

Handbook of Research on Sustainable Development Goals, Climate Change, and Digitalization

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Chapter 1

Re-Thinking the Sustainable Development Goals From the Point of View of Social Ecology and Environmental Law

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ABSTRACT

This research tries to understand the Sustainable Development Goals (SDG) from the perspective of social ecology and environmental law, away from the Darwinian theory of man dominating nature and more focused on rethinking the SDGs from the nature-society co-evaluation in the adaptive sense of society to the new reality of its physical-natural support and to the new legal system of human rights. Development with victims from biologically rich countries like Peru with paradoxical poverty is analyzed, and likewise, the collapse of society in the face of imminent climate change due to human action is analyzed, which requires climate justice for environmentally displaced people in the face of the violation of their human rights, especially of children at risk. Finally, a Latin American academic contribution is presented to rethink the SDGs, generating contributions to the later times of the social confinement of COVID-19, in the so-called new normal.

INTRODUCTION

The global health crisis that humanity faces, makes us rethink the Sustainable Development Goals (SDG),

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in the construction of the new paradigm of social ecology, avoiding the tragedy of the common good in its two essential characteristics: that there is no rivalry for them and there are no exclusions of people; so that we can all enjoy those. The SDG action plan made up of 17 goals and 169 targets that the 193 member states of the United Nations system adopted in the 2030 Agenda for Sustainable Development, seek to end poverty, fight inequality and tackle climate change by 2030. To understand these SDGs with the new paradigm of Social Ecology, we must go to the political implications of Darwin's Theory, based on competition and the survival of the fittest and with this "scientific justification" the expansion of the British Empire over the rest of the world. The Darwinian displaced the study of biological interactions, which are collaborative ways of sharing resources in the strict sense of the laws of nature. Darwin was used to impose the idea "the dominating man of nature", in the thought of "the supremacy of the strongest over the weak". Darwin's Theory is the evolutionary biology of the species with reproductive isolation as a real entity, while Ecology emphasizes community relations, including the human one, especially in adaptation. This approach responds to the interactions between human flora and fauna species as one of the engines of evolution.

Like biological interactions that lead to modifications in ecosystems; in human interactions with ecosystems, the same thing happens, they are degraded if they are managed beyond their capacity for recovery and self-purification, with which toxic substances generate risks to human health as a result of human activity itself; above all, in a relationship marked in the linear sequence: ecosystem-merchandise-profit, which leads to an individual and unsupportive linear worldview, producing a Global Unsustainability Crisis (Vegas-Gallo, 2003).

With social ecology and environmental law, we intend to rethink the SDGs based on the coevolution between nature and society, in view of the fact that human societies transform their natural environment by producing changes in social structures, to adapt to the new realities of their natural physical support, with an environmental justice system. We see this positive relationship between society and nature in the first empire of pre-Columbian South America, of the Wari culture, which with an elliptical worldview settled in the heights of the current Moquegua Region, managing the water resource in the rainy and dry seasons to develop agriculture and allow geographic expansion. This means that the relationship is not individual but social community. The link between man and nature should obey a shared and ethical worldview for sustainability, considering that "globalization has fallen into an ethical vacuum." It is evident that it is necessary to promote it politically to move towards a sustainable society.

DEVELOPMENT WITH VICTIMS: PARADOXAL POVERTY OF BIOLOGICALLY MEGADIVERSE COUNTRIES

Within this list of "mega diverse countries" there are 6 Latin American countries (Mexico, Colombia, Ecuador, Peru, Brazil, Venezuela), which from the beginning of the 21st century to the present show a severe picture of "paradoxical poverty" (Kliksberg, 2004). Peru, with a territory dominated by the Andean mountain, presents a particular biogeography with life zones that go from the coastal desert-marine edge to the Andean ecosystems and the humid mountain ecosystems run along the eastern mountain range. This geography favors the biological richness of species, ecosystems and landscapes; cultural and ethnic. Within its territorial limits a high specific richness of mammals, birds, reptiles, amphibians, marine fish and continental waters has been recorded. In its floristic diversity it registers almost 25 thousand species, being one of the twelve original centers of agricultural cultivars on the planet. Peru with these figures

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can aspire to a country with high human development, in a modern futuristic vision and taking advantage of its comparative advantages; unfortunately, it is an exporter of natural resources without added value.

These biological figures are paradoxical with their medium to low human development, with 51.3% of Peruvians in poverty and 23.1% in extreme poverty (figures before the COVID-19 pandemic). It ranks 123rd out of 196 countries in literacy rate and 88th in infant mortality (18.4 deaths / 1000 normal births); while life expectancy (79.74 years) is in 36th place globally and third regionally. For (Kliksberg, 2004), the answer goes through the ethical challenge in Latin America mainly in the fight against state corruption (Case of the Transnational Odebrecht of Brazil), drug trafficking, uncontrolled migration, lack of education and health, it also goes through protect infants at risk, families burdened by poverty, provide opportunities for young people and reduce crime. In short, social justice is required.

In the exporting primary development model, dependent on Natural Resources NR, “Western consumerist naturalism” predominates, which considers nature external to humans, without being subject to law; consuming 1% of the world’s population 80% of the world’s natural resources deepening the ecological footprint (urbanized land, carbon dioxide, farmland, fishing grounds, forest products, grazing lands), in which Western naturalism it demands more from nature than it can produce. In the past 55 years the demand for natural resources in the world has exceeded available biological capacity, leading most countries to live with ecological deficits and the collapse of their societies.

COLLAPSE OF CURRENT SOCIETY

In his research, (Herrington, 2021), warns that the collapse of society would take place in 2040: “without a drastic change, industrial society is heading for collapse”, corroborating a study by the Massachusetts Institute of Technology (MIT) (Meadows et al., 1972), the conclusion of which indicated “the search of humanity by economic growth without taking into account environmental and social costs would lead to the collapse of society in the middle of the 21st century”. Herrington using the World3 computing model, concludes “the consumer entrepreneurial mindset puts emphasis on business above all else, will lead to a decline in economic growth in the next decade (2021-2030), followed by total social collapse by 2040. “This terrifying forecast” does not mean that humanity will cease to exist”, but rather that “industrial and economic growth will stop and then decline, damaging food production and living standards.” Regarding the results of the MIT 1972 model, Jerry Foster, team leader pointed out “around 2020, the condition of the planet becomes very critical... if we don’t do about it the quality of life is reduced to zero... pollution becomes so serious that it will begin to kill people, which in turn will cause the population to decline, to a much lower figure than in 1900 ... at this stage, around 2040-2050, civilized life as we know it on this planet will cease to exist”. It is remarkable the coincidence of the 2020 turning point indicated by Foster, with the beginning of the year of the C19 pandemic. Although the simulated scenario of MIT 1972 suggests a society doomed to failure, in Herrington’s study (2021) it transcends that, with science and technology for sustainability, as well as greater investment in public services (especially in health, education and sustainable infrastructure) could lead us away from collapse. She adds “humanity will have to make a great effort in this decade to change this bleak future. Not all hopes are lost implies a deliberate and global change of trajectory towards other sustainable development goals that is not exclusively excessive economic growth to avoid the worst case scenario”.

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ECOLOGICAL RESTORATION FOR DURABLE DEVELOPMENT

The formation of Planet Earth occurred 4.55 billion years ago and the beginning of life 3.55 billion years ago. *Homo sapiens sapiens* has required 99.99% of the evolutionary process of Life, with Humanity just being born 10 thousand years ago. In the last 70 years, ENVIRONMENTAL DAMAGE has occurred, which causes terrestrial architecture to collapse, destroying the ecological basis of life in the various biomes and terrestrial and marine ecosystems. This global crisis is the crisis of conventional development models. It is a development with victims. For the World Meteorological Organization (WMO) there is a 40% probability that Planet Earth will be closer to warming by 1.5 ° C in the next five years (2021-2025), a figure that would be close to the inflection point of 2 ° C forecast for 2050 (World Meteorological Organization, 2021). The Global Bulletin on Climate Change indicates that there is a 90% probability that the period 2021-2025 will be the warmest year in history. So far the warmest year has been 2016. In that sense, (Vegas-Gallo, 2018); points out “to conserve biodiversity, the factors that threaten it must first be recognized and clearly defined”. Among them he cites the loss and fragmentation of habitat, overexploitation, pollution and global climate change.

The Rio 1992 Conference was the starting point that forced countries to turn their attention to the environmental issue. The governments of the south do not fully understand that by destroying the ecological basis of life there will be no social development or economic development in the future. There are no magic recipes for solving the degradation of ecosystems. Basically, it involves modifying our economic system and consumption habits in such a way that the natural foundations of life are preserved. Faced with the possibility that humanity collapse, as Robert Heilbroner called it “ecological Armageddon” (Heilbroner, 1970), the United Nations calls on countries to urgently make peace with nature by promoting the restoration of ecosystems. For this, it has established from 2021 to 2030, the Decade for the recovery of terrestrial ecosystems; in an urgent call to wage a world war for the health of the planet. Likewise, for the strengthening of SDG 14 SUBMARINE LIFE, the United Nations Organization itself recommends that a joint effort be carried out between the States, the business community, fishermen’s unions and the university academy (with ocean science and technology), to allow the Oceans to recover their health and provide proteins for human nutrition. In the Peruvian case, fishing and fisheries are managed by four business groups, burning proteins for flour and oil destined for animal feed, regardless of the sustainability of the fishery, only with a mercantile vision with the complicity of the government entities of control, supervision and investigation. marine importing little that many fish that Peruvians commonly consume could disappear as ocean warming increases the pressure on their survival, hampering their ability to survive.

Scientific research is crucial above all so that developing countries in the race against the clock for smarter development must race and prioritize their transition towards digital and ecological societies, designing new political tools to facilitate the transfer of technology with their own research to the industry, avoiding being recipients of foreign scientific knowledge and technology (Schneegans et al., 2021). With the current COVID-19 pandemic and the evolution of the geopolitical panorama, it is necessary to debate on how to safeguard strategic interests in health, education, trade and technology; starting by recognizing the unitary concept of health (human, animal and ecosystem health); understanding that public policies on health must consider both social and environmental determinants.

Given this, it is necessary to recognize that the current pandemic and others to come, prevention measures not only involve confinement or health education, such as hand washing, but also ensure that

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ecosystems are healthy as natural containment and containment barriers. that we also have an environmental policy with low impact.

CLIMATE CHANGE, CLIMATE JUSTICE AND HUMAN RIGHTS

In a recent report, the Intergovernmental Panel on Climate Change (IPCC) points out “it is unequivocal that human influence is responsible for the warming of the atmosphere, the ocean and the earth” (IPCC, 2014). Although the results of the IPCC Report are not encouraging in concluding that humans are responsible for the current climate crisis and that we will exacerbate it in the near future; It is also true that the solution to that is in our hands with public policies to adopt reforestation measures and the elimination of the use of fossil fuels to slow down its anticipated progress, overcoming global warming in the 21st century of 1.5 °C and even exceeding 2 °C.

(Vicedo-Cabrera et al., 2021), using empirical data (1991-2018) from 43 countries, estimated the mortality burden associated with exposure to heat produced by climate change. In all study countries they found that on average 37% of deaths are related to extreme heat. The study considered data from more than 29 million deaths. For Latin America the situation is more worrying. In Ecuador 76.6% of deaths are linked to high temperatures, Colombia 76% and Peru 73.5%.

CLIMATE DISPLACED

With climate displaced persons or environmental refugees, both nationally and internationally, a true transgression of all human rights occurs, starting with the scarcity of resources for the displaced, the human right to education as seen in the indigenous and rural community, in Africa or even exchange of fish for sex in some African regions; the right to freedom of movement that due to climate change cannot return to the country of origin and even the right to decent housing (Ibarra-Sarlat, 2019).

It is necessary that the Courts of Justice begin to deal with these issues and for which there is a political and legal basis for the administration of environmental justice, referred to in Principle 10 of the Rio Declaration.

(ECLAC, 2020a), based on this Principle, has implemented the Escazú Agreement for Latin America and the Caribbean; whereby citizens can request information from governments regarding environmental conservation and also the duty of those for the protection of environmental defenders. Peru, due to political and business pressure, did not ratify the Escazú Agreement. However, there is the Madre de Dios Pact for Environmental Justice, with 10 commitments; taking into account the Amazon deforestation as a result of illegal gold mining and drug trafficking; that lead to the assassinations of environmental defenders (a dozen in the pandemic confinement) and environmental displaced people to Lima Capital.

Worldwide, there are nearly 30 million climate displaced people who left their homes due to disastrous floods attributable to climate change and whose human rights are precarious. In Piura, Peru, the year 2017; There was a Coastal Child with catastrophic floods, as a sign of global warming, leaving the infrastructure of the Region collapsed materially and without economic growth and with more than 30,000 people displaced to shelters, lacking water, drainage and electricity; with children who, before the pandemic, used to walk for miles among the dunes of the Sechura Desert to reach their Educational Center. Persistent and recurring situation since the sixties of the last century, in evident lack of concerted

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planning between the different levels of government for a dignified life with well-being. This Peruvian, Latin American and global reality with asymmetry and social inequity, leads us to the issue of violated human rights that collapse as a society. David Boyd High Commissioner of the United Nations (2021) points out “to conserve and protect nature, human rights must be placed as the central axis if we want to guarantee the future of life on our planet” and also expresses “leave human rights on the margins of the process cannot be an option, because conservation centered on them is the most effective, efficient and equitable way to protect the planet”.

In the Report (UNICEF, 2021) called “The climate crisis is a crisis of the rights of the child,” the Children’s Climate Risk Index, IRC, is presented, concluding that 1 billion children (almost half of the total of 2.2 billion that exist in the world) are severely exposed to the effects of the climate crisis, the most vulnerable being children in the Central African Republic, Chad and Nigeria. These children face the lethal combination of being exposed to multiple climatic and environmental shocks and being highly vulnerable due to the precariousness of the essential services they receive, such as water, sanitation, medical care, education and poor nutrition. An emblematic case of climate justice that deserves to be pointed out is the Schell Case, in the Court of Justice of The Hague (Friends of the Earth International, 2021), which obliges the oil company to reduce greenhouse gases by 45%, as it had in 2019. Although it is true this ruling is only applicable in the Netherlands, it will undoubtedly have worldwide repercussions. The positive of the sentence is that the Dutch justice includes the principles of precaution, prevention, environmental damage and non-regression in environmental matters.

FINAL COMMENT

Last 2020 the Peruvian University of Sciences and Informatics UPCI, the Autonomous University of Guerrero UAGro, Mexico; the World League of Environmental Lawyers LMAA, Mexico and the Center for Research and Development of Education, Culture, Science and Technology CIDECCYT; held a panel in eight sessions rethinking the SDGs, for the Post Covid 19 time, generating contributions to the later times of social confinement to what is called “new normal”, in the vision of Social Ecology and Environmental Law; understanding that the fatal, social and economic consequences of C19 are as dramatic and threatening as are its structural causes (ŽIŽEK, 2020), (WHO, 2020); transmitted through the YOUTUBE channel of CIDECCYT.

The joint work that is proposed is in accordance with the consideration of the “2030 Agenda that in the post-Covid-19 world requires more cooperation and regional integration, greater multilateralism and productive integration”; consistent with the Report (ECLAC, 2020b): The social challenge in times of COVID-19, where an economic, social and welfare proposal is proposed. The Report points out “there is a fragility of the welfare state in the people of Latin America and the Caribbean, because access to health is fragmented by income levels, a problem that is exacerbated by the existence of vulnerable groups that do not have an affiliation to get a retirement pension”.

The pandemic caused by Covid-19 has made visible the structural problems of the economic model and the shortcomings of social protection systems and welfare regimes. Therefore, a new normal is not the way, we must rethink the development model and consolidate the economic, social and environmental dimensions of sustainable development, leaving no one behind, said Alicia Bárcena (ECLAC, 2021).

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Figure 1. Online Latin American panels

Source: (UAGro, 2020)

Latinamerican Online Panels

In the area of employment, more than 50% of workers are in the informal sector without social security support. These structural difficulties exacerbated by the pandemic cause poverty to increase by 28.7 million people more than in 2019, this means that there will be approximately 2 147 million poor people. In relation to extreme poverty, it will increase by 15.9 million people more than in 2019, which will generate 83.4 million people in extreme poverty in the region.

We start from the consideration that it is important to take the learning that this pandemic offers us to improve social aspects, human rights, education, science, culture, environment, among others, which allows the elaboration and implementation of an action program to gradually transform the consequences of this coronavirus and its chaos. In such a way, that we obtain responses to future pandemics and other global challenges, of which the most urgent is climate change, which requires a stronger focus on carbon neutrality by 2050 and on caring for biodiversity (Guterres, 2020). These transformations must be added to the end of the climate wars, the wars for natural resources (for example, the war for oil), the water wars (as in the case of the conflict in Darfur, in western Sudan) and the environmental wars. in armed conflicts. Also, it is necessary to ensure that countries do not abandon their environmental responsibilities with the justification of the coronavirus pandemic (Sharma, 2020).

While it is important to respond to the pandemic in the short term, it is inescapable to place the Covid-19 pandemic in the historical context to avoid repetition of past mistakes, think about the unthinkable, plan what to do after the Covid-19 disaster, and give answers to questions such as: what world do we want to live in when all this ends? What education do we need? How will science and technology focus on the poorest and most vulnerable be strengthened? field, male and female peasants? How will public health systems be strengthened?

To offer answers to these and other questions that allow us to be better human beings, it is important to think in the long term in the midst of the Covid-19 crisis, since now is the time to imagine the world to come. to rethink our priorities and needs, becoming the opportune moment to build the future we want.

There are different institutional and academic voices that are in accordance with our proposal to think about the world after the pandemic. Some of these voices are the UN's approaches to human rights.

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(In the report: COVID-19 and Human Rights we are all in this together (Guterres, 2020). Likewise, the ECLAC Report, “Latin America and the Caribbean: Measuring the effects of COVID-19 to think about reactivation, is relevant.” (ECLAC, 2020a); and furthermore, we find a strong argumentative closeness in the manifesto signed by 170 Dutch intellectuals and scientists entitled: Five proposals for the post-coronavirus: we can make the Netherlands radically more sustainable and fairer (Arsel, 2020).

The inter-institutional alliance between UAGro, UPCI, LIMAA and CIDECCYT; It allows us to tackle the priority task of rethinking how to achieve the proposals of the framework of action of the SDGs, under the gaze of Social Ecology and Environmental Law.

One of the cross-cutting tasks of the international community, in the midst of this health crisis, is to strengthen efforts to guarantee health and well-being in accordance with SDG 3. More work is needed in education, equity, the environment and peace with the achievements of SDGs 4, 10, 13 and 16. Education (SDG 4) is one of the debated topics where the answers to the problems referred to and raised in the report of the Organization of Ibero-American States for Education, Science and Culture (OEI) (Sanz et al., 2020). In this regard, the following questions were raised: what measures are necessary to reduce the educational and social impacts on education due to the actions taken in the face of the Covid-19 pandemic? What effects are there and what solutions can be carried out by the closures of educational institutions where the alternative of online education had an impact on the digital divide for students and teachers? How are educational indicators (enrollment, dropout, approval, failure and terminal efficiency) impacted? of education in highly marginalized areas and groups such as: rural areas, groups of indigenous peoples and Afro-descendants or disabled people? What should be the actions for the reopening of educational institutions at all levels? role can popular, alternative, emancipatory pedagogies play? How to implement alternation pedagogy in rural schools? And for what and how to strengthen the training of rural teachers?

Regarding SDG 13 in the environmental case, David Boyd considers that it is necessary to: “accelerate efforts to achieve the 2030 Sustainable Development Goals”, since achieving “a healthy environment is an effective way to prevent pandemics and protect human rights” (Sharma, 2020).

For the environmental issue Adhanom Ghebreyesus points out:

“More than six million deaths annually are due to combined air pollution in homes and in the environment. Air pollution is one of the leading causes of the noncommunicable disease epidemic, accounting for between a quarter and a third of the burden of disease from stroke, coronary heart attack, lung cancer, and chronic obstructive pulmonary disease, as well as more than half of deaths from childhood pneumonia” (World Health Assembly, 2018).

Regarding economy and society, Michelle Bachelet; According to (Barral, 2020), she points out: “we have to redouble our efforts to build more inclusive and sustainable economies and shape societies that are more resistant and resilient to crises, and for this the SDGs are still our most powerful instrument.”

Consequently, the inter-institutional and interdisciplinary articulated work of the UAGro, the UPCI, the LIMMA and the CIDECCYT collectively seeks to contribute in different interpretations of the SARS-CoV-2 pandemic and the times after it, which contribute to forging another vision of the world, different from the one we live in at the moment (Chomsky, 2020); through debates with a high level of rigor and depth, to answer the question of how to achieve the transformation of the SDGs that contributes to changing the economic model that generated this disaster (Klein, 2020) that is hitting the right to health hard and exceeding the other human rights.

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We recognize that this is a miniscule world crisis in the face of the great challenges of this civilization in reference to climate change, the approach of a nuclear war, the increase in poverty and famine (there may be more than 135 million people facing level three of insecurity at the end of 2020, there could be 130 million people who are in phase 2), inequities and inequalities and, above all, the arduous task of achieving a culture of peace.

To achieve alternatives on the results of this pandemic, we rigorously address debates about the new role of SDGs 1 to 8, 10, 11, 13, 16 and 17 related to human rights, science, technology, social, the economic, the political, indigenous and Afro-Mexican peoples, young people, women and children, migrants and refugees, the ecological, educational, health, cultural, violence, peace, among other dimensions of analysis that allows recognizing the incidences of inequity and social inequality in different populations and areas affected by the pandemic, such as ours, Table 1, where ECLAC proposes socioeconomic effects due to the exacerbation generated by Covid-19.

Table 1. Populations affected by the impacts of Covid-19

The different socioeconomic impacts reflect the social inequality matrix		
Populations most affected by the socioeconomic impacts of COVID-19		
Population	Area affected by the pandemic	
Women	Physical and mental health Nutrition Education Labour income Child labour Access to basic services (water, sanitation, electricity, gas, digital technologies) Unpaid care work Intrafamily violence	* Inequalities , which accumulate, enhance and interact, cause discrimination that implies differences in the exercise of rights.
Low- and lower-middle income strata		
Informal workers		
Female paid domestic workers		*In a context of confinement, unpaid domestic work and violence against women, girls and adolescents increases.
Children and adolescents		
Young people		
Older persons		* The poorest children and adolescents: increase in child labor
Rural population		
Indigenous peoples		
Afrodescendants		
Persons with disabilities		
Migrants		
Homeless persons		

Source: (ECLAC, 2020a)

Another issue addressed in the panels has been the structural problem of food security, where currently 821 million people go to bed hungry, this figure being able to double with loss of food security sovereignty. In relation to this reality, it is important to guarantee food security and promote the resilience of the agri-food sector so that SDGs 1 and 2 are achieved, in relation to achieving zero hunger, a commitment that is now seen much further than before. Agriculture is analyzed based on its negative environmental impacts, such as the “avocado” in Mexico or viticulture in Piura, Peru.

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