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STOPPING THE FLOOD: PUBLIC NUISANCE LIABILITY AS A METHOD TO COMBAT THE INTRODUCTION OF INVASIVE SPECIES IN HAWAII

Ecological alterations and disturbances caused by non-indigenous invasive species [NIS] deteriorate biodiversity\(^1\) and have a devastating affect on an area's ecology, economy, and human health.\(^2\) Of the roughly 13,000 non-indigenous species that have been introduced to Hawaii, only about one percent are considered invasive.\(^3\) Invasive species can alter an area's physical and chemical conditions, affect species diversity, and cause ecological disturbances such as fires, flooding, and pathogen outbreaks.\(^4\)

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2 An invasive species is defined as an alien species that significantly disrupts or distorts the proper function of an ecosystem. An alien species is described as a species that is transported outside of its native geographic range by intentional or unintentional human activities. Small Island Developing States and Invasive Alien Species: Briefing Papers, The Nature Conservancy (1992). [hereinafter TNC brochure] A recent study by Hawaii's Legislative Reference Bureau described an invasive species simply as foreign plants or animals that have invaded a new environment. Edmond K. Ikuma, Dean Sugano, & Jean K. Mardfin, State of Haw. Leg. Reference Bureau, Filling the Gaps in the Fight Against Invasive Species 1 (2002). [hereinafter LRB]

3 Hawaii Department of Land and Natural Resources, Hawaii's Most Invasive Horticultural Plants, http://www.state.hi.us/dlnr/dofaw/hortweeds/ (last visited Feb. 14, 2007) (defining invasive species as alien species that have a negative environmental, economic, or health impact on existing ecosystems.

4 George W. Cox, Alien Species in North America and Hawaii 283 (1999). Most of these dollar impacts are limited to impacts on agriculture, forestry, fisheries, and navigable waters. Id. at 251.
The economic costs of the cumulative impacts of invasive species to the United States and Hawaii are staggering. Although the exact economic cost of invasive species is difficult to calculate, a recent study estimated that exotic pests alone create economic costs of over $115 billion in the United States. In Hawaii, the damage caused by invasive species to ecosystems, housing, agriculture, and human health costs the state hundreds of millions of dollars. Lost revenues in Hawaii's agriculture sector alone account for an estimated $300 million per year, while the projected effects of a brown tree snake introduction from Guam could cost Hawaii an additional $450 million.

Invasive species also pose a serious danger to public health in the form of disease outbreaks caused by invasive pests and the pathogens they carry. This threat was exemplified on Maui in 2001 when a dengue fever outbreak had serious negative health and economic repercussions. Not only were people sickened by the outbreak, but related effects to Hawaii's tourism industry demonstrated how a more severe epidemic could potentially cost the state billions of dollars in lost taxes, revenues, and jobs. Although the Maui dengue

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5 Id. Cox points out how environmental changes caused by introductions of invasive species can permanently alter the ecosystem to a stable, yet altered, state from which full recovery can become nearly impossible.

6 See LRB, supra note 2, at 13 – 16.


outbreak was not directly attributed to a invasive species, the human health and economic fallout caused by the outbreak exemplified the possible effects of an outbreak caused by an invasive species. The Hawaii State legislature noted, “There is wide-spread agreement among farmers, scientists, government agencies, business people, and others that stopping the influx of new pests is essential to Hawaii's future well-being.”

Federal and state legislation aimed at controlling the introduction of invasive species has been inadequate. Legislation designed to empower federal agencies with the ability to prevent the introduction of NIS has been unsuccessful in its implementation. Problems with federal efforts include lack of funding for enforcement, lack of agency coordination at the state level, lack of coordination and cooperation among federal agencies, lack of a comprehensive legal regime at the federal level, and required compliance with international trade agreements.

The Environmental Protection Agency [“EPA”], a federal agency charged with maintaining environmental quality, has acknowledged its efforts to contain and control invasive species has not effectively slowed introduction of invasive species nor the damage they cause. The EPA's negative assessment was

9   LRB, supra note 2, at 7 (quoting The Coordinating Group On Alien Pest Species, The Silent Invasion (1999)).

10  John A. Ruiter, Combating the Non-Indigenous Species Invasion of the United States, 2 Drake J. Agric. L. 259, 260 (arguing for a more comprehensive approach to battling NIS).

11  LRB, supra note 2, at 31 – 33.

supported by Congressman Jim Saxton, who stated “I am sadly aware that we are losing the battle against these unwanted invaders [referring to invasive aquatic species].”\(^{13}\)

Hawaii has responded to the NIS threat by enacting its own legislation and empowering state agencies to implement prevention and control policies. Despite Hawaii’s effort, however, the current state system has shortcomings similar to those at the federal level: inadequate program funding and incomplete policies.\(^{14}\) In fiscal year 2000, Hawaii spent $7.6 million to fight invasive species, far short of the estimated $50 million that experts suggest is required to successfully address the situation.\(^{15}\) Hawaii’s State Senate admitted Hawaii’s “[C]urrent protection system [is both] piecemeal and lacking adequate vigor and comprehensiveness.”\(^{16}\) This negative assessment is supported by findings that twenty five new species of pests, plants, and animals appear in Hawaii every year.\(^{17}\)

Compliance with global trade agreements has restricted the ability of state and federal agencies from fully combating the NIS threat. Accidental


\(^{14}\) LRB, supra note 2, at 31.

\(^{15}\) Id.


\(^{17}\) Cox, supra note 4, at 177. Many of these are unintentional introductions via airplanes, agricultural products, and people entering Hawaii everyday.
introductions are increasing as global trade and human travel increases.18 Most of these unintentional introductions come from horticulture plant trade and increased human travel.19 Even as the costs, health risks, and environmental damage associated with NIS becomes more apparent and widely accepted, further trade restrictions to prevent NIS introduction may become more politically unacceptable in light of the growing global economy.20

Public Nuisance tort liability may provide a solution to NIS introduction where federal and state legislation has failed. This article argues that although the problem of invasive species introduction has been addressed by various legal regimes, public nuisance tort liability is particularly well suited and should be used to target those who negligently or deliberately introduce invasive species in Hawai'i. Part I analyzes the obstacles and deficiencies of current methods used to prevent the introduction of invasive species. This section focuses on insufficient state legislation and the absence of effective federal guidance in the face of ineffective legislation, shrinking federal law, and policies promoting free trade. Part II analyzes the unique ability of Hawaii to use public nuisance liability given Hawaii's relaxed standing requirements compared to other jurisdictions. Part III examines the advantages of using Hawaii's unique public nuisance standing rules

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19 George Staples and Robert Cowie, eds., Hawaii's Invasive Species, Bishop Museum Biological Survey 7 (2001).

20 LRB, supra note 2, at 32.
to engage industries in a proactive solution to prevent invasive species from even being introduced. This final section analyzes the advantages of public nuisance liability to create an incentive for industries to internalize costs associated with NIS introduction and that are currently passed on to Hawaii's taxpayers and government agencies. The article concludes by encouraging private citizens and public officials in Hawai'i and other jurisdictions to adopt this mode of enforcement given the advantages argued and the unique challenge posed by invasive species introduction.

Overall, the dangers of invasive species have been well documented, and this article will not detail those effects. Instead, this article will highlight and support increasing interest within the legal community to apply the flexible nuisance doctrine to a new realm of environmental law. It does not suggest that public nuisance law can provide the cure-all solution to invasive species introduction, yet it may be one of many effective tools for an isolated island ecosystem such as Hawaii.21

I. OBSTACLES AND DEFICIENCIES OF CURRENT REGULATORY SYSTEM

Federal and State legislative attempts to prevent the introduction of invasive species is not a new effort. Starting as early as 1900, Congress passed legislation aimed at preventing the spread of invasive organisms that threatened

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agriculture production. 22 Years later, Presidents Carter and Clinton signed executive orders encouraging federal authorities to prevent invasive species introduction onto federal land and encourage private citizens, state and local governments' to prevent invasive species introduction into “natural ecosystems.” 23 Congress has renewed the federal government's effort to control NIS in the past decade and enacted several federal statutes to provide resources to federal agencies to control the invasive species problem. 24 Despite all of these actions, however, the problem of invasive species introduction is growing increasingly worse, especially in Hawaii, where dozens of new species appear annually and destruction to local ecosystems continues. 25

A. Shortcomings at the Federal Level

Attempts at the federal level to officially recognize and control the introduction of invasive species have proved inadequate in the execution, scope, and breadth. Although twenty federal agencies are authorized and mandated to prevent the damaging effects of NIS, none of these agencies have the required

22 18 U.S.C. § 42 (2007) (Referred to as the Lacey Act, the Secretary of the Interior was given the power to prevent the importation of certain plants and animals deemed to be injurious to humans, agriculture, and/or forestry, or wildlife. Violation of the act is considered a crime and punishable by a fine or up to six months imprisonment.).


25 See LRB, note 4, at 7-8; Pidot, supra note 27, at 193 (“One hundred years after the first environmental law attempted to address invasive NIC, the problem has worsened dramatically”).
authority to address the problem effectively.\textsuperscript{26} Federal efforts to control the proliferation of NIS are plagued by a lack of funding, inefficient inter-agency cooperation, and an unsupportive federal regulatory framework.\textsuperscript{27} As a congressional study conceded, “The current Federal effort [at addressing invasive NIS] is largely a patchwork of laws, regulations, policies, and programs .... ”\textsuperscript{28} The same study observed that legislation intended to prevent the introduction of NIS is overly narrow and only indirectly addresses root causes.\textsuperscript{29}

No single federal statute directly regulates all invasive NIS introductions into the United States.\textsuperscript{30} Although Congress first addressed the problem of NIS introduction as early as 1900,\textsuperscript{31} for almost a century there were no serious attempts to focus on specific species and their effects on native ecosystems.\textsuperscript{32} During the 1990's, the federal government responded to calls within the scientific, environmental, and agriculture industries to use its police powers to impose civil

\textsuperscript{26} Marc L. Miller, The Paradox of U.S. Alien Species Law, in \textit{Harmful Invasive Species: Legal Responses}, 125 (Marc L. Miller & Robert N. Fabian eds, 2004).


\textsuperscript{28} Pidot, supra note 27, at n. 11 (quoting Office of Tech. Assessment, U.S. Cong., Publ'n No. OTA-F-565, Harmful Non-Indiginous Species in the United States 11 (1993)).

\textsuperscript{29} \textit{Id.} (“ Many only peripherally address NIS, while others address the more narrowly drawn problems of the past, not the broader emerging issues.”).

\textsuperscript{30} Larsen, supra note 21, at 3.

\textsuperscript{31} \textit{Id.} at note 40 (Act of May 25, 1900, ch. 553, 31 Stat. 187).

\textsuperscript{32} Larsen, supra note 21, at 3. The first of this recent legislation was the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, which addressed the introduction of NIS aquatic species through ballast water of shipping vessels. 16 USC § 4711 (1990).
and criminal penalties on parties that violate the statutes governing NIS. The major legislative actions at the federal level that deal with preventing and controlling NIS introduction are the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (“NANPCA”), the National Invasive Species Act of 1992 (“NISA”), and the Plant Protection Act of 2000 (“PPA”).

1. *Nonindigenous Aquatic Nuisance and Control Act*

NANPCA initially addressed the unintentional introduction of NIS through the ballast water of ships only in the Great Lakes and Hudson River watershed, but the statute's coverage was later expanded to apply to all ports within United States waters. NANPCA specifically responded to the introduction of zebra mussels in the Great Lakes and the resulting damage caused to the region's water and port infrastructure. NANPCA requires ships to minimize the impact of aquatic NIS introduction in domestic ecosystems by forcing them to exchange their ballast water away from U.S. ports.

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37 Whalin, supra note 33, at 119.

38 Zebra muscles have a history of being a very troublesome invasive species because they spread rapidly in drain pipes and other fresh water enclosed spaces and can cause lots of damage. Population densities of zebra muscles in Lake Erie essentially cover every underwater object. Larsen, supra note 21, at 2, 5.

39 Ruiter, supra note 10, at 268.
NANCPA, ships could opt out of participation in the exchange program by adopting environmentally sound alternatives to ballast water dumping.\(^{40}\) Initially, a voluntary ballast water exchange program was set up outside the great lakes basin.\(^{41}\) NANCPA also allows civil and criminal sanctions to be imposed for every day a ship violates NANCPA's guidelines.\(^{42}\) Last, NANCPA created a task force charged with developing a program to combat the introduction of NIS.\(^{43}\) The resulting program charged the Coast Guard with adopting specific guidelines regarding ballast water exchange and enforcing a mandatory ballast exchange program.\(^{44}\)

Deficiencies of NANPCPA include its limited coverage and jurisdiction, unstable and inadequate federal funding, and its preclusion of citizen enforcement.\(^{45}\) First, NANCPA is limited in jurisdiction because it primarily applies to the Great Lakes ports. Outside of the northeast United States, the ballast exchange program and its resulting attempted prevention of NIS

\(^{40}\) Larsen, supra note 21, at 5.

\(^{41}\) Ruiter, supra note 10, at 267.

\(^{42}\) Civil fines are up to $25,000 for every day of violation and a possible class C criminal felony. NANCPA § 1101(c), (d), 16 U.S.C. § 4711(g); Whalin, supra note 33, at 120.


\(^{44}\) Larsen, supra note 21, at 5; See Ruiter, supra note 11, at 267.

\(^{45}\) Larsen, supra note 21, at 5.
introduction are not fully implemented and enforced.\textsuperscript{46} Even if NANCPA was implemented outside of the Great Lakes, the statute focuses on aquatic species and ballast water introduction only.\textsuperscript{47} NANCPA’s focus on ballast water addresses only one avenue, or vector, in which invasive species are introduced, and completely ignores the threat posed by land-based NIS.\textsuperscript{48} Although the focus on ballast water is important for preventing introduction of aquatic species, comprehensive invasive species legislation must be broad enough to address terrestrial species as well.

Second, NANCPA’s funding lacks the steady, stable base required to develop an effective national program to prevent aquatic NIS introduction.\textsuperscript{49} Without this funding, the required research, agency coordination, and enforcement is overwhelming.\textsuperscript{50} With limited funds and resources, agencies tend to focus on the species that will get the most attention in order to guarantee future funding.\textsuperscript{51}

Last, NANCPA’s civil and criminal sanctions are enforced by executive agencies and do not allow for citizen enforcement or damages to affected

\textsuperscript{46} Miller, supra note 26, at 136 – 137.

\textsuperscript{47} \textit{Id}.

\textsuperscript{48} Whalin, supra note 33, at 120.

\textsuperscript{49} Ruiter, supra note 11, at 269; Biber, supra note 18, at 403.

\textsuperscript{50} See Ruiter, supra 11, at 269. Only $1 million is spent on control of aquatic NIS.

\textsuperscript{51} The gypsy moth is used as an example of a high profile pest given much attention by regulatory agencies at the expense of less well known but perhaps more harmful invasive species. Biber, supra note 18, at 401.
communities. This mode of enforcement, referred to as a command and control structure because of its hierarchical method of enforcement, is criticized for stifling creative solutions because it does not provide incentives for private parties to develop new technologies and methods to limit introduction. NANCPA's command and control structure also resigns enforcement and implementation to inconsistent political commitments and federal administrative priorities. Without a statutory provision specifically providing for citizen enforcement, the scientific complexity, geographic breadth, and enormous costs of NIS exceeds the ability of private parties to bear the costs of facilitating native ecosystems.

Although far from perfect, NANCPA represents the first good faith recognition by Congress that NIS introduction is a wide-ranging problem that requires a solution based on funded research programs, technological advances, and mandatory regulatory guidelines.

2. National Invasive Species Act

In 1996, Congress passed the National Invasive Species Act (“NISA”), a statute intended to stem the tide of NIS introduction in the US by providing a more direct and comprehensive approach than NANCPA. NISA focuses on

52 Larsen, supra note 22, at 5.
53 Larsen refers to the private sector as the segment of society most capable of developing an innovative and effective solution to the invasive species problem. Id. at 7; Biber, supra note 18, at 400.
54 Biber, supra note 18, at 400.
55 Whalin, supra note 33, at 121.
interstate travel and therefore addresses both terrestrial and aquatic NIS.\textsuperscript{56}

NISA also specifically addresses the problem of NIS introduction into Hawaii by focusing on inspection of interstate mail packages.\textsuperscript{57} NISA's attempts to prevent the importation of "injurious animals" and "plant pests" by authorizing inspection of all incoming mail to Hawaii.\textsuperscript{58} NISA is significant for Hawaii because it federally recognizes and targets the importation of NIS from foreign countries and interstate commerce from the mainland.\textsuperscript{59}

NISA recognizes that postal services are a significant vector for the intentional introduction of invasive species.\textsuperscript{60} NISA uses a pre-existing "black list" of un-mailable species and allows for the lists' expansion as scientists develop a better understanding of the affects of NIS introduction.\textsuperscript{61} This regulation of interstate activity (the mail system) was a significant step forward in curbing the intentional introduction of invasive species.\textsuperscript{62}

NISA has significant shortcomings, including its reactive approach and

\textsuperscript{56} NISA also re-authorized NANPCA and expanded regulation of ballast water to a nationwide program under the Department of Transportation. Eric Biber, supra note 18, at 395; Whalin, supra note 33, at 122.

\textsuperscript{57} 39 U.S.C. § 3015; Larsen, supra note 22, at 5.

\textsuperscript{58} \textit{Id}.

\textsuperscript{59} Larsen, supra note 21, at 5.

\textsuperscript{60} Whereas NISA's predecessor, the Lacey Act, dealt primarily with importation of injurious animals from other countries (mainly for agriculture protection), NISA applied this regulatory solution to other species (pests, plants) and interstate mail. Larsen, supra note 21, at 5.

\textsuperscript{61} \textit{Id}.

\textsuperscript{62} Miller, supra note 26, at 138; Larsen, supra note 21, at 5.
focus on intentionally introduced NIS.\textsuperscript{63} The reactive approach of NISA’s “black list” of banned species is problematic because the science behind invasive species is constantly responding to changing environmental factors, therefore a fixed list of banned species gives no incentive to prevent the introduction of species whose harm is unknown.\textsuperscript{64} Since this list creates a presumption in favor of introduction unless stated otherwise, lists of species with harmful impacts will always be reactive rather than proactive and ameliorate the harm rather than prevent the harm in the first place.\textsuperscript{65}

Although NISA's command and control enforcement, administered by executive agencies, can be effective for curbing intentional introduction through postal services, this mode of enforcement has not served to slow the tide of negligently and unintentionally introduction NIS to Hawaii.\textsuperscript{66} NISA targets intentional introductions by mail and cargo, rather than unintentional introduction

\textsuperscript{63} See Larsen, supra note 21, at 5 (“[I]t uses the flawed ‘dirty list approach from the Lacey Act for designating ‘injurious animals.’”); Whalin, supra note 33, at 120 – 22.

\textsuperscript{64} Larsen, supra note 21, at 3-5.

\textsuperscript{65} Larsen, supra note 22, at 3 (pointing out disadvantages of the Lacey Act's dirty list system, upon which NISA is based, as too inflexible to accommodate new species and have significant benefits). See Dentler, supra note 18, at 226. Pidot, supra note 27, at note 71. Critics of NISA have argued that if serious about combating NIS, Congress needs to create a list of species. This different presumption would be the opposite of the current list and create a list of allowed species and presume all others banned. In 1973, The Department of Interior, with support for environmental groups such as Sierra Club, proposed creating a “clean list” regulatory system in which all species are deemed inappropriate for introduction unless explicitly stated other wise. After intense opposition from the pet trade industry and several scientific groups, this idea was not implemented. Robert Brown, Exotic Pets Invade United States Ecosystems: Legislative Failure and a Proposed Solution, 81 Ind. L.J. 713, 719 (2006).

\textsuperscript{66} Larsen, supra note 22, at 5.
caused by negligent handling or inspection of cargo containing invasive species.\textsuperscript{67} NISA’s focus on intentional introduction fails to address the increasing causes of horticulture trade and human travel.\textsuperscript{68} Similar to the downfalls of NANCPA, NISA does not allow for citizen enforcement,\textsuperscript{69} and instead uses civil penalties levied by overwhelmed agencies to deter introduction and contribute to clean up costs.\textsuperscript{70}

3. \textit{Plant Protection Act}

The Plant Protection Act of 2000 (“PPA”),\textsuperscript{71} which targets species that have negative impacts on native plant species, was designed to primarily protect agricultural production.\textsuperscript{72} The PPA creates broad authority to control invasive pests and plants by allowing the United States Department of Agriculture to restrict interstate transportation “noxious weeds.”\textsuperscript{73}

The PPA’s main drawback is its bias toward agriculture industries and its ineffectiveness in preventing the introduction of species harmful to plants not

\begin{itemize}
\item \textsuperscript{67} \textit{Id.}
\item \textsuperscript{68} \textit{Id.}
\item \textsuperscript{69} \textit{Id.}
\item \textsuperscript{70} Civil penalties for each introduction or day of continuous introduction are to be at least $250 but not more than $100,000. 39 USC § 3018(c)(1).
\item \textsuperscript{71} Pidot, supra note 27, at 195. The PPA consolidated several existing agricultural law, including the Plant Quarantine Act, Federal Plant Pest Act, Federal Noxious Weeds Act, and certain parts of the Organic Act, all of which specifically protected agricultural production.
\item \textsuperscript{72} \textit{Id.}
\item \textsuperscript{73} \textit{Id.} The Noxious Weed Control and Eradication Act of 2004 added to the PPA by providing grant money and additional funds to encourage and control the targeted problem.
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involved in market production.\textsuperscript{74} This bias results in sensitive native ecosystems being ignored at the expense of agricultural interests because federal agencies focus their efforts on eradicating high-profile existing invasive pests instead of equally environmentally damaging, less well known species that damage non-agricultural land.\textsuperscript{75}

The PPA also facilitates the lack of agency coordination that has plagued enforcement of NIS legislation. The PPA contains language that prevents states from imposing additional or different restrictions on federally listed plants under the Act.\textsuperscript{76} States have responded by banning importation of plants not on the federal list of noxious weeds, which has transformed the PPA into a baseline that forces states to unilaterally act for further protection.\textsuperscript{77} With each state imposing bans on different species and federal agencies responding to the minimal NIS listings, jurisdictional and communication problems are inevitable. This federal baseline approach facilitates the patchwork, non-uniform system that has led to inconsistent and inadequate prevention of NIS introduction.

\textit{4. Executive Orders}

There have been two administrative attempts at the federal level to control the introduction of NIS.\textsuperscript{78} Although both orders had good intentions, each failed

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\item \textsuperscript{74} Pidot, supra note 27, at 195.
\item \textsuperscript{75} Biber, supra note 18, at 400 – 401.
\item \textsuperscript{76} Pidot, supra note 27, at 196.
\item \textsuperscript{77} Pidot, supra note 27, at 196.
\item \textsuperscript{78} Executive Orders are an odd area of law, where presidents direct one or more specific
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in their execution because of a lack of enforcement and implementation. In 1977, President Carter issued Executive Order 11,987 to direct agencies to restrict and prevent introduction of NIS into native ecosystems owned or operated by the federal government.\textsuperscript{79} The damage caused by NIS was not a widely accepted problem at that time, and federal authorities did not implement or enforce the order's mandate.\textsuperscript{80}

In 1999, President Clinton executed Executive Order 13,112 ("EO") in order to minimize the economic, ecological, and human health impacts caused by NIS introduction.\textsuperscript{81} Clinton's EO established the National Invasive Species Council ("NISC"), a national body charged with creating a plan to achieve the goals of the EO through its centralized coordinating authority.\textsuperscript{82} Once again, however, this administrative solution proved to be ineffective and incapable of approaching the systemic causes of the invasive species problem.\textsuperscript{83} The plan created by the NISC became a low priority of federal agencies, and a Congressional investigation noted that few of the EO's required actions were ever


\textsuperscript{80} "It is wrong, I think, to judge Executive Order No. 11987 as anything other than a truly bold but ultimately ineffectual statement of wise policy unfortunately ahead of its time." Miller, supra note 26, at 148; [T]he Order was little more than an empty promise because the authorized guidelines were neither finalized nor implemented." Larsen, supra note 22, at 4 – 5.

\textsuperscript{81} Exec. Order No. 13,112, 64 Fed. Reg. 25 (Feb. 8, 1999); Miller, supra note 26, at 148; Pidot, supra note 27, at 197 – 198.

\textsuperscript{82} Miller, supra note 26, at 148.

\textsuperscript{83} Id.
completed and little progress was ever made in the overall implementation of the NISC's plan.84

B. Hawaii's Inability to Control NIS Introduction

Hawaii's native species are particularly sensitive and vulnerable to invasive species because the islands' geographic isolation facilitated unique evolution patterns in a secluded environment and caused Hawaii's native species to lose their natural defense mechanisms.85 A prominent conservation biologist noted that invasive species are the leading environmental problem in Hawaii, yet the cumulative and ecological impact by NIS is not considered serious by the general public.86 This lack of citizen concern has translated into inadequate state legislative efforts to fully protect Hawai'i from invasive species because state officials are not forced to prioritize the NIS problem, leading to a theoretically comprehensive yet inadequately implemented statutory regime.

Although Hawaii's system to prevent and control the introduction of NIS is considered one of the world's best, its implementation remains an inadequate effort due to jurisdictional gaps between agencies and inadequate funding of

84 Pidot, supra note 27, at 197 (stating that less than 20% of the plans recommendations and actions were ever implemented and the whole program was slow in getting off the ground).

85 Cox, supra note 4, at 176. started with Polynesian settlers; Some of the other factors that caused Hawaii's unique biodiversity are the lack of large mammals, lack of terrestrial grazers, and its relatively late human colonization. LRB, supra note 2, at 8.

86 Id., supra note 4, at 186. In the past few years, public education efforts have attempted to alert citizens and tourists to the costs and problems associated with invasive species as a means to enlist citizen support for eradication efforts, funding requests, and prevention awareness. Cowie & Staples, supra note 19, at 9 – 11.
enforcement.\textsuperscript{87} The separation of responsibilities among agencies for NIS prevention and control creates jurisdictional gaps in the system's implementation and inhibits the state's efforts to mitigate and eliminate the damage caused by NIS. Severe funding shortfalls magnify these jurisdictional gaps, prevent multi-agency cooperation, and force agencies to focus on less effective methods. An examination of the agencies responsible for enforcement of this regime demonstrates that despite seemingly effective attempts at a comprehensive system of policy enforcement, current coordinated efforts leave large gaps unable to be filled by under-funded agencies.

\textit{1. State Agencies}

Although Hawaii's system of invasive species control attempts to create a coordinated system between specialized agencies, the overall effect of this decentralized regime has been the creation of jurisdictional gaps between responsible agencies. The limits of Hawaii's coordinated effort is exemplified by the state agencies responsible for the bulk of the inspection and eradication efforts associated with NIS: the Hawaii Department of Agriculture ("HDOA")\textsuperscript{88} and the Hawaii Department of Land and Natural Resources Division ("DLNR").\textsuperscript{89} A

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\textsuperscript{88} LRB, supra note 2, at 21. The DLNR division of Forestry and Wildlife is the specific branch of the DLNR responsible for NIS eradication on conservation and agricultural land.
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\textsuperscript{89} Id., supra note 4, at 25. For a full list of all state and federal agencies involved in NIS prevention and control programs in Hawaii, see The Nature Conservancy of Hawaii, Natural Resources Defense Council, The Alien Species Invasion in Hawaii: Background Study and Recommendations for Interagency Planning, July 1992, available at
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Memorandum of Understanding between these two agencies obliges the HDOA responsible for preventing the introduction of NIS into the state and delegates eradication of introduced species to the DLNR. \(^90\) Despite this memorandum of understanding, a lack of practical coordination between these two agencies exacerbates the jurisdictional gaps created by their confined roles in implementing the overall invasive species system.

The HDOA, a highly specialized agency that carries out the majority of the state's prevention programs, reflects the downfalls of entrusting rigidity organized and already overwhelmed state agencies with broad invasive species policy enforcement. In an attempt to be a comprehensive clearinghouse for preventing introduction of invasive species, the HDOA maintains lists of permitted, restricted, and prohibited species that encompass a wide array of microorganisms, pathogens, plants, and animal species. \(^91\) Since these lists were codified into rules through the Hawaii Attorney General, any attempt to amend the lists must be through the normal public notice, hearing, and comment processes mandated by the Hawaii Administrative Practices Act. \(^92\) This rigid amendment procedure prevents the HDOA from quickly responding to new invasive species threats and encompassing previously unknown harmful species.

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[^90]: LRB, supra note 2, at 27.
[^91]: HRS § 141-3. This list is an example of a “clean list” supported by many experts and lobbied for at the federal level; TNC Background Study, supra note 87, at 25.
[^92]: TNC Background Study, supra note 87, at 25.
or vectors of entry within existing inspection procedures.

Similarly, the DLNR's Division of Forestry and Wildlife ("DFW") exemplifies the difficulties faced by an already under-funded and overwhelmed agency responsible for implementing the majority of Hawaii's invasive species eradication efforts. The DFW, the nation's only state agency to combine forestry and wildlife protection, has jurisdiction over invasive species eradication on 800,000 acres of state owned land as well as certain agriculture lands. The double duty of forestry and wildlife protection undertaken by the DFW, combined with the large amount of land under its jurisdiction, overwhelms the agency with the responsibility of levying penalties for DLNR rule violations, acting as the state's main regulator of endangered species and critical habitat, and eradicating invasive species on public land.

In addition to the overwhelming burden created by consolidating forestry and wildlife protection in a single agency, the DFW is frequently asked to cooperate in invasive species eradication with other agencies and landowners beyond the DFW's statutory mandated jurisdiction. Although the DFW makes

93 HRS § 183-1.5(4); HRS § 183D-2(1); LRB, supra note 2, at 25.
94 TNC Background Study, supra note 87, at 40-1.
95 Id. (including forest reserves, hiking trails, and recreation areas); HRS § 195-4(1).
96 Hawaii Revised Statutes ("HRS") 183D and HRS 195D. TNC Background Study, supra note 87, at 43. These wildlife and wilderness preserve areas cover about 200,000 acres throughout the state.
97 The DFW often acts at the invitation of private landowners or other government agencies to lead eradication efforts in remote or rural areas where an invasive pests or species introduction threatens to spread to surrounding areas. Some of these control efforts include chemical spraying for weed control and trapping invasive snakes, mongoose, and ferile cats. TNC
limited progress in eradicating invasive species, its various authorities and large jurisdictio
nal mandate limits its ability to adequately implement its invasive species eradication policies.

2. Collaborative Efforts

Hawaii's legislature responded to the growing invasive species threat and overwhelmed state agencies by creating collaborative efforts to combat the NIS problem. The first of these legislatively created collaborative efforts was The Coordinating Group on Alien Pest Species (“CGAPS”), a de-centralized committee composed of management-level participants from major government agencies and private organizations. Created in 1995 to facilitate collaboration between interested parties relevant to NIS prevention and control in Hawaii, CGAPS represents a much needed first effort to raise public awareness and facilitate communication among state, federal, and community organizations. However, CGAPS's de-centralized structure and management level members lack the high level participation and political leadership necessary to commit major government resources to NIS control and prevention. Although CGAPS influences funding decisions, promotes broad communication, institutes public

Background Study, supra note 87, at 42.

99 Id.
101 Id.
102 LRB, supra note 2, at 63.
awareness programs, coordinates focus groups, and conduces case studies, it has been unable to facilitate the substantial cooperative commitment of resources necessary to adequately combat the invasive species threat.

In response to CGAPS's shortcomings and a study by the Legislative Reference Bureau that found “[T]he State lacked political will to effectively fight the invasive species problem.”\(^\text{104}\), the Hawaii legislature created the Hawaii Invasive Species Council (“HISC”) in 2003.\(^\text{105}\) Hawaii’s creation of the HISC expresses a political realization, at least on paper, of its commitment and political will to address NIS introduction. Co-chaired by the DLNR and HDOA (Hawaii’s main NIS prevention and control agencies), it consists of leaders from the University of Hawaii, Hawaii Department of Tourism, Department of Transportation, Department of Health, and state and county government.\(^\text{106}\)

Since the HISC is comprised of high level leaders from a wide range of agencies, HISC members can make major commitments on behalf of whole sectors of state government and take leadership roles in coordinating NIS policy.\(^\text{107}\) By including the heads of these important organizations rather than

\(^{103}\) \text{Id.} \\
^{104}\) LRB, supra note 2, at 64. \\
^{105}\) Hawaii Revised Statutes (“HRS”) § 194; LRB, supra note 2, at 28; \text{Www.state.hi.us/dlnr/dofaw/HISC; } SB 1505 (study by the legislative reference bureau that analyzed the effectiveness of the council and lead agency approaches around the world in combating NIS). \\
^{106}\) CGAPS brochure, supra note 101; 2007 Legislative report and summary \text{www.state.hi.us/dlnr/dofaw/HISC [hereinafter Legislative Report].} \\
^{107}\) \text{See LRB, supra note 2, at 63.}
merely the management level personnel like CGAPS, the HISC improved on CGAPS and injects authority and accountability into NIS policy enforcement.\textsuperscript{108}

2. \textit{Jurisdiction Gaps}

Although GCAPS and HISC are substantial efforts to consolidate authority and coordinate agency activity relating to NIS policy implementation, many jurisdictional gaps persist. One such gap occurs when introduction of a particular species is discovered and jurisdiction changes from HDOA prevention responsibilities to DFW-led eradication.\textsuperscript{109}

This jurisdictional confusion occurred between the HDOA and DLNR and led to costly delays that allowed the Coqui frog to introduce itself and spread throughout the Hawaiian islands.\textsuperscript{110} When the Coqui's introduction on the Island of Hawaii was first discovered in the late 1990's, jurisdiction seemed to belong to the HDOA because the frog was accidentally introduced through ornamental plants, which are technically under the authority of the HDOA.\textsuperscript{111} However, jurisdiction over the Coqui frog transferred from the HDOA because the memorandum of understanding between the DLNR and HDOA gave the DLNR control over all eradication efforts.\textsuperscript{112} The transfer of jurisdiction took time and

\begin{itemize}
  \item \textsuperscript{108} \textit{Id.}
  \item \textsuperscript{109} TNC Background Study, supra note 87, at 65. As noted above, the HDOA has minimal authority over prevention and detecting while DFW focuses on control.
  \item \textsuperscript{110} LRB, supra note 2, at 62.
  \item \textsuperscript{111} Since ornamental plants are terristrial forma, they are considered agricultural products and therefore under jurisdiction of the Hawaii Department of Agriculture (“HDOA”).
  \item \textsuperscript{112} See supra note 88 and accompanying test.
\end{itemize}
resulted in a delay before the DNLR initiated eradication efforts.\textsuperscript{113} Confusion over agency responsibility and funding coupled with underestimating the scope of the potential damage led to substantial delay that allowed the frogs to spread.\textsuperscript{114} The Coqui frog's introduction proved that without a clear lead agency from the outset, jurisdictional gaps can have serious repercussions.\textsuperscript{115}

The transfer of jurisdiction from the HDOA and its prevention duties to DFW and its eradication obligations occurs at a crucial time in controlling damage and minimizing introduction of a species before that species becomes endemic. Rather than being able to quickly eradicate the problem initially, confusion over appropriate jurisdiction leads to costly delay and and damage Hawaii's agriculture and ecosystems.

Another jurisdictional gap exists in determining which agency should conduct the inspection of incoming materials that may contain invasive species. The HDOA's inspection responsibilities primarily focus on materials originating from the continental United States. Because the HDOA's jurisdiction is limited to one vector of imported materials, the HDOA must be referred by U.S. Customs or

\begin{footnotesize}
\begin{enumerate}
\item[	extsuperscript{113}] Despite the Memorandum Of Understanding, confusion persisted because DLNR has jurisdiction over “established” pests while HDOA maintains jurisdiction over “escaped” pests TNC Background Study, supra note 87, at 65.
\item[	extsuperscript{114}] See LRB, supra note 2, at 62;
\item[	extsuperscript{115}] LRB, supra note 2, at 62. Several states and New Zealand currently have a lead agency approach to NIS. Although a lead agency provides administrative accountability, responsibility, and concentrated authority, its critic point out the system's inherent bias toward agricultural industries, its drain of funding on other environmental departments, and the problem of a lead agency not understanding the capacities and needs of other involved agencies.
\end{enumerate}
\end{footnotesize}
another federal agency to intercept items originating outside the United States.116 HDOA's constraint on domestic imports allows incoming freight to fall outside the state's jurisdiction yet potentially not be adequately reviewed by under-staffed federal agencies.117

In addition, thorough inspection of foreign and domestic cargo is difficult because cargo is unloaded and stored by a number of private commercial companies rather than a centralized customs center.118 A shortage of inspectors forces the HDOA to rely on self reporting by shippers who might not have an incentive to accurately and thoroughly describe their manifest in a decentralized inspection system.119 While smuggling and inadvertant introductions are commonplace in such a setting, some high risk cargo, such as cut timber, is not even inspected at all.120

3. Lack of Funding

The ability of Hawaii to successfully combat invasive species is inhibited by cuts to government funded programs, minimal earmarking of funds for NIS programs, and a lack of special NIS related taxes. Various Hawaii state agencies charged with enforcing NIS statutes complain that the lack of funding is the

116 TNC Background Study, supra note 87, at 25.
117 To see problems of the federal system of preventing importation and introduction of invasive species, see supra notes 26 – 84 and accompanying text.
118 TNC Background Study, supra note 87, at 59.
119 Id.
120 TNC Background Study, supra note 87, at 59.
greatest hindrance in the fight against invasive species.\textsuperscript{121} Hawaii officials have also recognized that improving funding is more crucial than any other proposed change to the current NIS regime.\textsuperscript{122}

In 2000, the Government Accountability Office found that Hawaii spent $7.6 million on invasive species policy enforcement,\textsuperscript{123} roughly 15\% of the $50,000,000 amount needed to successfully implement federal and state NIS programs.\textsuperscript{124} Similarly, HISC's budget has been cut in half for the upcoming fiscal year 2007, from $4,000,000 the previous three to $2,000,000 for 2007.\textsuperscript{125} Although the DFW is the lead control agency and employs approximately 25 staff members with an operating budget of over $2 million, it has no permanent research facility and/or staff and therefore relies on other agencies to fill this gap.\textsuperscript{126} According to Governor Lingle's Office, the DLNR's 2007-2009 operating budget to fight invasive species will include $2 million in added funding to offset the decreased funding to HISC.\textsuperscript{127} However, the majority of these funds will go

\begin{flushleft}
\textsuperscript{121} LRB, supra note 2, at 34.  \\
\textsuperscript{122} Id.  \\
\textsuperscript{123} LRB, supra note 2, at 88. State government agencies did their own study of NIS program expenditures and came up with a figure of $11 million for 2000, numbers which are inconsistent with both GAO and CGAPS findings. Id. at note 2.  \\
\textsuperscript{124} LRB, supra note 2, at 34.  \\
\textsuperscript{125} Legislative Report, supra note 106, at 6.  \\
\textsuperscript{126} TNC Background Study, supra note 87, at 43.  \\
\end{flushleft}
to eradication and control efforts\textsuperscript{128} even though many experts agree that prevention is more efficient for combating invasive species introduction.\textsuperscript{129} The lack of clear directives by the legislature to re-direct and allocate funds specifically to NIS makes consistent funding difficult.\textsuperscript{130} When state funding sources funnel into general budgets within an agency or department, those funds are sometimes not used for invasive species control.\textsuperscript{131} Without a link between funding sources and NIS policy implementation, the base on which these programs rely is eroded because of difficulty tracking the exact amount of government funds expended on NIS policies.\textsuperscript{132}

Similarly, special taxes designed to pay for efforts to prevent and control NIS, rare as they are, are often not clearly earmarked for invasive species programs and instead get folded into general funds. One example of these taxes is the air cargo tax, authorized by statute and administered under the administrative rules.\textsuperscript{133} Although some of the generated fees have been used in NIS prevention programs at Hawaii’s major airports, there is no statutory language linking those fees to specific NIS policy implementation, therefore the money generated from

\begin{thebibliography}{9}
\bibitem{128} \textit{Id.; Legislative Report, supra note 103, at 6.}
\bibitem{129} Cowie & Staples, supra note 19, at 9. TNC Background Study, supra note 87, at 69.
\bibitem{130} LRB, supra note 2, at 41.
\bibitem{131} \textit{Id.}
\bibitem{132} \textit{Id. at 40.}
\bibitem{133} HRS § 261-7(e) and HAR 19-16.1-1.
\end{thebibliography}
the cargo tax does not directly fund invasive species policies.\textsuperscript{134}

Despite the current funds allocated to Hawaii's NIS programs, it still falls dramatically short of the estimated $50 million required to successfully implement the preventative and control programs. A new economic approach to NIS prevention and control, such as tort liability, is needed if the government cannot provide the necessary funds to implement the legal regime.

\textbf{II. PUBLIC NUISANCE LAW: A POTENTIAL MEANS OF ADDRESSING INVASCIVE SPECIES}

Although some legal scholars have described nuisance law as an amorphous doctrine, court's have defined public nuisance as an unreasonable and substantial non-trespassory interference with a public right.\textsuperscript{135} Fundamentally, public nuisance law provides a cause of action to compensate plaintiffs and abate unreasonable interferences with public rights.\textsuperscript{136}

The cause of action in a public nuisance suit can be brought by either private parties on behalf of the public or by government officials representing the sovereign state. During a public nuisance suit brought by private parties, the private party acts as a public representative and the private cause of action

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{134} LRB, supra note 2, at 41.
\item \textsuperscript{136} Restatement (Second) of Torts § 821B (1997) [hereinafter Restatement]; Pidot, supra note 27, at note 193.
\end{enumerate}
\end{footnotesize}
represents public rights. Individuals who bring public nuisance suits act as representatives of the public good. On the other hand, a government official's cause of action is on behalf of the sovereign state and the public rights the government protects.

Using public nuisance to vindicate environmental harm has some unique advantages, such as the ability to focus on the effect of an action, the opportunity for plaintiffs to receive damages and injunctive relief, and the creation of a vehicle to protect community values from localized problems. Professor Denise Antolini has distilled three unique characteristics of nuisance law: substantial interference with a public right, unreasonableness of defendant's conduct, and equitable flexibility. This section will demonstrate how the elements and rules associated with public nuisance expose the public right, unreasonable conduct, and equitable flexibility attributes that make the public nuisance doctrine advantageous for invasive species protection.

A. Elements of Public Nuisance

Public nuisance suits brought by government officials and those brought by private parties share similar elements and legal claims within tort liability. The similarities between public nuisance brought by governments and those brought

137 Larsen, supra note 21, at 13.

138 Id. Most legal scholars trace this aspect of public nuisance law to midevil England, where a royal sovereign acted for the benefit of his subjects and had the inherent authority to bring legal actions on behalf of their welfare.

139 Antolini, supra note 135, at 6 - 7.

140 Antolini, supra note 135, at 7.
by private parties include requirements of a substantial effect, the use of
reasonableness test to determine the extent of the interference, and the finding of a
public right being interfered with.141 Similarly, both doctrines focus primarily on
the effect of the alleged action rather than the action itself.142

If a court finds an activity results in a substantial and unreasonable
interference with a public right, the court can proceed to determine the other
requirements of a successful public nuisance claim.143 In People ex. Rel. Gallo v.
Acuna, the California Supreme Court recognized that a public nuisance is a
offense against a right common to the public and stressed the importance of
examining the harm itself when considering whether or not a public nuisance
exists.144 In Gallo, the San Jose City Attorney sought an injunction prohibiting
certain gang members from associating together in public, claiming the gangs
presented a public nuisance that intimidated members of the community. In
affirming the issuing of the injunction, the California Supreme Court held that the
reasonableness of the interference should be determined in an impartial, objective
manner to determine whether or not the conduct constitutes a public nuisance.145
The Court emphasized that determining the interference to be harmful is central to

141 Larsen, supra note 21, at 8.
142 “The essential element of an actionable nuisance is predicated upon unreasonable injury
rather than upon unreasonable conduct.” Id. (citing Wood v. Picillo, 443 A.2d 1244, 1247 (R.I.
1982)).
143 Antolini, supra note 135, at 7.
144 929 P.2d 596 (Cal. 1997).
145 Id. at 605 (citing the Restatement Second of Torts, §821F (1979)).
finding a public nuisance, and the alleged harm must be measured objectively and constitute a real, substantial invasion.146

Both types of public nuisance use this reasonableness test to determine the gravity of the interference imposed on the public welfare.147 However, different burdens of reasonableness exist for public nuisance suits brought by private parties and those brought by public officials (see below). In order for the action to be unreasonable, “[T]he gravity of the harm [must] outweigh the utility of the actor’s conduct ...”148 This broad reasonableness test allows the definition and finding of a public nuisance to evolve over time as the values and characteristics of the affected community change.149 An advantage to this flexible reasonableness doctrine is that it allows for more equitable judicial control over what is otherwise a very amorphous and broad reaching cause of action.150

Although a determination of a public nuisance considers the reasonableness of the conduct, it does not substantially detract from the doctrine's focus on compensation over cause and the requirement that the interference be substantially offensive to the affected community.151 Accordingly, the type of harm that a court will abate does not seem to be any different for public versus

146 Id.
147 Restatement, supra 132, §§ 826(a) & 827
148 Larsen, supra note 21, at 8.
149 Larsen, supra note 21, at 9.
150 Antolini, supra note 135, at 7.
151 Pidot, supra note 27, at 203 - 204; Restatement, supra note 132, at 821B.
private nuisance suits.\(^{152}\)

1. Advantages of Public Nuisance Suits Brought by Government Officials on Behalf of the State

Unlike private parties who bring a public nuisance claim, a government official acting on the part of a sovereign does not need to prove fault to establish liability for the public nuisance.\(^{153}\) Instead, the court uses strict liability for damage caused by the defendant's action.\(^{154}\) This strict liability rule conforms to the rationale behind traditional public nuisance law, where a violation of public welfare must concede to the police power of the sovereign.\(^{155}\) Rather than inquire into the mental state of the defendant in order to find negligence, intent, or knowledge, the court uses strict liability to expedite and strengthen the sovereign's ability to control public welfare.\(^{156}\) This strict liability rule is a powerful tool because it allows the sovereign to protect public resources from interferences caused by private parties, even on private land.\(^{157}\)

Other than the strict liability rule, another major advantage of public nuisance suits brought by public officials is that a statutes of limitations does not apply.\(^{158}\) The rejection of the statute of limitations as a bar to suit exemplifies

\(^{152}\) Id. at 13.

\(^{153}\) Larsen, supra note 21, at 8.

\(^{154}\) Id.

\(^{155}\) Id.

\(^{156}\) Id.

\(^{157}\) Larsen, supra note 21, at 9.

\(^{158}\) Pidot, supra note 27, at 213.
how far courts are willing to go in order to facilitate government protection of public rights. For example, in a public nuisance suit brought by the State of California against a mine operator, the California Supreme Court stated that “[A] right to continue a public nuisance cannot be acquired by prescription.” The rejection of a statute of limitations in that case exemplified the court's willingness to prevent the continued interference with a public right and concede to the desire of the sovereign state to abate the harm.

2. Burden of Proof and Standing Requirements for Private Parties as Plaintiffs for Public Nuisance Claims

The two main differences between public nuisance suits brought by public officials and those brought by private parties on behalf of the public are the latter's greater burden of proof and strict standing requirements. In public nuisance claims, private parties have a higher proof standard because unlike public officials, the former do not act with the authority of the sovereign state's police power. The higher proof burden ensures that private parties do not impose strict liability under a more stringent fault-based scheme.

For unintentional actions that lead to a nuisance, the defendant will only be liable if his or her duty of care was breached. The calculation of the appropriate standard of care for negligence in the overall public nuisance scheme depends on jurisdiction because public nuisance has evolved separately under

159 Id.
160 Larsen, supra note 21, at 10.
161 Id.
each state's common law.\textsuperscript{162} This fragmented evolution of public nuisance law is one reason why it is regarded as such a ambiguous doctrine.\textsuperscript{163} However, this fragmented doctrinal evolution also leads to one of public nuisance law's most cited advantages: the flexibility to appropriately respond to the nature of the affected community's standards, its specific values and needs, and the time period in which the harm occurs.\textsuperscript{164} This flexibility corresponds with the judge's equitable flexibility to avoid unjust results and burdensome remedies not in balance with corresponding abilities of defendants to abate or prevent the nuisance from occurring.\textsuperscript{165}

Before the court can consider the rules regarding specific standing of a plaintiff, it must first decide if a public right is at stake.\textsuperscript{166} Although there is no specific definition of a public right, courts have been fairly liberal in their interpretation of what constitutes a public right and have included aesthetic values and environmental conservation.\textsuperscript{167} Private citizens who bring public nuisance claims also have a high standard for establishing standing under the traditional

\begin{footnotesize}
\begin{enumerate}
\item[162] Larsen, supra note 21, at 11.
\item[163] \textit{Id.}
\item[164] Antolini, supra note 135, at 7 – 8.
\item[165] \textit{Id.}
\item[166] Pidot, supra note 27, at 213.
\end{enumerate}
\end{footnotesize}
'special injury rule.'\textsuperscript{168}

The requirement that private citizens demonstrate the strict “Special Injury Rule” exists in almost every American jurisdiction. Hawaii stands alone in allowing citizen suits for public nuisance without requiring special injury.\textsuperscript{169} In Hawaii, a plaintiff must only show an 'injury in fact,' not an injury that is different in kind from others.\textsuperscript{170} The next section will examine the 'special injury' and 'injury in fact' rules and the challenges faced by plaintiffs attempting to establish standing.

\textbf{B. Standing Conflicts}

Although there have been calls for a liberalization of the traditional standing requirement for public nuisance under the special injury doctrine, only Hawaii has moved toward a more encompassing and accommodating rule.\textsuperscript{171} The Second Restatement of Torts tries to offer a compromise between the two extreme limits of the standing rule, stating that any plaintiff who is representative of the public may have standing to abate the nuisance. Although there was evidence of a trend away from the special injury rule with the Restatement and Hawaii's newer rule, that shift in public nuisance standing requirement has yet to materialize.\textsuperscript{172}

\footnotesize
\textsuperscript{168} Id.
\textsuperscript{169} Larsen, supra note 22, at 9 – 10.
\textsuperscript{170} Id.
\textsuperscript{171} Pidot, supra note 27, at 214.
\textsuperscript{172} See Larsen, supra note 22, at 10.
1. Traditional Special Injury Rule

Antolini illustrates the traditional rule's unjust application by citing a court's dismissal of a public nuisance suit brought by Alaska Natives against Exxon Valdez for the destruction of subsistence fishing grounds and cultural rights during the 1989 oil spill in Prince William Sound, Alaska.\textsuperscript{173} Even though Exxon conceded the subsistence rights of the Alaska natives were legally recognized, Exxon argued that all Alaskans have the same rights and therefore no special injury existed.\textsuperscript{174} The Ninth Circuit Court of Appeals later affirmed the district court summary judgment in favor of Exxon because the injury was not different in kind.\textsuperscript{175}

Courts are more likely to approve standing under the traditional special injury rule where the plaintiff has a commercial interest at stake or private land is being degraded.\textsuperscript{176} The individual plaintiff must show that his or her harm is different from the harm suffered by other members of the affected community. Without showing this different injury, a private party lacks standing to maintain a public nuisance claim.\textsuperscript{177} Some legal experts are critical of the special injury rule because it bars plaintiff's claims in cases where the court has admitted injury.

\begin{footnotesize}
\begin{enumerate}
\item[173] In re Exxon Valdez, 1994 WL 182856, at 2 (D. Alaska); Antolini, supra note 135, at 8;
\item[174] Id.
\item[175] In re Exxon Valdez, 104 F.3d 1997 (holding that Alaska Natives failed to prove Special Injury rule to warrant recovery under public nuisance claim).
\item[176] Ruiter, supra note 10, at 272 – 273.
\item[177] Id.
\end{enumerate}
\end{footnotesize}
exists and the result of the rule's application was unjust.\textsuperscript{178}

2. \textit{Hawaii's Rule -- Akau v. Olohana}

In \textit{Akau v. Olohana}, the Supreme Court of Hawaii adopted a more liberal 'injury in fact' standing requirement for private plaintiffs in public nuisance suits.\textsuperscript{179} In \textit{Akau}, private parties sued to enforce public access along beach access routes. Defendant landowner responded that only the state can file suit to abate a public nuisance and force access to the trails.\textsuperscript{180} The court disagreed, and ruled that in order to maintain a public nuisance claim, a private plaintiff must only show he or she suffered an injury in fact and that the suit alleviates the need for a multiplicity of similar suits.\textsuperscript{181} The injury in fact requirement disregards a plaintiff's harm in relation to the rest of the community, instead allowing any party significantly injured by a threat to a public right to bring a claim for damages or injunction.\textsuperscript{182} In supporting this new rule, the Hawaii Supreme Court court reasoned that “[I]t is unjust to deny members of the public the ability to enforce the public's rights when they are injured.”\textsuperscript{183} The court followed the test


\textsuperscript{179} Akau v. Olohana Corp., 65 Haw. 383 (1982).

\textsuperscript{180} Id. at 386.

\textsuperscript{181} Akau, 65 Haw. at 388.

\textsuperscript{182} Pidot, supra note 27, at 216.

\textsuperscript{183} Id.
laid out in the Restatement,\textsuperscript{184} which was seen as ushering in a new shift in the standing requirement for public nuisance.\textsuperscript{185} Although there are no further reported cases at the appellate level, \textit{Akau} remains the common law standard for public nuisance brought by private parties in Hawaii.\textsuperscript{186}

\textbf{III. ADVANTAGES OF PUBLIC NUISANCE LIABILITY IN HAWAII}

The application of public nuisance tort liability to invasive species introduction can alleviate the shortcomings of current legislative efforts outlined above by providing necessary funding to existing programs, allowing lawsuits to fill existing gaps in jurisdiction between regulatory agencies, and promoting proactive solutions through economic incentives in order to prevent unintentional introductions. The advantages of public nuisance liability are particularly suited to solve these shortcomings in Hawaii, where the more liberal injury in fact standing rule unlocks the doctrine’s flexibility.

The threat of public nuisance claims affords the best preventative solution to unintentional introductions of invasive species by individuals and businesses. The possibility of public nuisance suits against industry and individual defendants

\textsuperscript{184} “In order to maintain a proceeding to enjoin to abate a public nuisance, one must ... have standing to sue as a representative of the general public, as a citizen in a citizen's action or as a member of a class in a class action.” Restatement (Second) of Torts § 821(C)(2) (1978); Antolini, supra note 135, at 10; Pidot, supra note 27, at note 215.

\textsuperscript{185} See Antolini, supra note 135, at footnote 8 for legal scholarship characterizing the special injury rule and outdated and in need of reform.

\textsuperscript{186} Several cases have mentioned Akau since, but as dicta. \textit{E.g. Mottl v. Miyahira}, 95 Hawai’i 381 (2001) (holding that university faculty members' union challenging reduced state education budget did not have standing to sue because they did not show injury in fact); Pele Defense Fund v. Paty, 73 Haw. 578, 592 (Hawai’i 1992) (observing the effect of the Akau rule that lowered standing requirements in cases of public interest).
who negligently introduce invasive species serves as an effective deterrent and can stimulate innovative industry wide solutions. David Larsen touts the doctrine’s equitable flexibility and ability to facilitate innovative solutions through industry incentives.187 Another scholar found the main advantage of applying pubic nuisance to invasive species would simply be the ability to address unintentional introductions, a vector completely ignored by the current statutory regime.188 Public nuisance law is already used regularly to fill holes and address shortcomings in current environmental laws,189 so the application of public nuisance liability to unintentional NIS introductions would be consistent with the doctrine’s historical adaptation to changing community needs.

This section will apply NIS introductions to Hawaii’s public nuisance regime, analyze the advantages of such an application, and link those advantages to a viable and proactive solution for NIS control based on public nuisance liability.

A. NIS Satisfies Requirements of Successful Public Nuisance Claim

Claims against tortfeasors who unintentionally introduce NIS fits within Hawaii’s public nuisance tort law because plaintiffs can allege that damage

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187 Larsen, supra note 22, at 6. Larsen recognizes three distinct advantages of apply nuisance law to unintentional introductions of NIS. First, a liability scheme would encourage transporters to use aggressive efforts to prevent introductions. Second, public nuisance tort liability would provide flexibility for a business to adjust its practices and change methods to a more effective procedure to combat introduction and spread of NIS. Third, encouraging new solutions through liability incentives would create new knowledge and methods to combat the threat. *Id.*

188 Ruiter, supra note 11, at 271.

189 Pidot, supra note 27, at 198.
caused by NIS harms a public right, introduction of the harmful species evidences a failure to exercise the required standard of care, and the harm suffered by the public satisfies the injury in fact requirement established in *Akau*. Similarly, a public nuisance suit brought by a public official would be allowed because introducing invasive species harms the public and its right to environmental preservation and health. But in order to maintain a private suit, the plaintiff must also show an injury in fact, prove an unreasonable standard of care, and stand in for many other similar lawsuits.

1. Introduction of NIS Jeopardizes a Public Rights to Biodiversity, Environmental Preservation, and Public Health

The definition of public nuisance encompasses invasive species because a right common to the general public includes biodiversity as well as clean air, water, and soil. Public nuisance claims have previously been asserted to prevent environmental harm to public rights such as air, water, and soil pollution. Invasive species can degrade these environmental resources and human health, therefore the harm caused by invasive species satisfies the requirement that a harm adversely effect biodiversity, agriculture, and other established public rights before being considered a nuisance. Several jurisdictions have already moved toward recognizing wildlife diversity as a public right and the Congressional

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190 Leo v. General Elec. Co, 145 A.D.2d 291 (N.Y.A.D. 1989) (holding that pollution of river and contamination of fish constitutes public nuisance and commercial fishermen who suffer harm different and above rest of society have standing to sue over pollution to river from which they derive their living); State v. Fermenta ASC Corp., 616 N.Y.S.2d 702 (N.T. Sup. 1994) (holding that county water authority could maintain public nuisance suit regarding polluted water against pesticide manufacturer).
Technology Office has referred to invasive species as “biological pollution.”\textsuperscript{191}

Courts have found public nuisances where damage to aesthetic values and environmental conservation has resulted.\textsuperscript{192} In Colorado Division of Wildlife v. Cox, the Colorado Court of Appeals ruled that disruption of native species and biodiversity constituted a public nuisance.\textsuperscript{193} The Colorado Division of Wildlife wished to issue an abatement order to prevent Cox's operation of an exotic wildlife ranch. In affirming the lower court's finding that characterized the release of “exotic, non-native” wildlife as a public nuisance, the court held that exotic wildlife may be considered a public nuisance if it interferes with native species, thereby degrading biodiversity.\textsuperscript{194}

The environmental harm caused by invasive species is not particularly different than other pollution already established as causes of public nuisance. Such public rights have included access to healthy fish stocks, viable marine life, and unobstructed native wildlife.\textsuperscript{195} Since NIS can disrupt all of these rights, public nuisance claims can be maintained. Like other pollutants, exotic species

\begin{footnotesize}
\textsuperscript{192} State ex. Rel. Wear v. Springfield Gas & Electric Co., 204 S.W. 942 (1918) (ruling that waste water discharged by gas company constituted an enjoinable public nuisance); Restatement (Second) of Torts § 821B cmt e (“Some courts have shown a tendency, for example, to treat significant interferences with recognized aesthetic values or established principles of conservation pf natural resources as amounting to public nuisance.” ); Pidot, supra note 27, at 214.
\textsuperscript{193} 843, P.2d 662 (1992).
\textsuperscript{194} Id. at 664.
\textsuperscript{195} See Pidot, supra note 27, at 214 (citing several cases where disruption of wildlife habitats has environmental quality has been held to constitute a nuisance).
\end{footnotesize}
degrade the native environment, and their introduction is comparable with other environmental damaging disruptions.\textsuperscript{196} Since these are the very ecosystems that would be affected by NIS, a court could hold the aesthetic and cultural values derived from native ecosystems a public right and important for the public welfare.

Aside from environmental values, native ecosystems and invasive species have been shown to have enormous economic impacts on Hawaii. The enormous economic burden alone that NIS introductions put on Hawaii would represent an objectively unreasonable harm to public welfare. In Hawaii, the economic impacts and harms caused to industries, agriculture, and native ecosystems by NIS invokes a public right and welfare.

2. Unintentional Introduction Can Be An Unreasonable Interference

The introduction of invasive species satisfies the Restatement’s test for unreasonable harm because the conduct is prescribed by statute and is of a continuing nature which the actor has a reason to know effects a public right.\textsuperscript{197} The extensive federal and state legal regime gives industries that normally may introduce NIS (shipping, travel) the notice to satisfy both of these prongs and raise the standard of care in a results focused doctrine. The negative effects of NIS has becomes increasingly common knowledge as Hawaii increases public education and enacts more regulations that specifically target industries that

\textsuperscript{196} Larsen, supra note 21, at 11.

\textsuperscript{197} O'keefe, supra footnote 1, at 99.
engage in business involving common vectors of invasive species introduction.

The focus of nuisance law on the effect of the defendant's conduct rather than the nature of the conduct itself limits the viability of defenses defendants may assert based on common industry practice and statutory compliance. Even if a defendant uses reasonable and widely accepted prevention methods, those methods still may not overcome a finding of an unreasonable interference because of the reluctance of courts to allow continuance of harm to public rights.198 Unreasonable interferences with public rights can be found with little or no fault requirements because public nuisance is largely focuses on the results of the defendant's actions.199 However, private parties who bring suit must still anticipate the plaintiff's unreasonableness burden and prepare to argue the test laid out in *Akau* and the Restatement. If environmental destruction caused by oil spills and hazardous waste constitute unreasonable interferences, then NIS introduction resulting in similar economic costs of control and environmental losses should also constitute a similar unreasonable interference.200

3. *Introduction of NIS Satisfies Akau Injury in Fact Standing Requirement*

The liberal injury in fact standard adopted by the Hawaii Supreme Court can be satisfied because NIS introductions affect agricultural production, fishing stocks, infrastructure, and wildlife biodiversity, native ecosystems, etc.

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198  O'keefe, supra footnote 1, at 100. “[I]t is a well settled principle of nuisance law that the adoption of the most approved … methods … do[es] not justify the continuance of that which, in spite of them, remains a nuisance.”

199  Pidot, supra note 27, at 220 – 221.

200  Ruiter, supra note 10, at 273.
Therefore, agriculture industries, subsistence fishermen, wildlife enthusiasts, environmental organizations, and utility companies all suffer injuries substantial enough to satisfy a injury in fact requirement when NIS are introduced and cause damage. State agencies and taxpayers are also injured because prevention and eradication of NIS directly costs Hawaii millions of dollars every year.

Potential plaintiffs could maintain a public nuisance suit as a whole, or one individual could come forward to claim relief on the whole group’s behalf. These plaintiffs would represent the injury to the general public and would have standing because they actually suffered an significant injury related to a public right. This standing requirement would probably be difficult to fulfill in other jurisdictions, but Hawaii has the unique ability to find standing without comparing the plaintiff’s injury to the general public or similarly situated parties.

A public nuisance suit brought by a private party as a public representative would also satisfy Akau’s requirement that the public nuisance claim obviate the need for a multitude of individual suits. This element ensures that the plaintiff acts on behalf of a large segment of the community he or she claims to represent.

Applied to invasive species, a member of an effected business sector, scientific field, group of landowners in a affected region, or environmental group could speak on behalf of that group and replace individual lawsuits by every affected individual. In this way, the second element of Akau is met and the public nuisance can be established.

B. Advantages of a Public Nuisance Tort Liability System for Introductions of Invasive Species
The advantages of a public nuisance liability scheme for Hawaii and NIS provide incentives for industries responsible for introducing NIS to work towards a proactive solution. Public nuisance is ideal for this incentive because the doctrine's flexibility allows it to change as science, methods of unintentional introductions, and legislative commitments continue to evolve. The flexibility of the doctrine is also evident in its remedies, which include damages and injunctive relief.

Rather than rely on government regulation to monitor every vector of entry, keep up to date lists of allowed species, enforce preventative measures, and lead all eradication efforts, a tort liability system allows citizens most affected by invasive species to force industries to pay the costs that result from conducting the businesses that can eventually cause introduction of invasive species.

1. Public Nuisance Liability Facilitates Industry Involvement in Proactive Solution

Given the shortfalls of the current command and control regulatory regime for NIS control in Hawaii, public nuisance liability provides a solution where transporters are encouraged to develop the most cost effective methods to prevent introductions of invasive species.\(^\text{201}\) Instead of a system of confrontation between government and industry, public nuisance liability can use citizen enforcement to fill the gaps created by the current politically vulnerable enforcement regime.

A proactive solution based on tort liability creates an economic advantage

\(^\text{201}\) Larsen, supra note 21, at 6 – 7.
for minimizing damage to native ecosystems because it forces industries to
internalize the externalities normally placed on state agencies and community
resources. \(^{202}\) Industries that cause the harm and unintentionally introduce NIS do
not normally bear the burden and costs which their conduct creates. Tort liability
attempts uses citizen involvement to force defendants to fund prevention and
control efforts normally paid for by the government, although exact quantification
of environmental and aesthetic values remains contentious. \(^{203}\) Forcing industries
that introduce the species to pay is consistent with the polluter pays principle, a
system where liability enforced upon polluters forces them to act responsibly with
a high standard of care for the affected community. \(^{204}\) In the case of public
nuisance, private citizens can enforce this principle and ensure industry liability
through lawsuits. In this way, individuals can ensure industries bear an
appropriate burden for the harm they cause while encouraging proactive solutions
by making litigation and liability expensive.

Broad based citizen and public official enforcement of public nuisance
claims will obviate the economic downsides of tort liability and facilitate a more
proactive solution on the part of industry and transporters. Allowing larger
groups of effected individuals and public officials to collectively institute tort
actions can counter the tragedy of the commons, a result caused by marginal

\(^{202}\) See Pidot, supra note 27, at 220.

\(^{203}\) Id. at 220.

losses being spread over large populations.205 Large landowners and established environmental groups have the incentive to pursue claims for introductions of NIS and counteract the difficulty of coordinating a large legal claim when harm is dispersed over a large enough population and individual citizens are only slightly effected and therefore lack the incentive to file a suit.

2. Public Nuisance Tort Law Can Respond to Changing Environmental Values and Scientific Knowledge

Another advantage of applying public nuisance law to NIS in Hawaii is that the flexibility of the doctrine allows for it to change along with the science and the needs of the community.206 As the threat and damage from NIS multiplies, Hawaii needs a legal regime that can adequately respond to that growth and utilize advances in technology for the prevention and eradication of NIS. By forcing industries to be proactive in combating the NIS threat, public nuisance and its incentives to internalize costs will spur development of new methodologies and technologies to better prevent the interference with the public right and nuisance to begin with.

Some commentators question the effectiveness of nuisance law as applied to NIS because the doctrine is too flexible and an inherently reactive tool compared to legislation.207 Yet all legislative attempts employed so far have been ineffective precisely because of their command and control perspective and their

205 Biber, supra note 18, at 446.
206 Larsen, supra note 21, at 7.
207 Pidot, supra note 27, at 218.
focus on using the police powers of the state. The current, rigid nature of a command and control statutory system only prolongs the current system's inadequacy because rules remain unchanged unless amended, whereas public nuisance law can continually adapt to changing circumstances.

Public nuisance is also flexible in that it allows for different plaintiffs to file the suit, depending on the potential risk, harm caused, expertise of the parties, and complexity of litigation. Environmental organizations such as the Nature Conservancy and Trust for Public Land, which own large tracts of land in Hawaii, have the expertise and ability to institute complex litigation against large transporting companies. In addition to those large environmental groups, the State through the Attorney General's Office could wield its considerable resources to force proactive solutions in the face of devastating impacts of NIS on the state's tourism and agriculture industries. The flexibility of public nuisance allows for different types of plaintiffs depending on the situation presented by a particular NIS threat.

Plaintiffs also have the flexibility of seeking an injunction to stop the

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208 Larsen, supra note 21, at 7.

209 The Nature conservancy is an environmental organization whose Hawaii branch protects 200,000 acres of critical habitat ecosystems in Hawaii [http://www.nature.org/wherewework/northamerica/states/hawaii/](http://www.nature.org/wherewework/northamerica/states/hawaii/).

210 The Trust for Public Land protects land by purchasing it and holding it in trust for public use. [http://www.tpl.org/tier2_r1.cfm?folder_id=269](http://www.tpl.org/tier2_r1.cfm?folder_id=269)

211 The large amount of environmentally sensitive land owned by these organizations and the large budgets with which they operate would enable them to see a public nuisance lawsuit through the courts. Pidot, supra note 27, at 217 – 218.
nuisance or seeking damages suffered by the general public.\textsuperscript{212} The state has the same two options as private plaintiffs applied to government land and damage it may suffer.\textsuperscript{213}

**CONCLUSION**

The threats from Nonindigenous Species are serious and commonly accepted in the scientific community. Invasive species result in substantially negative financial, environmental, and health impacts to Hawaii. Although the state and federal legislatures have attempted to prevent this harm, these statutory methods and legal regimes have failed. Through the adoption of public nuisance tort liability, the parties most effected by invasive species will have an avenue of legal recourse sufficient enough to force industries to develop proactive solutions to NIS introductions. Due to Hawaii's liberal standing requirements as established in *Akau*, citizen groups have a legal basis to bring these suits if government officials do not. The gaps in the current enforcement regime are too wide; Hawaii needs public nuisance liability to fill those gaps and protect what is left of the state's biodiversity and native ecosystems.

\textsuperscript{212} Larsen, supra note 22, at 11.

\textsuperscript{213} *Id. at* 11.