



# Whistleblowers and Citizen Enforcement

*Discussion Series Synthesis*

**February-June 2019**

INECE Secretariat  
1730 M St. NW, Suite 700  
Washington, DC 20036  
[inece@inece.org](mailto:inece@inece.org)

National Whistleblower Center  
1875 Connecticut Avenue NW,  
Washington DC 20009  
[help@whistleblowers.org](mailto:help@whistleblowers.org)

## Executive Summary

In February through June 2019, the International Network of Environmental Compliance and Enforcement (INECE) partnered with the National Whistleblower Center (NWC) to deliver four webinars, hosted by the Environmental Law Institute (ELI) on the role of whistleblowers and other citizens in enforcing environmental law.

INECE is a partnership of government and non-government enforcement and compliance practitioners from around the globe. Since 1989, INECE's work has enabled intergovernmental dialogue on environmental compliance and enforcement issues and provided a database of relevant information and training materials to its members. INECE organizes trainings, meetings, and conferences to build capacity for compliance and enforcement capacity. The mission of the National Whistleblower Center (NWC) is to support whistleblowers in their efforts to expose and help prosecute corruption and other wrongdoing. The NWC provides whistleblowers with legal assistance, advocates for policies that protect and reward whistleblowers, and educates the public about the importance of whistleblowers to preserving democracy and the rule of law.

INECE periodically organizes Discussion Series in collaboration with other organizations on topics of particular interest to the compliance and enforcement community. These series consist of several webinars, each focused on strengthening compliance and enforcement from a particular angle across a range of different environmental issues. These include climate and air, biodiversity, chemicals and waste, forest and water management, oceans, and seaports.

This Series examines how whistleblower laws, emerging technologies, and citizen engagement are transforming the landscape of environmental enforcement. An important component of the compliance assurance and enforcement process is the ability to detect environmental violations and provide support to environmental authorities and enforcement agencies to prosecute these violations. Achieving compliance and enforcement is a difficult task, but new legal protections and rewards for whistleblowers and newly available technologies open up a wide array of opportunities. Today, ordinary citizens and NGOs around the world can participate in monitoring and reporting evidence of possible environmental crimes to authorities, which means more effective and consistent enforcement at a lower cost. If designed well, these protections and tools allow the ordinary citizen to join this process without fear of retaliation. If used correctly, these tools will accelerate the procurement of detailed information on regulated entities and improve agencies' capacity to enforce regulations and protect ecosystems.

The objective of the series was to raise awareness of the different ways in which citizens and other nongovernmental actors can play a role in the accountability processes in environmental law. In particular, the sessions focused on admissible evidence, legal frameworks supporting citizen engagement, and the effective use of data generated by emerging technologies. These sessions also aimed to help policymakers and regulators understand the importance of environmental defenders and how they can provide education and tools to support and protect whistleblowers.

## I. Session Summaries

The topics discussed at each webinar are as follows:

### *Webinar No.1: Using Whistleblower Laws to Promote Environmental Laws; Feb 26, 2019*

Whistleblowers play a critical role in uncovering and detecting fraud and corporate criminal activity, including in the environmental arena. This webinar introduced existing whistleblower protections under U.S. law, and reviewed how these protections can encourage citizen disclosures on environmental enforcement throughout the globe. In this session, Stephen Kohn, Chairman of the Board of Directors of the National Whistleblower Center, outlined the mechanisms employed in whistleblower provisions, the risks and potential consequences of being a whistleblower, and the role of financial and personal rewards in increasing the credible reports both within and outside of the United States.

Speaker(s): Stephen Kohn, *Chairman of the Board of Directors of the National Whistleblower Center*; Carl Bruch, *Director of International Programs, the Environmental Law Institute (Moderator)*

### *Webinar No.2: Citizen Enforcement in the Forestry Sector; March 21, 2019*

Monitoring and enforcement in forest ecosystems remains a challenge around the world. This webinar examined the drivers of illegal logging in forested areas, particularly in the Amazon, and highlighted the linkages between organized criminal networks and logging activity. It also explored ongoing initiatives that engage forest communities in monitoring forests, the process of integrating citizen-sourced data into conventional enforcement processes, and potential roles for practitioners to play in this sector.

Speaker(s): Ruth Noguerón, *Senior Associate, Forest Program, World Resource Institute (WRI)*; Shelley Gardner, *Illegal Logging Program Coordinator, United States Department of Agriculture (USDA)*; Melissa Blue Sky, *Senior Attorney, Center for International Environmental Law (CIEL)*; Sandra Nichols Thiam, *Senior Attorney, Environmental Law Institute (Moderator)*

### *Webinar No.3 Enforcing Maritime Laws: the Role of Private Citizens, April 16, 2019*

By their nature, maritime violations are exceedingly difficult to detect for conventional law enforcement. Whistleblowers, many of whom are employed by ships at sea, play an important role in uncovering violations of the Act to Prevent Pollution from Ships (APPS), and have made the United States the most effective enforcer of the [International Convention for the Prevention of Pollution from Ships \(MARPOL\)](#). In this webinar, the United States Coast Guard and the International Criminal Police Organization (INTERPOL) Pollution Crime Working Group provided perspectives on national and international initiatives to tackle maritime pollution, respectively, and the National Whistleblower Center covered whistleblower information disclosures.

Speakers : Xiao Recio-Blanco, *Director of Ocean Program, Environmental Law Institute, Managing Director, International Network for Environmental Compliance and Enforcement Secretariat, Moderator* Anton DeStefano, *Lieutenant Commander, Environmental Law Division, U.S. Coast Guard* Stephen Kohn, *Chair of the Board, National Whistleblower Center* Joseph Poux, *Deputy Chief, Environmental Crimes Section of Department of Justice, Chair, INTERPOL Pollution Crime Working Group.*

### *Webinar No. 4: Collecting and Reporting Evidence of Environmental Law Violations: Tools That Work for Citizens, June 13, 2019*

Around the world, there has been a growth in legal protections and rewards as well as technologies and programs that empower ordinary citizens and NGOs to engage in monitoring local environmental conditions and reporting potential violations of law. This webinar addressed new needs emerging from increased use of citizen science: the need to educate citizens and NGOs about how to collect and report information without jeopardizing their security and the need to strengthen whistleblower programs to

protect security and otherwise increase incentives for submitting evidence. The webinar also discusses the role that non-profits can play in capacity-building and education to improve the reliability of data, increase understanding of traditional enforcement processes, and expand capacities for reporting evidence.

*Speakers: Stevie Lewis, Public Laboratory for Open Technology and Science Outreach Director; Shaun Goho, Deputy Director of Emmett Environmental Law & Policy Clinic, Harvard Law School; John Kostyack, Executive Director, National Whistleblower Center; LeRoy C. Paddock, Associate Dean for Environmental Studies, George Washington University Law School (Moderator).*

## II. Discussion Synthesis

This paper synthesizes the key takeaways of those presentations and discussions.

### Webinar No. 1: Using whistleblower laws to promote environmental laws, Feb 26, 2019

On National Whistleblower Appreciation Day in 2015, Senator Charles Grassley, senior United States senator from Iowa once said, “You can’t fix something if you don’t know it’s broken. That’s just common sense.”<sup>1</sup> This idea, while applicable to law enforcement in general, was employed here to highlight the importance of whistleblowers in uncovering criminal activities that would otherwise never be brought to justice. In *Using Whistleblower Laws to Promote Environmental Laws*, panelist Kohn, Chairman of the Board of Directors of the National Whistleblower, outlined how whistleblower provisions that have been put in place throughout United States’ history, can be applicable to the environmental context both in the United States and around the world. As with other forms of crime, particularly white collar organized crime, entities perpetuating environmental violations expend a lot of resources on covering up evidence of their wrongdoing. In these situations, law enforcement relies on concerned citizens acting as whistleblowers to identify violations when they occur.

Nonetheless, it is challenging to encourage such concerned citizens to step forward when there is fear of personal retaliation or lack of response on the part of accountable actors. These risks are amplified when citizens are reporting on crimes committed by powerful actors, who are often responsible for the most impactful wrongdoing. In addition to these risks, the logistics of gathering evidence and reporting crimes also pose challenges for potential whistleblowers. How should one report such crimes, and to whom? What types of evidence should be gathered for particular violations, and what will be admissible in court? Without the right resources available to ensure that their claim will yield results, potential whistleblowers lack incentives to step forward. The United States legislature has passed legislation that recognizes and responds to these manifold barriers to speaking out, but there is still a great need for capacity-building around the implications of these laws, particularly in the environmental field.

The False Claims Act (FCA), originally passed by President Lincoln in 1863 and modernized in 1986,<sup>2</sup> was the first law in the United States specifically oriented towards empowering whistleblowers. The *qui tam*<sup>3</sup> provisions of the law empower private citizens to sue entities for fraud in government contracts on behalf of the government. They also set forth the framework for *qui tam* reward laws, which establish the process for protection of anonymity, enable whistleblower collaboration with the government in filing cases, and entitle whistleblowers to receive mandatory rewards from collected proceeds in successful cases. Such laws can and have been used to deter violations for environmental crimes. Notably, the FCA itself can target the global supply chain for illegally obtained goods, including from logging and wildlife trafficking.

These *qui tam* provisions can also be applied to a variety of environmental laws, including those that address wildlife trafficking, and have been implemented for the Lacey Act, the Act to Prevent Pollution from Ships, and the Endangered Species Act.

Although few countries other than the United States have passed such whistleblower protections, there are still opportunities for whistleblowers located abroad to get involved and crimes committed outside of the United States to be reported. For example, the Foreign Corrupt Practices Act, which targets bribery and financial falsification in publicly traded corporations, established U.S. jurisdiction over corruption

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<sup>1</sup>Grassley,C. “Grassley Remarks on National Whistleblower Appreciation Day” 2015.

<https://www.grassley.senate.gov/news/news-releases/grassley-remarks-national-whistleblower-appreciation-day>

<sup>2</sup> Legal Information Institute. “31 U.S. Code § 3730.Civil actions for false claims” *Cornell Law School*.

<https://www.law.cornell.edu/uscode/text/31/3730>

<sup>3</sup> Garner, B.”QUI TAM ACTION“ *Black’s Law Dictionary, 11th Edition*. 2019. Thomson Reuters.

occurring in foreign countries by U.S. citizens or companies that register securities in the U.S..<sup>4</sup> However, there is no requirement that claimants be located in the United States, and there is no requirement that the illegal activity be conducted on U.S. soil.<sup>5</sup> As long as the activity violated U.S. laws and is perpetuated by an entity subject to the given law, it can be reported by anyone with sufficient information. If bribery was involved in the allocation of a foreign concession by a U.S. company, for instance, a whistleblower could report this violation to U.S. authorities regardless of their citizenship. Virtually all whistleblower laws allow non-U.S. citizens to report violations of U.S. law, and these laws oftentimes address criminality outside the U.S. and can be applied as long as there is a U.S. nexus.

As recognition for the importance of whistleblowers grows, more legal provisions are being produced to encourage the practice. A law that is currently moving through Congress, H.R. 864,<sup>6</sup> The Wildlife Conservation and Anti-Trafficking Act, sets forth whistleblower provisions for crimes related to wildlife trafficking and illegal, unreported, and unregulated (IUU) fishing. The Act would require implementing agencies to create whistleblower offices to increase the uptake of whistleblower enforcement to prosecute anti-wildlife-trafficking.<sup>7</sup> Reports may be filed anonymously and confidentially, and whistleblowers would be given a monetary award for providing information that leads to administrative or judicial action.<sup>8</sup> It also lays out strong civil and criminal sanctions for the wrongdoers, making trafficking a predicate offense under the Racketeer Influenced and Corrupt Organizations Act and IUU fishing a predicate offense under money laundering statutes.<sup>9</sup> This type of legislation indicates an effort to strengthen whistleblower law in the environmental field by better facilitating whistleblower reporting in order to bring attention to these environmental crimes.

#### Webinar No. 2: *Citizen Enforcement in the Forestry Sector*, March 21, 2019

Around the world, a variety of competing interests affect forest use and the effectiveness of forest protection. Despite growing attention to the role of forests in regulating global greenhouse gas concentrations and regulating regional water availability, the global community had little success in quelling the increasing pace of forest degradation and loss.<sup>10</sup> A variety of factors exacerbate this issue, many of them stemming from the difficulties of traditional monitoring and law enforcement in remote forest areas, and the role the global commodity chain plays in obfuscating illegal trade in logged goods.<sup>11</sup> With the appropriate support, communities can fill gaps in monitoring and enforcement through independent observation, utilizing technologies such as smart phones, satellites, etc. to deliver the information to state authorities with the dominion to act.<sup>12</sup> At the international level, examining trade flows can help identify where corruption and wrongdoing is occurring. This session highlighted the roles of different actors in

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<sup>4</sup> Securities, U. S., and Exchange Commission. "Spotlight on Foreign Corrupt Practices Act." 2017.

<https://www.sec.gov/spotlight/foreign-corrupt-practices-act.shtml>

<sup>5</sup> O'Neill, K. "ORDER DETERMINING WHISTLEBLOWER AWARD CLAIM" 2014.

<https://www.sec.gov/rules/other/2014/34-73174.pdf>

<sup>6</sup> 116<sup>th</sup> Congress. "H.R.864 - Wildlife Conservation and Anti-Trafficking Act of 2019" 2019.

<https://www.congress.gov/bill/116th-congress/house-bill/864>

<sup>7</sup> 116<sup>th</sup> Congress. "H.R.864 - Wildlife Conservation and Anti-Trafficking Act of 2019" 2019. 102(b)(3)(B).

<https://www.congress.gov/bill/116th-congress/house-bill/864/text#H8FC7791772CF4881A3DE5DB84AAF0895>

<sup>8</sup> 116<sup>th</sup> Congress. "H.R.864 - Wildlife Conservation and Anti-Trafficking Act of 2019" 2019. 103(a)-(d).

<https://www.congress.gov/bill/116th-congress/house-bill/864/text#H190DFC9DB87245E8A293047A45C2EE32>

<sup>9</sup> <sup>9</sup> 116<sup>th</sup> Congress. "H.R.864 - Wildlife Conservation and Anti-Trafficking Act of 2019" 2019. 302, 402.

<https://www.congress.gov/bill/116th-congress/house-bill/864/text#H1DA205E475334226BA10858F0F84B06A>

<sup>10</sup> Nunez, Christina. "Deforestation and Its Effect on the Planet" 2019. *National Geographic*.

<https://www.nationalgeographic.com/environment/global-warming/deforestation/>

<sup>11</sup> Chatham House. "Causes" <https://www.illegal-logging.info/topics/causes>

<sup>12</sup> Chatham House. "What is illegal logging?" <https://www.illegal-logging.info/TOPICS/WHAT-ILLEGAL-LOGGING>

forestry sector in combatting illegal logging as well as specific initiatives and opportunities to engage citizens in doing so.

At the local level, citizens who live in forest communities affected by illegal forest activity can be critical eyes on the ground in rural areas for entities charged with legal enforcement. Given their familiarity and comfort with local surroundings, these communities are much better equipped to detect destructive activity or notice changes in the forest than traditional enforcement agents who rarely come from forest communities themselves. Communities also have their own incentives for wanting to deter crime in the forest because enforcement generally improves community members' safety and reduces competition for their resources, but there is often a need for better outreach to empower them to act on these incentives and to connect them with enforcement resources.

Initiatives such as the World Resources Institute's Global Forest Watch (GFW) aim to strengthen the ability of local communities and governments to identify and sanction illegal logging through capacity-building. In her presentation, Noguerón emphasized the role of easily accessible technology in capacity-building, highlighting the GFW's forest monitoring platform that tracks forest loss in real time. Data in the platform, which is input according to interpretations of satellite images by University of Maryland researchers, generates [Global Land Analysis and Discovery \(GLAD\)](#) alerts signaling deforesting activity.<sup>13</sup> Users can subscribe to receive these notifications for a particular region and upload information on a given site to the platform based on their on-the-ground observations.<sup>14</sup> While the satellite data is processed and interpreted by scientists at the University of Maryland, local communities and individuals on the ground play a critical part in verifying and validating the observations.

The accessibility of this data also enables communities to connect monitoring with enforcement actions. Noguerón gave the example of the Rainforest Foundation US (RFUS) project, which has worked with two communities in Ucayali to train them in using the GLAD system. These communities now have developed a system in which they print alerts onto a large map, which is then used to deploy community members to monitor the territories. Data from the alerts and from their field observations has already been used to file legal complaints, one of which is still pending a final decision in the courts. Based on these experiences, the project is now scaling up and training 40 communities in Loreto, who have formed patrols and placed at least 6 cases which are currently being prepared.

Another project Noguerón discussed, the Forest Legality Initiative, seeks to address the market for illegal logged timber through citizen-sourced information. One of the biggest challenges in stemming the flow of illegal timber is the difficulty of wood identification at points of entry into new markets. Verification is notoriously difficult to do, as this either requires vouchers and verifications from different parties and/or libraries of species with geo-referenced samples for each different part of the tree to ensure accuracy. Some technologies are being developed to address this gap, but there is a need to apply large groups of people and resources to adequately deploy the technologies. This project, as a partnership with Adventure Scientists, developed a strategy for citizen sampling of Big Leaf Maple trees in which they recruited volunteers, led online trainings, and deployed them to sample the trees throughout California and British Columbia. They worked with over 100 volunteers over the course of 5 months to produce 1000 reference samples from these two areas, creating their reference database for the tree. The project is now being expanded and replicated in Indonesia.

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<sup>13</sup> Peterson, Kyla. "Fostering Citizen Enforcement and Rule of Law Could Cut Down Illegal Logging" 2019. *New Security Beat*. <https://www.newsecuritybeat.org/2019/04/fostering-citizen-enforcement-rule-law-cut-illegal-logging/>

<sup>14</sup> World Resources Institute. "Forest Legality Initiative" <https://www.wri.org/our-work/project/forest-legality-initiative>



At the international level, increased data accessibility can improve decision-making, particularly in private settings, but only if integrity in forest governance frameworks is maintained. Supporting these efforts may require building better capacity by studying supply chains and addressing regulatory gaps. Melissa Blue Sky, Senior Attorney at the Center for International Environmental Law (CIEL), presented CIEL's recent research on timber exports from Peru studying whether there is a connection between the destination of the exports and the legality of the product.<sup>15</sup> The group studied exports from the port of Callao near Lima, Peru, a country with a high level of illegally harvest timber, and looked at how different actors responded to increasing legal infrastructure and oversight of forestry activity. They found that the private sector responded to the input of more stringent inspections, documentation, and transparency requirements by becoming more skilled at evading detection by laundering illegal timber with official documents. Of the timber exports about which they collected information, 84% was on OSINFOR's "red list" (meaning that there were significant legal violations), unsupervised, or missing information on the origin of the timber. It is difficult to deter the corruption and falsification of documents within exporting countries, especially when the profits of selling stolen timber are so substantial for the organized criminal networks involved.

In looking at supervised imported timber, however, CIEL found that countries without laws prohibiting the import of illegal timber had higher percentages of illegal timber imports, demonstrating the importance of importing country initiatives to slow illegal trade flows. The United States and France, for example, which have respectively passed the Lacey Act and the EU Timber Regulation, have much higher rates of legal timber imports, as compared with their counterparts in countries such as China and Mexico, where the legal constraints are minimal. As such, legislation and increased demands from importing countries could incentivize fortifying governance structures and increasing compliance in exporting countries.

The difficulties posed by the international trade of forest products mean that collaborative and international initiatives are needed. Shelley Gardner, the Chair of INTERPOL's Forestry Crime Working Group (FoCWG), introduced the FoCWG, whose aims include delivering programs to address forestry crime; serve as a platform for knowledge exchange and best practice sharing; provide support, guidance and capacity for ongoing INTERPOL forestry projects; and promote the use of policing capabilities in the forest sector. Through Project LEAF (Law Enforcement Assistance for Forests), the working group engages law enforcement authorities in their member countries, INGOs, and NGOs to coordinate enforcement responses to forestry crime around the world.<sup>16</sup> They have led operations every year, such as [Operation Amazonas II \(2015\)](#), in which they partnered with Peru Customs, INTERPOL, and the WCO, and engaged law enforcement and customs authorities in Brazil, China, Dominican Republic, and Mexico.<sup>17</sup> In recent years, the working group has also partnered with groups working on overlapping challenges, such as CITES and INTERPOL's Wildlife Crime Working Group, and have produced a variety of trainings and capacity-building materials. In order to ensure adequate enforcement, Gardner emphasized the importance of collaboration between law enforcement authorities like INTERPOL with other countries' custom authorities and information sharing to educate the public and law enforcement community at the global level.

The session evidenced the local-to-global nature of forestry enforcement and the need to deploy technologies that enable new partnerships to be formed between community members and enforcement agencies. Participatory processes and information access may help draw connections between different

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<sup>15</sup> Center for International Environmental Law. "“Continuous Improvement” in Illegal Practices in the Peruvian Forest Sector” 2017. <https://www.ciel.org/wp-content/uploads/2017/11/EnglishVersionFinal.pdf>

<sup>16</sup> Interpol. "INTERPOL launches Project LEAF to combat illegal logging worldwide" 2012. <https://www.interpol.int/en/News-and-Events/News/2012/INTERPOL-launches-Project-LEAF-to-combat-illegal-logging-worldwide>

<sup>17</sup> Dewane, Maggie. "Operation Amazonas Targets Illegal Timber Trade in Peru" 2014. *Environmental Investigation Agency*. <https://eia-global.org/press-releases/operation-amazonas-targets-illegal-timber-trade-in-peru>



crime networks that facilitate illegal logging, while also leading to better understanding of the capacities of different actors to contribute to the enforcement process. As new actors become engaged in enforcement processes, particularly private citizens or potential whistleblowers, it is also important to create frameworks that protect them and ensure that their disclosures are properly handled. Legal safeguards in both importing and exporting countries can enable this.

### Webinar No. 3: *Enforcing Maritime Laws: The Role of Private Citizens*, April 16, 2019

Oil pollution from ships is a severe threat to the marine life and the overall health of our oceans, with an estimated 80 million gallons of oil, about 8 times the amount of the Exxon-Valdez spill, dumped in the ocean every year. Though legal frameworks to address marine pollution exist around the world, ocean activity remains notoriously difficult to regulate and monitor. In this context, whistleblowers play an important role in detecting maritime violations and improving enforcement. This is both because the inherent difficulty of supervision on the high seas necessitates an insider perspective, and because illegal discharges are usually carried out using complex and deceitful engineering tactics that are difficult for outside observers to detect. In the United States, maritime pollution is regulated under the Act to Prevent Pollution from Ships (APPS)<sup>18</sup>, which implements the International Convention for the Prevention of Pollution from Ships (MARPOL). The Act contains applicable whistleblower protections, which is notable as over 76% of successful APPS cases between 1993-2017 were initiated by a whistleblower disclosure.<sup>19</sup> Perhaps as a result of these whistleblower protections, the United States has been recognized as one of the only countries that effectively prosecutes MARPOL violations in the world.

Whistleblowers are so critical in this area especially due to the highly complex way in which companies violate of maritime law. The pollution-related crime common to the high seas is the falsification of the Oil Record Book, in which crew members are required to track the use and movement of oily wastewater so as to ensure that no wastewater that is above the 15 ppm oil limit is discharged improperly. Though the Record Book is meant to serve as an internal compliance system that facilitates inspections, it can often obscure the reality on the ground, as new more sophisticated technologies make it easier to cover up violations. Only the few crew members employed in the engine room truly have a sense of what goes on in there, and it can be extremely difficult for inspectors to detect fraud. In the Princess Cruise Lines Case, a whistleblower reported illegal dumping to UK authorities, resulting in a conviction in the United States in which the company was fined US\$40 million.<sup>20</sup> In this instance, the cruise line was using a “magic pipe,” a piece of equipment that allowed them to bypass pollution detection and prevention equipment and dump oily discharge into the ocean.<sup>21</sup> This violation went undetected by inspectors for 10 years, between 2005 and 2015, until the whistleblower disclosure, because their technique was so sophisticated that the pollution prevention equipment appeared intact. The whistleblower photographed the magic pipe and this was used as evidence in the courts. Because of the whistleblower rewards that exist in the United States, he received a US\$1 million award for his disclosure. Mr. Poux further pointed out that much of the material in the

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<sup>18</sup> 96<sup>th</sup> Congress. “H.R.6665 - Act to Prevent Pollution from Ships” 1980. 33 U.S.C. § 1901 – 1915.

<https://www.congress.gov/bill/96th-congress/house-bill/6665>

<sup>19</sup> National Whistleblower Center. “Whistleblower Detection Credited in 76% of Last 100 APPS Cases” 2018.

<https://www.whistleblowersblog.org/2018/05/articles/environmental-whistleblowers/whistleblower-detection-credited-in-76-of-last-100-apps-cases/>

<sup>20</sup> Kalosh, A. “Whistleblower awarded \$1m in \$40m Princess pollution case” 2017. *Seatrade Cruise News*.

<https://www.seatrade-cruise.com/news/news-headlines/whistleblower-in-40m-princess-pollution-case-awarded-1m/>

<sup>21</sup> Ready, T. “A whistleblower exposed illegal dumping by Princess Cruise Lines. The DOJ says they are still doing it” 2019. *National Whistleblower Center*. <https://www.whistleblowersblog.org/2019/06/articles/environmental-whistleblowers/a-whistleblower-exposed-illegal-dumping-by-princess-cruise-lines-the-doj-says-they-are-still-doing-it/>

engine room can be used either for good or for bad, and only those who are present to see it in use are able to tell its impact.

Despite the importance of whistleblowers to enforcing maritime law, there remain many risks and barriers that deter whistleblowers from coming forward with evidence. First, there exists the threat of being fired and prevented from finding employment again. Often crewpersons, maritime whistleblowers and potential whistleblowers do not make much money. Further, they are required to remain in the United States during an ongoing investigation, while they and their families remain vulnerable to threats or obstruction by the company under investigation. In effect, many companies refuse to cooperate with whistleblower laws and have launched campaigns to vilify whistleblowers as profit-seeking liars. These risks, added to the possibility that whistleblowers will not be believed, underscore the importance of whistleblower protections and rewards in U.S. law. A case from the Eastern District of Texas illustrates the barriers to whistleblowers and the necessity of compensatory mechanisms. In this case, the whistleblower in question was a foreign national who lost his marine license as a retaliatory response to his disclosure. Back at home, his family was threatened, and he was unable to return home. The US government was able to assist him in gaining asylum status and finding employment working as an instructor for professional mariners.<sup>22</sup> Without these kinds of protections, it is hard to imagine many taking the risk to step forward as a whistleblower.

In the United States, the US Coast Guard has wide discretion under 14 U.S.C. § 89(a) and through the Marine Environmental Protection Program to investigate crimes on the high seas, particularly those relating to pollution. As a Lieutenant Commander in the Coast Guard's Environmental Law Division, Anton Destefano is tasked with providing legal advice to investigators in ongoing cases, then make suggestions as to whether cases should be referred to the Department of Justice where they would ultimately be tried. The US DOJ officially began using whistleblower rewards for maritime prosecutions in the 1990s but has been issuing them more regularly since 2002. At the beginning, most of the convictions were coming from satellite observation or field inspections, but, according to Joseph Poux of the Environmental Crimes Division of the US DOJ, the majority of tips now come from whistleblowers. Since the policy began, the US DOJ has designated 160 crew men as whistleblowers for having assisted in a case, and has paid out a total of US\$28 million to them. More recently, since 2016, the US Coast Guard has been involved in the conviction of 23 corporate entities, generating over US\$70 million in penalties. In addition, they have compelled 262 foreign ships to adopt environmental compliance plans, thus furthering a culture of environmental compliance and stewardship.

It is precisely because of the United States' aggressive prosecution on this issue that it has had such success in identifying violations through whistleblower disclosures. Stephen Kohn, Chair of the Board, National Whistleblower Center discussed how U.S. whistleblower laws, such as the Lacey Act, provide monetary rewards for U.S. citizens, non-citizens, and NGO's who step forward with information on ocean pollution. In addition to rewards for whistleblowers, laws such as the False Claims Act and Foreign Corrupt Practice Act provide an avenue for prosecuting marine pollution crimes if there is evidence of fraud or bribery. The cycle of accountability is perpetuated by whistleblowers and the prosecution of the perpetrators, guaranteeing the continued enforcement and compliance of the laws.<sup>23</sup>

In the absence of widespread legislation to protect whistleblowers, there is a role for international organizations and NGOs to play in raising awareness about whistleblower laws and the other avenues through which marine crime is prosecuted. The Global Wildlife Whistleblower Program, a confidential and

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<sup>22</sup> Institute for Law Enforcement Administration. "U.S. Coast Guard Special Agent Thomas Gage Receives 2018 ILEA Ethical Courage Award" 2018. *The Center for American and International Law* <http://www.cailaw.org/institute-for-law-enforcement-administration/News/2018/ilea-ethical-courage-award-2018.html>

<sup>23</sup> National Whistleblower Center. "Safeguard Oceans from Shipping Pollution" <https://www.whistleblowers.org/wildlife/wildlife-laws/act-to-prevent-pollution-from-shipsmarpol/>

anonymous online platform, was created by the National Whistleblower Center 2016 in order “to educate and incentivize potential whistleblowers in order to dramatically increase the number of high-quality confidential reports essential to detect wildlife crimes and enforce the laws prohibiting illegal trafficking worldwide.”<sup>24</sup> The platform provides a direct portal through which whistleblowers can contact the National Whistleblower Legal Defense and Education Fund, who then evaluate their claim and provide legal advice.<sup>25</sup> Disseminating this kind of legal information is particularly important given the misinformation and deprecating messages spread by industry. Joseph Poux also discussed the growing role of the INTERPOL Pollution Crimes Working Group in detecting these crimes, training enforcement agencies, and building capacity. In recent years, they have launched a global operation, named 30 Days at Sea, in which they support a global push for improved enforcement against marine pollution. In 2018, through the operation, they carried out over 5,200 inspections and identified over 500 waste crimes and administrative violations in 84 countries and territories.<sup>26</sup> He emphasized the importance of coordination between policy makers and law enforcement agencies to aid in this process,<sup>27</sup> which INTERPOL aims to facilitate. A recommendation was made that the US Coast Guard as the lead US Government agency for the IMO (International Maritime Organization) should promote and support whistleblower initiatives in the IMO>

*Webinar No. 4: Collecting and Reporting Evidence of Environmental Law Violations: Tools That Work for Citizens, June 13, 2019*

Changes in monitoring technology have increased the ability of the citizens to collect, interpret, and exchange environmental data, and have led to an explosion in citizen-sourced data in recent years.<sup>28</sup> It has many important applications for environmental management, especially in areas in which there are gaps in information and in communities facing environmental justice concerns that may not be able to access resources to hire external researchers. As the generation and availability of such data grows, those who seek to use it for environmental enforcement purposes face challenges in legal systems since it diverges from the types of data that have historically been used in mounting legal cases. This webinar reviewed some major challenges to citizen-sourced data and claims and provides recommendations at local, national, and international levels.

At the local level, citizen science may represent a radical shift in the ownership of information and material that has the potential to shift the relationship between citizens and their governments. Stevie Lewis, a panelist from Public Lab, told a story about a group of concerned community members in Louisiana who, in 2010, organized themselves to document the impacts the Gulf Deepwater Horizon oil spill was having on their local ecosystem. Using balloons, kites, and simple cameras, they captured images of the spill that were then used to overlay onto Google Earth. This moment, which led to the formation of Public Lab, illustrates the importance of the changing paradigm surrounding the generation of scientific information and data.

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<sup>24</sup> National Whistleblower Center “The Global Wildlife Whistleblower Program” <https://www.whistleblowers.org/wildlife/>

<sup>25</sup> National Whistleblower Legal Defense & Education Fund. “Contact the National Whistleblower Legal Defense and Education Fund” <https://www.report-fraud-now.info/contact-nwldef>

<sup>26</sup> Curzon, K. “Interpol's 30 Days at Sea identifies offenders in marine pollution crime” 2019. *Basel Action Network*. <https://www.ban.org/news/2019/1/4/interpol-s-30-days-at-sea-identifies-offenders-in-marine-pollution-crime>

<sup>27</sup> Interpol. “Pollution crime” <https://www.interpol.int/en/Crimes/Environmental-crime/Pollution-crime>

<sup>28</sup> Wyeth, G., Paddock, LC., Parker, A., Glicksman, RL., Williams, J. “The Impact of Citizen Environmental Science in the United States” 2019. *ELR*. <https://elr.info/news-analysis/49/10237/impact-citizen-environmental-science-united-states>

Scientific industries have historically been relatively exclusionary and inaccessible to ordinary citizens, but this need not always be the case. The Public Lab aims to “entrench equity and access in all parts of environmental exploration and advocacy” by removing barriers to entry by such simple means as reducing jargon, employing simple technologies that produce data that appeal to human senses, and spreading awareness about environmental issues and how they impact regular communities. They hope that their activities can change the way that scientists conceive of collaboration and shift the focus of scientific efforts to be more people-centered.

While there is a lot of capacity-building that needs to happen at the citizen level to improve the use of citizen data, there is also a need for the scientific community and government agencies to create an enabling environment for the use of citizen-sourced data. In 2016, the EPA published the NACEPT 2016 Report: Environmental Protection Belongs to the Public,<sup>29</sup> which contains recommendations as to how the EPA should respond to technological and social developments in the area of citizen science. Panelist Stevie Lewis also emphasized the importance of imagining uses for citizen science beyond simply for enforcement actions. This exercise will help shift the framework from incremental changes in dominant systems to a broader orientation towards collaborative governance, in which knowledge and decision-making are made accessible to communities affected. With this aim in mind, governments and other initiatives will seek to empower citizens to become aware of the issues around them, develop partnerships with other actors, and become more engaged in data collection. The objective would be capacity-building and engagement with local communities generally, but the results would entail greater availability of data for use when violations are observed. Creating a culture of environmental monitoring that is more collaboration-oriented would also have ramifications for the traditional legal enforcement community, making it more amenable and accepting of citizen sourced data.

At present, the use of citizen-sourced information still faces many barriers in the courts. Although the United States courts have mechanisms for citizen suits, there remain regulatory and evidentiary standards that often complicate the objective of using citizen science to enforce environmental law. When a community group wishes to express concerns regarding local pollution, for example, they may either take their information to the EPA or another state or local agency, who would then conduct their own research and data collection on the problem, or they may move forward with bringing their own enforcement actions to court. Shaun Goho, of Harvard’s Emmett Environmental Law and Policy Clinic, discussed some of the evidentiary issues with using citizen-science in the courts.

The ways in which the courts categorize and standardize information often disadvantage citizen-sourced information. Rule 11 certifications<sup>30</sup> require attorneys to certify that there is evidentiary support for the information being used, confirming that they have reasonable confidence that the information is reliable. The related requirements of data authentication and the inadmissibility of hearsay create further barriers in the courts. Hearsay, which is defined as “a statement, other than one made by the declarant while testifying at the trial or hearing, offered in evidence to prove the truth of the matter asserted,”<sup>31</sup> is considered inadmissible in the courts unless one of a limited number of exceptions applies. This means that oral or written statements that citizen scientists make outside of court are admissible unless someone with firsthand knowledge can testify about them. For example, in one case individuals used a standard methodology to make opacity observations of a grain elevator’s barge and ship loading operations. The court held that the

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<sup>29</sup> Environmental Protection Agency. “NACEPT 2016 Report: Environmental Protection Belongs to the Public” 2016. <https://www.epa.gov/faca/nacept-2016-report-environmental-protection-belongs-public-vision-citizen-science-epa>

<sup>30</sup> Legal Information Institute. “Rule 11. Signing Pleadings, Motions, and Other Papers; Representations to the Court; Sanctions” *Cornell Law School*. [https://www.law.cornell.edu/rules/frcp/rule\\_11](https://www.law.cornell.edu/rules/frcp/rule_11)

<sup>31</sup> Legal Information Institute. “Rule 801. Definitions That Apply to This Article; Exclusions from Hearsay Sanctions” *Cornell Law School*. [https://www.law.cornell.edu/rules/fre/rule\\_801](https://www.law.cornell.edu/rules/fre/rule_801)

forms used to record these observations were inadmissible hearsay unless the people who took the observations could testify about them.<sup>32</sup>

Another complication when trying to get citizen science evidence admitted in court arises from the related distinctions between fact and opinion testimony, on the one hand, and between expert and lay opinions, on the other. Anyone can offer testimony about facts, but the scope of such testimony is limited because it does not include inferences about facts or assumptions about facts. In addition, the line between fact and opinion can be quite blurry. When testimony is properly classified as opinion testimony, the question then becomes whether it is a lay opinion, that can be presented by anyone, or an expert opinion, that can be presented only by people who meet a stringent test to qualify as experts. Lay opinion testimony must be based on witness perception, aid in determining a fact, and not require scientific, technical or other specialized knowledge.<sup>33</sup> While this is limiting, Goho mentioned several cases where testimony about pollution such as dust, raw sewage, and manure was admitted as lay opinion.<sup>34</sup> The success of these cases suggest that citizen scientists will have success in testify about visible or well-known pollutants can be detected with the senses.

When courts consider an opinion to be expert testimony, then only witnesses with the necessary qualifications can testify about it.<sup>35</sup> In the U.S. federal courts, the test to decide whether someone qualifies as an expert is called the *Daubert* test.<sup>36</sup> It considers whether the methods have been tested or peer reviewed; the rate of error is known for the methodology and whether that level is acceptable to the courts; standards are applied to the operation of the methodology; and the methodology is accepted in the scientific community.<sup>37</sup> To qualify as an expert, a witness does not necessarily need an advanced degree. In its applications for citizen science, it remains an open question whether the *Daubert* test will be applied in the narrow sense for evaluating specific methodologies, or in the broad sense in evaluating the validity of citizen science in general. It is yet to be seen whether courts will accept the lower-cost technologies more typically used by citizen science groups and whether citizen science methodologies will be broadly accepted in the scientific community. Before these questions are formally tackled in the courts, however, citizen-sourced data will be most usable if citizens do their best to adhere to using widely-used methodologies, to ensure they have the best technologies available for their cost, and to train those involved to standardize their methods. Various resources are available to assist communities with this, including the EPA Citizen

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<sup>32</sup> *Consol. Env'tl. Mgmt. v. Zen-Noh Grain*, 981 F. Supp. 2d 523 (E.D. La. 2013).

<https://www.leagle.com/decision/infdco20131106c13>

<sup>33</sup> Legal Information Institute. "Rule 701. Opinion Testimony by Lay Witnesses" *Cornell Law School*

[https://www.law.cornell.edu/rules/fre/rule\\_701](https://www.law.cornell.edu/rules/fre/rule_701)

<sup>34</sup> *Ellis v. Gallatin Steel Co.*, 390 F.3d 461 (6th Cir. 2004); *Cmty. Ass'n for Restoration of the Env't v. Henry Bosma Dairy*, 305 F.3d 943, 954 (9th Cir. 2002); *Concerned Area Residents for Env't v. Southview Farm*, 34 F.3d 114 (2d Cir. 1994); *State of Ga. v. City of E. Ridge, Tenn.*, 949 F. Supp. 1571, 1577 (N.D. Ga. 1996).

<sup>35</sup> Legal Information Institute. "Rule 701. Opinion Testimony by Lay Witnesses" *Cornell Law School*.

[https://www.law.cornell.edu/rules/fre/rule\\_701](https://www.law.cornell.edu/rules/fre/rule_701)

<sup>36</sup> *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993).

<https://www.leagle.com/decision/19931088509us57911072>

<sup>37</sup> Legal Information Institute. "Daubert Standard" *Cornell Law School*.

[https://www.law.cornell.edu/wex/daubert\\_standard](https://www.law.cornell.edu/wex/daubert_standard)



Science Quality Assurance Documentation Handbook,<sup>38</sup> and the Emmett Clinic’s interactive Citizen Science Manual.<sup>39</sup>

When considering global enforcement issues, on the other hand, citizen suits as discussed above are limited in their scope, as they only apply on U.S. soil and cannot result in criminal charges. John Kostyack, Executive Director of the National Whistleblower Center, emphasized the need for additional people-driven approaches to combat the criminal networks driving much of the crime underlying environmental destruction around the world. Traditional environmental enforcement mechanisms are not sufficient to pursue violent and criminal environmental violations, such as that which led to the murder of trade union leader and environmentalist Chico Mendes, and that which has driven the Vaquita almost to extinction in Mexico. The National Whistleblower Center’s work has focused on four environmental fields that deal in high value resources and are particularly affected by crime and corruption: wildlife trafficking, illegal fishing, illegal discharges, and illegal logging and timber.

Each of these issues is difficult to monitor and international by nature. However, the global legal tools that have been created to address them lack the enforcement mechanisms necessary to implement them adequately unless these are implemented nationally, such as with MARPOL and APPS in the United States. Because many of these crimes actually constitute some form of fraud or corruption that is directly regulated, non-environmental laws such as the False Claims Act can be used to prosecute them. This is another promising avenue for citizen complaints, such as the False Claims Act and other such *qui tam* laws, as they contain whistleblower protections and enable cooperation between whistleblowers and the government, who take charge in investigations and litigation.

NGOs can play an important role both in assisting whistleblowers with navigating the legal system and with spreading awareness about the reach and applications of whistleblower protections. Throughout the process, before and when they decide to step forward, whistleblowers often need additional support and education. NGOs can be effective in helping citizens effectively prepare and make disclosures by advising citizens on cases, connecting them with qualified lawyers, and helping them submit their claim to enforcement officials. The Legal Assistance Program of the National Whistleblower Center, for example, “helps those who may have witnessed criminal activity by corporations or governmental bodies to decide whether and how to step forward and report the wrongdoing to authorities.”<sup>40</sup> NGOs can also be critical to ensuring that the risks to whistleblowers are minimized by improving anonymity and securing communications. It is important that NGOs build strong relationships in both witness and law enforcement communities so that they may act as a bridge between prosecutors and defending attorneys. Outside of cases, NGOs can also work to build support for cases among different actors in the legal system and advocate for the strengthening of such protections.

Although there are strong evidentiary requirements for citizen-generated data, there is building momentum around ensuring that citizen science is integrated into environmental monitoring and compliance efforts.<sup>41</sup> Both whistleblowers and citizen scientists have important roles in environmental enforcement. Legal and

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<sup>38</sup> Environmental Protection Agency. “Quality Assurance Handbook and Guidance Documents for Citizen Science Projects” <https://www.epa.gov/citizen-science/quality-assurance-handbook-and-guidance-documents-citizen-science-projects>

<sup>39</sup> Emmett Environmental Law & Policy Clinic. “The Citizen Science Manual” 2019. <https://citizenscienceguide.com/homepage>

<sup>40</sup> National Whistleblower Center. “Legal Assistance Program” <https://www.whistleblowers.org/legal-assistance-program/>

<sup>41</sup> Wyeth, G., Paddock, LC., Parker, A., Glicksman, RL., Williams, J. “The Impact of Citizen Environmental Science in the United States” 2019. Environmental Law Reporter, Vol. 49, No. 3, 2019; GWU Law School Public Law Research Paper No. 2019-44; GWU Legal Studies Research Paper No. 2019-44. <https://ssrn.com/abstract=3344638>



policy efforts should work to empower these key stakeholders whose efforts in monitoring can have a significant impact on the efficacy of the implementation of environmental laws and regulation.

## Conclusions and Main Takeaways:

### International Applications of Whistleblower Laws

There is a common misconception that nothing can be done in the United States to address crimes occurring outside the borders of our domestic legal system. On the contrary—as pointed out in the first webinar—FCA and APPS broadly applies to crimes that originate outside the United States. Whistleblowers have filed successful False Claim Act cases based on a violations of customs laws and false statements on import related documents. Furthermore, both APPS and the Lacey Act cover violations of international conventions, such as MARPOL (APPS) and CITES (Lacey Act) that occur outside the U.S. Under the Foreign Corrupt Practices Act (FCPA), Over \$30 million has been paid to non-U.S. citizens who reported bribes overseas. For example, FCPA prosecutions have included cases in which bribes were paid at ports in Kenya and customs payments in South America.<sup>42</sup>

### Capacity-building

Educating the public and increasing awareness and international cooperation regarding tree identification and harvesting can “strengthen the capacities of civil society organizations, governments, and the private sector to detect, identify, and sanction illegal logging”.<sup>43</sup> Furthermore, utilizing citizens with the necessary information and technology to monitor compliance will aid in “improving transparency on the origins of the harvested goods and enforcing penalties for illegal acts”<sup>44</sup> leading to improved environmental enforcement and justice.<sup>45</sup>

### The Use of Technology

While new technologies empower communities to assist in environmental enforcement and monitoring, data from these technologies may not always be used in environmental enforcement actions, nor do new technologies eliminate equity concerns that are embedded in the scientific field. There is a need to form robust and standardized methodologies that conform to citizen needs, concerns, and capacities. Working with communities, most of whom are directly experiencing the effects of harms they are documenting, requires trust-building and diverges substantially from working with conventional scientific researchers. Herein, uses of technology should be people-centered and accessible. There is a need for the regulatory community to set standards on admissible and usable technologies for environmental monitoring. In this space, NGOs can assist in identifying high quality and low cost materials, training communities in standardized methodologies, and advising on legal claims.

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<sup>42</sup> National Whistleblower Center. “The Global Wildlife Whistleblower Program”

<https://www.whistleblowers.org/wildlife/>

<sup>43</sup>Peterson, Kyla. “Fostering Citizen Enforcement and Rule of Law Could Cut Down Illegal Logging” 2019. *New Security Beat*. <https://www.newsecuritybeat.org/2019/04/fostering-citizen-enforcement-rule-law-cut-illegal-logging/>

<sup>44</sup> Center for International Environmental Law. “AUTHORIZED TO STEAL ORGANIZED CRIME NETWORKS LAUNDER ILLEGAL TIMBER FROM THE PERUVIAN AMAZON” 2019. <https://www.ciel.org/wp-content/uploads/2019/07/Authorized-to-Steal-July-2019.pdf>

<sup>45</sup> Peterson, Kyla. “Fostering Citizen Enforcement and Rule of Law Could Cut Down Illegal Logging” 2019. *New Security Beat*. <https://www.newsecuritybeat.org/2019/04/fostering-citizen-enforcement-rule-law-cut-illegal-logging/>

## Connecting Citizens with Law Enforcement Systems

Citizen scientists have the potential to impact regulatory decision making and environmental enforcement.<sup>46</sup> Although the scientific validity of volunteer observation is a challenge for legal enforcement actions, funding for citizen science, improving technologies, and removing unnecessary legal barriers such as gag laws and restrictions on the use of certain technologies may further facilitate the public's involvement in gathering scientific data for these enforcement actions.<sup>47</sup> Furthermore, NGO's can serve as a bridge to prosecutors and private attorneys who represent whistleblowers, facilitating critical, "behind-the-scenes" communication.

### Closing thoughts:

The goals of this discussion series were to (1) explore how whistleblowers can play a large role in strengthening environmental compliance and enforcement, (2) explain the need to reward whistleblowers with monetary incentives and the necessity of anonymous and confidential reporting, and (3) highlight how new approaches, technologies and citizen engagement can benefit environmental compliance and enforcement activities. This series aimed to continue the discussion initiated by the INECE, focusing on the U.S whistleblower laws, explaining their international application, and determining the best methods for tracking environmental compliance and enforcement activities.

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<sup>46</sup> Wyeth, G., Paddock, LC., Parker, A., Glicksman, RL., Williams, J. "The Impact of Citizen Environmental Science in the United States" 2019. Environmental Law Reporter, Vol. 49, No. 3, 2019; GWU Law School Public Law Research Paper No. 2019-44; GWU Legal Studies Research Paper No. 2019-44. <https://ssrn.com/abstract=3344638>

<sup>47</sup> Parker, A., & Dosemagen, S. "Environmental protection belongs to the public: A vision for citizen science at EPA." 2016. In *AGU Fall Meeting Abstracts*. [https://www.epa.gov/sites/production/files/2018-04/documents/nacept\\_citizen\\_science\\_publication\\_eng\\_022318\\_rf508\\_508.pdf](https://www.epa.gov/sites/production/files/2018-04/documents/nacept_citizen_science_publication_eng_022318_rf508_508.pdf)

## Appendix I: Key Legislation for Citizen Scientists

<a href="#"><u>False Claims Act (FCA)</u></a>	31 U.S.C. §§ 3729 – 3733. The False Claims Act imposes penalties against those who make fraudulent monetary claims for payment or who make fraudulent claims in the effort to avoid payment of a fine to the government. <sup>48</sup> Included in the FCA is a <i>qui tam</i> provision that rewards private citizens for reporting potential fraud by allowing them to bring a civil action in court against someone suspected of engaging in fraudulent behavior. <sup>49</sup> If successful, the reporting citizen bringing the claim can collect a monetary reward through the court. <sup>50</sup>
<a href="#"><u>Foreign Corrupt Practices Act</u></a>	15 U.S.C. §§ 78m, 78dd, 78ff, 78u-6-78u-7. Under The Foreign Corrupt Practices Act, U.S. Citizens or issuers (a company with registered securities in the US who periodically reports to the SEC) who pay bribes to foreign officials in order to secure or retain business will face criminal liability. <sup>51</sup> The Frank Dodd Act in 2010 created a whistleblower office in the SEC, in 15 U.S.C. § 78u-7, that could reward whistleblowers who report on violations against securities law.
<a href="#"><u>Act to Prevent Pollution from Ships (APPS)</u></a>	33 U.S.C. §§ 1901 – 1915. § 1908(a)-(b) includes provisions for payment to an individual who reports information that leads to a criminal or civil penalties of no more than ½ the amount of the fine. <sup>52</sup>
<a href="#"><u>Lacey Act</u></a>	16 U.S.C. §§ 3371 – 3378. The Lacey Act aims to protect against the illegal taking of fish and wildlife. § 3375(d) provides that a reward will be provided to anyone who provides information that leads to an “arrest, criminal conviction, civil penalty assessment, or forfeiture of property.” <sup>53</sup>
<a href="#"><u>Endangered Species Act</u></a>	16 U.S.C. §§ 1531 – 1544. The Endangered Species Act has a provision in § 1540(d) that rewards anyone who provides information that leads to “an arrest, a criminal conviction, civil penalty assessment, or forfeiture of property” for violating any other provisions of the Act. <sup>54</sup>

<sup>48</sup> “The False Claims Act: A Primer” 2011. *U.S. Department of Justice*.

[https://www.justice.gov/sites/default/files/civil/legacy/2011/04/22/C-FRAUDS\\_FCA\\_Primer.pdf](https://www.justice.gov/sites/default/files/civil/legacy/2011/04/22/C-FRAUDS_FCA_Primer.pdf)

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> “Anti-Bribery and Books & Records Provisions of The Foreign Corrupt Practices Act” 2004. *U.S. Department of Justice*. <https://www.justice.gov/sites/default/files/criminal-fraud/legacy/2012/11/14/fcpa-english.pdf>

<sup>52</sup> Legal Information Institute. “33 U.S. Code CHAPTER 33—PREVENTION OF POLLUTION FROM SHIPS” *Cornell Law School*. <https://www.law.cornell.edu/uscode/text/33/chapter-33>

<sup>53</sup> “TITLE 18—CRIMES AND CRIMINAL PROCEDURE” *U.S. Fish and Wildlife Service*. <https://www.fws.gov/le/pdf/Lacey.pdf>

<sup>54</sup> “CHAPTER 35—ENDANGERED SPECIES” *U.S. Fish and Wildlife Service*. <https://www.fws.gov/le/USStatutes/ESA.pdf>

## Appendix II: Resources for Citizen Scientists

- **The Volunteer Monitor's Guide To Quality Assurance Project Plans:** [https://www.epa.gov/sites/production/files/2015-06/documents/vol\\_qapp.pdf](https://www.epa.gov/sites/production/files/2015-06/documents/vol_qapp.pdf)
  - o This guide shows volunteers how to develop a Quality Assurance Project Plan which ensures that the data they collect meets the project requirements and reduce skepticism about volunteer collected data.
- **EPA Citizen Science Quality Assurance Handbook:** <https://www.epa.gov/citizen-science/quality-assurance-handbook-and-guidance-documents-citizen-science-projects>
  - o This page provides links to important documents to help organizations complete a Quality Assurance Project Plan including the handbook, templates, and examples of completed quality assurance documentation.
- **Legal Assistance Program of the National Whistleblower Center:** <https://www.whistleblowers.org/legal-assistance-program/>
  - o This page has information about laws under which whistleblowers are protected and rewarded. Additionally, the page provides confidential contact information for the National Whistleblower Law Center's legal assistance program
- **Global Wildlife Whistleblower Program:** <https://www.whistleblowers.org/wildlife/>
  - o This page provides links to information about how to report wildlife crime, support the Wildlife Conservation & Anti-Trafficking Act, understand reward laws, understand reform needed in implementing wildlife whistleblowing laws, as well as reports and news from the Wildlife Whistleblower Program's partners
- **The Impact of Citizen Environmental Science in the United States:** <https://elr.info/news-analysis/49/10237/impact-citizen-environmental-science-united-states>
  - o This article published in the Environmental Law Reporter evaluates 10 case studies of citizen science to see how citizen science is changing, barriers and assets to its magnitude of impact, and recommendations on how to increase its influence on environmental decision-making.
- **Citizen Science Guide:** <https://citizenscienceguide.com/homepage>
  - o This guide educates individuals on how to become citizen scientists by outlining practical suggestions for designing and executing a citizen science project. It also informs readers on relevant legal information and on how to meet quality assurance standards
- **Citizen Science Association's Law and Policy Working Group:** <https://www.citizenscience.org/get-involved/working-groups/law-policy-working-group/>
  - o This blog introduces readers to an online tool that allows citizen scientists to submit questions relating to laws and policies relevant to conducting citizen science. The questions will be answered by volunteers from the Emmett Environmental Law & Policy Clinic at Harvard Law School
- **Public Lab:** <https://publiclab.org/>
  - o The Public Lab is an open community where users can pose questions and network with other members about community based environmental projects. It also provides access to open source tools and data help users generate knowledge and share data.