LEARNING by DOING

Scaling up Ambitious Leadership Learning By Doing Dominican Republic

ANNUAL REPORT 2021



Scaling up Ambitious Leadership Learning By Doing Dominican Republic

ANNUAL REPORT 2021

Santo Domingo, Dominican Republic June 08th, 2022





CIES consorcio de investigación económica y social Construyendo conocimiento para mejores políticas





Contents

Acronyms		3
1.	Introduction	4
2.	LbD Project and participants in the Dominican Republic	5
3.	Baseline	7
4 ·	Scrum personnel selection criteria	12
5.	Reports from scrums in 2021	12
6.	Other activities 2021	16
7.	Knowledge insights	19
8.	Peer review and suggestions	19
9.	Impacts	19
10.	Conclusions and view forward	19
Anne	ex I – List of Main Stakeholders	21



Acronyms

IKI	International Climate Initiative (in German)
СВО	Community Based Organizations
CNCCMDL	National Council for Climate Change and Clean Development Mechanism
DR	Dominican Republic
ECORED	National Business Environment Support and Protection Network
GDP	Gross Domestic Product
LAC	Latin America and the Caribbean
LbD	Learning by Doing
MEPyD	Ministry of Economy, Planning and Development
MSMEs	Micro, Small and Medium Enterprises
NGO	Non-Governmental Organization
ONE	National Statistics Office
SIDS	Small Island Developing States
UNFCCC	United Nations Framework Convention on Climate Change



1. Introduction

Climate change has proven to be a major challenge for mankind, threatening all aspects of human society and the environment. Consequently, designing new strategies, based on new models of development, is essential to mitigate the phenomenon and create resilience at different scales.

"Scaling up Ambitoius Leadership" is a project financed by the International Climate Initiative (IKI), in which teams from the Dominican Republic, Mexico, Lebanon, South Africa and Great Britain take part, with a regional component in Latin American and the Caribbean. The initiative is based on the learning by doing principle and a methodology designed to learn and create apprenticeship opportunities at multiple levels, spreading the knowledge during all the phases of implementation.

In each country, the project pretends to define a 2050 vision of society adapted to a 2-1.5°C increase in global temperature, including solutions of sustainable use of land resources while guaranteeing a "good life" for people. In the case of the Dominican Republic, LbD supports the national agenda and national strategies to implement it. For this reason, the project is based on a recognition of government natural leadership, the transformations promoted by civil society and the great capacity and experience of our business community, carried out with commitments for action and that this action is better exercised by all together. Government-Civil Society-Private Sector-Academy and International Cooperation.



After a preliminary phase consisting of contacting significant stakeholders and defining a baseline in terms of actions that the country has been taking to face climate change at all levels, from policy to concrete interventions, the project begun the process of building a country vision towards a 2050 Dominican society adapted to a 2-1.5°C global warming, whose people live well and in harmony with their environment.

This report synthetizes the first year of project implementation, describing the main activities carried out as well as the results obtained and future challenges. After providing details about the project and specifying key stakeholders that have been taking part in the process in the Dominican Republic, the document focuses on the main results from baseline study. Afterwards, the results from scrums in 2021 are presented, after having briefly introduced the adopted methodology both for selecting participants and for carrying out the process. Next, the report deals with a rapid view of other activities implemented during the year.

Finally, the last section is devoted to give details about main findings, impacts, lessons learnt and way forward. Annex 1 includes a list of local stakeholders that are participants of the project activities.

The responsible for this report are:

•	Mr. Omar Ramírez	Country Manager, Energeia Network
•	Ms. Michela Izzo	Consultant - Executive Director of Guakía Environment
•	Mr. Rafael Berigüete	Consultant - Executive Director of Brightline Institute



2. LbD Project and participants in the Dominican Republic

Learning by Doing (LbD) is an international and multi-disciplinary project, financed by the International Climate Initiative (IKI), involving teams from Mexico, South Africa, Lebanon, the Dominican Republic and the United Kingdom (UK), with a regional component covering Latin America and the Caribbean. Executed by an international consortium leaded by Energeia Network, it seeks to learn through research and practice, as it outlines visions and transitions to societies with increases in temperature no greater than $2 - 1.5^{\circ}$ C by 2050. In doing so, it seeks to illustrate the socio-economic, cultural and natural features of such societies. One of the goals is the development of country-specific portfolios of projects and activities to support the process of making these visions implementable. In realizing these visions, LbD works with expert partners drawn from civil society, academic and non-academic institutions seeking to enhance capacity.

The work and visions of LbD builds on previous work on low carbon societies. The farthest origin of this involved a project between the UK and Japan between 2007 and 2011. This project focused on envisioning low carbon societies with deep (80 - 90%) cuts of emissions in absolute terms, using visions differentiated as either highly technological or instead more embedded within nature and more aligned to traditional customs, associated institutions, practices, and infrastructure.

The LbD project seeks to develop socio-economic, cultural and ecological visions of societies within specific places, whose net emissions approach zero, while they become increasingly capable of adapting to 2°-1.5°C increases in temperature. These visions, developed by civil society and experts, in coordination with other significant stakeholders, outline the features and characteristics of these potential societies. The process places these visions center stage, their carbon footprints and resilience, and uses an iterative process of meetings and associated knowledge management, to back-cast to the present and outline periodically the steps required to achieve these visions. This seeks to facilitate the possible periodical transformation and preservation, as well as the policies, practices, technologies and skills required to implement them. Crucially, the whole approach is used altogether as a learning exercise – i.e., learning by doing.

The following step is the development of portfolios of i) projects and ii) policies - domestic and multilateral - required to enable them. These may include "low hanging fruits", as well as those on the hard to abate sectors, considering the technical aspects of the equation. Various learning opportunities, knowledge management, and dissemination are used as a way of transmitting to society at wide, a better understanding of what is feasible, how it can be achieved as a whole, where challenges lie, and how life would look like, even in sectors that people would typically say are hard to decarbonize.

Specific features of the LbD project encourage these results. It is built with an iterative methodology that engages different stakeholders in workshops ("Scrums") to think strategically during an interval of time (a "sprint"), seeking to





produce annually all project outputs ("backlog") at once, rather than in a sequence. This allows participants to test how well the proposed outputs fit together and whether or not they have to introduce changes in the model.

Annually, a parallel process of surveys and interviews collects and compares findings, allowing the project to track down new knowledge and skills as they appear. To avoid biases of preconceived solutions, the project is designed to generate capacities to change and adapt, seeking and testing potential solutions during the execution. This entails outlining in advance the process without the proposed outputs.

There are different main tools to reach this. First of all, there is the practice of interviewing people, creating draft mental maps and draft portfolios of the process and potential solutions, in order to build storylines. Similarly, graphic novels are designed to illustrate these visions and findings. Finally, there is the crucial inclusion of people and disciplines that usually are usually excluded from these discussions.

In this context, a parallel "deep-dive" approach can be applied to specific sectors, including those harder to abate, such as heavy industry (iron, steel, cement), transport, or food. These deep dives can be included within the scrum process and workshops, adding these dedicated components in the generated visions.

Finally, an additional dimension is the need to address what "good life" means in the context of these visions, policies and projects. In fact, this is often perceived with skepticism, as something elusive and hard to pin down. However, this existential question is a key point in the process of seeking a new and more sustainable model of development.

In the Dominican Republic, one of the first steps of the project implementation was the identification of the first nucleus of relevant stakeholders that could take part in the first scrum and in the discussion for a country vision. This phase included the socialization of the project with the main environmental authorities in the country, such as the Ministry of Environment and Natural Resources and the National Council for Climate Change and Clean Development Mechanism (CNCCMDL, according to its Spanish acronym), as well as with the Ministry of Economy, Planning and Development (MEPyD, in Spanish).

The Dominican Republic is characterized by a highly diverse and dynamic social context, where people from different sectors actively take part in national debate to define country policies. From this point of view, the LbD project extended the invitation to get involved to numerous stakeholders, from academy, private sector, Non-Governmental Organizations (NGOs), as well as Community Based Organizations (CBOs), with a special focus on representatives from rurality.

A list of these stakeholders is presented in Annex I.





3. Baseline

The Dominican Republic is a country of the Caribbean region, located between 17°36' and 19°58' north latitude and between 68°19' and 72°01' west longitude. Together with Jamaica, Cuba and Puerto Rico, it belongs to the Greater Antilles. The country occupies the eastern two third parts (48442 km²) of the Hispaniola Island (76192 km²), whose territory is shared with the Republic of Haiti. The Dominican territory is 390 km East-West and 265 North-South long, with a perimeter constituted of 76% of coastline and 24% of the Haitian border.

Its population, 10.5 million individuals (ONE, 2021a¹), is typically young (46.9% less than 35 years old) and significantly urban (80.9% of people live in towns or cities).

From a socioeconomic point of view, the Dominican Republic is classified as a Small Island Developing States (SIDS) (UNDESA, 2020²). Even though the country is classified as an upper-middle income economy, with a per capita Gross Domestic Product (GDP) of USD8583.10 (Banco Central, 2020³), it shows high inequality and a significant level of poverty (30.5% of households live in poverty and 6.9% in extreme poverty (ONE, 2016⁴)), being female heads of household, small farmers, landless peasants, small merchants, and rural service provider workers the most disadvantaged groups, highly vulnerable to extreme events and external crises (MEPyD-ONE, 2020⁵; Berigüete & Paniagua, 2018⁶; MEPyD, 2014⁷), like, more recently, the COVID-19 pandemics.

The main economic activities in the country are: Mining (26.5%), Financial Intermediation (11.9%), Agriculture and Livestock (10%), Construction (9%), Tourism (7.6%) and Health (7.4%). Inflation decreased from 8.5% in 2011 to 1.8% in 2020, while fiscal deficit is 7.7% of GDP. Consolidated public debt (multilateral, bilateral and with private entities) reaches 53000 million USD, equivalent to 70% of GDP (68.8% external and 31.2% internal debt) (Ministerio de Hacienda, 2021⁸). Revenues from emigrants are a significant impact on improving the economy of vulnerable groups (MEPyD, 2019⁹).

Basic services face significant challenges. Only 54.2% of people have access to public water in their home, with a discontinuous provision (ONE, 2019¹⁰), and even though basic sanitation is generally guaranteed (ONE, 2019¹¹), wastewater treatment is less than 10% (CAASD, 2014¹²). Electricity access has increased in the last years, achieving 100% of electrification in urban areas (World Bank, 2020¹³), while population rate without access to electricity exceeds 2% in rural regions. Despite the high electrification rate and the progress observed in terms of system quality, significant problems persist, both in terms of energy supply and in terms of quality of transmission and distribution, being the Dominican Republic the first country in LAC region for blackouts, which generally exceed 30 days annually on average (BID, 2017¹⁴), while fossil fuels are still the dominant source of electricity generation (OCSENI, 2021¹⁵).

^{1.} ONE (2021a). Estimaciones y proyecciones de la población total por año calendario, según región y provincia, 2000-2030. Oficina Nacional de Estadística, Santo Domingo. <u>https://www.one.gob.do/demograficas/proyecciones-de-poblacion</u>

^{2.} UNDESA (2020). World Social Report 2020: inequality in a rapidly changing world. United Nations Department of Social Affairs, New York. <u>https://www.un.org/</u> <u>development/desa/dspd/wp-content/uploads/sites/22/2020/02/World-Social-Report2020-FullReport.pdf</u>

^{3.} Banco Central (2020). PIB per cápita. Banco Central de la República Dominicana, Santo Domingo: Banco Central de la República Dominicana. <u>https://cdn.bancen-tral.gov.do/documents/estadisticas/sector-real/documents/pib_dolares.xls?v=1619308800130?v=1619308800191</u>

^{4.} ONE (2016) Boletín de estadísticas oficiales de pobreza monetaria. Boletín Semestral No. 3. Oficina Nacional de Estadísticas, Santo Domingo. <u>https://web.one.gob.</u> <u>do/media/vohbb1si/bolet%C3%ADn-de-estad%C3%ADsticas-oficiales-de-pobreza-monetaria-no-3.pdf</u>

^{5.} MEPyD-ONE (2020). Boletín de estadísticas oficiales de pobreza monetaria. Boletín anual, 7. Ministerio de Economía, Planificación y Desarrollo y Oficina Nacional de Estadística, Santo Domingo. <u>https://www.one.gob.do/sociales/pobreza-asistencia-social-y-condiciones-de-vida</u>

^{6.} Berigüete R, Paniagua E (2018). Evaluación de indicadores socioeconómicos y cambio climático. Una primera aproximación para República Dominicana. Santo Domingo: Alfa y Omega.

^{7.} MEPyD (2014). Mapa de la pobreza 2010 en la República Dominicana. Ministerio de Economía, Planificación y Desarrollo, Santo Domingo. <u>https://mepyd.gob.do/</u> uaaes/atlas-pobreza-2010

^{8.} Ministerio de Hacienda (2021). Estadísticas fiscales. Ministerio de Hacienda de la República Dominicana, Santo Domingo. <u>https://www.hacienda.gob.do/estadisti-cas-fiscales/</u>

^{9.} MEPyD (2019). Impacto de las remesas sobre el alivio de la pobreza. Ministerio de Economía, Planificación y Desarrollo, Unidad Asesora de Análisis Económica y Social, Santo Domingo. <u>https://mepyd.gob.do/wp-content/uploads/drive/UAAES/Textos%20de%20Discusion/td-no-30%20Impacto%20de%20las%20reme-sas%20sobre%20el%20alivio%20de%20la%20pobreza.pdf</u>

^{10.} ONE (2019). Encuesta Nacional de Hogares de Propósitos Múltiples (ENHOGAR-2018). Informe general. Oficina Nacional de Estadística, Santo Domingo. https://www.one.gob.do/Multimedia/Download?ObjId=90112

^{11.} ONE, 2019.

^{12.} CAASD, 2014.

^{13.} World Bank (2020). Sustainable Energy for All (SE4ALL), Global Electrification Database. <u>https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=DO</u> 14. BID-CDEEE (2017) Iluminando el futuro: electricidad en Centro América y República Dominicana en el 2040. Banco Interamericano de Desarrollo y Corporación Dominicana de Empresas Eléctricas Estatales, Santo Domingo.

^{15.} OCSENI (2021). Informe anual de operaciones y transacciones económicas año 2020. Organismo Coordinador del Sistema Eléctrico Nacional Interconectado de la



In 2020 the General Law of Integral Management and Co-processing of Solid Waste (Law 225-20) was approved, but solid waste remains a major problem in the country.

Health and education face great challenges as well. In fact, maternal-infant mortality, teenage pregnancy, the incidence of HIV/AIDS and vector transmitted diseases (like dengue fever, malaria, zika and chikungungya), the high rate of occurrence of cardiovascular and gastrointestinal, as well as the deficiencies of public health service still need to be addressed (SNS, 2020¹⁶).

Regarding education, despite the approval of the National Pact for Educational Reform in 2014, access to high quality education is still distant goal for the majority of the Dominican people. According to the last report of the Programme for International Student Assessment (PISA), the Dominican Republic occupies the position 77 of 77 countries, regarding the average level in Mathematics, Basic Science and Comprehensive Reading (OECD, 2019¹⁷).

Women and young people belong to two of the most vulnerable groups in the country in terms of income generation, political participation, employment conditions, among other aspects (ONE, 2019¹⁸).

From an environmental point of view, the Dominican Republic shows a very high climate and environmental diversity (Izzo et al., 2010^{19}). This implies an equally high diversity of living beings and ecosystems (more than 6000 species among amphibians, birds, mammals, reptiles and vascular plants), for which the country is one of the biodiversity hotspots of the planet. (Bolay, 1997^{20} ; Huggins et al., 2007^{21})

Protected areas occupy 26.3% of the Dominican territory, one of the highest percentages in the world. Nevertheless, the effectiveness of this protection is highly questioned.

The analysis of climate trends in the Dominican Republic shows significant change during the last century. Recent studies (Izzo et al., $2020a^{22}$; Pérez & Jury, 2013^{23}) reveal a significant increase of maximum and minimum air temperature (1.8 ± 0.4 °C and 3.0 ± 0.5 °C respectively since 1936) and change of rain patterns. Specifically, a significant decrease of total annual precipitation is observed in leeward areas, while the opposite trend is registered windward, exposed to trade winds. An increase in rain intensity is also detectable, being identified greater exposure to both extreme rain and drought.

The available projections up to the end of this century indicate: an increase in annual average temperature; an increase in the frequency of warm days and nights; a significant reduction of precipitation, especially during rainy season; more intense hurricanes; an increase in frequency and intensity of drought spells (Christensen et al., 2007^{24} ; McSweeney et

República Dominicana, Santo Domingo. <u>https://www.oc.do/Informes/Administrativos/Informe-Anual</u>

^{16.} SNS (2020). Reporte de atenciones a la Salud Mental Enero – Diciembre 2019, Boletín especial. Servicio Nacional de Salud, Santo Domingo. <u>https://repositorio.</u> <u>sns.gob.do/download/96/boletines-dengue/1024/reporte-de-dengue-en-la-red-sns-2019.pdf</u>

^{17.} OECD (2019). PISA 2018 Results (Volume I): What Students Know and Can Do, PISA, OECD Publishing, Paris. <u>https://doi.org/10.1787/5f07c754-en</u> 18. ONE, 2019.

^{19.} Izzo et al., 2010.

^{20.} Bolay E (1997). The Dominican Republic: a country between rain forest and desert. Contributions to the ecology of a Caribbean island, Joseph Margraf Verlag, Bonn.

^{21.} Huggins AE, Keel S, Kramer P, Núñez F, Schill S, Jeo R, Chatwin A, Thurlow K, McPherson M, Libby M, Tingey R, Palmer M, Seybert R (2007). Biodiversity conservation assessment of the insular Caribbean using the Caribbean Decision Support System. Technical Report, The Nature Conservancy, Santo Domingo. 22. Izzo M, Aucelli PPC, Maratea A (2020a). Historical trends of rain and air temperature in the Dominican Republic. International Journal of Climatology. DOI:10.1002/joc.6710

^{23.} Pérez CR, Jury MR (2013). Spatial and temporal analysis of climate change in Hispañola. Theoretical and Applied Climatology, 113, 213-224. https://doi. org/10.1007/s00704-012-0781-0

^{24.} Christensen, Jens & Hewitson, Bruce & Busuioc, Aristita & Chen, Anthony & Gao, Xiaoqing & Held, Isaac & Jones, R. & Kolli, R.K. & Kwon, Won-Tae & Laprise, René & Rueda, Valery & Mearns, Linda & Menéndez, Claudio & Räisänen, Jouni & Rinke, Annette & Sarr, Abdoulaye & Whetton, Penny. (2007). Regional climate projections. Climate change 2007: The physical science basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. 847-940.



al., 2008²⁵; Ministerio de Ambiente y CNCCMDL, 2018²⁶; IPCC, 2018²⁷; 2019²⁸; CATHALAC, 2021²⁹).

Models also indicate an increasing exposure to sea level rise: a World Bank study, based on projections to 2050, identifies Santo Domingo es the fifth most affected city in the world and the second in Latin America to this phenomenon (Hallegatte et al., 2013^{3°}), consideraing that all the available scenarios (SEMARENA, 2009³¹; Ministerio Ambiente y CNCCMDL, 2018³²; Ministerio Ambiente y CNCCMDL, 2020³³) predict a sea level increase between 3.8 and 25.9 cm in 2030.

Because of climate change, the country is highly exposed to an increase of vector transmitted diseases (IPCC, 2014³⁴). Tourism, which is one of the sectors that contribute the most to GDP (8.4% in 2019) (Banco Central, 2021c³⁵), is expected to be among the most impacted.

In terms of Green House Gases (GHGs), the main emitting sectors are Ministerio Ambiente y CNCCMDL, 2020³⁶: energy (62.7%), waste (15.7%), and industrial processes (8.15%). GHG emissions are projected to increase in the next decades (Medio Ambiente y CNCCMDL, 2018³⁷).

From a sensitivity point of view, the factors that significantly increase country vulnerability are linked to land management and include deforestation, forest fires and inappropriate waste management, which accelerate land degradation, threatening water and food security (Izzo et al., 2013³⁸; 2012³⁹; 2009^{4°}; USAID, 2013b⁴¹; World Bank, 2012⁴²).

In this context, Climate change priority in the Dominican policy is clearly established in the article 194 of the Dominican Constitution, which states that "priority of the State is the formulation and execution, by law, of land use planning that guarantees the efficient and sustainable use of natural resources of the Nation, according to climate change adaptation needs".

36. Ministerio Ambiente y CNCCMDL, 2020.

^{25.} McSweeney, M. N. y G. Lizcano, 2008. UNDP Climate Change Country Profiles - Dominican Republic. Oxford. University of Oxford School of Geography and the Environment http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/

^{26.} Ministerio de Ambiente y CNCCMDL, 2018.

^{27.} IPCC (2018). Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Intergovernmental Panel on Climate Change, Geneve. <u>https://www.ipcc.ch/sr15/</u>

^{28.} IPCC (2019). Desertification. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D.C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.). Intergovernmental Panel on Climate Change, Geneve. <u>https://www.ipcc.ch/srccl/</u>

^{29.} CATHALAC (2021). Escenarios de cambio climático para República Dominicana. Centro del Agua del Trópico Húmedo para América Latina y el Caribe, Programa de las Naciones Unidas para el Medio Ambiente, Ministerio de Medio Ambiente y Recursos Naturales, Santo Domingo. <u>En proceso de publicación</u>

^{30.} Hallegatte S, Green C, Nicholls RJ, Corfee-Morlot J (2013). Future flood losses in major coastal cities. Nature Climate Change. DOI: 10.1038/NCLIMATE1979 31. SEMARENA (2009). Segunda Comunicación Nacional sobre Cambio Climático. Secretaría de Estado de Medio Ambiente y Recursos Naturales, Programa de las Naciones Unidas para el Desarrollo, Santo Domingo. <u>http://dipecholac.net/docs/files/529-domrepnc2.pdf</u>

^{32.} Ministerio de Ambiente y CNCCMDL (2018). Tercera Comunicación Nacional sobre Cambio Climático. Ministerio de Medio Ambiente y Recursos Naturales, Consejo Nacional para el Cambio Climático y Mecanismo de Desarrollo Limpio, Programa de las Naciones Unidas para el Desarrollo, Santo Domingo. <u>https://unfccc.int/</u> <u>sites/default/files/resource/29064815_Dominican%20Republic-NC3-1-Resumen%20Ejecutivo%20TCNCC_low%20%282%29.pdf</u>

^{33.} Ministerio Ambiente y CNCCMDL (2020). Primer Informe Bienal de Actualización de la República Dominicana ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático. Ministerio de Medio Ambiente y Recursos Naturales, Consejo Nacional para el Cambio Climático y Mecanismo de Desarrollo Limpio, Programa de las Naciones Unidas para el Desarrollo, Santo Domingo. <u>https://unfccc.int/documents/227895</u>

^{34.} IPCC (2014). Climate Change 2014: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Field CB, Barros VR, Dokken DJ, Mach KJ, Mastrandrea MD, Bilir TE, Chatterjee M, Ebi KL, Otsuki Estrada Y, Genova RC, Girma B, Kissel ES, Levy AN, MacCracken S, Mastrandrea PR, White LL (eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. <u>https://www. ipcc.ch/report/ar5/wg2/</u>

^{35.} Banco Central (2021c). Importancia del turismo en República Dominicana: evolución reciente en el contexto del COVID-19 y perspectivas de recuperación. Santo Domingo: Banco Central de la República Dominicana. <u>https://www.bancentral.gov.do/a/d/5003</u>

^{37.} Medio Ambiente y CNCCMDL, 2018.

^{3.} Izzo M, Araujo N, Aucelli PPC, Maratea A, Sánchez A (2013). Land sensitivity to desertification in the Dominican Republic: an adaptation of the ESA methodology. Land Degradation and Development, 24(5), 486-498. DOI:10.1002/ldr.2241

^{39.} Izzo M, Rathe L, Arias Rodríguez D (2012). Puntos críticos para la vulnerabilidad a la variabilidad y cambio climático en la República Dominicana y su adaptación al mismo. Programa para la Protección Ambiental, USAID-IDDI-TNC, Santo Domingo.

^{40.} Izzo M, Aucelli PPC, Javier Y, Pérez C, Rosskopf CM (2009). The tropical storm Noel and its effects on the territory of the Dominican Republic. Natural Hazards, 53, 139-158. DOI:10.1007/s11069-009-9417-9

^{41.} USAID (2013b). Dominican Republic climate change vulnerability assessment report. African and Latin American Resilience to Climate Change Project, New York. https://www.usaid.gov/sites/default/files/documents/1862/Dominican%20Republic%20Climate%20Change%20Vulnerability%20Assessment%20Report_0.pdf 42. World Bank (2012). Disaster Risk Management in Latin America and the Caribbean Region: GFDRR Country Notes – Dominican Republic. Washington, DC.: World Bank. <u>https://dipecholac.net/docs/files/526-dominicanrepublic-2010.pdf</u>



In coherence with this constitutional mandate, the Dominican Republic has developed a comprehensive climate change political framework, even though different social sectors, especially civil society, claim an improvement of rules implementation and, in general, the certainty of law.

In December 2020, the Dominican Republic presented its revised and updated NDC, in accordance with the Paris Agreement and the UNFCCC (CNCCMDL, 2020⁴³). In this new version, the country increases its ambition to reduce national GHG emissions by 27% compared to the Business as Usual (BAU) scenario 2030, with the following objectives: 20% conditioned to available international funds and 7% unconditioned from domestic sources (5% and 2% from public and private sectors respectively).

Furthermore, awareness about the urgency of adopting actions to mitigate climate change as well as to adapt to it has pushed private sectors as well as civil society and international cooperation to carry out different initiatives, which have produced results and impacts at different scales. Nevertheless, numerous stakeholders point out the need of improving coordination and synergy, since the initiatives implemented in the country generally lack a common strategy and do not integrate into an integral process, but rather isolated projects, which do not show sustainability.

Among the major challenges that the Dominican Republic face in its way to sustainable socioeconomic development there are (CEPAL, 2019a⁴⁴):

- 1. Persistence of poverty, especially of vulnerable groups like women, young people and children, rural communities, immigrants and people with disabilities.
- 2. Structural inequalities and culture of privilege, which affect economic level as well as people's rights and autonomy.
- 3. Educational gaps, with high inequalities among social classes.
- 4. Lack of work and uncertainty of the labor market, which especially affect young people and women, while child labor persists.
- 5. Partial and inequal access to social security, with significant differences among social classes.
- 6. Limited institutionalization of social policies, characterized by a weak institutional framework.
- 7. Insufficient social investment, which needs more effectiveness in tax collection, among other elements.
- 8. Emergent obstacles, like violence, natural disasters, demographic transition, migration, technological change, climate change, etc.

In its effort to carry out synergic actions between mitigation and adaptation, the Dominican Republic recognizes as important strategic lines: climate change risk reduction; intersectoral and interinstitutional coordination; research on vulnerability, impacts and adaptation; strengthening of monitoring and evaluation; information, communication and education; inclusion of a gender perspective. In this framework, circular economy has high potentialities for the country.

Significant stakeholders in the country clearly state that empowerment of people and local communities is a key step in the way to sustainability (Izzo, 2020⁴⁵; Sánchez & Izzo, 2017⁴⁶).

In conclusion, numerous sectors in the country recognize the need of a paradigm change, which implies the substitution of the dominant economic model, based on unresponsible consumption. Circular economy offers a potential alternative, which needs to be studied further for an implementation adapted to national needs and peculiarities.

^{43.} CNCCMDL (2020). Contribución Nacionalmente Determinada 2020 - NDC-RD 2020. Presidencia de la República Dominicana, Santo Domingo. <u>https://ndcrd.</u>

^{44.} CEPAL (2019a). Nudos críticos del desarrollo social inclusivo en América Latina y el Caribe: antecedentes para una agenda regional. Comisión Económica para América Latina y el Caribe: Santiago de Chile. <u>https://crds.cepal.org/3/es/documentos/nudos-criticos-desarrollo-social-inclusivo-america-latina-caribe</u> 45. Izzo M (2020) Alianzas público-privadas en el desarrollo de proyectos microhidroeléctricos comunitarios. RD Sostenible, 1.

^{46.} Sánchez A, Izzo M (2017). Micro hydropower: an alternative for climate change mitigation, adaptation and development of marginalized local communities in Hispaniola island. Climatic Change, 140, 79-87. DOI 10.1007/s10584-016-1865-0



In the recent past, the Dominican Republic has progressed significantly in the definition of a political and normative framework oriented to climate change adaptation, being now in need of promoting a similar progress in implement concrete actions. At the same time, the country is focused on giving human being a central role in environmental and climate public policies, starting from a vision of development based on wellbeing with dignity.

At present, all current planning instruments has 2030 as their temporal goal, lacking the definition of long-term visions. From this point of view, the LbD project is a valuable support to this process.

From the baseline described above, a potential draft vision of a Dominican Republic 2050 carbon neutral country may be resumed as: "The Dominican Republic is a 2050 carbon neutral society, which implements models of sustainable development based on a competitive, circular and equitable economic management of natural resources, the use of clean energy, solutions that promote climate change adaptation and resilience, while guaranteeing wellbeing with dignity for its people, respecting its identity, sovereignty and culture".





4. Scrum personnel selection criteria

Scrums are one of the methodological instruments that the LbD project uses to develop the 2050 country vision. They are a series of round tables, where a group of creative and strategic thinkers meet several times, bringing forward and analyzing together problems and issues related to climate change, development and a "good life" vision for a specific society.

Another task of scrum sessions is to examine elements and ways forward for a transition towards this society, including a proposal of potential projects and a portfolio of multilateral actions to reach it.

As a general approach, scrums base their methodology on the learning by doing principle, according to which themes and discussions arise from shared experiences among participants, aiming to develop creative and constructive thinking.

Guided by this objective, the main criteria to select participants in the scrum are:

- Proven experience in participating in national discussion on climate change policy;
- Belonging to a relevant sector, according to the described baseline;
- · Representativeness of vulnerable groups;
- Commitment to face environmental issues.

Scrum dynamics is highly flexible and allows the expansion of the initial nucleus of participants, thus contributing to integrate new perspectives during the process and enriching the discussion, towards an inclusive and representative 2050 country vision.





5. Reports from scrums in 2021

As a part of the implementation plan of the project "Learning by Doing: scaling up ambitious leadership", the first scrum was carried out on November 3rd and 4th 2021.

According to the established methodology, the scrum was organized as a round table, where relevant stakeholders debated climate change related issues to reach a common vision for a sustainable Dominican Republic, in a 2-1.5°C global warming scenario. The event was just one of various planned meetings where, in an iterative process, the proposed ideas will be refined and organized, up to reach a common vision.

The scrum consisted of two-day virtual sessions, each which lasted two hours, carried out through the Zoom platform.

A total number of 22 people took part in the event, 55% of whom were women. They proceeded from government (18%), private sector (36%), civil society (27%), academy (14%), and international cooperation (5%).

The first day, after an introduction on the project, presented by the coordinating team, the participants started a discussion session to identify key elements for a Dominican society copying with a 2-1.5°C warmer future, while being able to guarantee a good life to its people in a sustainable way.

The second day, starting from the results of the day before, the participants, divided in 5 working groups, defined strategic lines for this 2-1.5 °C Dominican society.

The participants were provided with the following guiding questions:

- a. Considerations and limitations: Which are our social needs?
- b. Which are the goals and aspirations of a sustainable society?
- c. What makes a society or city prosperous? And what makes this prosperity sustainable?
- d. Which do we consider attractive in this future society? What do we want to conserve? What do we want to change?
- e. How are relationships and interactions with nature in the society we want for the future?
- f. How are food, households, and transport in this future society?
- g. How are production, industry, infrastructure, jobs, art, and culture in this future society?

The preliminary common vision defined by the joined effort of working groups during Scrum 1 is the following: "The 2050 Dominican society, based on its cultural identity, is oriented to sustainable development, through its key components, thus guaranteeing we are a sustainable, fair, tolerant, diverse and socially and environmental responsible society, where each person lives well, in a context where rurality and urbanity develop in harmony, complementing their respective functions, and adapting to a 2 to 1.5° C global warming".

Two mainstreaming components are shown as essential to reach this vision:

- 1. Interinstitutional and multistakeholder dialogue and coordination, based on the principle of subsidiarity and synergy at all levels.
- 2. Implementation of a model other than consumerism, focused on sustainable use of resources and based on conceptual and technological innovations.

The path followed to reach this 2-1.5°C society is described through three main strategic pillars, each of which contains main actions, as described below:



1. Political and legal framework

- a. Fair mechanism of political representativeness, based on participatory and responsible citizenship.
- **b.** Security of the law and consequence regime, to overcome the present lack of application of the existing rules. This will need modernizing and specializing security and surveillance bodies, as well as guaranteeing labor and social security rights.
- c. Design and implementation of land use planning coherently with sustainable use of resources, designing and implementing effective mechanism of ecosystem and biodiversity conservation.
- **d.** Mechanisms of cooperation and transboundary coordination with Haiti, oriented to sustainability of both countries.

2. Human development

- **a.** Zero poverty and malnutrition, based on specific action to guarantee zero hunger and healthy nutrition.
- b. Universal access to high quality basic services, based on:
 - i. Service decentralization.
 - ii. Development of sustainable infrastructure for universal access to water.
 - iii. Access to high quality, safe and affordable transportation.
 - iv. Greater relevance of rural areas in land policy.
 - v. Better communication and transport network in rural areas, to fill the gap between rural and urban environment.
- c. Implementation of integral educational programs, which include ethics as a guiding framework for decision making.
- **d. Promoting scientific research**, **guaranteeing it appropriate funding**, as a key support for decision making.

3. Pollution reduction

- a. Establishing circular economy, based on:
 - i. Incentives to Micro, Small and Medium Enterprises (MSMEs).
 - ii. Modernization of agricultural and forestry production systems.
 - iii. Promotion of sustainable tourism models, especially relevant in a country whose economy is based on this activity.
 - iv. Development a net-zero energy matrix, overcoming present limitations of a energy matrix where fossil fuels are dominant.
 - v. Development of low impact transportation, based on the diversification of energy sources and innovation.



- Promoting organic and sustainable agriculture and cattle farming, adapted to a 2-1.5°C global b. warming.
- Promoting local zero-km consumption, as a part of a general policy based on local empowerment. c.
- d. Implementation of integral solid waste management.
- Development of infrastructure for wastewater treatment. e.
- Implementing a sustainable "urbanity", based on innovative technology and new organizational f. visions.
- Implementing innovative and efficient working modalities. g.

A graphical scheme is presented in (Figure 1).





Other activities 2021

Beside the implementation of the first scrum, numerous other activities were carried out during 2021, which contributed to trigger project dynamics and create the appropriate conditions to generate productive discussions.

The main activities include:

• Socialization of the project in the Ministry of Environment and Natural Resources

On January 15th, 2021, an introductory presentation of the project was socialized with the Vice Ministers of Climate Change (Ms. Nathalie Flores) and International Cooperation (Ms. Milagros Decamps), as well as with the Climate Change Director of the institution (UNFCCC focal point).

• Socialization of the project in the National Council for Climate Change and Clean Development Mechanism (CNCCMDL, according to its Spanish acronym)

On January 22nd, 2021, the project was presented in the CNCCMDL (UNFCCC focal point), being present the Executive Vice President and the technical team

• Presentation of the project to the German Embassy in the Dominican Republic

After the project received the final approval from the International Climate Initiative (IKI, according to its German acronym), on February 17th, 2021, the nation coordinating team introduced it to the Ambassador of the Federal Republic of Germany, His Excellency, Dr. Volker Pellet.

• Participation in the Latin America and the Caribbean (LAC) Climate Week

From March 3rd to March 4th, 2021, the Country Management of Energeia Network participated in the Latin American and Caribbean Climate Week (LAC Regional Climate Week) meeting of the United Nations Framework Convention on Climate Change (UNFCCC), in virtual modality.

• Socialization of the project in the Ministry of Economy, Planning and Development (MEPyD, according to its Spanish acronym)

On April 20th, 2021, the project was presented to the Vice Minister of Planning and his technical team.

· Official launch of the project

On May 5th, 2021, the official launch of the project took place, with the participation of national and international authorities, among whom representatives from the Ministry of Environment, the CNCCMDL, the MEPyD, the Embassy of the Federal Republic of Germany and the United Nations Development Programme (UNDP).

Training session and interviews

On June 9th, 2021, the National Coordinating Team took part in a virtual conference and training session, under de guidance of strategic, tactical and narrative thinkers from the Arizona State University.

Participation in THE GREEN EXPO and the XXVIII International Environmental Congress of the National Council of Ecologist Industrialists of Mexico (CONIECO)

Following the project objectives, the Energeia Network country manager participated, as a panel moderator, in THE GREEN EXPO® and the XXVIII International Environmental Congress of CONIECO, an international exhibition and congress on the most relevant environmental themes, including waste, recycling, energy efficiency, smart cities and sustainability, with discussions on a wide range of solutions for Mexico and Latin America.



• Delivery of a Baseline Report

On June 5th, 2021, the National CoordinatingTeam of the project delivered the Baseline Report, which included a proposal of the country vision, as a preliminary synthesis of the national context.

• Socialization of the project with the National Business Support Network (ECORED)

On July 12th, 2021, the project was presented, through a virtual meeting, to ECORED, a national network of the main national companies whose corporate social policy includes environmental and climate issues. The meeting had the objective of discussing possible collaboration with the project.

• Registration of the project in the Newsletter Platform of "Interface Projects"

As part of the knowledge management strategy of the IKI, the LbD project was registered in the Newsletter Platform of "Interface Projects", specifically created for initiatives supported by the IKI in Central America and the Caribbean, to share contributions (like news, publications and events) at regional scale, reaching IKI implementers as well as external subscribers that may be interested in learning more about what it is happening in the region on environmental issues. The first meeting was held on July 27th, 2021.

• Participation in the Public-Private Articulation for Climate Action in Latin America (ArticuLAC)

On August 20th, 2021, the National Coordinating Team participated in the first exchange session of the ArticuLAC, oriented to align climate action from private sector with national strategies and goals.

• 2nd Global Meeting

On December 2nd, 2021, the National Coordinating Team participated in the second global meeting of the LbD project, where the results of the Baseline study as well as the first scrum Workshop were shared with the other countries participating in the project.

• Participation in the first National Technical Forum on Ecosystem based Adaptation (EbA)

On December 9th, 2021, the LbD National Coordinating Team took part in different panels of the first National Technical Forum on EbA, oriented to introduce the theme and promote a national platform to create synergy among different stakeholders, at different scales. The discussion was focused on identifying benefits and opportunities of EbA, requirements and policies for implementation in the Dominican Republic and multisectoral public policy instruments needed to reduce inclusion gaps.



6. Knowledge insights

Over the first year of the LbD project team have been collecting data from each of the stakeholders about their activities, thoughts about the project, and the process of identifying pathways towards notions of the good life in 2-1.5C worlds. That king of reflections helps to learn from each other, and among the team members as the project unfolds in and across each social sector context.

In 2021 the team has collected interviews with key stakeholders and at national level institutions and also collected many documents, including baselines reports and national visions and approaches. This has permitted identify a wide range of potential actions by each sector according to an 1.5-2°C future.





7. Peer review and suggestions

The experience developed in the 2021 implementation of the LbD project confirms that it is a valuable instrument to support country discussion for the definition of a 2050 vision, in a $2-1.5^{\circ}$ C world context.

Nevertheless, the project needs to dynamize its methodological tools to get the most from its potential.

In fact, several participants express their expectation that the project reaches more concrete results. They also confirm their commitment to contribute to the discussions, to guarantee that they go well beyond philosophical speculation, supporting the definition of national strategies for a change.

From this point of view, a significant observation is the need of establishing synergic actions with governmental institutions, especially the Ministry of Economy, Planning and Development (MEPyD), which is currently working to update the National Development Strategy. As a matter of fact, even though the LbD project is specifically oriented to civil society, trying to improve its participation in defining an inclusive and representative country vision, the expectation that the project turns into an effective instrument for the definition of feasible actions can be met only if it promotes a wider discussion, producing impacts on national policy.





8. Impacts

According to local stakeholders, most of LbD impacts are related to the need to stablish a national-level vision towards the society that the Dominicans envisages in long term, and the opportunity to discuss it within a participative, transparent and innovative approached provided by the scrums. The first exercise to reach a vision towards a 1.5 to 2°C, permitted also to understand which policies and strategies need to be enhanced and developed to promote a carbon-neutral, climate resilient and social inclusive society.





9. Conclusions and view forward

The 2021 project implementation reveals a widespread need of the Dominicans for a more sustainable and fair society, as an unnegotiable condition for living well.

Although preliminary, the expressed vision shows a clear awareness of the importance of carbon neutrality, as well as of developing policies and adopting measures to adapt to different climate conditions.

People are aware of the main limitations that the Dominican society faces at present and recognize that the path towards the defined 2-1.5°C future society passes through their overcoming. In the meantime, in the backward process from this future society to the present, the participants in the first scrum identified current strengths and opportunities as important elements to promote specific actions.

Innovation goes hand in hand with conservation of cultural identity, to which people show significant attachment, as a key factor for a "good life". Ethics should be reintroduced to orient decision making at all levels.

In synthesis, the transition requires a systemic transformation. So, the process leaves an open question: do we really understand what it means and what it is needed to reach the goal?

In 2022, the project needs to promote the refinement and unification of the current draft vision, contributing to its harmonization with other existing work-in-progress visions, answering all the pending questions. This implies an expansion of participation of other stakeholders in the process, including the establishment of collaborations with governmental institutions, especially those that are working at updating instruments of national policy.





$Annex \, I-List \, of \, Main \, Stakeholders$

Name	Institutions	position	Sector to which it belongs	Male/female
Mario Méndez	EMPACA	Presidente	Empresario Turístico	Masculino
Alberto Sánchez	Programa de Pequeños Subsidios (PPS)	Coordinador Nacional	Agropecuario y Forestal	Masculino
Circe Almánzar Melgen	Asociación de Industrias de la República Dominicana (AIRD)	Vicepresidente Ejecutiva	Empresaria Industria	Femenino
Carlos Grullón	Asociacion para el Fomento de las Energias Renovables	Presidente	Empresario Energético	Masculino
Eddy Frank Vasquez	Juventud Sostenible	Director ejecutivo	Juventud	Masculino
Arianna Frencia	Heartland Alliance	Oficial de proyectos	Derecho laboral	Femenino
Julissa Báez	Asociación Domini- cana de Productores de Cemento Portland (ADOCEM)	Directora Ejecutiva	Empresaria Industria	Femenino
Rosaura Pimentel	Instituto Tecnologico de Santo Domingo (INTEC)	Miembro RAUDO/ Coordinacion Maestria Ingenieria Sanitaria y Ambiental	Academia	Femenino
José Antonio Núñez	Universidad Agroforestal Fernando Arturo de Meriño (UAFAM)	Dir. Departamento de Cambio Climatico y carrera Agroforestal	Agropecuaria y Forestal	Masculino
Milagros Rodríguez	Universidad Iberoamericana (UNIBE)	Directora Programa Ciencia Ambiental	Academia	Femenino
Kathia Mejía	Fundación Sur Futuro	Directora Ejecutiva	Tercer Sector	Femenino
Jake Kheel	The Puntacana Ecological Foundation (PCEF)	Director Ejecutivo	Empresario Turístico	Masculino
Maria Alicia Urbaneja	Red Nacional de Apoyo Empresarial a la Protección Ambiental (ECORED)	Directora Ejecutiva	Empresaria	Femenino



Roberto Herrera	Consejo Nacional de la Empresa Privada -CONEP-	Presidente	Empresario Energético	Masculino
Claudia Taboada	Ministerio de Relaciones Exteriores -MIREX-	Directora de Ciencias, Tecnologia y Medio Ambiente	Juventud	Femenino
Federico Grullón	CNCCMDL	Director de Transparencia	Gobierno	Masculino
Nathalie Flores	Ministerio de Medio Ambiente	Directora de Cambio Climático	Gobierno	Femenino
Michaela Izzo	Guakía Ambiente	Directora Ejecutiva	Academia -tercer sector	Femenino
Rafael Beriguete	Brightline Institute	Director Ejecutivo	Academia-tercer sector	Masculino
Alvin Rodríguez	RAUDO	Director Ejecutivo	Academia	Masculino
Olga Luciano	Sociedad Civil	Consultora Ambiental	Tercer Sector	Femenino
Rosa Bonetti	Fundación Propagas	Presidente	Empresaria energética	Femenino
Domingo Contreras	Fundación Atabey	Presidente	Municipalista	Masculino
Francis Jorge	Ayntamiento Santo Domingo Norte	Jefe de Gabinete	Municipalista	Femenino
Francis Jorge Deyanira Surinach	Ayntamiento Santo Domingo Norte Ambientaza	Jefe de Gabinete Directora Tecnica	Municipalista Tercer Sector	Femenino Femenino
Francis Jorge Deyanira Surinach Angye Rincón	Ayntamiento Santo Domingo Norte Ambientaza PUCMM	Jefe de Gabinete Directora Tecnica Coordinadora de Cátedra AG	Municipalista Tercer Sector Academia	Femenino Femenino Femenino
Francis Jorge Deyanira Surinach Angye Rincón Esteban Polanco	Ayntamiento Santo Domingo Norte Ambientaza PUCMM FCHP	Jefe de GabineteDirectora TecnicaCoordinadora de Cátedra AGDirector Ejcutivo	Municipalista Tercer Sector Academia Laboral	Femenino Femenino Femenino Masculino
Francis Jorge Deyanira Surinach Angye Rincón Esteban Polanco Yomayra Martinó	Ayntamiento Santo Domingo NorteAmbientazaPUCMMFCHPGreenergy	Jefe de GabineteDirectora TecnicaCoordinadora de Cátedra AGDirector EjcutivoCEO	Municipalista Tercer Sector Academia Laboral Derecho laboral	Femenino Femenino Femenino Masculino Femenino
Francis Jorge Deyanira Surinach Angye Rincón Esteban Polanco Yomayra Martinó Pavel Isa Contreras	Ayntamiento Santo Domingo NorteAmbientazaPUCMMFCHPGreenergyMEPyD	Jefe de GabineteDirectora TecnicaCoordinadora de Cátedra AGDirector EjcutivoCEOViceministro	Municipalista Tercer Sector Academia Laboral Derecho laboral Gobierno	Femenino Femenino Masculino Masculino Masculino
Francis Jorge Deyanira Surinach Angye Rincón Esteban Polanco Yomayra Martinó Pavel Isa Contreras Lourdes Tapia	Ayntamiento Santo Domingo NorteAmbientazaPUCMMFCHPGreenergyMEPyDPUCMM	Jefe de GabineteDirectora TecnicaCoordinadora de Cátedra AGDirector EjcutivoCEOViceministroCoordinadora céstión Ambiental	Municipalista Tercer Sector Academia Laboral Derecho laboral Gobierno Academia	Femenino Femenino Femenino Masculino Femenino Femenino
Francis JorgeDeyanira SurinachAngye RincónEsteban PolancoYomayra MartinóPavel Isa ContrerasLourdes TapiaMayrelin García	Ayntamiento Santo Domingo Norte Ambientaza PUCMMA FCHP GReenergy MEPyD ADLCMMA Liga Municipal Domina	Jefe de GabineteDirectora TecnicaCoordinadora de Cátedra AGDirector EjcutivoCEOViceministroCoordinadora destión AmbientalVicesecretaria General	Municipalista Tercer Sector Academia Laboral Derecho laboral Gobierno Academia Municipalista	Femenino Femenino Masculino Femenino Femenino Femenino Femenino Femenino Femenino