summary of the Deep Seabed Hard Mineral Resources Act, accessible at: http://www.gc.noaa.gov/documents/gcl_dshmr_summary.pdf. “A license or permit shall authorize the holder thereof to engage in exploration or commercial recovery, as the case may be, consistent with the provisions of this chapter, the regulations issued by the Administrator to implement the provisions of this chapter, and the specific terms, conditions, and restrictions applied to the license or permit by the Administrator.” See 30 U.S.C. 1412(b).

Prior to certifying a license application, NOAA “must find that the applicant has demonstrated that, upon issuance or transfer of the license, the applicant will be financially responsible to meet all obligations which he may require to engage in the exploration proposed in the application.” Id., at Sec. 907.401.

Prior to certifying a license application, NOAA “must find that the applicant has demonstrated that, upon issuance or transfer of the license, the applicant will possess, or have access to or a reasonable expectation of obtaining, the technological capability to engage in the proposed exploration.” Id., at Sec. 907.402.

Id., at Sec. 907.203; Sec. 970.404.

Id., at Sec. 970.206.

Id., at Sec. 970.208; 970.406.
environmental impact assessment of the proposed activity, and to provide an accompanying statement of “propose[d] terms and conditions for, and restrictions on, the exploration or commercial recovery proposed in the application.”

The Congressional Research Service (‘CRS’) has confirmed in a series of reports that, aside from domestic legislation, international measures, such as UNCLOS, influence U.S. domestic OCS moratorium policies which “can affect the development of transboundary reserves near U.S. waters” as well as “leasing options near international marine boundaries.” For example, U.S. OCS and environmental policy decisions concerning whether to “increase[e] domestic production in areas near international waters…[generally, and]…U.S. offshore activity…[i]n the Gulf of Mexico, the Arctic, and other international marine areas,” more specifically, reflect conformance to customary international law and consistent, if not, full alignment with the UNCLOS framework. U.S. policy concerning the extension of the OCS for purposes of securing sovereign claims to minerals found in the subsoil and seabed thereof is, perhaps, the only exception to this rule. In the absence of a customary law process that defines “how nations claim natural resources beyond 200 miles from shore”, the task of settling boundaries and claims in these areas has, by default, largely fallen under UNCLOS auspices. Although the U.S. is not a party to UNCLOS, and consequently, such “UNCLOS rules would likely not apply to U.S. claims”, the U.S. is, nevertheless, currently “engaged in efforts to establish ECS [extended continental shelf] areas beyond [its] customary 200-mile EEZ” in a manner not inconsistent with the UNCLOS

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125 See 30 U.S.C. 1419(d).
126 Id., 30 U.S.C. 1415(b).
127 “The two most common sources of authority for OCS oil and gas leasing in the EEZ and beyond are the Outer Continental Shelf Lands Act (P.L. 103-426, OCSLA) and UNCLOS. Consideration of both OCSLA and UNCLOS is apparent in the U.S. effort addressing extended continental shelf (ECS) areas.” See Curry L. Hagerty, Outer Continental Shelf Moratoria on Oil and Gas Development (June 2010) supra, at p. 11.
128 See Curry L. Hagerty, Outer Continental Shelf Moratoria on Oil and Gas Development (May 2011) supra at p. 10.
129 Id., at p. 11.
130 See Curry L. Hagerty, Outer Continental Shelf Moratoria on Oil and Gas Development (May 2011) supra at p.11. “UNCLOS is broadly viewed as the international standard by which to govern joint development in OCS areas in the North Atlantic, in the Arctic region, and in the Gulf of Mexico.” Id., at pp. 12-13.
131 U.S. policy “reflects general conformance to customary international law and consistency, if not full alignment, with the UNCLOS framework.” Id., at p. 13.
132 Id.
133 Id., at p. 14.
134 Id. “As moratoria restrictions expire or are lifted, ocean areas that were formerly closed have the potential to open for energy development. U.S. leasing policy alternatives recognize certain areas under moratoria pursuant to bilateral treaty agreements and customary international law.” Id. “The U.S. OCS extends beyond the EEZ in certain areas and the U.S. is engaged in efforts to establish its outer boundaries, or its extended continental shelf, to ultimately have the extended boundaries recognized generally by the international community.” Id., at p. 15.
process.”135 In sum, the OCSLA and DSHRMA (and their accompanying regulations) as well as various CRS studies clearly demonstrate that, “[d]espite not ratifying UNCLOS, the United States seems to align domestic OCS policy [within and beyond U.S. jurisdiction and control] with UNCLOS”, 136 though without, as much, publicly acknowledging it.137

The ITLOS Seabed Disputes Chamber Advisory Opinion With Respect to Activities in the ‘Area’

The first advisory opinion138 issued by UNCLOS’ ITLOS Seabed Disputes Chamber (the ‘Chamber’) sheds important light on the UNCLOS environmental obligations with which the administration’s OCS policy has been purposefully aligned – particularly, the rules applicable to deep seabed mining activities to be conducted adjacent to or within international waters. A discussion of this opinion follows.

Facts

On February 1, 2011, the Seabed Disputes Chamber issued a nonbinding139 advisory opinion concerning the legal responsibilities and obligations of UNCLOS States Parties
and the International Seabed Authority (‘ISA’) with respect to the sponsorship of activities in ‘the Area’ in accordance with Part XI of the Convention and its 1994 Implementing Agreement. UNCLOS defines the “Area” as “the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction” (i.e., beyond 200 nm). “The Chamber is a separate judicial body within the Tribunal entrusted, through its advisory and contentious jurisdiction, with the exclusive function of interpreting Part XI of the Convention and the relevant annexes and regulations that are the legal basis for the organization and management of activities in the Area.” It’s advisory function “concerns legal questions submitted by the [ISA] Assembly and by the [ISA] Council”. The Council is one of “the two principal organs of the Authority. The Authority is the international organization established by the Convention in order to ‘organize and control activities in the Area’.”

The Chamber’s advisory opinion was formally requested by the ISA Council, pursuant to UNCLOS Article 159(10) and 191, following the receipt by the ISA’s Legal and Technical Commission (‘LTC’) of two applications submitted during 2008 by the Republic of Nauru and the Kingdom of Tonga to conduct activities in the ‘Area’. Lacking the technical and financial capacity to undertake seafloor mining in international waters on their own, and exposed to potential significant liabilities which could preclude

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140 See International Tribunal for the Law of the Sea, Case No. 17—Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area, accessible at: http://www.itlos.org/index.php?id=38&L=1&AND1%253D1-- (hereinafter referred to as ‘Case No. 17’).
141 See UNCLOS Article 1.1.
142 Id., at par. 25. The Chamber’s advisory jurisdiction derives from the ISA’s need for “the assistance of an independent and impartial judicial body...to exercise its functions properly in accordance with the Convention”. Id., at par. 26.
143 Id., at par. 27. “As provided in article 187 of the Convention, the Chamber also has contentious jurisdiction to settle different categories of disputes referred to in that article with respect to activities in the Area.” Id., at par. 28.
144 Id., at par. 26.
146 “The Seabed Disputes Chamber shall give advisory opinions at the request of the Assembly or the Council on legal questions arising within the scope of their activities. Such opinions shall be given as a matter of urgency.” See UNCLOS Article 191.
their participation in such activities, these UNCLOS developing country State Parties’
specified in their applications that they had sponsored contractors Nauru Ocean
Resources Inc. (sponsored by Nauru) and Tonga Offshore Mining Ltd. (sponsored by
Tonga) to undertake a plan of work in the Area to explore the seabed for polymetallic
nodules. The ISA Council’s decision to request an advisory opinion was prompted by
disagreement among ISA LTC members regarding the interpretation of Convention and
1994 Agreement provisions “relating to the implementation of Part XI…that pertain to
the responsibility and liability of sponsoring States”.

Jurisdiction and Applicable Law

The Chamber determined that it possessed advisory jurisdiction to hear the case because
the request for an advisory opinion constituted a valid request originating from
the ISA Council, and “concern[ed] ‘legal questions’ within the meaning of article 191
of the Convention” that raised issues concerning the interpretation of Convention
provisions and issues of general international law, that arose “within the scope of the
ISA Council’s activities.” These activities include approving plans of work and
exercising control over activities in the Area. The Chamber also concluded, pursuant
to UNCLOS Article 293(1), that the law it shall apply will be the rules of the Convention
and other rules of international law not inconsistent therewith. These other rules
include inter alia “the rules, regulations and procedures of the Authority adopted in
accordance with the Convention…and…the terms of contracts concerning activities in

149 See Council of the International Seabed Authority, Proposal to Seek an Advisory Opinion from the Seabed Disputes Chamber
of the International Tribunal for the Law of the Sea on Matters Regarding Sponsoring State Responsibility and Liability -
Submitted by the Delegation of Nauru (ISBA/16/C/6) (March 5, 2010), at pp. 1-2, accessible at:
150 Id., at p. 2. The Council decided not to adopt the proposal as formulated by Nauru, which it later revised to reflect the
articulation of “three more abstract but concise questions”. See Case No. 17 supra at p. 8.
151 See Case No. 17, supra at par. 45.
152 Id., at paras. 33-36.
153 Id., at par. 37. The three questions raised relate inter alia to: 1) “the legal responsibilities and obligations of States Parties to the
Convention with respect to the sponsorship of activities in the Area”; [2] “the extent of liability of a State Party for any failure to
comply with the provisions of the Convention…by an entity whom it has sponsored”; and [3] the “measures that a sponsoring
State must take in order to fulfill its responsibility under the Convention”. Id., at par. 38.
154 Id., at paras. 39-40.
155 Id., at par. 32.
156 Id., at pp. 41-44. UNCLOS Annex III, Article 6 vests the Council with the authority to approve work plans, while UNCLOS
Articles 162 and 153(4) and “the rules, regulations and procedures of the Authority” vest the Council with the authority to exercise
control over activities in the Area. Id., at par. 43.
157 See Case No. 17, supra at paras. 50-52. See also UNCLOS Article 293(1).
the Area…” Furthermore, the Chamber concluded, pursuant to Article 2(1) of the 1994 Implementing Agreement, that it must interpret and apply the provisions of the Convention and the 1994 Implementing Agreement “together as a single instrument”, and that where the provisions of the Agreement and Part XI of the Convention conflict, the former shall prevail. ISA regulations, by contrast, “are instruments subordinate to the Convention, which, if not in conformity with it, should be interpreted so as to ensure consistency with its provisions.”

Analysis of Legal Questions Posed

The ISA Council had posed the following three questions to the Chamber in its request for an advisory opinion:


2) What is the extent of liability of a State Party for any failure to comply with the provisions of the Convention in particular Part XI, and the 1994 Agreement, by an entity whom it has sponsored under Article 153, paragraph 2(b), of the Convention?

3) What are the necessary and appropriate measures that a sponsoring State must take in order to fulfill its responsibility under the Convention, in particular Article 139 and Annex III, and the 1994 Agreement?

Question #1: Sponsoring States’ Due Diligence and Direct Obligations

158 See Case No. 17, supra at par. 53, quoting Article 38 of the Statute of the Tribunal. According to the Chamber, “the rules of the Vienna Convention on the interpretation of treaties apply to the interpretation of provisions of the Convention and the 1994 Agreement…” In addition, since, the Regulations adopted by the Authority…are binding texts negotiated by States and adopted through a procedure similar to that used in multilateral conferences…the Chamber…is per[mit]ed…to consider that the interpretation rules set out in the Vienna Convention may, by analogy, provide guidance as to their interpretation.” Id., at pars. 58-60.

159 Id., at par. 54.

160 Id., at par 93. Regulations “may, nevertheless be used to clarify and supplement certain aspects of the relevant provisions of the Convention.” Id.
The Chamber’s opinion generally identified two types of legal obligations owed by States sponsoring activities in ‘the Area’ beyond national jurisdiction. They include both indirect and direct obligations. It also described the many types of activities that would be covered by such obligations. They include “drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities”. In the context of both exploration and exploitation, they also include “the recovery of minerals from the seabed and their lifting to the water surface, …the evacuation of water from the minerals and the preliminary separation of materials of no commercial interest, including their disposal at sea, …transportation…[in]…the high seas, when directly connected with extraction and lifting,…transportation between the ship or installation where the lifting process ends and another ship or installation where the evacuation of water and the preliminary separation and disposal of material to be discarded take place.”

According to the Chamber, sponsoring States’ primary obligation/responsibility under UNCLOS Article 139(1) is ‘to ensure’ that the activities a sponsored contractor conducts ‘in the Area’ are in conformity or in compliance with the relevant provisions of UNCLOS Part XI and the Annexes thereto, the rules, regulations and procedures of the ISA, and the contracts (plans of work) which are based on Part XI and relevant Annexes thereto. The obligation/responsibility ‘to ensure’ may be characterized as an obligation of ‘due diligence’ “to deploy adequate means, to exercise best possible

161 It also noted that state ‘sponsorship’ of activities in the Area, which is within the discretion of States, is a prerequisite to determining legal responsibility. Id., at pars. 78-79. For example, Convention Annex III, Article 4(3) and Article 11(2) of the ISA Nodules Regulations and Sulphides Regulations require that “[a]ll contractors and applicants for contracts must secure and maintain the sponsorship of the State or States of which they are nationals.” Id., at par. 77. Convention Annex III, Article 4(4) provides that, The sponsoring State or States shall, pursuant to article 139, have the responsibility to ensure, within their legal systems, that a contractor so sponsored shall carry out activities in the Area in conformity with the terms of its contract and its obligations under this Convention.” See also UNCLOS Articles 139(1) and 154(10). Id., at pars. 100-101.

162 The Chamber noted that the phrase ‘legal responsibilities and obligations’ refers to "primary obligations…[acts]…sponsoring States are obliged to do under the Convention." Id., at par. 69.

163 Id., at par. 85, quoting UNCLOS Article 145.

164 Id., at par. 94.

165 Id., at par. 95.

166 Id., at par. 96.

167 Id., at pars. 103-105. The ‘responsibility to ensure’, within the meaning of UNCLOS Article 139(1), “points to an obligation of the sponsoring State under international law…which find [its] legal basis in [the] domestic law” of State Parties that accept it. Id., at pars. 107-108. It is effectively an “obligation[] which States Parties must fulfill[] by exercising their power over entities of their nationality and under their control.” Id., at par. 108. The obligations of sponsored contractors are substantially the same. Id., at par. 106.
In addition, sponsoring States also have ‘direct obligations’ with which they must comply “independently of their obligation to ensure a certain behaviour by the sponsored contractor.” Among the most important of these direct obligations incumbent on sponsoring States are: the obligation to assist the Authority in the exercise of control over activities in the Area; the obligation to apply [implement] a precautionary approach; the obligation to apply best environmental practices; the obligation to take measures to ensure the provision of guarantees in the event of an emergency order by the Authority for protection of the marine environment; the obligation to ensure the

168 “[I]t may be characterized as an obligation ‘of conduct’ and not ‘of result’, and as an obligation of “due diligence”. Id., at par. 110. For example, UNCLOS Article 194(2) provides that “States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment …” Id., at par. 113. “[D]ue diligence’ is a variable concept…[that]…may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge. It may also change in relation to the risks involved in the activity….The standard of due diligence has to be more severe for the riskier activities.” Id., at par. 117.

169 Id., at par. 242(3)(A).

170 Id., at par. 121.

171 The Chamber notes that while Regulation 33(2) of the Sulphides Regulation imposes on the sponsoring State and the ISA the obligation to “apply best environmental practices”, while Regulation 5.1 of the Sulphides Regulation and the accompanying Annex 4, Section 5.1 Standard Contract Clause impose on a sponsored contractor the obligation to “apply best environmental practices”, the regulation nowhere defines that general term. Id., at par. 136. The Chamber also notes that, although the Nodules Regulations do not incorporate such term but instead incorporate the term “best technology”, the more recently issued Sulphides Regulations reflect evolved international law and thus supercede the Nodules Regulation in this respect. Id., at par. 137. In other words, “best environmental practices” likely entail more than employing “best technology”.

172 The Chamber pointed out that Nodules Regulation 32(7) and Sulphides Regulation 35(8) impose upon sponsoring States an obligation to ensure that a contractor abides by its obligation by “providing the Council with a guarantee of its financial and technical capability to comply promptly with emergency orders or to assure that the Council can take such emergency measures…prior to the commencement of testing of collecting systems and processing operations”. Id., at par. 138. This obligation is triggered where the contractor fails to provide such a guarantee and the sponsoring State receives a request from the ISA Secretary-General for assistance. A sponsoring State shall “take necessary measures to ensure that the contractor provides such a guarantee or shall take measures to ensure that assistance is provided to the Authority in the discharge of its responsibilities”. Id. In other words, this direct obligation is linked to the sponsoring State’s direct obligation to assist the Authority. It arguably also can be read as a relevant factor for meeting the sponsoring State’s due diligence obligation.
availability of recourse for compensation in respect of damage caused by pollution;\textsuperscript{175} and the obligation to conduct environmental impact assessments.“\textsuperscript{176} According to the Chamber, “compliance with [direct] obligations can also be seen as a relevant factor in meeting the due diligence ‘obligation to ensure’”.\textsuperscript{177}

As noted above, sponsoring States have a direct obligation to assist the ISA, consistent with UNCLOS Article 153(4), “in its task of controlling activities in the Area for the purpose of ensuring compliance with the relevant provisions of Part XI of the Convention and related instruments”.\textsuperscript{178} The Chamber noted that such obligation is, in part, “a common interest role…[that]…contributes to the realization of the common interest of all States in the proper application of the principle of the common heritage of mankind which requires faithful compliance with the obligations set out in [Convention] Part XI.”\textsuperscript{179}

For example, the ISA', in part, controls activities in the Area by promulgating binding regulations\textsuperscript{180} that require States Parties, State enterprises or natural or juridical persons controlled by them to submit detailed applications to the ISA “for approval of plans of work for exploration”.\textsuperscript{181} These applications must include the presentation of a certificate of sponsorship issued by a sponsoring State Party,\textsuperscript{182} a description of the total area covered by the application,\textsuperscript{183} specific and sufficient information about the applicant’s financial and technical capabilities,\textsuperscript{184} information about previously awarded Authority contracts,\textsuperscript{185} and the execution directly with the Authority of a binding written

\textsuperscript{175} The Chamber pointed out that sponsoring States are also obliged by UNCLOS Article 235(2) “to adopt laws and regulations within the framework of its legal system…to ensure that recourse is available…[to] prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment” by sponsored contractors. \textit{Id.}, at par. 139. It noted that a sponsoring State must “establish procedures, and, if necessary, substantive rules governing claims for damages before its domestic courts” that will ensure the sponsored contractor’s ability to satisfy its obligation under UNCLOS Annex III, Article 22 “to provide reparation for damages caused by wrongful acts committed in the course of its activities in the Area.” \textit{Id.}, at par. 140.

\textsuperscript{176} \textit{Id.}, at par. 122.

\textsuperscript{177} \textit{Id.}, at paras. 123; 242(3)(B).

\textsuperscript{178} \textit{Id.}, at par. 124.

\textsuperscript{179} \textit{Id.}, at par. 76. “[T]he role of the sponsoring State is to contribute to the common interest of all States in the proper implementation of the principle of the common heritage of mankind by assisting the Authority”. \textit{Id.}, at par. 226.


\textsuperscript{181} See Part III, Regulation 10 of both the Nodules Regulations and the Sulphides Regulations; Sulphides Regulation Annex 2.

\textsuperscript{182} See Nodules and Sulphides Regulation 11.

\textsuperscript{183} See Nodules Regulation 15; Sulphides Regulation 12.

\textsuperscript{184} See Nodules Regulation 12; Sulphides Regulation 13.

\textsuperscript{185} See Nodules Regulation 13; Sulphides Regulation 14.
contract the terms of which must acknowledge Authority control over proposed activities in the Area, acceptance of the rules of the Convention, applicable Authority regulations, procedures and contracts, and provide assurances of compliance therewith. Sponsoring states may satisfy this obligation “by taking all measures necessary to ensure such compliance in accordance with article 139[s] ‘due diligence’ obligation.

**The Direct and Indirect Obligation to Adopt a Precautionary Approach**

Sponsoring States also have a direct obligation to adhere to the requirements of Regulation 31(2) of the Nodules Regulations and Regulation 33(2) of the Sulphides Regulations which the ISA has promulgated in furtherance of its obligation to protect the marine environment and the resources of the Area under UNCLOS Article 145. They require sponsoring States to ‘apply (implement in domestic law) a precautionary approach as reflected in Principle 15 of the Rio Declaration’, “in order to ensure effective protection for the marine environment from harmful effects which may arise from activities in the Area”. The Chamber emphasized that this direct obligation “transform[s] th[e] non-binding statement of the precautionary approach in the Rio Declaration into a binding obligation”, specifically, with respect to “prospecting and exploration for polymetallic nodules and sulphides. In this regard, the Chamber found that the language of Principle 15 of the Rio Declaration is self-limiting, insofar, as it “limits its scope to threats of ‘serious or irreversible damage’ and to ‘cost-effective’ measures adopted in order to prevent ‘environmental degradation’”. [The European/strong precautionary principle, by contrast, does not have a ‘serious or irreversible damage’ threshold and does not permit cost-benefit analysis.] It would seem that a sponsoring State would satisfy its direct obligation to apply a precautionary

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186 See Nodules Regulation 14; Sulphides Regulation 15.
187 Id.; Sulphides Regulation Annex 3.
188 Id., at par. 124.
189 See UNCLOS Article 145(a)-(b).
190 Id., at pars. 125-127.
191 Id., at par. 127. Principle 15 of the Rio Declaration provides that, “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”
192 Id., at par. 130. “These Nodules and Sulphides Regulations apply the precautionary approach “specifically to the activities envisaged therein, namely, prospecting and exploration for polymetallic nodules and polymetallic sulphides. It is to be expected that the Authority will either repeat or further develop this approach when it regulates exploitation activities and activities concerning other types of minerals.” Id.
193 Id., at pars. 126, 128.
194 See discussion, supra.
approach, which requires that it go beyond employing the prevention principle, if it enacts cost-effective environmental protection laws with which sponsored contractor compliance is mandatory, for the purpose of preventing sponsored contractors’ activities from causing serious or irreversible environmental damage to the marine environment, even where sufficient scientific evidence of the scope and potential negative impact of the sponsored contractor’s activities is lacking. The Chamber’s ruling, however, does not address the types of risk assessments applicable sponsoring State legislation must prescribe – i.e., whether they must be quantitative or qualitative in nature.195

The Chamber noted, furthermore, that “the precautionary approach is also an integral part of the general obligation of ‘due diligence’ of sponsoring States, which is applicable even outside the scope of the Regulations”.196 This means that sponsoring States are required “to take all appropriate measures to prevent damage that might result from the activities of contractors that they sponsor…in situations where scientific evidence concerning the scope and potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks”.197 Sponsoring States “cannot disregard those risks” and yet meet their obligation of due diligence.198

In other words, in addition to enacting environmental laws employing a precautionary approach that prescribe rules to prevent sponsored contractor activities from causing serious or irreversible damage to the marine environment despite the insufficiency of scientific evidence of the scope and potential negative impact of the sponsored contractor’s proposed activities, sponsoring States must also enact other rules that ensure sponsored contractor compliance with those environmental protection laws. Presumably, a compliance-related precautionary approach could include the enactment and enforcement of legal provisions that: impose substantial noncompliance penalties; require financial sufficiency and adequate minimal insurance coverage for possible damages; require the posting of an ex ante bond of sufficient amount to cover potential damages; require the imposition of criminal penalties in the event sponsored contractor

195 The use of quantitative versus qualitative risk assessments and the importance and priority of risk assessment versus hazard assessment in the risk evaluation process is largely indicative of the distinction between a precautionary approach and the precautionary principle. For example, legal commentators have discerned a pattern in WTO SPS Agreement jurisprudence reflecting the growing influence of qualitative risk assessment over quantitative risk assessment, and this trend may reflect the acknowledgement that SPS Article 5.7 reflects the precautionary approach found in Principle 15 of the Rio Declaration on Environment rather than the precautionary principle which focuses primarily on hazard assessment. See, e.g., Lawrence A. Kogan, REACH Revisited: A Framework for Evaluating Whether A Non-Tariff Measure Has Matured Into An Actionable Non-Tariff Barrier To Trade, 28 American University International Law Review 101-280 (2013), at pp. 188-193, 222-224. See also SSRN draft version, at pp. 36-38, 50, accessible at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2149756.
196 Id., at par. 131.
197 Id.
198 Id.
activities result in serious or irreversible damage to the marine environment; and/or provide for the withdrawal of noncompliant licenses or permits to conduct activities in the Area, thereby imposing a significant financial loss upon contractors. In addition, a precautionary approach may, perhaps, also include enactment and enforcement of legal provisions mandating sponsored contractor creation and implementation of a prescribed internal organizational due diligence and corporate governance framework that adopts a precautionary approach especially to prevent entity licensed activities from damaging the marine environment in the Area, as well as, sponsoring State rules to ensure (enforce) sponsored contractor compliance therewith. Indeed, all of these requirements could be incorporated into a sponsorship contract (agreement) with which compliance is mandatory that must be executed by sponsored contractors as a condition precedent to receiving a license, which shall be enforced through other sponsoring State legal provisions.

Significantly, the Chamber observed, consistent with UNCLOS Article 293(1), that “the precautionary approach […] has been incorporated into a growing number of international treaties and other instruments, many of which reflect the formulation of Principle 15 of the Rio Declaration”, is a rule of international law not incompatible with the Convention. It even went as far as to state that, “this has initiated a trend towards making [the precautionary] approach part of customary international law…[and that t]his trend is clearly reinforced by the inclusion of the precautionary approach in the Regulations and in the ‘standard clause’ contained in Annex 4, section 5.1, of the Sulphides Regulations.” The Chamber, however, stopped short of concluding that the obligation to employ a precautionary approach is a direct obligation under the Convention and a general obligation under customary international law, which should be employed to interpret the provisions of Part XI of the Convention or the Convention.

199 The advisory opinion, however, does not address whether such measures should be reasonable and cost-effective, consistent with Rio Principle 15.
200 “[T]he precautionary approach…[as set forth in the sulphides regulations]…is a contractual obligation of the sponsored contractors whose compliance the sponsoring State has the responsibility to ensure.” Id., at par. 133. The obligation of due diligence requires “the sponsoring State…to take measures within the framework of its own legal system in order to oblige sponsored entities to adopt such an [a precautionary] approach.” Id., at par. 134.
201 Id., at par. 135.
202 Id. According to the Chamber, [A]rticle 31[(3)(c)] of the Vienna Convention…[provides that]…the interpretation of a treaty should take into account not only the context but ‘any relevant rules of international law applicable in the relations between the parties” Id.
203 “Customary international law is traditionally considered to be comprised of two elements: state practice and opinio juris, with opinio juris being a subjective feeling of legal obligation regarding the practice in question. Since subjective feelings are difficult to identify, the analysis of customary rules has almost always focused on state practice. The questions asked include the following: what kinds of behavior count as state practice, how many states need to participate in the practice, and over how long a period of time?” See Michael Byers, Power, Obligation and Customary International Law, Introduction, 11 Duke J. of Comp. & Int’L L. 81 © 2001, accessible at: http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1213&context=djcil.
Environmental Law Obligations

Revised U.S. Deep Seabed Mining Policy Reflects UNCLOS and Other International Law Obligations


“Article 31 of the Vienna Convention on the Law of Treaties (VCLT)...covers the interpretation of treaties, and, in 31(3)(a) and (b), designates subsequent agreement and subsequent practice as the main tools for determining the consent of parties to evolving interpretations of treaty obligations... The ability of subsequent agreement and practice to provide predictable yet flexible interpretation of treaties is impeded by today's insufficiently clear agreement as to what constitutes 'practice,' as well as how to ascertain 'agreement' from practice...International tribunals have attempted to answer these questions regarding the application of subsequent practice. Given that customary law governs the application of subsequent practice in the gaps not covered by the VCLT, states' consent to obligations under treaty law will be better protected when states have greater awareness of how subsequent practice may change their treaty obligations... Some tribunals consider the nature of the states' conduct; others consider whether the practice is sufficiently concordant; and, sometimes, after considering all the factors, a tribunal will simply not come to a conclusion regarding the application of Article 31(3)(a)... The greater flexibility and increased use of state practice to determine interpretations of treaties offers a way for parties to fit their interpretations of their obligations to changing contexts to ensure treaties' effectiveness... Interpretation of treaty obligations based on subsequent practice, allowing those obligations to evolve, creates the danger of 'reinterpretation of the treaty beyond the actual consent of the parties' if parties' intentions are not properly accounted for. 198 The key to applying subsequent practice prudently is to determine what effect states intend practice to have on an interpretation or modification of the treaty provision... See Alexander M. Feldman, Evolving Treaty Obligations: A Proposal for Analyzing Subsequent Practice Derived from WTO Dispute Settlement, 41 International Law and Politics 656, 657-659, 703-704 (2009), accessible at: https://www.law.nyu.edu/ecm_dlv4/groups/public/@nyu_law_website__journals__journal_of_international_law_and_politics/documents/documents/ecm pro_063936.pdf.

The Restatement (Third) of the Foreign Relations Law of the United States provides that customary international law “results from a general and consistent state practice” done out of “a sense of legal obligation.” See Restatement (Third) of the Foreign Relations Law of the United States, § 102(2) (1987). Article 38(1)(b) of the Statute of the International Court of Justice (ICJ) authorizes the ICJ to apply “informational custom, as evidence of a general practice accepted as law” in resolving international disputes. See Statute of the International Court of Justice Art. 38(1)(b) (June 26, 1945), 59 Stat. 1055. However, as one legal commentator has observed, “[t]his definition, although easily stated, turns out to be terribly difficult to apply. For example, there is little agreement as to how widespread the practice must be or how consistently states must follow the practice. More fundamentally, scholars and commentators do not agree on what kinds of practice are relevant.” See Timothy Meyer, Codifying Custom, 160 University of Pennsylvania Law Review 995, 1002-1003 (2012), accessible at: http://www.pennumbra.com/issues/pdfs/160-4/Meyer.pdf. "While scholars have spilled much ink attacking and defending customary international law as such, states have largely responded to custom’s difficulties by turning customary law into treaty law; that is, they have responded with codification. By codification, I mean the formulation and reduction to a written instrument of rules of law that elaborate established doctrines and precedents, which, even if nonbinding, have legal consequences. Codification solves some of the practical problems with customary law by clearly delineating the steps that mark the creation of a legal obligation... Codification and international organizations both seek to use substantive legal and procedural rules to structure and shape what would otherwise be unrestrained political interactions among states” (emphasis added). Id., at pp. 1003-1004. However, this commentator’s research findings have led him to question the desirability of codification given its negative feedback loops. “The negotiated elaboration of vague, universally applicable customary rules is one way in which states seek to reduce the transaction costs of making new law. Codification does this by limiting participation in the formulation of customary rules and, at the same time, creating incentives for excluded states to adhere to the negotiated terms. The consequences of this strategy of codification are profound. Codified customary rules, counter-intuitively, may not evolve toward efficiency, thus casting further doubt on the thesis that decentralized systems of law offer a way out of the gridlock and messy politics that plague legislatures and legislative-like bodies. Moreover, codification can actually undercut the long-term benefits of competition among.
actual relevant provisions (text) of Part XII of the Convention which impose an obligation upon State Parties to “prevent, reduce and control pollution of the marine environment arising from or in connection with seabed activities” conducted in the Area \(^{207}\) and the adjacent EEZ \(^{208}\) had instead required only the application of the prevention principle.

**The Direct and Indirect Obligation to Conduct an Environmental Impact Assessment**

Beyond assisting the ISA in undertaking its activities in the Area and adopting a precautionary approach in establishing and enforcing laws and policies to protect the marine environment from potential damage caused by sponsored contractor activities, the Chamber ruled that sponsoring States also have a direct obligation “to conduct an environmental impact assessment” \(^{209}\) and “a [related] due diligence obligation to ensure compliance by the sponsored contractor with this obligation.” \(^{210}\) Paragraph 7 of Section 1 of the Annex to the 1994 UNCLOS Implementing Agreement \(^{211}\) sets forth the due diligence obligation. It provides that, “A [contractor] application for approval of a plan of work shall be accompanied by an assessment of the potential environmental impacts of the proposed activities…” \(^{212}\) Regulation 31(6) of the Nodules Regulations and Regulation 33(6) of the Sulphides Regulations “establish [the] direct obligation of the sponsoring State concerning environmental impact assessment…[that]…is linked to the direct obligation of assisting the Authority…[and]…which can also be read as a relevant factor for meeting the sponsoring State’s due diligence obligation.” \(^{214}\) In other words, sponsoring States are “obliged not only to cooperate with the Authority in the establishment and implementation of impact assessments, but also to use appropriate legal rules by making it more difficult to harmonize standards. These consequences should lead us to question the desirability of codification as an across-the-board solution to the indeterminacy that can plague international legal obligations.” \(\text{id.}, \text{at p. 1069.}\)

207 See UNCLOS Articles 142(1), 142(3), 209(1)-(2), 215.
208 See UNCLOS Articles 194(1), 194(2), 194(3)(c); 208(1)-(2), 214.
209 Id., at par. 145.
210 Id., at pars. 141; 242(3)(B).
213 The Chamber noted how these regulations provide that, “[c]ontractors, sponsoring States and other interested States or entities shall cooperate with the Authority in the establishment and implementation of programmes for monitoring and evaluating the impacts of deep seabed mining on the marine environment”. See Case No. 17, supra at par. 142.
214 Id. “This provision is designed to clarify and ensure compliance with the sponsoring State’s obligation to cooperate with the Authority in the exercise of the latter’s control over activities in the Area under article 153, paragraph 4, of the Convention, and of its general obligation of due diligence under article 139 thereof.” Id. In other words, sponsoring States are “obliged not only to cooperate with the Authority in the establishment and implementation of impact assessments, but also to use appropriate means to ensure that the contractor complies with its obligation to conduct an environmental impact assessment.” Id.
means to ensure that the contractor complies with its obligation to conduct an environmental impact assessment.”215 Nodules Regulation 31(6) and Sulphides Regulation 33(6) directly oblige contractors and sponsoring States to “cooperate with the Authority in the establishment of monitoring programmes to evaluate the impact of deep seabed mining on the marine environment, particularly through the creation of ‘impact reference zones’ and ‘preservation reference zones’” and the comparison of relative environmental conditions within them.216 To this end, the Chamber pointed out how ISA Law and Technical Commission (‘LTC’) recommended guidance for contractors further clarifies this obligation by identifying specific activities that “require prior environmental impact assessment, as well as an environmental monitoring programme to be carried out during and after the specific activity”.217

The Chamber, moreover, stressed how the obligation to conduct an environmental impact assessment is not only “a direct obligation under [Article 206 of] the Convention”, but also “a general obligation under customary international law”, as recognized by the International Court of Justice in Pulp Mills on the River Uruguay.218 In such case, the ICJ affirmed the international law obligation “to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.”219 The Chamber observed that, although the ICJ’s ruling applied in the context of transboundary concerns, its reasoning and its references to ‘shared resources’ “may also apply to activities with an impact on the environment in an area beyond the limits of national jurisdiction…to cover activities in the Area even beyond the scope of the Regulations.”220 Moreover, the Chamber noted that, although “international law does not “specify the scope and content of an environmental impact assessment”221

215 Id.
216 Id., at par. 143.
219 Id., at par. 147. See also Pulp Mills on the River Uruguay (Arg. v. Uru.), supra at par. 204.
220 See Case No. 17, supra at par. 148.
221 Id., at par. 149. See also Pulp Mills on the River Uruguay (Arg. v. Uru.), supra at par. 205.
activities in the Area.” Consequently, the Chamber concluded that sponsoring States’ and sponsored contractors’ obligations “concerning environmental impact assessments extend beyond the scope of application of specific provisions of the Regulations.”

Question 2: Sponsoring States’ Liability for Any Sponsored Contractor Failure to Satisfy Obligations

The Chamber observed that UNCLOS Article 139(2), second sentence, sets forth “rules concerning sponsoring State liability”, while UNCLOS Annex III, Article 22 sets forth “rules concerning the liability of the contractor and the Authority”, and that each of these rules apply “without prejudice…to the rules of international law concerning the liability of States Parties and international organizations.” In the Chamber’s view, sponsoring State liability is triggered by the sponsoring State’s “failure…to carry out its own obligations”, and not by “the failure of the sponsored contractor to meet its obligations”.

UNCLOS Article 139(2), second sentence, and UNCLOS Annex III, Article 4(4), second sentence, provide “a link between the liability of the sponsoring State and the failure of the sponsored contractor to comply with its obligations, thereby causing damage.” They “establish two conditions for liability to arise: the failure of the sponsoring State to carry out its responsibilities and the occurrence of damage.” Such failure “may consist in an act or an omission that is contrary to that State’s responsibilities under the deep seabed mining regime” which, in turn, “depends primarily on the requirements of the obligation alleged to have been breached.” The Chamber concluded that sponsoring State liability will attach under UNCLOS Article 139(2) if a causal link can be established between a sponsored contractor’s damage to the marine environment in the Area and the sponsoring State’s failure to carry out its prescribed responsibilities – i.e., contractor damage was a result of sponsoring State failure. Since “[s]uch a causal

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222 See Case No. 17, supra at par. 149.
223 Id., at par. 150.
224 Id., at par. 171.
225 Id., at pars. 172; 242(4).
226 Id., at par. 173.
227 Id., at par. 176. The Chamber noted how this constitutes an exception to the general international rule that “a State may be held liable under customary international law even if no material damage results from its failure to meet its international obligations” (i.e., in the event of a mere breach). Id., at par. 178. See also Id., at par. 242(4).
228 Id., at par. 177.
229 Id.
230 Id., at par. 181.
A sponsoring State shall be exempt from liability under UNCLOS Article 139(2), however, even where “the sponsored contractor fails to comply with the Convention, the Regulations or its contract, and such failure results in damage”, if the sponsoring State “has taken all necessary and appropriate measures to secure effective [sponsored contractor] compliance”: 1) by assisting the Authority, consistent with UNCLOS Article 153(4); and 2) by “adopt[ing] laws and regulations and tak[ing] administrative measures which are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction”, consistent with UNCLOS Annex III, Article 4(4).235 A sponsoring State shall not be eligible for such exemption, however, if it fails to

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231 Id., at pars. 182, 184, 242(4).
232 Id., at par. 189.
233 The Chamber noted that “the liability regime established in Annex III to the Convention and related instruments does not provide for the attribution of activities of sponsored contractors to sponsoring States”, and thus, is an exception to customary international law rules. See Case No. 17, supra at par. 189.
235 Id., at pars. 186, 242(4). Arguably, the Obama administration is familiar with the international rules of State Responsibility which were incorporated into Annex VI of the Madrid Protocol on Environmental Protection to the Antarctic Treaty. See “Annex VI - Liability Arising From Environmental Emergencies, Protocol on Environmental Protection to the Antarctic Treaty” (1991), at Article 10, accessible at: http://www.ats.aq/documents/recatt/Att249_e.pdf. (Article 10 provides that, “A Party shall not be liable for the failure of an operator, other than its State operators, to take response action to the extent that that Party took appropriate measures within its competence, including the adoption of laws and regulations, administrative actions and enforcement measures, to ensure compliance with this Annex.”) See also “MESSAGE FROM THE PRESIDENT OF THE UNITED STATES, Transmitting Annex VI on Liability Arising from Environmental Emergencies to the Protocol on Environmental Protection to the Antarctic Treaty (Annex VI) Adopted on June 14, 2005”, (Treaty Doc. 111-2), 111th Congress First Session (April 2, 2009) at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_documents&docid=f:td002.pdf. (“Annex VI sets forth rules and procedures relating to liability arising from the failure of operators in the Antarctic to respond to environmental emergencies...Its provisions advance the U.S. goals of protecting the environment of Antarctica, establishing incentives for Antarctic operators to act responsibly, and providing for the reimbursement of costs incurred by the United States Government when it responds to environmental emergencies caused by others.” Id., at p. 7.) “Pursuant to Annex VI, which has not yet entered into force for any State, the Parties agree to require their operators to take preventative measures and establish contingency plans for preventing and responding to environmental emergencies in the Antarctic Treaty area and to take prompt and effective response action to such emergencies arising from their activities. Annex VI also sets forth provisions relating to liability arising from the failure of operators in the Antarctic to respond to environmental emergencies.” Id., at p. V. “Article 10 – State Liability...Thus, if a Party enacts necessary laws and regulations and implements them, it does not bear liability for acts taken by its nationals and non-State operators.” Id., at Executive Summary at p. 7.) See also Lawrence A. Kogan, Polar Sea Ice Melts Away in Time for Antarctic Easter Surprise Institute for Trade, Standards and Sustainable Development (April 2009), accessible
comply with its direct obligations. Sponsoring State “[l]iability shall be joint and several” where joint development activities involve one or more sponsoring States and one or more sponsored contractors, and the failure of either State to comply with its obligations results in sponsored contractor damage, unless otherwise provided for in ISA regulations.

According to the Chamber, UNCLOS Annex III, Article 22, like Regulation 30 of the Nodules Regulations and Regulation 32 and Section 16.1 of the Standard Clauses for exploration contracts of the Sulphides Regulations, provide that sponsored contractors shall be held liable in every case “for the actual amount of damages”. Similarly, customary international law requires States “to provide for a full compensation (restitution).” The form of reparation will depend on both the actual damage and the technical feasibility of restoring the situation to the status quo ante.” The Chamber, furthermore, noted that both the sponsored contractor and the sponsoring State “remain[] liable for damage even after the completion of the exploration phase.”

UNCLOS Annex III, Article 22, nevertheless, limits the liability of the sponsored contractor and the sponsoring State to the extent of any “contributory acts or omissions by the Authority [ISA].” Sponsoring States also will not be held responsible for reparations where the sponsored contractor “has paid the actual amount of damage”. Indeed, even if “the sponsoring State has taken all necessary and appropriate measures, the sponsored contractor has caused damage and is unable to meet its

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236 Id., at par. 207.
237 Id., at pars. 191-192, 242(4).
238 Id., at pars. 193, 242(4).
239 Id., at par. 194. “This conclusion was first reached by the Permanent Court of International Justice in the Factory of Chorzów case (PCU Series A, No. 17, p. 47). This obligation was further reiterated by the International Law Commission. According to article 31, paragraph 1, of the ILC Articles on State Responsibility: ‘The responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act.’” Id.
240 See Case No. 17, at par. 197.
241 Id., at paras. 198, 242(4).
242 Id., at par. 199. “It may therefore be deduced that the main liability for a wrongful act committed in the conduct of the contractor’s operations or in the exercise of the Authority’s powers and functions rests with the contractor and the Authority, respectively, rather than with the sponsoring State. In the view of the Chamber, this reflects the distribution of responsibilities for deep seabed mining activities between the contractor, the Authority and the sponsoring State.” Id., at par. 200.
liability in full”, the sponsoring State still does not bear any residual liability. The Chamber strongly suggested that, in cases “where a contractor does not meet its liability in full while the sponsoring State is not liable” because it has complied with its obligations, “the Authority may wish to consider the establishment of a trust fund to compensate for the damage not covered.” It reasoned that current customary international law cannot be relied upon to provide recourse for purposes of closing such a gap in liability.

The Chamber, furthermore, noted the various parties entitled to claim compensation in the event sponsoring State liability is triggered. They “may include the Authority, entities engaged in deep seabed mining, other users of the sea, and coastal States.” In addition, any State Party to the Convention, pursuant to the customary international law on state responsibility, “may also be entitled to claim compensation in light of the erga omnes character of the obligations relating to preservation of the environment of the high seas and in the Area.”

Question 3: ‘Necessary and Appropriate Measures’ a Sponsoring State Must Take to Fulfill its Responsibility Under the Convention and Implementing Agreement

In this portion of its opinion, the Chamber discussed in greater detail the operation of the phrase “necessary and appropriate measures”, as contained in UNCLOS Article
139(2) and Annex III, Article 4(4). According to the Chamber, such language serves to both “ensure compliance by the contractor with its obligations and to exempt the sponsoring State from liability for damage caused by the sponsored contractor.”

To both qualify for exemption from liability and satisfy the obligation of due diligence, UNCLOS Annex III, Article 4(4) stipulates that sponsoring States must “adopt laws and regulations and to take administrative measures”, consistent with their legal system, “because not all the obligations of a contractor may be enforced through administrative measures or contractual arrangements alone”. The Chamber noted, for example, that administrative measures “may include the establishment of enforcement mechanisms” for the active supervision of contractor activities and “may also provide for the coordination between the various activities of the sponsoring State and those of the Authority”. A sponsoring State must ensure that its laws, regulations and administrative measures are “in force at all times that a contract with the Authority is in force”, in order to both satisfy its obligation of due diligence and to absolve itself from liability. In this regard, sponsoring State laws, regulations and administrative measures must be made consistent with the Nodules and Sulphides Regulations, and must be periodically reviewed “so as to ensure that they meet current standards and that the contractor meets its obligations effectively without detriment to the common heritage of mankind.” A sponsoring State, however, will not be deemed to satisfy its due diligence obligation or to retain its eligibility for exemption if it merely enters into a contractual sponsoring arrangement with the contractor. The Chamber concluded that, “[c]ontractual arrangements alone cannot satisfy the obligation undertaken by the sponsoring State…to contribute to the common interest of all States in the proper implementation of the principle of the common heritage of mankind by assisting the Authority and by acting on its own with a view to ensuring that entities under its jurisdiction conform to the rules on deep seabed mining.”

251 Id., at pars. 217, 242(5).
252 The Chamber emphasized that “[t]he existence of such laws and regulations, and administrative measures is a necessary requirement” for meeting for carrying out the obligation of due diligence of the sponsoring State and for seeking exemption from liability.” Id., at par. 242(5).
253 Id., at pars. 218, 242(5)
254 Id.
255 Id., at pars. 219, 242(5).
256 Id., at pars. 220-221, 242(5).
257 Id., at par. 222.
258 Id., at par. 223. The Chamber reasoned that, “[m]ere contractual obligations between the sponsoring State and the sponsored contractor…would…[not]…establish legal obligations that could be invoked against the sponsoring State by entities other than the sponsored contractor…[a]nd… would, moreover, lack transparency” because it would be “difficult to verify, through publicly available measures, that the sponsoring State had met its obligations.” Id., at pars. 224-225. See also Id., at par. 242(5).
259 Id., at par. 226.
Recognizing that the specific policy choices that a sponsoring State must make in determining “what measures will enable it to discharge its responsibilities” (within the meaning of UNCLOS Articles 139(2) and 153(4) and Annex III, Article 4(4)) are largely a matter of State sovereignty, the Chamber proceeded to set forth some general considerations. At a minimum, such measures must be “reasonably appropriate” for securing compliance by persons under its jurisdiction. This means that they must be “agreeable to reason and not arbitrary.” In the Chamber’s view, the obligation to take ‘reasonable and appropriate’ measures requires the sponsoring State “to act within its own legal system, taking into account” that system’s idiosyncrasies. While the determination of what is ‘reasonable and appropriate’ generally falls within the discretion of the sponsoring State, that discretion, nevertheless, is not absolute. According to the Chamber, a sponsoring State must remain mindful of its “obligation to assist the Authority acting on behalf of mankind as a whole” when making such determination. In addition to acting in a reasonable and non-arbitrary manner, a sponsoring State “must take into account, objectively, the relevant options in a manner that is reasonable, relevant and conducive to the benefit of mankind as a whole”. This means that it “must act in good faith, especially when its action is likely to affect prejudicially the interests of mankind as a whole.”

Furthermore, the Chamber provided several examples of domestic laws, regulations and administrative measures that a sponsoring State may adopt, apply and enforce to satisfactorily implement its obligations under the Convention. For example, they “may concern, inter alia, financial viability and technical capacity of sponsored contractors, conditions for issuing a certificate of sponsorship and penalties for non-compliance by such contractors.” In addition, they may include laws, regulations and/or implementing measures which assure, consistent with UNCLOS Annex III, Article 22(2)

260 Id., at par. 227.
261 Id., at par. 228.
262 Id.
263 Id., at par. 229.
264 Id., at pars. 229-230.
265 Id., at par. 230.
266 Id.
267 Id. The Chamber emphasized that “The need to act in good faith is also underlined in articles 157, paragraph 4, and 300 of the Convention. Reasonableness and non-arbitrariness must remain the hallmarks of any action taken by the sponsoring State. Any failure on the part of the sponsoring State to act reasonably may be challenged before this Chamber under article 187 (b) (i) of the Convention.” Id. See also Id., at par. 242(5).
268 Id., at pars. 234, 242(5).
and Article 39 of the Statute of the ITLOS,²⁶⁹ that the Chamber’s decisions “shall be enforceable in the territories of the States Parties in the same manner as judgments or orders of the highest court of the State Party in whose territory the enforcement is sought”.²⁷⁰ The Chamber also emphasized that such rules may, by way of example, also include provisions implementing the direct obligations of sponsoring States previously discussed.²⁷¹

The Chamber, moreover, noted the significance of UNCLOS Annex III, Article 21(3). First, this provision imposes a “general obligation” for sponsoring States not to impose contract conditions on sponsored contractors “that are ‘inconsistent’ with Part XI of the Convention”.²⁷² Sponsoring States, in other words, must “adopt laws and regulations and take administrative measures...[that]...assist...[and] not hinder the contractor in...[the]...fulfill[ment] of its contractual obligations”.²⁷³ Second, said provision also establishes “a minimum standard of stringency” for sponsoring State environmental or other laws and regulations that may be applied to a sponsored contractor.²⁷⁴ A sponsoring State’s marine protection laws and regulations and administrative measures “cannot be less stringent than those adopted by the Authority, or less effective than international rules, regulations and procedures.”²⁷⁵ Consequently, in the Chamber’s view, sponsoring States are free to adopt, apply and impose on sponsored contractors environmental or other laws, regulations and procedures “more stringent than” those the ISA has adopted in fulfillment of its obligation to protect the marine environment consistent with UNCLOS Article 145 and Annex III, Article 17(2)(f),²⁷⁶ or those required by international law consistent with UNCLOS Article 209(2).²⁷⁷ This means that sponsoring State UNCLOS Parties, such as EU Member States, and an aspiring UNCLOS State Party, such as the U.S., may, in satisfaction of the due diligence and direct obligations set forth in this advisory opinion, choose to adopt, apply and impose

²⁷⁰ See Case No. 17, supra at par. 235. UNCLOS Annex VI, Article 39 (of the Statute of the International Tribunal for the Law of the Sea) requires UNCLOS State Parties to enforce the decisions of the Seabed Disputes Chamber.
²⁷¹ Id., at par. 236. “These include: the obligations to assist the Authority in the exercise of control over activities in the Area; the obligation to apply a precautionary approach; the obligation to apply best environmental practices; the obligation to take measures to ensure the provision of guarantees in the event of an emergency order by the Authority for protection of the marine environment; the obligation to ensure the availability of recourse for compensation in respect of damage caused by pollution; and the obligation to conduct environmental impact assessments.” Id.
²⁷² Id., at paras. 231-232.
²⁷³ Id., at par. 238.
²⁷⁴ Id., at paras. 232, 240.
²⁷⁵ Id., at par. 242(5).
²⁷⁶ Id., at paras. 240, 242(5).
²⁷⁷ Id., at paras. 241, 242(5).
on sponsored contractors undertaking deep seabed mining activities in the Area, 
domestic environmental laws, regulations, procedures that are based on the 
precautionary principle, a standard that is universally recognized as being more 
stringent and restrictive than the Rio Declaration’s precautionary approach. 278 The 
potential ramifications of this particular Chamber ruling are quite significant, considering 
that “[i]n addition to OCSLA, [the Oil Pollution Act of 1990] OPA 90, and NEPA, [U.S.] 
OCS oil and gas activities may implicate a variety of other federal laws, including but not 
limited to the Clean Air Act, the Marine Mammal Protection Act, (MMPA), the Coastal 
Zone Management Act (CZMA), the Endangered Species Act (ESA), and the 
Magnuson-Stevens Fishery Conservation and Management Act (MSA).”279

Conclusion

A cursory review of evolving U.S. deep seabed mining and oceans policies clearly 
reflects U.S. administration efforts since the Deepwater Horizon incident to effectuate 
substantive changes in federal agency regulations implementing the OCSLA, the 
DSHMRA, and a host of federal environmental statutes that are implicated by U.S. 
offshore oil and gas activities. 280 These administration policy changes, driven largely by 
the environmental movement, began with the White House Ocean Policy Task Force’s 
issuance of final recommendations calling for the adoption of the mutually reinforcing 
precautionary and eco-systems-based management approaches to ocean resource 
management and the subsequent issuance of a presidential executive order mandating 
their implementation by all U.S. federal agencies under the auspices of a newly created 
National Oceans Council. DOI revisions to OCSLA-implementing regulations more 
clearly incorporate ‘precaution’ rather than ‘prevention’ language, and require offshore 
oil and gas lessees and operators to provide more detailed advance information about 
deep sea exploration and development plans and the preparation of EIAs describing the 
specific technologies being employed upon which BOEM EIAs and five-year OCS 
development plans may be based, as evidenced by the 2012-2017 OCS development

278 See discussion, supra.

279 See Andrew Hartsig, Shortcomings and Solutions: Reforming the Outer Continental Shelf Oil and Gas Framework in the Wake 
of the Deepwater Horizon Disaster, supra at p. 271. See also Lawrence A. Kogan, What Goes Around, Comes Around: How 
UNCLOS Ratification Will Herald Europe’s Precautionary Principle as U.S. Law, supra at pp. 83-140; Lawrence A. Kogan, 
‘Ecosystem-Based Management’: A Stealth Vehicle To Inject Euro-Style Precaution Into U.S. Regulation, supra; Lawrence A. 
Kogan, A Chill Wind for Precaution?: The Broader Ramification of the U.S. Supreme Court’s Winter Ruling, Wash. L. Found. 
Rescuing the Strong Precautionary Principle From Its Critics, supra; Jale Tosun, “Risk Regulation in Europe: Assessing the 
Application of the Precautionary Principle”, supra.

280 While this author does not analyze the most recent U.S. administration policy changes made to U.S. federal environmental 
regulations implicated by U.S. OCS policy in compliance with the presidential executive order, particularly the incorporation of a 
precautionary approach, he did analyze this potential in a previous law review article cited herein, as referenced above.
plan. These revisions also require preparation of contingency plans for employing marine environment-protecting remedial measures in the event of a potential technology failure (well-blowout), and documentation demonstrating lessee and operator technology use and management capabilities. Such OCSLA-related revisions are similar to the requirements contained in NOAA regulations implementing DSHMRA, a transitory legislative regime that shadows the UNCLOS in anticipation of eventual U.S. accession thereto. The NOAA regulations, likewise, require the preparation of detailed environmental impact assessments that are to be accompanied by statements of financial resources and technological experience, and by detailed information about plans for and the area(s) of exploration.

Arguably, these U.S. policy changes were undertaken largely to ensure that current and planned offshore oil and gas exploration and development activities along the U.S. continental shelf within and beyond the U.S. EEZ, respectively, do not potentially endanger the protection of the marine environment and its living resources, consistent with the evolving UNCLOS legal regime, as recently interpreted by the Seabed Disputes Chamber of the ITLOS in its first advisory opinion. The Chamber interpreted the textual provisions to UNCLOS Part XI and recent accompanying ISA regulations as incorporating evolving customary international environmental law norms that did not exist at the time UNCLOS was negotiated, namely the UN Rio Declaration’s precautionary approach and the ICJ and PCIJ caselaw-inspired requirement to conduct an EIA. The Chamber held that all States sponsoring deep seabed mining activities in international waters are subject to both indirect and direct obligations under international law to ensure the protection of the marine environment in and around the Area, by adopting, implementing and enforcing mandatory laws incorporating these norms and other provisions within their domestic legal systems that control sponsored contractor activities in the Area. Domestic laws should also ensure sponsoring State and sponsored contractor assistance with ISA efforts to exercise control over the Area, sponsored contractor financial guarantees in the event of emergencies in the Area, and sponsoring State provision for financial recourse for damages caused to the Area. In this regard, where sponsoring contractor activities cause damage to the Area, sponsoring State liability for compensatory damages will attach only if the sponsoring State has failed to meet its indirect and direct legal obligations. International law may entitle any UNCLOS Party, the ISA, and any sea-using private entities to claim compensation in the event sponsoring State liability is triggered.

The most potentially problematic aspect of both the U.S. administration OCS policy change and the non-binding but nevertheless influential ITLOS advisory opinion is their
singular and mutual embrace of the UN Rio Declaration’s precautionary approach. The U.S. administration’s aggressive implementation of the precautionary approach in a manner that resembles Europe’s stronger precautionary principle has already stymied offshore oil and gas development with serious U.S. economic, technological and national security repercussions. Unfortunately, with ongoing guidance from the environmental movement,\(^\text{281}\) recently proposed DOI regulations implementing a precautionary approach that would mandate “the disclosure to the public of chemicals used in hydraulic fracturing on public land and Indian land”\(^\text{282}\) and other restrictions now threaten to derail the significant economic, technological, national security, and environmental gains thus far secured through the use of horizontal drilling and hydraulic fracturing methods\(^\text{283}\) to recover shale oil and gas on the continental U.S.\(^\text{284}\) Such a

\(^{281}\) See, e.g., Government Accountability Office, Oil and Gas: Information on Shale Resources, Development, and Environmental and Public Health Risks, Report to Congressional Requesters (GAO-12-732 (Sept. 2012), accessible at: http://www.gao.gov/assets/650/647791.pdf (highlighting that: 1) EIA and USGS estimates of the size of U.S. shale oil and gas resources “are highly dependent on the data, methodologies, model structures, and assumptions used to develop them”; 2) “less is known about the amount of technically recoverable shale oil than shale gas”; and 3) “[o]il and gas development, whether conventional or shale oil and gas, pose inherent environmental and public health risks, but the extent of these risks associated with shale oil and gas development is unknown, in part, because the studies GAO reviewed do not generally take into account the potential long-term, cumulative effects.” Id., at Summary. See also Civil Society Institute and Environmental Working Group, Energy, Water and Clean Air: What Kind of Leadership Do Americans Want?, ORC International Survey (Jan. 10, 2013), at pp. 6, 19, 38, accessible at: http://www.civilsocietyinstitute.org/media/pdfs/011013%20CSI%20EWS%20ACEA%20survey%20report%20FINAL2.pdf, 80 percent of Americans think we ‘should get the facts first about health and environmental risks before the potential damage is done by energy production.’ This ‘precautionary principle’ approach is supported by 67 percent of Republicans, 82 percent of Independents, and 89 percent of Democrats.” Id., at p. 6.

\(^{282}\) See U.S. Department of the Interior Bureau of Land Management, Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on Federal and Indian Lands, Proposed Rule 43 CFR Part 3160, 77 FR 27691 (May 11, 2012) accessible at: http://www.gpo.gov/fdsys/pkg/FR-2012-05-11/pdf/2012-11304.pdf; See also 77 FR 38024 (June 26, 2012), accessible at: http://www.gpo.gov/fdsys/pkg/FR-2012-06-26/pdf/2012-15597.pdf (extending the deadline for comments from July 10, 2012 to Sept. 10, 2012). “The rule would provide disclosure to the public of chemicals used in hydraulic fracturing on public land and Indian land, strengthen regulations related to well-bore integrity, and address issues related to flowback water. This rule is necessary to provide useful information to the public and to assure that hydraulic fracturing is conducted in a way that adequately protects the environment.” See 77 FR 27691, supra. The proposed regulations, for example, “would require the operator to submit information in the form of a cement bond log, which...would be used to verify that the operator has taken the necessary precautions to prevent migration of fluids in the annulus from the fracture zone to the usable water horizons” (emphasis added). Id., at 27696. In addition Proposed Regulation Sections 3.162-3.3(o)(7) and 3.162-3.3(d)(1)-(3) would require the operator to provide substantial information about its activities and to conduct various tests. “The BLM believes that all of these tests are important to show that reasonable precautions have been taken to ensure the protection of other resources during well stimulation activities’ (emphasis added). Id., at 27697.

\(^{283}\) Exxon CEO Rex Tillerson...believes the discourse about shale has been hijacked and distorted...He argues that shale drillers are being held to an unrealistic safety standard. ‘What’s happened is the tables have been turned around now to where we have to prove it’s not going to happen,’ he says. ‘Well, that is a very dangerous exchange to get into because where it leads you from a regulatory and policy standpoint is to govern by the precautionary principle. And the precautionary principle will absolutely undermine the economy.’ He adds, ‘If you want to live by the precautionary principle, then crawl up in a ball and live in a cave’” (emphasis added). See Brian O’Keefe, Exxon’s Big Bet on Shale Gas, CNN Money (April 16, 2012), accessible at: http://tech.fortune.cnn.com/2012/04/16/exxon-shale-gas-fracking/. See also Andrew Orlowski, Frack me! UK Shale Gas Bonanza ’Bigger than North Sea Oil’, The Register (Dec. 14, 2012), accessible at: http://www.theregister.co.uk/2012/12/14/gaia_violated_by fracking/.” On Monday the Mayor of London Boris Johnson characterised objections to fracking as irrational and psychological, writing of the environmentalists: ‘Beware this new technology, they wail. Do not tamper with the corsets of Gaia! Don’t probe her loamy undergarments with so much as a finger — or else the
result would be both misguided and unnecessary given the lessons France\textsuperscript{285} has learned with respect to its reliance on the precautionary principle.\textsuperscript{286}

\textbf{5.5.2 Revised U.S. Deep Seabed Mining Policy Reflects UNCLOS and Other International Environmental Law Obligations}

goddess of the earth will erupt with seismic revenge. Dig out this shale gas, they warn, and our water will be poisoned and our children will be stunted and our cattle will be victims of terrible intestinal explosions. \textquotesingle{}This is not an original observation. It\'s one we\'ve made it here before. There is a powerful symbolism in the Earth Goddess Gaia being penetrated. However, here at Vulture Central we fear the fate of any undiscovered subterranean reptile-human hybrids that fracking may disturb. (This is a joke. We are merely extending the environmental lobby\'s favourite rhetorical weapon - the precautionary principle - to its natural conclusion.\textquotedblright). Id.\textsuperscript{284}

\textsuperscript{284} \textquoteright{}The shale-gas revolution in America has been as sudden and startling as a supertanker performing a handbrake turn. A country that once fretted about its dependence on Middle Eastern fossil fuels is now on the verge of self-sufficiency in natural gas. And the news keeps getting better. This week the International Energy Agency (IEA) predicted that the United States would become the world\’s largest oil producer by 2020, outstripping Saudi Arabia and Russia... The North American hydrocarbon bonanza offers big benefits, but also some pitfalls. \textit{The economic pluses are obvious}: cheap gas yields cheap electricity, which boosts American industry, especially power-hungry sectors such as aluminium, steel and glass. Cheap gas also buoys petrochemical firms, which use it to make useful stuff such as plastic. \textit{Also, America consumes some 19m barrels of oil a day}. \textit{Imported oil costs $109 a barrel}. \textit{Not having to pay Saudi Arabia for this is a boon}. The environmental scorecard is more mixed. Burning fossil fuels adds to greenhouse-gas emissions, which cook the planet. \textit{But the dash for gas has reduced American emissions, since gas is cleaner than coal}. By contrast, in Europe, which does have a carbon-trading system but never developed shale gas, emissions have risen over the past three years. Europeans are shuttering nuclear-power plants and backsliding to filthy coal\textsuperscript{286} (emphasis added). See \textit{America\’s Oil Bonanza}, The Economist (Nov. 17, 2012), accessible at: http://www.economist.com/news/leaders/21566663-good-thing-but-it-would-be-better-if-energy-was-priced-correctly-united-states-americas. See also, \textit{Energy to Spare}, The Economist (Nov. 17, 2012), accessible at: http://www.economist.com/news/business/2156694-america-track-produce-all-energy-it-needs-home-energy-spare.

\textsuperscript{286} See Geoffrey Clavel, \textit{Obama The European: What France Awaits From The U.S. President}, The Huffington Post (Jan. 18, 2013), accessible at: http://www.huffingtonpost.com/2013/01/18/obama-france_b_2467012.html \textit{\textsuperscript{\textdagger}}\textsuperscript{\textdagger}Some recent announcements from Washington have been interpreted as signs of political and cultural rapprochement. The choice of French economist Esther Duflo, a progressive intellectual known for her work fighting poverty, as an adviser to Obama has been very much appreciated in France. Moreover, the appointment of Sen. John Kerry (D-Mass.) to succeed Hillary Clinton at the head of the U.S. State Department has also been applauded in political circles. The \textit{\textquoteleft{}francophilia\textquoteright{}} and \textit{\textquoteleft{}competence\textquoteright{}} of the former Democratic presidential candidate have been widely acknowledged. \textit{From a strictly geopolitical point of view, France bets on the fact that second terms of U.S. presidents are generally more conducive to strong international initiatives.\textquotedblright{}}.

\textsuperscript{285} See, e.g., Louis Gallois, \textit{PACTE POUR LA COMPÉTITIVITÉ DE L\'INDUSTRIE FRANÇAISE} (Nov. 5, 2012), at p. 59, accessible at: http://media.es蓬e.com/mnpubled/doc/20121105/1786014_53da_rapport_de_louis_gallois_sur_la_competitivite.pdf \textsuperscript{\textdagger}\textsuperscript{\textdagger}A portion of this report addressed the improper use of the precautionary principle to deprive society of the benefits of technology and general progress, and thus, French industry competitiveness.) See ITSSD Journal on Economic Freedom, Gallois Report: \textit{\textquoteleft{}The Precautionary Principle Must Be Used For the Prevention or Reduction of Risks, Not to Paralyze Research\textquoteright{}} (Nov. 6, 2012), accessible at: http://itssd-economicfreedom.blogspot.com/2012/11/gallois-commission-precautionary.html \textit{\textsuperscript{\textdagger}}\textsuperscript{\textdagger}(The English translation of the report title is \textit{\textquoteleft{}More seriously, the very notion of technical progress is too often challenged through an interpretation that is extensive - if not even abusive - of the precautionary principle and a unilateral description of the risks of progress, but not also of its beneficial potential. The precautionary principle must be used for the prevention or reduction of risks, not to paralyze research; it must, on the contrary, encourage research. Rejecting the technical progress because it presents risks constitutes a far greater danger: that of the decline, compared with emerging countries that make in a dynamic way the choice of the technical and scientific progress, while being no more blind than us on the necessary precautions\textquoteright{}}) (emphasis added). Id. See also Jacques Attali, \textit{Une ambition pour dix ans - Rapport de la Commission pour la libération de la croissance} (Oct. 2010), at pp. 23, 34, 149, accessible at: http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/1040005410000.pdf \textsuperscript{\textdagger}\textsuperscript{\textdagger}(A portion of this report addressed the need to promote risk-taking to advance technology and grow the economy, and how the precautionary principle, with its aversion to risk, must be strictly circumscribed.) See ITSSD Journal on Economic Freedom, Attali Commission: \textit{\textquoteleft{}France Must Strictly Circumscribe Precautionary Principle to Promote Entrepreneurial Risk-Taking, Innovation & Economic Growth\textquoteright{}} (Oct. 24, 2010), accessible at: http://itssd-economicfreedom.blogspot.com/2010/10/attali-commission-france-must-strictly.html \textit{\textsuperscript{\textdagger}}\textsuperscript{\textdagger}(The English translation of the report title is \textit{Ambition for Ten Years - Report of the Commission for the Release of Growth}. \textit{\textquoteright{}To grow, France must invest much more than it does in sustainable development, preserve its environment and implement a integrated strategy for managing scarce resources...It must also launch a proper policy of the sea by developing our ports and by intensifying the exploration of sea-beds\textquoteright{}}) (emphasis added). Id., at p. 21. In addition, the proposals of our first report that have not
yet implemented, in particular on the innovation and competitiveness, remain fully relevant. All of our proposals constitute an ambition for ten years. It requires, in order to succeed, radical changes in the organization of the government and the relationship to risk and to democracy. To make possible the changes described above, the Commission proposes to act in four directions:

Id., at p. 22. “Promote the risk willingness. Growth means taking risks. Zero risk leads to zero success. The innovation must be favored and assumed; the precautionary principle must be strictly circumscribed. In particular, this requires encouragements for research and the entrepreneurial spirit, a fair pricing for the scarce resources, incentives for the public agents to the reduction of the public deficits, and a more inciting financing of social programs - with a bonus-malus system” (emphasis added). Id., at p. 23.

“The productivity gap is particularly rooted in the relative paucity of research and innovation. More reasons for this situation: A high risk aversion Risk aversion translates into a demand for strong (both social and economic) protection addressed to the community. This takes the form of support and help programs that are increasingly expensive for the past projects at the expense of the future endeavors. Other symptoms are unmistakable: the number of entrepreneurs who choose not to grow their businesses; preference of investors and regulators for risk-free assets which do not fund growth; the high precautionary savings of the households; preference for the retention of the present employment, which blocks the reallocation of employment towards more productive and innovative businesses. These features are exacerbated by an extensive application of the precautionary principle, contrary to the constitutional text, which covers in everyone’s mind a growing number of areas, and sterilizes creativity and risk-taking which are essential for growth. The lack of innovation and upgrading intellectual creation. While the production moves to countries with low workforce costs, the competitiveness of companies in developed countries relies increasingly on innovation. In France, the effort for the research of the private sector is greater than that of China and the European average, but below the average of OECD countries, and especially the United States and Germany” (emphasis added). Id., at pp. 34-35.

“Innovation is ultimately the only real source of productivity gains, of growth and of purchasing power. It is the result of a complex alchemy and it is not restricted only to the quality of public or private research. Innovative economies are characterized by: A willingness to take risks shared by the entrepreneurs and the society. In particular, this risk willingness requires clearly circumscribing the precautionary principle in order to avoid that the inaccuracies that surround the language of the constitutional text do not lead to the paralysis, to the stagnation and to the blocking of the innovation in an increasing number of domains. The zero-risk indeed leads to zero growth” (emphasis added). Id., at p. 149. “To create the conditions for these changes, it is necessary to: promote risk willingness. The search for zero risk leads to zero success. The innovation should be promoted and welcomed; the risk-taking must be paid; the precautionary principle must be strictly circumscribed. Our public policies must create incentives so that everyone has interest to act in the favor of growth, debt reduction, full employment and the environment” (emphasis added). Id., at pp. 163-164.