



Answering
tomorrow's
challenges
today

Réunion

**Study on living conditions and
access to selected basic needs in
the EU outermost regions**

REQUEST FOR SERVICES 005 Under Framework contract
2020CE160AT013

1.0 Key economic and social structure of the region

- ▶ **Specificities of the region:** Réunion is a volcanic island located in the western Indian Ocean, east of Madagascar and southwest of Mauritius. Réunion is a French overseas department, with a Regional Council and a Departmental Council. Réunion is divided into four districts, 25 cantons and 24 municipalities organised around five agglomeration communities. It is one of the most well-preserved biodiversity hotspots in the planet, with a national park that covers 40% of the territory of Réunion¹. The island is characterised by a tropical climate, marked by a rainy season between November and April, and a dry season between May and October. The territory is naturally divided into the windward coast in the east and the leeward coast in the west, sheltered by the high relief, which translates into disparities in rainfall and temperature. Réunion is one of the youngest and fastest-growing European regions. There are 2.5 times more individuals under 20 years old than over 65². The population has been growing at an average of 0.4% per year since 2014, slightly faster than in mainland France (0.3%)³. In 2019, around 37% of the population lived below the national poverty line, compared to 15% in mainland France⁴, with a high unemployment rate (18%) compared to the national average (7.9%)⁵.
- ▶ **Water and sanitation** and **Adequate Housing** have been defined as the **key basic needs** to be analysed in Réunion. **Key facts and figures** are summarised below:



Figure 1. Réunion map. Source: DG REGIO

- ▶ **Key Area 1 “Water and sanitation”:** About 97% of the population has access to water supply⁶ but its quality often falls short⁷. The efficiency of the distribution network is at around 63%⁸ and networks are vulnerable to water loss through leaks or breakages. Non-collective sanitation⁹ remains a concern, affecting approximately 45% of households that are not connected to a public wastewater collection network.
- ▶ **Key Area 2 “Adequate housing”:** The population in Réunion faces challenges to access adequate, affordable and secure housing. The number of over-occupied homes is above the national average¹⁰; social housing demand is high¹¹; and there is a decreasing trend in the number of property owners¹². Moreover, despite some improvement in terms of facilities, there are still 33,526 precarious homes and comfort issues persist¹³.

2.0 Water and sanitation

2.1 Access to drinking water and sanitation in Réunion

2.1.1 Conditions in place to meet the needs and main factors constraining access

Conditions in place

- ▶ With abundant water resources, Réunion relies mainly on surface water (66%), while the rest primarily comes from groundwater¹⁴, with uneven distribution in time and space. The rainfall brought by winds is more abundant on the windward coast (east), than on the leeward coast (west). Réunion’s natural hazards, particularly cyclones (the island has just been hit by a strong cyclone in January 2024) and topographical features impact water availability and quality. Most of the water is used for drinking purposes (approximately 69%), while irrigation and industrial uses are comparatively small, representing 25% and 5% respectively¹⁵.
- ▶ On **water consumption**, the estimated number of inhabitants supplied increased between 2014 (708,073 inhabitants) and 2020 (836,089 inhabitants)¹⁶, which is close to universal access (approximately 97% of the population, which currently stands at 860,000 inhabitants). However, areas such as Cirque du Mafate, only accessible by foot or helicopter, deal with serious problems of access to water, often accentuated by cyclones. Water bottles were delivered by helicopter in 2022 to guarantee a minimum access to water^{17,18}. The average consumption per customer in Réunion decreased from 2014 (223,86 m³) to 2020 (205.47 m³)¹⁹. The domestic volume accounted for per inhabitant served also decreased from 2014 (107.38 m³) to 2020 (94.79 m³). While 2014 recorded the highest value, 2017 displayed the lowest (68.46 m³)²⁰.

- ▶ Regarding **affordability**, the price of water²¹ per m³ it increased from 2014 (1.31 €/m³) to 2020 (1.41 €/m³)²². In comparison with other French outermost regions and France (with an average price for drinking water of 2.11 €/ m³ in 2021), the price of water in Réunion remains low. However, half of Réunion's population have an equivalent disposable income²³ of less than 1,320€ per month, 27% below the national average²⁴. The rate of unpaid water bills increased between 2014 (4.22%) and 2020 (7.72%)²⁵, which could be explained by a combination of low income and a high share of the population living below the national poverty line. This affects the capacity of local authorities to invest in infrastructure renewal.
- ▶ Regarding **water quality**, compliance with microbiological²⁶ and physico-chemical²⁷ quality limits in distributed water samples decreased slightly from 2014 (96.66% and 98.50%, respectively) to 2020 (95.35% and 95.47%)²⁸. **Water infrastructure conditions** present a mixed picture. The percentage of annual average renewal of drinking water networks increased from 2014 (0.66%) to 2020 (1.46%)²⁹. In contrast, the percentage of occurrence of unscheduled service interruptions increased from 2014 (0.61%) to 2020 (1.07%), with a peak in 2019 (1.63%)³⁰ ³¹. Furthermore, average distribution network efficiency stood at around 63% (for every 10 litres of water withdrawn, only 6.3 litres are distributed to customers)³², which is below the national average of 83.5% in 2022³³. This varies throughout the region, with different areas displaying different efficiency rates – ranging from below 40% to over 80%³⁴. Similarly, the linear network **loss** index (m³/km/day) increased from 2014 (23.43 m³/km/day) to 2020 (26.84 m³/km/day)³⁵, which indicates that networks are vulnerable to water loss through leaks or breakages.
- ▶ On **water management**, the maximum number of working days to open connections for new subscribers increased from 1.14 days in 2014 to 3.10 in 2020³⁶. From an **administrative** point of view, following the introduction of the law NOTRe in 2020³⁷, there are five organising authorities in charge of drinking water and sanitation services (the agglomeration communities)³⁸, and around ten public and private operators involved in the production, the protection of extraction points, and treatment, transport, storage and distribution of water for human consumption³⁹.
- ▶ The **Action Plan for Drinking Water and Wastewater services** (known as Plan Eau DOM) from 2016 is the key **policy framework** for water action in the French outermost regions, as it supports local authorities in improving the drinking water and sanitation services, by strengthening their technical and financial capabilities. To plan the strategic orientations of water management in the region, the **Master Plan for Water Development and Management** (SDAGE)⁴⁰ and its associated measures for 2022-2027 (adapted to Réunion)⁴¹ were approved in 2022. Additionally, the National Recovery and Resilience Plan (RRP) (2021) focuses on strengthening the resilience of the drinking water supply and on speeding up the Plan Eau DOM in the French overseas departments.
- ▶ When it comes to **programmes and investments**, there is a mix between funds coming from the European Regional Development Fund (ERDF), national government, the department and region, and the water office. Around 60% of funding comes from water users (i.e. bills), of which 11% comes via the SDAGE entrusted to the Water Office. The remaining 40 % comes from EU funding (the ERDF Programme for Réunion 2021-2027 plans to finance around 1.7 billion euro⁴²) and the national level (financed with around 385 million euro⁴³), which help reinforce capacities to plan and organise water projects⁴⁴. At the **EU level**, the ERDF Programme for Réunion 2021-2027 includes a specific objective aimed at favouring access to water and sustainable water management, which is financed with 106 million euro⁴⁵.
- ▶ At the **national level**, the French government has made funding available within the Action Plan for Drinking Water and Wastewater services (nearly 200 million euro for the period 2020-2024 to address the challenges of wastewater collection) and the Convergence and Transformation contracts⁴⁶. There is also a Funding Committee in Réunion, bringing together the main water funding bodies in the region, and aiming to facilitate the coordination and help optimise the programming of actions and works⁴⁷.

Constraining factors

The region faces challenges which partially constrain access to this basic need or are likely to constrain access in the future:

- ▶ The **relief**, the volcanic and insular character, and **climate** of Réunion affect the spatial and temporal distribution of water, with difficulties in accessing resources depending on the altitude. There is risk of shortages at the end of the dry season in the west and south, and vulnerability of groundwater resources along the coast, due to the risk of saline intrusion⁴⁸. There are regular shortage warnings at the end of the dry season in the west and south⁴⁹. The risk of run-off and erosion is also very high⁵⁰⁵¹ given the topography, posing threats to people during times of heavy rain. Climate change may exacerbate natural hazards, such as droughts, cyclones and the intensity of rainfalls, as well as the increasing level of the Indian Ocean (which can lead to salinisation of fresh coastal groundwater).
- ▶ Despite the investments made in the past years, including the construction of the aqueduct 'basculement des eaux' to connect the east and west, **infrastructure still faces some challenges**. The state of the infrastructure and the efficiency

of the distribution networks vary across the region, with some areas revealing efficiency levels below 40%⁵². Repair needs of water supply networks differ, depending on the municipality, and the networks have relatively low yields⁵³.

- ▶ Some operators had to **restrict water supply to cope** with the water deficit. Water restrictions were introduced in 20 distribution units⁵⁴, primarily at street or neighbourhood level⁵⁵. Some areas are more affected, such as Salazie, where there were almost 30 water restriction announcements between October and December 2022⁵⁶. Moreover, in October 2023, temporary water restrictions were introduced in seven municipalities⁵⁷.
- ▶ The distributed water often did not meet **quality standards**. According to data from the Regional Health Agency (ARS), 46% (2019) of water service subscribers receive water from networks that did not have sufficient sanitary safety procedures in place (i.e. the absence of clarification treatment before disinfection)⁵⁸. In addition, 52% of the population is supplied by networks that are not sufficiently safe⁵⁹. Approximately 5% of water service customers are served by networks with proven health risks (pathogenic parasites detection) or ongoing risks (lack of disinfection)⁶⁰. Pesticides have been found in 27% of water catchments, mainly impacting the eastern and southern regions⁶¹. Progress in water resource protection decreased from 2014 (63.1%) to 2020 (59.31%), suggesting that fewer preservation actions were undertaken by public and private entities compared to previous years.
- ▶ **Non-collective sanitation** remains a concern, affecting 45% of households⁶². The latter is particularly common in sparsely urbanised areas. In line with these identified challenges, nearly 200 million euro are planned over the period 2020-2024 to meet the wastewater collection issues⁶³.

3.0 Adequate housing

3.1 Access to adequate housing in Réunion

3.1.1 Conditions in place to meet the needs and main factors constraining access

Conditions in place

- ▶ There are several **socio-economic** aspects that affect access to adequate housing. Firstly, more than a third of the population is living below the national poverty line⁶⁴, which translates into a shortage of housing meeting the population's purchasing power. Moreover, the region is experiencing demographic changes, as the population is growing at an average rate of 0.4%⁶⁵, and even though the population is still young, the demographic pyramid is starting to widen in the middle and old age groups. It is estimated that one in four residents will be aged 60 or more in 2050⁶⁶, which will alter the housing needs of the population.
- ▶ With regards to **habitability**, Réunion showed a lower number of rooms per person than the French average in 2019, with 1.5 compared to 1.9 rooms⁶⁷. The lack of space remains a challenge, as 9.5 % of main residences were over-occupied in 2019. In parallel, there is a considerable number of under-occupied homes, meaning that they are deemed too large for the needs of the households living in them (60%). Such homes are likely to be occupied by owners, couples without children and older households⁶⁸. In terms of **tenancy regime**, the region has faced a downward trend in homeownership rates, with a decrease from 51.8% in 2013 to 50.5% in 2019, compared to 63.6% in France⁶⁹. The rate of home ownership is declining more within low-income households⁷⁰.
- ▶ The construction of social housing in Réunion began in the 1960s. The proportion of social housing per 10,000 inhabitants stood at 861 in 2018, increasing to 929 in 2022⁷¹. Around 23% of all principal residences are social housing⁷². To this day, the **social housing** offer is partially meeting the needs of the population. The French demand registration system recorded more than 30,000 active applications for social housing in 2020⁷³, and requests have risen since the onset of the COVID-19 crisis. Common trends of the profile of the requests: applicants are often young, usually less than 30 years old; very precarious economic situation; single-parent households; lack of own housing or current accommodation is too small. Besides, the number of social housing units approved for construction fell in recent years: in 2020, 2,000 new social housing units were financed compared to 2,700 in 2019 and almost 4,416 in 2012. The decline between 2019 and 2020 can be explained by the health crisis. The downward trend continued after 2020, which was mainly due to the high inflation caused by Russia's invasion of Ukraine in 2022. There is a low turnover rate of households living in social housing⁷⁴.
- ▶ In relation to the **housing typology**, there have been limited changes, and the share of solid buildings or houses stagnated at around 89%^{75 76}. Similarly, the proportion of traditional huts, wooden houses and makeshift dwellings, amounted to 6.2%,

4.1% and 0.6% respectively in 2019⁷⁷. According to Urbanism Agency of Réunion (Agorah), there are still 33,526 precarious buildings, including 2,160 makeshift dwellings and 20,408 traditional huts; 15,601 unfit buildings identified in 20 municipalities, 30% to 40% of which are unoccupied⁷⁸.

- ▶ There is a positive trend observed when it comes to **facilities**. Electricity and sanitation facilities are available in nearly 100% of households⁷⁹. Both solar water heaters and sewerage facilities were present in slightly above 50% of households in 2020, with a more prominent increase of solar water heaters (an increase of 20.7 percentage points compared to 2009)⁸⁰ compared to sewerage (an increase of 6.3 percentage points compared to 2009)⁸¹. The presence of an air-conditioned room, despite a growing trend over the period 2009-2020, remained at 27.4% in 2020⁸².
- ▶ The market is currently unable to provide sufficient **affordable housing**. The average rent stood at 6.22 €/m² in 2021, which is above the national average of 6.05€/m²⁸³. Prices are determined by several factors, including proximity to employment centres, the structure of the housing stock and particularly the limited social housing offer. Private rents in Réunion are comparable to rents in large and medium-sized cities in mainland France, which pushes households to move to the outskirts, away from employment and leisure centres⁸⁴.
- ▶ Housing **policy** falls under the responsibility of the national government and is under the framework of the second **Overseas Housing Plan 2019-2022**, which was extended until 2023⁸⁵. This plan served as a roadmap, tailored to the specificities of Réunion, and resulted in 37 adapted measures and a tool to track progress^{86 87}. At local level, the **Local Housing Programme** (PLH) constitutes the main document for formulating a housing strategy at the inter-municipal level. In 2011, the State has set up a departmental centre to combat substandard housing⁸⁸. Similarly, the (Inter-)municipal Plans to Combat Substandard Housing (PILHI) are a key tool used by agglomeration communities and municipalities to improve living conditions of households facing precarious situations^{89 90}.
- ▶ The national government offers **funding** for social housing through the so-called 'unique budgetary line' (LBU). The other main vectors of the State's policy to promote social housing are tax measures, grants, and loans from Action Logement and the National Housing Agency (ANAH)⁹¹. The Banque des Territoires also provides financing in the form of loans and equity investments⁹². At the local level, to complement the national support, in 2022 the regional authority launched a plan to renovate housing, with a budget of 200 million euro up to 2025⁹³. Moreover, the French Major Natural Risk Prevention Fund (FPRNM) provides funding for risk prevention measures⁹⁴.
- ▶ At the **EU level**, the ERDF Programme for Réunion 2021-2027 plans to allocate 33.5 million euro for adequate housing, including energy efficiency measures for social housing⁹⁵), while the European Social Fund Plus (ESF+)⁹⁶, InvestEU⁹⁷ and France's Recovery and Resilience Plan (RRP) for 2021-2026⁹⁸ offer grants and financial tools to increase access to and improve housing. The RRP for 2021-2026⁹⁹ focuses on the protection of windows against solar radiation and on efficient air conditioning to replace existing air conditioning units¹⁰⁰.

Constraining factors

The region faces challenges which partially constrain access to this basic need or are likely to constrain access in the future:

- ▶ **Geographical** challenges, such as limited land space, pose constraints on residential development. Additionally, the region hosts protected natural areas, requiring a delicate balance between conserving nature and encouraging urban growth.
- ▶ The **existing housing stock does not fully align with evolving demographics**, changes in lifestyles (i.e., changes in co-housing behaviours) and updated standards¹⁰¹. For instance, most of the social housing used to be 'T3' type (home containing a living room and two rooms). As the size of households decreases and the population ages, the need for smaller homes is growing¹⁰². This will also translate into a need for more housing units.
- ▶ Dating back to the 1960s, **social housing is aging**. Approximately 38.7% of social housing is between 20 and 39 years old¹⁰³. Moreover, local climatic conditions and high humidity accelerate the deterioration of buildings.

Examples of initiatives to improve housing quality

To address deterioration of social housing, major renovation projects are underway as part of the '**France Relance**' **Recovery Plan**^{104 105}. Regarding private housing, the Departmental Council helps low-income households or individuals with '**home improvement**' **grants** to carry out work to improve or adapt their homes¹⁰⁶. Nevertheless, the demand is very high and waiting lists are long, while a large part of the remaining stock still needs to be repaired and upgraded¹⁰⁷. Households also face problems related to insulation or the roof, sometimes made of sheet metal causing unbearable temperatures in homes. The thermal performance

of private housing is starting to improve, largely thanks to **MaPrimeRénov**¹⁰⁸, funded by the national government and the Recovery and Resilience Facility (RRF)¹⁰⁹. Nevertheless, few companies have the required certification to carry out the work initiated under this programme¹¹⁰.

- ▶ Many residents of Réunion are exposed to **comfort issues or defects**. Dampness in homes is the most common problem faced (51%), followed by noise (32%), difficulty in maintaining a comfortable temperature (29%) and inadequate size of home (19%)¹¹¹. Moreover, a large proportion of the existing housing stock needs major improvements, including energy renovation and asbestos removal, on a long-term basis¹¹².
- ▶ The high inflation experienced in 2023 deterred housing construction and renovation. Inflation mostly affected prices of **construction materials**¹¹³, which represent around a third of total construction costs. Most of these materials often come from mainland Europe and France due to the need to comply with specific certifications, like CE marking¹¹⁴ or NF certification¹¹⁵. Currently, applied **norms and standards** are not fully tailored to the specificities of the region, making construction more expensive¹¹⁶.

4.0 Mitigating actions and recommendations

Needs identified in Key Area 1: Access to water and sanitation

DIVERSIFY AND USE ALTERNATIVE WATER RESOURCES TO INCREASE WATER RELIABILITY AND A FAIR DISTRIBUTION ACROSS THE TERRITORY

- ▶ Make greater **use of groundwater** to improve the safety of water supplied to the population.
- ▶ Intensify **rainwater recovery** and **reuse treated wastewater** for irrigation, car wash, toilet flush among others.
- ▶ Set up and improve **interconnections** between the different water sources allowing to mobilise different resources and compensate shortages through water transfers.
- ▶ Promote **research and innovation** to explore alternative solutions, including the development of cost-effective and environmentally friendly ways to desalinate seawater.

PROMOTE WATER SAVING MEASURES TO OFFSET FUTURE INCREASES IN DEMAND

- ▶ Gain a better understanding of behavioural patterns in relation to **water use** in the region to identify ways of saving water.
- ▶ Carry out **campaigns to raise awareness** of water resource preservation, climate change and the involvement of citizens in water-related initiatives, with a special focus on engaging younger generations.
- ▶ Further promote the use of existing **subsidies for the installation of water tanks** for watering, washing vehicles, among others, for individual household use.

PREVENT AND FIGHT WATER POLLUTION TO IMPROVE WATER QUALITY

- ▶ Systematically **monitor** the situation to gain a better understanding of the extent, sources and effects of water pollution.
- ▶ Increase the area of **protection zones** around water catchments as a means of preventing occasional or accidental pollution to improve the quality of the water distributed to the public.

Needs identified in Key Area 2: Access to adequate housing

ADAPT THE HOUSING OFFER TO DEMOGRAPHIC AND BEHAVIOURAL CHANGES TO ENSURE ADEQUATE AND AFFORDABLE HOUSING IN LOCATIONS WITH ACCESS TO FACILITIES

- ▶ **Adapt the housing offer to the needs** and changing lifestyles of the population.
- ▶ Promote the **development of social housing and the revitalisation of existing structures** to create additional social housing units. Seek to design such housing units to enhance quality of life, provide easy access to public amenities, ensure strong transportation connectivity, offer diverse housing options, and keep rents affordable.
- ▶ Promote **home-ownership initiatives** alongside social housing projects supported by available incentives and mechanisms.

TAILOR CONSTRUCTION REGULATIONS AND PRACTICES TO THE SPECIFICITIES OF RÉUNION AND PROMOTE CIRCULAR CONSTRUCTION AND RENOVATION

- ▶ Identify regulatory **requirements** (including the requirement of specific materials) not adapted to Réunion circumstances that could deter construction.
- ▶ Implement **circular economy actions** to reduce the environmental footprint of the construction sector, given the high emissions and costs of transporting materials from mainland Europe. Actions could include reusing and recycling building materials or using alternative local materials (e.g., timber or bamboo) and promoting local research and innovation involving local universities and stakeholders.

STRENGTHEN AWARENESS AND KNOWLEDGE TO BENEFIT FROM EXISTING SUBSIDIES FOR HOME RENOVATION

- ▶ **Organise capacity-building and awareness raising workshops** at local level to provide information and guidance on the subsidies available to citizens and the requirements and procedure to access them.

Annexes

Annex 1 - References

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³ <https://www.insee.fr/fr/statistiques/4482473>

⁴ Ibid.

⁵ Ibid.

⁶ Fiche de métadonnées du jeu Services publics d'eau potable - jeux de données exploités pour les rapports nationaux, SISPEA (France), 2022. <https://data.eaufrance.fr/jdd/7d6a3010-cf19-42c3-8a38-9823074185ce>

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⁸ Les chroniques de l'eau – Réunion, Office de l'eau Réunion, 2023.

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¹⁹ Fiche de métadonnées du jeu Services publics d'eau potable - jeux de données exploités pour les rapports nationaux, SISPEA, 2022. <https://data.eaufrance.fr/jdd/7d6a3010-cf19-42c3-8a38-9823074185ce>

²⁰ Ibid.

²¹ This indicator refers to the price of water per m³ for 120 m³ including VAT. Nonetheless, it is difficult to specify the price of a m³ of water in France, as different rates are applied. On average, however, the price of water is estimated at €2.11 /m³ for drinking water as at 1^{er} January 2021, based on an annual consumption of 120 m³ (figures published in the latest SISPEA report in July 2022).

²² Ibid.

- ²³ The equivalent disposable income (Eurostat) is called 'standard of living' (niveau de vie) in France. The standard of living is equal to the household's disposable income divided by the number of consumption units. The standard of living is therefore the same for all individuals in the same household.
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- ³⁰ This indicator refers to the rate at which unexpected disruptions in water supply to consumers take place.
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- ³⁶ Ibid.
- ³⁷ Law on the new territorial organisation of the Republic, conferring new powers to the regions.
<https://www.ecologie.gouv.fr/loi-portant-sur-nouvelle-organisation-territoriale-republique-notre>
- ³⁸ In French called 'communautés d'agglomérations', they group several communes or municipalities.
- ³⁹ Les chroniques de l'eau – Réunion, Office de l'eau Réunion, 2023.
https://www.eaureunion.fr/fileadmin/user_upload/Chroniques/2023/23.07.19_CHRONIQUES_de_L_EAU_133.pdf
- ⁴⁰ The SDAGE 2022-2027, adopted on 29 March 2022, is the regional translation of the Water Directive 2000/60 and Directive 2020/2184 on the quality of water intended for human consumption.
- ⁴¹ La Reunion is a pioneer as not all outermost regions have adapted their SDAGE and are assessing progress.
- ⁴² Programme Réunion ERDF-ESF+ 2021-2027.
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