



# Dominican Republic – The Link between Poverty and Environment: An Innovative Tool for SDGs Monitoring and Evaluation in the Dominican Republic

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## CONTEXT

The Dominican Republic is located in the Greater Antilles archipelago in the Caribbean Sea. It covers two-thirds of the island of Hispaniola, its neighbour country Haiti occupying the remaining third of the territory. The Dominican Republic is the second biggest country in the Caribbean in terms of both area and population. It covers 48,311 km<sup>2</sup> and has 10 million inhabitants, 32 percent of whom are poor and 5.8 percent live in extreme poverty.<sup>45</sup>

While poverty rates have been decreasing in the last three years, the current rate has not yet reached the level of 2000. Although the Gini coefficient shows some improvement, it also shows inequality narrowing at a very slow pace when analysed over time and in relation to variables related to economic growth.<sup>46</sup> Also, access to public services such as health, education, sanitation and telecommunications, among others, is unequal, penalizing lower income groups, particularly those living in rural areas, which generates great disparities in living standards for all Dominican people.

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45 *Boletín de Estadísticas Oficiales de Pobreza Monetaria*, September 2015, Ministerio de Economía, Planificación y Desarrollo (Ministry of Economy, Planning and Development).

46 UNDP-DR Human Development Unit. For instance, the GNP average growth rate during the period 2010–2014 was approximately 5.16 percent and the Gini index growth rate for the same period – 1.62 percent.

Although the Dominican Republic has been classified as a medium income country, there are significant structural gaps that indicate, among other things, inequalities in access to basic services.<sup>47</sup> These inequalities increase when natural disasters occur; there is therefore an urgent need to develop physical and social infrastructure to provide essential public services and goods that are resilient to climate change effects and use natural resources in a sustainable manner. Furthermore, it should be kept in mind that 60 per cent of the population is concentrated in ever-expanding urban areas, most of which are located in coastal areas and zones at high risk of suffering the impact of extreme meteorological events.

### FROM THE MDGS TO THE SDGS

The Millennium Development Goals (MDGs) are considered by the international community a significant success since they helped to accelerate health and education processes, as well as to reduce extreme poverty in some countries; while progress was slower than expected, the MDGs have become the common benchmark at the global level.

Since September 2015, the Sustainable Development Goals (SDGs) have superseded the MDGs in setting global development goals for the next 15 years, until 2030. They include 17 macro objectives, from poverty eradication to forest preservation, while creating inclusive, secure, resilient and sustainable human settlement and cities. The SDGs aim to complete the unfinished work of the MDGs and to respond to new global challenges that combine a set of global priorities for sustainable development.

In order to contribute to monitoring and evaluation, first of the MDGs and now the SDGs, a monitoring and evaluation platform was created in the Dominican Republic, specifically designed for those goals; this platform and the information system it includes are operated by the Ministry of Economy, Planning and Development, and the National Statistics Office (with technical and financial support of UNDP). This has become the Dominican Republic official website to report on progress done in this area ([www.odm.gob.do](http://www.odm.gob.do)).

This platform is the statistical base supporting the National Monitoring Reports on the Millennium Development Goals, produced in 2010, 2013 and 2015. They show not only progress achieved by the country on some goals, but also the big challenges ahead for those goals that have not been accomplished.

### ANALYSES OF LINKAGES BETWEEN POVERTY AND ENVIRONMENT IN DOMINICAN REPUBLIC

In Latin America and at the global level, efforts to reduce poverty and reduce the risk of disaster are increasingly noticeable, but they use what seem to be disconnected strategies. However, the typology of vulnerable households is the same for both; they have similarities

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47 United Nations Development Programme (UNDP). 'Human Development Report 2014'. Retrieved on 15 September 2015 from <<http://hdr.undp.org/sites/default/files/hdr14-summary-es.pdf>>.

in the same geographical spaces and result from certain causes and environmental determinants that require resources and the coordination of sectoral public policies.

The country has started to explore, with UNDP technical support, the main linkages between these two big and complex issues facing Dominican society. The country is looking at ways to build policy tools with higher synergic levels between human development objectives, poverty reduction, environmental management and climate adaptation.

Little is known about the network of causes and consequences of natural disasters, the links between their direct and indirect impacts, who wins and who loses, the duration of their effects, the dynamic of so-called poverty traps, about household strategies and conditions to manage crisis, how to prevent short-term poverty becoming a long-term phenomenon, and about the conditions that enable environmental deterioration and poverty to feed one another.<sup>48</sup>

The last few years have seen an increase in the severity and the frequency of climate shocks; there is evidence of a distinct growth in their negative impact on social and economic structures, which is expected to increase as climate change further exacerbates risk conditions. Added to this are the structural conditions of a developing country (incomplete markets, weaknesses in government institutions and financial markets, violence, high levels of inequality, social fragility, among others) which not only produce conditions that make the population more vulnerable, but which also tend to create asymmetries that amplify shock impact and economic volatility in a way that ends up causing high costs in terms of income, economic growth and particularly poverty.

In the social and economic context, other variables are analysed, such as the adaptation and recovery of vulnerable households over the medium and long term, measuring not only the direct and evident impact of the shocks but rather impacts on progress for human development and the effects that climate change and extreme events can have on those households.

Based on a UNDP study in southern Dominican Republic<sup>49</sup> (one of the areas with higher poverty levels) – specifically at Enriquillo Lake, where more than a dozen natural climatic events have taken place between 2004 and 2012 – essential information was gathered on the conditions of households, the impact they suffered and the strategies adopted by families. The lack of land planning in the region and the use of land led a majority of the population to settle in zones of risk that aggravated their vulnerability to rising waters, flooding and increasing rains. The gathered data has been the base for developing a tool to measure the impact of some climate shocks on poor households.

These households present the specific vulnerabilities of poor rural communities whose productive livelihoods are highly sensitive to climate and dependent on natural resources. For instance, the construction materials used to build a significant number of their dwellings

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48 United Nations Development Programme (UNDP) and Agencia Española de Cooperación Internacional para el Desarrollo (AECID, Spanish Agency for International Cooperation). 2014. "Cuando los desastres se quedan".

49 Ibid.

are of poor quality, and they have limited access to basic services such as health, education, water and sanitation. They also reflect the dynamics of households trying to survive with low government support and using recovery and adaptation strategies that often seem to bring them closer to poverty rather than improving their well-being.

Recovery processes after natural disasters are complex because they impact a household's income and assets, increase costs, reduce savings as well as productivity, weaken the creation of social capital and increase vulnerability to new disasters. They are also a source of inequity and inequality since they place affected households and regions in clear disadvantage with respect to those with greater resilience.

Knowledge about the impact of natural disasters tends to focus on the national and community level; the impact at the household level, however, is usually unknown. The impact can be direct or indirect. Direct impact is relatively easy to perceive and includes the effect on human lives and immediate damage to assets, such as destruction of houses, goods, working tools and means of transport, among others. Indirect impacts on households include those flowing from or linked to the main damage, and are usually more difficult to analyse and evaluate; they depend upon the resilience of family members. This is frequently the case with job losses, new needs resulting from disasters, reduced livelihoods, declining health, school desertion or the increased overheads that a manufacturer incurs to continue production and trading.

Similarly, when a vulnerable household with limited capacity development faces frequent disasters and is unable to recover rapidly, it can fall into the poverty trap due to its inability to create the resilience needed to face the risks and recovery in new cycles.<sup>50</sup>

It is crucial to identify the indirect impacts of shocks associated with climate change because they constitute the characteristics of vulnerability that need to be differentiated and analysed in order to develop public policies to combat poverty-generating mechanisms.

## THE CLIMATE CHANGE VULNERABILITY INDEX (CCVI)

The CCVI measures a household's vulnerability to natural disasters. Environmental vulnerability refers to the likelihood that natural disasters – such as storms, floods, drought or earthquakes – will have a negative impact on households, whether in physical or socio-economic terms. The damage caused by one of these events might be loss of home, employment, sources of income or of life; and it could have a negative impact on what the household has gained.

The socio-economic information gathered by the Unique Beneficiaries System (SIUBEN)<sup>51</sup> has generated very useful statistics and indicators for the public institutions and social

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50 Ministry of Economy, Planning and Development (MEPYD). 2014. 'El Mapa de la Pobreza en la República Dominicana 2014'; retrieved on 15 September 2015 from <[http://economia.gob.do/mepyd/wp-content/uploads/archivos/uaaes/mapa\\_pobreza/2014/Mapa%20de%20la%20pobreza%202014,%20informe%20general,%20editado%20final%20FINAL.pdf](http://economia.gob.do/mepyd/wp-content/uploads/archivos/uaaes/mapa_pobreza/2014/Mapa%20de%20la%20pobreza%202014,%20informe%20general,%20editado%20final%20FINAL.pdf)>.

51 SIUBEN: A Dominican government institution, attached to the Social Policy Coordination Cabinet, works under the direct responsibility of the Vice-President of the Republic in her capacity of Coordinator. SIUBEN is the body responsible for putting together and running the poor households database for the entire country; it also oversees eligible households to ensure their access to benefits under the different social programmes and/or the allocation of government financial subsidies.

organizations working with vulnerable groups. SIUBEN classifies households according to their socio-economic situation, using proxy variables including characteristics such as dwelling construction materials and family members' capacities (education level and health, among others). The results are used to calculate a household-level quality of life index (QLI).

SIUBEN updates its database with periodic surveys (by area), including wherever possible, additional poverty-related variables. It is worth pointing out that 2.4 million households are registered in SIUBEN's database; this represents more than 70 percent of the population of the Dominican Republic, according to the 2010 census.

The creation of this index followed many studies carried out at a global or regional level:

- The Disaster Risk Index (DRI) implemented by UNDP, which is based on the relationship between economic development and environmental vulnerability, calculated at the national level.
- The University of Colombia's Hotspots Project, which identifies zones of greatest risk of mortality and economic loss, calculated at the global level and broken down by country.
- The Americas Index, also produced by the University of Colombia, which identifies zones of biggest disasters, prevalent vulnerability and risk management, calculated for Latin America with country-by-country breakdown.

The CCVI emerged from the need to incorporate a climate dimension into development and reduce the vulnerability of poor rural households faced with climate shocks in the Dominican Republic, and to include this dimension in national planning and products. It implied a connection between poverty and the environment, including climate change, and the development of policies and programmes to obtain better environmental management; this would be people-oriented, aiming at improving livelihoods and increasing economic security and investment opportunities for the poor as well as enhancing their resilience to climate shocks.

It is worth pointing out that an econometric model was proposed for constructing this index so as to understand the Dynamic Impacts of Climate Shocks on Households; this model aimed to identify the direct and indirect effects on the wellbeing of households, especially the medium and long-term effects on consumption, income and livelihoods.

There are factors that justify this new index, which enables us to know the zones of greater environmental risk prone to flooding and where rains and storms are greater. These factors include:

1. Environmental vulnerability is a pre-existing condition that characterizes an individual, household or community; a natural disaster should therefore be seen as being capable of causing different damage to each of the individuals or households affected.
2. There are determinants of environmental vulnerability, such as: environmental and physical factors (vulnerable zones, floods, type of housing, hurricane paths), social factors (culture, governance, institutionality, education, health, social well-being,

etc.) and economic factors (economic development and the allocation of received incomes). All of these should be considered in the conception of planning and monitoring instruments designed to measure environment-linked vulnerability.

As a result, the index enables the Social Policy Coordination Cabinet<sup>52</sup> to optimize the use of resources and to focus its activities so as to avert the loss of social investment. It also allows the national institutions which form part of the National Emergencies Commission to design risk, contingency and emergency plans to tackle possible climate change shocks and other disasters caused by natural events.

With the CCVI, the Dominican Republic is a pioneer at the global level in calculating and implementing a climate shocks vulnerability index applied to households. This allows for geographical disaggregation on any cartographic scale, from the national level down to households, and thus makes it possible to understand which variables and natural events best explain environmental vulnerability. And these results make it possible to extrapolate this information at the national level, taking into account housing characteristics (wall, floor and ceiling), the average household labour income and the proximity of housing to rivers and streams.

The CCVI has already been used to help take preventive steps in the resettlement of families which found themselves in high-risk areas during the most recent tropical storm. Since the register of households compiled by SIUBEN (which also provides data for the CCVI) is updated every four years, recent information about household poverty and vulnerability is readily available to the country; this enables it to identify improvements over time and to monitor social policies applied to households.

The CCVI offers major advantages for tracking and monitoring. In the first place, it makes it possible to monitor the vulnerability of poor households, both at a specific moment in time (the hour at which a storm took place for example) and also over a longer duration. It also enables a comprehensive vision of multidimensional social problems such as poverty. This is particularly relevant to the new development agenda which is seeking greater integration between sectors, so as to identify joint responses to social problems.

It is also worth noting that, due to its importance and relevance in the Dominican context, the CCVI is being included – through the incorporation of its variables – in the calculation of the National Multidimensional Poverty Index, which is being put together by the national authorities with the support of UNDP.

## CONCLUSIONS

Upper-middle-income countries such as the Dominican Republic that are still facing important challenges in inequality and poverty need to identify mechanisms enabling them to do more than tackling national problems. They also require instruments allowing them to point

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52 Retrieved on 15 September 2015 from <<http://vicepresidencia.gob.do/vice/coe-implementa-mapa-de-vulnerabilidad-del-gabinete-social-para-salvar-vidas/>>.

to improvements over time and to measure the degree to which commitments in the new sustainable development agenda are being met.

In this respect, the Dominican Republic is making major efforts to align itself with the SDGs. It is developing tools to facilitate the monitoring and evaluation of key elements like poverty through the use of the CCVI and the Multidimensional Poverty Index. These tools, moreover, are included in the SDGs Monitoring and Evaluation System and in the Information System of the Ministry of Economy, Planning and Development and the National Statistics Office. They could also be used to evaluate and monitor more than one of the new goals beyond 2015, especially poverty and climate impact, and could eventually acquire an important role in public policy decision-making in general.

It is important to continue developing and promoting the use of multidimensional instruments which make it possible at the same time to tackle social problems and to fulfil international commitments for development. Similarly, it is important to ensure the development of national capacities and of the technical support which the United Nations Development Programme can deliver to countries such as the Dominican Republic in the form of good practices which can be adapted to various contexts, while respecting each State's national character and particularities. There is no doubt that, in monitoring and evaluating the SDGs, this support provides tools and products which in great measure boost countries' efforts to fulfil the stated goals and objectives.