

## Dolphin-safe Tuna Label by Earth Island Institute

### Introduction

The Earth Island Institute (EII) was founded in 1982 by environmentalist David Brower as an organization dedicated to nurturing environmental entrepreneurs. EII provided a variety of such vital services as administrative support, advising individuals and small groups, facilitating professional networks and personal connections, and assisting with grant applications. The International Marine Mammal Project (IMMP) was begun in 1986 and remains one of the signature EII campaigns. A core element of the IMMP was the call for a consumer boycott of non-“dolphin safe” tuna as a means of pressuring tuna companies in the U.S. to change their fishing practices, in particular the end of the intentional chasing and netting of dolphins (so called “dolphin sets”). A labeling system to identify “dolphin safe” tuna was initiated by the IMMP and became a highly effective scheme with the 1990 cooperation of the world’s three largest tuna companies: StarKist, Bumblebee, and Chicken of the Sea. By 1997, only 2.9% of the global tuna harvest was caught by dolphin unsafe methods. Today, over 90% of canned tuna companies have pledged to only purchase or distribute tuna that is certified “dolphin safe” according to the EII standard. Currently, the mortality rate for all dolphin stocks is lower than 0.1% which is significantly less than estimated 2% net recruitment rate (Hall et al, 2003). The incidental mortalities of dolphins in the Eastern Tropical Pacific (ETP) due to commercial tuna fishing have declined from about 133,000 in 1986 to less than 2,000 since 1998 according to the estimation by the National Marine Fisheries Service (NMFS).

The case of the IMMP clearly illustrates how an NGO can be helpful in setting standards that are endorsed by both government and industry. Government regulation was essential because it enforced firms to comply with minimal standards and norms. However, regulation by itself would have been insufficient for the positive changes by tuna fishers and processors beyond what is required by laws. Although government regulation can conflict with WTO prohibition of non-tariff barriers to trade (including environmental protections), the IMMP has still been successful in reducing dolphin mortality due to industry compliance with the EII standards and the ongoing support of the “dolphin safe” labeling scheme by fishers, canners, distributors and ultimately consumers.

As the first and oldest “eco-label” for fisheries products, the “dolphin-safe” tuna labeling scheme has evolved over a thirty year span. This provide us a unique opportunity to see its evolution as an outcome of struggles

over standards and definition of “dolphin-safe” between concerned actors: environmental groups, multinational tuna canneries, tuna exporting states and intergovernmental organizations such as WTO (Constance, 1999). Tuna exporting nations in Central America eventually filed complaints in WTO, arguing that U.S. regulations regarding government labeling scheme are too restrictive in support of their purpose of protecting dolphins. This competing industry lobby successfully weakened the legal definition of dolphin safe tuna in 1998, making it legal to sell non-dolphin safe tuna (though it could not bear the EII’s trademarked “dolphin safe” label). However the U.S. court upheld the original definitions of the dolphin-safe tuna label. Although tuna products bearing a dolphin-safe label with the lower industry standards preferred by Mexico are still barred from the U.S. market, if allowed, they may cause consumer confusion and ultimately undercut the higher non-encirclement standards advocated by the EII and represented by its label.

I will first look at the history of dolphin conservation efforts that led to the dolphin-safe labeling system in U.S. and then follow with an examination of the global tuna industry’s response to the U.S. legislation with specific focus on tuna-exporting nations in Central America. We will study the credibility of the Earth Island Institute’s labeling system by looking at transparency and autonomy of the organization and various aspects of its certification, monitoring and sanctioning process. Reasons for success of the dolphin-safe labeling system will be evaluated with the main focus on the criteria of NGO credibility, factors affecting firms, and consumer compliance. Lastly, the challenges from the industry and subsequent weakening of the regulation will be considered.

### History of Dolphin-safe Tuna Certification System

In response to NGO and public pressure, Congress enacted the Marine Mammal Protection Act (MMPA). But enforcement by the government agency tasked with overseeing compliance was lenient and failed to address the issues of ongoing dolphin mortality. The second round of the NGO-led public campaign resulted in more strict regulation and private labeling system to fill the gap left out by the government’s regulation. Industry responded with various tactics to weaken the standard and enforcement with some success. A coalition of environmental groups and its sympathizers in Congress pursued abolition of encirclement/purse-seine fishing, particularly on dolphin sets, though this stance was strongly opposed by the tuna industry and its own allies. Tuna fishers wanted to

maintain the legality of purse-seine fishing though they signaled their acceptance of some regulatory constraints (Bonanno & Constance, 1999).

### **Dolphin Bycatch Problem in Eastern Tropical Pacific (ETP)**

The incidental mortality of dolphins in the purse-seine fishery for tunas in the Eastern Tropical Pacific Ocean (ETP) is one of the longest and most controversial by-catch problems (Hall, 1998). Bycatch can be defined as the incidental capture of non-target animals when harvesting a species. Bycatch is made up mostly of non-target species though it also includes juvenile and immature animals from the target species. The primary source of the incidental mortality of dolphins began in the 1950s when the commercial tuna fishery developed the ability to use the purse-seine technique of fishing on entire schools of tuna. For unknown reasons, dolphins are frequently found above schools of tuna in ETP. The ETP covers approximately 7 million square miles of ocean, ranging from the waters around San Diego down to Chile and extending several hundred miles westward into the Pacific. During the deployment of purse-seine nets on dolphin-associated schools of tuna (also known as “dolphin sets”), many dolphins were frequently either caught in the net or separated from their pod (family) members during the chase. According to a 2001 Marine Mammal Commission’s Annual Report to Congress, before 1972, an estimated 500,000 dolphins died annually as a result of fishing techniques used by tuna vessels (Ramach, 1997). Since 1959, as many as 6 or 7 million dolphins have drowned in the purse-seine nets (Bonanno & Constance, 1996).

### **Domestic Law and Voluntary Agreement**

Beginning in the 1960s, environmental NGOs successfully mobilized public support and lobbied U.S. Congress to address the ETP dolphin bycatch problem, resulting in the 1972 Marine Mammal Protection Act (MMPA). Under the 1972 MMPA, the allowable dolphin kill for U.S.-based tuna boats was drastically reduced, funding was provided to develop new and alternative technologies that increase the likely safety of dolphins during a tuna fishing expedition, an observer program was established to gather hard data on dolphin mortality on tuna boats, and a trade embargo restricting the import of non-dolphin safe tuna became mandatory (Boreman, 1992).

However, conflicting language in the MMPA over the mortality goal produced confusion and future grounds for contention between environmental groups and the tuna industry. For example, one part of the bill described the necessity for maintaining certain species of dolphins at or above the optimum sustainable population (OSP). Another part, however, stated that the purpose of the entire MMPA was to decrease the number of incidental

dolphin mortality cases from tuna fishing to “insignificant levels approaching zero” (Bonanno & Constance, 1999). Although the act also did not ban any specific technique, it made almost it impossible for U.S.-based large purse seine vessels in the ETP to continue using purse-seine netting intentionally targeted at dolphins.

An ongoing challenge was implementation of the MMPA since its unilateral regulatory approach only applies to the U.S. territorial waters. Meanwhile, although the U.S. tuna industry was being forced to reduce dolphin mortality, tuna boats from Latin American countries in particular were responsible for a drastic increase in the number of dolphin deaths during the 1970s. In the year 1986 alone, more than 100,000 dolphins were killed in nets, almost all of which had been set by non-U.S. boats, thus off-setting the progress in dolphin conservation that had been made by the U.S. fleet (Stewart, 2008). Amendments made in 1984 to the MMPA required foreign exporters of yellowfin tuna to apply a program designed to reduce dolphin mortality to rates comparable to those of the U.S. These protective measures included a provision for placing import restrictions on countries that attempted to export tuna to the U.S. without adhering to a comparable standard of dolphin safe fishing practices (Hall, 2003).

The International Marine Mammal Project began in 1986 as part of a concerted effort to mobilize the public in favor of the dolphin safety issues advocated by EII. One of the IMMP’s most effective public awareness campaigns came as a result of covert footage filmed in 1988 by an employee on a Panamanian tuna boat. The graphic depiction of drowning dolphins caught in the nets triggered massive outrage among consumers who expressed their sentiment on multiple fronts. Canned tuna was blocked from school lunchrooms, people wrote their legislators, environmental and community groups organized protests outside tuna companies and advocated broad public boycotts as well (Stewart, 2008).

A major breakthrough for the IMMP came in April 1990 when StarKist, Bumblebee, and Chicken of the Sea – the world’s three largest tuna companies – committed to ending their purchase of tuna that was not caught in line with the standards endorsed by EII. The other U.S. tuna companies quickly followed suit, and Congress furthered the momentum toward dolphin safety generated by the lead of this voluntary agreement between an NGO and industry, approving new legislation: the 1990 Dolphin Protection Consumer Information Act (DPCIA). Even stronger than the MMPA, it establishes a penalty of up to \$100,000 for each instance of noncompliance with labeling rules for tuna exported from or sold in the U.S. It also established the minimum legal standard for tuna to qualify for the “dolphin safe” label in line with the EII position on non-encirclement of dolphins (Electric Code of

Federal Regulations). To monitor compliance, the IMMP maintains a global network of staff tasked with observing operations at all stages of tuna production, from onboard fishing boats at sea and in the harbor to offloading ports and transshipment sites, cold storage facilities, processing plants, and canneries.

In 1989, Earth Island Institute led a lawsuit against Department of Commerce for failing to impose strict enforcement of the MMPA. As a result of this lawsuit, U.S. Courts ordered embargoes on yellowfin tuna and yellowfin tuna products from Ecuador, Mexico, Panama, Vanuatu, and Venezuela. In 1990, it led the formation of the Marine Mammal Protection Act Reauthorization Coalition, an environmentalist organization comprised of twenty-eight national environmental organizations, including Earth Island Institute, Greenpeace, the Marine Mammal Fund, Sierra Club, the Humane Society of the U.S., the Whale Center, and the National Audubon Society. They together with some members of Congress accused the National Marine Fisheries Services (NMFS) of failing in its duty (Bonanno & Constance, 1999).

Since the United States still provides a major market for tuna (importer of 40% of world traded tuna), the trade embargo under MMPA had some effect on global tuna fishing practices (Labor Department). A significant obstacle, however, is the fact that other countries and non-U.S. markets are not directly subject to U.S. laws (Boreman, 1992), leaving relative market pressure as the primary tool for compelling compliance with the IMMP's definition of a true dolphin safe standard. Moreover U.S. consumption of ETP yellowfin tuna continued to decline annually from approximately 85 percent of total harvested tuna in 1985 to only 10 percent in 1992. This created market opportunities in other areas of the world, mainly in Europe but also in Latin America, though the flood of tuna was also responsible for a depression in prices (Ramach, 1997).

#### **Tuna Industry Response**

An influential industry group, the American Tunaboat Association (ATA), successfully lobbied the Reagan Administration and obtained a reinterpretation of the MMPA away from the stated goal of zero mortality. Instead, "acceptable" annual dolphin death limits of 20,500 animals were established. They were able to exploit a legal loophole in the MMPA under which the Secretary of Commerce has authority to issue permits allowing a specified number of annual dolphin mortalities. In 1987, the Inspector General of the U.S. Department of Commerce reported that enforcement of the MMPA was quite lenient, making the law ultimately ineffective to promote dolphin safety.

Businesses found it less expensive to simply pay the fine for exceeding their limits of dolphins killed during a tuna harvest than to change their fleets and fishing practices. It became an unpopular addition to the cost of doing business but was not a steep enough penalty to incentivize tuna companies to shift to more dolphin-safe alternatives. As a consequence of the ATA lobby, 1986 saw the highest number of dolphin deaths in a decade in the ETP (Bonanno & Constance, 1999).

The purse-seine industry of the tuna exporting nations in Latin America also had employed various strategies to counter U.S. regulation and labeling system including their own voluntary program aiming to reduce dolphin bycatch, lobbying U.S. agencies (including the Department of Commerce), and filing complaints with the GATT and the WTO about the regulations forming non-tariff barriers to trade. The industry-preferred body for tuna fishing standards is the Inter-American Tropical Tuna Commission (IATTC). First established in 1949 and composed of tuna fishing nations in the ETP, its main responsibility is to manage ETP tuna stocks to sustain maximum yields. The IATTC is primarily friendly to free-market forces over environmental considerations in its decisions, being more concerned with maintaining viable fishing stock than with bycatch.

After an initial resistance to the MMPA in 1984-85, with the financial support from the U.S. government, the IATTC slowly adopted programs that include a very modest shipboard observation program for large purse seine vessel of greater than 400 short tons (362.8 mt) carrying capacity, technological and performance standards, and dolphin mortality quotas to improve dolphin protection in the ETP (Stewart, 2008). Due to the increased expenses of dolphin safety, the U.S. tuna fleet diminished in size over time. Although each individual vessel also attempted to reduce dolphin bycatch, a portion of the decline in dolphin mortality for U.S. tuna boats can also be attributed to the reduced size of the fleet. The 40 vessels remaining in the U.S. tuna fleet in 1989 were collectively responsible for approximately 19,713 dolphin deaths that year. Other tuna fishing countries took advantage of the opening to increase the size of their own fleets; in 1989, the ninety-two non-U.S. tuna boats were responsible for 61,881 dolphin deaths. Shipboard observers monitored roughly half the U.S. tuna expeditions, while only 35% percent of non-U.S. vessels were covered, meaning that the actual numbers of dolphins killed may have been even higher than what was officially reported (Ramach, 1997).

Although the MMPA allowed trade restrictions to be placed against the nations not in compliance with U.S. standards, the Department of Commerce did not issue any embargo until 1990. In September of 1990, as a result of

the Earth Island Institute's lawsuit against Department of Commerce in a federal court, U.S. Customs banned tuna imports from Mexico, Panama, and Ecuador. These countries promptly filed a complaint against the U.S. under the General Agreements on Tariffs and Trade (GATT) that the MMPA was unfair trade protectionism. The GATT panel ruled for the allies, finding against the U.S. and its unilateral regulations for environmental conservation. Concerned about any negative effect the GATT decision would have on the ongoing North American Free Trade Agreement (NAFTA) negotiations, the Bush Administration engaged in extensive diplomacy with Mexico, promising to try to resolve the disagreements by getting U.S. laws changed. The Mexican government ultimately suspended any action on the panel report (Bonanno & Constance, 1999). Prior to NAFTA ratification, however, an agreement was reached among ETP tuna fishing nations to address issues or contentious points by international consensus. They also established a voluntary program that formalized on-board observers and technical and performance standards in the IATTC-sponsored La Jolla Agreement of 1992.

### Government Compromise

In 1995, the governments of the ETP tuna fishing nations signed the Panama Declaration, which established an annually diminishing cap on dolphin mortality for each tuna stock. It seemed that opponents of the dolphin safe standard as defined by the EII and codified in U.S. law by the MMPA were attempting a new strategy. A competing standard was proposed and would have allowed a product to be labeled "dolphin safe" so long as an observer on a tuna boat did not actually see any dolphins killed during the fishing process. This was the standard agreed upon in the 1992 La Jolla Declaration (Bonanno & Constance, 1999). The EII was immediately concerned because the alternative standard permits intentional chasing and netting of dolphins which is strictly prohibited under its own definition of "dolphin safe." The Panama Declaration also called for the signatories to establish a binding legal agreement by 1996 that utilized the La Jolla Declaration's relaxed interpretation of dolphin safety, overturning any more protective domestic laws. The U.S. would have had to amend the MMPA to lift any embargoes on tuna caught in accordance with the La Jolla Declaration and access to the U.S. market would have to be granted to IATTC members (Felando, 1995).

A bill was introduced to the U.S. Congress in 1996 in accordance with the more lenient Panama Declaration standard that was supported by a majority of Republicans in the House of Representatives and also found support within the Clinton Administration, the ATA, and five prominent environmental organizations

including the Center for Marine Conservation, the Environmental Defense Fund, Greenpeace, the National Wildlife Federation, and the World Wildlife Fund (Felando 1995). The bill's sponsors and supporters contended that the La Jolla Agreement had already made significant progress toward reducing dolphin mortality on an international level comfortable for IATTC member states. They noted the severity of the threat that countries could withdraw from the La Jolla Agreement, further eroding dolphin protections, particularly in light of the fact that data showed U.S. embargoes were having little effect on reducing the number of dolphin sets in the ETP. Advocates of the bills also argued that aborting the practice of using purse seine nets on dolphins, though reducing dolphin mortality, were increasing bycatch of other species and non-target specimens (juvenile tuna), thus threatening the long-term viability of tuna stocks as well as the marine ecosystem more broadly (Stewart, 2008). Dolphin sets have the lowest incidents of bycatch for all non-target fish (except dolphins themselves). If some measures to fully separate the dolphins from the tuna schools before capture can be devised, dolphin sets would be the most ecologically sound way of harvesting tuna.

EII has remained steadily opposed to the La Jolla Agreement, the Panama Declaration, and any attempts to weaken the zero dolphin mortality standards embedded in the MMPA. It has found support for this position from many prominent environmental NGOs including the Sierra Club, the Humane Society of the U.S., EARTHTRUST, Cetacean Society International, the ASPCA, Sea Shepherd, Defenders of Wildlife, Friends of the Earth, the Fund for Animals, Ralph Nader's Public Citizen, the Human Dolphin Foundation, and the Cousteau Society (Bonanno & Constance, 1999). These organizations claimed the other members of the IATTC were only seeking access to the highly profitable U.S. tuna market and not concerned with the trauma to dolphins associated with the entire process of a dolphin set, including the hours of chasing, herding, and encirclement. Marine mammal scientists conducted studies of dolphins and argued that the animals finding themselves in a dolphin set were exposed to extreme stress on top of the fatality risk which prevents individuals, pods, and the general dolphin population in the ETP from recovering to historic level. The NGOs further argued that harvesting tuna by using dolphin sets would not reduce numbers of non-dolphin bycatch (juvenile fish, sharks, sea turtles) but would only result in many additional dolphin deaths (EII 1996). Finally, they claim, the voluntary IATTC on-board observer program is not as effective as the mandatory U.S. observation program. Unlike the U.S. NMFS mandatory observer program, IATTC observers on



tuna boats lack enforcement authority and a process to report violations of dolphin safety procedures (Boreman 1992).

In August 1997, President Clinton signed the International Dolphin Conservation Program Act (IDCPA) into law. However, the Senate adopted amendment requiring three year-research to determine the impacts of chasing and encirclement of dolphin on dolphin stock before the final change to standard can be made. The National Marine Fisheries Service (NMFS) was put in charge of conducting the research and delivering a final judgment at the end of 2002. In December 2002, the Secretary of Commerce determined that there was insufficient evidence to prove that chasing and encirclement of dolphins harmed dolphin stocks in the ETP (Bonanno & Constance, 1999).

However, in response to a complaint filed by environmental groups against the final finding, the U.S. court issued an order that stayed the final finding's implementation in January 2003 upholding the original definition of dolphin-safe label under the 1990 Dolphin Protection Consumer Information Act (DPCIA). In 2007, EII filed a law suit against the Secretary of Commerce and Assistant Administrator for the National Marine Fisheries Service (NMFS). The Court of Appeals confirmed the 2004 lower court's decision that the final finding by the Secretary was "arbitrary and was influenced by foreign policy considerations rather than scientific evidence alone (Earth Island Institute v. Hogarth).

### Evaluation of the EII's Monitoring Mechanism

The Earth Island Institute is a non-profit, non-governmental conservation organization headquartered in San Francisco, C.A., and supporting diverse projects around the world. Among the primary reasons for its foundation in 1982 is the promotion of biodiversity and conservation of natural resources. Today, it is best understood as an umbrella organization that provides sponsorship and support for a variety of eco-entrepreneurs. Approved applications are designated official EII projects and must identify themselves as such in all publications. It uses the wide range of its projects to facilitate a variety of services. One of EII's oldest and most successful projects is the International Marine Mammal Project (IMMP). It was founded with the goal of dramatically improving the safety of dolphins, seals, sea otters, and other marine mammals both by directly advocating for extremely low (if not zero) levels of permissible bycatch associated with tuna fishing. (EII website). Interestingly, EII and the IMMP do not restrict the scope of their activities to only the government/public or the private sectors. Instead, the project seeks to

direct both legislation and industry practices in a direction that reduces marine mammal mortality. A critical breakthrough for the IMMP came in 1990 when the world's three largest tuna companies (Bumblebee, Chicken of the Sea, and StarKist) announced that they would no longer purchase, process, or sell any tuna that was dolphin unsafe according to the IMMP's strict standards. This industry buy-in made it easier for the IMMP understanding of "dolphin safe" tuna to become the exclusive one used for the official Dolphin Safe label in the U.S.

### EII's Dolphin Safe Tuna Standards

Quoted by the EII, in order for tuna to be considered "Dolphin Safe", it must meet the following standards:

1. No intentional chasing, netting or encirclement of dolphins during an entire tuna fishing trip;
2. No use of drift gill nets to catch tuna;
3. No accidental killing or serious injury to any dolphins during net sets;
4. No mixing of dolphin-safe and dolphin-deadly tuna in individual boat holds (for accidental kill of dolphins), or in processing or storage facilities; and
5. Each trip in the Eastern Tropical Pacific Ocean (ETP) by vessels 400 gross tons and above must have an independent observer on board attesting to the compliance with points (1) through (4) above.



By agreement between Earth Island Institute and the participants in "Dolphin Safe" fishing operations:

- All processing, storage, and transshipment facilities and procurement records related to the purchase, processing, storage, transport, and sale of tuna must be made available for independent monitoring.
- Companies listed as "Dolphin Safe" must maintain "Dolphin Safe" policies approved by Earth Island Institute and apply them to all international aspects of their operations and related subsidiaries.

Further, "Earth Island Institute and the 85-member Dolphin Safe/Fair Trade Campaign strongly encourage tuna fishermen and tuna companies to work to reduce bycatch of non-target species and to release alive, to the maximum extent feasible, any non-target species caught in purse seine nets" (EII website).

### Certification Process

The IMMP website is dominated by actionable items and background about its various campaigns related to the conservation and protection of dolphins, whales, and orcas. The dolphin safe tuna campaign is notably linked to its QMS Global ISO 9001 registration. Information on their website are comprehensive and transparent in describing the standardized process by which a tuna fisher, processor, or canner can become a certified "dolphin

safe” facility. First the company should request a copy of the relevant policy template from the IMMP which will then send the appropriate documents. Upon receipt and review, if the tuna-related company elects to pursue IMMP certification, it must complete a copy of the template on the company’s letterhead and include the CEO or President’s signature in the designated place(s). The documents should be properly signed, dated, and then returned to EII. The next step in the certification process is for EII and the IMMP to have an international monitor conduct an inspection of the company’s operations, “including all procurement and production documents, vessels, ports, storage, processing and canning facilities, as per the policy provisions” (EII website).

Any deficient areas preventing approval of an application will be noted and the company is given the opportunity to rectify any outstanding or additional issues that might hinder adherence to the dolphin safe standard. Once this step is complete, EII will notify the company of its “provisionally approved” status and the company name will appear on the IMMP list of companies that are in compliance with the dolphin safe policy. Provisional status will last for six months during which time the companies are subject to regular monitoring by EII. At the end of this period, if all goes well, the provisional status will be lifted and the company will be declared fully part of the dolphin safe group with which other dolphin safe tuna companies may do business. Companies are even advised by EII to plan for this lengthy approvals process.

### **I. Autonomy from Target of Monitoring**

EII’s dolphin safe tuna certification system fits the third-party certification model. While standard setting was done by representatives from the tuna industry and the EII in 1990, compliance is evaluated using several methods including monitoring. Sanctioning is verified by its own staff but not independent outside organizations. The U.S. government has provided legal enforcement to EII’s dolphin-safe labeling standard and fined companies as much as \$100,000 upon verification of violations. EII also holds an effective threat of sanction in that violators of the dolphin safe standard lose access to the EII network of compliant tuna fishers, processors, and canners. Together, these firms represent 90% of the world’s market for tuna, including the highly lucrative U.S. and E.U. markets.

Based on the information provided on the website, Earth Island Institute appears to be completely autonomous from the tuna industry it monitors. For its dolphin-safe labeling program, there is no requirement for certification or inspection fee. Since the IMMP is an integral part of one of the original EII’s conservation programs, EII provides all the funding. An FAQ section on the dolphin safe tuna program does mention that reimbursement is

requested from participating organizations but does not provide details about the amounts received and it is difficult to distinguish the exact amounts from the required financial filings made public on the website. It is easier to learn that EII's funding predominantly comes from donations by individuals and philanthropic foundations. Its Form 990 verifies its claim that the vast majority of its financial support comes by way of the public contribution (roughly 90%). On the board of directors for EII (and also on the IMMP staff), there are no representatives from target industry, tuna canned industry in particular for its tuna labeling program. The Board of Directors has ten members who are responsible for general oversight of EII, including all projects like the IMMP. The Board is composed of various professionals including: writers, professors, activists, business officers, and a lawyer.

## II. Organizational Strength:

Earth Island Institute now maintains 12 international monitoring staff around the world, including offices in San Francisco and Hawaii, Costa Rica, Colombia, Mexico, Thailand, Italy, Spain, Mauritius, and the Philippines. Based on information provided in a telephone interview with Mark Burman, the director of EII's Dolphin Safe Tuna monitoring program, all the staff are experienced monitors who also receive additional training from IMMP. Some of the monitors are scientists, some are environmental activists. Many of them have been with EII more than 18 years, since the beginning of the labeling scheme.

The history of the Earth Island Institute is briefly presented on the company website. It is possible to see how it has grown and evolved over time, as well as the numerous current projects it coordinates or sponsors. Some basic information about sponsors and the board of directors is provided along with names of influential individuals who have either been affiliated with or supported EII in the past. In this way, the organizational strength can be observed. The Dolphin Safe Tuna program site similarly lists the companies and countries that adhere to the Dolphin Safe standards, alluding to the strength of the monitoring regime.

**Table 1. 2010 Complete Organizational Report with Financial Information**

INCOME			EXPENSES		
Foundations	\$5,122,487	46%	Program	\$8,151,126	81%
Individuals	\$4,042,062	36%	Administrative	\$1,157,577	11%
Service	\$858,498	8%	Fundraising	\$762,117	8%
Other	\$1,136,045	10%			
<b>TOTAL</b>	<b>\$11,159,092</b>		<b>TOTAL</b>	<b>\$10,070,820</b>	

The chart above shows a breakdown of EII's income categories for 2010 based on the Form 990 that has been made publicly available on the EII website. It is clear that public support from a variety of sources accounted for 90% of EII's \$10 million in revenue for the year 2010.

### III. Monitoring Practice

These monitors regularly travel to inspect many other countries with important tuna canneries and fleets. As part of the "Dolphin Safe" agreement with companies, Earth Island's international monitors have access to fishing vessels, canneries, ports, storage facilities, and transport vessels to inspect tuna catches. Earth Island Institute monitors also works with fish processors and individual boat owners to establish "Dolphin Safe" fisheries and policies. Monitoring may take place at any time and for any reason. According to Mark Berman, EII staff will follow up on credible complaints but also conduct regular spot checks to ensure compliance. Industry has financial incentives to police itself using a combination of "police patrol" and "fire alarm" mechanisms against individual tuna suppliers, brokers, or processors cheating on their obligations, thus transferring a portion of the monitoring cost away from the IMMMP. EII has established a type of insurance system in which companies may return tuna shipments to their original sources without any liability if it can be proved that the fish was not caught in a manner in keeping with the dolphin safe standard. Any questionable shipments should be reported and will be examined by EII for compliance. The IMMMP website, in its FAQ section, draws the comparison with monitoring for compliance with health and safety standards for tuna products, and Mark Berman reiterated that it is simply good business for these companies to make sure that cheating does not take place.

No announcement by EII is necessary for monitoring in the field to take place and all parts of a facility should be open upon request to an EII inspector. Any attempt by a company to prevent or obstruct an inspection is taken quite seriously and the IMMMP response is swift. As stated the Dolphin Safe Tuna Program annual report, 471

tuna-related companies in 67 countries were verified dolphin-safe by the EII in 2011. Globally, 493 inspections in total were carried out in 2011.

## VI. Evaluations & Sanctions

EII staffs can withhold resources and the "dolphin safe" label to violators of standards; the organization has solicited agreements from countries as well as producers and canners to only purchase tuna that is EII compliant. It also maintains a list of these companies and provides information about companies that are not in compliance with its standards. These regularly-updated lists are available to participating "Dolphin Safe" companies and posted on its website.

Furthermore, working with import associations around the world, Earth Island Institute has succeeded in closing more than 90% of the world's canned tuna markets to dolphin-deadly tuna. More than thirty countries and more than 300 companies have made progress in adopting dolphin-safe fishing policies with the support and help of Earth Island Institute. In the event of a violation, EII does not immediately announce non-conformance reports to the entire network unless there is a direct impact on the next company in the production chain. For example, Mark Berman described a recent case where a tuna processor in Thailand had purchased non-dolphin safe tuna from a broker. EII worked with the Thai company to return the shipment and also could have notified any company with a contract to purchase tuna from the Thai firm; however, it would not necessarily have sent out a broad alert on its website for a narrow violation of this nature. The site visit was triggered by a credible complaint from other tuna companies.

## V. Transparency of Monitoring Organization

The following information was made available on their website: 1) money - financial statements and audit reports are available online, 2) board control - readily available online, 3) process - processes are largely available online with direct contact information provided for further inquiries, 4) staff, etc. - staff information (names, positions, phone numbers, email) is available online. With a little more effort, an interested party could find the 2010 budget abstract in a report, though specific details are not readily apparent and require some knowledge of accounting and tax forms for nonprofits. The names of the EII Board of Directors, 15 years of required IRS tax filings and their corresponding auditors' reports (1996-2010), and 10 years of annual organizational reports with

rudimentary financial information (1999-2009) are also made publicly available on the website. More prominent on the site are the current list of projects and an overview of benefits/responsibilities of program sponsorship.

Earth Island Institute appears to be mostly transparent in the information it provides online. Names and titles of staff and leadership, contact information, financial details, and major reports are all publicly available. Financial support received from industry is a major exception - it is not easy to find how much the organization receives each year from this source. The relative autonomy of each of EII's programs is also not readily apparent. Some projects seem to rely little on EII whereas others, such as the Dolphin Safe Tuna labeling scheme, seem to have no independent existence apart from EII. The website states that the projects are independent of EII and basically pay EII an annual fee for the benefits it can lend to each project (expertise, name recognition, access to professional networks). However, this is not the case with the Dolphin Safe Tuna program; information provided over the phone by Mark Berman indicates that no independent tax documents are filed with the IRS and that all financial information pertaining to the IMMP is contained within the EII documents.

Names of the international monitoring program staff (including titles for US staff) are only provided by IMMP in the International Tuna Monitoring Program annual report. Direct contact information for the EII assistant director for the International Marine Mammal Project (the program behind the Dolphin Safe monitoring) is available in multiple places. One major exception to the general transparency of EII is project-level financials (revenue, expenses). It is difficult to find the financials of the IMMP (as opposed to EII's other projects). This is partly due to the semi-autonomous nature of each project, but EII could take significant steps to improve its information disclosure in this area. In 2011, EII received a fifth consecutive 4-star rating from Charity Navigator which made them one of 4% of the charities rated by Charity Navigator who have received 5 consecutive 4-star evaluations. In 2010, it received 4-star rating for 4 consecutive year.

## VI. Shadow of the State

The dolphin-safe labeling system constitutes an industry-based CSR mechanism and traditional public regulation in which private voluntary standards and enforcement coexist with governments' command-and-control regulation. The entire arrangement relies on a form of government endorsement of voluntary standards, minimal recordkeeping requirements for verification, and penalties for false claims. After the EII's dolphin-safe labeling

program met with great consumer acceptance in the U.S., many tuna canneries got on board, sourcing certified dolphin-safe tuna in international markets and labeling their tuna products “dolphin-safe.” To support the integrity of the labeling scheme, the U.S. government imposed legal requirements for the “dolphin-safe” label such that it may appear exclusively on tuna that is compliant with the strictest EIU’s dolphin-safe definition of no intentional chasing and encirclement of dolphin in tuna purse-seine nets. In this way, government helped EIU establish the nascent niche market for dolphin-safe tuna by providing strict standards and penalty for fraudulent claims. Confusion among consumers could have undermined consumer confidence in the newly developed labeling system.

However, government-initiated provisions of a verification system were minimal, mostly relying on documents and statements of on-board observers leaving the credibility of the verification in doubt (The Library of Congress, TOMAS). Moreover, under pressure from the IATTC, the GATT decision, domestic advocates of deregulation, and a WTO lawsuit, the government attempted to change the original definition of “dolphin-safe” to allow for dolphin sets and created its own “dolphin safe” label that is used by the Department of Commerce.

#### Success Factors

It would be hard to say labeling alone affected industry to change its behavior since incidental dolphin mortality showed significant decline after the U.S. regulations were passed by Congress. Furthermore, voluntary efforts to reduce the problem by requiring use of specific technology, special fishing practices, an on-board observer and dolphin mortality limits had been embraced (to varying degrees) by industry long before the labeling system began. Although voluntary efforts alone may be insufficient to achieve industrial transformation, the labeling program was effective when U.S. domestic regulation is weakened or challenged by industry lobby and international trade disputes (Mitchell). The NGO-led voluntary labeling program successfully developed a profitable market for dolphin-safe tuna highlighting the important role of environmental and consumer groups in providing initial incentives to firms to change their behavior through successful public education campaign and consumer boycott. However, not all NGO-led campaigns and certification systems become sustainable over the long term. Most attempts to introduce labels suffered challenges in the early stages of their development and failed to transform the industry. Next, I will examine some factors behind the earlier success and long-term sustainability of the EIU’s dolphin-safe tuna label.



### *Credibility of Monitoring NGOs*

The relative decline in the public's trust of other institutions not due to the NGO's efforts in combination with these organizations' commitment to issues of broad concern are reasons for the default credibility enjoyed by many NGOs (Conroy 2007). However, the virtue of a cause is not sufficient to build unshakable credibility that is critical to their long-run success. If we think of the role played by NGOs, monitoring NGOs in particular, similar to reputational intermediaries, serious credibility challenges by stakeholders can lead not only to temporary damage to an individual organization but also to the collapse of the NGO-led certification system. When monitoring NGOs pursues industry participation too aggressively, criticism from fellow NGOs could lead to the credibility crisis as evidenced in the case of Marine Stewardship Council (MSC) in 2004 (Conroy 2007).

Credibility also matters when there is competition from an alternative labeling program. The Department of Commerce will label tuna as being dolphin-safe based on an evaluation standard that is less stringent than the one established by EII. For now, however, most tuna processors, retailers, and consumers have pledged to stay with the EII label because of the well-established public trust. Many NGOs such as Humane Society also maintained their recommended lists of processors and retailers who are compliant to the older standard. I will attempt to analyze the credibility of the EII's labeling system drawing on the four external conditions for credibility laid out by Gourevitch and Lake – common interests of the audience and the NGO, costly effort by the NGO, external verification, and penalties for misrepresentation (Gourevitch and Lake 2012).

### **Promoting Bond with the Audience**

Audience reception of an NGO's credibility increases when they promote a bond with audiences around shared common interest as well as values (Gourevitch and Lake 2012). In addition to very costly multiyear court battles against various government agencies to strengthen their regulatory enforcement, EII has been highly visible in organizing public protests and consumer boycotts as well as sending experts to public hearings. EII also actively communicates its values through a variety of methods: public outreach and media campaigns, advertisements, publication of a journal magazine, periodic updates to members, recruiting programs targeting activists and students from elementary school through college, and organizing special events and lectures featuring their project directors and leading environmental activists. The organization's high level of transparency with its provision of documents and reporting also communicates well with external verifiers including government, media, and other NGOs. This

can give ample opportunities for the global public to volunteer and participate according to their own interest and initiative, further increasing ties to individuals who can make future donations, and eases the recruiting of members and volunteers.

EII and the target industry share interest in building consumer confidence in dolphin-safe tuna products and protecting the market for these goods. It has an excellent track record of obtaining industry cooperation as reflected by the endorsements it has received from large tuna companies and association in the U.S., Thailand, the Philippines, Canada, Australia, and Europe. However, EII's effort to bring more companies on board did not stop at the large, high-visibility branded companies. As of 2011, Earth Island Institute currently has "Dolphin Safe" tuna agreements with more than 471 companies in 67 countries worldwide (Dolphin safe tuna labeling program annual report, 2011). So far, it seems that there is no problem or tension among the demands of the different audiences. Although some tuna exporters and retailers in a few nations, primarily in Latin America, have signaled their preference for a dolphin-safe standard that permits chasing, encircling, and even limited dolphin mortality, the vast majority of producers, consumers and NGOs show more confidence in EII's strict standards.

#### Costly Effort

Credibility of NGOs also increases when their claims are backed by observable costly effort (Gourevitch and Lake 2012). Moreover, high-quality NGOs have incentives to create credible signals to differentiate themselves from low-quality NGOs or competing organizations. EII's long track record as leader at the forefront of organizing demand protest and filing costly multiple litigations against powerful opponents in the U.S. government and around the world definitely signals its long-term commitment to its stated mission. Many early EII projects were small, issue-oriented, and staffed by volunteers. Now, EII serves as a large incubator for numerous eco-projects by obtaining large amounts of grant funding. As a result, it has had to increase its efforts to send often costly signals of commitment to its donors and the public in ever more diverse manners.

Other than autonomous governance structure, professional staff and standardization of operating procedures, and high level of transparency discussed above, networking with other NGOs was critical for EII's strategy. EII has a history of leading the broad-based coalition called the Marine Mammal Protection Act Reauthorization Coalition comprised of twenty-eight national environmental organizations, to seek stricter enforcement of government regulation on marine mammal protection. Moreover, over 80 non-governmental

environmental, animal welfare, and trade organizations support the Earth Island Institute's stance and its dolphin-safe tuna standards, including Greenpeace, the Humane Society of the U.S., Defenders of Wildlife, Sierra Club, American Association for the Prevention of Cruelty to Animals (ASPCA), Friends of the Earth, Animal Welfare Institute, and Ralph Nader's Citizen Trade Campaign (EII website).

### **Penalties for Misrepresentation**

If the NGO faces a potential penalty in terms of reputational damage, veto by other NGOs, and ultimately threat of deselection by donors, the incentive to misrepresent information or engage in wrongdoing will be substantially lowered. Since EII is mostly a fund-driven incubator for various projects, donor would potentially have power to fire the organization if they find misrepresentation of information.

### **External Verification**

NGOs are more likely to be credible if their claims are subject to the scrutiny of external verifiers (Gourevitch and Lake 2012). EII, headquartered and operating in San Francisco, where environmental activism is highly present in addition to free press and active civil society, all of which are typical features of a fully functioning democratic society, provides the most general level of external verification. Moreover, an increasing number of third party verifiers such as Charity Navigator and social auditing agencies will also discipline these NGOs. EII's higher level of transparency about its budget and procedures also enables easier access to outsiders to verify the NGO's claim increasing its credibility.

### ***Advocacy Group-led Campaign***

The marketing campaign targeting industry leaders not only gave firms initial incentive to change but also was cost-effective since the entire industry followed suit. Additionally, it created an opportunity to activate existing members, to recruit future members and talents, to raise more funds, and ultimately to mobilize large latent public into becoming involved. With large numbers of public and members behind their back, environmental groups were able to exert considerable political pressure on vote-maximizing politicians and budget- or political support-maximizing regulators (Oliver & Marwell 1992).

### Factors Affecting Consumer Choice

Since canned tuna product is largely undifferentiated commodity, consumer is usually indifferent to brand name or country of origin of canned tuna they purchase. Price rather than brand is often key factor. However, there was consumers' willingness to pay premiums for the dolphin-safe tuna products and consumers confidence in the older standard versus the U.S. Department of Commerce certifies-new standard. Although the direct consumer benefit (such as health) associated with consumption of dolphin-safe tuna was low, the social benefit such as status and influence from the socially responsible consumption was high. According to a study by Teisl et al consumers did respond to the dolphin-safe tuna label and helped grow the market for certified dolphin-safe tuna (Teisl et al, 2001).

### Factors Affecting Firms' Compliance

The canned tuna industry targeting U.S. market has fragmented industry actors. They are composed of multiple actors: fishing companies, processing companies, importers, distributors, brokers, retailers in addition to their different country of origin. Upstream and downstream producers are heterogeneous in their preferences and industrial structure making it hard for them to present concerted resistance to an NGO-led campaign.

U.S.-based downstream producers that own major canned tuna brands such as StarKist, Bumble Bee and Van Kamp Seafood Company were quick to adopt the EIU-led dolphin safe standards. High reputation costs, relatively lower compliance costs, expected price premium, high market concentration by industry leaders explains their incentives to participate in and stay with stricter labeling and regulation.

First, existence of tangible benefits relative to compliance costs is important to the initial adoption of CSR by firms. Firms' compliance cost should be offset either by price premium or other financial benefits such as lower employee turnout, lower insurance cost, and lower reputational risks (Reinhardt, 2000). In this case, branding benefits existed in the form of an improved reputation with consumers, investors, business partners, and government officials. The anti-dolphin-deadly tuna campaigns were highly effective in inflicting reputation costs on the tuna companies. Therefore they had priority to restore consumer confidence in their products and shared interest with NGOs in reducing consumer concerns.

Second, part of compliance cost was offset by price premium. The price premium backed by consumers' willingness to pay for the dolphin-safe tuna products was measured at \$400 per ton. This was enough to make up for additional cost of production relocation (Vogel, 1997).

Third, compliance costs for downstream producers were also relatively lower. The operation of U.S.-based tuna cannery was vertically integrated in 1970s: they procured tuna either through long term contracts with fishermen or by operating their own fleets (Bonanno & Constance, 1999). They faced two options: either comply with the dolphin safety regulations by switching to costly dolphin-safe techniques such as hook-and-line fishing and purse-seine netting on dolphin-free schools of tuna in ETP or to continue using purse-seine nets by relocating their fleet to the Western Tropical Pacific (WTP) and changing their harvest target species to Skipjack tuna which, unlike Yellowfin tuna, do not swim with dolphins (Bonanno & Constance, 1999). Many of them either moved their fleet to American Samoa or sourced dolphin-safe tuna in international market outside the ETP. Despite additional costs incurred due to moving their off-loading locations closer to Asia, the StarKist's revenue and profit improved over the two-year consumer boycott of non-dolphin-safe tuna (Ramach, 1997).

Fourth, market concentration in the canned tuna industry was rather high. The three largest canned tuna producers such as StarKist, Bumble Bee and Van Kamp Seafood Company together produced about 84 percent of the canned tuna sold in the United States (U.S. House of Representatives, Committee on Merchant Marine and Fisheries, 1990). Once they changed, the whole industry followed.

Lastly, once they are established in the premium niche environmental market, they further have incentives to use government regulation and private regulatory bodies or codes of conduct to deter market entry by firms, foreign competitors in particular, with higher compliance costs (Reinhardt, 2000). The existence of economic rent seeking was reason why the producer group failed to form a cohesive alliance against stricter standards.

In contrast, upstream producers, fisheries of the ETP in particular, have suffered significant loss in profits due to increased costs of compliance to the stringent U.S. standards banning dolphin set. Most fishermen could not afford to relocate their entire purse-seine fleet to the WTP. Another burden was the cost of switching target species since skipjack tuna in the WTP had lower market value due to its lower overall quality compared with the relative high quality mature tuna in ETP. To continue fishing Yellowfin tuna, they had to either switch to alternative fishing methods such as the hook-and-long line fishing and Fish Aggregating Device (FAD) which are less efficient to

fishermen relative to large scale purse-seine netting on dolphin. Fishermen in the ETP also had to develop new ways to detect dolphin-free tuna schools. Moreover, the alternative purse-seine school set on juvenile tuna that do not associate with dolphins or log set pose a threat to deplete tuna stocks in the future (Ramtch 1997).

## Challenges

### Competing Standards



The Dolphin-safe label developed by the U.S. Department of Commerce was first established in 1990 as a result of Dolphin Protection Consumer Information Act (DPCIA). Despite several attempts by industry lobbyists to change the legal definition of dolphin-safe, the original standards remained intact thanks to lawsuits filed by the environmental groups. Standards for the Department of Commerce label are similar to those of ETP in that it does not allow intentional chasing and netting of any dolphins and no dolphin mortality may be recorded. Its monitoring mechanism rely on the tuna tracking and verification system containing on-board observer verification and document review by representatives of the National Marine Fisheries Service (Electric Code of Federal Regulations). The system also allows audits and spot checks but upon request of administrator from NMFS.

Despite the government enforcement and extensive tracking and verification system, this alternate labeling system faces serious credibility challenges. First, its standard allows for individual vessel to catch dolphin-deadly tuna and store them separately from dolphin-safe tuna in their vessel wells while EII's standard does not allow any mixing of tuna during the entire fishing trip. In addition, their audit is triggered only by the government representatives; the system is lacking complaint-based inspections. Non-U.S. vessels catching tuna in the ETP can also be labeled as dolphin-safe as long as they are complaint with all the requirements of the Agreement on the International Dolphin Conservation Program (AIDCP) Tuna Tracking and Verification Plan (Electric Code of Federal Regulations). Lastly, the Commerce department has a policy of "confidentiality of proprietary information" which means all the reports are not subject to public access.

A government as an interest-aggregating institution by nature has to make compromise between various stakeholders' demand and may sometimes be captured by rent-seeking business interests. This inherent limitation tends to lead to a less-than-desirable standard from the activists' and concerned consumers' point of view, making it

hard to promote bonds between these various groups based on shared values and interests. It is also difficult to include the most important audience of eco-label, namely, consumers. The government's inconsistent position on the encirclement of dolphins also added further confusion and lowered confidence in its label. The U.S. Consumers Union has raised doubts about the government's veracity, classifying its dolphin-safe label to be a "partially-certified general claim" (Consumer Reports, Green Choices). EII has put a significant amount of information about the Department of Commerce label on its consumer alert website, titling it as "a death certificate" for dolphins.

### **By-catch of Other Species**

As a result of dolphin protection measures, fisheries looking for alternative methods increased the use of Fish Aggregating Devices (FADs) which now are creating more adverse impacts on the overall ecosystem since many more species than dolphins and tuna are drawn to FADs. As a result of the switch from dolphin sets to log sets, there was a significant reduction of dolphin bycatch and mortality at the expense of other species and small, nonmarketable tuna. In addition, fishing activities can cause many other negative ecological impacts ranging from habitat loss, pollution, and generation of marine debris, among other undesirable consequences (Hall, 1998). While reduction of dolphin bycatch through the single-issue eco-label clearly made a significant progress in limiting dolphin mortality, a holistic approach is needed to address these concerns (Hall 2003). In addition, some marine biologists worried that the current dolphin mortality rate is not sufficient to recover the original dolphin population in ETP unless the goal of zero mortality rate is reinstated (Ward 2008).

### **Trade Dispute**

The U.S. dolphin-safe label is currently under legal challenge from Mexico for being used as technical barrier against Mexican tuna producers. In 2008, Mexico filed complaint to the WTO panel that U.S. regulations including Department of Commerce official dolphin-safe label and section of Dolphin Protection Consumer Information Act (DPCIA) were discriminatory against Mexican tuna producers in compliance with a relevant international standard that minimize the incidental dolphin mortality in commercial tuna fishing. The panel found that while the U.S. dolphin-safe labeling provisions do not constitute technical barrier, they are "more trade-restrictive than necessary to fulfill the legitimate objectives" of providing information to consumers and protecting dolphins. Moreover, although the regulations do not require tuna companies to use the labels in order for the

products to be sold in the U.S. market, the label is based on the standard adopted unilaterally by the U.S. and not on relevant international standards (WTO, 2011. Dispute Settlement: Dispute DS381).

The U.S. government appealed the WTO ruling and argued the complaint should be brought to dispute settlement proceedings of the North American Free Trade Agreement (NAFTA), rather than to the WTO. Losing the appeal may mean another amendment of the 1990 DPCIA and relevant regulations regarding dolphin-safe labeling or threat of Mexican trade sanctions (Reuters, 2012). One of the important policy implications of the future ruling against the U.S. government's mandatory labeling scheme would be that private labeling scheme such as the EII eco-label would be the best alternative under international trade constraints.

### **Conclusion**

Due to the combination of government regulation and voluntary programs of industry and NGO-led labeling program, conservation of dolphins in the ETP has made a significant progress although more can be done to achieve zero dolphin bycatch rates. However, in the presence of the threat of international trade dispute with the nations not in compliance with more stringent U.S. standards, voluntary labeling scheme can use market pressure to influence trading partners while remaining in compliance with international trade agreements. Although multilateral voluntary or binding agreements have played another important role in reducing dolphin bycatch, the multilateral nature of international agreements imposes compromise of higher standards sought by particular groups in order to appease members with lower standard. With this external constraint, voluntary labeling system would be much more viable option for a country to pursue higher dolphin safety fishing standards. However, a voluntary program is only sustained under certain conditions that enable long-term commitment by consumer and industry to the cause. Such conditions include an NGO-led consumer boycott, the establishment of independent third-party certification system run by credible monitoring NGOs, and various contributing factors affecting firm and consumer compliance. The low consumer and producer acceptance of the new labeling program by Department of Commerce warns of the potential pitfalls of government attempts to establish a standard when its decision making process can be influenced by industry interest (Mitchell 2000). Given the low credibility consumers and civic groups often associate with government-led labeling scheme, the government role should be not the creation of its own label but a supporting advocate for a private labeling scheme, especially in threat of potential trade dispute under WTO system. Further research would require new role of government in promoting private labeling scheme.



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