



# PERU RMRP 2021 AND THE ENVIRONMENT

PART I: WATER SCARCITY,  
ITS IMPACT IN THE  
SECTORIAL RESPONSE

WASH, SHELTER,  
INTEGRATION (LIVELIHOODS),  
NUTRITION AND HEALTH

## Context

Peru is the second country of arrival for refugees and migrants from Venezuela and the first in asylum applications, hosting some 1,043 million persons according to the Superintendence of Migration. Following an increasingly challenging journey, most refugees and migrants from Venezuela arrive in dire need of humanitarian assistance to meet their most basic needs, including shelter, food and water, sanitation and hygiene (WASH).

Peru's remarkable economic success between 2000 to 2013 and economic stability up to 2019 opened a great opportunity for the improvement of the living conditions of many within its national population, including 6.4 million people climbing above the poverty line and a decrease of extreme poverty from 31 to 11 per cent.<sup>1</sup> These advances also provided the conditions to receive the increasingly vulnerable Venezuelan flows. However, despite these economic achievements and stability, the country continues to face many **structural challenges** on the provision of basic services and on the sustainable management of its natural resources to support its growing population, economic activities and development.

Peru's commitment to **development**, particularly to the achievement of the sustainable development goals (SDGs), represents its biggest opportunity to attain sustainable economic growth. In this context, human mobility benefits and boosts this growth. According to a macroeconomic analysis made by the BBVA, refugees and migrants from Venezuela have a positive net fiscal impact, improve the human capital with highly qualified professionals in key areas where the local labour market requires it, and increases the availability of labour force, thus boosting the productive capacity of the Peruvian economy.<sup>2</sup> Moreover, this analysis further demonstrated that the positive impacts to the potential Gross Domestic Product (GDP) could be heightened if the Venezuelan population is employed according to their education level, given that a substantial part of this community is highly educated, and as a result would contribute to a larger extent to increase the aggregate demand (internal consumption), essential for the country's overcome of the current economic contraction.

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<sup>1</sup> World Bank, Peru Overview available at <https://www.bancomundial.org/es/country/peru/overview#:~:text=La%20econom%C3%ADa%20peruana%20ha%20experimentado,de%206.1%20por%20ciento%20anua>. For further analysis please refer to the GTRM Joint Needs Analysis, Integration Sector.

<sup>2</sup> BBVA (2019) Venezuelan immigration to Peru: characteristics and macroeconomic impacts.

Nevertheless, Peru like the rest of Latin America and the world, face increasing challenges, including economic and development ones, as a result of climate change and the mismanagement of natural resources.

Today more than ever, development and durable solutions to humanitarian needs cannot come if not hand in hand with **environmental responsibility**. This is the only path to ensure that the benefits of human mobility will harness sustainable economic growth and livelihoods and will prevent further humanitarian and governance crises. While the current pandemic has proven that all countries face significant challenges when economies and services derail in the response to emergencies, it has also shown that regions with high inequality, like Latin America and its already vulnerable communities, may struggle the most. As the effects of climate change affect everyone directly or indirectly, by 2070 more than three billion people may find themselves living outside optimum climate for human life, displacing tens of millions of persons due to droughts, desertification, flooding, unbearable heat, disruption of economies and livelihoods, climate driven conflict over resource scarcity and staggering food insecurity.<sup>3</sup>

## Water scarcity and the response to refugees and migrants

The **Refugee and Migrant Response Plan (RMRP)** is one of the few response plans globally to incorporate a meaningful environmental component to promote efforts to address climate change within humanitarian action. Rising sea levels, warmer temperatures, unemployment, food insecurity, spread of disease, increased poverty and conflict and increasing substantial displacement, all these the result of a warming planet and environmental degradation, will impede our efforts to attain durable solutions to the plea of displaced populations and will make our mandates ever more difficult to achieve. What is not done today to prevent the devastating effects of climate change will lead to a failure to achieve our objectives, and development and prosperity for everyone will become permanently elusive.

But climate change and environmental degradation are not a future crisis, they are already taking a large toll in our response today to the increasing needs of refugees and migrants. As a result, the RMRP Peru seeks to strategize on how to address environmental factors impacting the response to the humanitarian needs of refugees and migrants and their host communities in the country.

### *How do environmental factors affect the humanitarian needs of people on the move?*

As reported by the GTRM Joint Needs Analysis (JNA) and its Joint Needs Assessment through key informants ahead of the RMRP 2021, **water, sanitation and hygiene (WASH) services are the fourth most mentioned unsatisfied priority need** after healthcare, food security and nutrition, and access to livelihoods.<sup>4</sup> It is particularly important to highlight the relationship between WASH services and the other sectors to address the top three other unsatisfied priority needs.

According to the National Water Authority (ANA for its acronym in Spanish) Peru's hydrological resources are divided among three watersheds: the Atlantic Watershed, the Pacific Watershed, and the Titicaca Watershed, holding 97, two and 1 per cent of the available water resources respectively.<sup>5</sup> Given the country's geography, more than 65 per cent of the national population, and more than 90 per cent of refugees and migrants from Venezuela, live in the arid

<sup>3</sup> Abraham Lustgarten (2020), Global Climate Migration series, Part 3, ProPublica and The New York Times Magazine.

<sup>4</sup> GTRM Joint Needs Analysis available in [English](#) and [Spanish](#)

<sup>5</sup> Ministry of Agriculture and Irrigation, National Water Authority, Water in figures, available at <https://www.ana.gob.pe/contenido/el-agua-en-cifras>

coastal areas of Peru depending on the Pacific Watershed and thus facing water scarcity. Some 80 per cent of them live in Lima.

As stated by hydrologists and embraced by the United Nations, it is considered that an area is experiencing **water stress** (water scarcity) when annual water supplies are below 1,700m<sup>3</sup> per person and that the population faces absolute scarcity below 500 cubic metres.<sup>6</sup> Lima's water supplies are of only 125 m<sup>3</sup> per inhabitant. This scarcity is the result of a physical shortage or caused by lack of access due to the structural problems of institutions to ensure a regular supply and lack of infrastructure.<sup>7</sup> Many regions in Peru and the city of Lima face both issues, meaning that water is only available in some marginalized areas for a few hours, if at all.

Access to water is one of the main environmental determinants of **health and nutrition** through the provision of WASH services, especially during this sanitary emergency. While frequent hand washing is a basic measure to prevent the spread of disease, key informants highlighted that in many districts of Lima, Puno and Tumbes, among others, the most vulnerable refugees and migrants and host community, who cannot afford better choices of housing, are living in areas without access to water, and consequently sanitation and hygiene. A clear example are the informal human settlements located in the neighbouring hills within Santa Rosa and Villa Maria del Triunfo. People living in these settlements receive water only once per week, or even every two weeks during the winter, through water tankers and pay the most expensive water in Lima.<sup>8</sup> In addition to this, it may take up to an hour to walk to the tankers and bring the water back home for those who live where the tankers cannot arrive. This is not an isolated problem: Some 342,000 persons in Lima depend on water tankers.<sup>9</sup> According to the National Institute of Statistics and Informatics (INEI) up to 2018, 44 per cent of the urban population in the country was living in marginalized neighborhoods, informal human settlements, or inadequate housing;<sup>10</sup> stressing the importance of the relationship between environment, WASH and Shelter.

Lack of access to clean water and sanitation is also one of the main reasons causing **chronic malnutrition** of children in Peru, one of the main public health problems in the country.<sup>11</sup> The most affected communities are the poorest and more marginalized who live in areas without access or with limited access to WASH services. As chronic malnutrition is the result of environmental, social and economic factors, an immediate cause has been found in the spread of respiratory and gastrointestinal infections given the lack of clean drinking water, sanitation and hygiene. The challenges posed by water scarcity should be thus a major focus of the response to the needs of the most vulnerable communities.

Facing an absolute water scarcity, 83 per cent of the water used in the city of Lima comes from superficial water sources such as the rivers Rimac (providing 70 per cent of all surface water), Chillón and Lurín, as well as 17 per cent that comes from aquifers. The 90 per cent of underground water comes from the Chillón-Rimac aquifer.<sup>12</sup>

<sup>6</sup> UN portal <https://www.un.org/waterforlifedecade/scarcity.shtml>

<sup>7</sup> UN Water on water scarcity available at <https://www.unwater.org/water-facts/scarcity/>

<sup>8</sup> Mariel Castro (June and November 2020) Peru: The challenges to access potable water in the informal human settlements of the periphery of Lima's Metropolitan area amid COVID-19, National Geographic available at: <https://www.nationalgeographic.com/medio-ambiente/2020/06/problematica-del-acceso-al-agua-potable-lima-peru>

<sup>9</sup> Aquafondo (2020) Water Scarcity, a silence threat to economic development available at <https://aquafondo.org.pe/wp-content/uploads/2020/06/Estudio-Crisis-de-Agua-una-amenaza-silenciosa-para-eld-esarrollo-econ%C3%B3mico.pdf>

<sup>10</sup> INEI for the National System of environmental information (SINIA) available at <https://sinia.minam.gob.pe/informacion/tematicas?tematica=12>

<sup>11</sup> Sánchez-Abanto, José, (2012). Evolution of chronic undernourishment in children under five years old in Perú, Peruvian Magazine of Experimental Medicine and Public Health, Ministry of Health.

<sup>12</sup> Aquafondo (2016) Study of hidric risks and vulnerability of the private sector in Metropolitan Lima and Callao amid Climate Change available at <https://aquafondo.org.pe/wp-content/uploads/2016/07/040716-Estudio-de-Riesgos-Hidricos-y-Vulnerabilidad-del-Sector-Privado-en-Lima-Metropolitana-y-Callao-en-un-Contexto-de-Cambios.pdf>

Despite the great relevance of **the river Rimac as the main source of water for the city, it is heavily polluted**, creating another major challenge for the city's inhabitants. The main sources of pollution are industries, including the mining and metallurgic industries, home and agricultural waste, all of them posing threats to environmental and human health.<sup>13</sup> Treating water, preventing pollution and waste, improving infrastructure and innovation, are all major needs and all part of a strategy to enhance livelihoods, nutrition, food security and health through the sustainable provision of WASH services.

Moreover, the city of Lima is not only the home of some 10.5 million persons, including an estimated 785,000 refugees and migrants from Venezuela; it is also where 44 per cent of the country's GDP is produced.<sup>14</sup> As climate change threatens to increase the already absolute water scarcity and thus disrupt the water supply, it would impact not only the human consumption, but also the **economic activities**. According to a recent study, manufacture industries, including the food industry, and the services sector where most refugees and migrants are employed, are at the highest risk of not having enough water resources to operate normally in the next 10 to 15 years.<sup>15</sup> These industries represent 55 per cent of the employments in the city. Our vision of durable solutions around integration, livelihoods and development requires to come from sustainability.

The problem of water scarcity along the coastal areas is such that at the end of November 2020, amid the pandemic, when water is necessary to follow the hygiene measures, the Government published decree 185-2020 declaring a 60-day **state of emergency** in several districts within the regions of Tumbes, Piura, Lambayeque, La Libertad, Cajamarca and Ancash for the imminent danger caused by the water scarcity to implement exceptional, immediate and necessary measures to address these challenges. This included the districts of Zorritos, Corrales, Tumbes, Aguas Verdes, Zarumilla, and Piura, where a significant number of refugee and migrants from Venezuela live. This is not new: in 2016, through decree 089-2016 the government also declared a state of emergency caused by water scarcity in the regions of Apurímac, Ancash, Ayacucho, Cajamarca, Cusco, Huancavelica, Ica, Junín, Lambayeque, La Libertad, Pasco, Piura, Puno, Tacna and Tumbes as well as in seven provinces within the region of Lima and four of Arequipa.

Inadequate **agricultural practices as well as pollution and the mismanagement of water resources** by an increasing population and by the mining and manufacturing industries, now heightened by climate change, have further increased water stress, hampering sustainability and development and rendering small-scale farmers and rural communities impoverished.<sup>16</sup> Flows of people from rural to urban settings caused by poverty and incapacity to produce puts further stress on the limited resources the cities have and disrupts food security. Worryingly, according to the United Nations Environment Programme (UNEP) SDG score card, Peru has an increasing level of water stress and reduction of available freshwater resources and it is failing to meet its targets, not only on clean water and sanitation, but also on responsible consumption, decent work and economic growth, zero hunger and no poverty.<sup>17</sup> There is a link between these SDGs.

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<sup>13</sup> Please refer to Juárez, Henry (2012) Heavy metals pollution of the Rimac River and its impact in the agriculture of Eastern Metropolitan Lima and [https://aquafondo.org.pe/wp-content/uploads/2015/11/4\\_La\\_contaminacion\\_de\\_los\\_rios\\_de\\_Lima.pdf](https://aquafondo.org.pe/wp-content/uploads/2015/11/4_La_contaminacion_de_los_rios_de_Lima.pdf)

<sup>14</sup> Op. Cit. Aquafondo (2020)

<sup>15</sup> Ibid.

<sup>16</sup> UNOPS, The fight against water scarcity in Peru available at <https://www.unops.org/es/news-and-stories/stories/combating-water-scarcity-in-peru>

<sup>17</sup> Sustainable Development Goals Score Card, Peru, available at <https://wesi.unep.org/sdg/scorecard/>

Furthermore, the Ombudsperson's office in Peru reports that the highest number of social conflicts in the country, over 60 per cent, are socioenvironmental and many of them regarding concerns over the pollution and over exploitation of water resources and its impact in environmental and human health.<sup>18</sup>

### *Understanding and shaping the environmental impacts of the response to prevent xenophobic sentiments*

The SDG 6 aims to ensure **availability and sustainable management of water and sanitation** for all as water scarcity could displace 700 million people by 2030.<sup>19</sup> As Peru's most populated areas already face increasingly difficult challenges with water scarcity and absolute water scarcity, the response to the immediate and long term needs of refugees and migrants from Venezuela requires a **sustainable approach to the management of natural resources** that allows for their sustainable integration. To prevent anti-Venezuelan sentiments and grievances that fuel xenophobia over the competition of limited resources, the response shall contribute to the attainment of the SDG 6. This includes a thorough assessment of the design and impact of activities on WASH, Shelter and livelihoods and their joint programming, to in turn contribute to better nutrition and health.

Especial emphasis should be placed on SDG 6 target 6.1: to achieve **universal and equitable access to safe and affordable drinking water for all**, which requires to support the most vulnerable refugees, migrants and host communities living in informal human settlements and that depend on water trunks to receive water at a great expense. Likewise, for target 6.2: to achieve **access to adequate and equitable sanitation and hygiene** for all and end open defecation, the response must efficiently prioritize needs according to a severity analysis such as the cases identified during the GTRM Joint Needs Assessment where key informants highlighted the situation of families who depend on beaches, rivers and provisional holes in the ground for showering and as toilets. The response should pay special attention to the needs of women and girls and those in vulnerable situations to ensure their adequate protection and prevention of gender-based violence.

The overall response should aim to contribute to target 6.4: to **substantially increase water-use efficiency across all sectors** and ensure sustainable withdrawals and supply of fresh water to address water scarcity and substantially reduce the number of people suffering from it, a need to harness the benefits of human mobility and to prevent further displacement.

As mentioned before, there is a link between the SDGs, such as the relation between reducing poverty with reducing hunger, ensuring health and promoting well-being, and ensuring availability and sustainable management of water and sanitation. The actions to meet these goals can contribute to meet others. In this regard, addressing the problem of water scarcity also has an impact on SDG one: *no poverty, end poverty in all its forms everywhere*, as **access to clean drinking water and sanitation are indicators of poverty** and a non-income dimension to identify and to measure poverty related to the access to services. This is important for the response to vulnerable refugees, migrants and host communities to not only identify how many people are poor and in need, but also the intensity of poverty, such as who is more poor or less poor, their access to opportunities and issues of inequality, which informs decision making and planning. This is particularly significant for refugees and migrants since natural capital, in this case access to water, is instrumental for families to move out of poverty in a self-sustaining manner and avoid poverty traps which

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<sup>18</sup> Defensoría del Pueblo (2019) Reporto n social conflict No 187 available at <https://www.defensoria.gob.pe/wp-content/uploads/2019/10/Conflictos-Sociales-N%C2%B0-187-Septiembre-2019.pdf>

<sup>19</sup> Sustainable Development Goals <https://sdgs.un.org/goals/goal6>



they are currently facing, such as the pandemic and its economic consequences pushing millions of people into poverty and extreme poverty.<sup>20</sup> Natural disasters, such as drought, also exacerbate poverty.

As a result, the response must commit through its environmental approach to all targets for SDG one, especially targets 1.4 and 1.5. Target 1.4 aims to ensure that all men and women, in particular the poor and the vulnerable, have **equal rights to economic resources and financial services** (human and financial capitals), as well as access to **basic services** (social and physical capitals) and **natural resources** (natural capital). Target 1.5 seeks to build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. To accomplish these targets, all five capitals (livelihoods capitals) are essential for durable solutions that sustainably satisfy the needs of displaced populations and host communities, considering that natural resources are essential for livelihoods as the case of Lima clearly demonstrates, where water scarcity could disrupt economic activities. As such, decent work and economic growth (SDG 8) will not be sustainable without addressing the issue of water scarcity.

In line with this, the SDG 10: to reduce inequality within and among countries, must also be supported. As the most vulnerable groups are being negatively impacted the most by the pandemic, including refugees and migrants, **inequality** is an ever-increasing problem.<sup>21</sup> Access to services beside being an indicator on poverty is also an indicator on inequality. Interventions from the WASH sector addressing the issue of water scarcity and access to clean drinking water and sanitation for the most marginalize communities contribute to reduce inequality.

Our commitment to these targets stems from the fundamental understanding that if poverty and unemployment increase due to water scarcity, our efforts on WASH and livelihoods will be hindered. The path to build self-reliant and resilient societies goes hand in hand with sustainability and development.

### *What are partners doing and what is limiting the response?*

The challenge posed by **water scarcity is transversal to all the sectors of the response** to the humanitarian and development needs of refugees and migrants from Venezuela and their host communities in Peru. Access to clean drinking water and to sanitation is an immediate and long-term need that clearly highlights and exemplifies this nexus between humanitarian and development efforts. As it has been mentioned before, lack of access to water and sanitation is a type of heightened vulnerability (economic, social and environmental) against increased risks to their well-being and livelihoods and a non-income indicator of poverty.

The 2021 RMRP Peru Chapter on WASH aims to prioritize interventions that improve the existing sanitary infrastructure, including toilets, showers and handwashing facilities and distribution or enhancement of access to drinking water for the most vulnerable.<sup>22</sup> Nevertheless, these **interventions will need to overcome the challenges resulting from water scarcity and its exacerbation as a result of climate change** to have a sustainable impact. This will require investment in innovative solutions and cross-sectoral joint initiatives that address the issue of water scarcity comprehensively. Examples of these initiatives could include agroforestry projects, such as forest gardens, which could target livelihood objectives, food security, nutrition integration and environmental services, including the resistance to drought, carbon absorption and water conservation and restoring groundwater tables for water security. Supporting new low cost and cost-efficient technological solutions through entrepreneurships and other

<sup>20</sup> SDG 1 overview available at <https://sdgs.un.org/goals/goal1>

<sup>21</sup> SDG Goal 10 available at <https://sdgs.un.org/goals/goal10>

<sup>22</sup> RMRP2021 pp 266-267 available at <https://rmp.r4v.info>

capacity-building initiatives to treat, reuse and provide water would also highly increase benefits for refugee and migrant and host communities.

Up to now, the WASH sector in Peru has been heavily impacted by the limited number of partners available on the sectoral response, as well as limited resources. However, through collaborative work, including with the private sector, and involvement and support from donors, innovative projects can be the difference between overcoming obstacles such as further water stress and structural causes of poverty and cycling poverty traps and vulnerability.