



## Information and communication technology for promoting environmental justice movement

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### Abstract

Environmental justice has become one of the rallying points in world environmental agenda. The alarming increase in the loss of ecosystems and ecosystemic balance, loss of natural habitats, climatic change, depletion of indigenous people's natural resources, and lack of participation in indigenous people's management of their natural resources etc. are some of the factors that have given rise to environmental justice. Information and Communication Technology (ICT) is seen as a technical tool for institutional building for democratic participation and decision-making by indigenous people in the management of their natural resources. This paper addresses the common concern of resource management, and how ICT can be utilized to advance the rights of indigenous peoples and control over their natural resources.

**Keywords:** ICTs, environmental justice, environmental injustice, indigenous peoples

### Introduction

Environmental justice has been described as "the fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies (USEPA, 2017). But according to Roewe (2020) who writes for the EarthBeat, the National Catholic Reporter, environmental justice has been defined by Robert Bullard, considered the 'father of environmental justice' as "the principle that all people are entitled to equal environmental protection regardless of race, colour or national origin. It's the right to live and work in a clean environment". Environmental justice is a movement that grew from the recognition of a disproportionate number of environmental burdens in certain communities. It works to ensure a healthy environment for all irrespective of racial or economic background.

Environmental justice as contextualized in Europe according to HEAL/CEPL (2007) <sup>[3]</sup>:

exists when members of disadvantaged ethnic, minority or other groups suffer disproportionately at the local, regional (sub-national), or national levels from environmental risks or hazards, and/or suffer disproportionately from violations of fundamental human rights as a result of environmental factors, and/or denied access to environmental investments, benefits, and/or natural resources, and/or are denied access to information; and/or participation in decision-making; and/or access to justice in environment-related matters.

It further adds that:

a condition of environmental justice exists when environmental risks, hazards, investments and benefits are equally distributed without direct or indirect discrimination at all jurisdictional levels and when access to environmental investments, benefits, and natural resources are equally distributed; and when access to information, participation in decision-making, and access to justice in environment-matters are enjoyed by all.

Its history is anything to go by, environmental justice movement is a legacy of the United States (US) minority

communities. It is a reference to poor air quality due to location to nearby oil drill sites, poor and poisoned water quality from nearby chemical plants, low income housing located at floodplain areas etc. Environmental justice otherwise known as environmental racism is suffered by the poor and people on the margins of society disproportionately exposed to threats to a safe and healthy life. Robert D. Bullard, a professor of urban and environmental policy identifies four major priorities of environmental justice as reducing environmental, health, economic and racial disparities (EarthBeat, 2020).

Environmental justice movement, also associated with climate change, date back to the civil rights movement and the 1968 Memphis Sanitation Strike, which protested unsafe working conditions and won the support of Dr. Martin Luther King Jr. As Earthbeat documents the issue gained momentum in the 1980s, when civil rights activities and environmentalists staged a sit-in in Warren County North Carolina against toxic waste being dumped in a nearby landfill. Although the demonstration was not entirely successful, it drew global attention to issues surrounding the first major environmental justice movement.

Following this account, two decades ago, two reports, one by the U.S. General Accounting Office and the other by the United Church of Christ's racial justice commission, highlighted the disproportionate proximity of toxic waste facilities near communities of colour. In 1991, the National People of Colour.

### Environmental Leadership Summit

Drafted 17 Principles of Environmental justice. In 1992, President George H.W. Bush established the Environmental Protection Agency's office of environmental justice. And in 1994, President Bill Clinton signed the executive order 12898 directing the federal government to address environmental justice in minority populations and low-income populations (EarthBeat, 2020; Beretta, 2012) <sup>[1]</sup>.

Environmental justice is a travelling discourse which has taken on distinctive meaning in different parts of the world – a discourse that is gathering momentum in Africa and in

Europe. This is the focus of the discussion that follows in the next section.

### **Environmental justice and Indigenous Peoples' Rights**

The human environment is seen as all the external factors and conditions in which we live. This will include the natural and fabricated materials used for shelter, food and water, other organisms including other humans, and the weather. Three types of environments can be identified to include natural, industrial and social environment. The natural environment includes water, light, land, air and all organisms that live in nature. Environmental justice movement is premised on the assumption that a healthy environment is a necessary component of a healthy life.

Environmental justice issues are wide-ranging, and cover many aspects of community life: environmental pollutants and hazards that compromise the health of a community or its residents, inadequate transportation, air and water pollution, sub-standard and unsafe homes likely to put residents at higher risk of health problems. Since environmental justice redistributes benefits and burdens, it supports the policies about the environment. The principles of environmental justice support and strengthen environmental laws through equal distribution of resources and laws regarding pollution. It is an important part of the struggle to improve and maintain a clean and healthy environment, especially for those who have traditionally lived, worked and played closest to sources of pollution.

In Africa, environmental justice issues have been in the front burner of local and international agenda. These issues have sparked-off environmental justice movements. As Sobrasuaipi (2014) <sup>[17]</sup> reports, in Nigeria, the Ogoni-Shell uprising led by Ken Saro-Wiwa took a centre-stage in 1990 when the Ogoni people sought for a more political autonomy and compensation for the environmental damage done to their land by Shell Petroleum Development Corporation (SPDC). This culminated in the declaration of the 'Ogoni Bill of Rights' in the same year. The Ogoni Bill of Rights called for the economic resources derived from oil exploration by SPDC for the development of Ogoni land. The declaration further demanded for a stop in the degradation of Ogoni environment and ecology. This declaration resulted in peaceful protests by Ogoni people to pressure their demands. The aftermath of these protests was the arrest of the nine Ogoni leaders led by Ken Saro-Wiwa and their eventual execution in 1995 by the then military Head of State, Sani Abacha.

Environmental justice as a movement was first introduced in South Africa at a conference of environmental activities in 1992. Tackling environmental racism was seen to be central to the process of democratization, especially between 1992 and 1994. Cock (2015) <sup>[5]</sup> reveals that "most black South Africans continue to live on the most damaged land, in the most polluted neighborhoods near coal fired power stations, steel mills, incinerator and waste sites. Many are without access to clean air, water and services". He also reveals that climate change is accelerating with devastating impact on the poor and working class. This is seen in the rising food prices, crop failures and water shortages. Consequently, South African is witnessing ecological collapse moving towards ecological catastrophe.

The clamour for environmental justice has resulted in the establishment of environmental justice organizations such as Earthlife Africa, Groundwork, the Vaal Environmental

Justice Alliance, the South Durban Community Environmental Alliance, Mining Affected Communities United in Action and Womin. These groups are involved in mobilizing alliances and popular power, developing new strategies and forms of communal solidarity built around everyday experience of working people, in particular, rising food and energy prices.

Environmental justice as contextualized in Europe is defined by CEPL/HEAL (2007) <sup>[3]</sup> as "the distribution of environmental harms and benefits, and access to and consideration in procedures dictating their distribution". In the view of Beretta (2012) <sup>[1]</sup>, environmental justice in Europe is seen more to have a class/income dimension than racial and ethnic dimension. However, that is not to say that environmental inequalities do not have a racial dimension in Europe.

A case in point that demonstrates environmental justice agenda in Europe is the Roma for want of space – even though environmental justice is a social, economic and political phenomenon in many parts of Europe such as Kosovo, Romania, Eastern Slovakia, Macedonia Albarica (exposure to pollution); Chek Republic (flooding); Bulgaria, Serbia (denied environmental benefits: access to water, waste management) etc.

CEPL/HEAL (2017) has categorized the environmental conditions surrounding the Roma thus:

Dissemination and persistent poverty is said to account for the poor health status of Roma, compared to non-Roman, have lower life expectancy and are more likely than not to live in substandard housing, be exposed to environmental pollution, and experience hazardous exposure in the workplace.

Some Romani settlements have been described by CEPL/HEAL (2017) as environmental time bombs. Two patterns of environmental discrimination prevail in Roma: toxic exposure from environmental liabilities and disease and homelessness related to flood vulnerability. The Roma is known to experience racial prejudice and discrimination. Roma communities take on a disproportionate share of the burden of environmental harms, and are frequently denied such benefits as access to water and other natural resources. The Roma typifies the experience of other minority communities highlighted above.

The sordid conditions that surround human existence in many parts of the world, culminated in the first national People of Colour Environmental Leadership Summit held in Washington DC, on October 24 – 27, which drafted and adopted 17 principles of environmental justice as follows:

1. EJ affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.
2. EJ demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
3. EJ mandates the right ethical balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.
4. EJ calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food.
5. EJ affirms the fundamental right to political, economic, cultural and environmental self – determination of all peoples.

6. EJ demands the cessation of the production of all toxins, hazardous wastes and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
7. EJ demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.
8. EJ affirms the right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from damages as well as quality health care.
9. EJ protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.
10. EJ considers governmental acts of environmental injustice a violation of international law, the Universal Declaration on Human Rights, and the United Nations Convention on Genocide.
11. EJ must recognize a special legal and natural relationship of native peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.
12. EJ affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honouring the cultural integrity of all our communities, and provided fair access for all to the full range of resources.
13. EJ calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccination on people of colour.
14. EJ opposes the destructive operations of multinational corporations.
15. EJ opposes military occupation, repression and exploitation of lands, peoples and culture and other life forms.
16. calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.
17. EJ requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations.

The UN declaration on the Rights of Indigenous Peoples was adopted by the General Assembly on 13 September, 2007. The Declaration is structured as a United Nations resolution, with 23 preambular Clauses and 46 articles. In most articles, an aspiration for how the State should promote the rights of indigenous people is included. Major themes of the articles include:

- Rights of self-determination of indigenous individuals and peoples (Article 7 – 8; 33 – 34).
- Rights of indigenous individuals and people to protect their culture through practices, languages, education, media, and religion (Articles 9 – 15, 25, and 31).
- Asserts the indigenous people's right to own type of governance and to economic development (Articles 17

– 21, 35 – 37).

- Protection of subgroups eg. elderly, women and children (Article 22).
- Land rights from ownership including reparation, or return of land i.e. Article 10 to environmental issues (Articles 26 – 30, and 32).
- Dictates how this document should be understood in future reference (Articles 38 – 46).

The UNDRIP addresses the rights of indigenous people in regard to restoring and protecting culture, traditions, indigenous institutions and the pursuit of self-determined development.

### **ICT as a Resource for Environmental Justice Movement Information and Communication**

Information and Communication Technologies (ICTs) are changing the ways in which people facing environmental injustice and activists communicate, collaborate and demonstrate. ICTs have an important role to play in building networks and civil society for environmental movement.

In a case study from Scotland, Crowther, Hemmi, Martin, and Scandrett (2008) <sup>[7]</sup> provide an excellent example of how ICT can be a new means of participation in the environmental justice movement, and by this process, people become a part of social action and social learning. This is an important process in adult education movements hence the necessity for changing methods and strategies in order to align itself with this new horizon.

As part of a broader spectrum of social movements, the task of environmental justice movement transformation cannot be achieved without learning new social and cultural practices. To this end, social movements need organizational resources, the capacity to sustain activists and the ability to elicit support from a wider public. This will entail alternative and effective communication strategies and learning processes. Eyerman and Jamison (1991) <sup>[8]</sup>; Crowther *et al* (2008) <sup>[7]</sup> assert that social movements have developed a distinctive feature thus creating their own 'cognitive praxis' enabling them to generate new knowledge, alternative world views and technologies, as well as new institutions and organizations. Learning takes place in the social, cultural and cognitive milieu created by movements. The significance of ICTs is that they aid a virtual dimension to these milieux, thus altering their temporal, geographical and dialogical attributes. This is made possible by the rapid increase in interactive capabilities of the internet with the emergence of user-controlled communicative and networking environments.

As Brunsting and Postmes (2002) <sup>[2]</sup> demonstrate, online social learning actions have obvious advantage over offline actions. According to them, peripheral members of a movement are more easily persuaded to participate in online actions than offline actions. Similarly in another study of trade activism, Sawchuk *et al* (2002) <sup>[14]</sup> reveal that activists may be encouraged by e-learning because its pacing and anonymity can be controlled by the learner. However, since this study is focused on formal e-learning workshops, it is important to find out if ICTs can mediate processes of social and individual learning in social movements.

In spite of the gains of ICTs as online social learning platform, such important features as face-to-face contact which enhances collective trust and bond among

participants in social movements may be lacking. The relative fluidity of internet fluidity and its tendency towards anonymity, seem to undermine collective action and commitments in social movements. Again, ICTs tend to isolate those who lack the digital skills required to participate in online social movements. On the whole, ICTs help to build awareness and new knowledge.

### **Environmental Justice as a System of Securing Environmental Rights**

International environmental law provides the framework for the fight against environmental injustice in the North and South. Environmental law is a foundation for environmental sustainability and its violation undermines the achievement of all dimensions of sustainable development and environmental sustainability. Gonzalez (2012) identifies environmental justice under four broad categories: distributive justice, procedural justice, corrective justice, and social justice. Distributive justice demands for the fair allocation of the benefits and burdens of natural resource exploitation among and within nations. Procedural justice requires open, informed and inclusive decision-making processes. Corrective justice imposes an obligation to provide compensation for historic inequities and to refrain from repeating the conduct that caused the harm. Social justice, described as the most nebulous aspect of environmental justice, recognizes that environmental struggles are inextricably intertwined with struggles for social and economic justice. As a matter of fact, environmental injustice cannot be separated from economic inequality, race and gender subordination, and the colonial and post-colonial domination of the global South.

The South bears the heavy burden of environmental injustice despite their far smaller contribution to global environmental degradation. This has been caused by the overconsumption and development pattern of the North. Gonzalez (2012) <sup>[12]</sup> recognizes environmental justice movement as a growing trend on every continent – a development that followed after the colonization of America and Africa by European nations. Environmental justice advocates alleged distributive injustice in the form of disproportionate exposure to environmental hazards; procedural unfairness in environmental decision-making; corrective injustice due to inadequate environmental enforcement; and social injustice because environmental degradation cannot be separated from other problems plaguing low income communities and communities of colour.

The use of international law as an instrumentality for equitable and effective solutions to global environmental problems must be premised on a morally compelling narrative that recognize, the historic roots of environmental injustice and seeks to provide redress to the nations and communities disproportionately burdened by environmental degradation. Sadly, the discourse of international environmental law is often technocratic and ahistorical. It does not educate the World's wealthy about their inordinate contribution to global environmental problems to the alienation of the World's poor who demand fairness and equity in the distribution of the planet's finite resources.

Consequently, environmental justice requires the mitigation of structural inequities that impose a disproportionate share of the environmental costs of global economic activity on the global South and on vulnerable populations in both rich

and poor countries. Environmental justice should necessitate the implementation of measures to reduce the overconsumption of the world's resources by the North, to reduce North-South inequality, to curb the power of transnational corporations, and to guarantee full and effective participation in international, national, regional and local governance by Southern nations and vulnerable communities. Also, environmental justice demands for a re-prioritization of dominant economic paradigm in order to promote social and economic development having regard to the Earth's finite resources.

Environmental justice is embedded in international human rights which include the rights to life, healthy, and cultural integrity, the right to be free from race and sex discrimination, the rights to information, participation, and redress for environmental harm, and the right to a healthy environment (Gonzalez, 2007) <sup>[11]</sup>. Human rights and environmental protection are inextricably connected. The enjoyment of internationally protected human rights depends upon a healthy environment, and serious environmental degradation is often accompanied by human rights abuses. By the same token, environmental protection is strengthened by the exercise of human rights, such as the right to information and the right to participate in governmental decision-making (Shelton, 2001) <sup>[16]</sup>. Invoking human rights law and institutions when human rights are threatened by environmental degradation according to Shelton (2001) <sup>[16]</sup> ensures that:

the environment does not deteriorate to the point when the human right to life, the right to health, the right to a family and private life, the right to culture, the right to safe drinking water, or other rights are seriously impaired.

As Garcia (1999) <sup>[9]</sup> points out, human rights law is based on the natural law notion that human beings have inalienable, permanent and fundamental rights by virtue of their humanity, and that these right may not be compromised in favour of competing interests, such as economic efficiency. A recognition of this entitlement as human rights protects them from the tyranny of the majority, the dictatorship of the minority, and the compromise of economic independence that takes place in the negotiation of international trade and investment agreements (Shelton, 2001; Gonzalez, 2007) <sup>[16, 11]</sup>.

Kravchenko and Bonine (2008) <sup>[13]</sup> assert that human rights violations linked to environmental degradation have been recognized under the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), the European Convention for the Protection of Human Rights and Fundamental Freedoms and the American Convention on Human Rights despite the lack of explicit environmental human rights provisions in these treaties. The African Charter on Human and People's Rights and the Additional Protocol to the American Convention on Human Rights in the Areas of Economic, Social and Cultural Rights, do recognize substantive environmental human rights. By these Conventions, international human rights law is therefore an essential tool for victims of environmental injustice. However, it goes without saying that human rights approaches to environmental protection do have some flaws. Environmental treaties generally lack citizen complaint mechanisms, and human rights tribunals remain only international forum in which victims of environmental injustice can challenge governmental action or inaction

related to the environment.

### **Role of National Governments in Guaranteeing Environmental Justice**

The global environment needs government and governmental organizations participation in the management of natural resources and the environment. Governance has a strong impact on environmental actions and outcomes.

Government's role in promoting environmental sustainability is expressed in four ways: 1) policy development, 2) regulation, 3) facilitation and 4) internal sustainability management.

These government roles would require that in policy development, boundaries are set by recognition of major sustainability challenges at global, national, regional and/or local levels; policies use to prioritize, set goals and design coherent long-term strategies, and formulate targets and determine type of government activities and budget. In regulation, boundaries are set by international law; it is used to protect public benefits and to correct market failure in managing externalities; and long-term response to market. In facilitation, boundaries are set by political paradigms and ability and willingness of business and other actors to cooperate for change; used to stimulate breakthrough in transition management; and R&D, endorsing, convening roles, financial incentives, Societal cost benefit management. In sustainability management with government (CSR), boundaries are set by peer group, core values and stakeholders; used to lead by example and manage effects of core business; and reduce carbon footprint, green procurement, manage supply chain.

Governments are called to play a significant role in promoting sustainability thus:

1. Vision/Goal Setting: Governments are expected to provide vision and strategy to incorporate sustainability in public policy. This is possible by developing strategies for a transition to an economy based on sustainability principles.
2. Leading by example: Governments can ensure that public procurement conform to green procurement of innovative environmentally-friendly products.
3. Facilitator: Governments need to develop a strategy to build an eco-economy so as to create open, competitive, and rightly framed markets that would include pricing of goods and services, dismantling subsidies, and taxing waste and pollution, etc.
4. Green fiscal authority: Governments need to explore environmental taxes and market-based instruments for ecological fiscal reform.
5. Innovator/catalyst: Governments need to play leading and strategic role in advancing innovation in all sectors of society since the advancement of sustainability will demand changes.

Government role is changing and reflect the dynamic change in society. On holding public trust and authority, government protects public interest and regulates policies. In doing so, government works in cooperation with other stakeholders from corporations, NGOs and CSOs. Consequently, the future of a sustainable world in which environmental justice thrives lives in the policy decisions made by governments, individually or collectively (Worker, 2015).

Worker (2015) citing World Resources Institute, highlights

70 countries with strong national laws for environmental democracy using the new Environmental Democracy Index (EDI) of the "right to be involved in environmental decision-making: to know what is at stake, to participate in the decision itself, and to have the ability to challenge decisions that disregard human rights or harm ecosystems". The three countries with the highest rating, are all former Soviet states: Lithuania, (2:42) Latvia (2.31) and Russia (2.35). Others that made it to the top in the order of ranking are: United States (2.16), South Africa (2.16), United Kingdom (2.14), Hungary (2.12), Bulgaria (2.10), Panama (2.02) and Columbia (1.99). The lowest scoring countries on the index are Haiti, Malaysia and Namibia with scores of 0.51, 0.58 and 0.59 respectively.

Two principles of agenda 21 are relevant to sustainability: (1) the right to development must be fulfilled so as to equitably meet developmental and environmental needs of the present and future generations; and (2) in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it (UN-Agenda 21).

### **Conclusion**

ICTs play increasingly crucial role in creating awareness and building new knowledge in the environmental justice movement. ICTs are having an impact on the nature of social and political conflicts by creating new sites of struggle and new means of participation in social action. The UN declaration on the Rights of Indigenous Peoples establishes a universal framework of minimum standards for the survival, dignity and well-being of the indigenous peoples of the world and it elaborates on existing human rights standards and fundamental freedoms as they apply to the specific situation of indigenous peoples. As highlighted in this paper environmental provisions are made in the national policy of most governments but marred by weak implementation. This weak implementation that subsists in many countries promotes environmental injustice. The inclusion of indigenous peoples in the exercise of decision-making authority is paramount to change.

In recognition of this right, the UNDRIP's call for adequate representation of indigenous peoples in policy and decision-making is instrumental in breaking the cycle of discrimination and exclusion suffered by indigenous peoples in a number of countries. Voices of diversity with different perspectives and world views must be included to enable better law-making and improve governance that effects indigenous peoples.

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