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Evolution of Social Institutions in the Journey Towards Sustainability: The Case of the Galápagos Islands

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Abstract

Two hundred years after the birth of Charles Darwin, whose theory of evolution was influenced by the Galápagos Islands, we investigate the myriad of institutions that influence the domain's governance. We provide insight into the complex web of economic, environmental, and social factors that result in a lack of clear direction and thus lead UNESCO to list the Islands as "at risk" in the past. Using institutional theory, with specific interest in competing logics or differences in senses of place among the major organizational populations in the Islands, we investigate the context in which the Islands exist. Several forces, both positive and negative, are driving change, and despite attempts to achieve equilibrium in the Islands, governance is in constant flux due to high turnover among key personnel in the organization populations. Instability and lack of continuity exist not only in the domain but also within the organizational populations themselves.

Introduction

The Galápagos Islands are a province of the Republic of Ecuador, located in the Pacific Ocean about 1,000 km from the west coast of South American. They straddle the Equator. The Galápagos archipelago has a land area of about 8,000 square kilometers. Perceptions of the islands generally consist of uninhabited landscapes filled with exotic flora and fauna. Tourists generally visit the Islands by ships that stop at various locations to view animals that have no fear of humans. Alongside the iguanas, petrels, sea lions, blue-footed boobies, and giant tortoises live approximately 18,000 human residents. Only four of the islands are inhabited: Santa Cruz, San Cristobal, Isabela, and Floreana. With the exception of conservationists, for many years there was little interest in the Islands. They even housed prisoners until World War II.

Over the past four decades, thanks to conservancy efforts, the Islands have become a major attraction for tourism and fishing. To support these industries, citizens move from mainland Ecuador catalyzing the creation of municipalities, schools, roads, hotels, restaurants, and other infrastructure. The increasingly complex web of demands has created tensions between the different organizational populations, specifically the conservation scientific community, the tourism industry, the fishing industry, the agriculture industry, the Island municipalities, and mainland Ecuador. The Islands are in a crisis of governance and the purpose of this research is to investigate the forces preventing the achievement of balance among the economic, social, and environmental interests in the domain.

To many observers, the Islands would appear a model of conservancy and thus sustainability. One of the earliest organizations in the Islands was the Charles Darwin Foundation (CDF), whose mission is to ensure the conservation of the environment and biodiversity of the Islands even before the creation of the Galápagos National Park (GNP). In addition to the CDF and the GNP, the World Wildlife Foundation, Global Environmental Facility, and the United Nations Development Program are just a few of the organizations with a presence.

Paradoxically, the conservancy efforts of these organizations have catalyzed the tourism industry bringing approximately 140,000 tourists each year, of which 60 percent are non-Ecuadorians. A large support system is necessary for all tourists, cruise or land, requiring imports to the Islands from the mainland. People re-locate to the Islands; thus, communities are built requiring all the services of a small town: food, housing, utilities, roads, and medical care. Overfishing has occurred in the local fishing industry, especially sea cucumbers and sharks fins to satisfy primarily the Asian appetites. To support these activities, oil is transported to the Islands in vessels, and in 2001 a potentially catastrophic oil spill occurred in the surrounding waters. The presence of these escalating and conflicting interests creates a need for a strong and appropriate governance structure.

With the view to mediate these competing interests, as early as 1980 the government of Ecuador created INGALA (Galápagos National Institute) to coordinate "regional planning, government funding (national, bilateral and multi-lateral assistance), and technical assistance in Galápagos" (INGALA, 2011). In 1998, the Special Law created the Galápagos Marine Reserve and enlarged the responsibilities of INGALA. The Special Law made INGALA the central planning and policy authority to "coordinate and manage the activities of the different social, economic, cultural, and environmental stakeholders at the local, national, and international level to ensure sustainable human development and conservation of the ecological systems of the Galápagos" (INGALA, 2011). Although seemingly comprehensive and straight forward, the history of INGALA has been one of turbulence, partially due to overlapping jurisdictional authorities that occurred when the Islands became a province.

Using archival data (academic articles, popular press, and official reports) and interviews, we identified five historical stages occurring between 1990 and 2008 that surround triggering events associated with sustainability. These triggering events sparked sources of conflict between competing population logics within the domain of the Galápagos Islands. The underlying turbulence within the organizational processes, especially the turnover of key positions within some of the five major populations (conservancy, fishing, tourism, Island residents, and mainland residents) further divided these populations. These populations are not mutually exclusive but serve heuristically to understand how the governance of the islands is being negotiated, transformed, and re-institutionalized.

Conceptual Framework

Institutional theory strives to help us comprehend organizations' behaviours as they relate to the context in which they operate. It focuses on pressures that come from outside organizations' boundaries, yet within their broader social framework (Scott, 1995). A field consists of organizations' immediate social framework in which various organizational populations face similar issues but may have divergent views about the issue (Scott, 2001; Hardy and Philips, 1998). A field is defined as a "community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field" (Scott, 2001: 84). Organizational populations can also consist of seemingly disparate groups of organizations, such as governments, corporations, professional organizations, and non-government organizations, all facing com-

mon issues but divergent views and therefore working toward solutions (Hoffman, 1999). Recent research in institutional theory recognizes competing logics as possible sources for the heterogeneity of actions within a specific field. Organizational approaches to issues can be characterized as either self-regarding or other-regarding, based on the willingness to consider the interests of others when confronting issues (Jones, Felps, and Bigley, 2007).

Competing logics stem from different senses of place among the organizational populations and their stakeholders within a domain, such as the Galápagos Islands. Sense of place refers to the transformation of space into place through the endowment of values stemming from human activities of work, recreation, and living in general. Groups or communities develop shared meanings and beliefs about a particular location based on their activities and association with that place (Longo and Hodge, 2007; Cantrill, 1998). If each organizational population and its stakeholders have a different sense of place regarding the Galápagos Islands and their use, conflict will result in spite of strong external influences from international organizations.

The main issue associated with the Galápagos Islands is that of sustainability. Because the Islands were recently listed "at risk," (2007 to 2010), international organizations such as UNESCO have pressured for a sustainability plan. Two decades ago Sadler (1990 postulated a conceptual framework of three overlapping and interlocked circles representing environment, economy, and social. The World Conservation Union adopted this framework in 2005 because it demonstrates the integration of the three dimensions and the necessity to address any imbalance among them (Adams, 2006). Galápagos' competing organizational populations (conservation, fishing, tourism, municipalities, and mainland interests) and their senses of place correlate to different emphasis on the environment, economic, and social components of Sadler's model.

Ecosystem-based management integrates social values in planning and decision making (Clark, et al. 1999; Liu et al., 2007). By understanding the human and organizational processes that are critical to protection of natural places, conservationists and other populations learn to deal with the "highly complex social and political settings" critical to biodiversity conservation (Brechin et al. 2002, p. 44). Knowledge creation, collaborative learning, feedback loops, and social network building (Olsson et al., 2004) support healthy communities by guiding human activity through "collaborative, interdisciplinary, and adaptive methods" (Quinn, 2002). Brechin et al. (2002) refer to the same concept as "people-oriented conservation," or "community-based conservation." These approaches to conservation seek to find the overlap between the social needs of the people and the conservation of nature by taking a strategy that balances social justice with nature protection (Brechin et al. 2002).

Governance and Sources of Power

The contested issue in Galápagos is the values and norms that direct the governance of the Islands: strict conservation of the Islands' wildlife versus economic development of the Islands' human inhabitants and recognition of their social needs. Organizational populations and stakeholder groups compete for legitimacy to have their norms and values as the nexus for institutional construction. Even though institutions can provide stability

for organizations, they can also create instability when demands among the populations are inconsistent or when demands on organizations differ between formal (laws and regulations) and informal (culture and traditions) pressures (North, 1990). Multiple demands from institutions operating in an inter-organizational domain create different senses of place due to differences in beliefs, rules, and rituals.

To resolve issues, domains require an effective governance process. Governance, at any level, signifies addressing legitimate social purposes of different sectors and actors within the laws, regulations, institutions, and practices (Ruggie, 2004, p. 504). A governance process provides a means by which the roles of the various actors are articulated, contested, and defined (Ruggie, 2004). In a domain, power is derived from one or more of three different sources: formal authority, access to critical resources, or discursive legitimacy (Hardy and Phillips, 1998). First, governments and their agencies provide formal authority by means of formal laws and regulations or some other legitimized process, such as the Special Law for the Galápagos Islands and the governing organization (INGALA). Second, a domain actor or organization may generate or have access to scarce or critical resources that are necessary to govern the domain, such as the tourism industry which provides funding through the entrance fee to the Islands. Finally, an actor might be seen as having discursive legitimacy by the other actors in the domain or by the institutions which influence the domain, such as the Charles Darwin Foundation or the Galápagos National Park on issues of conservancy. An organization with discursive legitimacy is perceived as genuine, valid, and acceptable to speak on matters of domain concern. Rarely does an organization possess all three attributes of formal authority, critical resource access, and discursive legitimacy. Conflict within the domain can arise when different organizations hold each of these three forms of power and therefore compete to gain those they do not hold.

Domain Context: Uncertainty and Deinstitutionalization

Although stability is one aspect of institutional study, more recently studies have focused on the motives for change, the events that trigger change, the institutional responses, and the effect it has on the domain (Hardy and Philips, 1998; Hoffman, 1999; Scott, 2001). Change to the institutional framework occurs within the domain as well as within the corresponding institutions, such as those holding executive positions within institutionalized organizations. Change can be understood by studying interaction patterns and power balances among the various institutions (Greenwood and Hinings, 1996; Hoffman, 1999) which can lead to the de-institutionalization of some organizations. A new institutional framework is created due to a change in formal authority, access to or control over critical resources, or discursive legitimacy.

Dynamism increases as organizations clarify their interdependence on other players in the same field, other fields in the domain, and societal level influences (Emery and Trist, 1965). As the domain becomes more turbulent, it becomes more difficult to address the domain problems due to the number of factors that must be addressed and the obscurity of the factors in relationship to each other. Emery and Trist (1965) refers to contexts as turbulent when unclear boundaries exist as problems are beyond the scope of a single organization.

Methods

Preliminary interviews with key informants were used to identify points of conflict, both the timing and the issues. From the conflicts we radiated outward to identify populations and logics behind the conflicts by consulting a variety of archives such as academic articles, popular press, and official reports. Although archival data from 1990 through 2008[1] was the primary source of the findings, the interviews added depth to the issues, organizational populations, triggering events, and the core dynamics of the field (Ventresca et al., 2002; Silverman, 2006).

We started by analyzing documents from the Ecuadorian popular press, scientific peer-reviewed academic research about the Galápagos Islands, and local authoritative reports provided by the major institutions on the Islands themselves. Next, we interviewed subject matter experts, and then again returned to the archival data to explain the interaction among various populations and to understand the dynamics of the domain.

Findings

Our iterative process, common in inductive research (Silverman, 2006), resulted in the following initial findings:

1) *Define the field or issue.* Interviews and authoritative reports of key organizations and institutional representatives having influence on the Islands lead to the conclusion that the organizational populations and their constituents had very different definitions of what sustainability meant, and none was willing to compromise points of view, thus creating conflicts.

2) *Identify the organizational populations.* The content analysis of authoritative reports of key organizations and institutions as well as high impact academic journals identified the major influential populations. Different dominant institutional logics were strongest among the tourism industry, the scientific community, the fishing industry, and the local vs. national governance structures. The triggering events and surrounding popular press articles helped us to determine the strength of these conflicts.

3) *Outline the key triggering or critical events.* We identified five triggering events between 1990 and 2008 (in 1994, 1998, 2001, 2004, and 2007) by looking at spikes and slumps in the number of popular press articles in *Hoy*, a major Ecuadorian daily newspaper, that mentioned "Galápagos" as the main focus of the article. Interviews verified that these events created turbulence in the Islands.

4) *Determine the core dynamic of a particular field.* The competing logics of the definition of sustainability within the field were clarified through the content analysis of the popular press articles and the review of local authoritative documents and confirmed through interviews. The turnover of executive positions in each of the major populations intensified the disorder in the domain and subsequent struggles as the power structure changed.

[1] Documents before this period were also investigated but the results prior to this period are not reported here.

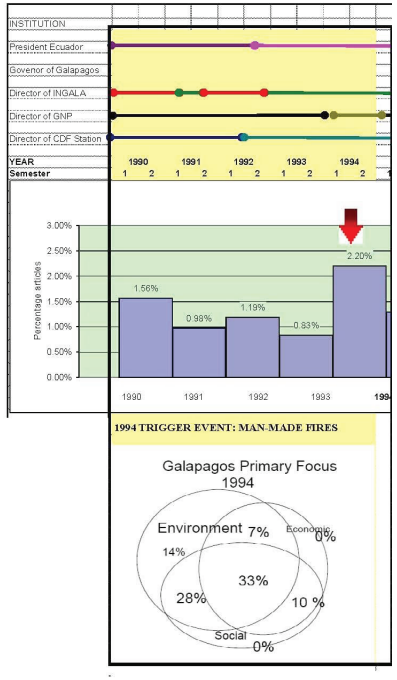
Sustainability and Triggering Events

The issue of contention is what constitutes sustainability (Hoffman, 1999; Heylings and Bravo, 2007) in the Galápagos Islands. Although there are many interpretations of sustainability (Hodge, 1997), for this study we define sustainability as the persistence over time of the necessary and desired characteristics of both the ecosystem and the human subsystem in a manner that guarantees intergenerational equity, consistent with eco-based management's attempt to support healthy communities by people-oriented conservation (Quinn, 2002; Brechin et al., 2002). This definition balances the social needs of the people with the conservation of nature (Brechin et al. 2002). After concretely defined each of the three dimensions and their overlaps, we content analyzed one thousand popular press articles covering almost two decades to review shifts in relative size of each sustainability dimension and the overlaps. We present five historical stages, surrounding the triggering events which show change in logics of organizational populations coupled with turbulence of executives in major institutions. We follow the change in logics and tenure of key positions to show how they detrimentally affected the ability to achieve a consensus on sustainability.

Events Triggering Conflict 1990-1994: Fire Garnering International Attention

In the early 1990s Galápagos was not an important topic other than to conservationists, the dominant institutional influence. Articles published in *Hoy* at the time referred to political races and the introduction of policies, nothing extraordinary. Galápagos as the primary focus of the articles was less than one article in ten. There was little or no mention of social issues or even the environment.

Diagram 2a, Period 1: 1990-1994



The change in 1994 is evidenced by a sharp increase from 9 to 38 percent in articles mentioning Galápagos. Within those articles, one in five articles addressed either the fishing or tourism industry. Internationally, Galápagos was under scrutiny for man-made catastrophes such as a devastating fire on Isabela Island started by local campers. A call for international assistance to extinguish the fire initiated the use of the words "danger" and "threat," used frequently going forward. For the first time, UNESCO threatened removal of the Islands from the list of World Heritage Sites. From the turbulence graph, it is evident that the institutional influences on the Islands are fairly stable during the years 1990 to 1996.

Events Triggering Conflict 1995 -1998: Marine Reserve and Galápagos Special Law

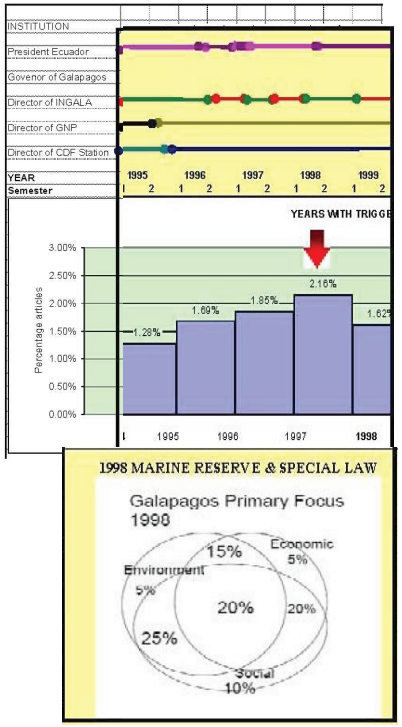
This era brought forth a serious national debate as to the provincialization of Galápagos, the recognition of the unique status of the Islands under the Ley de Galápagos (Galápagos Special Law), and the establishment of the Marine Reserve. These three movements brought increased interaction among conservationists, politicians, and economic interests particularly the fishers who protested and threatened violence to stop the proposed new fishing quotas.

The Presidential veto of the proposed Special Law in 1996 came with mixed sentiments. The conservationists applauded the move as they perceived the law as having weak conservation measures. However, the local residents perceived the veto as a setback to autonomous rule. The illness and death of several giant tortoises sparked more pressure from the international community. After lengthy negotiations over the Special Law, to the consternation of the industrial fishing interest, the Marine Reserve was elevated to special status. The GNP was given increased enforcement powers to prevent illegal industrial fishing. Only local artisanal fishers were allowed to extract according to carefully controlled quotas and seasons. To fulfill this mandate, an Inter-Institutional Authority at the national level was established to oversee the GNP administration of the Marine Reserve. In 1995-6, there was a general strike forcing out the Galápagos National Park Director, Arturo Izurieta Valery, and the head of INGALA, Gunda Schreyer Gorlitz.

Concurrently, the Special Law required the constitution of the council for INGALA. The object of INGALA was now clearly defined as "the conservation and sustainable development of the Islands and to approve the regional development plans for the Galápagos" (INGALA, 2011). With the new law, overlapping jurisdictions conflicted with local municipal authority while a common definition and manifestation of sustainability remained elusive.

In 1997 the first annual Galápagos Report was published to give an account of the socio-economic-environmental status from the local point of view. Before this time, decision makers had little information to assess the holistic conditions of the Islands. The Report methodically addressed the social conditions in 17 pages, the economic in 10 pages, and the environment in 4 pages (56 percent, 34 percent, and 10 percent of word count, respectively). The major social challenges included population growth, poverty, and education.

Diagram 2a, Period 2: 1995-1998

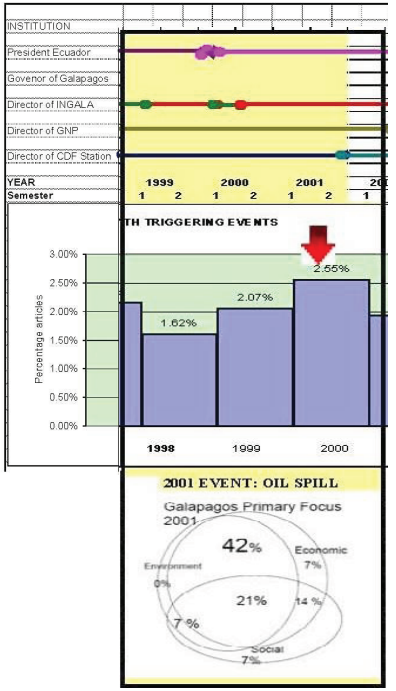


The economic challenges included tourism, fishing, and agriculture. The environment challenges discussed in the Report integrated various studies on the Islands' biodiversity.

Events Triggering Conflict: 1999-2001 Tourism and Oil Spill

The Galápagos Report published in 1998-1999 reflects the turbulence of the era, especially the conflict between the environment and economic dimensions of sustainability. Rather than a methodical approach, the Report is a series of articles highlighting the events of the Galápagos Special Law, the Marine Reserve, and legal and illegal fishing. Of the 64 page document, (67 percent) lies primarily at the nexus of enviro-economic, especially marine protection vs. economic livelihoods. Compared to the previous report, the discussion of social challenges of population, poverty, and education decreased from 56 percent to 23 percent, and the environmental challenges increased to 10 percent. To address the conflict between local population and national governance, the Report contained a survey of opinions on Island governance, institutional management, and conservation consisting of six pages, while tourism was treated in four pages. Introduced species, climate changes (El Niño), and waste treatment were also discussed. The next two reports (1999-2000 and 2000-2001) demonstrated an increasing concern about institutional power and governance of the Islands, focusing on the marine reserve and INGALA. Biodiversity and introduced species occupied more pages each year. Of note is a special chapter on energy consumption in the wake of the 2001 Jessica oil spill.

Diagram 2c, Period 3: 1999-2001

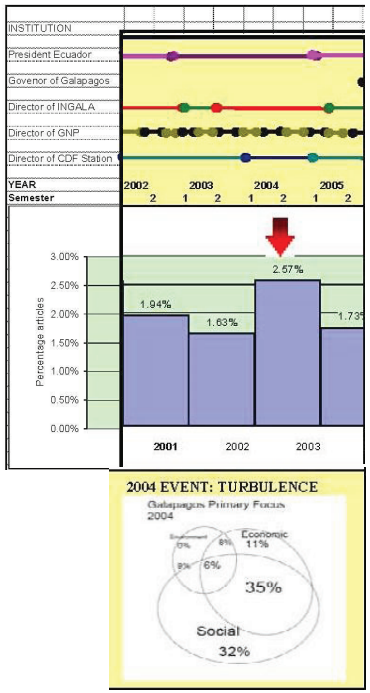


Once again, Island and mainland authorities came under severe international scrutiny when on January 16, 2001 the tanker Jessica ran aground in the bay of Puerto Barquerizo Moreno and spilled diesel oil and bunker fuel. There was no emergency response plan, and no one was assigned responsibility to manage the clean-up. Various international organizations volunteered resources for the cleanup. Catastrophic damage was averted because the diesel fuel was light enough to burn off, and favorable climatic wind and wave conditions dispersed the remaining oil quickly away from the shores. However, controversy continued for years over cleanup costs, increased demand for fuels to run tourist vessels, and non-renewable energy sources for a population which was burgeoning thanks to the needs of the tourism industry. Based on the *Hoy* articles, the conservationists appeared to be re-directing focus from the impacts of fishing to that of tourism.

Events Triggering Conflict 2002-2004: Fishers, Tourism, and Residents vs. Conservationists

Although commercial fishing was illegal, conservationists and artisanal fishers battled over the annual quotas and verification of the highly-lucrative sea cucumber. Ambiguity as to who qualified as an artisanal fisher created more conflict. During the same time, GNP park guards went on strike to protest the proposed political appointment of a new director of the Park who was viewed as unqualified. Violence erupted between fishers and park guards over the incident, closing the park to tourism for over two weeks. The violence was the culmination of two years of turbulence wherein the GNP director had changed seven times. Following seven years of stability (1996 – 2002) under the direction of Elicier Cruz, the position of GNP director was increasingly politicized and became an escalating battleground between the pro-fishing population and pro-conservation population. However, this dichotomy obscures that part of the confrontation that was due to the lack of employment contracts for many of the park employees. In other words, the opposing populations both sought economic security.

Diagram 2d, Period 4: 2002-2004



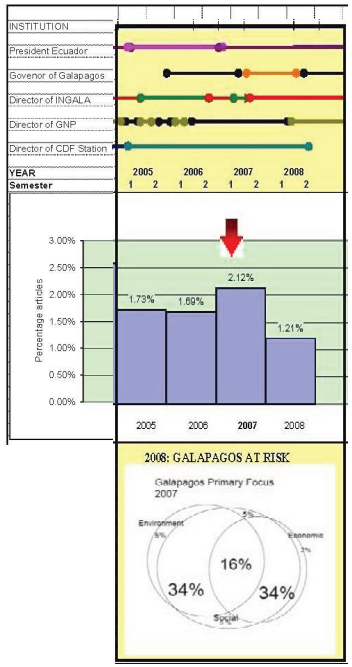
In 2004 a highly publicized social problem of pedophilia and child pornography motivated the federal government to respond with more social services. Conservationists viewed these institutions as problematic as it increased legitimacy of a permanent population and the subsequent pull of migrants from the continent for work, higher living standards, and well-paid government jobs.

Events Triggering Conflict 2005-2008: UNESCO List of Endangered Heritage Sites

After years of observation, reports, and threats by UNESCO, on June 26, 2007 the Islands were added to its list of endangered sites. According to *Hoy* the three main challenges were invasive species, growing tourism, and immigration to work in the tourism industry. The movement of people between the mainland and the Islands increases the introduction of invasive species. Endangered status was both an opportunity and a threat to Ecuador: the opportunity to redirect otherwise committed resources both national and international; a threat because Ecuador was again viewed by the international community as negligent.

In 2007 after a five year hiatus, the Galápagos Report returned (Galápagos Report 2006-2007). The report grew in size with socio-economic issues as 67 percent of the topic coverage, and 33 percent of the report now dedicated to environmental concerns of bio-diversity and species introduction. In the 2007-2008 report, the discussion of the environmental threat from species introduction increased to 40 percent of the report while the socio-economic decreased to 60 percent.

Diagram 2e Period 5: 2005-2008



Discussion

This analysis shows the ebb and flow of topic importance in the dimensions of sustainability spurred by triggering events. Governance was buffeted by these events, resulting in institutional changes in formal authority, access to critical resources, and discursive legitimacy. Nonetheless views differed regarding appropriate structures and regulation due to differing concepts of sustainability and how to achieve it in an unparalleled site such as the Galápagos.

Unsurprisingly, the academic peer-reviewed articles address almost exclusively the scientific aspect of the environment with little mention of the social or economic dimensions. These findings suggest an isolation of research efforts in the various dimensions of sustainability with a lack of research considering the overlapping dimensions and how they coalesce in the Islands' sustainability journey. Cognizant of this, the CDF chose a social scientist rather than a hard scientist as its most recent director.

How do the major populations define sustainability? Starting with the conservationist population, sustainability is the strict control of tourism to reduce human migratory pressure on the Islands lessening the impact from imported goods and services, increased infrastructure, waste, and invasive species. Once considered an ally of conservationism, tourism has replaced the fishing industry as the villain and is increasingly attacked as a source of Island degradation.

Tourism operators and associations perceive sustainability as synonymous with sustainable practices such as recycling, bio-degradable cleaning products, water economy, buying locally; efficient motors, and reduction of fuel consumption of both cars and boats. The tourism association, Capturgal, the tourism association for hotels and private companies, and the airline Aerogal all refer to locally introduced and international norms, such as ISO. Aerogal

has three ISO certifications: formalized business processes 9001, operations security 18000 and environmental management 14001. In February 2009, the tourism office and Capturgal were collaborating on a local hotel certification project to encourage environmentally-friendly practices. PetroEcuador, transporter of petroleum products to the Islands, follows several petroleum norms and has certification of ISO 18001 and 14001. International certifications signal that institutionalized normative and legitimated activities have been undertaken (Scott, 2001, p. 78-79). These standards, although important signals within an industry and/or a population are unrecognized, misunderstood, or considered insufficient by the conservationist population.

For years the tourism population has opposed the fishing industry due to illegal and over fishing. The fishers disagree that their quotas are excessive and unsustainable. Tourism, with the conservationists, is now attempting to co-opt the artisanal fishers by encouraging the GNP to offer dive-operation licenses to local fishers. Although the fishers are happy to have these licenses for off-season, a local fisher-turned-dive-operator confessed that the fishing income is too lucrative to abandon the practice completely. Although the fishing industry is less than 4 percent of the Islands' income (Watkins and Cruz, 2007) and less than 1 percent of the population, the fishers are the most vocal and violent population. In fact one informant stated that the Marine Reserve co-management established in 1998 no longer functioned because the fishers were too powerful.

To collapse the economic interests of tourism and fishing in one population would be an over-simplification. Also, to assume that the conservationists do not have economic interests would also distort the populations' interactions. Capturgal observed that its offices are spartan and lack air conditioning while all CDF offices are air conditioned. Moreover, small businesses remark that their revenues rely on tourism, which is volatile as it depends on economic conditions, while employees in the government offices or non-government organizations such as the CDF have fixed salaries. For the conservationists, the push for more institutions and institutional employment creates a feedback loop to increased migration and tourism (per com, 2009). In 2006, there were fifty federal government agencies and nine local agencies of which forty-nine have a presence on one of the five populated islands. The number of public sector employees doubled between 1990 and 2006 to 2,115. The increased presence of public sector services is viewed by conservationists as a menace and by the ordinary residents, a fourth population, as overdue.

The important social dimension and corresponding population is virtually silent with the exception of the national press *Hoy*. Although the Galápagos Annual Report refers to the social dimension in varying proportions year-to-year, statistics are gathered and reported by the influential conservationists. There are two populations within this dimension: the Island residents and the mainland residents. This is evidenced by the tension over Galápagos decentralization and independence. In fact, one of the informants mentioned that the Islands occupy a special status in that the Galápagos' Governor is functionally above the federal ministries working in the area through the Governor's role as coordinator of INGALA (pers. com., 2009). There is also rivalry over the relative financial independence of the Islands due to park fees[2] . Last but not least are the advantages and supplements bureaucrats receive for living in a "hardship post"

[2] Of approximate US$8.5 million in 2007, 40 percent went to the GNP, 25 percent to the municipalities, 20 percent to INGALA/Provincial Council and only 15 percent back to the mainland.

with living costs 40 percent above that of the mainland. At odds with the messages of 'hardship' by the local population is the increasing alarm by conservationists at their presence.

Prior to 1990 news reports about Galápagos, park wardens, and conservation were rare. The contrast between articles pre-1990 and post-1990 is stark not only in number but also in tone. Since 1990 the number of articles increased steadily with escalating warnings over the impurity of the Islands: Eden under threat. Words such as "harm," "invasion," "contamination," "depletion," and "extinction" were commonly used to describe the Islands. This representation of the Islands under threat is clearly demonstrated in two reports in 2007: a UNESCO/IUCN Mission Report and a CDF report titled Galápagos At Risk. In the ten-page body of the UNESCO Mission Report, the word "threat" is used fourteen times and "risk" is used thirteen times. The decision to list the Islands as "at risk"' was considered a positive measure to mobilize support (UNESCO, 2007) to assure the future of the conservation of Galápagos through building a sustainable society (Watkins et al., 2007). The Islands remained on the list for two years until 2009 when it was removed.

Conclusion

The goal of this paper is to demonstrate the major field constituents, how they are organized into populations, the logic of each population in terms of sustainability, and the events that lead to competition and conflict and thus the re-evaluation of institutions responsible for Island governance. We studied two decades by coupling archival data analyses with interviews. We revealed shifts in emphasis on the three dimensions of sustainability and mapped the turnover of personnel in key executive positions for the major organization populations. We demonstrated the shifting power of these organizations and how this turbulence resulted in the inability to arrive at a consensus on the sustainability model for the Islands.

Although the need for consensus is not novel, this study reveals that even those domains that are already heavily weighted towards the environment need to address economic and social issues. A collaborative and comprehensive definition of sustainability, both conceptual and functional, is the essential starting point for cohesion. Negotiations over definitions of sustainability will ultimately reveal differing senses of place that will need to be addressed and resolved. Negotiating concrete goals such as an acceptable ecological footprint (Ewing et al, 2010) or a limit on chemicals and compounds e.g. Natural Step[3] , will also allow for industry efforts such as ISO to be recognized and reconciled with the overall objectives of the Islands and the high standards set by the conservationists. As the Galapagos Islands are an important UNESCO World Heritage site, the achievement of balance among all three dimensions would be a success story for us all.

[3] See Natural Step at http://www.naturalstep.org

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Diagram 2a, Period 1: 1990-1994

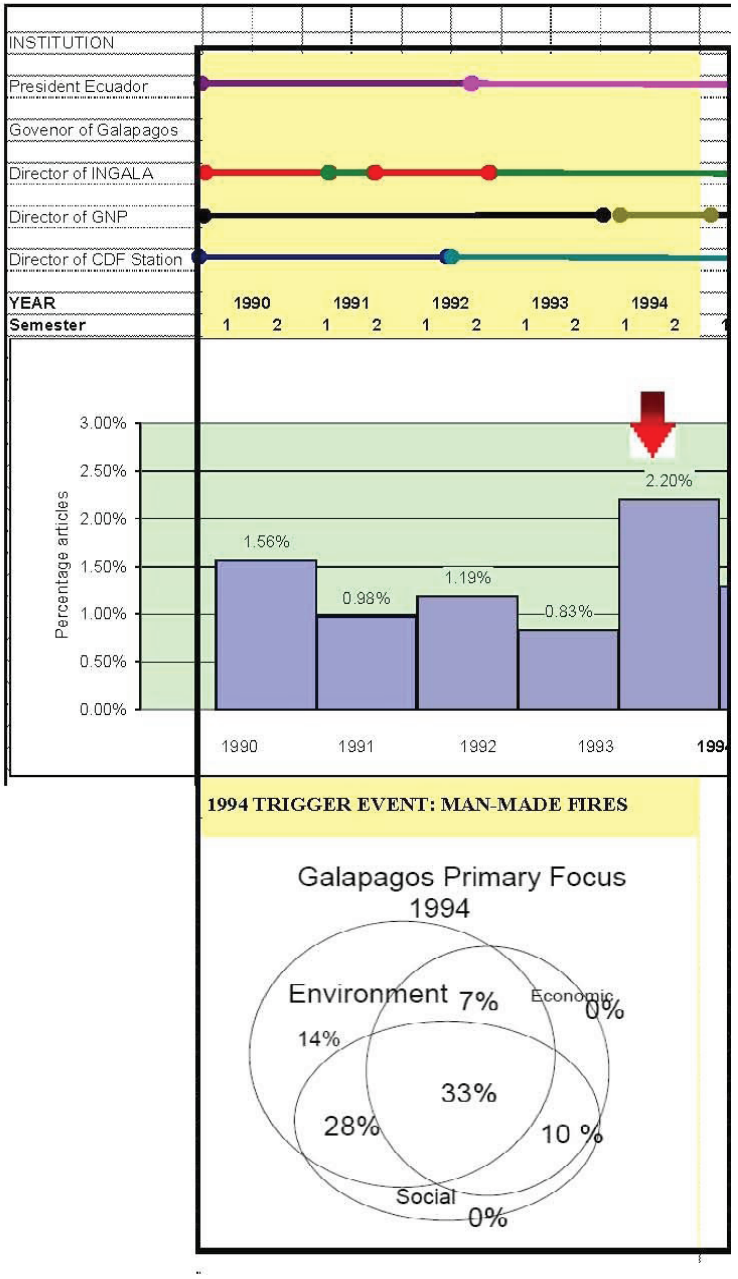


Diagram 2a, Period 2: 1995-1998

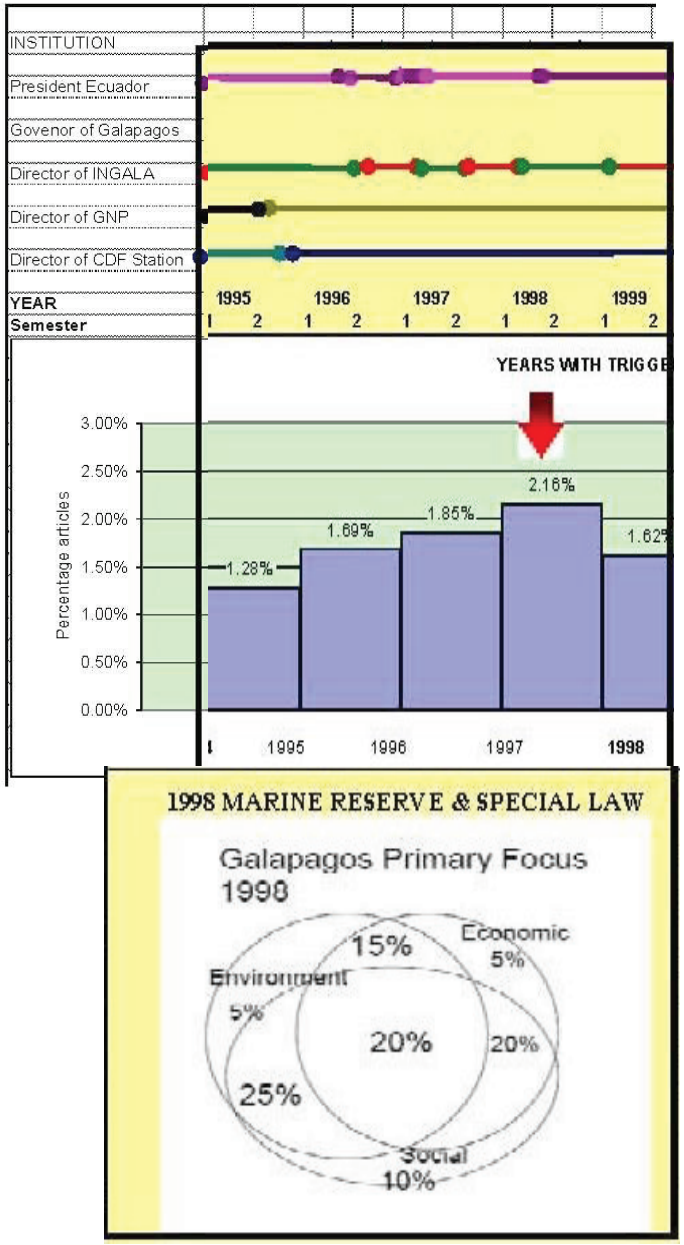


Diagram 2c, Period 3: 1999-2001

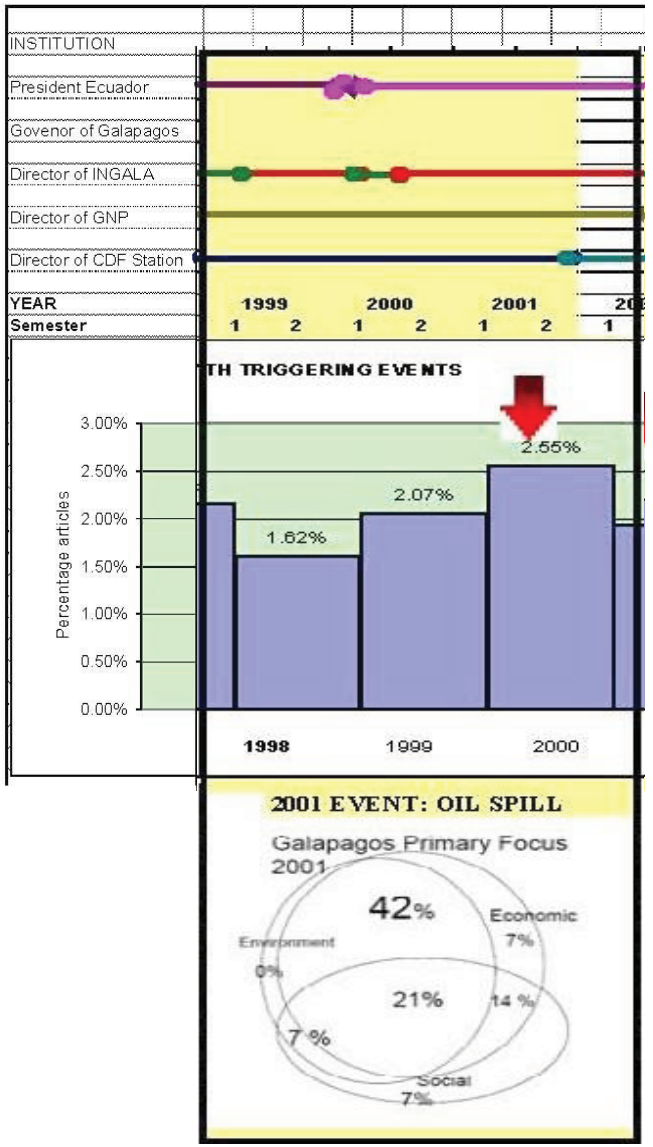


Diagram 2d, Period 4: 2002-2004

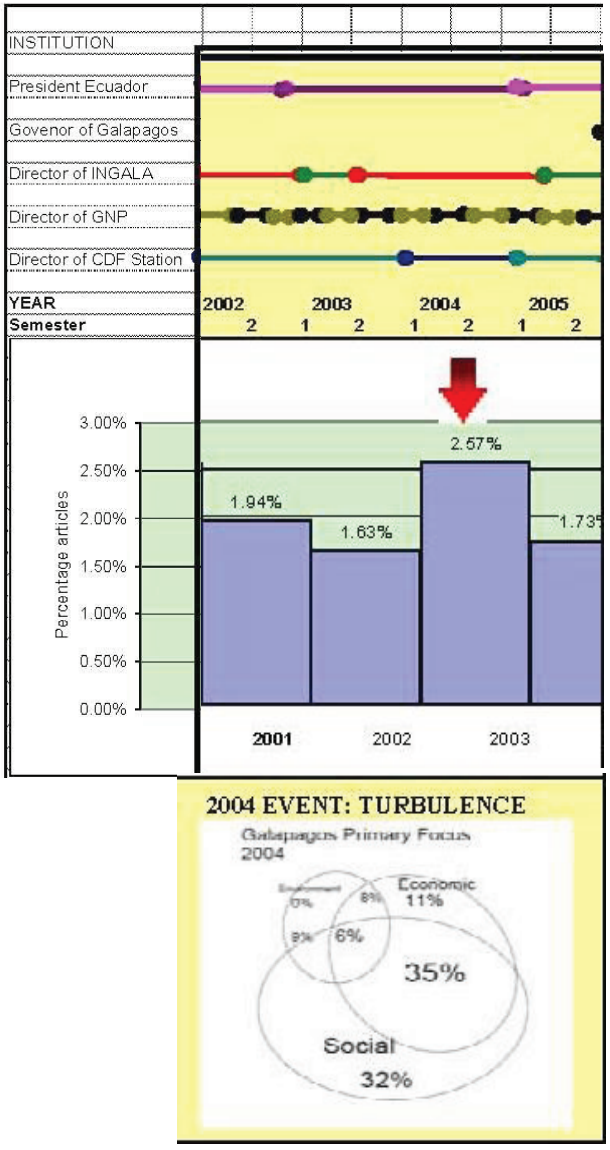
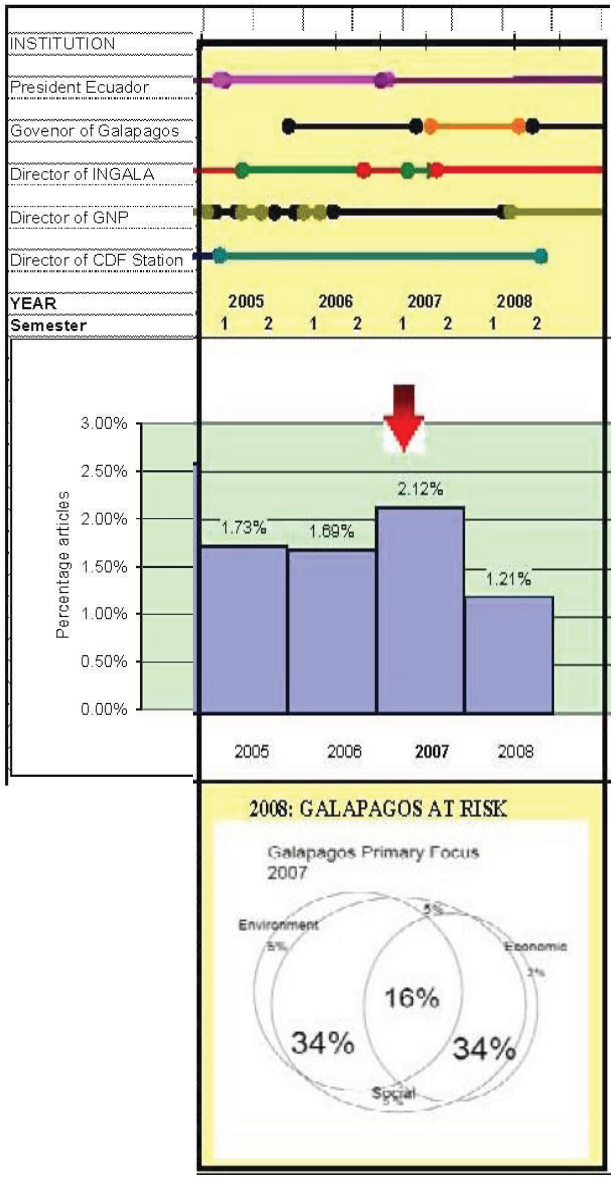


Diagram 2e Period 5: 2005-2008



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