Environmental law is altering the understanding and practice of law. Environmental Law is a legal discipline derived from social movements during the 1960s and 1970s, and has progressively received social, political, cultural, and legal acceptance. But its legitimacy is derived from extra-legal evidence. Law experienced a similar shift during the Progressive Era of the late 19th and early 20th centuries. Progressive legal scholars promoted the Law and Society Movement, which focused on the concept of “legal realism.” Legal realism argued that courts consider legal and non-legal evidence in their decision-making processes. They preferred to base legal arguments on empirical research rather than traditional legal rules and institutions. In his 1881 work *The Common Law*, legal historian Oliver Wendell Holmes noted that experience should govern the creation and application of law, not solely logic. He argued that one had to be aware of all kinds of non-legal matters to develop a thorough understanding of law. In 1921, Judge Benjamin N. Cardozo’s work *The Nature of the Judicial Process* continued Holmes’s argument. He added that judges should not solely rely upon legal past precedent, but consider all branches of knowledge, experience, information, and their own intuition. Modern legal realists view law not as a fixed phenomenon, but in a state of constant flux, responding to changing social conditions.1

Environmental law challenges court justices to not only include procedural law and sociological jurisprudence in their decisions, but also to consider each case as unique and different from all others. This concept of reflexive law is evident in the US Supreme Court Case *Winter v. Natural Resources Defense Council* (2008), where a 5-4 split Court opinion illustrates Cardozo’s arguments among the complex questions surrounding environmental law. *Winter* sheds light on the treatment of environmental legislation by the United States Government in the late 20th and early 21st centuries and begs the question of whether the federal

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government is the proper standard-bearer for and enforcer of environmental legislation.

The National Environmental Policy Act (NEPA) is the only major protective environmental legislation without a “national security” clause. In his work, “NRDC v. Winter: Is NEPA Impeding National Security Interests?” author C.C. Vassar, law clerk and graduate of Hamline University School of Law, recommends the solution to the imbalance between national security and environmental protection is a national security amendment to NEPA. I disagree with Vassar’s proposition because a national security amendment would weaken the protectionist capabilities of NEPA. NEPA is protectionist legislation due to its preventative regulations, which are most effective when applied broadly. Further clarifications through amendment clauses, such as a national security clause, would compromise its broad application and therefore weaken its preventative directive. Preventative law is the only effective means of environmental protection against the onslaught of government agency action. Complying with NEPA regulations ensures that government agencies research and consider the impact of their actions upon the environment. The essential purpose of NEPA is to prevent the unknown and irreversible environmental impact of government actions.

The “balance” between national security and environmental protection came to a head in the US Supreme Court case Winter v. Natural Resources Defense Council (2008). In Winter v. Natural Resources Defense Council (2008), the Natural Resources Defense Council (NRDC) sued for a preliminary injunction against Navy sonar training exercises scheduled for February 2007 and January 2009 of the coast of California. The plaintiffs argued that the Navy violated the National Environmental Policy Act because the Navy’s use of mid-frequency sonar irreversibly harmed marine life, the Navy should have completed a satisfactory Environmental Impact Statement before commencing the training exercises. In a 5-4 decision, the US Supreme Court held the Navy’s need to conduct realistic training exercises outweighed the plaintiffs’ “ecological, scientific, and recreational interests in marine mammals.”

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Winter falls into the theme of “national security trumps all,” but the case is representative of many other legal and historical developments; the relationship between science and law, the expansion of executive authority, proving legal injury, defining “emergency circumstances,” and legal standardization.

Vassar’s proposal is part of a popular legal strategy to standardize environmental law. An ongoing debate within law is whether to treat cases with standard formats or to treat each case as unique. Standardization favors procedural law, whilst uniqueness favors substantive law. Procedural law is the use of formulas based upon precedent. Essentially, similar cases are ruled in similar ways. Substantive law is the direct opposite; it is mandated by relativity. Each case is unique from all others and is treated for its substantive claims rather than precedent. A resulting question is whether there was a precedent case for Winter to conform to? The purpose of this work is to prove the answer is “no,” because multiple elements within Winter were new and underdeveloped scientifically, politically, and legally.

Environmental law is a relatively young legal field, developing as a political force in the late 1960s. In his work, “Is There a There in Environmental Law?,” Dan Tarlock, Distinguished Professor of Law and Director of the program in Environmental and Energy Law at Chicago-Kent College of Law, explains that environmental law largely depends upon the constant generation and application of new knowledge. Unlike other types of legal cases, environmental cases rarely conform to repetitive fact patterns. Therefore, Tarlock agrees with the theory of reflexive environmental law, which determines that environmental decisions be made based upon scientific knowledge and perspectives developed during the past four decades of environmental law. He states, “the best we can hope for are presumptions because, in the end, environmental law is a series of hypotheses that must be tested (and often modified) over a long time horizon by rigorous monitoring and experimentation.”

Summarily, Tarlock argues that environmental law is derived from science and, therefore, depends upon science for legitimacy.

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The relationship between environmental law and science is not one-sided; it is a relationship of interdependence, with environmental law stimulating scientific research and technological experimentation. An example relevant to Winter is the work of the Office of Naval Research (ONR). Historically, the protection of gray whales fell under a web of protective legislation including the International Agreement for the Regulation of Whaling (1937), the Endangered Species Act (1973), and the Marine Mammal Protection Act (1972). ESA and MMPA were under the jurisdiction of the Environmental Protection Agency (EPA). EPA tasked the National Marine Fisheries Service (Fisheries) with regulation enforcement, as well as conducting investigations into unusual mortality events. But Fisheries lacked the funding for proper environmental investigations. Consequently, investigations were largely conducted by the Navy’s Office of Naval Research (ONR). Due to Fisheries’ dependence upon the Navy’s ONR, Fisheries did not generally fraternize with environmentalist organizations, such as the Natural Resources Defense Council. With the Navy as the primary source of funding and research for cetology, how quickly the discipline has and is developing is questionable.

Winter highlights a lag between science and law because cetology, the study of whales, was vital to the case but was a massively underdeveloped discipline. An informative section of Joshua Horwitz’s work War of the Whales was the history of the Navy Sound Surveillance System, called SOSUS. SOSUS was born during the Cold War in an attempt to detect and destroy Soviet submarines. Surprisingly, cetology, the study of whales, and sonar research developed together. Horwitz describes the Navy’s attempt to train marine mammals to act as biological minesweepers during the 1970s in the Marine Mammal Training Program. The Navy was trying to tame and train marine life because of marine mammals’ use of biological sonar in deep waters. The program eventually failed and Sea World used its training techniques, but the program communicates the Navy’s utilization and objectification of

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marine life and its growing interest in deep-sea acoustics, which became sonar.  

Active sonar sends out pulses of sound that bounce off objects, which allows operators to assess the measure, size, and distance of marine objects. Operators must be proficiently trained due to the difficulty of distinguishing between natural marine noise and sonar. Mid-Frequency Sonar has proven more successful than low-frequency sonar in helping operators distinguish between marine noise and sonar. Unfortunately, the higher frequency of Mid-Frequency Active (MFA) sonar has proven excruciating to marine mammals. In 1998, investigations linked the use of MFA sonar to mass beachings of whales and other marine life around the world. It was proven the noise could rupture the ears of and disorient marine life, including blue whales, dolphins, and beaked Curvier’s whales. Sonar also causes marine mammals to change their migration routes to avoid sonar noise because it interferes with their own biological sonar, echolocation. Echolocation helps marine mammals navigate, communicate, identify food sources, and locate possible threats. To avoid MFA sonar, marine mammals surface too quickly, which results in decompression sickness, known as “the bends.” Quick surfacing also creates gas bubbles in the blood stream, resulting in fatal hemorrhaging and lesions in the organs. These factors bring disorientation, causing marine mammals to stray from migration courses, leading to beaching, starvation, and mating and birthing disruptions.  

The increase in occurrence and size of beachings during the 1990s incurred concerns throughout the scientific community. It was not until the 1996 mass stranding in Greece that scientists considered the link between sonar and beachings. NATO naval forces had been conducting antisubmarine training exercises near the Hellenic Trench in the Ionian Sea. In 1999, approximately 1,500 marine mammals beached on US shorelines and only five survived. Darlene Ketten was the US Navy’s top whale pathologist and an expert for unusual mortality event investigations. She held joint appointments at Harvard Medical School and Woods Hole Oceanographic Institution. Ketten was most concerned

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7 Ibid., 232-35.
9 Ibid., 287-88.
about a beaching in the Bahamas in 2000 due to the magnitude, number of different species involved, and the extended geographical area across six islands. The beachings were connected to US Navy testing ranges throughout the Bahamas.¹⁰

Ketten proved instrumental to sonar investigations because of her specialty in bioacoustics. Her research attests to the recent development of cetology as a discipline. She was the “first researcher to study the internal structures of beaked whale phonation and hearing, and the first to trace the path of sound waves all the way from their source in the ocean to the beaked whale’s auditory cortex.”¹¹ She was also the first researcher to use CT scans to create a 3-D composite scans of whale heads. Computerized tomography (CT) was invented in 1980 and Ketten began her work during the 1980s. By 2000, Ketten was the go-to whale coroner and expert in the area of acoustic trauma and whale ear pathology. Horwitz described beachings as opportunities for advancements in cetology because of a chronic lack of whale specimens for research. Specimens were sought by zoologists, veterinarians, paleontologists, marine biologists, and toxicologists.¹² Consequently, cetology was a young discipline that developed slowly for a lack of specimens as well as a lack of funding.

The limited knowledge of cetology was evident in the oral argument of Navy General Gregory G. Garre before the Supreme Court in 2008 on behalf of the petitioners, the Navy. Justice Samuel Alito questioned whether “temporary” behavioral modifications caused by sonar could be considered injury:

Justice Alito: In lay terms, what does that mean? Does it mean an alteration of their swimming pattern, their migration pattern? What does it mean? Mr. Garre: In most cases it means that there’s an alerting response, they hear the sound and they go in the opposite direction, as one who hears a noise that disturbs them would ordinarily do.

¹⁰ Horwitz, 18, 70-71, 110.
¹¹ Ibid., 103.
¹² Ibid., 104-106.
Justice Alito: It doesn’t necessarily mean that there’s a physical injury to them, does it?
Mr. Garre: No.
Justice Alito: It means that they may just swim in a different direction.
Mr. Garre: That’s right.13

And in Garre’s response he stated “the Navy acknowledged that there is uncertainty about the effects of sonar on beaked whales.”14 Justice John Stevens concurred with Justices Ginsburg and David Souter by stating:

The very fact that you need an EIS [Environmental Impact Statement] is—is because you don’t know what environmental consequences may ensue. That’s the purpose of the EIS. So isn’t the normal practice to enjoin government action until the EIS is filed when it is clear there is a duty to file?15

Ginsburg and Souter were concerned about the unknown environmental effects of government actions and NEPA was created to directly address these concerns.

The National Environmental Policy Act was created in 1970 to provide a procedural framework federal agencies must work within to ensure policies of the act are implemented. NEPA requires government agencies to consider the adverse environmental impact of their actions and to allow public comment. Section 102 requires that federal agencies submit a report to Congress detailing the environmental impact of proposed actions. The report, referred to as the Environmental Impact Statement (EIS), must describe the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided, alternatives to the proposed action, and irreversible and irretrievable commitments of resources affected.16 For a satisfactory EIS, federal agencies also have to study, develop, and describe appropriate

14 Ibid.
15 Ibid.
alternatives to the course of action for consideration. If agency action is taken before completion of the EIS, or the EIS is proven inadequate, injured parties may sue for preliminary injunctive relief.17

Founded alongside NEPA in 1970, the Natural Resources Defense Council (NRDC) was a non-governmental organization composed of environmental lawyers and activists who filled a niche in the environmental community by helping draft and enforce environmental legislation.18 Before the 1970s, environmental lawyers lacked an environmental legal arsenal, attempting to use common law principles for environmental protections. But the gambit of protective environmental legislation during the 1970s, gave environmental legal organizations, such as the NRDC, an “abundance of new statutory weapons.”19 The NRDC essentially became the regulator of regulatory agencies, especially the Environmental Protection Agency.20

Preliminary injunctions are the most broadly and frequently used remedies employed by federal courts, but they lack clear application standards. A preliminary injunction is issued “to protect plaintiffs from irreparable injury and to preserve the court’s power to render a meaningful decision after a trial on the merits.” But the plaintiff is required to persuade the court of clear injury.21 Injunctions have proven vital to the legal regulation of federal agency actions with potential environmental impact. In Winter, the Natural Resources Defense Council sought an injunction, arguing the Navy violated NEPA by failing to prepare an adequate EIS prior to MFA sonar training exercises. The Navy responded that an EIS was unnecessary because the training exercises would not have had significant impact on the environment. The District Court found this contrary to the Navy’s own research proving sonar exercises would injure and disturb 37 species of marine life.22 To circumnavigate NEPA’s EIS requirement, the Navy sought an emergency

18 Horwitz, 82.
20 Horwitz, 82.
circumstances exemption through the Council on Environmental Quality (CEQ). CEQ is a governmental agency created through NEPA to advise the executive branch of government, providing guidance and advice on environmental policy. In Winter, CEQ approved the Navy’s request and issued alternative arrangements in accordance with the emergency circumstances regulation and the Navy could continue its trainings. Courts generally defer to an agency’s interpretation of its own regulations, unless the agency’s interpretation opposes the original intent of the regulation. By overriding the NEPA EIS requirement, CEQ was clearly not acting in the interests of environmental protection. The district court noted NEPA has no national security defense exemption, therefore, regardless of CEQ interference; the Navy was still required to complete the EIS requirement of NEPA. The only way to bypass the EIS requirement is through direct legislation by Congress. CEQ could not bypass NEPA regulations “simply by characterizing an ordinary, planned activity as an emergency.” The court held CEQ’s action invalid and the Navy not exempted from either the EIS requirement or the preliminary injunction.23

At the Supreme Court, Justices Ginsburg and Souter confirmed CEQ’s lack of statutory authority to override the EIS requirement of NEPA. Justice Roberts agreed that NEPA gives no body regulatory authority, neither EPA nor CEQ. He recognized CEQ as “more or less an office in the White House, rather than a free-standing agency.”24 And Ginsburg stated the purpose of CEQ was “To set up an orderly regime for Federal agencies to carry out their obligations under NEPA.”25 In Justice Ginsburg’s dissent, in which Justice Souter joined, the Navy should have consulted Congress for legislative override of NEPA, not the executive branch.26

After disproving the CEQ as an overriding authority of NEPA regulation, the Supreme Court addressed the case timeline. Justice Souter stated:

25 Ibid.
I guess my question is, to the extent that there was an emergency, wasn’t the emergency created by the failure of the Navy to take any timely action? So it sounds to me as though that, if there is an emergency, it’s one that the Navy created simply by failing to start an EIS preparation in a timely way at which it trained in effect to sort of neutralize by keeping everybody in the dark until the last moment…there was no emergency here except one which was created by the Navy’s apparently deliberate inattention?27

Aiming to create a narrow definition, the Court investigated what constituted an emergency. In Valley Citizens for a Safe Environment v. Vest (1991), a sudden change in hostility in a region of the world permitted Air Force use of sonar before completing an EIS. In contrast, the Navy in Winter experienced no such change in need for sonar training. Also, as described in the Garre’s argument, the Navy had plenty of notice to complete a satisfactory EIS. The District Court found “the Navy’s current emergency was simply a creature of its own making, i.e., its failure to prepare an adequate environmental documentation in a timely fashion, via the traditional EIS process or otherwise.”28 The Supreme Court’s reference to Valley Citizens for a Safe Environment v. Vest infers that what constitutes an emergency is the timing and level of threat.

Stephen Holmes, Walter E. Meyer Professor of Law at New York University School of Law, presented the idea of a distinction between novel and urgent threats. Urgent threats require an immediate response and have precedents and protocols to follow. Novel threats lack a precedent and therefore lack a protocol to follow. But a novel threat is not considered an “emergency” like a sudden event requiring split-second decision-making. Urgent threats require quick reaction, with no opportunity for serious consultation and debate. Holmes argued that an enduring novel crisis, national-security personnel have time to think and rethink, plan ahead and revise their plans. The ultimate question is, “Is it

27 Ibid.
the kind of emergency that requires the government to rewrite radically, or flatly disregard, previously binding rules?29

Finding a middle ground between the Navy and NRDC has proven difficult, especially involving the use of sonar. MFA sonar has proven vital to detecting silent submarines, which threaten the safety of the US and its military.30 Vassar argued “the Ninth Circuit Court of Appeals correctly determined that an emergency cannot refer to pre-planned, long-term training exercises as part of a military policy that has no foreseeable end.”31 But, he stated, “The intent behind the adoption of the emergency circumstances regulation only contemplates unexpected, unplanned circumstances that arise independent of agency action.”32 Vassar’s proposal is logical; it would allow abrogation in emergency circumstances, such as those in Valley Citizens for a Safe Environment v. Ves, but would still prevent agency action abuses, such as in Winter.

Vassar argues that NEPA currently enacted and administered does not adequately consider national security interests and that NEPA should be amended to include a national security exemption. The proposition is sensible and attempts to find a middle ground between environmental protections and government agency action. Vassar supports a national security exemption because it would legally address national security needs and “would provide clearer guidelines for which types of circumstances should be relieved from NEPA’s procedural requirements.”33 Vassar’s proposition clearly favors military interests over environmental interests, although he claims the amendment would strike a balance between the two. I am most cautious to support an emergency circumstance amendment to NEPA because of the legal history of the Endangered Species Act (ESA).

Similar to NEPA, the Endangered Species Act (ESA) enacted broad-sweeping legal protections for endangered species and their habitats, initially with absolutely no exceptions. The Endangered Species Act (ESA) was enacted in 1973 to create legal, substantive protections for

31 Ibid., 282.
32 Ibid.
33 Ibid., 303.
listed endangered species. Section 7 prohibits the taking of any listed endangered species and their habitat by any person or governmental agency.\footnote{34 Endangered Species Act of 1973, Public Law 93-205.} In \textit{TVA v. Hill} (1978), in a 6-3 decision, the US Supreme Court approved an injunction against the Tennessee Valley Authority because completion of the Tellico Dam would have violated the Endangered Species Act by harming the endangered Snail Darter species and its habitat. The Court really had no choice because there were no avenues for exemptions from ESA prohibitions.\footnote{35 \textit{TVA v. Hill}, 437 US 153 (1978); Murchison, \textit{The Snail Darter Case}, 1-2.} Six months after \textit{TVA v. Hill}, Congress amended ESA to create an Endangered Species Committee with authority to grant exemptions from section 7 prohibitions.\footnote{36 Ibid., 141, 153, 168-69.} \textit{TVA v. Hill} was a victory for ESA, but also a loss with the creation of the Endangered Species Committee and the right of public interest in abrogating ESA. Enforcement of ESA has relied on administrative deference rather than the text of the law, de facto gutting the purpose of ESA; the protection of endangered species. This is due to the very broad reading of the Committee duties being, “the Committee shall grant exemption for any agency action is the Secretary of Defense finds that such exemption is necessary for reason of national security.”\footnote{37 Vassar, “NRDC v. \textit{Winter},” 297.} This broad reading does not specify what circumstances composes “reason of national security.” This same ambiguity is present in \textit{Winter}, but, unlike ESA, there is no national security exemption within NEPA.

NEPA regulations should be read narrowly with no exceptions. \textit{Winter} was not about the Navy harming marine life; it was about the \textit{law} and the Navy’s blatant disregard for it. The outcome of \textit{TVA v. Hill} (1973) rendered the Endangered Species Act ineffective. But ESA and NEPA drastically differ on one crucial point; ESA is prohibitory legislation and NEPA is regulatory legislation. ESA strictly prohibits any action in violation of its mandates. The Endangered Species Act (ESA) demands strict protections for listed endangered species. Section 7 prohibits the taking of any listed endangered species and their habitat by any person or governmental agency.\footnote{38 Endangered Species Act of 1973, Public Law 93-205.} But NEPA is merely part of the decision-making process and does not determine the decision outcome.
NEPA provides a step-by-step procedural framework federal agencies must work within to ensure policies of the act are implemented. NEPA technically does not prohibit government action, it merely requires compliance to its procedural regulations.

Returning to *TVA v. Hill*, the reaction of Justice Powell was, “The majority’s interpretation of the Endangered Species Act established ‘a continuing threat to the operation of every federal project, no matter how important to the Nation.’” Justice Powell viewed ESA as a threat to government action. NEPA was viewed with this same perspective in *Winter*. Assume hypothetically that the Navy had completed an adequate EIS and the level of irreversible environmental effects prohibited the sonar trainings altogether. The Supreme Court may still have overridden the decision for the preservation of national security. A change of perspective is needed for environmental law to succeed in its directives. NEPA should not be viewed as an enemy and rather be viewed as an ally to help agencies make better-informed decisions.

The purpose of NEPA is to prevent irreparable environmental impact by federal agencies. Thirteen-thousand marine mammal injuries have been attributed globally to the US Navy’s use of sonar. In *Winter*, it was difficult for the National Defenders of Wildlife to prove legal injury because cetology, the study of whales and marine life, was an underdeveloped discipline due to a lack of funding and specimens. Research toward cetology was left to the Office of Naval Research because the Environmental Protection Agency and Department of Fisheries and Wildlife lacked the funding. Obviously, the Navy was biased because it held a stake in the use of Mid-Frequency Sonar and its effect upon marine life. Beachings are a recent phenomenon, occurring primarily during the 1990s. So the rarity of specimens has slowed the development of cetology as well. As exemplified in *Winter*, we still do not understand the effects of sonar upon marine life. The issue of noise pollution and its effects on marine life is still being debated socially, politically, scientifically, and legally.

The purpose of NEPA and its EIS regulation is to investigate the unknowns of government agency action, such as in *TVA v. Hill* and in

39 Ibid., 138-39
40 Ibid., 351.
Winter. Dan Tarlock argues that “environmental law is fated to be about process rather than predictable outcomes” because environmental protection is a process evolving along with the discovery of new information. A fear of the unknown effects of actions fuels scientific investigations, which better inform the decision making process. NEPA should contain absolutely no amendments and no exceptions should be permitted by any authority. The regulations set forth in NEPA are the most effective safeguards against federal environmental abuses, many of which are merely the result of a lack of information.

William Rodgers, Stimson Bullitt Endowed Professor of Environmental Law at University of Washington School of Law, summarized the relationship between science and law by stating, “Without demeaning the many distinctions between the exercise of science and the practice of law, let me cut to the chase and declare that science is mostly about the ‘pursuit of truth’ and law is mostly about ‘who wins.’” The most intriguing aspect of Winter was that the US Supreme Court actually granted the Navy’s request for exemption from NEPA. The Navy’s national security “emergency” was plainly the result of the Navy’s failure to complete a satisfactory EIS before its proposed trainings. Then the Navy attempted to override NEPA by consulting the CEQ for alternative arrangements. But the Court determined that only Congress could alter NEPA regulations, and that CEQ held no override authority. And yet, after the US Supreme Court dispensed with all the Navy’s arguments, the Court majority granted the Navy’s request. The opinion in Winter paints the Roberts Court (2006-present) as an activist court for national security interests because the Court usurped the authority of Congress by overriding NEPA, an authority it stated belonged only to Congress.

In the February 2015 White House National Security Brief, Climate Change was identified as a national security emergency. This was a gain for environmental interests, but climate change is only one facet of environmental concerns. White House initiatives focus on

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41 Tarlock, “Is There a There in Environmental Law?” 220.
43 The White House, President Barrack Obama, National Security Strategy (February 2015), 12.
Climate Change, energy use, and environmental conservation. Climate Change has received the greatest political attention because it influences human environmental security. Environmental security is the concern about whether people have enough food, water, shelter, or necessary natural resources to live. Climate change threatens environmental security because it destabilizes these resources. Concerns over Climate Change, energy use, and conservation are all focused on human environmental use rather than human environmental abuse. None of these policies address environmental preservation, particularly the protection of animal species and their habitats. The primary preservationist White House initiative is the restoration of wetlands, including the Gulf of Mexico, California Bay Delta, Chesapeake Bay, Great Lakes, and the Everglades. This initiative is promising, but Winter begs the question of how successfully environmental policies are being implemented and upheld within the inter-agency squabbles and developing interests of the United States government.

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