

The Marriage of Russian Gas and Germany's Energy Needs: Do the Environment and Baltic Sea Fisheries Have a Place in the Wedding Party?

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In late May 2011, Chancellor Angela Merkel announced that Germany would abandon its reliance on nuclear energy.¹ Then, on June 6, 2011, her cabinet signed off on a bill that started the clock ticking towards the 2022 phase-out of nuclear power in Europe's biggest economy.² Today, nuclear power in Germany accounts for seven gigawatts of power,³ nearly a quarter of Germany's energy,⁴ so a natural question arises: how will the country make up the shortfall?

The phase-out will mean that, in the short and medium terms, the emphasis will be "on fossil fuel-based technologies including gas- and coal-fired power plants. The Russians can rejoice, thanks to [former German Chancellor] Gerhard Schröder's new Nord Stream gas pipeline under the Baltic Sea, which will mean even more lucrative business with the Germans."⁵ The Nord Stream pipeline, however, pits energy against the environment, particularly against the biodiversity of fisheries.

The present article explores this European energy-versus-environment conflict from a number of perspectives, focusing on the Nord Stream pipeline and the subsea Baltic environment through which it courses. Part I discusses the

Nord Stream pipeline. Part II discusses the Baltic Sea's fisheries and its environment. Part III focuses on the history of environmental-impact assessments ("EIA") and the industry that conducts these assessments. Part IV scrutinizes the procedures that the owners of the pipeline were required to follow under the Espoo Convention. In particular, this section explores the mechanisms of international environmental law, explains the Espoo Convention and how it dovetails with the Nord Stream project, and examines the conclusions drawn by the Nord Stream project's EIA about the Baltic Sea's fisheries. Part V addresses the Nord Stream's strategic dimension; it examines a number of the key issues that have arisen as a consequence of the Nord Stream pipeline's construction. Finally, the article concludes by examining the Russian government's subpar environmental record and the possibility that it may shut off the gas flow to Germany, thereby crippling Europe's strongest economy.

This article also reviews the independent claims that the Nord Stream EIA was deficient because it did not consider the current depleted state of Baltic Sea fisheries and the pipeline's potential impact on them. Denmark, Finland, Germany, Russia, and Sweden—the five countries whose territory the Nord Stream pipeline will traverse—have explored some of the environmental ramifications of this venture within their individual permitting processes and via Nord Stream's EIA. This article concludes that, although precautions have been taken in advancing Nord Stream's pipeline project, human error and other factors should not be disregarded, as shown by recent incidents such as the *Exxon Valdez* oil spill,⁶ the BP *Deepwater Horizon* well blowout,⁷ the Union Carbide plant

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1. *Germany: Nuclear Power Plants to Close by 2022*, BBC NEWS (May 30, 2011), <http://www.bbc.co.uk/news/world-europe-13592208>.

2. *German Cabinet Passes Nuclear Exit Bill*, FRANCE 24 (June 6, 2011), http://www.france24.com/en/20110606-germany-passes-nuclear-exit-bill-merkel-angela-japan-fukushima?quicktabs_1=1.

3. Tara Patel, *German Nuclear Halt May Disrupt Europe's Power Market Balance*, BLOOMBERG (June 10, 2011), <http://www.bloomberg.com/news/2011-06-10/german-nuclear-halt-may-disrupt-europe-s-power-market-balance.html>.

4. *Germany: Nuclear Power Plants to Close by 2022*, *supra* note 1.

5. Roland Nelles, *Blowing with the Wind: Merkel's Nose for Populism Yields Another Victory*, SPEIGEL ONLINE (May 31, 2011), <http://www.spiegel.de/international/germany/%200,1518,765903,00.html>.

6. See generally *Oil Spill Facts*, EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL, <http://www.evostc.state.ak.us/facts/index.cfm> (last visited Nov. 18, 2011).

7. See generally Holly Doremus, *Through Another's Eyes: Getting the Benefit of Outside Perspectives in Environmental Review*, 38 B.C. ENVTL. AFF. L. REV. 247 (2011); Itzchak E. Kornfeld, *Of Dead Pelicans, Turtles, and Marshes: Natural Resources Damages in the Wake of the BP Deepwater Horizon Spill*, 38 B.C. ENVTL. AFF. L. REV. 317 (2011); Zygmunt J.B. Plater, *The Exxon Valdez Resurfaces in the Gulf of Mexico . . . and the Hazards of "Megasytem Centripetal Di-Polarity"*, 38 B.C. ENVTL. AFF. L. REV. 391 (2011).

explosion in Bhopal, India.⁸ and the Chernobyl meltdown,⁹ among others.

I. The Nord Stream Natural-Gas Pipeline

A. *Insatiable Hunger: The Phenomenon of Energy and Economic Development*

This section provides a short discussion of the conundrum of industrialization and energy use and then introduces the Nord Stream pipeline.

Industrialized nations are perpetually ravenous for and highly dependent on fossil fuels.¹⁰ At times, the quest for these fuels is conducted with seemingly little regard for the immeasurable damage that it may cause to the environment.¹¹ The April 2010 BP *Deepwater Horizon* well blowout in the northern Gulf of Mexico, off the coast of Louisiana,¹² is the most recent environmental catastrophe to leave its mark on a unique ecology and environment—this time the entire U.S. Gulf Coast, from Texas to Florida.¹³ That disaster has once

again forced politicians and the oil and gas industries to confront the incalculable costs that the environment has borne as a consequence of the pursuit of fossil fuels.¹⁴ Indeed, “[t]he [BP] blowout stripped the cover from one of the most cherished myths of Louisiana and other oil-producing states—that oil development and the environment coexist in happy harmony.”¹⁵

This myth of coexistence also applies to natural-gas pipelines, which seem to explode much more often than do oil wells.¹⁶ Pipeline explosions also cause enormous localized destruction.¹⁷ For example, one recent incident, the rupture of a major underground high-pressure natural-gas pipeline in Ghislenghien, Belgium on July 30, 2004, resulted in 24 deaths and more than 120 injuries, and the degradation of the local environment.¹⁸ Another example is an incident in Texas in which a utility-pole-drilling machine accidentally penetrated a gas pipeline, resulting in a fireball hundreds of feet high.¹⁹ Incredibly, just one person, the driller, was killed.²⁰ Similarly, on September 9, 2010, an enormous gas-line explosion ripped through a neighborhood in San Bruno, a suburb of San Francisco.²¹ The source of the explosion was a thirty-inch-diameter steel natural-gas pipeline owned by

8. Rosanne Muller, *A Significant Toxic Event: The Union Carbide Pesticide Plant Disaster in Bhopal, India, 1984*, in 1 RURAL AND REMOTE ENVIRONMENTAL HEALTH 63, 63 (Deon V. Canyon & Rick Speare eds., 2001), available at <http://www.tropmed.org/rreh/rrehi.htm> (“In Dec[ember] 1984, a large-scale chemical disaster occurred in Bhopal, India. An explosion at the Union Carbide India pesticide plant released toxic gas in the form of methyl isocyanate (MIC) and its reaction products over the city. The estimated mortality of this accident is believed to have been between 2500 and 5000 people, with up to 200,000 injured.” (citation omitted)).
9. *Chernobyl Accident 1986*, WORLD NUCLEAR ASS’N, <http://www.world-nuclear.org/info/Chernobyl/inf07.html> (last updated Sept. 2011) (“The April 1986 disaster at the Chernobyl nuclear power plant in Ukraine was the product of a flawed Soviet reactor design coupled with serious mistakes made by the plant operators. It was a direct consequence of Cold War isolation and the resulting lack of any safety culture.” (footnotes omitted)).
10. For example, the European Union “depends on a limited number of energy sources, suppliers and transport routes.” Ekrem Krasniqi, *Nord Stream: Environment vs Energy*, INT’L REL. & SECURITY NETWORK, June 18, 2008, <http://www.isn.ethz.ch/isn/Current-Affairs/Security-Watch/Detail?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=88479>.
11. See, e.g., *In re Chevron Corp.*, 633 F.3d 153, 156 (3d Cir. 2011) (“In 1993, certain communities in the Amazon River area of Ecuador (the Ecuadorian plaintiffs) filed a class action . . . against Texaco, Inc. (Texaco), claiming that its subsidiary . . . had caused massive environmental contamination and degradation in Ecuador that sickened and killed numerous persons in the Amazon River area.” (footnote omitted) (citation omitted)). Texaco and Chevron partially merged in 2001 and the new entity, named Chevron, was ultimately found liable in an Ecuadorian court. See *Case Profile: Texaco/Chevron Lawsuits (re Ecuador)*, BUS. & HUM. RTS. RESOURCE CENTRE, <http://www.business-humanrights.org/Categories/Lawsuits/Lawsuitsregulatoryaction/Lawsuits-Selectedcases/TexacoChevronlawsuitsreEcuador> (last visited Nov. 18, 2011).
12. David Hammer, *Louisiana Has Always Welcomed Offshore Oil Industry, Despite Dangers*, TIMES PICAYUNE, July 18, 2010, http://www.nola.com/news/gulf-oil-spill/index.ssf/2010/07/louisiana_has_always_welcomed.html (“April 20, 2010: A well drilled by BP blows out in the Macondo field, 50 miles southeast of Venice, killing 11 workers and spilling an estimated 4.4 million barrels before it was capped Thursday.”).
13. Charles Cooper, *Gulf Dead Zone Grows as No-Fishing Area Expands*, CBS NEWS (June 28, 2010), http://www.cbsnews.com/8301-501465_162-20009077-501465.html?tag=mncol;lst;1 (“The National Oceanic and Atmospheric Administration said it had decided to expand the fishing closure from its current northern boundary as a precautionary measure to make sure consumers don’t eat seafood contaminated by the gulf oil spill. All told, a little more than 80,000 square miles, or 33 percent of [the] Gulf of Mexico’s federal waters, are now considered a closed area. . . . Meanwhile, commercial fishermen in the Gulf, who harvested more than one billion pounds of fish and shellfish in 2008, face another threat to their livelihood: a growing ‘dead zone’ with little or no oxygen in the water.”).

14. See Ian Urbina, *Documents Show Early Worries About Safety of Rig*, N.Y. TIMES, May 30, 2010, at A1, available at http://www.nytimes.com/2010/05/30/us/30rig.html?_r=1 (“Internal documents from BP show that there were serious problems and safety concerns with the Deepwater Horizon rig far earlier than those the company described to Congress last week.”).
15. Oliver Houck, *Oil & Accountability: Who Will Pay to Fix Louisiana?*, THE NATION, July 12, 2010, at 11, available at <http://www.thenation.com/article/36610/who-will-pay-fix-louisiana>.
16. See, e.g., Andy Wilson, *More Natural Gas Pipeline Explosions in Texas*, TEXAS VOX: VOICE PUB. CITIZEN TEX. (June 8, 2010), <http://texasvox.org/2010/06/08/more-natural-gas-pipeline-explosions-in-texas> (“After Monday’s [June 7, 2010] deadly explosion of a pipeline in Johnson County, there was another explosion in the Panhandle today. . . . ‘The blast near Darrouzett, just south of the Oklahoma border, was the second fatal natural gas explosion in Texas in as many days.’” (quoting *Natural Gas Line Blast Kills 2 in Panhandle; Three Others Injured*, AUSTIN AM.-STATESMAN, June 8, 2010, <http://www.statesman.com/news/texas/natural-gas-line-blast-kills-2-in-panhandle-735637.html>)). See also *A Chronology of Disasters in Nigeria*, ONLINE NIGERIA (Oct. 23, 2005), <http://nm.onlinenigeria.com/templates/?a=5701&z=17>; *Gas Blast Causes Fire in Moscow*, BBC NEWS (May 10, 2009), <http://news.bbc.co.uk/2/hi/europe/8042278.stm>; *Pipeline Explosion Kills Three in North China City*, PEOPLE’S DAILY ONLINE: ENG. (Dec. 16, 2007), <http://english.people.com.cn/90001/90776/6321628.html> (China) (“At least three people were killed and seven others injured in a pipeline explosion in Taiyuan, capital of north China’s Shanxi Province, on Saturday.”).
17. See Haroun Mahgerefteh & Olufemi Atti, Univ. Coll. London, Presentation at the American Institute of Chemical Engineers 2006 Spring Meeting: An Analysis of the Gas Pipeline Explosion at Ghislenghien, Belgium (Apr. 24, 2006), <http://apps.aiche.org/Proceedings/Abstract.aspx?PaperID=40438>.
18. *Id.* (“Aerial pictures of the scene showed burned grass extending several hundred metres on either side of what appeared to be a trench and crater, suggesting that there was a major release of gas before the explosion occurred. Witness statements said collisions and rubbing between the various metal pieces ejected to the summit of the gas column had provided the sparks which ignited the gas. The official inquiry following the incident has since revealed several similar incidents across the globe where an initial leak in the gas pipeline has been followed by rupture and explosion sometime later.”).
19. *The Moment Workmen Accidentally Blew Up a Texas Gas Pipeline, Leaving One Dead and Seven Injured*, MAIL ONLINE (U.K.) (June 9, 2010, 10:04 AM), <http://www.dailymail.co.uk/news/worldnews/article-1284880/Texas-gas-pipeline-explosion-kills-worker-injures-seven.html>.
20. *Id.*
21. Justin Berton, *Death Toll Rises to 8 in San Bruno Blast*, S.F. CHRONICLE, Sept. 29, 2010, at C4, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2010/09/29/BAIQ1FKVE5.DTL>; John Hoeffel et al., *San Bruno Explosion Death Toll Climbs to Seven; Six are Missing*, L.A.

Pacific Gas & Electric Company;²² the pipeline had recently been inspected.²³

Despite the frequency of incidents, the energy industry at times works hard to limit public media coverage of damage to the environment generally and biodiversity specifically.²⁴ Thus, the average citizen is not always aware of pipeline explosions or international environmental and ecological damage unless she is present at an explosion or interested in the subject.²⁵

As a consequence of the industrialization of the former Eastern Bloc, China, and India, fossil-fuel consumption is on the rise.²⁶ The relative abundance of²⁷ and low cost of natural gas,²⁸ as well as the fact that it burns more cleanly, lessening emissions that exacerbate global climate change, make it an attractive fuel.²⁹ Thus, future environmental damage is almost certain because of the ever-increasing number of gas pipelines crisscrossing the globe.³⁰ One of the most recent

gas-pipeline projects is the northern European Nord Stream pipeline.³¹

B. The Nord Stream Gas Pipeline Project

The Nord Stream project is a 760-mile (1,224-kilometer) dual-pipe natural-gas pipeline, with a diameter of 45 inches (115 centimeters) that will lie on the floor of the Baltic Sea.³² The project will allow Russia to supply natural gas directly to Germany³³ while bypassing an existing land-based pipeline that passes through four other Baltic countries: Estonia, Latvia, Lithuania, and Poland.³⁴ The pipeline will traverse the territory of five countries: Denmark, Finland, Germany, Russia and Sweden.³⁵

Nord Stream is owned by five private entities.³⁶ Gazprom, a Russian state-owned gas company, is the majority shareholder, with 51%.³⁷ The minority shareholders are BASF/Wintershall Holding, E.ON Ruhrgas, Nederlandse Gasunie, and GDF Suez.³⁸ BASF/Wintershall, a German chemical company,³⁹ and E.ON Ruhrgas, a German power-and-gas company,⁴⁰ each own 15.5%;⁴¹ Netherlands-based Gasunie⁴²

TIMES, Sept. 12, 2010, <http://articles.latimes.com/2010/sep/12/local/la-me-0912-san-bruno-explosion-20100912>.

22. Press Release, Pac. Gas & Electric Co., PG&E Continues Response Efforts at Scene of San Bruno Fire (Sept. 10, 2010), http://www.pge.com/about/newsroom/newsreleases/20100910/pge_continues_response_efforts_at_scene_of_san_bruno_fire.shtml.

23. Hoefel et al., *supra* note 21.

24. *The Effects of Oil on Wildlife*, AUSTRALIAN MAR. SAFETY AUTHORITY, http://www.amsa.gov.au/Marine_Environment_Protection/Educational_resources_and_information/Teachers/The_Effects_of_Oil_on_Wildlife.asp (last visited Nov. 19, 2011) ("We have all seen pictures and videos of wildlife covered in black, sticky oil after an oil spill. These pictures are usually of oiled birds. Many people are not aware that it is not just birds that get oiled during a spill. Other marine life such as marine mammals can also suffer from the effects of an oil spill. Even small spills can severely affect marine wildlife."); see, e.g., Zygmunt J.B. Plater, *Law, Media, & Environmental Policy: A Fundamental Linkage in Sustainable Democratic Governance*, B.C. ENVTL. AFF. L. REV. 511, 532-34 ("With respect to [the Exxon Valdez] oil spill, however, the industry carefully manipulated the media coverage so that, despite hundreds of images of bedraggled birds and sealife, very few members of the public ever heard the moderated but highly critical conclusions of the official investigators.").

25. Cf. Betsey Piette, *The Heat's on the Natural Gas Industry*, WORKERS WORLD (May 21, 2011), http://www.workers.org/2011/us/fracking_0526/ (discussing various local oppositions to fracking projects following "[y]ears of hard work to raise public awareness of the dangers of fracking").

26. See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CARBON DIOXIDE CAPTURE AND STORAGE 83 (Bert Metz et al. eds., 2005), available at http://www.ipcc.ch/pdf/special-reports/srccs/srccs_wholereport.pdf.

27. See e.g., *Natural Gas Weekly Update*, U.S. ENERGY INFO. ADMIN. (July 15, 2010), http://www.eia.gov/oog/info/ngw/historical/2010/07_15/ngupdate.asp (noting the surplus of natural gas stocks). Indeed, in September 2011, the U.S. Energy Information Administration noted:

A touch of autumn in the air combined with hopes for the eventual return of winter was likely the catalyst enabling natural gas prices to recapture the \$4 mark this week despite an environment of negative consumption fundamentals and continued strong production. At the New York Mercantile Exchange (NYMEX), the October 2011 natural gas contract advanced 9.9 cents per million Btu (MMBtu) to close at \$4.039 per MMBtu over the week.

Natural Gas Weekly Update, U.S. ENERGY INFO. ADMIN. (Sept. 15, 2011), http://www.eia.gov/oog/info/ngw/historical/2011/09_15/ngupdate.asp.

28. *Europe Switches To Gas*, EURACTIV.COM (Apr. 15, 2010), <http://www.euractiv.com/en/energy/europe-switches-gas> (Belg.); Connie Madon, *Big Surplus of Natural Gas Pushes Prices to a Five-Month Low*, BLOGGINGSTOCKS.COM, (Mar. 19 2010), <http://www.bloggingstocks.com/2010/03/19/big-surplus-of-natural-gas-pushes-prices-to-a-five-month-low> (explaining the cause of the price decline of natural gas, which led to its five-month low in March 2010).

29. See *Europe Switches To Gas*, *supra* note 28.

30. See, e.g., *id.* (follow "Issues" hyperlink) ("Europe is awash with natural gas supplies delivered by pipelines from Norway, Algeria and Russia. New possibilities are being explored to expand these and complement them with supplies from Central Asia and the Middle East."); see also *Natural Gas Health and Environmental Hazards*, ENERGY JUST. NETWORK, <http://www.energyjustice.net/>

naturalgas (last visited Nov. 19, 2011) ("Pipelines and compressor stations add to the harms, crossing all sorts of ecosystems. Even water bodies like Lake Erie and the Long Island Sound have faced proposals to bury pipelines in underwater trenches that involve stirring up toxic sediment [sic] accumulated on lake/sound floors.")

31. *Id.*

32. NORD STREAM, FACT SHEET: THE NORD STREAM PIPELINE PROJECT 1 (2011), available at <http://www.nord-stream.com/download/document/12/?language=en>.

33. Judy Dempsey, *Construction of Contentious Nord Stream Gas Line to Begin*, N.Y. TIMES, Apr. 8, 2010, <http://www.nytimes.com/2010/04/09/business/energy-environment/09nordstream.html>. The pipeline will enter the Baltic Sea at Vyborg, Russia, which lies to the east of the Finnish border, and will terminate at Greifswald, Germany. See *infra* Figure 1.

34. See Andrew E. Kramer, *Russia Gas Pipeline Heightens East Europe's Fears*, N.Y. TIMES, Oct. 13, 2009, at A1, available at <http://www.nytimes.com/2009/10/13/world/europe/13pipes.html>.

35. See Press Release, Nord Stream, Final Permit for Nord Stream Pipeline Paves Way for Construction Start in April (Feb. 12, 2010), <http://www.nord-stream.com/press-info/press-releases/final-permit-for-nord-stream-pipeline-paves-way-for-construction-start-in-april-326/>.

36. NORD STREAM, *supra* note 32.

37. *Id.* The Russian state owns a controlling stake in Gazprom, which has the biggest natural-gas reserves in the world. *Gazprom Today*, GAZPROM, <http://www.gazprom.com/about/today> (last visited Nov. 19, 2010).

38. NORD STREAM, *supra* note 32.

39. *Id.* See generally *BASF at a Glance*, BASF, <http://www.basf.com/group/about-basf/index> (last visited Nov. 19, 2011) ("BASF is the world's leading chemical company. With about 110,000 employees . . . and close to 385 production sites worldwide we serve customers and partners in almost all countries of the world.")

40. NORD STREAM, *supra* note 32. See generally *About Us: Profile*, E.ON, <http://www.eon.com/en/corporate/2035.jsp> (last visited Nov. 19, 2011) ("E.ON is one of the world's largest investor-owned power and gas companies. At facilities across Europe, Russia, and North America, our more than 85,000 employees generated just under EUR93 billion in sales in 2010.")

41. NORD STREAM, *supra* note 32.

42. *Id.*; *Our Shareholders*, NORD STREAM, <http://www.nord-stream.com/our-company/shareholders/gasunie.html> (last visited Nov. 19, 2011) ("Gasunie is a European gas infrastructure company. Its network ranks among the largest high pressure gas pipeline grids in Europe, consisting of over 15,000 kilometres in the Netherlands and northern Germany.")

and French-owned GDF Suez⁴³ each own 9%.⁴⁴ Interestingly, Nord Stream is incorporated in Switzerland rather than either of its host countries or any of the states of its other shareholders.⁴⁵ There may be a very good corporate reason for this choice. Switzerland is well known for its publicly opaque banking regulations, which keep a tight rein on transparency;⁴⁶ this impermeability may carry over to other corporate transactions, such as EIAs.

The Nord Stream agreement was completed in 2005 between then-President Vladimir Putin of Russia and then-Chancellor Gerhard Schröder of Germany.⁴⁷ On October 24, 2005, the deal for the €4 billion gas pipeline was completed mere weeks before Chancellor Schröder left office.⁴⁸ Chancellor Schröder sweetened the deal with a €1 billion (\$1.46 billion) German loan guarantee for the project.⁴⁹ After leaving politics, Schröder became chairman of Nord Stream.⁵⁰ These facts, as explained below, suggest that Putin and Schröder may have entered into an improper, collusive agreement.⁵¹

As of this writing, the first phase of construction of the Nord Stream pipeline has commenced and is scheduled to be completed in late 2011,⁵² and the entire project is expected to be completed in 2012.⁵³ Current plans are for the pipeline to transport up to 55 billion cubic meters—approximately

1.942 trillion cubic feet—of natural gas per year.⁵⁴ This is enough to supply more than 25 million households,⁵⁵ but at what cost to the Baltic Sea under which the gas will be transported?

II. The Baltic Sea Fishery

A. The Fishery, Generally

The Baltic Sea fishery dates back to the Stone Age.⁵⁶ In that era, it was indispensable, supplementing wild game for the people who settled the shores of the Baltic between 10,000 and 13,000 years ago when the glaciers of the Ice Age began to recede.⁵⁷ In the earliest Baltic coastal communities, the daily catch was primarily from areas close to the shore, with species including bream, ide, perch, and pike, as well as river-spawning species such as salmon and trout.⁵⁸ Fish were also an extremely important part of the economy; during the Middle Ages, they were even used as currency when taxes had to be paid.⁵⁹ Today, cod, salmon, herring sprats, and plaice are the mainstay of the fishery industry.⁶⁰ However, overfishing, especially of cod, has depleted the fishery's stocks.⁶¹

The Nord Stream EIA notes that the species diversity, particularly in the brackish ecosystem, is poor when compared to other seas.⁶² Nevertheless, the fishery's biodiversity and health were not fully considered in the EIA. Chapter 8, for instance, does not address the interrelationship between the fishery's biological integrity, diversity, and environmental health; this interrelationship is part of the biodiversity of the ecosystem, and all three must be considered in an integrated and holistic manner.⁶³ Similarly, a number of nongovernmental organizations ("NGOs") have found deficiencies in this portion of the EIA. For example, according to Coalition Clean Baltic, section 8.75 of the EIA, which describes the value of fish species in the area where the pipeline will be constructed, fails to consider "sea-trout and other important

43. NORD STREAM, *supra* note 32. See generally *Profile*, GDF SUEZ, <http://www.gdfsuez.com/en/group/profile/profile> ("[GDF Suez] provides highly efficient and innovative solutions . . . by relying on diversified gas supply sources . . . and unique expertise in four key sectors: liquefied natural gas, energy efficiency services, independent electricity production and environmental services. . . . GDF Suez has 218,350 employees worldwide and 2010 revenues of €84.5 Billion.").

44. NORD STREAM, *supra* note 32.

45. *Who We Are*, NORD STREAM, <http://www.nord-stream.com/about-us/> (last visited Nov. 19, 2011).

46. See *Swiss Banking*, OFFSHORE COMPANY, <http://www.offshorecompany.com/banking/swiss> (last visited Nov. 21, 2011) ("Swiss banking has long been associated with professional, discreet, secure banking in a jurisdiction renowned for its neutrality and adherence to the principles of banking confidentiality.").

47. See Judy Dempsey, *World Leaders, Especially Merkel, Express Sadness*, N.Y. TIMES, April 11, 2010, <http://www.nytimes.com/2010/04/11/world/europe/11germany.html>; see also Dempsey, *supra* note 33, ("Gerhard Schröder, the former German chancellor who is now chairman of the shareholders committee overseeing Nord Stream, lobbied hard for the 750-mile project, saying he believed that it would bring Russia closer to Europe."); Editorial, *Gerhard Schroeder's Sellout*, WASH. POST, Dec. 13, 2005, <http://www.washingtonpost.com/wp-dyn/content/article/2005/12/12/AR2005121201060.html> ("It's quite another thing when the chancellor of Germany—one of the world's largest economies—leaves his job and goes to work for a company controlled by the Russian government that is helping to build a Baltic Sea gas pipeline that he championed while in office.").

48. See Marc Young, *Schröder to Build Putin's Pipeline*, SPIEGEL ONLINE INT'L (Dec. 12, 2005), <http://www.spiegel.de/international/0,1518,389965,00.html>.

49. Kramer, *supra* note 34.

50. *Id.*

51. Editorial, *Gerhard Schroeder's Sellout*, *supra* note 47.

52. Dempsey, *supra* note 33; see also *Final Permit Paves Way to Begin Construction*, NORD STREAM (Feb. 12, 2010), <https://e-facts.nord-stream.com/app/article/index.cfm?fuseaction=OpenArticle&aoid=1657&clang=EN> ("Nord Stream [on February 12, 2010] received the last of the permits required to start constructing its 1,223 kilometre natural gas pipeline through the Baltic Sea. The technical Finnish 'Water Permit' complements the earlier permit granted by the Finnish Government for the consortium to use Finnish waters. In accordance with the Finnish Water Act, the Regional Administrative Agency for Southern Finland approved Nord Stream's detailed plans to construct, operate and maintain its gas pipeline along a 374 kilometre route through Finland's Exclusive Economic Zone (EEZ).").

53. *Creus Start on Baltic Underwater Gas Pipeline Linking Russia, Europe*, ENV'T NEWS SERVICE (Apr. 9, 2010), <http://www.ens-newswire.com/ens/apr2010/2010-04-09-02.html>.

54. *See id.*

55. *See id.*

56. *A Historic View of Baltic Fisheries*, HELSINKI COMMISSION, http://www.helcom.fi/environment2/biodiv/fish/en_GB/history (last updated Dec. 4, 2008).

57. *See id.*; see also KEVIN O'CONNOR, THE HISTORY OF THE BALTIC STATES 9–11 (2003); ANDREJS PLANKANS, A CONCISE HISTORY OF THE BALTIC STATES 2–5 (2011).

58. *A Historic View of Baltic Fisheries*, *supra* note 56.

59. *Id.*

60. See *Commercial Fisheries and the Management of the Baltic Stocks*, HELSINKI COMMISSION, http://www.helcom.fi/environment2/biodiv/fish/en_GB/commercial_fisheries/ (last updated Dec. 10, 2008).

61. *Overfishing Driving Evolution of Baltic Cod*, EUR. COMMISSION: COMMUNITY RES. & DEV. INFO. SERV. (Aug. 27, 2008), http://cordis.europa.eu/search/index.cfm?fuseaction=news.document&N_RCN=29794 ("Overfishing is driving the evolution of the cod populations in the Baltic Sea and pushing them towards extinction, according to new research by Swedish and American scientists.").

62. 2 NORD STREAM ENVIRONMENTAL IMPACT ASSESSMENT DOCUMENTATION FOR CONSULTATION UNDER THE ESPOO CONVENTION 493 (2009) [hereinafter NORD STREAM EIA], available at <http://www.nord-stream.com/download/document/58/?language=en>.

63. On the issue of biological integrity, diversity, and environmental health, see generally U.S. FISH & WILDLIFE SERV., FISH AND WILDLIFE SERVICE MANUAL, at ch. 601 FW 3 (2011), available at <http://www.fws.gov/policy/601fw3.html>.

fish species.⁶⁴ Similarly, in 2009, the World Wide Fund for Nature (“WWF”) announced:

[T]he latest Nord Stream environmental impact assessment [is] inadequate as it does not live up to established standards. WWF points at gaps and missing information and claims that Nord Stream is seriously underestimating environmental impacts.

. . . .

[M]ine sweeping may cause serious damage to marine mammals and fish⁶⁵

Overall, WWF concluded:

Despite some thorough research, the remaining data gaps are too large to make a detailed assessment of the pipeline’s impacts in many of the respective fields. The EIA does not take the obligatory approach to evaluate the worst case scenario in these situations, but rather relies on assumptions that can only be qualified as wild guesses in some cases. Additionally, the cumulative effects of other projects are not taken into account in adequate depth, although they will be very extensive.⁶⁶

With regards to the Baltic Sea’s fisheries, WWF found, among other deficiencies, that there was simply “[n]o evaluation [in the EIA] of the side-effects of permanent prevention of fisheries around the pipeline and associated structures.”⁶⁷ Consequently, the WWF report recommended that if Nord Stream or its contractors could not make a precise statement about how to deal with this issue, then a precautionary approach must be undertaken, and a substantial amount of additional mitigation would be required.⁶⁸

The Baltic Sea contains thirty-four fish species considered to be of high priority for conservation, and seventy species of medium priority.⁶⁹ One of the largest fisheries since at least the sixth century has been the cod fishery.⁷⁰ Within the last thirty years, however, the cod fishery has been so overfished that it is almost completely depleted.⁷¹ Other overfished

species include the European eel,⁷² the Baltic sturgeon,⁷³ herring,⁷⁴ and sprats.⁷⁵

The exploitation of the Baltic Sea fisheries has been so severe that based on scientific advice, the European Commission (“EC”) limited the total available catch (“TAC”) for 2010.⁷⁶ That recommendation is based on the nature of the various fisheries.⁷⁷ For example, the EC stated that “cod stocks are recovering, but that the Western herring stock still gives rise to serious concern.”⁷⁸ Indeed, the EC reduced the TAC for the Western herring stock by twenty-one percent until October 2010⁷⁹ because the species is undergoing a severe decline.⁸⁰ This fall-off in population can be seen in the numbers of succeeding generations (newly hatched fish), which are currently a mere quarter of what they were in previous years.⁸¹ Similarly, Baltic Sea cod received increased protection after their numbers declined. In September 2009, Joe Borg, the EC’s commissioner for maritime affairs and fisheries, observed, “The positive trend for Baltic Sea cod gives us confidence that the plan we have adopted to rebuild the stocks is working. We have paved the way for the comeback of Baltic cod by strictly applying the cod plan”⁸² In addition, the 2010 fishing quotas for the central Baltic Sea herring have been reduced by fifteen percent from 143,609 tons to 122,068 tons, as have the sprat fisheries, which have been reduced from 399,953 tons to 339,960 tons.⁸³ Lastly, juvenile

64. Press Release, Coal. Clean Baltic, CCB Statement on the Nord Stream Gas Pipeline ESPOO EIA Report and Proposals for Requirements to Mitigate Environmental Impact of the Gas Pipeline 7 (May 22, 2009), http://www.ccb.se/documents/CCBstatementNordStreamFinal_000.pdf.

65. *Nord Stream Assessment Seriously Underestimates Environmental Consequences for the Baltic Sea*, WORLD WIDE FUND FOR NATURE (May 7, 2009), http://wwf.panda.org/what_we_do/where_we_work/baltic/news/163682/Nord-Stream-assessment-seriously-underestimates-environmental-consequences-for-the-Baltic-Sea.

66. *Id.* (footnote omitted).

67. *Id.* at 10.

68. *Id.*

69. HELSINKI COMM’N, BALTIC SEA ENVIRONMENT PROCEEDINGS NO. 103 B, CHANGING COMMUNITIES OF BALTIC COASTAL FISH 8 (2006), *available at* <http://www.helcom.fi/stc/files/Publications/Proceedings/bsep103b.pdf>.

70. *See A Historic View of Baltic Fisheries*, *supra* note 56.

71. *See Overfishing Driving Evolution of Baltic Cod*, *supra* note 61.

72. *See* Eric Feunteun, *Management and Restoration of European Eel Population (Anguilla anguilla): An Impossible Bargain*, 18 *ECOLOGICAL ENGINEERING* 575, 575 (2002) (“The European eel panmictic population has been declining at least since the 1980s throughout its distribution area. The stocks are now ten times lower than they were initially.”). In fact, the BBC has reported that European Eel populations have diminished by ninety percent since the 1970s. *Great Animal Migrations: European Eel*, BBC (Dec. 14, 2008), <http://www.bbc.co.uk/radio4/worldonthemove/species/european-eel>.

73. Lutz Debus, *The Decline of the European Sturgeon Acipenser sturio in the Baltic and North Sea*, in *CONSERVATION OF ENDANGERED FRESHWATER FISH IN EUROPE* 147, 147 (Arthur Kirschofer & Daniel Hefti eds., 1996), *available at* <http://books.google.com/books?id=aQpfMDHcZL8C&lpg=PP1&dq=Conservation%20of%20endangered%20freshwater%20fish%20in%20Europe&pg=PA147#v=onepage&q&f=false>.

74. *See Herring*, FINNISH GAME & FISHERIES RES. INST., (June 9, 2008), http://www.rktl.fi/english/fish/fish_atlas/herring (“Stocks have probably been protected by the fact that the Baltic herring spawns widely in shallow water and also that the catch consists mainly of adult fish. The increasing abundance of sprat stocks in the late 1990s, together with the persistently low salinity levels in the Baltic Sea have contributed to a decrease in the growth rate of herring individuals. The effects of eutrophication on herring stocks are not known very well, though severe eutrophication has been found to impair reproduction success, and mass occurrence of plankton algae may have an effect on growth rate.”); *see also* Press Release, European Comm’n, Fisheries: Commission proposes fishing opportunities for the Baltic Sea for 2010 (Sept. 3, 2009), <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1274> (recommending a lower total available catch for herring and sprat).

75. *Sprat*, FINNISH GAME & FISHERIES RES. INST., (June 9, 2008), http://www.rktl.fi/english/fish/fish_atlas/sprat (“Catches decreased in the 1980s, coinciding with an increase in the abundance of cod. Since 1990, the sprat catch in the Baltic Sea has increased fivefold, being over 500 000 tonnes in 1997. . . . In the Baltic Sea, abundances of sprat stocks and sprat catches vary markedly for reasons that are not clearly understood.”); *see also* Press Release, European Comm’n, *supra* note 74.

76. Press Release, European Comm’n, *supra* note 74.

77. *See id.*

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.*

83. *Id.*

Baltic salmon stocks are also in decline, and the EC therefore reduced the TAC for salmon in the main basin by fifteen percent.⁸⁴ Although salmon stocks are also down, no TAC has been set for salmon in the northern Gulf of Finland, pending consultations with the relevant member states.⁸⁵

B. Threats to Baltic Sea Fisheries

There are a variety of primary threats to the health of fish species in the Baltic Sea. These include “the fishery, either as a target species or as by-catch, eutrophication, toxic contaminants, [and] constructions in adjacent waters.”⁸⁶ Loss of habitat is also a significant factor in loss of fisheries.⁸⁷ For example, clean sandy bottoms are necessary for benthic fish to survive.⁸⁸ Indeed, around the world, vital populations of fish and other marine life are on the verge of collapse, due in large part to poor management and concomitant overfishing.⁸⁹ Additionally, the populations of two nonindigenous fish species that have been introduced into the Baltic Sea—the round goby and the Prussian carp—have increased significantly in recent years.⁹⁰

Although the Nord Stream EIA identifies some of these threats,⁹¹ the proposed mitigation measures were not sufficient. In the Nord Stream EIA’s paper on fish and fisheries, the company states:

Possible mitigation measures include adaptations to trawling gear, restriction zones [on fishing] and[] compensation for loss or damage caused to fishing gear. In addition, Nord Stream proposes to develop together with fishermen—involving both national associations and FOGA [Fishermen’s Information of Oil and Gas Activities]—a training programme for all Baltic Sea fisherman.⁹²

Indeed, this paper proposes some specific steps to assist fishermen, including training on fishing above and adjacent to the pipeline, and designating non-fishable areas. It also points out that “[e]xperience with numerous offshore pipelines in the North Sea shows that fishery and offshore pipelines can co-exist safely.”⁹³ Nevertheless, as Nord Stream admits, “the situation in the Baltic Sea is potentially different, in terms of trawling gear types, size of vessels/engines and sea bed conditions. Nord Stream also has a bigger diameter than any of the pipelines in the North Sea.”⁹⁴ Furthermore, the paper addresses the “Impact on Fisheries during

Operation”⁹⁵ but does not look at the pipeline’s postconstruction effects on the fishery and its habitat.

The next section of this article considers claims by NGOs that the Nord Stream EIA is deficient with respect to environmental and biodiversity protection. Before wading into that topic, I will briefly discuss the EIA process.

III. Deficiencies in the Conclusions Drawn by the Nord Stream Environmental Impact Assessment Regarding Baltic Sea Fisheries

The Nord Stream pipeline will pass through the territorial waters or exclusive economic zone (“EEZ”) of five countries (Russia, Finland, Sweden, Denmark and Germany).⁹⁶ Consequently, permits had to be obtained from each of these countries prior to the start of construction, and “[n]ational legislation generally requires an [EIA] to be completed as a prerequisite for a national permit.”⁹⁷ The purpose and methods of an EIA may be summarized as follows:

Usually, the purpose and objectives of the EIA process will be contained in [national] legislation. This statement of aims varies from country to country, but generally includes instrumental ends relating to sound decision-making, and substantive ends relating to protection of the environment.

The main purpose of EIA is to facilitate the systematic consideration of environmental issues as part of development decision-making. It does so primarily by assembling and analysing information on the potential environmental effects of specific development proposals and how they can be best prevented or mitigated.⁹⁸

Here, the purpose of the Nord Stream EIA was to assist decisionmakers in weighing the risks and benefits to the natural and living environment of the Baltic Sea posed by the proposed Nord Stream pipeline prior to deciding whether to issue their respective national permits.⁹⁹

The methodology of Nord Stream’s EIA¹⁰⁰ is in line with international guidelines for EIAs generally.¹⁰¹ Nord Stream hired a consultant in the United Kingdom, Environmental Resources Management, which researched and produced the Nord Stream EIA in cooperation with other well-known environmental specialists.¹⁰² Environmental surveys were

84. *Id.*

85. *Id.*

86. HELSINKI COMM’N, BALTIC SEA ENVIRONMENT PROCEEDINGS NO. 103 A, ASSESSMENT OF COASTAL FISH IN THE BALTIC SEA 18 (2006), available at <http://www.helcom.fi/stc/files/Publications/Proceedings/bsep103a.pdf>.

87. *Id.*

88. *Id.*

89. *Unsustainable Fishing*, WWF, http://wwf.panda.org/about_our_earth/blue_planet/problems/problems_fishing/ (last visited Nov. 22, 2011).

90. See HELSINKI COMM’N, *supra* note 69, at 5, 9.

91. See 2 NORD STREAM EIA, *supra* note 62, at 926–42.

92. *Id.* at 264.

93. *Id.* at 262.

94. *Id.*

95. *Id.*

96. On the permitting process, see generally *A Pipeline Through the Waters of Many Nations*, NORD STREAM, <http://www.nord-stream.com/pipeline/permits/> (last visited Nov. 25, 2011).

97. *Id.*

98. HUSSEIN ABAZA ET AL., UNITED NATIONS ENVIRONMENT PROGRAMME, ENVIRONMENTAL IMPACT ASSESSMENT AND STRATEGIC ENVIRONMENTAL ASSESSMENT: TOWARDS AN INTEGRATED APPROACH 40 (2004), available at <http://www.unep.ch/etu/publications/textONUbr.pdf>.

99. See *A Pipeline Through the Waters of Many Nations*, NORD STREAM, <http://www.nord-stream.com/pipeline/permits/> (last visited Nov. 25, 2011).

100. See 1 NORD STREAM EIA, *supra* note 62, non-technical summary, at 24–28.

101. *Id.* at 24.

102. *Id.* at 6.

conducted over several years across a broad range of topics by a number of independent contractors.¹⁰³

There may be limitations to the EIA, and those are spelled out in the report to be considered by the decisionmaker.¹⁰⁴ Yet, where data are missing or associations are tenuous, assumptions are likely made; this represents particular cause for concern because it is unclear from the published Nord Stream EIA whether either the permitting governmental agencies or the public were privy to the EIA's underlying data. All we have is the final report.¹⁰⁵ Therefore, it is difficult to critique or question the Nord Stream EIA's underlying assumptions and associated conclusions.

Some members of the public and NGOs passionately agree that the threat to the Baltic Sea posed by the Nord Stream pipeline project is much more dire than that acknowledged in the EIA.¹⁰⁶ For example, one report asserts:

The Russo-German pipeline . . . will become an immediate threat to the Baltic Sea . . . Whilst laying the pipeline, the Russo-German consortium will stir up poisonous bottom sediments and . . . they will have to remove all kinds of remnants [scrap] that has been laying quietly at the bottom since the Second World War, remnants that are filled with lethal substances: thousands of undetonated mines, great amounts of dumped munitions and chemical weapons. In other words: All the things that the environmental experts are telling us not to do, [Nord Stream] will be doing, and thereby create an immediate threat to the Baltic Sea.¹⁰⁷

"Most of the concern stem[s] from the nature of the Baltic Sea itself, which is widely known as 'one of the most seriously polluted marine environments in the world . . .'"¹⁰⁸ The Baltic is unique among international water bodies: it is a semi-enclosed, brackish sea measuring approximately 415,000 square kilometers,¹⁰⁹ and with an average depth of 52 meters (156 feet), the Baltic Sea is one of the shallowest marine waterbodies in the world.¹¹⁰

Should the Nord Stream pipeline be completed—as noted above, construction began in April of 2010¹¹¹—it will be the shallowest (and longest) dual subsea pipeline in the world.¹¹² One reason for trepidation is quite simple: a pipeline explosion could trigger the undetonated mines and dumped munitions

and release the chemicals from dumped chemical weapons.¹¹³ In addition, because the Baltic Sea is semi-enclosed,¹¹⁴ a pipeline explosion in the Sea would create little possibility for the energy to escape, and therefore the self-contained nature of the Sea may be calamitous. When an explosion occurs, a large amount of potential (stored) energy is discharged into a small volume in a very short period of time. With regards to the Baltic Sea, the kinetic energy at issue is equivalent to energy in a semi-enclosed container. The amount of energy that would be released from a possible Nord Stream pipeline explosion would be immense. Indeed, Endel Lippmaa, chairman of the Estonian Academy of Sciences' council for energy, has claimed that if all the gas inside the Nord Stream pipe detonated, "the total explosive force would equal that of about 50 Hiroshima bombs."¹¹⁵ Therefore, given the disagreement over the number and types of munitions in the Baltic Sea, Nord Stream and the governments surrounding the Baltic would do well to conduct a more detailed and open investigation.

IV. Troublesome Aspects of the Nord Stream EIA from an Environmental Standpoint

A. *The EIA: The American Counterexample*

Our experience with environmental impact assessment is that when you predict major environmental impacts, the likelihood is that you will get major environmental impacts. The only problem is that you don't ever get quite the impacts you expect . . .

*Professor Frank Grad,
Columbia University Law School, 1992¹¹⁶*

The legally mandated process of investigating the human impact of federal actions on humans and the environment in the United States began in 1970 with the enactment of the National Environmental Policy Act ("NEPA") of 1969.¹¹⁷ NEPA is the cornerstone of environmental policymaking in the United States, and it has also become the gold standard for other nations, many of whom have adopted its sweeping breadth.¹¹⁸ The Act's procedures are designed to ensure that federal agencies employ environmental assessment as a key tool in making informed decisions in order to protect,

103. *Comprehensive Studies for Ecological Compatibility*, NORD STREAM, <http://www.nord-stream.com/environment/research/> (last visited Dec. 27, 2011).

104. See, e.g., 1 NORD STREAM EIA, *supra* note 62, non-technical summary, at 19, 23 (discussing the complexity and limitations of certain methodologies used in surveys on which the Nord Stream EIA was based).

105. See *id.* key issue paper: fish and fishery, at 21–22.

106. See *supra* notes 61–68 and accompanying text; *infra* part IV.

107. BENDIK SOLUM WHIST, FRIDTJOF NANSENS INSTITUTT, NORD STREAM: NOT JUST A PIPELINE: AN ANALYSIS OF THE POLITICAL DEBATES IN THE BALTIC SEA REGION REGARDING THE PLANNED GAS PIPELINE FROM RUSSIA TO GERMANY 40 (2008) (quoting Krister Wahlbäck, *Stoppa ryska gasledningen som hotar Östersjöns hälsa* [Stop the Russian Gas Pipeline That Threatens the Health of the Baltic Sea], DAGENS NYHETER [TODAY'S NEWS] (Stockholm), July 31, 2006), available at <http://www.fni.no/doc&pdf/FNI-R1508.pdf>.

108. *Id.* (quoting Arthur H. Westing, *Environmental Approaches to Regional Security*, in *COMPREHENSIVE SECURITY FOR THE BALTIC: AN ENVIRONMENTAL APPROACH* 9 (Arthur H. Westing ed., 1989)).

109. *Id.*

110. *Id.*

111. Dempsey, *supra* note 33.

112. WHIST, *supra* note 107, at 40.

113. *Baltic Sea Gas Pipeline Meets European Resistance*, DEUTSCHE WELLE-WORLD, Feb. 17, 2007, <http://www.dw-world.de/dw/article/0,,2345720,00.html>.

114. See Seita Romppanen, *Reflections on Environmental Responsibility—with an Emphasis on the Nord Stream Pipeline in the Baltic Sea Area*, 2010 NORDISK MILJÖRÄTTSLIG TIDSKRIFT [NORDIC ENVTL. L.J.] 23, 27 (Swed.), available at <http://www.nordiskmiljoratt.se/haften/NMT%202010-1.pdf>.

115. *Estonia Says 'No' to Nord Stream*, BALTIC TIMES, Sept. 20, 2007, <http://www.baltictimes.com/news/articles/18860/>.

116. PATRICK McCULLY, *SILENCED RIVERS: THE ECOLOGY AND POLITICS OF LARGE DAMS* 54 (2001).

117. National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321–4347 (2006)).

118. See *National Environmental Policy Act (NEPA)*, POLLUTION ISSUES, <http://www.pollutionissues.com/Li-Na/National-Environmental-Policy-Act-NEPA.html> (last visited Nov. 26, 2011).

restore, and enhance the environment.¹¹⁹ To advance this end, NEPA requires each federal agency to draft an environmental impact statement (“EIS”) for any “major Federal action[] significantly affecting the quality of the human environment.”¹²⁰ NEPA established such a far-reaching precedent that numerous countries and international development agencies have adopted its sweeping goals and insisted on written EIAs prior to the initiation of any major infrastructure projects.¹²¹ Nevertheless, NEPA’s environmental-protection *message* has been followed all too infrequently by the governments of other countries and the corporations that are required to conduct EIAs. Instead, the EIA methodology is often merely another hurdle to be sailed over.¹²² Before addressing that issue, however, the next section will briefly discuss the World Bank’s environmental-assessment process.

B. The World Bank’s Environmental-Assessment Directive

Pursuant to its operational policy 4.01, the World Bank requires that environmental assessment (“EA”) be conducted for each and every project proposed for Bank financing.¹²³ This prerequisite to financing is in place in order to ensure that projects are both sustainable and environmentally sound, and to aid the World Bank in its decisionmaking.¹²⁴ According to the operational policy:

EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. EA evaluates a project’s potential environmental risks and impacts in its area of influence; examines project alternatives; [and] identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts The Bank favors, whenever practicable, preventive measures over mitigatory or compensatory measures, whenever feasible.¹²⁵

As the next section will show, however, this policy is undermined by the nature and reality of the international environmental consulting industry that prepares the EIAs.

C. The Worldwide EIA Industry: Objective Studies or Rubber Stamps for More Development?

A thorough assessment of a proposed [project’s] possible environmental impacts should indeed be required before any project goes ahead. Unfortunately, governments and . . . [corporations who undertake environmental impact

assessments] have invariably turned the EIA process into a bureaucratic formality, *merely another regulatory hurdle* which developers must jump, before they can get their project approved. Governments and funders *rarely treat EIAs as objective studies* to be used to inform an open debate on whether or not a project is desirable, *but instead employ them as rubber stamps for projects they have already decided to build.*¹²⁶

Why would project developers, including pipeline operators and constructors, not take environmental assessments seriously or as seriously as they should? There are three answers to this question. The first and most significant is that the pipeline companies control the process and create incentives that discourage objective environmental assessment.¹²⁷ Because international environmental consulting has become a huge and competitive business comprised of relatively few firms,¹²⁸ consultants are willing to bend to their principals’ wishes and alter reports on demand.¹²⁹ If consultants’ conclusions are not favorable to the corporate principal that hires them, then the likelihood that they will get future work is greatly diminished.¹³⁰ Consequently, international consultancies “have a strong self-interest in underplaying the environmental impacts of projects and exaggerating their benefits.”¹³¹ For example, “the World Bank’s guidelines on environmental assessment specify that consultants must be ‘acceptable to both the World Bank and the local contracting agencies.’”¹³²

“There is an obvious conflict of interest when the company assessing the environmental viability of a project is also likely to get the contract to build it.”¹³³ In addition:

Even when individual sections of an EIA are critical or raise concerns that some effects cannot be predicted, these points are invariably toned down in the report’s overall conclusions (and criticisms in drafts frequently disappear when they appear in final form). The Executive Summary of a 1994 feasibility study for a cascade of dams on the Mekong [River] written by [French and Canadian consultants], for example, states that the “environmental impacts of the proposed projects are expected to be . . . not severe.” Yet the fisheries volume of the study, written separately by US consultants, warns that the proposed dams “may cause a wholesale decline in the fishery throughout the lower Mekong River.”¹³⁴

119. See 42 U.S.C. § 4331(b).

120. *Id.* § 4332(C).

121. McCULLY, *supra* note 116, at 54.

122. See *id.*; see also *infra* Part IV.C.

123. WORLD BANK, THE WORLD BANK OPERATIONS MANUAL, at OP 4.01, ¶ 1 (rev. 2011), available at <http://siteresources.worldbank.org/EXTOPMANUAL/Resources/EntireOpManualExternal.pdf?resourceurlname=EntireOpManualExternal.pdf>.

124. *Id.*

125. *Id.* ¶ 2.

126. McCULLY, *supra* note 116, at 54 (emphasis added) (discussing dam projects, in particular).

127. See, e.g., *id.* at 54–55 (noting that, in the context of European dam-building, the companies building the dams hire the third-party company that conducts the EIA).

128. *Id.* (“The environmental assessments for large internationally funded dam projects are invariably written by consultants from a relatively small number of companies, some of which, such as German consultants Lahmeyer International, are also directly involved in dam building. Others, such as Norwegian firm Norconsult, are subsidiaries of dam builders.”).

129. *Id.* at 55.

130. *Id.*

131. *Id.*

132. *Id.*; see WORLD BANK, *supra* note 123, BP 4.01, ¶ 7 & n.10.

133. McCULLY, *supra* note 116, at 55.

134. *Id.* (citation omitted).

The second reason that pipeline operators and constructors often fail to take environmental assessments seriously is that there is no quality control over the consultants' EIA reports.¹³⁵ They are neither peer-reviewed nor reviewed in-house—either by governments or by the party requesting the EIA—and there is absolutely no public input in response to the document.¹³⁶ Moreover, EIAs “are often treated as state or commercial secrets and hidden from public scrutiny,”¹³⁷ even though, under the Espoo Convention, which governs Nord Stream's EIA, the states-parties will ultimately have to deal with ecological or environmental harms that flow from a deficient EIA.¹³⁸ The Espoo Convention is discussed in more detail in the next section.

In contrast to this system, in the United States, NEPA requires each agency to provide public notice of its intent to conduct an EIS by publishing such notice in the Federal Register¹³⁹ and allowing the public the opportunity to comment after a draft of the EIS has been completed.¹⁴⁰ The agency must then weigh the comments and respond to them prior to making its decision.¹⁴¹ Additionally, members of the public have the right to sue the agency if they feel that the agency acted in an arbitrary or capricious manner in arriving at its final decision.¹⁴² Again in contrast to NEPA, the Espoo Convention, which admittedly does have a considerable public-participation component, affords legal recourse solely to the states that are parties to the Convention.¹⁴³ Nongovernment actors, including individuals, corporations, and NGOs, have no legal rights to enforce the Convention.¹⁴⁴

The third reason that pipeline operators and constructors often fail to take environmental assessments seriously has to do with companies like Nord Stream themselves. Their mission is to build pipelines to transport gas to customers.¹⁴⁵ This simple profit motive drives how unregulated businesses, whether pipeline companies or others, make decisions. For example, with respect to the EA process at the World Bank, a former vice president observed in a report leaked to the public that there is a pervasive “culture of approval [of projects]” at the Bank.¹⁴⁶ Entrenched in this ethos is a mindset that provides incentives to employees and encourages them to move money out the door as quickly as possible, “without adequate attention to project quality or mitigation of the

social and environmental impact of projects.”¹⁴⁷ If indeed there exists such a culture at the World Bank, it would not be surprising if such a culture existed at some of the for-profit EIA corporations.

V. The Espoo Convention: An International EIA Treaty

Thirty-one years after NEPA was enacted¹⁴⁸ the United Nations Convention on Environmental Impact Assessment in a Transboundary Context, more commonly referred to as the Espoo Convention,¹⁴⁹ was executed.¹⁵⁰ The Treaty, which came into force in September of 1997, has been signed by thirty parties, and forty-five have either ratified or acceded to it.¹⁵¹ The Espoo Convention is the only international treaty that addresses environmental impact assessments.¹⁵² One of the Convention's requirements is to make information generated by EIAs more easily accessible.¹⁵³ Accordingly:

The Espoo (EIA) Convention sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. . . .¹⁵⁴

The Convention, like other international environmental treaties, serves as the primary paradigm for cooperation among states seeking to safeguard the local, regional, and global environment.¹⁵⁵ Indeed, the object of public international law is “to provide a framework within which the various members of the international community may cooperate, establish norms of behaviour and resolve their differences.”¹⁵⁶ This framework acknowledges ecological interdependence among nations, a condition that “explains why international co-operation and the development of international environmental standards are increasingly indispensable: the challenge for international law in the world of sovereign states is to reconcile the fundamental independence of each state

135. *Id.*

136. *Id.*

137. *Id.*

138. Convention on Environmental Impact Assessment in a Transboundary Context, art. 7, Feb. 25, 1991, 1989 U.N.T.S. 309 [hereinafter Espoo Convention], available at <http://treaties.un.org/doc/publication/UNTS/Volume%201989/v1989.pdf> (discussing the procedure to be followed where, following an EIA, one of the parties “has reasonable grounds for concluding that there is a significant adverse transboundary impact”).

139. 40 C.F.R. § 1501.7 (2011).

140. *Id.* § 1503.1(a)(4).

141. *Id.* § 1503.4.

142. *I-291 Why? Ass'n v. Burns*, 372 F. Supp. 223, 240-41 (D. Conn. 1974) (construing 5 U.S.C. § 706(2)(a) (2006)).

143. Espoo Convention, *supra* note 138, art. 15.

144. *See id.*

145. *Who We Are*, *supra* note 45.

146. Dana L. Clark, *The World Bank and Human Rights: The Need for Greater Accountability*, 15 HARV. HUM. RTS. J. 205, 217 (2002).

147. *Id.*

148. National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347 (2006)).

149. *Introduction to Espoo Convention*, UNITED NATIONS ECON. COMMISSION FOR EUR., <http://live.unece.org/env/eia/eia.html> (last visited Nov. 27, 2011).

150. Status of Espoo Convention, UNITED NATIONS TREATY COLLECTION (Nov. 27, 2011), http://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtidsg_no=XXVII-4&chapter=27&lang=en (“The Convention was adopted by the Senior Advisers to ECE [Economic Commission for Europe] Governments on Environmental and Water Problems of the Economic Commission for Europe at their fourth session held in Espoo, Finland, from 25 February to 1 March 1991. The Convention was open for signature at Espoo, Finland, during the said period and thereafter at the United Nations Headquarters in New York until 2 September 1991.”).

151. *Id.*

152. Press Release, Econ. Comm'n for Eur., Russia's Nuclear Power Company Agrees to Consult with Neighbors on Environmental Impacts Within Framework of UNECE's Espoo Convention, U.N. Press Release ECE/ENV/11/P21 (May 31, 2011), http://www.unece.org/press/pr2011/11env_p21e.htm.

153. Espoo Convention, *supra* note 138, art. 2, ¶¶ 2, 6.

154. *Introduction to Espoo Convention*, *supra* note 149.

155. *See* PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 12 (2d ed. 2003).

156. *Id.*

with the inherent and fundamental interdependence of the environment.”¹⁵⁷

A. Mechanisms of International Environmental Law

International environmental laws employ various mechanisms to achieve their objectives.¹⁵⁸ The Espoo Convention is effective, in part, because it relies on a number of mechanisms rooted in these laws. A few of these concepts are addressed below. The first is the idea of inviting the public's input or participation.¹⁵⁹ Public-participation mechanisms ensure a strong connection between transparent performance and dedication to environmental sustainability by various project stakeholders, including governments, contractors, and funders.¹⁶⁰ They also keep the public abreast of developments.¹⁶¹

A European example, the Aarhus Convention on Public Participation, illuminates this point:

Recognizing that, in the field of the environment, *improved access to information and public participation in decision-making enhance the quality and the implementation of decisions*, contribute to public awareness of environmental issues, *give the public the opportunity to express its concerns and enable public authorities to take due account of such concerns . . .*¹⁶²

Moreover, by fostering the public's input, the Aarhus Convention seeks to compel “the accountability of and transparency in decisionmaking and to *strengthen public support for decisions on the environment*.”¹⁶³ Public participation therefore furthers the incorporation of environmental issues by decisionmakers by enhancing transparency, which then plays a role in preserving the environment. Where a party is denied the right to access documents under the Aarhus Convention, an aggrieved party has a right of action against the government that withholds the documents.¹⁶⁴

157. *Id.* at 14.

158. See, e.g., Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, pmbl., June 25, 1998, 2161 U.N.T.S. 447 [hereinafter Aarhus Convention], available at <http://treaties.un.org/doc/publication/UNTS/Volume%202161/v2161.pdf> (advocating the accessibility of public information with respect to projects potentially affecting the environment).

159. For example, in Finland, the Nord Stream EIA “was made available for public inspection in 33 municipalities on the Gulf of Finland coast and archipelago in the southern part of the Archipelago Sea.” Kees Bastmeijer & Timo Koivurova, *Transboundary Environmental Impact Assessment: An Introduction*, in THEORY AND PRACTICE OF TRANSBOUNDARY ENVIRONMENTAL IMPACT ASSESSMENT 16 n.58 (Kees Bastmeijer & Timo Koivurova eds., 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1297230. In addition, public hearings were held in four major Finnish cities during December 2006. Thereafter, the comments and opinions of citizens, businesses, municipalities and other authorities were collected by the Regional Environment Centre of Uusimaa, and submitted to Nord Stream at the end of February 2007. See *id.* at 17 n.58.

160. See, e.g., Aarhus Convention, *supra* note 158, at pmbl. (The Convention entered into force on October 30, 2001, once the ratifications by sixteen of the Signatories were obtained.).

161. See *id.*

162. *Id.* (emphasis added). Note that the Espoo Convention in and of itself does not trigger the Aarhus Convention's requirements. See *ESPOO Convention (Convention on Environmental Impact Assessment in a Transboundary Context)*, INST. FOR ENVTL. SECURITY, <http://www.envirosecurity.org/actionguide/view.php?r=251&m=organisations> (last visited Dec. 27, 2011).

163. *Id.* (emphasis added).

164. *Id.* art. 9, ¶ 1.

One of the underlying premises of the Espoo Convention is that environmental issues are solvable or can be disentangled through a rational model.¹⁶⁵ That is, rationality will always yield effective decisionmaking.¹⁶⁶ A number of commentators have asserted that such a framework is evident in the Espoo treaty, given that the drafters espoused the EIA process as the Convention's principal operative structure.¹⁶⁷ They also posit that a framework wherein a technical assessment provides impartiality or objectivity to the decisionmaking process also confirms the rationalist approach.¹⁶⁸ According to this analysis, the aim of an EIA is to offer scientific data that predict “environmental consequences, without considering if this information will be taken into account or how it will be considered.”¹⁶⁹

Nevertheless, one commentator suggests that because at least some decisions in the EIA process are political, it is unlikely that these choices can fairly be said to be rational.¹⁷⁰ Indeed, he asserts, “[w]ithin the EIA field it is increasingly recognized that subjectivity (e.g. of politics) also should be accepted as part of the process and not only scientific knowledge.”¹⁷¹ Some commentators view “subjectivity as a ‘positive attribute’ of the EIA process, considering subjectivity unavoidable due to politicized evaluations, among other things.”¹⁷²

Another concept is rooted in the fact that the contracting parties to the Espoo Convention were also “[a]ware of the interrelationship between economic activities and their environmental consequences . . . [and] *mindful* of the need and importance to develop anticipatory policies and of preventing, mitigating and monitoring significant adverse environmental impact in general and more specifically in a transboundary context.”¹⁷³ Accordingly, they defined the terms *EIA*, *impact*, and *transboundary impact* so that the text itself is clear and there can be little or no confusion in the treaty's interpretation:

(vi) “Environmental impact assessment” means a national procedure for evaluating the likely impact of a proposed activity on the environment;

(vii) “Impact” means any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes

165. See, e.g., Stephen Jay et al., *Environmental Impact Assessment: Retrospect and Prospect*, 27 ENVTL. IMPACT ASSESSMENT REV. 287, 288–90 (2007).

166. See *id.*

167. E.g., Francisco M. Hernández, Analysis of the Espoo Convention as Applied to Mega Projects: The Case of Nord Stream 8 (May 2008) (unpublished M.A. Thesis, Lunds Universitet), http://www.lumes.lu.se/database/alumni/06.08/thesis/Francisco_Hernandez.pdf.

168. See, e.g., Susan Owens et al., *New Agendas for Appraisal: Reflections on Theory, Practice, and Research*, 36 ENV'T & PLAN. A 1943, 1946 (2004).

169. Hernández, *supra* note 167, at 9.

170. *Id.*

171. *Id.*

172. *Id.* (citing Hugh Wilkins, *The Need for Subjectivity in EIA: Discourse as a Tool for Sustainable Development*, 23 ENVTL. IMPACT ASSESSMENT REV. 401, 401 (2003)).

173. Espoo Convention, *supra* note 138, pmbl.

effects on cultural heritage or socio-economic conditions resulting from alterations to those factors;

- (viii) “Transboundary impact” means any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party¹⁷⁴

The next section explores the burdens that the Espoo Convention placed on the Nord Stream pipeline.

B. *The Espoo Convention and the Nord Stream Pipeline*

The Espoo Convention governs the Nord Stream pipeline project for two reasons. First, four of the five countries whose territory will be traversed by the pipeline—Denmark, Finland, Germany, and Sweden—are parties to the Convention.¹⁷⁵ They are also “parties of origin”¹⁷⁶ as well as “affected parties,”¹⁷⁷ and the project falls under the rubric of a “proposed activity,” which is defined as “any activity or any major change to an activity subject to a decision of a competent authority in accordance with an applicable national procedure.”¹⁷⁸ Second, gas-pipeline projects are specifically governed by the Convention.¹⁷⁹ Accordingly, Nord Stream undertook an EIA for the portion of its pipeline that crosses into the territory of each party of origin, in this case its EEZ.¹⁸⁰

Thus, the public,¹⁸¹ regardless of whether it was composed of individuals, associations, or NGOs in each party, was able to air its concerns about the project.¹⁸² Indeed, the EIAs and national permitting processes for the Nord Stream project are subject to national legislation in each of the states whose territorial waters or EEZs it crosses.¹⁸³ Therefore, in accor-

dance with the requirements of country-specific national legislation, Nord Stream was required to submit permit applications for construction and operations.¹⁸⁴ Nord Stream received all necessary permits by February 2010.¹⁸⁵

In conclusion, the *sine qua non* for the Convention is that it (1) responds to a growing concern about transboundary emissions and the emergence of an EIA *as a tool* to reduce the negative environmental effects of new activities; (2) underscores the *interrelationship* between *economic activities* and their *environmental consequences*; and (3) seeks a sustainable balance between economic activities and the environment.¹⁸⁶ Its principal purpose is to require assessments when projects (1) extend across borders; (2) are between parties to the Convention; and (3) *may cause* significant adverse transboundary impacts.¹⁸⁷

C. *Threats Posed by the Nord Stream Pipeline in Combination with Munitions and Mines Dumped in the Baltic Sea*

One of the critical concerns voiced by scientists, politicians, and members of the public regarding the pipeline and the Baltic's fisheries is the fact that the Baltic, from World War I until recently, has been a dumping ground for all types of munitions and mines.¹⁸⁸ The concerns that the Nord Stream project has raised are centered on the fear that these munitions will explode during the construction of the pipeline and possibly thereafter.¹⁸⁹ Thus, people and marine life could suffer death and maiming; for example, the Finnish Food Safety Authority, Evira, found that “the detonations of war-time munitions will increase the toxic substance load of the environment, most likely in the form of higher lead and arsenic concentrations.”¹⁹⁰

Nord Stream responded that it could avoid all of the officially classified sites.¹⁹¹ However, according to Dr. Stefan Nehring, a marine biologist:

[M]uch is still unknown about the dumped weapons, due to the chaotic circumstances under which the disposal took place in 1945–46. As much as three metric tons of munitions end up in fishermen's gear every year, and, contrary to Nord Stream AG's information, there have in fact been numerous accidents involving dumped munitions, although the exact number is difficult to ascertain. In Denmark, the only state that releases official numbers, some 20 people are

174. *Id.* art. 1, ¶¶ vi–viii.

175. Status of Espoo Convention, *supra* note 150. Russia is not a party to the treaty because, although it is a signatory, it has not ratified the treaty. *Id.*

176. “Party of origin” means the Contracting Party or Parties to this Convention under whose jurisdiction a proposed activity is envisaged to take place.” Espoo Convention, *supra* note 138, art. 1, ¶ ii.

177. “Affected Party” means the Contracting Party or Parties to this Convention likely to be affected by the transboundary impact of a proposed activity.” *Id.* art. 1, ¶ iii.

178. *Id.* art. 1, ¶ v.

179. *See id.* app. I, ¶ 8.

180. *See* 3 NORD STREAM EIA, *supra* note 62, at 1543–1616 (discussing the transboundary impacts of the project). The EEZ is defined by the U.N. Convention on the Law of the Sea as “an area beyond and adjacent to the territorial sea, subject to the specific legal régime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention.” United Nations Convention on the Law of the Sea, art. 55, Dec. 10, 1982, 1833 U.N.T.S. 397, available at <http://treaties.un.org/doc/publication/UNTS/Volume%201833/v1833.pdf>. This convention also defines the rights, jurisdiction, and duties of a coastal state in the EEZ. *See id.* art. 56.

181. The Convention defines “The Public” as “one or more natural or legal persons.” Espoo Convention, *supra* note 138, art. 1, ¶ x.

182. *See id.* art. 4.

183. National legislation generally requires an EIA to be completed as a prerequisite for a national permit. In addition, Nord Stream commissioned an “Espoo Report,” which assessed the potential environmental impact along the entire pipeline route. The EIAs and the Espoo Report are based on a broad range of

surveys as well as on data from independent experts and research institutions. *A Pipeline Through the Waters of Many Nations*, *supra* note 99.

184. *See id.*

185. *Id.*

186. *See* Espoo Convention, *supra* note 138, pmb1.

187. *See id.*

188. *See* 2 NORD STREAM EIA, *supra* note 62, at 790–813.

189. *See* Letter from Jüri-Ott Salm, CEO, Estonian Fund for Nature, to Tarja Halonen, President of Fin., and Matti Vanhanen, Prime Minister of Fin. (Nov. 24, 2009), http://www.elfond.ee/images/Open_letterNS.pdf.

190. *Id.*

191. *See* NORD STREAM EIA, *supra* note 62, at 790–813.

reported injured by dumped explosives and chemicals each year.¹⁹²

Additionally, a report issued by a panel of the European Parliament in 2008 observed that years of construction in an area measuring up to 2,400 square kilometers (927 square miles) necessitating the operation of numerous dredging vessels, and others bearing winches, as well as other large construction equipment, “represents a serious threat to biodiversity and to the number of habitats.”¹⁹³ Parliament’s report also recommended that Nord Stream be required to pay for any damage that pipeline operations cause to the environment.¹⁹⁴ The European Parliament panel also noted that the munitions dumped on the Baltic Sea’s seabed create a peril to the Sea’s marine ecology, as well as to human health.¹⁹⁵ The panel identified at least 80,000 tons of toxic munitions, including “mustard gas, sulphur yperite, nitrogen yperite, lewisite, Clark I, Clark II and adamsite . . . that are now very heavily corroded and cannot always be located, according to the report. The construction of a pipeline could further disrupt the already unstable munitions on the seabed.”¹⁹⁶ I posit that this study ought to be accepted as unbiased, because the European Parliament ostensibly has no stake in the outcome. This study also contrasts sharply with Russia’s numbers, which identified only 54 bombs or munitions in the vicinity of the pipeline route: 3 in the Danish zone, 30 in the Finnish zone, 20 in the Russian zone, and 1 in the Swedish zone.¹⁹⁷

Queries about this area of concern were raised by the trade journal *Oil & Gas Eurasia*. Indeed, it reported that according to the director of Rambol, the Norwegian consultancy that coordinated the preparation of Nord Stream’s EIA, the path that the gas pipeline takes as it traverses the Baltic Sea avoids buried World War II ammunition.¹⁹⁸ Rambol’s director, Niel Strobek, stated that his company has data, on behalf of Gazprom, that identified the paucity of military ordinance described above.¹⁹⁹ What he failed to say is that Gazprom conducted munitions studies as early as 2005—before any EIA was planned and when it had already decided the pipeline route without consulting either the public or the states whose EEZs the pipeline traverses.²⁰⁰ Consequently, “for the

existing pipeline delineation no additional studies would be necessary for formulating the EIA Report.”²⁰¹

Critics noted an even more fundamental environmental concern with Russia’s forefront involvement in the Nord Stream pipeline project—that Russia cannot be bound by the agreements of the Espoo Convention:

[T]he whole action of fulfilling the Espoo Convention EIS requirements is legally more than questionable, because the main 51% shareholder and signatory of the whole Nord Stream project [i.e., Russia] has not ratified the Espoo Convention . . . [The] Russian Federation, the majority owner of Gazprom, can thus not be held responsible for any environmental damage or calamity caused by the Nord Stream pipeline designed, built, operated and protected by Gazprom and the Russian State. This is a serious matter that makes all the future Espoo-related paperwork look rather thin.²⁰²

Oil & Gas Eurasia also asked about possible impacts on fisheries. Stobek, the director of Rambol, the Norwegian consultancy, believed: “As for commercial fishing, that too appears not to be a problem . . . The pipeline will have no long-term impact on fisheries, as fish will be able to return to their habitats after pipeline construction is completed.”²⁰³ Concomitantly,

Estonian researchers challenged the thoroughness of an environmental survey in the Gulf of Finland for the Nord Stream natural gas pipeline. [One] pointed out that the developers of the gas pipeline have only researched the seabed under the gas pipe route at the depth of five centimetres whereas in order to achieve sufficient thoroughness, marine sediments up to 30 centimetres from the surface should be viewed, the Baltic Course reported. “In such a case, the results would be more comprehensive; besides, the impact of dioxins has currently not [been] assessed at all” . . . He added that Russia’s data have also not been included in the report, concluding that on the basis of information available, no adequate assessment can be made.²⁰⁴

VI. Nord Stream’s Strategic Dimension

Environmental issues do not stand alone. Because governments and corporations have interests other than protect-

192. WHIST, *supra* note 107, at 41–42 (citing Axel Bojanowski, *Gift und Sprengkraft aus der Tiefe [Poison and Explosives in the Deep]*, SPIEGEL ONLINE (Apr. 2, 2007), <http://www.spiegel.de/wissenschaft/mensch/0,1518,475201,00.html>).

193. Krasniqi, *supra* note 10.

194. *Id.*

195. *Id.*

196. *Id.*

197. *Environmentalists Discuss Issues of Nord Stream Construction and Operation*, OIL & GAS EURASIA (June 2009), <http://www.oilandgaseurasia.com/articles/p/102/article/937>.

198. *Id.*

199. *Id.* Except for the Danish zone, where chemical weapons were revealed, the remaining ordinance was conventional in nature. According to Alexander Korshenko, a Russian oceanographer, similar Cold War-era munitions found in the Barents Sea—located west of Greenland and north of Norway and Russia—were generally inert by 1994. *Id.* Korshenko additionally asserts that “[t]he bulk of these substances are in a form that are insoluble in water. They lie in a plasticine-like mass on the ocean floor, contaminating only smaller areas . . . In the eastern part of the Barents Sea, no concentrated chemical weapons dumps remain.” *Id.*

200. See, e.g., ENDEL LIPPMA, ESTONIAN ACADEMY OF SCIENCES, EXPERT OPINION OF THE ACADEMY OF SCIENCES ON THE APPLICATION SUBMITTED BY THE NORD STREAM AG FOR GRANTING PERMISSION TO CONDUCT PIPELINE ROUTE IN-

VESTIGATIONS IN ESTONIAN WATERS AS DEFINED IN UNCLOS 5–6 (2007), available at http://www.valitsus.ee/UserFiles/valitsus/et/uudised/taustamaterjalid/Eesti_Teaduste_Akadeemia.pdf (“[T]he entire planned route exclusively through the waters of the five above-mentioned parties of origin [Denmark, Finland, Germany, Russia and Sweden] has been investigated very thoroughly using a wide range of methods and instruments. [It was also confirmed] that Nord Stream already has—through surveys commissioned by Gazprom in 2005–2006—investigated the whole pipeline route for munitions.”).

201. *Id.* at 6.

202. *Id.* at 6 (citation omitted). Additionally, the “Russian Federation, the successor state of the Soviet Union, just like SU never paid any compensation for the very serious trans-boundary environmental damage caused in Europe by the incompetent and negligent design and operation of the Chernobyl Power station in 1986.” *Id.* at 6–7.

203. *Environmentalists Discuss Issues of Nord Stream Construction and Operation*, *supra* note 197.

204. *Nord Stream Faces More Obstacles*, NEW EUR. (May 5, 2009), <http://www.neu-rop.eu/article/nord-stream-faces-more-obstacles>.

ing the environment or the ecology of the Baltic Sea, for instance, environmental issues fall into a basket of competing strategic interests that must be balanced.²⁰⁵ Disagreements regarding environmental issues in the Baltic Sea notwithstanding, a number of key concerns have arisen as a consequence of the construction of the Nord Stream pipeline.

These apprehensions, reflected in stakeholders' comments during the Espoo process,²⁰⁶ flow from strategic considerations, including the impact that Russia will have on the European Union's energy policies, European integration, and Europe's energy-security issues.²⁰⁷ Such considerations certainly could have influenced the EIA process, which Gazprom controlled,²⁰⁸ and, as noted previously, environmental consultants have been known to "correct" their reports at the behest of their principals.²⁰⁹

There is also a feeling in many European quarters that since the 2008 Russian–Georgian war,²¹⁰ Russia has sought both to dominate Europe and to turn its back on the West. For example, in a European Parliament report on another Gazprom pipeline called the South Stream, which is to supply gas to Greece, Italy, and Turkey, the author asserted:

Russia is clearly not moving in a pro-Western direction; instead, as the recent Georgian crisis has demonstrated, it is reasserting itself as a great power that can challenge the post–Cold War world order. The EU must carefully assess any new strategic energy project that will increase Russian influence (and leverage) over the continent.²¹¹

He also stresses that Russia seeks to limit European choices and to economically dominate the Continent:

South Stream, along with Nord Stream, is key to the maintenance of Russian political and economic leverage over Europe. South Stream will enable Russian influence to expand in southern Europe, while Nord Stream, connecting Russia with Germany (and bypassing Poland and the Baltic states) will similarly permit Moscow's influence to expand in northern Europe.²¹²

Similarly, the report's author is very suspicious of Russia's motives, declaring that "South Stream would provide Russia with surplus transit capacity, which is important to the fulfillment of Moscow's wish to set gas prices in

Europe—a wish shared by the potential members of Putin's 'gas OPEC', such as Iran, Venezuela, Qatar and Algeria."²¹³ This situation will also allow Russia to manipulate European markets:

Russia will also be able to influence markets and policies in Europe through its position in Austria's Baumgarten gas hub—the projected endpoint for both [the already extant] Nabucco [pipeline] and South Stream. Thanks to its partnership with the Austrian firm OMV, Gazprom has secured access to the trading floor there—and along with it access to vital, privileged information about the energy infrastructures of the countries along South Stream's projected route. This relationship provides Gazprom with tremendous potential leverage over the markets, stability and security of the whole continent.²¹⁴

In this environment, without legal changes and new requirements, biodiversity stands little chance of being protected, even though the Baltic Sea fishery generates hundreds of millions of Euros in income and taxes per annum.²¹⁵

VII. Proposing Solutions for EIAs Going Forward

Russia's environmental record has been extraordinarily deficient for many years. For example, Ivan Blokov, the program director for Greenpeace Russia, announced at a news conference in early 2010, that not only has Russia's environment worsened considerably in the past few years, but in 2000 his organization predicted that environmental degradation would worsen in the next few decades.²¹⁶ The organization's predictions came true: Blokov declared, "Ten years ago we predicted the situation would get worse The results are very saddening, but for the time being the situation is not catastrophic."²¹⁷ Indeed, "[t]he period in question coincides with the leadership of Vladimir Putin, who served as president for eight years until 2008, when he became prime minister."²¹⁸

Furthermore, in 2008, Owen Matthews observed that "[r]ather than tackle its ecological problems, Moscow is cracking down on its ecologists."²¹⁹ Oleg Mitvol, deputy head of Russia's Federal Environmental Monitoring Service, declares that the Russian Government allows him to compile environmental compliance facts and figures about

205. See, e.g., Kramer, *supra* note 34 (discussing political tensions between Russia and former Soviet Bloc countries over construction of the Nord Stream Pipeline).

206. See generally *supra* notes 64–68.

207. See ZEYNO BARAN, EUROPEAN PARLIAMENT, PUB. NO. PE 388.962, SECURITY ASPECTS OF THE SOUTH STREAM PROJECT, at iii (2008), available at <http://www.cristibusoi.ro/files/press/studiu%20south%20stream.pdf>.

208. See *supra* Part III.

209. See *supra* notes 128–132 and accompanying text.

210. PETER ROUDIK, LAW LIBRARY OF CONGRESS, PUB. NO. 2008-01474, RUSSIAN FEDERATION: LEGAL ASPECTS OF WAR IN GEORGIA 1 (2008), available at <http://www.loc.gov/law/help/russian-georgia-war.pdf> ("August 8, 2008, invasion by Russian military forces of sovereign Georgian territory, Russia's attempt to change the borders of this independent country, and the strengthening of the Russian military and political presence in the Georgian province of South Ossetia" (footnote omitted)).

211. Baran, *supra* note 207, at iii.

212. *Id.*

213. *Id.*

214. *Id.*

215. Fisheries Country Profile—The Republic of Lithuania, FOOD AND AGRIC. ORG. OF THE UNITED NATIONS (May 2005), <http://www.fao.org/fi/oldsite/FCP/en/LTU/profile.htm>.

216. Gary Peach, *Greenpeace Decries Russia's Environmental Record*, MOSCOW TIMES, June 7, 2010, <http://www.themoscowtimes.com/news/article/greenpeace-decries-russias-environmental-record/407626.html>.

217. *Id.*

218. *Id.* ("Blokov pointed out, however, that it was Putin who, just days after being inaugurated president in 2000, abolished the country's forestry service and environmental protection committee—depriving the country of independent environmental regulators.")

219. Owen Matthews, *When Gray Looks Green*, NEWSWEEK, June 28, 2008, available at <http://www.newsweek.com/2008/06/28/when-gray-looks-green.html>.

private—especially foreign—corporate interests.²²⁰ However, he is impeded in reporting about ecological crimes by either the Russian government or by Russian corporations in which the government has an interest: “[I]f I try to talk about Krasny Bor outside of St. Petersburg, the biggest chemical dump in Eastern Europe, or about lakes of spilled oil all over Siberia, the ministry shuts me up.”²²¹

Clearly, Russia’s and the Putin regime’s environmental records are, at best, marred. It should therefore not come as any surprise that then-President Putin and his government’s majority stake in Gazprom, whether directly or indirectly, would have a number of reasons to cut corners during the design and preconstruction EIA for the Nord Stream pipeline, without much consideration for the Baltic Sea’s biodiversity or environmental conditions. Given that environmental consultants, who specialize in large-scale projects, can be and often are manipulated, with the next job as bait,²²² it is questionable whether the Nord Stream EIA received adequate scrutiny.

Moreover, circumstantial evidence suggests that politics played a large role in the planning and preconstruction process—including the EIA phase—of the Nord Stream pipeline. As noted above, the pipeline was mapped out by Gazprom in 2005, prior to any agreement that it would be built.²²³ Indeed, German Chancellor Gerhard Schröder “has said he decided to take the [Gazprom] job after leaving office and that he had not known of the [€1 billion] loan guarantee,” when he appears to have personally endorsed the guarantee.²²⁴ Furthermore, the Nord Stream project is part of a pattern by Schröder, who, while in office, secured a reputation for placing the interests of business ahead of all other issues when dealing with Russia.²²⁵

Following Schröder’s electoral loss of chancellorship, Gazprom offered him the position of chair of Nord Stream’s shareholders committee, which he quickly accepted.²²⁶ Mr. Schröder has been subject to intense criticism in the press,

220. *Id.*

221. *Id.*

222. See *supra* notes 128–132 and accompanying text.

223. See *supra* note 200 and accompanying text.

224. Kramer, *supra* note 34.

225. See Young, *supra* note 48.

226. *Id.*

Figure 1

Nord Stream’s Proposed Natural Gas Pipeline



Source: *Optimised Route*, FACTS ABOUT THE NATURAL GAS PIPELINE ACROSS THE BALTIC SEA (Nord Stream, Zug, Switz.), Sept. 2008, at 2, available at http://media.nord-stream.com/media/news/facts/en/2008/09/the-new-gas-supply-route-to-europe_20080901.pdf.

including questions about his ethics.²²⁷ At the same time, Gazprom’s (and possibly Mr. Schröder’s) ties also triggered an investigation by Swedish authorities into allegations of bribery and corruption, to either silence critics of the Nord Stream pipeline or to “change” their minds about their previously negative views about it.²²⁸ Additionally, in early 2008, Sweden’s environment minister Andreas Carlgren asserted that Nord Stream’s application to build its pipeline in Sweden’s EEZ would be rejected, in part, on environmental grounds.²²⁹

227. *Schröder’s New Job Stinks*, SPIEGEL ONLINE INT’L (Dec. 13, 2005), <http://www.spiegel.de/international/0,1518,390131,00.html>. Even giving Schröder the benefit of doubt, there is no way to separate his new job from the fact that he played a key role in initiating the project just before leaving office. It might be how business is done in much of Russia, but even the hint of such shady dealings should make the whole affair untouchable for a former German chancellor.

228. *Nord Stream Gift Prompts Bribery Probe*, THE LOCAL (Feb. 19, 2009), <http://www.thelocal.se/17680/20090219> (“A Swedish prosecutor is looking into suspicions of bribery and corruption after a college on the island of Gotland received a donation from Nord Stream, which wants to build a gas pipeline in the Baltic Sea.”). Gazprom donated 5 million kronor (\$574,000) to a biology professor at Gotland University who previously cautioned that the Nord Stream pipeline’s track was too near to a sensitive bird sanctuary in the Baltic Sea. *Id.* The prosecutor, Malin Palmgren, a member of the National Anti-Corruption Unit, told Sweden’s TV4 that “[m]ore concrete information has emerged which gives reason to look into the question of whether one specific person has benefited from this money.” *Id.*

229. Russell Hotten, *What’s in the Pipeline for Nord Stream?*, THE TELEGRAPH (Feb. 21, 2008), <http://www.telegraph.co.uk/finance/newsbysector/energy/2784810/Whats-in-the-pipeline-for-Nord-Stream.html>.

As noted previously, if EIAs or EISs are to be an effective tool for protection of the environment, it is essential that they consider alternatives.²³⁰ One of those alternatives was an overland route through Georgia, Estonia, and Poland. However, Gazprom, Nord Stream's majority shareholder, dismissed this possibility.²³¹ Additionally, Russia and Gazprom openly acknowledge that the Nord Stream pipeline will be detrimental to the political interests of certain Eastern European countries.²³² They claim that the Nord Stream pipeline will result in the Ukraine's, Belarus's, and Poland's inability to "even theoretically . . . resort to 'transit blackmail' in order to secure their interests in relations with Russia or Europe."²³³ Russia's concerns over the former Soviet Bloc's political influence with respect to an overland pipeline would of course evaporate if Russia would negotiate mutually favorable gas contract with these countries.

VIII. Conclusion

The question Germany's political leaders must answer before the next decade is: Will Russia be a reliable supplier of natural gas so that the German economy can continue to lead Europe out of its current economic woes? Zbigniew Brzezinski, the national security adviser in the Carter administration, has said that "[t]he ability to shut off one pipeline or the other 'depending on whim' makes shutoffs to Eastern Europe more likely," and has "called the pipelines a grand Russian initiative to 'separate Central Europe from Western Europe insofar as dependence on Russian energy is concerned.'"²³⁴ I close with a quote from an English economic reporter: "Welcome to Nord Stream, a project that could be all—or none—of the following: the answer to Europe's energy needs, a multibillion-pound black hole, a Kremlin conspiracy."²³⁵

230. See *supra* note 125 and accompanying text.

231. See Hotten, *supra* note 229 ("Nord Stream disagrees about the ease of putting the pipe over land, saying it would need to move around villages, lakes and the like. What's more, it is cheaper and easier to transport gas at pressure via underwater pipes, because interim compressors are not needed.")

232. See *Baltic Deal Worries Polish Press*, BBC NEWS (Sept. 8, 2005), <http://news.bbc.co.uk/2/hi/europe/4226296.stm>.

233. *Id.*

234. Kramer, *supra* note 34.

235. Hotten, *supra* note 229.