

ENVIRONMENTAL SANITATION POLICY IN COSTA RICA: AN ONGOING CHALLENGE

LA POLÍTICA DE SANEAMIENTO AMBIENTAL EN COSTA RICA: UN DESAFÍO CONTINUO

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Abstract

This article presents part of the results of a doctoral dissertation concerned on sustainable sanitation in Costa Rica. Specifically, this article relates to environmental sanitation policies implemented in the country. Environmental sanitation is a complex concept because it implies the integration of different aspects related to drinking water, sanitation, and the management of solid waste; and its diverse implications in terms of improving human well-being and environmental conditions, especially in contexts of poverty and social exclusion. Thus, efforts must be directed to the legal obligation of governments to commit themselves to attain sustainable development goals under the notion of people's basic right to live in a healthy environment. Social work advocacy plays a major role in promoting policy changes by positioning the issue at the top of national and local agendas as well as looking for improvements in terms of planning and implementation of projects.

Key words: environmental sanitation, drinking water, waste management, environment, social work.

Resumen

Este artículo presenta parte de los resultados de una tesis doctoral sobre el saneamiento ambiental sostenible en Costa Rica. Específicamente, este artículo se refiere a las políticas de saneamiento ambiental implementadas en el país. El saneamiento ambiental es un concepto complejo porque implica la integración de diferentes aspectos relacionados con el agua potable, el saneamiento y el manejo de desechos sólidos, y sus diversas implicaciones en términos de mejorar el bienestar humano y las condiciones ambientales, especialmente en contextos de pobreza y exclusión social. Por lo tanto, los esfuerzos deben dirigirse a la obligación legal de los gobiernos de comprometerse a alcanzar los objetivos de desarrollo sostenible bajo la noción del derecho básico de las personas a vivir en un ambiente saludable. Trabajo social puede desempeñar un papel importante en la promoción de cambios en las políticas al colocar el tema como prioritario en las agendas nacionales y locales, así como mediante la búsqueda de mejoras en términos de planificación y ejecución de proyectos.

Palabras clave: saneamiento ambiental, agua potable, gestión de residuos, ambiente, trabajo social.

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Understanding environmental sanitation is challenging because it implies the integration of different aspects related to drinking water, sanitation, and the management of solid waste, and its implications in terms of improving human well-being and environmental conditions. This is a comprehensive definition which calls for a careful planning on the management processes of the whole environmental sanitation chain (SuSanA, 2008). Drinking water management refers to the assessment of the water supply chain (i.e., from the source to the point of consumption); thus, it considers the protection of water sources (surface and groundwater), and the delivery of safe water (water that meets all health-based quality targets). Drinking water monitoring is of particular importance since a wide range of both chemical and microbial contaminants may be found in it, some of which can be derived from a number of sources (i.e., geological, storage, distribution, and handling). Wastewater management encompasses a broad range of efforts that promote effective and responsible water use, treatment, and disposal, also by encouraging the protection and restoration of watersheds. Finally, solid waste management focuses on the generation, prevention, characterization, monitoring, treatment, handling, reuse, and disposal of solid waste.

Internationally, environmental sanitation has been recognized as a catalytic entry point for ensuring environmental sustainability. The 2002 World Summit of Sustainable Development (WSSD) and its seven Millennium Development Goals (MDGs) established the need for ensuring environmental sustainability by increasing access to sources of drinking water, sanitation, and clean energy; reducing pressures on ecosystems from water and air-borne contaminants; and improving human health (UN-Millennium Project, 2005).

In fact, increasing efforts have been made to examine the disease burden attributed to key environmental risks. International agencies, such as the World Health Organization (WHO), have undertaken efforts to strengthen the healthcare sector worldwide by increasing people's understanding of how different environmental factors impact disease, and help guide policymakers in designing preventive health measures in areas such as energy use, air and water quality, land use, and urban design which affect health and behavior directly or indirectly (Prüss-Üstün & Corvalán, 2006). The intention of current policy efforts is to ensure that policymakers at all levels (e.g., public and private institutions, and communities) take proper account of the wider responsibility for creating healthy environments (Wilkinson & Marmot, 2003).

This study understands environmental sanitation as a contextually-based phenomenon in which environmental, technical, sociocultural, economic, and institutional factors shape national and local preferences, practices, and policies. Context-based research on a country's environmental sanitation challenges is particularly needed to improve the current state of affairs. Hence, the present study explores environmental sanitation practices and policies in Costa Rica. It is of interest to frame the study within a larger social work discussion on sustainable social development, and environmental social work perspectives.

Focus and Methodology of the Study

The present study seeks to deepen the knowledge of the environmental sanitation conditions in Costa Rica, particularly in terms of the environmental sanitation policy agenda. The study emphasizes on the main idea that environmental sanitation is a contextually-based phenomenon; hence, the study is based on a constructivist paradigm for inquiry (Lincoln & Guba, 1985; Rodwell, 1998) to achieve an in-depth, qualitative understanding of particular views on Costa Rican environmental sanitation policy. Basically, this is a descriptive and exploratory study, which has a policy-in-experience focus, which tries to analyze how people experience the results of the related policy. Policy-in-experience is not just an assessment of the competence of service providers, it is an assessment of the construction of values related to what the problem is, who experiences the problem, what should be done about the problem, and who should be responsible (Rodwell, 1998).

Based on a constructivist approach, meaning is constructed through negotiation among individuals' standpoints and perspectives (Lincoln & Guba, 1985). What gives meaning depends on peoples' perspectives or position (Rodwell, 1998). In other words, this is an active process to construct meaning, and it is created in relationship to perspectives. Understanding is built up by emphasizing inductive analysis of participants' perspectives as revealed in the data (i.e. in-depth individual interviews and focus-group interviews, in this particular study). The researcher was especially interested in explaining the variation in perceptions and experiences across different types of participants by describing how they perceive different environmental sanitation links.

Data was gathered in three different sites with rural (Site 1), urban (Site 2), and semi-urban (Site 3) characteristics in order to compare local experiences. Costa Rica has a total of 81 municipalities; each municipality contains different districts and neighborhoods. The chosen sites for this study corresponded to three municipalities in different areas of the country, each with different geographic characteristics and levels of human development, as well as different drinking water providers (e.g., the National Water and Sewer Institute, municipalities, and rural organizations). These sites were also classified as having low, medium, and high levels of inequality in terms of service access and water quality, according to the 2006 Service Access and Quality of Water Index, which classifies all 81 of the country's municipalities according to levels of inequality in terms of service access and quality of water (Mora, 2006).

Moreover, the study develops perspectives from different stakeholders in the Costa Rican's environmental sanitation field. These stakeholders include national authority representatives, local authority representatives, community leaders, and householders who are affected by particular environmental sanitation issues in the respective study sites. In-depth individual interviews were performed to 30 national authorities, 12 local authorities, 19 community leaders, and 14 householders among

the three study sites. Focus-group interviews also were performed to 29 community leaders and 13 householders among the three study sites. The total sample size was of 117 stakeholders.

Study participants are organized by national authority stakeholders who works in 14 Costa Rican national institutions related to environmental sanitation. For example, these are public, private, and non-governmental organizations that are responsible for the provision of water and sanitation services, as well as organizations responsible for setting regulations and tariffs to public and private bodies that pollute the environment. Local authority participants work at the local government offices among the three study sites. On the other hand, community leaders belong to different associations such as: agriculture producer associations, district council, community development associations, ecological blue flag, local youth movements, parish pastoral groups, and water committees. Finally, householders were homemakers, farmers and university students.

Study participants represent a heterogeneous group with different demographic characteristics, diverse professional and occupational background, and community involvement experiences. This was a very important aspect within the study, since a broad range of views could be provided, enriching the research results.

Environmental Sanitation in Costa Rica

The development strategy of Costa Rica, which has been relying heavily on its natural resource base, is facing important pressures and vulnerability due to economic activities and popular practices that undermine its protection (Ministerio de Vivienda y Asentamientos Humanos [MIVAH], 2006). Although the country has had privileged geographical and ecological characteristics widely recognized internationally, especially in terms of water sources; significant problems in terms of drinking water quality, deficiencies on wastewater treatment, and critical management of solid waste have been identified.

Despite these significant environmental sanitation problems, the country has been unable to develop a long-term, sustainable development strategy to appropriately address these problems and secure the overall well-being of its population (MIVAH, 2006).

Different regulatory and service providers are housed within the Costa Rican environmental sanitation sector (See Figure 1). At the national level, the Ministry of Health (MINSALUD) oversees the sanitation sector and assumes a supervisory role. The National Water and Sewage Institute (AyA) is an autonomous public institution that reports to the MINSALUD. These two institutions also relate to the Regulatory Authority for Public Services (ARESEP)—an institution responsible for economic

regulation (i.e., tariff setting, monitoring, and control of efficiency and quality of services). The Ministry of the Environment and Energy (MINAET) oversees compliance to environmental laws regarding water resource management.

The AyA directly administrates and operates 180 water systems, serving 49% of the country's population, mostly in urban areas. Administrative Committees of Rural Water Systems (CAARs) and Administrative Associations of Rural Water and Sanitation Systems (ASADAS) serve 24% of the country's population through 1,827 water systems in rural communities. Different municipalities operate 240 small water systems, reaching 15% of the country's population. The Heredia Public Services Company (ESPH), which is an autonomous multiservice public utility (regulated under private law), serves almost 5% of the population in the province of Heredia. Other private organizations that operate water systems, such as housing developers, serve about 5% of the population (Instituto Nacional de Estadísticas y Censos [INEC], 2011).

The State of Drinking Water

Approximately, 98.2% of the population has access to water within their households. Out of this, 92.9% may be considered drinking water (Mora, Mata, & Portuguez, 2013). According to Mora and Portuguez (2007), the main water source for human consumption originates from springs (3,009 springs reported), followed by water wells (799 wells reported), surface water catchments for rainwater harvesting (255 catchments reported), and rivers and reservoirs with treatment plants (51 systems reported).

The State of Wastewater Management

Most of the surface water in Costa Rica can be considered polluted. This is mainly caused by the discharge of wastewater from domestic, commercial, industrial, and livestock activities. Agricultural activity (e.g., pesticide waste) also increases this pollution. Pesticides can reach surface water via different emission routes, such as wind or soil infiltration, or via the discharge of wastewater from agricultural plants (Ruepert, 2011).

Around 75% of the population in the country uses septic tanks to treat household wastewater. Specialists in the field indicate that the disintegration of organic material in a well-designed and well-managed septic tank can reach 70%. The smooth operation of this technology also depends on soil conditions (Angulo, 2013). The use of septic tanks also implies the periodical removal of sewer sludge. However, by 2012, only seven companies in Costa Rica were authorized to treat and to dispose of sewer sludge (Angulo, 2013).

The State of Solid Waste Management

Ordinary solid waste consists of all solid waste generated from residential, commercial, institutional, and industrial activity. Usually in Costa Rica, solid waste is placed in plastic bags and collected indiscriminately (without separation or previous selection) from temporary metallic baskets built for that specific purpose. Some people also place their waste directly on the sidewalk or street just prior to the arrival of the waste collection truck (Cooperación y Medio Ambiente [CYMA], 2007).

After collection, the waste is temporarily stored until transported to the final treatment facility or to another location for disposal. The General Health Law states that the municipalities are responsible and in charge of the collection, transportation, and disposal of solid waste. However, the municipalities are allowed to subcontract collection and transportation services to private companies (CYMA, 2007). The municipal solid waste collection service faces serious problems regarding the number of waste collection trucks and their maintenance as well as their operators' lack of competence (CYMA, 2007).

Service coverage and the collection and transportation of waste are both critical points relating to the municipality's management of solid waste. Urban areas with high population density tend to have coverage of approximately 90%. Rural areas, however, are suffering from lack of coverage due to their remoteness and low population density, which makes collection services neither profitable nor effective. In areas without waste collection service, the final disposal consists of burning the waste or directly discharging it into waterways (CYMA, 2007).

Policies Related to Environmental Sanitation

One of the major challenges facing Costa Rica relates to the environmental sanitation policy of the country. According to study findings, five issues are of significant importance: (a) government's historical focus on drinking water rather than on wastewater management; (b) lack of an explicit and comprehensive policy on environmental sanitation; (c) lack of long-term development strategies; (d) weak inter-institutional coordination; and (e) Costa Rica's contradictory green image.

Government's Historical Focus on Drinking Water Rather than on Wastewater Management

This category was exclusively emphasized by national authorities. Historically, drinking water provision has been the main focus of interest for the government. This is reflected by the national figures on drinking water, which reveal the country's significant achievements on this matter and contrast the country's deficient performance in terms

of wastewater management. Although the AyA's mission is to connect Costa Rican households to drinking water and sewer systems, the mandate has not been achieved for all Costa Ricans. Nine national authority participants are particularly concerned with the country's wastewater management. For them, wastewater management has been largely neglected in the government's agenda.

The neglect of wastewater management is demonstrated by the low infrastructure investment (e.g., construction of sewer systems and wastewater treatment plants) made by the AyA throughout the years. According to a national authority stakeholder, the AyA has only been able to treat industrial and household wastewater from existing metropolitan sewer systems. One of the main reasons for this lag in wastewater treatment is the high cost required to build large-scale infrastructure, which is hardly recovered by user's tariffs. A national authority from the AyA mentions that one of the main reasons for this lag in wastewater treatment is the high cost required to build large-scale infrastructure, which is hardly recovered by user's tariffs. However, this lag in infrastructure development has led to the pollution of many rivers in the country—the Tárcoles River, for example, in which most of the metropolitan's raw wastewater gets dumped. Despite the urgent need to invest in wastewater infrastructure, such infrastructure will be continually neglected as long as drinking water infrastructure remains unresolved in all areas of the country (e.g., remote rural communities or indigenous settlements).

According to a national authority participant at the AyA, despite the urgent need to invest in wastewater infrastructure, such infrastructure will be continually neglected as long as drinking water infrastructure remains unresolved in all areas of the country (e.g., remote rural communities or indigenous settlements). Nonetheless, she insists, inaction on wastewater infrastructure cannot continue simply because of the high level of water contamination in Costa Rica—to paraphrase her: “inaction on wastewater infrastructure can be considered as a time bomb.”

To conclude, a national authority participant also working at the AyA, emphasizes that wastewater collection and treatment should be as important to the government as the provision of drinking water; unfortunately, the AyA does not consider both environmental sanitation aspects as equally relevant. Also, it is important to highlight that, according to him, the lack of attention to wastewater stems not only from the government but also from the communities. For him, people in the community are often more worried about drinking water than wastewater, but both environmental sanitation issues should be addressed together: “Communities do not understand the importance of not just thinking about drinking water, wastewater has to be taken into account, [and] both issues have to go hand in hand.” Drinking water is important for the population's health but so is wastewater, especially considering the negative impacts of raw wastewater on the quality of available water. The situation needs to be addressed nationally, not only in the metropolitan area of the country, because not much can be achieved if we solve the problem of water pollution in one area only to have contaminated water flow upstream or downstream.

Lack of an Explicit and Comprehensive Environmental Sanitation Policy

This issue was mentioned both by eight national authority participants. According to national and local authority representatives, Costa Rica lacks an explicit and comprehensive policy on environmental sanitation. Although, legal frameworks and programs addressing some aspects of environmental sanitation can be found, policies are fragmented without a comprehensive framework and planning that articulates all national and local actions under clear environmental sanitation principles and objectives. As a national authority participant working at the AyA, illustrates:

First, I should start by saying that I don't know of a national environmental sanitation policy in Costa Rica...maybe because legislation and regulations have taken action in certain aspects, we can infer that there is a national policy; for example, all urban housing developments need provision for drinking water and a wastewater system as well as a system for solid waste disposal...[T]hus, from there, we can say that there is an implicit environmental sanitation policy, but I don't know of any explicit policy on this topic.

In the absence of an explicit environmental sanitation policy, the issue turns out to be vague and confusing. According to a national authority participant, many aspects are included in environmental sanitation—land management, environmental impact studies, primary health care, water supply, and wastewater management, among others—and all of them require different approaches from various institutions, which, ultimately, cannot be integrated and implemented in a comprehensive manner. In line with such participant's perspective, another national authority participant, also mentions that because environmental sanitation involves many aspects, policy has been fragmented with disjointed actions.

In addition to it, participants of all type highlight that policy on environmental sanitation has been often characterized by the failure of government to perform actions that it was supposed to undertake years ago. Concerned with the state of wastewater infrastructure, some of them note that such inaction by the government has especially affected the quality of water in the Costa Rican rivers.

At local levels, this implicit and disconnected environmental sanitation policy also has important implications. A local authority participant in Site 2 agrees that policy on environmental sanitation policy is not well known; therefore, local effects cannot be clear cut. As he states, "we have worked on some aspects, but I don't know if that is part of a national environmental sanitation policy itself." This can be particularly confusing for local authority representatives because they are insecure about their role. It is supposed that local levels are in charge of implementing national policies, but in the

absence of clarity, roles are diffused. Moreover, a local authority participant in Site 3, mentions, “the central government has not done much here, in fact, we are just doing what we think is important.” A local authority participant in Site 3, also emphasizes the need to know a country’s national priorities in order to guide and better integrate local actions.

A national authority participant, also agrees that the lack of linkage at higher levels trickles down to local levels. For him, the country needs a clear policy with clear programs and plans so that people can take the lead on a particular issue, promoting action at local levels. According to his perspective, “one would expect that national institutions [maintain oversight of] the local level, whereas regional institutions can perform a supervisory role, but this is not happening due to the institutional disassembly of the country.”

Four national authority participants mention that improvements to environmental sanitation conditions have been achieved by isolated, individual efforts and not necessarily driven by a governmental policy. For example, one of them points out that although the government has taken environmental sanitation more seriously because of its international commitments to the Millennium Development Goals (MDGs), the population has independently increased its level of consciousness concerning the importance of the topic. He recognizes an indirect impact stemming from the enactment of recent laws that prompt communities and private enterprises to take a more environmentally friendly stand.

However, another national authority participant, has a more radical perspective. He states that improvements in environmental sanitation are mostly due to individual efforts because environmental national policy is widely unknown by the general population. As he explains using the MINAET’s example:

I feel that in many ways, at least at the population level, policy is still unknown...for example, there is the national environmental policy by the MINAET, but it is a policy in the air, rootless, even we (authorities) do not know how much this policy is consolidated...I think that environmental awareness has been generated by isolated, independent actions—perhaps felt by one particular community that somewhat inspires the rest of the communities or municipalities to take action on some issues.

Lack of Long-Term Development Strategies

This issue was stressed by 15 participants of all types: national authority representatives, local authority representatives, community leaders, and householders. For some stakeholders, there is an inability from the government to think strategically. First, Costa Rica lacks a “compass” as a country that can guide actions in the long run towards a desirable development pathway. In order to achieve this pathway, it is necessary for a *state policy* to be developed. By state policy they mean a unifying policy with clear objectives and actions that can transcend the different presidential administrations. In this respect, there is a basic difference between a state policy and a *government policy*, and this difference is based on the concept of short- versus long-term planning.

For two national authorities, governments have been unable to think ahead (e.g., 10 to 15 years from now), and most of the time actions are improvised, usually taken during emergency situations. Likewise, policies are not necessarily a product of a clear path drawn by the state; instead, they often function as “fire extinguishers.” That is, actions are taken when environmental problems become emergencies. Hence, environmental sanitation improvements are mostly due to transitory interests, not necessarily derived from concrete government policies.

A community leader in Site 1, and a community leader in Site 3, also agree that the country does not have a state policy with long-term planning. For them, projects only last four years (the duration of a particular presidential administration), and priorities change with each administration. According to participant in Site 1, because government officials are temporarily in their positions, they are mostly interested in the priorities of their particular administration than in future actions. Moreover, a national authority participant, raises the critical issue that politicians, guided by individual interests, might obstruct important strategic decisions. For him, investment priorities should take precedent over a politician’s personal interests. He reports municipal mayors who refuse to raise service tariffs, when they are technically needed, simply to gain political sympathy or to improve their image in order to garner votes.

A householder in Site 3, also states that different governments have failed to follow up the work of previous administrations, especially if those actions stem from a different political party. Perhaps government officials believe that it is always their responsibility to develop new strategies in order to seem proactive. However, as she points out, previous or existing actions can also be good and creative:

Due to the bureaucratic process, so many things are left waiting for 4 years to be implemented, and then comes another government that starts again from zero, following the same circle...Thus, what each government can really do is very little...The governors come, have their agendas for four years and show

what their main actions were...This might have two results, one positive and one negative. First, you might find interesting new things, innovative ideas, but on the other hand, past actions are not followed up...Certainly there are good [ideas] that can be rescued.

Therefore, a national authority figure, highlights the need for a state policy with long-term planning that can provide a common path for development, where plans are connected and can be followed up on—regardless of the different political parties that run the government. In this respect, two national authority participants, also point out that once a state policy can be put into place, institutions, communities, and households will know their roles and responsibilities. As one of them states, “first of all, there has to be a real state policy, once we have a clearly defined state policy everything will come into place, everything will fall down and will impact communities and households.”

Finally, a national authority, also stresses the power of this kind of long-term planning on countries’ capacity to change. He compared Costa Rica with Switzerland, stating: “I want to say that in the 1950s, 60 years ago, Swiss rivers were equally contaminated as Costa Rican rivers, and countries like Switzerland have shown throughout history that the government, universities, industry, private business, and people can agree on a harmonized plan...in Costa Rica there are enough resources to harmonize actions”.

Weak Inter-institutional Coordination

Eleven national authorities mainly emphasize that institutions are not working together to protect the environment. Instead, each institution is absorbed in its own everyday issues with little concern about the issues experienced by other institutions. The following statement summarizes the main ideas expressed by stakeholders on this topic:

Yes, it seems to me that the biggest limitation we have in the country is that we have not been able to join a lot of efforts (both public and private efforts) as well as NGOs and other organizations interested in water sources...We are duplicating efforts, and we are not working hand in hand...I am really convinced that we have the will and the needed resources to change the current situation, but all of these are scattered...However, when we begin to articulate efforts, we will realize that we can generate a stronger impact... This can be compared to having pebbles in our hands, instead of a big rock. When you throw a handful of small stones [they scatter, and the] impact is not [as big as when you throw a large stone]...If we try to unify all these

institutions: MINAET, Ministry of Health, AyA, universities, NGOs, municipalities, and so forth... [With the right politician,] I think we could make a greater impact.

Three major ideas can be identified from this quote. One refers to the duplication of efforts. Because institutions are not aware of the work done by other institutions, they might be focusing on the same issues. However, the impact of their work is not the same because efforts are scattered without integrative planning. This is what it calls, “having a handful of pebbles instead of a big rock.” Second, the government has failed to incorporate the efforts of public and private institutions. Failure to incorporate these efforts wastes a good opportunity to multiply existing resources and capacities, which, for some stakeholders, are very valuable and can make a positive impact on environmental sanitation, especially if private organizations are also involved. And third, Costa Rica needs a leader who can unify and coordinate efforts from public and private institutions. This last idea is considered crucial for efficient and effective institutional performance.

Besides this, stakeholders do not have a clear agreement on who should assume this coordination role (e.g., MINSALUD, AyA, or MINAET), and some of them state that not all of these institutions are well prepared to assume this leadership role. Interestingly, officials working at the AyA and the MINSALUD do not believe that their institutions should assume such leadership role either. This shows that there is no consensus regarding the institution that should assume the leadership role, or, perhaps, nobody wants to assume it. In fact, a specialist on water and sanitation issues recommend that public universities might be ideal figures to lead this process, since it is supposed that universities have a more “neutral” position. They are institutions without political party affiliation, with equitable social values, and have the scientific and technical background that might help overcome historical barriers encountered by public institutions.

This issue of institutional leadership might seem to be particularly important in order to improve environmental sanitation conditions. The country needs a space where different actors and service providers can act under a leading institution, which can guide actions efficiently and effectively. But it also needs a leader who can ensure sustainable and equitable services. In this regard, some stakeholders believe that institutions need to coordinate with different stakeholders, especially with those actors from local communities because responsibilities for environmental sanitation should be shared. Besides integrating institutions, it is also necessary to develop long-term projects that involve different actors in society. Furthermore, some stakeholders of all types express that there should be a politician who could lead a public discussion on environmental sanitation and who could help to make it a national development priority. For instance, as a local authority mentions: “the country needs a person who

is knowledgeable on the topic, who can understand the complexity of it, and who exhibits the willingness to advance Costa Rica’s environmental sanitation agenda”.

At this point, it is important to highlight this stakeholders’ idea to convince and involve private enterprises within environmental sanitation efforts because they have the resources and the capacity to enact environmental benefits. Likewise, private organizations have also shown an increasing interest in taking actions on this matter; thus, the government should take that interest very seriously.

Costa Rica’s Contradictory Image

Internationally, Costa Rica has been recognized as a “green” country in terms of protecting its biodiversity—usually called the “green agenda.” Much of Costa Rica’s current economic development strategy has been based on this green image, mainly through the promotion of tourism and eco-tourism. Nonetheless, most stakeholders recognize a contradiction between this green image and what really happens throughout the country, particularly in terms of waste management.

First, stakeholders refer to the issue of the “green agenda” versus the “brown agenda.” The green agenda refers to everything related to biodiversity protection, which is mainly resolved through the establishment of national parks. The brown agenda refers to everything related to waste management, which requires economic, social, political, and technologically complex solutions. However, it seems that despite the need to equitably address both agendas, Costa Rica, throughout the years, has put more emphasis on the green agenda. As a national authority figure explains:

I don’t know, but the concept that our country is trying to sell is highly oriented [around] the green context. The green agenda is excellent when it comes to the conservation of fauna and flora—everything related to conservation and protection—but our brown agenda does not have the same degree of importance as the green agenda does, and I refer to the brown agenda as the waste management in our country.

Disregarding waste management is especially dangerous for the well-being of the population and also jeopardizes the social development of the country. According to a householder in Site 3, the environmental agenda of the country should be more than landscaping and biodiversity protection. It is also a matter of resource availability and development. Thus, working on environmental sanitation involves more than simply protecting the natural resource base, it also requires choosing the economic model and the social development strategy for the country.

Therefore, Costa Rica is facing a significant contradiction. On the one hand, it is trying to project, internationally, an image of a country concerned with the protection

of the environment, based on this so-called “green discourse.” This image may be reinforced by the results of the 2012 Environmental Performance Index (EPI), in which Costa Rica ranked 5th in the world as one of the greenest countries. It is widely known by the Costa Rica population, that governments have used this “green” image to attract economic gains through tourism activities, especially tourists interested in visiting areas abundant in natural resources.

Nonetheless, this situation can be problematic because it generates double standards in terms of what is spoken and what is really done, especially considering the different realities experienced by tourists versus Costa Rican citizens. The problem of having these double standards can generate loss of confidence in the government, especially when people are aware of the vulnerability of their local natural resources. In this respect, stakeholders also mentioned that this green image of the country has been particularly used as a commercial slogan to attract tourism.

Similarly, a community leader in Site 3, highlights the problems of having these double standards because the population could lose confidence in the government, especially when people are aware of the vulnerability of their local natural resources: “When we start working on local environmental issues, it is laughable listening to government officials giving discourses abroad about how good the country’s environmental policy is. What I think is that officials are full of lies; those people are not trustworthy.”

In this respect, other participants also mentioned that this green image of the country has been particularly used as a commercial slogan to attract tourism. For example, a local authority participant in Site 1, mentions how the government has taken advantage of this green image of Costa Rica for commercial purposes. In fact, he was visibly angry because he believes that the government has not taken seriously the urgent environmental situation of the country. Similar to this participant’s opinion, another householder thinks that the environmental discourse that stems from the government is not genuine, and states:

I see the attitude of the government, how it is pleased to introduce TV promotional campaigns internationally to sell the country as a commodity... We are a green country that protects 25% or 30% of the country’s land...and because of that, in Europe, people are amazed and they come to the country and travel from the airport to the mountain refuge, but, of course, they don’t go through the pineapple crops...Rightly, tourists are amazed by the beauty of Costa Rica...however, people like us, who live far away from these touristic areas, we know that isn’t true...they are just selling a brand, an image, nothing more...the country shouldn’t be an article of commerce; instead, it must be protected for the well-being of all...it’s okay to come to visit the country, but also for people who live here, we have the right to enjoy it.

This last point, is also made by other two householders in Site 2. There is a sense of unfairness because tourists have the economic means to visit the most beautiful areas of the country, whereas common citizens must cope with environmental degradation, without seeing a real interest from the government to improve all geographic areas of the country. As a woman householder mentions, “tourists go to the better places; they don’t see our waste problems...where I live you cannot even find a trash can.” Also, she explains that important local resources have not been used for the communities themselves. Those areas with abundance of natural resources have been used with the aim of getting an external image abroad. For her, local populations do not see the direct effects of this national policy.

In summary, most of community leaders and householders experience a sense of unfairness because tourists have the economic means to visit the most beautiful areas of the country, whereas common citizens must cope with environmental degradation, without seeing a real interest from the government to improve all geographic areas of the country, in which rural areas are mostly in disadvantage.

The role of Social Work on Improving Environmental Sanitation Practices and Policies

In terms of achieving sustainable environmental sanitation conditions, social work advocacy plays a major role in promoting policy changes by positioning the issue at the top of national and local agendas as well as looking for improvements in terms of planning and implementation of projects. Principles of justice, participation, and intersectorial collaboration will strengthen the core functions of the government (Midgley, 2014). Social workers can advocate and work together with educators, engineers, and architects in urban planning as well as with national and local representatives to emphasize the importance of environmental sanitation in the social development of countries.

Moreover, social work education should start deepening the investigation and education on the understanding of the person-environment relationship. Curriculum modification can be a good start to strengthening such education. A course on environmental justice for social workers might be a good option within the university curriculum, where faculty and researchers can promote an interdisciplinary work with others such as primary and secondary school education, as well as with other university schools such as visual arts, media, architecture, engineering, public health, among others, in order to perform community projects on environmental sanitation throughout the country.

Informal spaces in communities and agencies can be a good method to educate about sustainable environmental sanitation practices as well. This point was also stressed by study participants since they recommend strengthening and

complementing both formal and informal education because not all people are formally educated. According to them, by strengthening both formal and informal education, the impacts can be greater. In fact, most local authority participants, community leaders, and householders recognize the value of informal education activities among the general population. For example, one of the main recommendations is to promote awareness through newspapers, television, and radio broadcasts dealing with issues on environmental sanitation. These media outlets reach a wide range of the population, especially in isolated, rural areas where access to environmental learning and resources is limited. Some householders say that environmental campaigns in media, especially in television, taught them important aspects about the value of water or solid waste handling. Some of them even comment that certain messages convinced them to make changes in their everyday practices. Other community leaders suggest utilizing public spaces, such as churches, to convey an environmental message to community members (e.g., displaying an educational video).

Moreover, participants recommend that within the formal education system there should be more experiential education so that students can directly experience the environmental characteristics of their communities and the impacts of their everyday practices. According to some local authorities and community leaders, fieldtrips to springs, drinking water aqueducts, and wastewater treatment plants can teach students how to protect water sources, about physical infrastructure, and maintenance processes.

On the other hand, some other participants suggest teaching sustainable environmental issues within the formal school curricula, specifically a solution-oriented curriculum that challenges a student's creativity and capacity. Some local authorities also recommend the importance of training educators in environmental sanitation issues as well as assigning more human resources to follow up on environmental projects such as school recycling campaigns.

Lastly, some national authorities recommend the need to reflect on the concept of environmental sanitation and its implications. Some of these authorities suggest the importance of regarding environmental sanitation from a human rights perspective. By doing this, it is possible that the population, in general, can be more proactive and demand quality services and healthier environments from the government. In this sense, the notion of sustainability should be related to the creation of healthy environments starting to promote the general well-being of the population through healthy lifestyles -via environmental campaigns, cultural activities, sport promotion, and the like. Also in Site 1, communities have started to understand that protecting the environment can lead to local development such as home-grown and ecotourism. According to some stakeholders, communities that achieve environmental protection as a way of improving living conditions (e.g., economic gains) are those that can generate sustainable change in the country. Moreover, stakeholders believe that a clear environmental sanitation policy is a prerequisite of sustainability.

Study Conclusions

According to study findings, Costa Rica lacks an explicit and comprehensive environmental sanitation policy. Although legal frameworks and programs addressing some aspects of environmental sanitation can be found, policies are fragmented and lack a comprehensive planning framework that articulates all national and local actions under clear objectives.

Overlapping functions and isolated efforts, related to environmental sanitation, are prevalent. According to some stakeholders, the lack of linkage at higher levels trickles down to local levels, and most environmental sanitation changes have been driven by individual or community efforts rather than by the government. For example, the responsibility for wastewater treatment mostly falls to individual householders. Moreover, the limited wastewater infrastructure investment made by the government has predominantly benefited the metropolitan area of the country. Overall, there is a common perception by stakeholders that the government has not invested equally in all areas of the country, rural areas being particularly neglected.

According to stakeholders, some policy issues should be prioritized in order to improve environmental sanitation conditions in Costa Rica. First, the country needs a national policy that can guide actions in the long run towards a desirable development pathway. By a national policy, stakeholders denote a unifying policy with clear objectives and actions that can transcend the different presidential administrations. Besides, institutions need to work together by incorporating efforts from public and private institutions. In order to effectively incorporate such efforts, some stakeholders stress the need for a leader who can coordinate such broad actions. Although it is the responsibility of government and institutions to implement policies, universities are important drivers of change by integrating different and disperse actors in society, by improving technology, and by disseminating new knowledge and interventions that result in more sustainable behavior. In this regard, social workers can play an important advocacy role in order to coordinate actions among very different actors in the country as well as disseminate knowledge of more sustainable practices.

As social workers, there is the need to understand environmental sanitation from a human rights perspective. WHO and UNICEF (2012) and UN-Millennium Project (2005) have noted that the environmental sanitation gap within and among countries is huge. This gap is detrimental for people's well-being, especially poor populations who are at major risk. Thus, as Midgley (2014) emphasizes, improving environmental conditions is one of the major challenges for achieving sustainable social development. Efforts must be directed to the legal obligation of governments to commit themselves to attain sustainable development goals under the notion of people's basic right to live in a healthy environment.

The fact that this social rights perspective has been neglected within the scope of environmental sanitation is a major problem. As a result, responsibility for environmental sanitation is diluted or is transferred to the individual or to the communities, who are not fully capable of assuming such responsibility. In Costa Rica, the government has put unrealistic expectations on people without providing the needed economic and educational support. This aspect has also been stressed within the literature regarding the need of political support to create enabling environments, that is, providing the needed resources to bringing about change (e.g., political, legal, institutional, financial, technical and social conditions that encourage and support improved sanitation activities) (Lüthi, McConville & Kvarnström, 2009).

The principle of differentiated responsibility should be guiding more of the actions on environmental sanitation in Costa Rica. The underlying idea of this principle refers to different levels of responsibility; therefore, responsibility cannot be considered equal. Resources, power, and capacities are different depending on the type of actor involved in the field. Furthermore, different actors' responsibility should reflect their level of impact to the environment (e.g., a chemical factory should shoulder more responsibility than a small restaurant in a community).

Thus, responsibilities should be different and clearly defined. In particular, the government needs to invest in infrastructure to provide quality environmental sanitation services, staff to ensure that companies and households are meeting established environmental standards, and environmental education to promote sustainable behavioral changes. It is expected, that once responsibilities are clearly defined at higher levels, effects will permeate to local and individual levels.

Moreover, citizens should campaign for their right to live in a healthy environment. Helping to organize and promote diverse voices across different communities, community leaders can be a powerful champion of health equity and environmental protection. Many of the environmental sanitation achievements in the country are the result of pressure, encouragement, and creativity from civil society.

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Appendix

Figure 1. Environmental Sanitation Sector Structure in Costa Rica.

