



BENIN SUSTAINABLE DEVELOPMENT REPORT 2024

Progress towards SDG 6: Safe drinking
water and sanitation for all



September 2024

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The principal SDSN authors are Isabella Massa and Samory Toure. Grayson Fuller (SDSN) is responsible for data management and analysis. Jude Eggoh and Achille Barnabé of the SDSN Benin network carried out the case study on access to drinking water in Benin in collaboration with the CSO-ODD and the DRES of the Ministry of Economy and Finance, the SONEB and the ANAEP-MR and proposed directions for future action to achieve the SDGs in Benin.

The report also benefited from the support of Sara Allali, Gaëlle Descloitres and Jessy Ngarde, the INStAD and the DGCS-ODD. Ruben Andino and Felipe Mantovani produced the online data visualization platform.

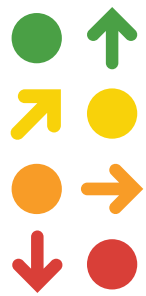
An interactive online dashboard and all data used in this report can be accessed at: benin.sdgindex.org and www.sdgindex.org.

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Foreword

Since the inaugural €500 million SDG Eurobond issuance in 2021, Benin has made remarkable steps forward in financial innovation, implementing transformative projects and programs with significant impacts on its Sustainable Development Goal (SDG) priority targets. In June 2023, a second SDG loan operation amounting to €350 million was completed, backed by a partial credit guarantee from the African Development Fund. These initiatives demonstrate our strong commitment to meeting the essential needs of our population while strengthening the resilience of our economy in the face of global uncertainties.

The 2024 Benin Sustainable Development Report, the result of our partnership with the United Nations Sustainable Development Solutions Network (SDSN), also benefits from the contributions of the local SDSN Benin network established in 2023 under the same partnership. As in previous editions, this report provides an in-depth analysis of the progress made, the challenges to be addressed, and the opportunities to be seized, while offering perspectives for action. The document also places Benin's progress in a regional context, particularly in comparison to the performance of the Economic Community of West African States (ECOWAS).

After having emphasized in 2023 the strengthening of human capital and the fight against inequality, the 2024 report focuses on universal access to clean water, sanitation, and hygiene. These elements are crucial not only for public health but also for food security and economic development. This theme is closely aligned with Transformation 3 (energy decarbonization and sustainable industry) and Transformation 4 (sustainable food, land, water, and oceans) among the "Six Transformations" needed to achieve the SDGs,* and it is perfectly in line with the Government Action Program (PAG 2021-2026), especially its Pillar No. 2, "Improving the Social Well-being of the Population."

The analysis presented in this document highlights the substantial investments currently being deployed to build clean water infrastructure, particularly in rural areas. For instance, 17.5% of the SDG Eurobond proceeds were allocated to improving access to clean water and wastewater treatment, reflecting Benin's commitment to developing an innovative and sustainable public service management model.

The current context, shaped by the effects of climate change as well as health and geopolitical crises, underscores the need for an integrated and resilient approach to water resource management. It is imperative to strengthen cooperation among various stakeholders, promote innovative technologies, and raise awareness among the population about water-related issues.

I am confident that, through our shared commitment, we will succeed in making Benin a country where every citizen has access to quality drinking water and adequate sanitation services.

Romuald WADAGNI

Minister of Economy and Finance in charge of Cooperation, Minister of State.

* Sachs et al. (2019) propose a strategic framework for achieving the SDGs, grouping them into "Six Major Transformations", namely: (1) education and skills, (2) health and well-being, (3) clean energy and industry, (4) sustainable use of land and oceans, (5) sustainable cities, and (6) digital technologies.

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Acronyms and abbreviations

AfDB	African Development Bank
AIDS	Acquired Immunodeficiency Syndrome
ANAEP-MR	National Agency for Rural Water Supply <i>Agence Nationale d'Approvisionnement en Eau Potable en Milieu Rural</i>
ARCH	Human Capital Strengthening Insurance Program <i>Programme d'assurance pour le renforcement du capital humain</i>
BP	Individual connections
BTP	Public Buildings and Works
CO₂	Carbon dioxide
COVID-19	Corona Virus Disease 2019
CSO-ODD	SDG Bond Monitoring Unit <i>Cellule de Suivi des Obligations ODD</i>
DGCS-ODD	General Directorate for the Coordination and Monitoring of the SDGs <i>Direction Générale de la Coordination et du Suivi des ODD</i>
DRES	Directorate of Research and Strategic Studies <i>Direction de la Recherche et des Études Stratégiques</i>
DWS	Drinking water supply
ECOWAS	Economic Community of West African States
EFTP	Technical and Vocational Education and Training
EIB	European Investment Bank
EPI	Environmental Performance Index
ESMAP	Energy Sector Management Assistance Program
ESMP	Environmental and Social Management Plan
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCFA	African Financial Community Francs
GAP II	Government Action Program II <i>Programme d'Actions du Gouvernement II</i>
GIS	Geographic Information System
GIZ	German Agency for International Development Cooperation
HDPE	High Density Polyethylene
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technologies
IEA	International Energy Agency
IFDC	International Fertilizer Development Center
ILO	International Labor Organization
IMF	International Monetary Fund
INStaD	National Institute of Statistics and Demography <i>Institut National de la Statistique et de la Démographie</i>
IPU	Inter-Parliamentary Union
IRENA	International Renewable Energy Agency

IST	Industrial Sciences and Technology
ITU	International Telecommunication Union
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
JMP	WHO/UNICEF Joint Monitoring Programme
JRC	Joint Research Center
KfW	German Development Bank
MVS	Multi-village water supply scheme
OECD	Organization for Economic Co-operation and Development
PANGIRE	National Action Plan for Integrated Water Resources Management <i>Plan d'Action National de Gestion Intégrée des Ressources en Eau</i>
PAVICC	Climate Change Adaptation for Cities Program <i>Programme d'Adaptation des Villes au Changement Climatique</i>
PPP	Public-Private Partnership
PVC	Polyvinyl Chloride
SDG	Sustainable Development Goals
SDR	Sustainable Development Report
SDSN	Sustainable Development Solutions Network
SNMI	Sustainable Nitrogen Management Index
SOBIE	Benin Water Infrastructure Company <i>Société Béninoise des Infrastructures d'Eau</i>
SONEB	National Water Company of Benin
SWEDD	Sahel Women's Empowerment and Demographic Dividend Project
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
UNSD	United Nations Statistics Division
UNU-IAS	United Nations University Institute for Advanced Studies
USAID	United States Agency for International Development
WADB	West African Development Bank
WHO	World Health Organization
WWAP	World Water Assessment Program

Executive summary

The *Benin Sustainable Development Report 2024* is the third edition in a series of reports produced as part of the partnership between the Government of Benin and the United Nations Sustainable Development Solutions Network (SDSN).

This edition aims to support the Government of Benin's continued efforts to implement the 2030 Agenda, especially to achieve the Sustainable Development Goal (SDG) on water and sanitation (SDG 6). Achieving SDG 6 is a priority for Benin, as demonstrated in its 2021–2026 Action Program (PAG II) and the sizeable allocation of SDG Eurobond resources to the water sector (€85.12 million or 17.5% of the total allocation).

The analysis of Benin's performance and trends towards achieving the SDGs shows that:

- Benin is halfway to achieving all 17 SDGs, with a score of 55.6 out of 100, above the population-weighted average of the Economic Community of West African States (ECOWAS).
- Overall, Benin is performing better than the average of ECOWAS member countries in terms of achieving the SDGs. Although it still faces major challenges in achieving several SDGs, these are fewer in number than in the rest of the subregion. Benin's significant progress on SDGs 12 (Responsible Consumption and Production) and 13 (Climate Action) will need to continue as the country continues to develop.
- At the current rate of progress, Benin is on track to achieve SDGs 1 (No Poverty) – which focuses mainly on eradicating extreme poverty – 8 (Decent Work and Economic Growth) and 10 (Reduced Inequalities) – almost 29.6% of the targets measured in this report are on track to be achieved by 2030. Yet declining trends on SDGs 4 (Quality Education), 11 (Sustainable Cities and Communities), and 16 (Peace, Justice, and Strong Institutions) need to be monitored.
- However, Benin is lagging behind the subregion on SDG 6, particularly in terms of basic drinking water and sanitation.

The qualitative analysis of the interactions between SDG 6 and the strategic priorities of GAP II (2021–2026) – the operational planning instrument for government action in Benin – draws on the “Six Transformations” framework (Sachs et al., 2019) to show that:

- GAP II strategic Priorities 1 (Strengthening democracy and the rule of law), 2 (Consolidating good governance), 3 (Strengthening the macroeconomic framework and maintaining its stability) and 4 (Accelerating economic growth) have relatively lower potential impact on SDG 6.
- Strategic Priorities 5 (Promoting quality education and technical and vocational education and training), 6 (Improving people's access to basic social services and social protection) and 7 (Strengthening the balanced and sustainable development of the national space) support the most significant transformations towards achieving SDG 6.

- Notwithstanding the considerable investments in the water and sanitation sectors, assessment of GAP II budget allocations shows that the majority of government funding is directed towards strategic Priority 4, which has limited impact on SDG 6 compared to strategic Priorities 6 and 7, despite some positive spillover effects. Strategic Priority 4 is however most likely to bring positive changes in the structure of the economy.

The case study on safe drinking water access in Benin shows that the Government has implemented major reforms and investments towards improving access to drinking water, particularly in rural areas. The SDG Eurobond has also enabled Benin to step up these government initiatives. From 2017 to 2022, access to improved drinking water increased by 83.5% in rural areas in Benin, reaching 76.7% in 2022, and increased by 30.5% in urban areas, to 71.8% in 2022.

To strengthen its efforts to achieve the SDGs, particularly the water and sanitation objectives under SDG 6, Benin must adopt a targeted, integrated approach as suggested in the directions for future action proposed by SDSN Benin. Although considerable progress has been made, particularly through the substantial SDG Eurobond allocation, which has injected a very positive dynamic into improving drinking water access, challenges remain. Increased investment in water and sanitation infrastructure in both urban and rural areas is crucial to achieving SDG 6. Particular attention should be paid to GAP II strategic Priorities 5, 6 and 7, with a view to reassessing budget allocations towards resources in the water and sanitation sectors. The adoption of the Regulated Public-Private Partnership Mechanism (*Mécanisme du Partenariat Public-Privé Encadré*) for managing water infrastructure, along with the low-cost connection model, are essential to ensuring equitable and affordable access to water services for all. Finally, the modernizing of public procurement procedures must be accelerated to improve project transparency and efficiency.

Ahead of the Summit for the Future in September 2024, this report once again demonstrates the Government of Benin's strong commitment to achieving the SDGs. It also shows that the country faces challenges in achieving SDG 6. The Summit will be an opportunity for Benin to reaffirm its priorities and set ambitious targets to further advance the implementation and achievement of SDG 6 and the 2030 Agenda as a whole. The *Benin Sustainable Development Report 2024* will also help the Government of Benin to identify the challenges and needs that its country faces and define an operational strategy that can leverage the support of technical and financial partners at the Fourth United Nations Conference on Financing for Development in June 2025.

Enhanced cooperation between SDSN and the Government of Benin

In line with its efforts to implement the 2030 Agenda, in July 2021, the Government of Benin issued its first Eurobond for the SDGs, exclusively dedicated to financing high-impact projects for achieving the SDGs. In this context, the Government of Benin called upon the SDSN, recognized for its independent expertise, to assist in monitoring and evaluating the progress and efforts made by the country. This technical partnership includes two main channels: i) the scientific expertise of the SDSN, particularly with the SDG indices and dashboards; and ii) local scientific expertise through the development of a national SDSN network. The solutions mobilized within this partnership have three objectives:

- Monitor the country's performance and progress on the SDGs, using the best available indicators.
- Identify key data gaps and areas where research is needed.
- Promote integrated solutions by monitoring and discussing commitments, strategies, and implementation mechanisms to achieve the SDGs.

The first two years of partnership have been successful, as highlighted by both parties and their partners. Thus, this collaboration is intensifying with a capacity-building component through: i) the annual production of a meta-analysis on the availability and updating of data for SDG monitoring in Benin; ii) training workshops on Geographic Information System (GIS) tools and the production of indicators from GIS data; iii) workshops on budgeting for the SDGs to assess financing needs for the SDGs and better allocate investments.

The SDSN Benin network, launched in July 2023 and co-hosted by the University of Abomey-Calavi and the Directorate of Research and Strategic Studies of the Ministry of Economy and Finance, has also become a key partner in producing the Sustainable Development Report for Benin 2024.

Additionally, the SDSN contributes to the work for updating Benin's National Low-Carbon and Climate Resilient Development Strategy (2016–2025) by evaluating, with the FABLE Calculator, the potential for emission reductions related to agriculture and land use by 2030 and 2050.

Source: Authors.



Part 1

Benin Sustainable Development Index

Part 1

Benin Sustainable Development Index

1.1 SDG Index and dashboard

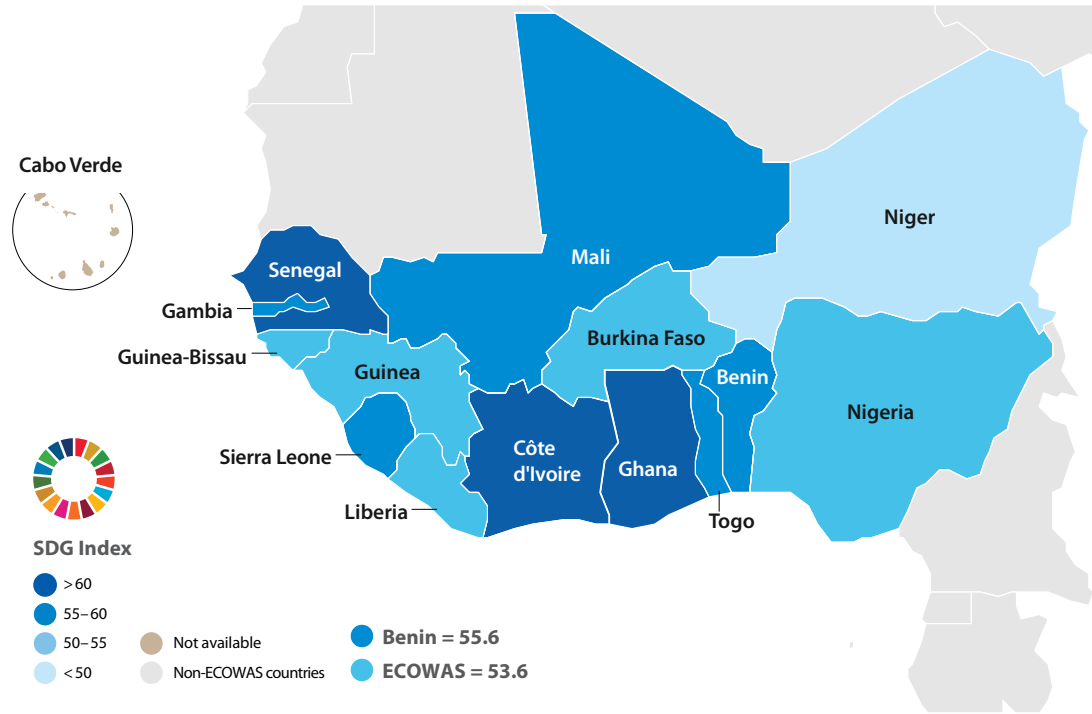
The SDG Index and dashboard are based on a set of international indicators from the global edition of the Sustainable Development Report (SDR) (Sachs et al., 2024) with available data for Benin, as well as for the other ECOWAS countries. Benin is compared to its neighbors to contextualize its performance and trends in achieving the SDGs. To ensure the relevance of the analysis, those indicators in the Global SDG Index that were not a useful measure for Benin, or whose coverage was insufficient — indicators that mainly concern developed countries and the Organization for Economic Co-operation and Development (OECD) member countries, such as certain indicators of international externalities known as “spillovers” — have been omitted. Likewise, a few additional indicators were included to reflect priorities specific to Benin and the ECOWAS region.

It is important to underline that the results of this third edition of the Benin Sustainable Development Report are not comparable with the findings of previous editions, nor with the SDR. A detailed explanation of the methodology, as well as the list of indicators used, can be found in [Annex A.3](#).

1.1.1 SDG Index score

Benin scores 55.6 out of 100 on the 17 SDGs overall (Figure 1). This score places Benin above the average of the ECOWAS countries (53.6 out of 100). Benin outperforms the other eight countries in the subregion, including its neighbors Burkina Faso, Nigeria, and Niger. Only Côte d'Ivoire, Ghana and Senegal have SDG Index scores above 60.0. Some of the reasons behind Benin's performance are detailed below, looking at SDG scores and individual indicators.

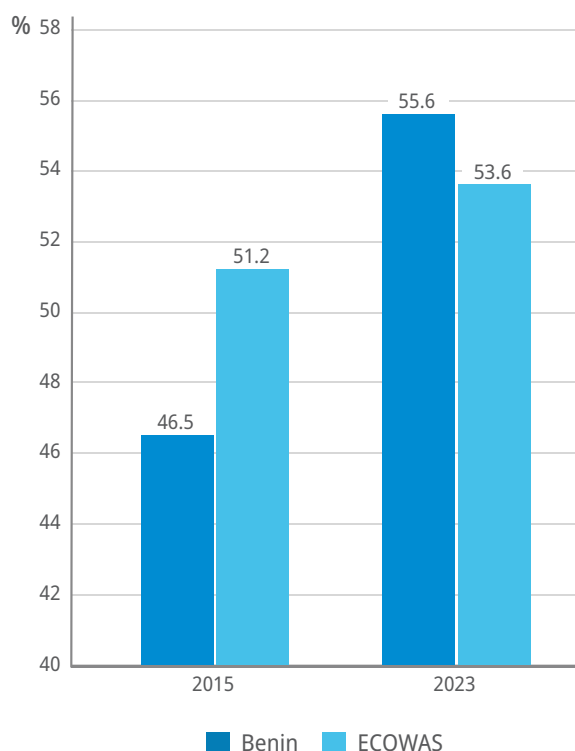
Figure 1: SDG Index for Benin and ECOWAS Member States



Source: Authors' analysis.

The evolution of its SDG Index score illustrates the dynamic Benin has been experiencing since the adoption of the 2030 Agenda (Figure 2). Over the past eight years, Benin’s Index score has risen by an average of 1.1 points per year. In comparison, the ECOWAS SDG Index score has risen by an average of only 0.3 points each year. Several elements have contributed to this improvement in Benin’s SDG Index score, including a significant reduction in inequality (SDG 10) and poverty (SDG 1), encouraging in turn progress in industry, innovation and infrastructure (SDG 9), in the dynamics of economic growth (SDG 8), and in the elimination of disparities between men and women (SDG 5) (Figure 3).

Figure 2: Benin and ECOWAS SDG index trends, 2015–2023



Source: Authors’ analysis.

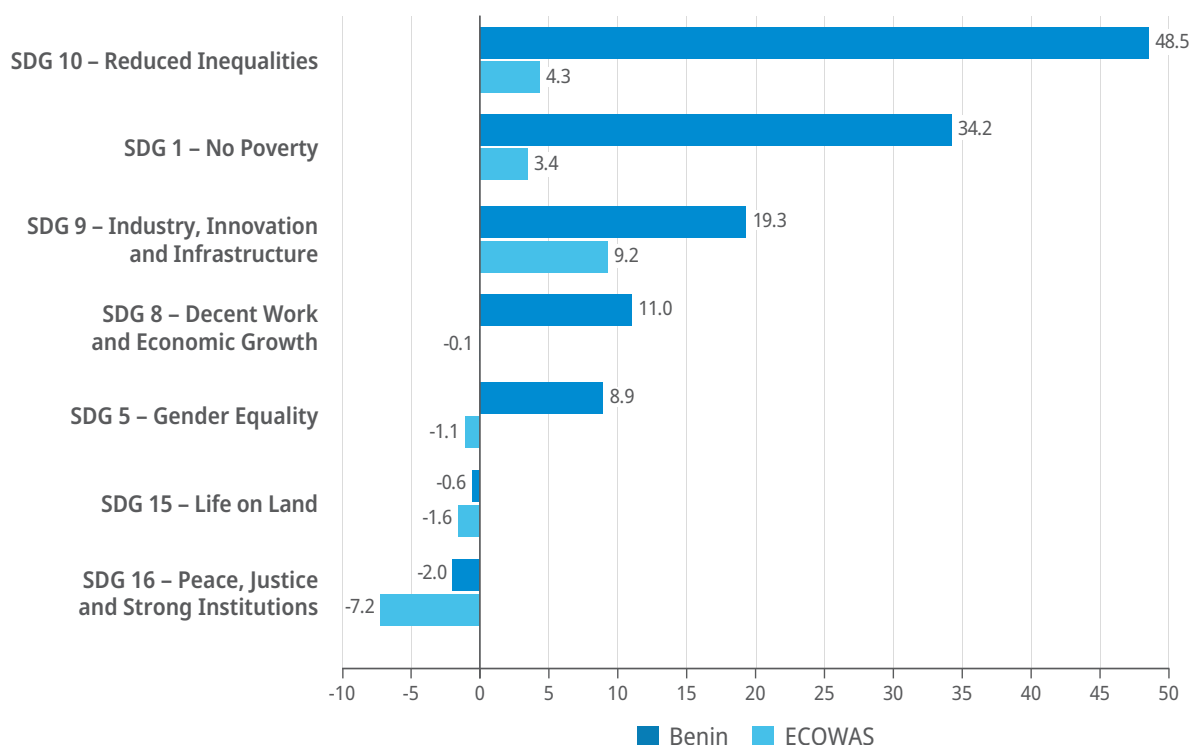
Note: ECOWAS average weighted by population.

A closer look at those SDGs identified as drivers of the strong growth of the SDG Index in Benin highlights some important trends. As shown in Figure 3, which illustrates the key shifts in individual SDG scores from 2015 to 2023, Benin performs better than most ECOWAS countries on the SDGs identified as drivers of the SDG index score growth. Improvements on SDG 1 (No Poverty) can be attributed to the sharp reduction in the share of Benin’s population living below international poverty lines. The share of the population living on \$2.15 a day fell from 42.3% in 2015 to 14.4% in 2024, an average annual decline of around 11.3%.¹ Similarly, the proportion of the population living on \$3.65 a day fell from 61.5% in 2015 to 36.0% in 2024, an average annual decline of around 5.8%.² Government initiatives under strategic Priority 4 “Accelerating economic growth” of the 2016–2021 and 2021–2026 Government Action Programs (GAP I and II)³ are the key levers that have enabled the progress observed on SDG 1. Since 2016, the Government of Benin has aimed to boost its economy through the agricultural, tourism, craft, trade, and industrial sectors, among others, which generate jobs, thus promoting poverty reduction.

Benin has also recorded a significant reduction in socio-economic inequalities, measured by the Gini coefficient and the Palma ratio. From 2015 to 2018, the Gini coefficient fell by 20.7%, and the Palma ratio decreased by 52.5% from 2015 to 2021.⁴ Key government initiatives that have contributed to this progress include the Human Capital Strengthening Insurance Program (ARCH – *Programme d’assurance pour le renforcement du*

1. Authors’ calculations based on data from World Data Lab (2024).
2. Authors’ calculations based on data from World Data Lab (2024).
3. PAG II is the operational planning instrument for Benin’s government action (reforms and investment), serving as the basis for developing and implementing the national budget over the 2021–2026 period, continuing the planning initiated by PAG I (2016–2021).
4. Authors’ calculations based on data from the World Bank (2024) for the Gini coefficient, and from the OECD (2024) and UNDP (2024) for the de Palma ratio.

Figure 3: Evolution of SDG scores in index points: Benin versus ECOWAS, 2015–2023



Source: Authors’ analysis.

Note: *The five highest improvements were selected, as well as the evolution of SDGs 15 and 16 which are the only ones that have deteriorated in Benin over the period 2015–2023.

capital human), which provides access to health insurance, training, microcredit and pension insurance. In particular, the ARCH has taken into account workers in the informal sector and began by fully covering health insurance for the extremely poor (Toure and de la Mothe Karoubi, 2023), thus stimulating the significant progress observed on SDG 10 (Reduced Inequalities) (Figure 3).

The dynamics of SDG 5 (Gender Equality) indicate notable progress towards a more egalitarian society in which women’s rights and opportunities are valued and protected (Figure 3). These trends are driven by government actions supporting gender equality, also evidenced by the sharp increase in the number of women in Benin’s parliament, growing from only 8.4% in 2015 to

26.6% in 2024⁵ – a shift that has resulted from the introduction of electoral code law n°2019-43, which ensures greater participation by women in the National Assembly by reserving one seat exclusively for women in each of the country’s 24 electoral districts (Toure and de la Mothe Karoubi, 2023). Other determining factors in the progress observed on SDG 5 include growth in demand for family planning and an increasing ratio of female-to-male mean years of education. Estimates by UNDESA (2022) of the demand for family planning that is met by modern method (as a percentage of women aged 15–49) show a rise from 25.9% in 2015 to 36.0% in 2023, an increase of 10.1 percentage points. These improvements can be

5. Authors’ calculations based on data from the Inter-Parliamentary Union – IPU (2024).

attributed to initiatives such as the Sahel Women's Empowerment and Demographic Dividend (SWEDD) project, for which one main objective is to guarantee universal access to reproductive health services. The ratio of female-to-male mean years of education has increased by around 3.9 percentage points since 2015, reaching 46.8% in 2022.⁶ This could be about to rise significantly higher in Benin, in part due to reforms underway to facilitate girls' access to education by guaranteeing them fee-free schooling for several years.⁷

Progress on SDG 8 (Decent Work and Economic Growth) (Figure 3) can be attributed to strengthening the country's macroeconomic framework and maintaining its stability (Priority 3), as well as to accelerating economic growth (Priority 4) – both provided for in GAPs I and II. For example, Priority 3 of both GAP I and II aims to boost regional economic integration, particularly with Nigeria. This includes establishing economic and trade zones for semi-industrial agricultural products (GAP I), which is evolving into a free-trade zone and treaty that will set out joint rules for economic cooperation between the two countries (GAP II). Strategic Priority 4 stands out for its cross-cutting nature. Investments in energy, transport and logistics infrastructure, information and communication technologies (ICT), and the stimulation of priority economic sectors (agriculture, tourism, crafts, trade and industry) are essential to developing productive activities, generating economic growth and jobs. These government action packages may also have boosted progress on SDG 9 (Industry, Innovation and Infrastructure)

6. Authors' calculations based on data from PNUD (2024).

7. Since 2013, girls have been exempted from school fees up to the first level of general secondary education in public schools. Since February 2023, this measure has been extended to girls in upper general secondary education in 20 of Benin's lowest income municipalities. In addition, since 2012, Benin's technical high schools have benefited from government financial support, enabling them to subsidize one-third of the tuition fees for girls enrolled in the industrial science and technology (STI - Sciences et techniques industrielles) stream in 2021 and 2022 (Toure and de la Mothe Karoubi, 2023).

(Figure 3), as illustrated by an increase in the share of the population using the Internet – which rose by around 17.0% on average per year from 2015 to 2022, reaching 33.8% in 2022⁸ – and the even greater increase over the same period in mobile broadband subscriptions – which grew from only 4.2% in 2015 to 67.2% in 2022, an increase of around 48.5% on average per year.⁹

In spite of the progress achieved on the SDGs discussed above, Benin faces challenges in achieving SDG 16 (Peace, Justice and Effective Institutions), which requires the Government's attention in light of a possible structural and functional fragility within its institutions (Figure 3). The Government of Benin is therefore pursuing efforts to consolidate democracy, the rule of law and good governance, notably through the first pillar of its action program. In line with the rest of the sub-region, Benin's SDG 15 (Life on Earth) index score has fallen slightly (Figure 3), mainly due to a small increase in permanent deforestation. Although Benin is one of the countries with the lowest area of permanent deforestation (0.2% of its forest area in 2022, after Burkina Faso, Niger and Mali), permanent deforestation increased by around 23.5% in Benin from 2016 to 2022 and by 35.3% in ECOWAS.¹⁰ Strategic Priority 7 of GAP II, which aims to "strengthen the balanced and sustainable development of the national territory", includes projects and reforms to manage the environment, climate change, risks and other natural disasters, which could improve the preservation of its natural capital, including forests. One example is the biodiversity conservation and sustainable management of classified and communal forests project. Finally, it is interesting to note that the decline in SDG 15 and 16 scores is less significant in Benin than in the sub-region (Figure 3).

8. Authors' calculations based on data from the International Telecommunication Union - ITU (2023).

9. Authors' calculations based on data from the International Telecommunication Union - ITU (2023).

10. Authors' calculations based on data from Curtis et al. (2018).

1.1.2 SDG dashboard

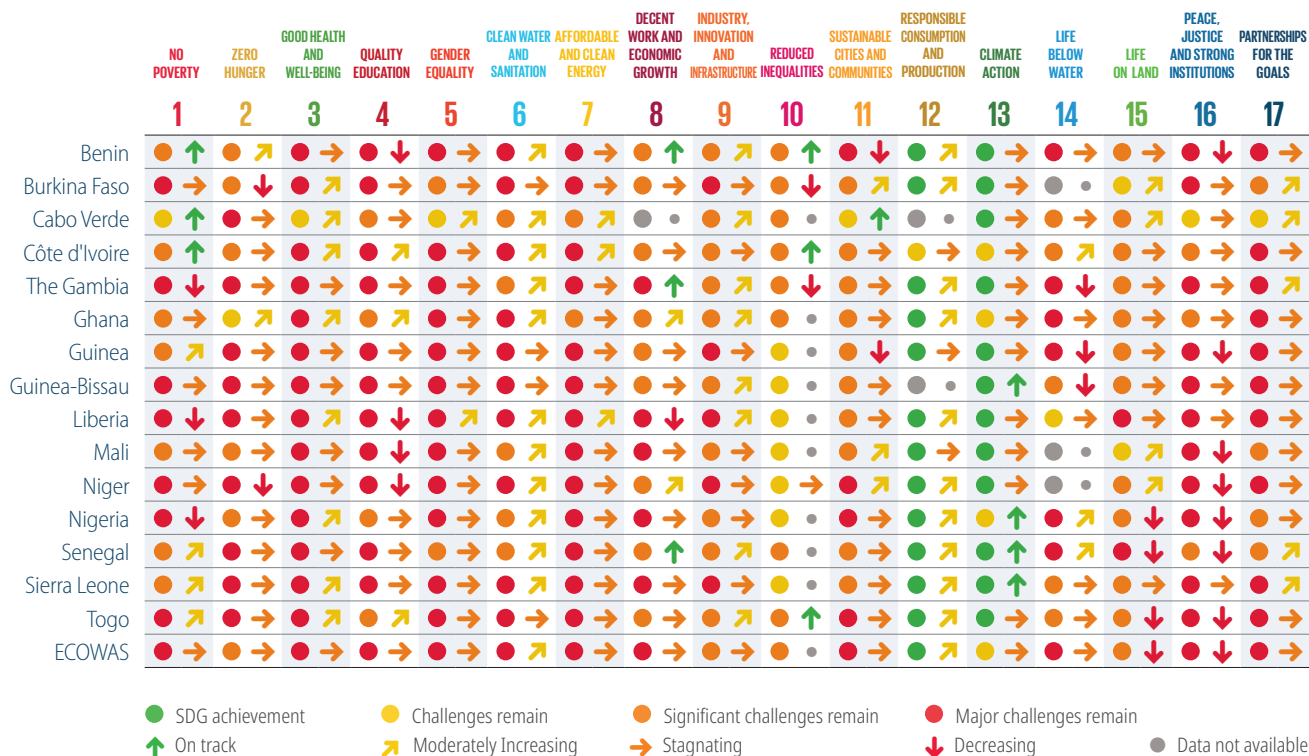
The SDG Dashboard (Figure 4) summarizes each country's performance on the 17 SDGs. While the SDG Index score is based on all indicators for each goal, the dashboard is based only on the two indicators for each goal on which the country is performing the worst. This "tough" scoring approach emphasizes the need to implement all dimensions of the SDGs, as satisfactory performance on one indicator cannot compensate for poor performance on another. A detailed explanation of this methodology can be found in Annex A.3.

Overall, Benin is performing better than the average of ECOWAS member countries in terms of achieving the SDGs. Although it still faces major challenges on several Goals (in red in

the dashboard – Figure 4), these challenges are fewer than those faced by the rest of the sub-region. Moreover, by maintaining its performance alongside its economic and social development, Benin could achieve SDGs 12 (Responsible Consumption and Production) and 13 (Climate Action) (Figure 4). The actions that have led to these performances include the key initiatives and reforms mentioned above.

Examining these trends gives us a better appreciation of the efforts that have been made (Figure 4). Benin, along with Côte d'Ivoire and Cabo Verde, is one of the few countries in the sub-region to be on track to achieve SDG 1. Benin, Gambia, and Senegal are also the only countries in the sub-region on the path to achieving SDG 8.

Figure 4: SDG Dashboard for ECOWAS Member States



Source: Authors' analysis.

Note: See Annexes for details of the methodology and indicators used.

Lastly, Benin and Togo are the only ECOWAS countries to be progressing at a sufficient rate to achieve SDG 10.

Yet Benin's progress is stagnating on a considerable number of SDGs (Figure 4). While some countries in the sub-region are seeing moderate improvements towards achieving SDG 3 (Good Health and Well-Being), Benin – together with Gambia, Guinea, and Mali – is experiencing a slowdown on this Goal. However, GAP II initiatives in Benin, such as the construction of new university hospitals and the improvement of health infrastructure, aim to fill these gaps. Projects such as the construction of the Abomey-Calavi referral university hospital and the acquisition of ambulances are directed at improving emergency care and quality of care. Structural reforms, including the creation of the National Primary Health Care Agency (*Agence Nationale des Soins de Santé Primaires*) and the Health Sector Regulatory Authority (*Autorité de Régulation du Secteur de la Santé*), have also been designed to improve governance and quality of care. A stagnation in progress is also observed in relation to SDGs 5, 7 (Clean and Affordable Energy) and 17 (Partnership for the Goals) – in Benin as well as in many other countries in the sub-region – while other countries stand out by showing moderate progress (Cabo Verde, for example). Also, although Benin and the majority of countries in the sub-region are on track to achieve SDGs 12 and 13 – provided that these performances are consistently maintained alongside countries' development – progress is moderate or even stagnant for these two SDGs respectively, with the exception of Guinea-Bissau, Nigeria, Senegal and Sierra Leone, which are all on track to achieve SDG 13.

Benin's progress towards several SDGs has slowed (Figure 4). Like Liberia, Mali, and Niger, Benin's performance on SDG 4 (Quality Education) has declined, with the country recording a drop in the primary school enrollment rate from 96.9% in 2016 to 94.6%

in 2022,¹¹ caused by demographic growth increasing the school-age population without all children being enrolled in school (CIDE, 2022). In the coming years, this phenomenon could be mitigated by the construction of new classrooms and increased teacher-training planned under the "Education" component (Priority 5) of GAP II. The lower-secondary-school completion rate also declined from 2015 to 2022, which might be explained in part by rising repetition rates that can increase drop-out rates, along with migration between neighboring municipalities and countries artificially inflating drop-out rates, since pupils are neither considered as passing the grade nor as repeaters (CIDE, 2022). The many projects in place to improve the quality of general, technical, and vocational secondary education, through focused recruitment and training of qualified teachers and the use of the "EducMaster" teaching platform, could help to reduce drop-out rates and thus improve completion rates. At the same time, although several countries in the sub-region are showing encouraging improvements in progress towards SDG 11 (Sustainable Cities and Communities), Benin and Guinea are the only ones falling behind on this goal. In Benin, this downward trend is driven by the decline in the share of the population with access to an improved water source – from 54.0% in 2015 to 47.8% in 2022 (a drop of 6.2 percentage points).¹² Lastly, the declining trend on SDG 16 alerts the Government of Benin to possible structural and functional fragility of its institutions.

Despite persistent challenges, several SDGs show moderate improvement (Figure 4). While most countries in the sub-region are stagnating in achieving SDG 2 (Zero Hunger), Benin is one of the few, along with Ghana, to show moderate improvement on this goal. This trend is mostly due to a more appropriate usage rate of fertilizer

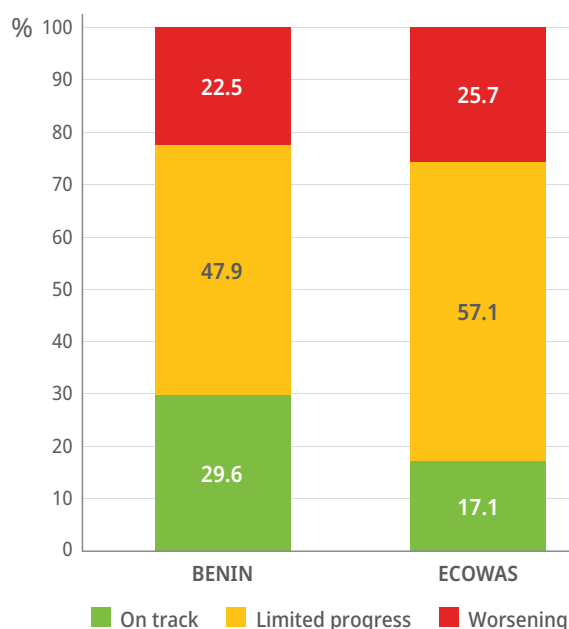
11. Data from UNESCO (2024).

12. Authors' calculations based on data from WHO and UNICEF (2023).

– which rose from 0.13 kg to 40.7 kg per hectare of arable land from 2015 to 2021¹³ – as well as an improvement in the sustainable nitrogen management index.¹⁴ This dynamic illustrates the impact of projects and reforms to boost the agricultural sector, such as the measures to regulate, manage and facilitate access to inputs under GAPS I and II. Like several other countries in the region, Benin has also made moderate improvements towards achieving SDG 6 (Clean Water and Sanitation) and SDG 9. The moderate improvement on SDG 6 is driven solely by low freshwater abstraction (Part 1.2) and the small amount of its scarce water incorporated into imports. In comparison, access to drinking water and sanitation is growing slowly (Part 1.2). Nevertheless, the water sector is one of the priorities of the Government of Benin, with the objective of guaranteeing universal access to improved drinking water. The introduction of a number of policy actions towards achieving SDG 6 in Benin – such as the National Action Plan for Integrated Water Resources Management (PANGIRE – *Plan d’Action National de Gestion Intégrée des Ressources en Eau*) and its accompanying flagship projects – should enable the country to achieve even more encouraging improvements in the coming years.

Overall, the status of SDG target achievement in Benin is encouraging, with 29.6% of the SDG targets on track to be achieved in Benin by 2030, compared to 17.1% on average in the sub-region (Figure 5). Benin and ECOWAS have made only limited progress towards a number of SDG targets however, with 47.9% and 57.1% of targets respectively showing only moderate improvement or stagnation. Lastly, negative trends are seen on

Figure 5: SDG targets’ achievement status (%), Benin and ECOWAS



Source: Authors’ analysis.

Note: ECOWAS average weighted by population. 71 indicators for Benin and 70 indicators for the weighted ECOWAS average are included in the analysis.

22.5% of targets in Benin, which is less worrying than the sub-region as a whole, for which trends are negative on 25.7% of all targets.

1.2 Focus on SDG 6 “Clean Water and Sanitation”

The country’s social diagnostic highlights the population’s precarious living conditions, caused in part by the delay in coordinating the supply of drinking water and resolving sanitation problems (Presidency of the Republic of Benin, 2021). In response, the government is focusing on enhancing basic social services and social protection under Priority 3 of its action program (GAP II 2021–2026). Access to drinking water and sanitation services have become priority objectives for the country for the years ahead.

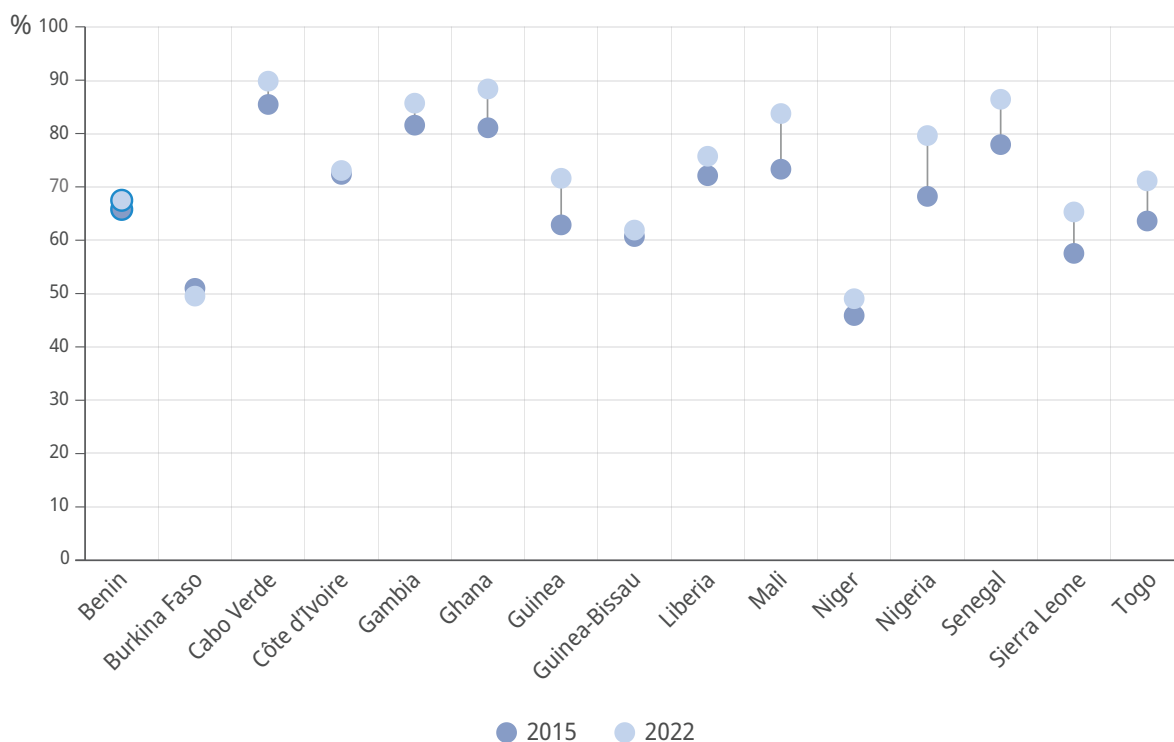
13. Data taken from FAO (2022). The optimum is set at 100 kg per hectare of arable land (Sachs et al., 2024). This considerable increase in fertilizer can be attributed to growing demand, supported by increased fertilizer imports, reflecting a growing need to support agriculture in the country (IFDC, 2021).

14. The Sustainable Nitrogen Management Index (SNMI) is a unidimensional ranking score that combines two measures of efficiency in crop production: nitrogen use efficiency and land use efficiency (crop yield) (Zhang and Davidson, 2019).

Improvements on SDG 6 have knock-on effects on other SDGs. There is a synergy between the different SDGs that can give rise to both positive and negative externalities (Sachs et al., 2019). In the case of SDG 6, access to improved drinking water can reduce the burden of water transport, the responsibility for which often falls on women and girls in a context like Benin. With better access to drinking water, women can allocate more of their time to educational or economic activities, thus reducing inequalities as defined in SDG 5 (World Bank, 2019). Also, access to drinking water can lead to a reduction in the prevalence of waterborne diseases such as cholera and dysentery (Wolf et al., 2023), as defined in SDG 3. In addition, ensuring equity in access to drinking water can help reduce social and

economic inequalities between different regions and social groups, supporting the “Leave no one behind” principle (WWAP, 2019; Valero et al., 2023). Improving access to water can also increase economic opportunities by supporting water-dependent industries such as agriculture, fisheries and tourism, that have a key role in building national wealth, supporting SDG 8 (WWAP, 2015). Improving integrated water resources management can increase agricultural productivity, essential to achieving food and nutritional security, as defined under SDG 2 (WWAP, 2015; WWAP, 2019). Lastly, ensuring a good water supply system is essential for urban development and promotes resilience to natural disasters such as floods and public health emergencies (UNESCO and UN-Water, 2020), enabling SDG 11 to be achieved.

Figure 6: Population using at least basic drinking water services (%), ECOWAS Member States, 2015–2022



Source: Authors' calculations based on data from the WHO/UNICEF Joint Monitoring Programme (JMP, 2023).

This synergy between SDG 6 and other SDGs highlights the important role that access to water plays in achieving the SDGs.

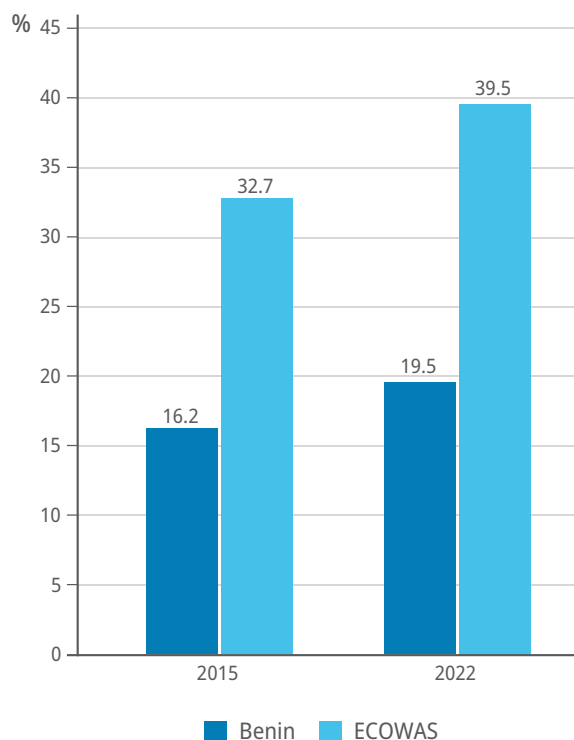
The share of Benin’s population using at least basic drinking water services has increased by 1.6 percentage points since 2015, reaching 67.4% in 2022 (Figure 6). This increase places Benin below the performance of most countries in the sub-region, a performance gap that highlights the challenges the country faces, which include poor understanding of water resources, the absence of permanent mechanisms to monitor water resources quality and quantity, problems of governance and coordination between institutions in the sector, as well as a lack of technical, human, infrastructural and financial resources (MEEM, 2023). Several reforms

and projects are being implemented by the Government to improve access to drinking water and meet these challenges (Part 3).

From 2015 to 2022, Benin saw a slight improvement (around 3.3 percentage points) in its population’s access to sanitation services (Figure 7). Nonetheless, Benin is lagging behind the performance achieved by many other countries in the region. The rate of access to sanitation in the ECOWAS region was higher than that of Benin in 2015 and this gap remains in 2022, with the regional rate significantly higher than Benin’s (Figure 7). The slow increase in the proportion of the population with access to sanitation services highlights the need to step up government measures to strengthen the technical, institutional, and financial capacities required to help the sanitation sector to respond effectively and appropriately to the expectations of the country’s population. In its action program, the Government of Benin has initiated several projects to strengthen sanitation services. The “Aqua-Vie” program, for example, aims to increase access to drinking water and sanitation services in rural areas, potentially reaching 1.6 million people (Presidency of the Republic of Benin, 2021). In addition, the construction and rehabilitation of micro-dams and other hydraulic infrastructure to enhance the mobilization and valuation of water resources are some of the flagship projects implemented by the Government as part of the PANGIRE (2023–2025), and whose contribution to improving access to sanitation services is significant.

In 2021, Benin abstracted only about 1.0% of its freshwater resources, compared with an average of around 8.3% for ECOWAS countries, below the technical optimum of 12.5% for this indicator (Sachs et al., 2024) (Figure 8). This result in Benin can be attributed in part to prudent integrated water resources management, supported by initiatives such as PANGIRE that are aimed at preserving water resources and improving access to safe drinking water while protecting aquatic ecosystems. However, it is pertinent to ask whether

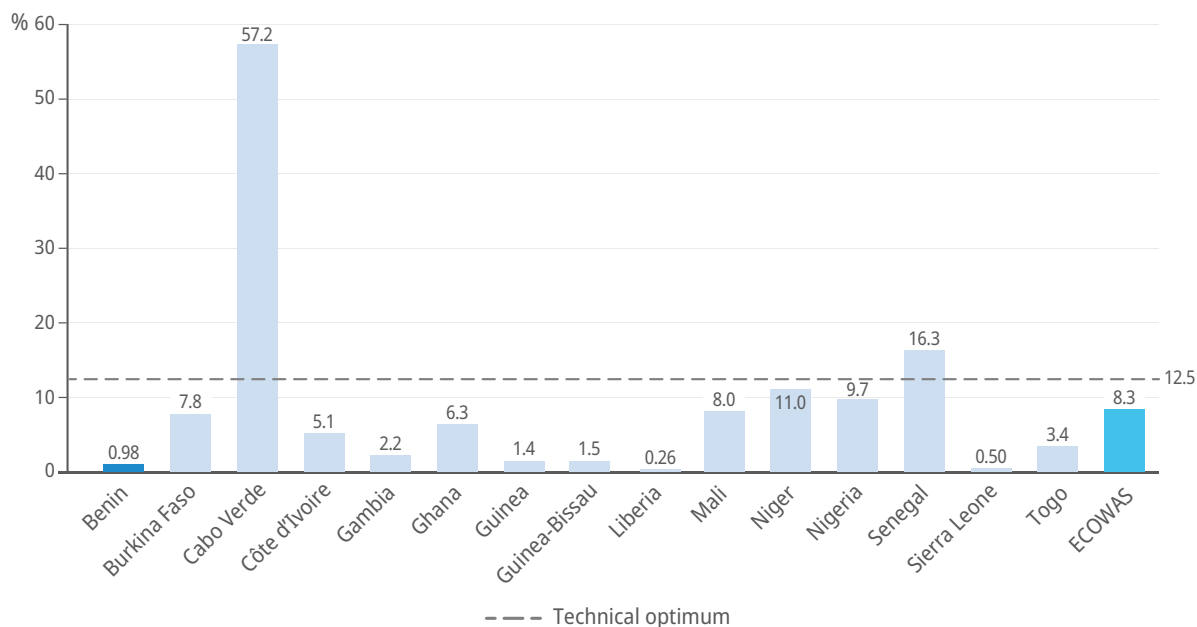
Figure 7: Population using at least basic sanitation services (%), Benin and ECOWAS, 2015–2022



Source: Authors’ calculations based on data from the WHO/UNICEF Joint Monitoring Programme (JMP, 2023).

Note: ECOWAS average weighted by population.

Figure 8: Freshwater abstraction (% of available freshwater services), ECOWAS Member States, 2021

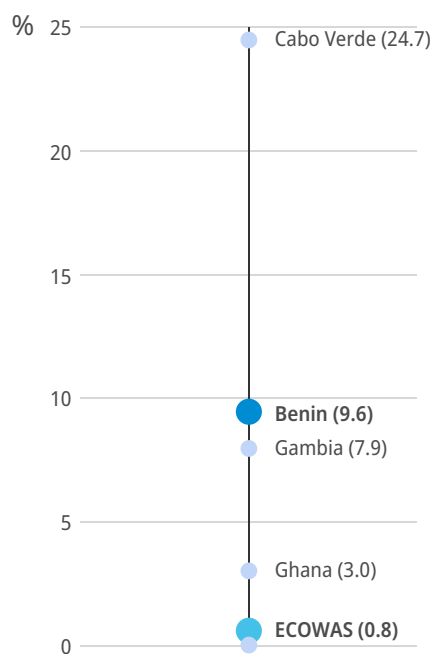


Source: Authors' calculations based on data from the FAO (2023).

this low abstraction is a deliberate choice on the part of the country, or whether it is the result of difficulties in efficiently exploiting available water resources. The analysis of the sectoral context shows that Benin, despite its management efforts, faces infrastructural and economic challenges that limit its capacity to abstract more water (MEEM, 2023). Benin and the other ECOWAS countries, despite relatively low abstractions, need to manage their resources effectively to avoid depletion and environmental degradation.

In terms of wastewater management, only 0.8% of anthropogenic wastewater received treatment in ECOWAS countries in 2020, compared with 9.6% in Benin (Figure 9). This significant difference shows a particular effort by Benin in wastewater treatment compared to its regional neighbors, although this is still insufficient to reach SDG 6.1 target, which is to treat all wastewater. This low proportion of treated wastewater could indicate a lack of adequate infrastructure for water treatment and purification in Benin and the sub-region.

Figure 9: Anthropogenic wastewater receiving treatment (%), 2020



Source: Authors' calculation based on Environmental Performance Index (EPI) data from Yale Center for Environmental Law & Policy (2022).

Note: ECOWAS member countries with a percentage of wastewater receiving treatment of 0.0% in 2020 are: Burkina Faso, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Sierra Leone, and Togo.



Part 2

The “Six Transformations” for the SDGs in Benin

Part 2

The “Six Transformations” for the SDGs in Benin

The 17 SDGs and their 169 targets describe the goals to be achieved by 2030 but do not provide specific guidance on how governments should organize themselves to achieve them. To design effective strategies to achieve the SDGs, governments and other stakeholders need to determine how to organize actions such as improved policies, public and private investment, regulation and how to deploy them for the SDGs. Given the interconnected nature of the SDGs and their targets, following 17 separate strategies to execute the 2030 Agenda is not appropriate. Therefore, drawing on the “Six Transformations” framework developed by Sachs et al. (2019), this chapter aims to define an operational strategy for SDG 6 (Clean Water and Sanitation) by examining interactions with the strategic priority of GAP II (2021–2026), the operational planning instrument for government action in Benin.

2.1 Benin’s performance in achieving the “Six Transformations”

2.1.1 Presentation of the “Six Transformations” framework

The core of the “Six Transformations” is the recognition that the 17 SDGs can be achieved through “Six Major Transformations” focusing on: (1) education, gender and inequality; (2) health, well-being, and demographics; (3) clean energy and industry; (4) sustainable use of land and oceans; (5) sustainable cities; and (6) digital technologies (Figure 10).

The “Six Transformations” are based on two fundamental principles. The first principle is to design, implement, and monitor each transformation in such a way as to “leave no one behind.” This principle aims to reinforce justice, equity, and social inclusion. It particularly applies to public services such as health and education, to infrastructure services (transport, water, sanitation, energy), and to the use of environmental

resources. The second principle, “circularity and decoupling,” advocates changing consumption and production patterns to decouple the use of environmental resources and pollution from growth and human well-being. According to this second principle, each transformation must be designed, implemented, and monitored to reduce its ecological footprint – by promoting circular flows, reuse, recycling of more sustainable materials, as well as a more efficient use of natural resources. Good governance and the absence of conflict are also essential conditions for achieving the “Six Transformations.”

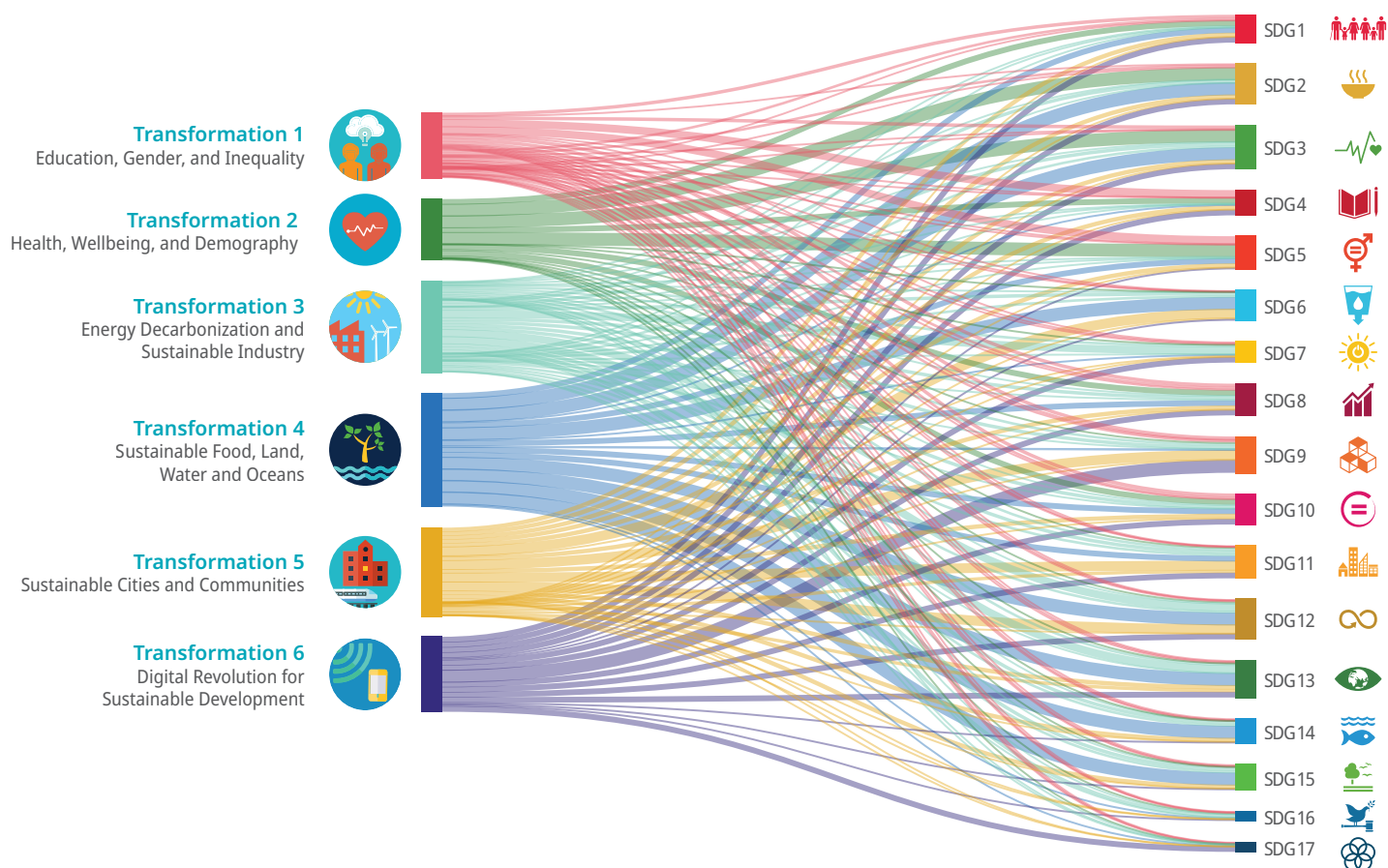
The SDG transformation concept offers an operational and communicable narrative framework, bringing together key synergies and trade-offs. It provides a clear action agenda for ministries, businesses, and civil society, making it easier to coordinate the actions needed to achieve the SDGs.

2.1.2 Performance on the “Six Transformations”

The indicators presented in the SDGs index and dashboards (Part 1) for Benin and ECOWAS countries have been reorganized around the “Six Transformations” (Figure 11).

Benin scores above the subregion average on Transformation 1 (education, gender, and inequality), Transformation 2 (health, well-being, and demographics), and Transformation 6 (digital revolution at the service of sustainable development). Benin’s performance on Transformation 1 is mainly underpinned by better participation rates in pre-school and primary education; a reduction in the share of the population at the \$2.15 and \$3.65 a day poverty lines, and a higher share of seats held by women in parliament, among others. Concerning Transformation 2, Benin’s good results, compared with the ECOWAS average, can be explained by a lower maternal mortality rate, a reduced incidence of tuberculosis, better coverage of

Figure 10: Contribution of the "Six SDG Transformations" to the 17 SDGs



Source: Authors' reproduction based on data from Sachs et al. (2019).

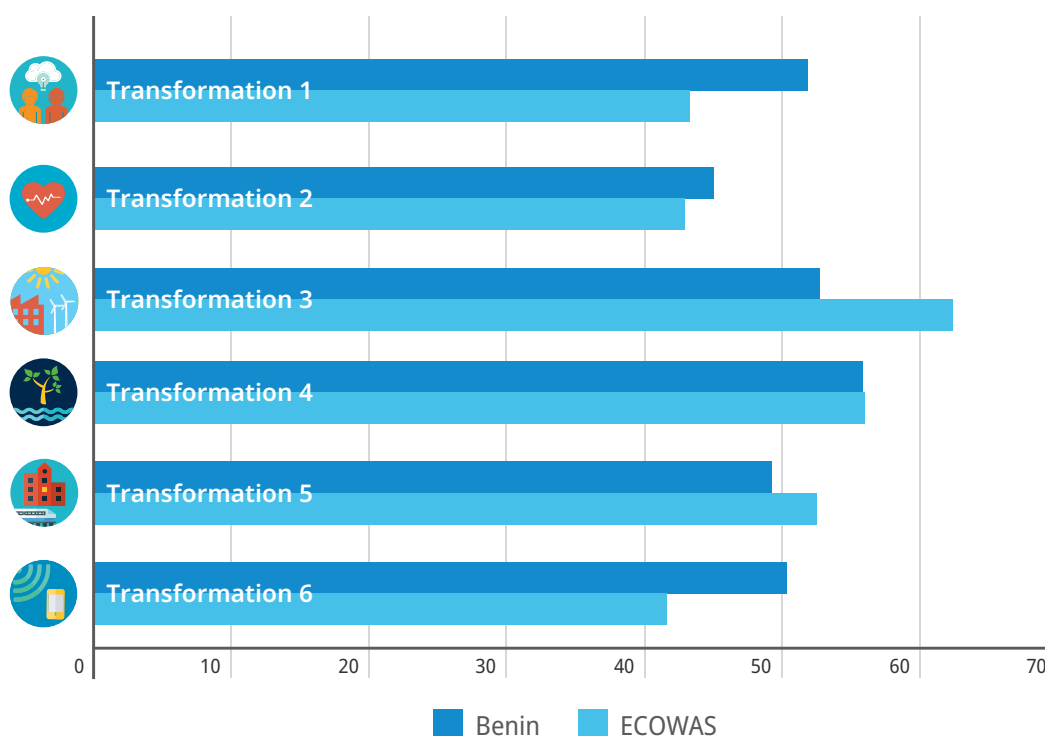
Note: For more details on the figure construction methodology, see Table 1 and Appendix 2 of Sachs et al. (2019).

preventive chemotherapy for neglected tropical diseases, and a higher number of births attended by skilled health personnel, among other factors. For Transformation 6, Benin's performance is boosted by a higher number of mobile broadband subscriptions, better performance in registering births of children under five with the civil authority, and a better corruption perception index.

In terms of Transformation 3 (energy decarbonization and sustainable industry) and Transformation 5 (sustainable cities and communities), Benin is below the ECOWAS average. Benin's poor performance on

Transformation 3 compared with the ECOWAS is mainly due to a higher level of CO₂ emissions from fuel combustion per total electricity generation, a lower proportion of the population with access to electricity, lower affordability of electricity than the subregion average and a lower share of the population with access to clean fuels and cooking technologies. Regarding Transformation 5, Benin's lower scores are mainly due to the population's lower access to water and sanitation, a lower proportion of the rural population having access to all-weather roads and a higher proportion of the urban population living in slums.

Figure 11: Performance of the “Six Transformations”, score from 0 (worst) to 100 (best)



Source: Authors' analysis.

Note: See Table A.2 in the Annexes for details of the indicators used. ECOWAS average weighted by population.

Finally, Benin's score for Transformation 4 (sustainable food, land, water, and oceans) is equivalent to that of the subregion.

Indicators and data to illustrate these performance gaps between Benin and the subregion are available online.

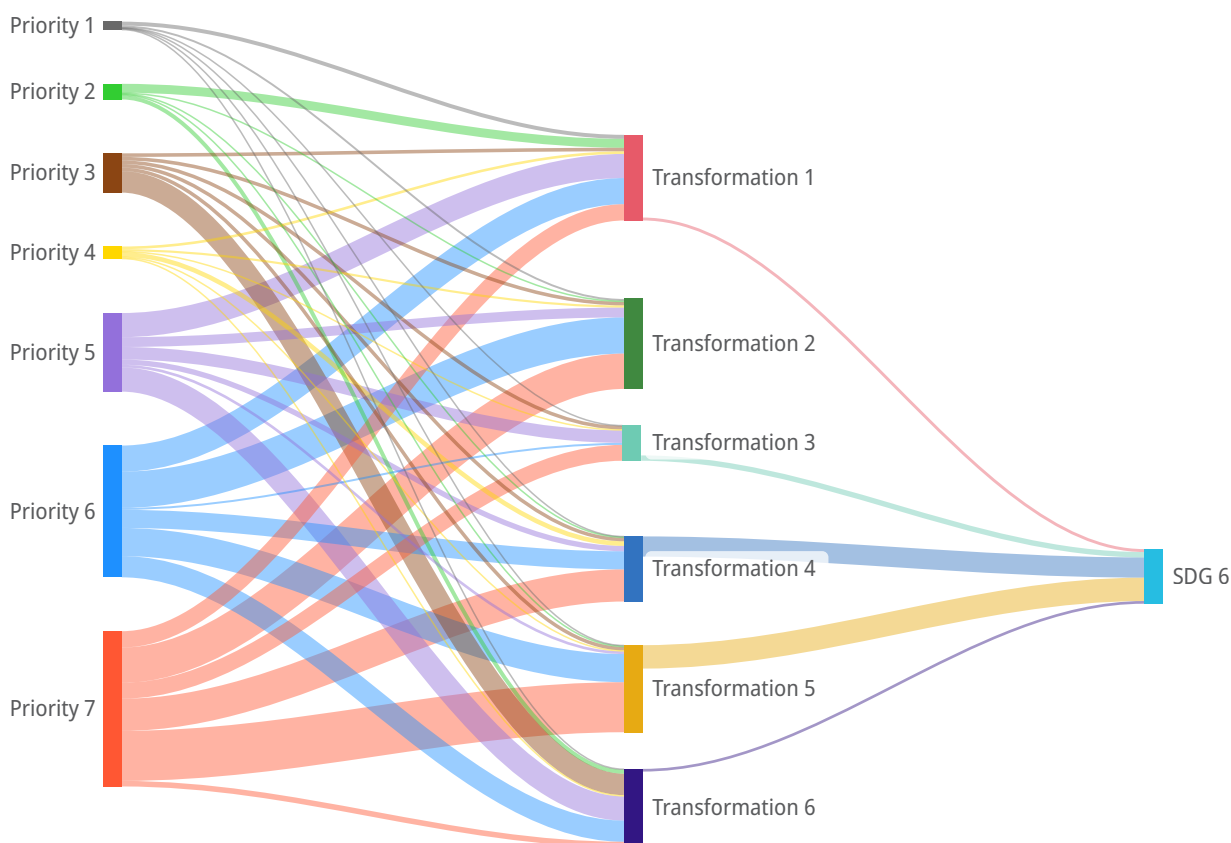
The “Six Transformations” analysis produced for previous editions of this report has shown that the measures and policies implemented through GAP II (2021–2026) consistently target Benin's challenges in achieving the SDGs. To accelerate progress towards SDG 6, the Government of Benin must maintain these efforts.

2.2 Government Action Program, “Six Transformations” and SDG 6

As mentioned above, there is a strong alignment between the strategic priorities of GAP II, the “Six Transformations” framework, and the SDGs.¹⁵ This section examines synergies between these, drawing on SDSN's expertise and the methodology provided by Sachs et al. (2019). The aim is not to propose government-specific solutions but

15. The seven strategic priorities of PAG II are: Priority 1: strengthening democracy and the rule of law; Priority 2: consolidating good governance; Priority 3: strengthening the macroeconomic framework and maintaining its stability; Priority 4: accelerating economic growth; Priority 5: promoting quality education and Technical and Vocational Education and Training (TVET); Priority 6: improving people's access to basic social services and social protection; Priority 7: strengthening the balanced and sustainable development of the national space.

Figure 12: Interactions between GAP II, the “Six Transformations” and SDG 6



Source: Authors’ analysis based on GAP II (Presidency of the Republic of Benin, 2021).

Note: This analysis is based on an expert assessment of SDSN based on the approach and results of Sachs et al. (2019).

to illustrate the potentially strong links between GAP II and SDG 6 through the prism of the “Six Transformations”, in order to help design, implement, and improve key actions to achieve the SDGs.

All transformations apart from Transformation 2 influence SDG 6 (Sachs et al. 2019), although Transformations 4 and 5 have the most significant potential impacts (Figure 10). As a result, actions that support these two transformations offer the greatest positive effects on SDG 6.

An analysis of GAP II strategic priorities shows that, given their nature, Priorities 1 (strengthening

democracy and the rule of law), 2 (consolidating good governance) and 4 (accelerating economic growth) have a relatively lower potential impact on SDG 6 than do the other GAP II strategic priorities (Figure 12). These three strategic priorities mainly offer initiatives to improve institutional frameworks (Priorities 1 and 2) and to support economic growth through investment in key sectors (agriculture, tourism, industry, etc.) and in infrastructure other than water and sanitation (Priority 4).

GAP II’s Priority 1, whose potential impact is mainly through Transformation 1 (education, gender and inequality), has a relatively low impact on SDG 6

and its influence is also through Transformation 2 (health, well-being and demographics), which has no direct impact on this goal (Figure 13a). Despite having less potential impact than Priority 2 on SDG 6, Priority 4 shows more balanced interactions with the “Six Transformations” (Figure 13a). Moreover, Priority 4 has a significant potential impact on Transformation 4 (sustainable food, land, water and oceans), which is essential for achieving SDG 6 (Figure 10). Conversely, Priority 2 impacts SDG 6 mainly via Transformations 1 and 6 (digital revolution for sustainable development), the least influential for this goal (Figure 10). Although its interactions with the other transformations are balanced, Priority 3 displays a higher potential impact. Still, its contribution is largely via Transformation 6 through the numerous digitalization projects, which are less relevant to SDG 6 (Figure 10).

GAP II’s strategic Priorities 5, 6 and 7 are the most promising for achieving SDG 6 (Figure 12). Priorities 6 and 7 directly target the water and sanitation sectors (Figure 12, Figure 13b). As for Priority 5, in addition to providing access to drinking water and sanitation in educational establishments, it also promotes research and innovation, as well as technical and vocational training, which are necessary to guarantee technical advances and adequate human resources for the mobilization, management and distribution of water resources. However, the potential impact of Priority 5 is weaker, as it mainly passes through Transformations 1 and 6 and this priority has less significant interactions with Transformations 4 and 5 (sustainable cities), which have the most significant potential impacts on SDG 6 (Figure 13b). In contrast, Priorities 6 and 7 have higher potential impacts, as they interact significantly with Transformations 4 and 5.

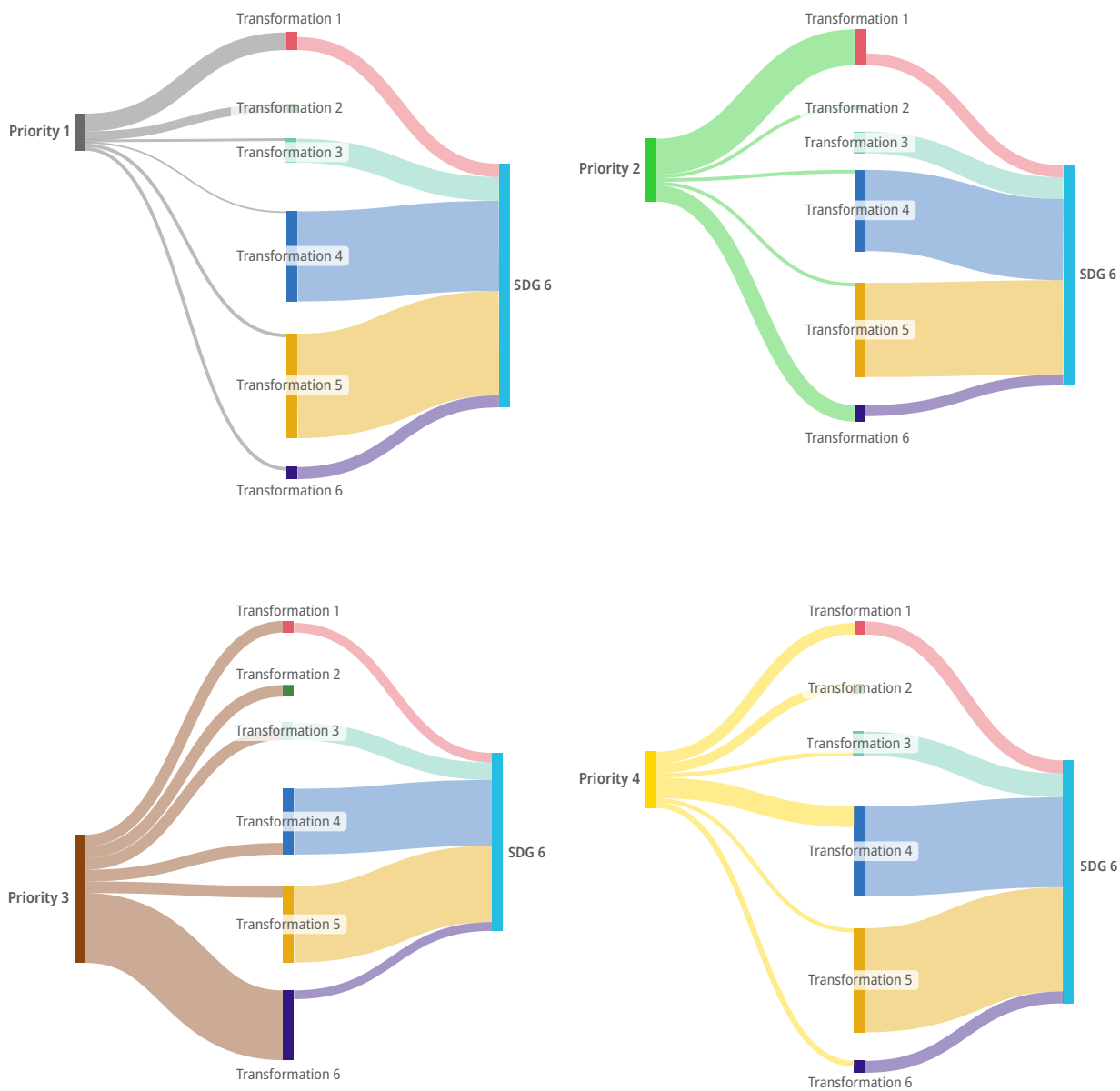
These results make it possible to visualize the potential impact that each of GAP II’s strategic priorities could have in achieving SDG 6. As a result, they can also help the Government of Benin and the international community to better understand

where reforms and investments can play a greater role in promoting progress towards SDG 6.

GAP II has a budget broken down into its seven strategic priorities, enabling us to understand the extent to which current budget allocations, by strategic priority, can support the achievement of SDG 6, in light of the results obtained from the qualitative analysis (Figure 14). With 54.8% of the total GAP II budget, Priority 4 occupies an important place in the Government’s choice, as it mobilizes more resources than the other priority but has one of the lowest potential impacts on SDG 6 (Figure 14). It is important to emphasize that GAP II is intended to cover all aspects of Benin’s economic and social development. It is therefore to be expected that a cross-cutting theme such as Priority 4 will receive the most funding. This priority covers, for example, investments in the agricultural sector, in transport and logistics, and in energy and digital infrastructure, which often require substantial funding. Moreover, Priority 4 could have a positive impact on all of the Government’s GAP II objectives, including facilitating the mobilization of the financial and technical resources needed to make progress on SDG 6, as illustrated in the qualitative analysis (Figure 13a). After Priority 4, the highest budget allocations are directed to strategic Priorities 7, 6 and 5, which represent 17.4%, 14.0% and 8.3% of the GAP II budget respectively (Figure 14), thus following the order of importance in terms of potential impact observed in the analysis of interactions between GAP II, the “Six Transformations” and SDG 6 (Figure 12).

Priority 3, with a higher potential impact on SDG 6 than strategic Priorities 1 and 2, has, however, the lowest budget allocation in GAP II (0.3% of total budget) (Figure 14). This is mainly because the actions planned under this strategic priority are primarily institutional reforms and capacity-building for actors in the public sector, which require less funding than do investments in infrastructure, for example. The same applies to Priority 1, which aims to strengthen democracy and the rule of law.

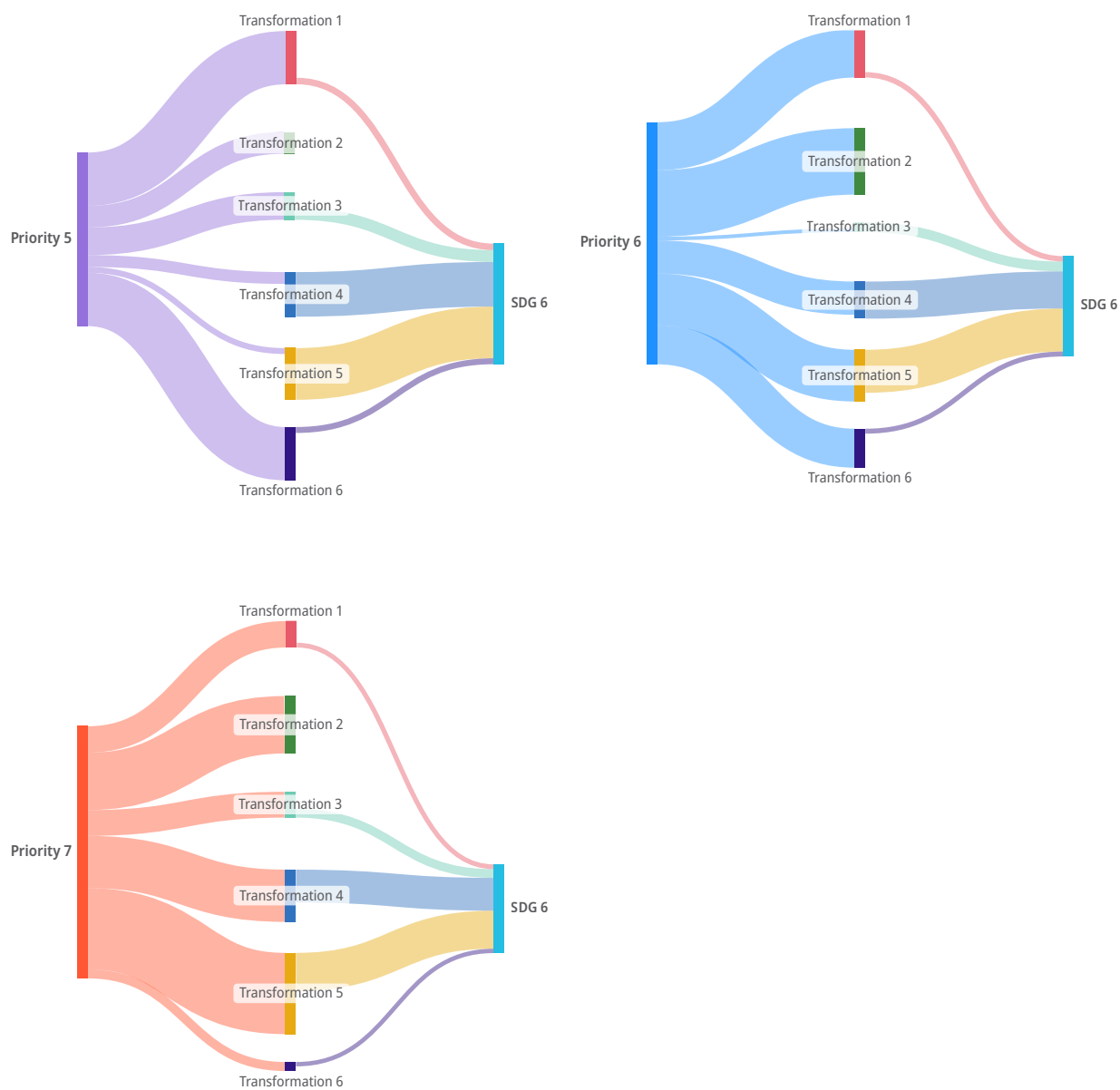
Figure 13a: Interactions between GAP II strategic priorities (1 to 4), the "Six Transformations" and SDG 6



Source: Authors' analysis based on GAP II (Presidency of the Republic of Benin, 2021).

Note: This analysis is based on an expert assessment of SDSN based on the approach and results of Sachs et al. (2019).

Figure 13b: Interactions between GAP II strategic priorities (5 to 7), the “Six Transformations” and SDG 6



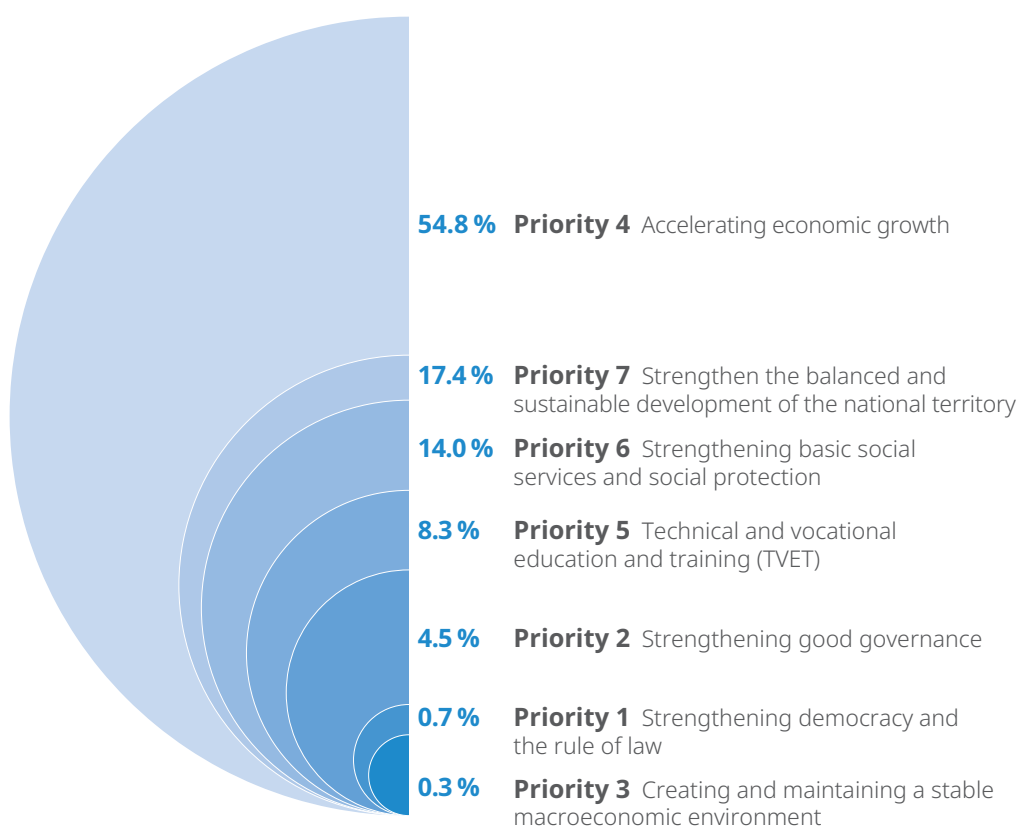
Source: Authors' analysis based on GAP II (Presidency of the Republic of Benin, 2021).

Note: This analysis is based on an expert assessment of SDSN based on the approach and results of Sachs et al. (2019).

Finally, the higher allocation given to strategic Priority 2 (4.5% of the GAP II budget), compared with Priorities 1 and 3 (Figure 14), is mainly due to investments in national defense and civil protection, which require substantial funding. Decentralization (“improving local governance and inter-communality”), which includes constructing administrative centres for Benin’s twelve departments and providing support to communities to strengthen their capacity to invest in basic socio-economic infrastructure, is also a major area of expenditure.

Overall, reviewing GAP II budget allocations by strategic priority shows that most government funding is directed towards an area with limited potential impact on the achievement of SDG 6, although significant positive spin-offs may result. The strategic priority likely to play a significantly greater role in promoting progress towards SDG 6 receives limited funding compared to the other strategic priorities.

Figure 14: Breakdown of the Government of Benin’s GAP II budget, by strategic priority, 2021–2026



Source: Authors' analysis based on PAG II (Presidency of the Republic of Benin, 2021).



Part 3

Case studies: Access to drinking water in Benin

Part 3

Case studies: Access to drinking water in Benin

3.1 Context and general stylized facts

Before 2016, Benin faced major challenges in the water sector, with drinking water coverage rates of just 41.4% in rural areas and 54.0% in urban areas.¹⁶ To remedy this critical situation, the Benin's Government has undertaken substantial reforms and made massive investments in the sector. Two main strategies have been implemented: on the one hand, ambitious government initiatives, particularly in rural areas with the creation of the National Agency for Rural Water Supply (ANAEP-MR – *Agence Nationale d'Approvisionnement en Eau Potable en Milieu Rural*) in 2017; on the other, project financing via the issuance of an SDG Eurobond in July 2021. This section is devoted to presenting government initiatives ([Part 3.1.1](#)) and projects financed by the SDG Eurobond and other partners ([Part 3.1.2](#)).

3.1.1 Government reforms

Since 2016, the Government of Benin has taken significant steps towards achieving SDG 6, which aims to guarantee universal access to drinking water and sanitation by 2030. As previously mentioned, prior to 2016, the level of access to drinking water was relatively low, prompting the Government to launch sector reforms and make major investments to improve supply infrastructure, particularly in rural areas. Reforms included establishing the ANAEP-MR in 2017, the introduction of a new oversight mechanism for projects directed at improving access to safe drinking water that promotes the effective use of PPPs in the sector, and institutional reforms at Benin's General Water Directorate and National Water Company (SONEB – *Société Nationale des Eaux du Bénin*). The establishment of the National Agency for Rural Water Supply was a decisive turning point in the Government's policy, which aimed to strengthen institutional reforms and separate water resources management from water use.

16. PC2D inaugural review report, November 2018 (Presidency of the Republic of Benin, 2018).

Infrastructure policies focus on rehabilitating and extending existing village water supply systems and constructing new multi-village drinking water supply schemes (MVSS). Sustainable management of the production, transport, and distribution of drinking water in rural areas is entrusted to specialized operators who draw on local skills to provide a reliable supply for almost nine million people.¹⁷ Accompanying measures include the monitoring of Environmental and Social Management Plans (ESMPs),¹⁸ the transfer and commissioning of new facilities, and projects to assess the compliance of existing infrastructure. These initiatives aim to ensure a sustainable and equitable supply of drinking water in rural areas, thus contributing to the achievement of the SDGs.

Given that infrastructure in rural areas is already leased through PPP agreements,¹⁹ a committee was formed²⁰ to explore how a single entity could be established to manage both rural and urban water resources and coordinate the supply of drinking water to urban areas. Based on the work of this committee, the Government approved the creation of the Benin Water Infrastructure Company (SoBIE – *Société Béninoise des Infrastructures d'Eau*) through a decision of the Council of Ministers on April 11, 2024. SoBIE is entrusted with planning the sector in line with development objectives, sourcing financing and creating investment programs, and maintaining public works. It also manages water resources, providing close oversight and monitoring of delegated drinking water supply agreements. This institutional framework is designed to ensure transparent and efficient water supply management,

17. *Benin Sustainable Development Report 2022* (Toure and de la Mothe Karoubi, 2022; page 24).

18. ESMPs are strategic documents used to identify, assess, and manage the environmental and social impacts of a project. These plans detail the measures to be taken to minimize negative impacts and maximize positive effects on the environment and local communities.

19. Law 2016-24 of June 28, 2017, on the legal framework for PPP in the Republic of Benin.

20. Decision of the Council of Ministers dated June 22, 2022.

guaranteeing compliance with quality criteria and performance targets set by the State for operators in the sector. To increase access to drinking water, the State has extended a significantly reduced, universal national “solidarity” price rate.²¹

3.1.2 Summary of projects financed by the SDG Eurobond and other partners

Benin’s SDG Eurobond has mainly financed seven projects, including two in rural areas, four in urban areas and one structuring project in the water sector to ensure access to drinking water and sanitation for all (Table 1).

The initiatives financed by the SDG Eurobond represent a portion of overall government efforts in the water sector, with an allocation of resources

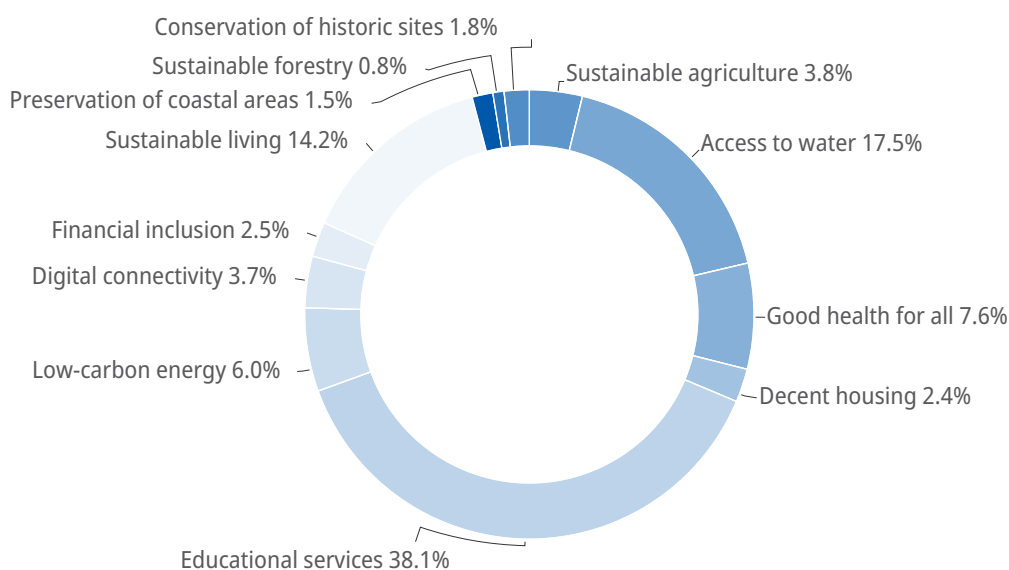
21. The Government has opted for a universal tariff of 598 francs per cubic meter (taxes included) in rural areas. For standpipes, a price of 15 francs (including taxes) has been set for a 25-litre basin throughout the country, starting in February 2023.

of around 55.8 billion FCFA (85.1 million euros), or 17.5% of the funds raised. The water sector represents the second priority, after education services, in terms of financing by the SDG Eurobond, which absorbed 38.1% of the resources mobilized (Figure 15).

Government action to provide access to water and sanitation is mainly concentrated in rural areas, where 61.6% of resources are allocated. In urban areas, funded projects account for 38.4% of water and sanitation allocations.

Numerous partners are also involved in the sector, including: (i) multilateral development banks such as the World Bank, the West African Development Bank (WADB), the African Development Bank (AfDB), the European Investment Bank (EIB), etc.; (ii) international cooperation agencies such as the Netherlands Cooperation, German Cooperation (GIZ and KfW), Japanese Cooperation (JICA); and (iii) international cooperation institutions such as the European Union (EU).

Figure 15: Breakdown of sectors financed by the SDG Eurobond



Source: Authors based on the CMO-SDG report (2022).

Table 1: Summary of projects financed by the SDG Eurobond in the water sector

N°	Project (amount of SDG Eurobond financing)	Goal	Priority actions	Achievements to date
1	Project to strengthen the drinking water supply system for the towns of Savè, Glazouè and Dassa and surrounding areas (527 million francs from the African Financial Community (FCFA) or 0.8 million euros).	Strengthen drinking water supply systems to reach 100% coverage of the population and meet water needs until 2035.	<ul style="list-style-type: none"> Acquire 8,000 connection kits. 	<ul style="list-style-type: none"> By the end of 2023, the beneficiary area had registered 5,595 active subscribers, compared with 4,409 in 2018. 67,140 people served by the end of 2023, compared with 64,884 in 2021.
2	Project to strengthen the drinking water supply system for the city of Parakou and surrounding area (419 million FCFA or 0.6 million euros).	Ensure water supply for around 500,000 people by 2028 by increasing the production and treatment capacity of the drinking water supply system (AEP Approvisionnement en Eau Potable) and extending and increasing the distribution network.	<ul style="list-style-type: none"> Mobilization of water resources through the installation of an 1,800-m³/h intake tower. Building of a treatment plant with a capacity of 1,800 m³/h. Building of a 500 m³ water tower; extension and increase of the network over a linear distance of 306 km. Installation of a remote management system. Acquisition of 7,000 connection kits. 	<ul style="list-style-type: none"> 27,343 active subscribers registered in 2023, compared with 17,521 in 2018. 328,116 people served by the end of 2023, compared with 300,684 in 2021.
3	Project to strengthen the drinking water supply system for the city of Abomey-Calavi and surrounding area (10.6 billion FCFA or 16.2 million euros).	Improve drinking water supply through additional production of 1,500 m ³ /h by 2027.	<ul style="list-style-type: none"> Construction of a new 1,650 m³/h plant at Zinvié. Connection of the Abomey-Calavi system to the Cotonou system. 	<ul style="list-style-type: none"> 514,285 potential people to be served by the end of the project. 28,372 active subscribers registered in 2023, compared with 21,350 in 2018. 340,464 people served by the end of 2023, compared with 312,324 in 2021.
4	Project to strengthen the drinking water supply system for the towns of Abomey, Bohicon and surrounding areas (10.2 billion FCFA or 15.6 million euros).	Increase water supply to the towns of Abomey, Bohicon, Djidja, Agbangnizoun, ZaKpota, Zogbodomey and surrounding areas by 2030.	<ul style="list-style-type: none"> Construction and equipping of eight boreholes (1,550 m³/h). Rehabilitation of the Cana raw water pumping station. Building a treatment plant (1,650 m³/h) in Bohicon. Strengthening of delivery lines at the Bohicon plant. Rehabilitation of the Bohicon 1,000 m³ reservoir and existing water towers. Building five reservoirs and water towers (3,350 m³). Laying of 92 km of pipes and installation of a remote management system. 	<ul style="list-style-type: none"> The number of active subscribers in the area concerned will rise from 16,163 in 2018 to 29,102 by the end of 2023. 349,224 people served by the end of 2023, compared with 285,132 in 2021.
5	Project to build 80 new systems in critical areas (15 billion FCFA or 22.9 million euros).	Increasing access to drinking water services in rural areas.	<ul style="list-style-type: none"> Construction of 4 high-flow boreholes to supply drinking water to the Akpassi MVS in the Bantè municipality. 	<ul style="list-style-type: none"> Physical work continues.
6	Construction of 95 MVSs (15.4 billion FCFA or 23.5 million euros).	Increasing access to drinking water services in rural areas.	<ul style="list-style-type: none"> Provisional acceptance and commissioning of half (around 45) of the planned number of MVSs is expected in 2024. 	<ul style="list-style-type: none"> Physical work continues.
7	Project for the Development of Multifunctional Hydraulic Infrastructure and the Sustainable Management of Water Resources (3.7 billion FCFA or 5.6 million euros).	Promote integrated water resources management at watershed level and build multifunctional hydraulic infrastructure.	<ul style="list-style-type: none"> Construction of 100 artesian wells. Construction of 11 small and medium-sized dams. Rehabilitation of the Dékandji dam. 	<ul style="list-style-type: none"> Around 8,000 people affected in five municipalities: Aplahoué, Nikki, Kandi, Kérou and Pehunco. 600,000 people in the Ouémé watershed affected.

Source: Authors based on the CMO-SDG report (2023).

3.2 Impact analysis of recent initiatives in the water sector

This section analyzes the impact of various government initiatives, as well as projects financed by the SDG Eurobond, in terms of improving both access to water and living conditions in Benin.

3.2.1 Direct impact of government initiatives

The impact of the reforms and investments made by the Government of Benin to accelerate progress towards SDGs 3 (Health and Well-Being) and 6 (Water and Sanitation) can be appreciated from the momentum of water access works throughout the country, the progress of urban water access indicators and the evolution of sanitation indicators. By way of illustration, SDG funding through the Development of Multi-functional Hydraulic Infrastructure and Sustainable Management of Water Resources project has enabled 46,500 people to have access to drinking water in rural areas by 2022. More generally, the various projects in the sector, financed by the SDG Eurobond, have had a positive impact on Target 1 (Ensure Universal and Equitable Access to Drinking Water at an affordable cost) of SDG 6. Key achievements include the construction of a 1,500 m³/h water treatment plant in Gobé and the completion of the Ayedjoko dam in the Savè municipality in 2022. By the end of 2023, the infrastructure put in place had served a significant number of people in various municipalities. More specifically, 67,140 people in 2023, were served in the municipalities of Savè, Dassa-Zoumè, Glazoué and surrounding areas, compared with 64,884 in 2021; 349,224 people were served in the municipalities of Abomey, Bohicon, Agbangnizoun, Djidja, Za-Kpota and Zogbodomey, compared with 285,132 in 2021; 340,464 people were served in Abomey-Calavi, compared with 312,324 in 2021; and 328,116 people were served in Parakou, compared with 300,684 in 2021.

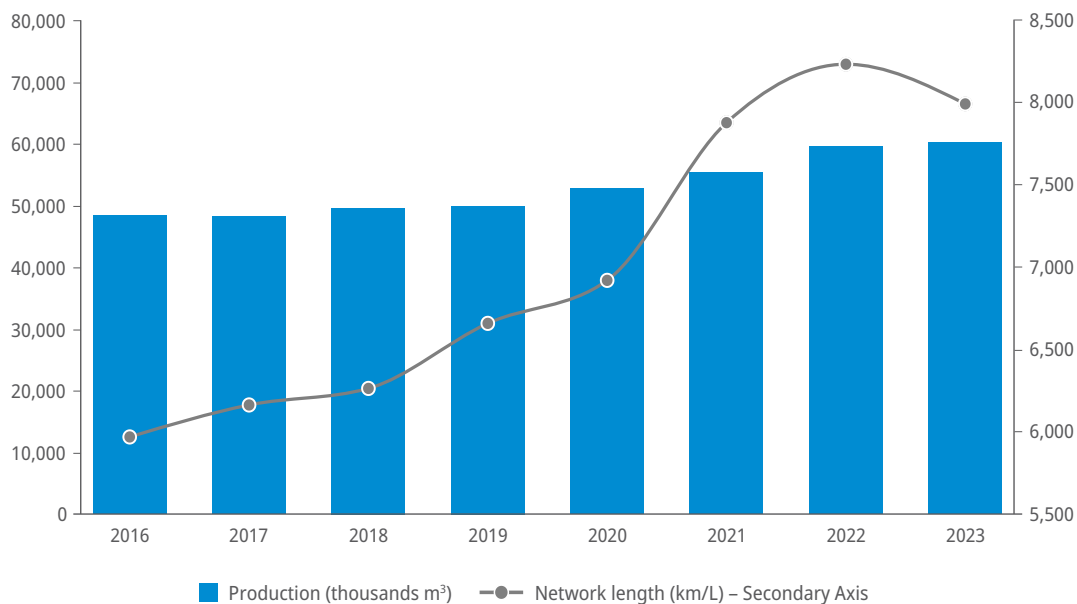
In terms of structures built in urban areas throughout the country, it should be noted that the total length of SONEB's water distribution network increased considerably from 2016 to 2023, going from 6,032.3 km to 8,357.3 km, or a 33.5% increase (Figure 16a). This has resulted in a substantial increase in water production over the same period, reflecting improvements in infrastructure and capacity. In 2016, SONEB's water production was 49.5 million m³, rising to 61.8 million m³ in 2023, a 24.8% increase (Figure 16a). This expansion is the result of the Government's many efforts to improve access to drinking water for its growing population and to meet the challenges of rapid urbanization.

Figure 16b shows the expansion in the number of water facilities built from 2020 to 2023, categorized as rural water supply systems, boreholes with manual pumps, or independent water supply points. The increase in rural water supply systems seen between 2020 and 2023 reflects sustained efforts to improve access to drinking water in villages via decentralized systems. At the same time, boreholes with manual pumps have shown a downward trend since 2021, probably due to an increased preference for modern, less manual solutions such as rural water supply systems. Although there are fewer independent water supply points, their construction has increased noticeably in 2023 compared with previous years, suggesting a commitment to stand-alone drinking water solutions.

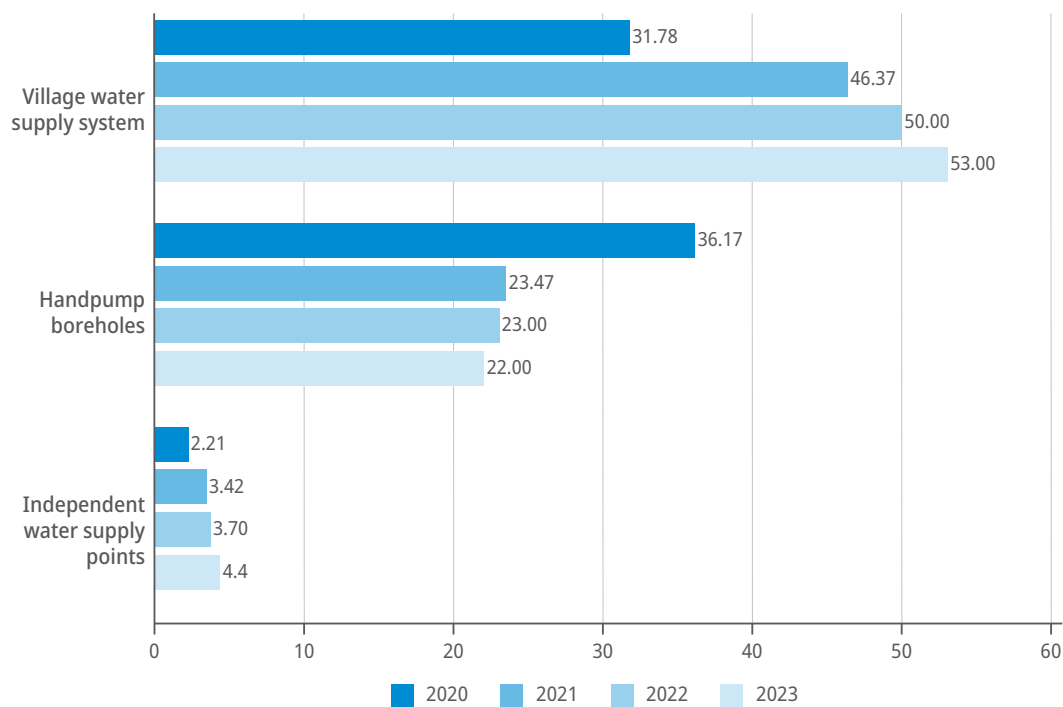
The expansion of piped water supply infrastructure, accompanied by an increase in water production, as well as the extension and adoption of a single national solidarity tariff, have made it possible to increase accessibility for a greater number of rural localities and to meet people's drinking water needs more effectively. As a result, the number of individual and community connections to rural water supply systems will reach 20,533 by the end of 2023, compared with 14,283 in 2021. More broadly, from 2017 to 2022, the coverage rate in urban areas rose from 55.0% to 71.8%,

Figure 16: Evolution of water facilities in Benin

(a) Network length and water production

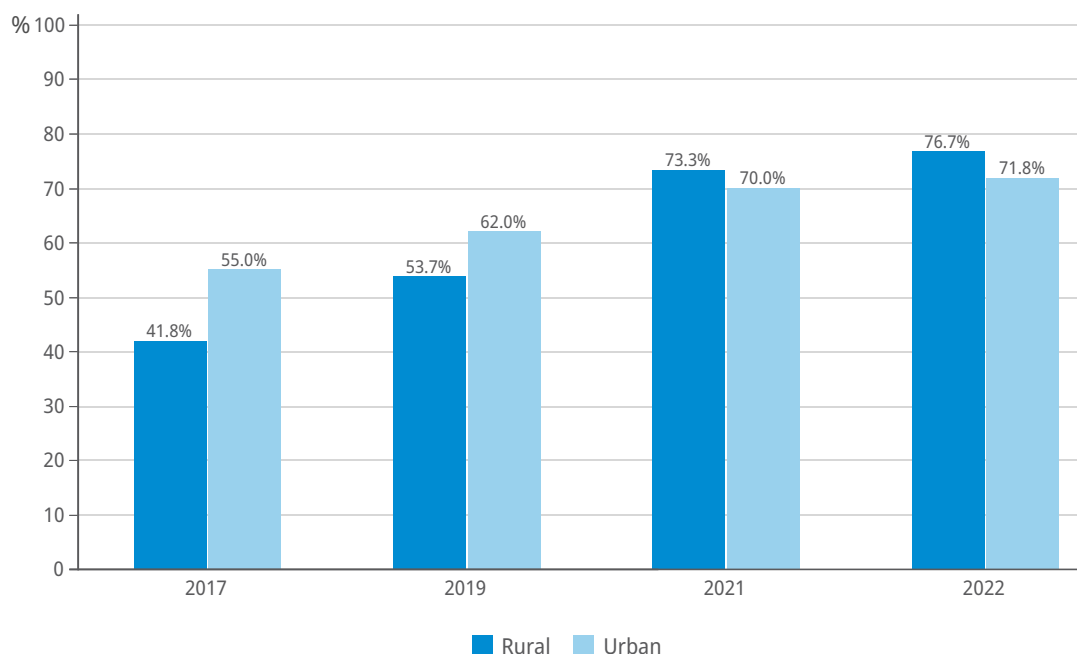


(b) Facility types



Source: SONEB (2023) et ANAEP-MR (2023).

Figure 17: Drinking water coverage in Benin, 2017–2022



Source: SONEB (2023) et ANAEP-MR (2023).

while in rural areas it rose from 41.8% to 76.7%, marking a sharp reduction in disparities between urban and rural areas (Figure 17). Nationally, the proportion of the population with access to drinking water rose to 72.6%, according to the results of the household living conditions harmonized survey (INStAD, 2024).

Massive investment in the water sector has increased the number of subscribers. From 2016 to 2023, the number of subscribers served by SONEB rose substantially, from 246,908 to 345,808, representing growth of almost 40.1%. This increase is the direct result of public policies aimed at extending the water distribution network and improving drinking water production. Similarly, the population served by SONEB rose from 2,962,896 to 4,149,696 over the same period (SONEB, 2024). These figures reflect a significant improvement in access to drinking water, essential for achieving SDG 6.

3.2.2 Direct impact of SDG Eurobond-financed projects

Two projects financed via the SDG Eurobond were selected to evaluate their impact on improving access to drinking water: the city of Abomey-Calavi’s project to strengthen the drinking water supply system for the city and surrounding areas, and a second project to strengthen the drinking water supply systems for the towns of Abomey, Bohicon and surrounding areas. A summary of the drinking water access projects financed by the SDG Eurobond is presented in Table 1 of Part 3.1.2.

The project to improve drinking water supply systems in Abomey-Calavi, Akassato, Ouedo, Togba and Zinvé is being implemented in two phases. According to data received from SONEB, the overall cost of this project is approximately 26.8 billion FCFA (or 40.9 million euros), of which 10.6 billion FCFA (or 16.2 million euros) has been financed by the SDG Eurobond.

The second project selected aims to strengthen the drinking water supply system in the towns of Abomey, Bohicon, Djidja, Agbangnizoun, Za-Kpota and Zogbodomey, with a view to meeting the population's water needs by 2030. The cost of the project is 27.5 billion FCFA (or 42.0 million euros), co-financed with a contribution of 10.2 billion FCFA (or 15.6 million euros) from the SDG Eurobond.

These two projects' main achievements are presented in [Box 1](#).

In terms of impact, the strengthening of the drinking water supply system in Abomey-Calavi and the surrounding area has increased the quantity and pressure of drinking water distributed to the population ([Figure 18](#)). In fact, the volume of drinking water produced and distributed increased by 57.6% from 2018 to 2022, from 4.3 million m³ in 2018 to 6.8 million m³ in 2022 ([Figure 18a](#)). The length of the drinking water distribution network has more than tripled over this period, reaching 1,122.8 km/L in 2022, compared with 367.2 km/L in 2018 ([Figure 18a](#)). This distribution network will supply 27,325 connections (delivery points) in 2022, compared with 21,497 in 2018 ([Figure 18b](#)), an increase of 27.1%. The additional population served during this period is estimated at 69,936 ([Figure 18b](#)), with an overall growth rate of 27.1%. The coverage rate in this area (Abomey-Calavi, Akassato, Ouedo, Togba and Zinvié districts) reached 93.0% in 2023. The quality of the water supply service has also improved considerably, with an uninterrupted supply now provided and pressure sufficient to serve multi-story buildings (at least ground floor +2)²² without the installation of booster pumps. Water cuts complaints have decreased across these districts.

In addition, the linking of the Cotonou and Abomey-Calavi water networks under the second component of this project has enabled the Godomey plant to increase its capacity from

22. I.e., first floor and 2 floors above.

1400 m³/h to over 2000 m³/h, representing an additional 205,714 potential people served. As a result, the quality of water supply services has improved substantially in the Agla, Fidjrossè and Akogbato neighborhoods of Cotonou, putting an end to inconveniences such as pressure drops and intermittent water supply cuts.

The project to improve the water supply system in Abomey, Bohicon and surrounding areas has had a significant positive impact on the quantity of safe water distributed to this population ([Figure 19](#)). Facilities and structures installed as part of this project have not only definitively resolved the problem of drinking water shortages that the population had been experiencing,²³ but have also increased the quantity of drinking water distributed and improved water pressure. The volume of safe drinking water produced and distributed rose from 1.9 million m³ in 2018 to 4.7 million m³ in 2022 ([Figure 19a](#)), an increase of 146.9%. The length of the drinking water supply system reached 1,029.2 linear kilometers in 2022 versus 458.6 linear kilometers in 2018 ([Figure 19a](#)), an increase of 124.4% over this period. This water system will supply 26,688 connections (delivery points) in 2022 compared with 16,163 in 2018, an increase of 65.1%. The additional population served over the 2018–2022 period is estimated at 126,300 people ([Figure 19b](#)), an increase of 65.1%. The overall coverage rate in the districts supplied by these municipalities is estimated at 82.0%, with a total population served of 338,565 in 2023. As a result, the quality of the water supply service has greatly improved, ending service cuts. Moreover, water service pressure is also sufficient to serve multi-story buildings (at least ground floor +2) without compressors.

23. In particular, in the districts of Djègbé, Hounli, Vidolé (Abomey municipality), Bohicon 1, Bohicon 2, Ouassaho and Sodohomè (Bohicon municipality), Agbangnizoun (Agbangnizoun municipality), Djidja (Djidja municipality), Za-Kpota (Za-Kpota municipality) and Zogbodomey (Zogbodomey municipality).

Box 1: Main achievements of selected projects

Strengthening the drinking water supply system in Abomey-Calavi and surrounding area

The main results of the project's Phase I are:

- i. The construction and equipping of eight boreholes for a total operating flow rate of 1,500 m³/h;
- ii. Building of a drinking water treatment plant with a nominal capacity of around 45,000 m³/d, comprising a 3,000 m³ reinforced concrete ground reservoir and a pumping station equipped with 9 surface pumps (3 stations with 2+1 pumps), for a total nominal flow rate of around 2,000 m³/h;
- iii. The laying of raw and treated water transmission networks comprising around 28.1 linear kilometers of high-density polyethylene (HDPE) pipes DE280 to DE710;
- iv. Building a 500 m³ reinforced concrete water tower;
- v. Laying a distribution network of around 102.7 linear kilometers of Polyvinyl Chloride (PVC) pipes from DE75 to DE225; and
- vi. Installation of a remote management and monitoring system.

Phase II of the project essentially involved the laying of 4.2 linear kilometers of 315 mm HDPE pipes to connect the Houèto water tower to the Godomey water network and the supply of electromechanical and electrical equipment (pumps, submersible motors, water hammer bladder and junction boxes).

Strengthening the drinking water supply system for the towns of Abomey, Bohicon and surrounding areas

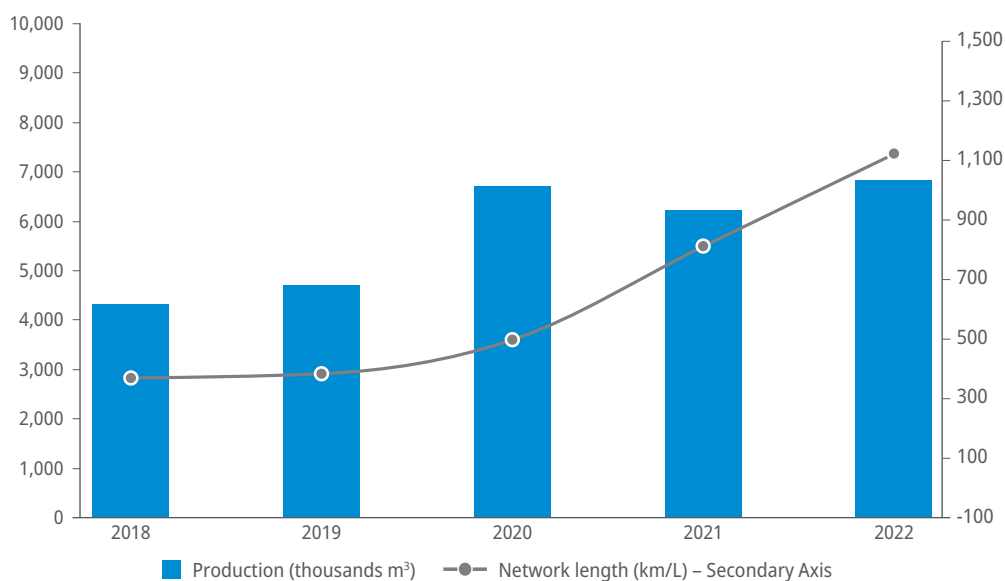
The project's achievements are as follows:

- i. Eight new boreholes installed and equipped;
- ii. The Cana raw water pumping station rehabilitated;
- iii. A 1,650 m³/h treatment plant built at the Bohicon water treatment plant;
- iv. Rehabilitation of the lower Bohicon 1,000 m³ reservoir and existing water towers;
- v. Five new reservoirs and water towers built for a total capacity of 3,350 m³, including one water tower and four ground tanks;
- vi. 92 km of pipes, including 19 km of supply network and 73 km of distribution network, supplied and laid;
- vii. Installation of a remote management system.

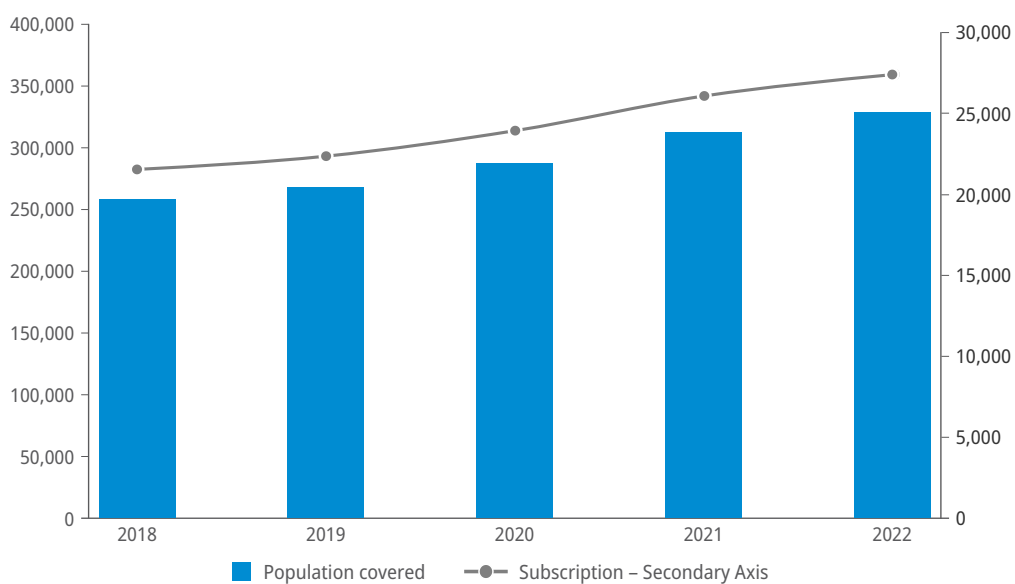
Source: SONEB (2024).

Figure 18: Drinking water infrastructure project in Abomey-Calavi and surrounding areas, key impact indicators

(a) Network length and water production



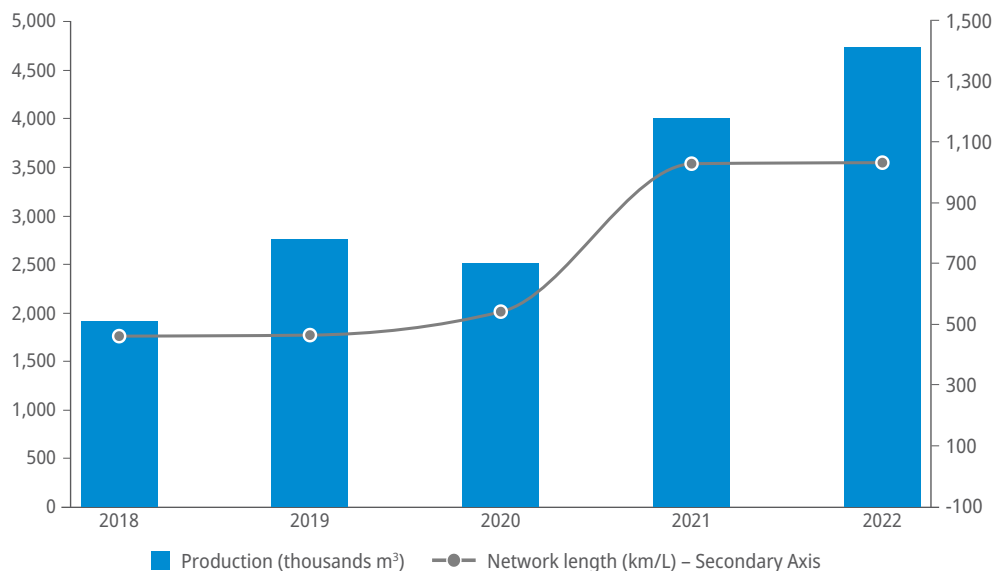
(b) Subscription and population served



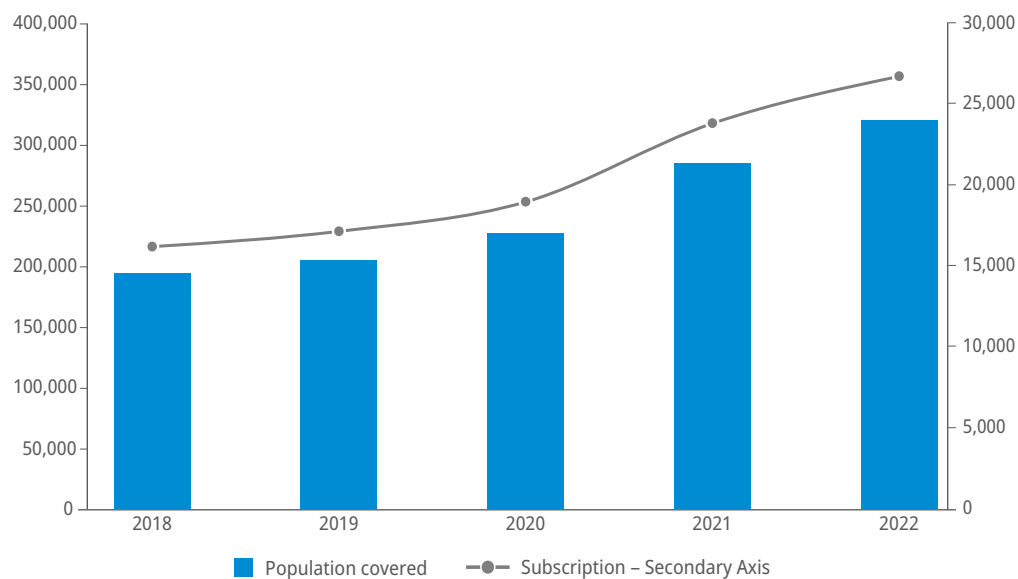
Source: SONEB (2024).

Figure 19: Drinking water infrastructure project in Abomey, Bohicon and surrounding areas, key impact indicators

(a) Network length and production



(b) Subscription and population served



Source: SONEB (2024).

3.2.3 Indirect impacts of increased access to drinking water

It is widely documented that improving access to drinking water considerably impacts on various aspects of socio-economic life.

Increasing access to drinking water has indirect implications for SDG 3, which aims to ensure good health and well-being. Firstly, it contributes to reducing infant mortality. Studies show that children from households with access to an improved drinking water source have a lower risk of being underweight (Johri et al., 2019). Children living in households using unimproved water facilities or surface water have an increased risk of mortality before the age of five (Gaffan et al., 2023; Ummalla et al., 2022). In addition, the reduction in diarrhea, the second leading cause of under-five mortality in developing countries, is more noticeable in households that treat water before consumption (Kumar and Vollmer, 2013). Secondly, access to improved drinking water sources promotes better health, enabling better school attendance for children as they are no longer at risk of contracting water-related diseases (World Bank, 2019). Thirdly, increasing

access to improved drinking water translates into reduced healthcare costs.

Access to drinking water also reduces the women’s workload, as they no longer have to travel long distances to fetch water. This reduction in water collection time frees up time for other productive activities, improving quality of life and economic opportunities for households (World Bank, 2019).

In the Benin context, improving access to drinking water sources has undoubtedly contributed to reducing infant mortality and improving life expectancy. The strong negative correlation between the infant mortality rate and the percentage of the population using basic drinking water services (Table 2) highlights this possible contribution. In other words, better access to drinking water substantially reduces child mortality rates. Similarly, life expectancy at birth is positively associated with using basic water services.

Improving access to drinking water is one of the most effective levers for reducing infant mortality, which remains an important barometer of public health and human development. Access to safe

Table 2: Correlation between infant mortality, life expectancy at birth and use of basic drinking water services, 2000–2022

Variables	Infant mortality	Life expectancy at birth	Use of basic water services
Infant mortality	1.000 –	–	–
Life expectancy at birth	-0.975* (0.000)	1.000 –	–
Use of basic water services	-0.996* (0.000)	0.984* (0.000)	1.000 –

Source: Authors’ calculations based on data from World Bank (2024), World Development Indicators.

Note: *** p<0.01, ** p<0.05, * p<0.1

Box 2: Effect of the use of basic water services on infant mortality and life expectancy in sub-Saharan Africa

To assess the impact of the introduction of basic water services on infant mortality and life expectancy in sub-Saharan Africa, a random effects model using panel data was estimated using a generalized least squares method. This methodology, which corrects for problems of heteroskedasticity and autocorrelation, was applied to a dataset covering 46 countries in the region, excluding Somalia and South Sudan, over the 2000–2022 period. In addition to the variable of interest, which was the provision of basic water services, the estimated model includes other control variables including public spending on health, access to electricity, CO₂ emissions, and access to clean cooking technologies.

The estimation results show that improving access to basic water services has a significant impact on child mortality in sub-Saharan Africa (Table 3). A 1.0% increase in the use of basic water services results in, other things being equal, a 0.7% reduction in infant mortality. It goes without saying that ensuring access to clean, safe drinking water is imperative to reduce the incidence of water-borne diseases such as diarrhea, cholera, etc. that severely impact newborn and infant mortality rates.

Table 3: Estimated results for the use of basic water services

Variables	Infant mortality	Life expectancy at birth
Use of basic water services	-0.712*** (0.170)	0.202*** (0.059)
Public spending on health	-0.020 (0.068)	0.017 (0.019)
Access to electricity	-0.170*** (0.057)	0.068*** (0.019)
CO ₂ emissions	0.159*** (0.055)	-0.061*** (0.015)
Access to clean cooking technologies	-0.080* (0.043)	0.006 (0.009)
Constant	7.946*** (0.637)	2.847*** (0.209)
R ²	0.483	0.401
Observations	933	933
Number of countries	46	46

Source: Authors' calculations based on data from the World Bank (2024).

Note: *** p<0.01, ** p<0.05 and * p<0.1

The use of basic water services also has a positive effect on life expectancy at birth. A 1.0% increase in access to basic water services leads, all other things being equal, to a 0.2% increase in life expectancy at birth. This increase in life expectancy is explained by the reduction in water-related diseases along with improved public health conditions. Access to safe drinking water reduces the prevalence of chronic and infectious diseases, resulting in a healthier population. The results also show that factors such as access to electricity and clean cooking technologies also have significant effects in terms of mortality reduction.

Source: Authors' analysis.

drinking water reduces the risk of water-borne diseases such as diarrhea, typhoid, cholera, etc., which are leading causes of mortality among children under five in many developing regions. In addition, better quality drinking water contributes to a general improvement in health and nutritional conditions, which in turn strengthens children's immune systems and reduces their vulnerability to infections. An in-depth analysis of sub-Saharan African countries where data are available confirms the effect of basic safe water services in reducing child mortality (Box 2). We can infer from the econometric results for sub-Saharan Africa that the increase in access to basic water services in Benin by 1.7% from 2016 to 2022 has reduced the country's infant mortality rate by approximately 1.2% in this period. Similarly, improved access to drinking water likely generated a 0.3% increase in life expectancy at birth in Benin in the same period, all other things being equal.

3.3 Analysis of challenges and obstacles encountered in project implementation

One of the main challenges in implementing drinking water projects in Benin is the cumbersome public procurement process. This administrative complexity often slows project progress, delaying the delivery of essential infrastructure. In response, Benin has set up dedicated agencies such as the National Agency of Rural Water Supply (ANAEP-MR) to help overcome the lengthy procedures of the ministries. Although this mechanism has enabled deadlines to be met without significant delays, it has not eliminated all obstacles, particularly those linked to financial constraints.

Financial constraints have been a major obstacle, with budgets proving insufficient to cover all programs recommended in the detailed technical studies. This budget shortfall has caused some projects to be implemented over several phases,

particularly in the Abomey-Calavi commune and the towns on the Abomey plateau. The fragmentation of projects can lead to disruptions in service provision, adversely affecting water services provision and the achievement of the 2030 targets.

In addition, the absence of individual water supply connection kits has posed a significant challenge. The projects carried out did not include measures to facilitate mass connections to water services, leaving residents to connect at their pace and according to their own financial means. As a result, the impact of infrastructure investments was less immediate. The provision of connection kits,²⁴ accompanied by a low-cost connection campaign, would have accelerated the impact of these investments, making the benefits for the population served more perceptible and immediate.

3.4 Conclusion and ways forward

The institutional reforms and innovative financing mobilized by Benin as part of the issuance of the SDG Eurobond in July 2021 have accelerated the achievement of the SDGs, particularly with regard to universal access to water and sanitation. The multi-functional hydraulic infrastructure development project gave 46,500 people in rural areas access to drinking water by 2022. The total length of SONEB's water distribution network increased by 33.5% from 2016 to 2023 and water production rose by 24.8% over the same period. The number of individual connections in rural areas reached 20,533 in 2023 compared with 14,283 in 2021 and the drinking water coverage rate jumped from 55.0% to 71.8% in urban areas and from 41.8% to 76.7% in rural areas from 2017 to 2022. At the same time, projects financed by the SDG

24. Private connection kits are practical and often necessary solutions for giving households access to running water at home. These kits generally include the equipment and accessories needed to connect an individual residence to the public water distribution network.

Eurobond, such as the strengthening of water supply systems in and around Abomey-Calavi, as well as in Abomey and Bohicon, have increased drinking water production and distribution, improved service pressure and served thousands of new subscribers. These projects have considerably reduced water shortages and disparities between rural and urban areas while enhancing the quality of life of the beneficiary populations.

A review of government initiatives and projects financed by the SDG Eurobond highlights several ways to strengthen future actions to improve drinking water access in rural and urban areas. SONEB's experience in mobilizing innovative financing in collaboration with the multinational corporation, Sogea-Satom²⁵ has brought advanced technologies and greater fluidity to project execution. However, it is essential to address the risks associated with these partnerships, notably by closely monitoring the technologies proposed, assessing the cost-effectiveness of financial offers, and improving information exchange to better support effective budgeting.

To enhance project efficiency and sustainability, it is recommended that the "Regulated PPP Mechanism" be progressively adopted for all projects aimed at universal access to drinking water. This is a concession-type PPP set up between local private companies and decentralized municipalities to manage village water supply systems. The distinctive feature of this model lies in the use of subsidized concession contracts, enabling private operators not only to provide operation and maintenance services, but also to invest their own resources into major works to extend water distribution networks and individual connections (World Bank, 2016). This mechanism, while beneficial, requires particular attention be given to closely assessing technical and financial bids, improving information systems to maintaining a continuous exchange of relevant

information with stakeholders, and ensuring comprehensive administrative and financial management. Systematizing this mechanism will undoubtedly speed up project implementation, reduce delays and maximize the impact of interventions.

Finally, to contribute to the achievement of the SDGs, in particular Target 6.1, it is important to systematically integrate the "low-cost connection" component into drinking water supply projects. This approach would not only guarantee equity and affordable access to water for low-income populations, but also improve return on investment. Facilitating access to drinking water for as many people as possible, including vulnerable populations, is likely to move the country significantly closer to achieving the SDGs, and will sustainably improve people's living conditions.

A holistic and rigorous approach that involves the establishment of clear and transparent regulatory frameworks is needed to ensure that public procurement procedures are no longer a hindrance to project implementation.

These measures will require the complete digitization of the procurement process to reduce delays, minimize the risks of corruption, and accelerate processes. Institutional capacities need to be strengthened through ongoing training of the players involved to ensure full proficiency in procedures and international best practices. Furthermore, the creation of independent monitoring and auditing mechanisms is crucial to ensure integrity and accountability throughout the process, with regular audits and the publication of detailed reports. The integration of advanced information systems for contract monitoring and management will ensure better project management and transparency in procedures.

25. Sogea-Satom is a multinational company specializing in construction and civil engineering in Africa.



Part 4

Directions for future action

Part 4

Directions for future action

4.1 Achieving the SDGs

The SDG Index and scorecards reveal that Benin's overall performance is favorable compared to that of the ECOWAS sub-region. With a score of 55.6 out of 100, Benin is above the regional average. Progress has been made in areas including poverty reduction (SDG 1), reducing socio-economic inequalities (SDG 10), and gender equality (SDG 5). However, persistent challenges in certain areas, such as the declining trends observed for SDGs 4 (Quality Education) and 16 (Peace, Justice, and Effective Institutions), call for increased action to

accelerate progress. The country's lack of progress on some of the SDGs, notably SDGs 3 (Good Health and Well-Being) and 7 (Clean and Affordable Energy), is indicative of the limited impact of some current policies and initiatives. It goes without saying that a more focused and dynamic approach is required to overcome the obstacles and ensure a steady and sustained progress towards the full realization of the 2030 Agenda. To this end, attention should be drawn to certain key challenges summarized in [Table 4](#) below, with the goal of maximizing current strategies to maintain and accelerate Benin's progress towards achieving the SDGs.

Table 4: Matrix of directions for future action for achieving the SDGs

SDG	Results	Directions for future action
SDG 4	Benin has seen a drop in primary school enrollment (from 96.9% in 2016 to 94.6% in 2022) and a decline in lower secondary completion rates, exacerbated by high repetition rates and migration.	<ul style="list-style-type: none"> • Increase investment in educational infrastructure, including the construction of new classrooms and ongoing teacher training. • Strengthen initiatives aimed at improving the quality of teaching (recruitment and training of qualified teachers), reducing drop-out rates, and improving school completion rates through mechanisms for monitoring learners via psychosocial support programs, mentoring, etc.
SDG 11	Benin is experiencing a regression in terms of sustainable cities and communities, illustrated by rapid and poorly planned urbanization, which puts excessive pressure on urban infrastructure and services, aggravating urban quality of life problems.	<ul style="list-style-type: none"> • Strengthen integrated urban planning by expanding initiatives such as the Climate Change Adaptation for Cities Program (PAVICC - Programme d'Adaptation des Villes au Changement Climatique). • Promote sustainable development and infrastructure management strategies to better manage urbanization and improve living conditions in urban areas.
SDG 15	Permanent deforestation increased by around 23.5% in Benin from 2016 to 2022, although the rate is lower than the ECOWAS average.	<ul style="list-style-type: none"> • Intensify sustainable forest management policies and strengthen biodiversity conservation projects, such as the project to create sustainably managed fuel wood production forests and the sustainable forest management and conservation project. • Pursue sustainable management initiatives for classified and communal forests and improve deforestation monitoring to limit the loss of forest cover.
SDG 16	Benin faces governance challenges, with signs of structural and functional fragility of institutions, worsened by the deterioration of indicators evaluating checks and balances, insufficient transparency in the disclosure of financial and judicial information.	<ul style="list-style-type: none"> • Continue efforts to reinforce democracy, the rule of law, and good governance, through institutional reforms. • Strengthen governance institutions by implementing reforms to improve transparency, support the fight against corruption, and enhance citizen participation.

Source : Authors.

4.2 Achieving SDG 6: Ensuring access to drinking water, sanitation, and hygiene in Benin

Looking at Benin's performance through the prism of the "Six Transformations," it appears that the country has made progress in several key areas, including education, health, and the digital revolution. This progress is particularly promising, as it generates significant ripple effects likely to strengthen the country's capacity to achieve the SDGs. However, challenges remain in areas such as energy decarbonization and the development of sustainable cities. More specifically, Benin's performance on transformations relating to clean energy and sustainable urban infrastructure remains below expectations, suggesting persistent gaps in access to drinking water and sanitation. These challenges point to the need for a strategic reassessment of budget priorities and policy interventions.

The directions for future action, summarized in [Table 5](#), aim to optimize Benin's strategy for achieving SDG 6, by exploiting the synergies between the strategic priority of GAP II and the "Six Transformations". Firstly, it is imperative to increase efforts and funding allocated to Transformations 3 (clean energy and industry) and 5 (sustainable cities), which are directly relevant to meeting the challenges of SDG 6. Improving infrastructure for access to drinking water and sanitation must be a priority, supported by robust water resources management strategies and investment in greener, more innovative technologies. Secondly, it is recommended to re-evaluate the current budget breakdown, increasing the funding allocated to strategic Priorities 5, 6 and 7 of GAP II, which have demonstrated a significant potential impact on the achievement of SDG 6. It is also essential to maintain efforts in the fields of

education and health, which indirectly contribute to the achievement of this objective by strengthening the capacities of vulnerable populations. Finally, it is essential to strengthen synergies between the various transformations and government strategies, to ensure an integrated and coherent approach. Hence the importance of focusing on reducing CO₂ emissions and improving access to essential services, particularly for the most disadvantaged communities, in order to ensure sustainable and inclusive development.

Furthermore, in order to improve access to drinking water and sanitation within the framework of SDG 6, several key actions need to be implemented. Firstly, it is essential to strengthen institutional reforms and innovative financing, such as that obtained by Benin with the 2021 SDG Eurobond. This financing has enabled significant leaps forward, including securing access to drinking water for tens of thousands of people in rural areas and a 33.5% increase in the drinking water distribution network. Benin should capitalize on these successes by adopting the "Regulated PPP Mechanism," a public-private partnership model that allows private operators to manage and invest in village water infrastructure, while ensuring rigorous evaluation of technical and financial bids. Systematically integrating the "low-cost connection" component into household water supply projects is needed to guarantee equity and affordable access for vulnerable populations. At the same time, it is imperative to modernize public procurement procedures by establishing clear and transparent regulatory frameworks, digitizing the process to reduce delays and minimize the risk of corruption, and building institutional capacity through ongoing training and regular audits. These measures will contribute to more efficient project management, greater transparency and, ultimately, sustainable improvement in living conditions for the people of Benin.

Table 5: Matrix of directions for future action for SDG 6

GAP II Strategic Priority	Qualitative analysis results	Budget allocation results	Directions for future action
Priority 1	Priority 1's potential impact on SDG 6 is relatively low, as it focuses primarily on strengthening democracy and the rule of law.	Receives a limited budget allocation (0.7% of total budget).	Reassess the budget allocation for Priority 1 to redirect funds towards priorities that have a more direct impact on SDG 6.
Priority 2	Priority 2, while important for governance, has a limited impact on SDG 6, influencing mainly Transformations 1 and 6, which are less relevant to this goal.	Moderate allocations (4.5% of total budget) mainly for defense and infrastructure spending.	Redistribute part of the budget from Priorities 2 to 5, 6 and 7 to strengthen their ability to achieve SDG 6.
Priority 3	Priority 3 has a higher potential impact on SDG 6 than Priorities 1 and 2, but focuses on institutional reforms and capacity building, requiring less funding.	Receives the lowest budget allocation (0.3% of total budget).	Increase funding for Priority 3 to support reforms which, although indirect, can improve conditions for SDG 6.
Priority 4	Although Priority 4 is well-funded, its direct impact on SDG 6 is moderate, being mainly focused on economic growth and infrastructure.	Receives the largest share of the budget (54.8%).	Redirect part of Priority 4 funding to Priorities 5, 6 and 7 to increase their direct impact on SDG 6.
Priority 5	Priority 5 holds promise for SDG 6 by supporting access to water and sanitation, but receives limited funding compared to its potential.	Allocation of 8.3% of total budget.	Increase funding for Priority 5 to support drinking water and sanitation initiatives.
Priority 6	Priority 6 directly targets the water and sanitation sectors and is crucial to SDG 6, although it is under-funded.	Allocation of 14% of total budget.	Increase financial resources for Priority 6 to strengthen its interventions in water and sanitation.
Priority 7	Priority 7 is essential for SDG 6, with a significant impact on relevant transformations, but receives limited funding.	Allocation of 17.4% of total budget.	Increase funding for Priority 7 to maximize its impact on the transformations linked to SDG 6.

Source : Authors.

Annexes

Methods summary and data tables

A.1 Interpreting the SDG Index and Dashboards results

The “Benin Sustainable Development Report 2024” is the third edition in a series of publications developed through the partnership between the Government of Benin and SDSN. This report provides an assessment of the progress made towards the SDGs for Benin.

The SDG Index score is presented on a scale of 0 to 100 and can be interpreted as a percentage towards optimal performance on the SDGs. Therefore, the difference between 100 and a country's SDG Index score is the distance, in percentage points, that must be overcome to reach optimum SDG performance. To minimize missing data bias, we do not calculate an overall SDG Index score and rank for countries missing data on more than 20 percent of the indicators. The same basket of indicators and similar performance thresholds are used for all ECOWAS countries to generate comparable scores and dashboards.

The SDG Dashboards provide a visual representation of countries' performance on the 17 SDGs. The “traffic light” color scheme (green, yellow, orange, and red) illustrates how far a country is from achieving a particular goal. The SDG Dashboards are presented for all ECOWAS countries.

The SDG Trend Dashboards indicate whether a country is on track to achieve each individual goal by 2030 based on past performance. It builds on past annual growth rates, since 2015, which are extrapolated to 2030. Indicator trends are aggregated at the goal level to give an indication of how the country is progressing towards that SDG.

This section provides a brief summary of the methods used to compute the SDG Index and Dashboards. A detailed methodology paper is accessible online (Lafortune et al., 2018). The European Commission Joint Research Centre (JRC) conducted an independent statistical audit

of the report's methodology and results in 2019, reviewing the conceptual and statistical coherence of the index structure. The detailed statistical audit report and additional data tables are available on our website: www.sdgtransformationcenter.org

Due to time lags in international statistics, this year's edition may not fully capture the severe consequences on the SDGs of the war in Ukraine and of other geopolitical and security crises over the past two years.

A.2 Changes and limitations

Due to changes in the indicators and refinements in the methodology, SDG Index rankings and scores from one edition cannot be compared with the results from previous editions. However, [Part 2](#) provides time series for the SDG Index calculated retroactively using this year's indicators and methods, providing results that are comparable across time. The full time series for the SDG Index are available for download online.

[Table A.1](#) summarizes the additions and identifies the indicators that were replaced or modified due to changes in the methodology and estimates produced by data providers.

Despite our best efforts to identify data for the SDGs, several indicator and data gaps persist at the international level (refer to [Table A.2](#) of the SDR 2024 methodology annex). To ensure the results are comparable across countries, we do not incorporate estimates received directly from national statistical offices. Data providers may adjust national data to ensure international comparability. As a result, some data points presented in this report may differ from data available from national sources. Moreover, the length of the validation processes by international organizations can lead to significant delays in publishing some data. National statistical offices may therefore have more recent data for some indicators than presented in this report.

Table A.1: New indicators and modifications

SDG	Indicator	Modification	Source
1	Proportion of population living below the national poverty line	Removed from the set of indicators because of lack of Timeliness.	World Bank
2	Sustainable Nitrogen Management Index (best 0–1.41 worst)	New Indicator in the Benin edition, usually used in the SDR.	Zhang and Davidson (2019)
3	Subjective well-being (average ladder score, worst 0–10 best)	New Indicator in the Benin edition, usually used in the SDR.	Gallup
7	CO ₂ emissions from fuel combustion per total electricity output (MtCO ₂ /TWh)	Modification: CO ₂ data now sourced from the Global Carbon Project.	Global Carbon Project & IEA
8	Unemployment rate (% of total labor force, ages 15+)	Replaces "Employment-to-population ratio (%)".	ILO
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM _{2.5}) (µg/m ³)	Modification: data no longer limited to urban areas.	Washington University in St Louis
12	Production-based air pollution (DALYs per 1,000 population)	Replaces "Production-based SO ₂ emissions".	UNEP
12	Air pollution associated with imports (DALYs per 1,000 population)	Replaces "SO ₂ emissions associated with imports".	UNEP
16	Crime is effectively controlled (worst 00–1 best)	Replaces "Population who feel safe walking alone at night in the city or area where they live".	World Justice Project
17	Index of countries' support to UN-based multilateralism (worst 0–100 best)	New Indicator.	SDSN
15	Terrestrial and freshwater biodiversity threats embodied in imports (per million population)	Replaced in the SDR 2024 by Imported deforestation (m ² /capita). Not included in the Benin edition.	Lenzen et al. (2012)

Source: Authors.

A.3 Methodology

This edition of the ‘Benin Sustainable Development Report’ provides a comprehensive assessment of the distance to be covered to reach the targets, based on the most recent available data covering all 15 ECOWAS countries. This year’s report includes 95 indicators, of which 82 are from the 2022 Sustainable Development Report, with an additional 13 indicators relevant to the context of Benin and the rest of ECOWAS.

The following sections provide an overview of the methodology for selection, normalization, aggregation, and generation of trend indications. Additional information, including raw data, supplementary data tables, and sensitivity tests, is available online.

A.3.1 Data selection

Where possible, we use official SDG indicators endorsed by the UN Statistical Commission. Where there are data gaps or insufficient data available for an official indicator, we include other metrics from official and unofficial providers. We used five criteria in selecting indicators suitable for inclusion in the report:

1. Their global relevance and applicability to a broad range of country settings.
2. Statistical adequacy: The indicators represent valid and reliable measures.
3. Timeliness: The indicators are current and published on a timely schedule.
4. Coverage: Data is available for at least 80% of UN member states with a population > 1 million.²⁶
5. Distance to targets must be measurable (optimal performance can be defined).

26. There are two exceptions to this rule: (i) New HIV infections and (ii) Children involved in child labor.

Data sources

The data come from a mix of official and non-official data sources. Most of the data (around two-thirds) come from international organizations (World Bank, OECD, WHO, FAO, ILO, UNICEF, other) which have extensive and rigorous data validation processes. Other data sources (around one-third) come from less traditional statistics including household surveys (Gallup World Poll), civil society organizations and networks (Oxfam, the Tax Justice Network, the World Justice Project, Reporters Without Borders), peer-reviewed journals (e.g., to track international spillovers), and geographic information systems (GIS). These non-official data sources complement other data sources and help increase data availability and timeliness for key SDG indicators and targets. The full list of indicators and data sources is available in [Table A.2](#). The data for this year’s edition were extracted between March and April 2024.

A.3.2 Missing data and imputations

The objective of this report is to assist the country in monitoring and evaluating its progress and efforts towards implementing the 2030 Agenda, based on available and robust data. To minimize bias due to missing data, the SDG index includes only countries with data for at least 80% of the indicators included in the report. Cape Verde was not included in the SDG index comparison due to insufficient data availability, with 23.4% of data missing across all indicators. However, the countries were retained in the dashboards ([Part 1](#)).

Given that many SDG priorities do not have widely accepted statistical models for imputing country-level data, we generally have not imputed or modeled missing data, except in a few exceptional circumstances. The list of indicators where imputations are made is available in the online codebook.

A.3.3 Method for constructing the SDG Index and Dashboards

The procedure for calculating the SDG Index comprises three steps: (i) establish performance thresholds and censor extreme values from the distribution of each indicator; (ii) rescale the data to ensure comparability across indicators (normalization); (iii) aggregate the indicators within and across SDGs.

Establishing Performance thresholds

To make the data comparable across indicators, each variable was rescaled from 0 to 100, with 0 denoting worst performance and 100 describing the optimum. Rescaling is sensitive to the choice of limits and extreme values (outliers). The latter may become unintended thresholds and introduce spurious variability in the data. Consequently, the choice of upper and lower bounds can affect the relative ranking of countries in the index. The upper bound for each indicator was determined using the following decision tree:

1. Use absolute quantitative thresholds in SDGs and targets: e.g., zero poverty, universal school completion, universal access to water and sanitation, full gender equality.
2. Where no explicit SDG target is available, apply the principle of “Leave-No-One-Behind” to set upper bound to universal access or zero deprivation.
3. Where science-based targets exist that must be achieved by 2030 or later, use these to set the 100 percent upper bound (e.g., zero greenhouse gas emissions from CO₂ as required by no later than 2050 to stay within 1.5°C, 100 percent sustainable management of fisheries).
4. For all other indicators, use the average of the top 5 performers.

These principles interpret the SDGs as “stretch targets” and focus attention on the indicators where a country is lagging behind. The lower bound was defined at the 2.5th percentile of the distribution. Each indicator distribution was censored, so that all values exceeding the upper bound scored 100, and values below the lower bound scored 0.

Normalization

After establishing the upper and lower bounds, variables were transformed linearly to a scale between 0 and 100 using the following rescaling formula for the range [0 ; 100]:

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)} \times 100$$

where x is the raw data value; \max/\min denote the upper and lower bounds, respectively; and x' is the normalized value after rescaling. The rescaling equation ensured that all rescaled variables were expressed as ascending variables (i.e., higher values denoted better performance). In this way, the rescaled data became easy to interpret and compare across all indicators: a country that scores 50 on a variable is half-way towards achieving the optimum value; a country with a score of 75 has covered three quarters of the distance from worst to best.

Weighting and Aggregation

The results of several rounds of expert consultations on earlier drafts of the SDG Index made clear that there was no consensus across different epistemic communities on assigning higher weights to some SDGs over others. As a normative assumption, we therefore opted for fixed, equal weight to every SDG to reflect policymakers' commitment to treat all SDGs equally and as an integrated and indivisible set of goals. This implies that to improve their SDG Index score countries need to place attention on all goals with a particular focus on goals where they are furthest from

achieving the SDGs and where incremental progress might therefore be expected to be fastest.

To compute the SDG Index, we first estimate scores for each goal using the arithmetic mean of indicators for that goal. These goal scores are then averaged across all 17 SDGs to obtain the SDG Index score. The results of various sensitivity tests are available online including comparisons of arithmetic mean versus geometric mean and Monte-Carlo simulations at the Index and Goal level. Monte-Carlo simulations call for prudence in interpreting small differences in the Index scores and rankings between countries as those may be sensitive to the weighting scheme.

Dashboards

We introduced additional quantitative thresholds for each indicator to group countries in a “traffic light” table. Thresholds were established based on statistical techniques and through various rounds of consultations with experts conducted since 2016.

Averaging across all indicators for an SDG might hide areas of policy concern if a country performs well on most indicators but faces serious shortfalls on one or two metrics within the same SDG (often referred to as the issue “substitutability” or “compensation”). This applies particularly to high-income and upper-middle-income countries that have made significant progress on many SDG dimensions but may face serious shortfalls on individual variables, for example on the sustainability of diets and agriculture within SDG 2.

As a result, the SDG Dashboards focus exclusively on the two variables on which a country performs worst. We applied the additional rule that a red rating was assigned only if both the worst-performing indicators score red. Similarly, to score green, both indicators had to be green.

The quantitative thresholds used for generating the dashboards are available in the online

codebook. The methodological section of the Sustainable Development Report also provides insights into the thresholds and justifications for choosing optimal values.

SDG Trends

Using historic data, we estimate how fast a country has been progressing towards an SDG and determine whether – if extrapolated into the future – this pace will be sufficient to achieve the SDG by 2030. For each indicator, SDG achievement is defined by the green threshold set for the SDG Dashboards. The difference in percentage points between the green threshold and the normalized country score denotes the gap that must be closed to meet that goal. To estimate trends at the indicator level, we calculated the linear annual growth rates (i.e., annual percentage improvements) needed to achieve the target by 2030 (i.e., 2015–2030) which we compared to the average annual growth rate over the most recent period since the adoption of the SDGs in 2015 (e.g. 2015–2023). Progress towards achievement on a particular indicator is described using a 4-arrow system ([Figure A.1](#)). [Figure A.2](#) illustrates the methodology graphically. Because time series data is required for these calculations, indicators with only one or very few data points across time could not be used for these analyses. The list of indicators used to generate the trend indications is available in the online codebook.

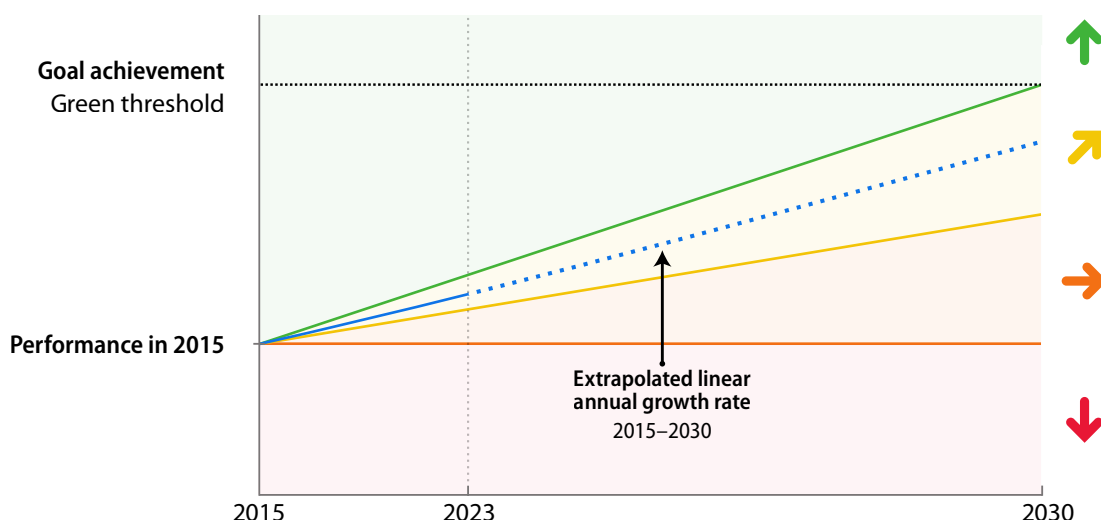
Because projections are based on the growth rate over the last several years, a country might have observed a decline in performance in the past year (for instance due to the impact of COVID-19) but still be considered as being on track. This methodology emphasizes long term structural changes over time since the adoption of the SDGs in 2015, and less so annual changes which may be cyclical or temporary. Countries that currently exceed an indicator target but have decreased since 2015, are assigned an orange arrow. This is because if the decreasing trend continues, the country may no longer meet the SDG target in the future.

Figure A.1: The four-arrow system for denoting SDG trends



Source: Authors.

Figure A.2: Graphic representation of the methodology for SDG trends



Source: Authors.

Status of SDG targets

In addition to the SDG Index, Dashboards and Trends, we present an assessment of the status of SDG targets for Benin and for the ECOWAS population-weighted average (Figure 5). To make this assessment, we only use trend indicators since time series data was needed to calculate rates of progress.

In the case where the past rate of progress is sufficient to meet the target by 2030 – corresponding to the green arrow “On track or

maintaining SDG achievement” — the indicator is counted as a target on track. Indicators where past rates of progress are insufficient to meet the SDG target — corresponding to the orange “stagnating” or yellow “moderately improving” arrows — are counted as limited progress. Finally, indicators that are going in the wrong direction — the red arrow “decreasing” — were counted as worsening. Indicators for which a country has already met the target but have decreased in score since 2015 were also considered worsening.

Table A.2: Indicators included in the report for the SDG index and dashboards

SDG	Transformation	Notes	Indicator	Source	Description
1	1	[b]	Poverty headcount ratio at \$2.15/day (2017 PPP, %)	World Data Lab	Estimated percentage of the population that is living under the poverty threshold of US\$2.15 a day. Estimated using historical estimates of the income distribution, projections of population changes by age and educational attainment, and GDP projections.
1	1	[b]	Poverty headcount ratio at \$3.65/day (2017 PPP, %)	World Data Lab	Estimated percentage of the population that is living under the poverty threshold of US\$3.65 a day. Estimated using historical estimates of the income distribution, projections of population changes by age and educational attainment, and GDP projections.
2	1		Prevalence of undernourishment (%)	FAO	The percentage of the population whose food intake is insufficient to meet dietary energy requirements for a minimum of one year. Dietary energy requirements are defined as the amount of dietary energy required by an individual to maintain body functions, health and normal activity.
2	1	[a]	Prevalence of stunting in children under 5 years of age (%)	UNICEF et al.	The percentage of children up to the age of 5 years that are stunted, measured as the percentage that fall below minus two standard deviations from the median height for their age, according to the WHO Child Growth Standards.
2	1		Prevalence of wasting in children under 5 years of age (%)	UNICEF et al.	The percentage of children up to the age of 5 years whose weight falls below minus two standard deviations from the median weight for their age, according to the WHO Child Growth Standards.
2	2		Prevalence of obesity, BMI \geq 30 (% of adult population)	WHO	The percentage of the adult population that has a body mass index (BMI) of 30kg/m ² or higher, based on measured height and weight.
2	4		Cereal yield (tonnes per hectare of harvested land)	FAO	Cereal yield, measured as tonnes per hectare of harvested land. Production data on cereals relate to crops harvested for dry grain only and excludes crops harvested for hay or green for food, feed, or silage and those used for grazing.
2	4	[a]	Fertilizer consumption (kg per hectare of arable land)	FAO	The amount of nutrients used per unit of arable land. Fertilizers cover nitrogen, potassium and phosphate fertilizers (including ground rock phosphate). Traditional nutrients – animal and plant manures – are not included. For data dissemination purposes, FAO has adopted the concept of a calendar year (January to December). Some countries compile fertilizer data on a calendar year basis, while others are compiled on a semi-annual basis. Arable land includes land defined by FAO as land under temporary crops (double-cropped areas are counted once), temporary grassland for mowing or grazing, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.
2	4		Sustainable Nitrogen Management Index (best 0–1.41 worst)	Zhang and Davidson (2019)	The Sustainable Nitrogen Management Index (SNMI) is a one-dimensional ranking score that combines two efficiency measures in crop production: Nitrogen use efficiency (NUE) and land use efficiency (crop yield).
3	2		Maternal mortality rate (per 100,000 live births)	WHO et al.	The estimated number of women, between the age of 15 and 49, who die from pregnancy-related causes while pregnant or within 42 days of termination of pregnancy, per 100,000 live births.
3	2		Neonatal mortality rate (per 1,000 live births)	UNICEF et al.	The number of newborn infants (neonates) who die before reaching 28 days of age, per 1,000 live births.

Table A.2: (continued)

SDG	Transformation	Notes	Indicator	Source	Description
3	2		Mortality rate, under-5 (per 1,000 live births)	UNICEF et al.	The probability that a newborn baby will die before reaching age five, if subject to age-specific mortality rates of the specified year, per 1,000 live births.
3	2		Incidence of tuberculosis (per 100,000 population)	WHO	The estimated rate of new and relapse cases of tuberculosis each year, expressed per 100,000 people. All forms of tuberculosis are included, including cases of people living with HIV.
3	2		New HIV infections (per 1,000 uninfected population, all ages)	UNAIDS	Number of people newly infected with HIV per 1,000 uninfected population.
3	2	[a]	People living with HIV receiving antiretroviral therapy (%)	UNAIDS	Percentage of people undergoing antiretroviral treatment among all the people living with HIV.
3	2	[a]	Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs (%)	USAID	Percentage of children aged 0–59 months who were ill with a fever in the two weeks before the survey and who received any anti-malarial drugs during that time.
3	2	[a]	Malaria mortality rate (per 100,000 population)	WHO World Malaria Report 2022	Number of adults and children who have died due to malaria in a specific year, expressed as a rate per 100 000 population.
3	2	[a]	Coverage of Preventive Chemotherapy for Neglected Tropical Diseases (%)	WHO	Coverage is calculated as the number of people in need of PC and treated out of population requiring PC.
3	2		Age-standardized death rate due to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in adults aged 30–70 years (%)	WHO	The probability of dying between the ages of 30 and 70 years from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases, defined as the percent of 30-year-old-people who would die before their 70th birthday from these diseases, assuming current mortality rates at every age and that individuals would not die from any other cause of death (e.g. injuries or HIV/AIDS).
3	2		Age-standardized death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	WHO	Mortality rate that is attributable to the joint effects of fuels used for cooking indoors and ambient outdoor air pollution.
3	2		Traffic deaths (per 100,000 population)	WHO	Estimated number of fatal road traffic injuries per 100,000 people.
3	2		Life expectancy at birth (years)	UNDESA	The average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area.
3	2		Adolescent fertility rate (births per 1,000 females aged 15 to 19)	WHO	The number of births per 1,000 females between the age of 15 and 19.
3	2		Births attended by skilled health personnel (%)	UNICEF	The percentage of births attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period, to conduct deliveries on their own, and to care for newborns.
3	2		Surviving infants who received 2 WHO-recommended vaccines (%)	WHO and UNICEF	Estimated national routine immunization coverage of infants, expressed as the percentage of surviving infants, children under the age of 12 months, who received two WHO-recommended vaccines (3rd dose of DTP and 1st dose of measles). Calculated as the minimum value between the percentage of infants who have received the 3rd dose of DTP and the percentage who have received the 1st dose of measles.

Table A.2: (continued)

SDG	Transformation	Notes	Indicator	Source	Description
3	2		Universal health coverage (UHC) index of service coverage (worst 0–100 best)	WHO	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage.
3	2		Subjective well-being (average ladder score, worst 0–10 best)	Gallup	Subjective self-evaluation of life, where respondents are asked to evaluate where they feel they stand on a ladder where 0 represents the worst possible life and 10 the best possible life.
4	1		Participation rate in pre-primary organized learning (% of children aged 4 to 6)	UNESCO	Participation rate in organized learning one year before the official primary entry age measured by the adjusted net enrollment rate in organized learning.
4	1		Net primary enrollment rate (%)	UNESCO	The percentage of children of the official school age population who are enrolled in primary education.
4	1		Lower secondary completion rate (%)	UNESCO	Lower secondary education completion rate measured as the gross intake ratio to the last grade of lower secondary education (general and prevocational). It is calculated as the number of new entrants in the last grade of lower secondary education, regardless of age, divided by the population at the entrance age for the last grade of lower secondary education.
4	1	[a]	Mean years of schooling (years)	UNDP	Average number of completed years of education of a country's population, excluding years spent repeating individual grades.
4	1		Literacy rate (% of population aged 15 to 24)	UNESCO	The percentage of youth, aged 15 to 24, who can both read and write a short simple statement on everyday life with understanding.
5	2		Demand for family planning satisfied by modern methods (% of females aged 15 to 49)	UNDESA	The percentage of women of reproductive age whose demand for family planning has been met using modern methods of contraception.
5	1	[b]	Ratio of female-to-male mean years of education received (%)	UNDP	The mean years of education received by women aged 25 and older divided by the mean years of education received by men aged 25 and older.
5	1		Ratio of female-to-male labor force participation rate (%)	ILO	Modeled estimate of the proportion of the female population aged 15 years and older that is economically active, divided by the same proportion for men.
5	1	[b]	Seats held by women in national parliament (%)	IPU	The number of seats held by women in single or lower chambers of national parliaments, expressed as a percentage of all occupied seats. Seats refer to the number of parliamentary mandates, or the number of members of parliament.
5	1	[a]	Women in ministerial positions (%)	IPU–UN Women	Percentage of women in ministerial positions, reflecting appointments up to 1 January 2017.
6	5	[b]	Population using at least basic drinking water services (%)	JMP	The percentage of the population using at least a basic drinking water service, such as drinking water from an improved source, provided that the collection time is not more than 30 minutes for a round trip, including queuing.
6	5	[b]	Population using at least basic sanitation services (%)	JMP	The percentage of the population using at least a basic sanitation service, such as an improved sanitation facility that is not shared with other households.

Table A.2: (continued)

SDG	Transformation	Notes	Indicator	Source	Description
6	4	[b]	Freshwater withdrawal (% of available freshwater resources)	FAO	The level of water stress: freshwater withdrawal as a proportion of available freshwater resources is the ratio between total freshwater withdrawn by all major sectors and total renewable freshwater resources, after taking into account environmental water requirements. Main sectors, as defined by ISIC standards, include agriculture, forestry and fishing, manufacturing, electricity industry, and services. This indicator is also known as water withdrawal intensity.
6	5	[b]	Anthropogenic wastewater that receives treatment (%)	EPI	The proportion of wastewater that undergoes at least primary treatment in each country, multiplied by the proportion of the population connected to a wastewater collection system.
6			Scarce water consumption embodied in imports (m ³ H ₂ O eq/capita)	UNEP	Water scarcity is measured as water consumption weighted by scarcity indices. In order to incorporate water scarcity into the virtual water flow calculus, water use entries are weighted so that they reflect the scarcity of the water being used. The weight used is a measure of water withdrawals as a percentage of the existing local renewable freshwater resources.
7	3		Population with access to electricity (%)	IEA, IRENA, UNSD, WB, WHO	The percentage of the population who has access to electricity.
7	3		Population with access to clean fuels and technology for cooking (%)	WHO	The percentage of the population primarily using clean cooking fuels and technologies for cooking. Under WHO guidelines, kerosene is excluded from clean cooking fuels.
7	3		CO ₂ emissions from fuel combustion per total electricity output (MtCO ₂ /TWh)	Global Carbon Project & IEA	A measure of the carbon intensity of energy production, calculated by dividing CO ₂ emissions from the combustion of fuel by electricity output. The data are reported in Megatonnes per billion kilowatt hours.
7	3		Renewable energy share in total final energy consumption (%)	IEA, IRENA, UNSD, WB, WHO	The share of renewable energy in the total final energy consumption. Renewable energy includes hydro, solid biofuels, liquid biofuels, biogases, modern biomass, wind, solar, geothermal, tide/wave/oceans and renewable municipal waste. It does not include traditional biomass — local solid biomass resources (e.g. wood, charcoal, dung, agricultural residues) used in low-income households that do not have access to modern cooking fuels or technologies.
7	3	[a]	Consumer affordability of electricity (scale 0 to 100)	ESMAP	In RISE, electricity is considered affordable if annual expenditure on 30 kWh per month is at most 5 percent of GNI per household of the bottom 20 percent of the population.
8		[a]	5-year average GDP Growth per capita (%)	World Bank	Five-year moving average (e.g., in 2020: average of 2020–2016) of the annual percentage growth rate of GDP per capita based on constant local currency. GDP per capita is gross domestic product divided by mid-year population. GDP at acquisition price is the sum of the gross value added of all resident producers in the economy, plus taxes on products and minus subsidies not included in the value of products. It is calculated without deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.
8			Unemployment rate (% of total labor force, ages 15+)	ILO	Modeled estimate of the share of the labor force that is without work but is available and actively seeking employment. The indicator reflects the inability of an economy to generate employment for people who want to work but are not doing so.
8	1		Victims of modern slavery (per 1,000 population)	Walk Free Foundation (2018)	Estimation of the number of people in modern slavery. Modern slavery is defined as people in forced labor or forced marriage. It is calculated based on standardized surveys and Multiple Systems Estimation (MSE).

Table A.2: (continued)

SDG	Transformation	Notes	Indicator	Source	Description
8	6		Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	Global Findex Database	The percentage of adults, 15 years and older, who report having an account (by themselves or with someone else) at a bank or another type of financial institution, or who have personally used a mobile money service within the past 12 months.
8	1		Fundamental labor rights are effectively guaranteed (worst 0–1 best)	World Justice Project	Measures the effective enforcement of fundamental labor rights, including freedom of association and the right to collective bargaining, the absence of discrimination with respect to employment, and freedom from forced labor and child labor.
9	6	[b]	Population using the internet (%)	ITU	The percentage of the population who used the Internet from any location in the last three months. Access could be via a fixed or mobile network.
9	6	[b]	Mobile broadband subscriptions (per 100 population)	ITU	The number of mobile broadband subscriptions per 100 population. Mobile broadband subscriptions refer to subscriptions to mobile cellular networks with access to data communications (e.g. the Internet) at broadband speeds, irrespective of the device used to access the internet.
9	5		Rural population with access to all-season roads (%)	SDSN (2023), based on Workman, R. & McPherson, K., TRL (2019)	Proportion of the rural population that lives within 2 km of an all-season road. An all-season road is one that is motorable throughout the year but may be temporarily unavailable during inclement weather.
9	5		Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	World Bank	Survey-based average assessment of the quality of trade and transport related infrastructure, e.g. ports, roads, railroads and information technology, on a scale from 1 (worst) to 5 (best).
9			Articles published in academic journals (per 1,000 population)	Scimago Journal Rank	Number of citable documents published by a journal in the three previous years (selected year documents are excluded). Exclusively articles, reviews and conference papers are considered.
10	1	[b]	Gini coefficient	World Bank	The Gini coefficient measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution.
10	1	[b]	Palma ratio	OECD & UNDP	The share of all income received by the 10% people with highest disposable income divided by the share of all income received by the 40% people with the lowest disposable income.
11	5		Proportion of urban population living in slums (%)	UN Habitat	Population living in slums is the proportion of the urban population living in slum households. A slum household is defined as a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, housing durability, and security of tenure.
11	5		Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) ($\mu\text{g}/\text{m}^3$)	Washington University in St Louis	Air pollution measured as the population-weighted mean annual concentration of PM2.5 for the urban population in a country. PM2.5 is suspended particles measuring less than 2.5 microns in aerodynamic diameter, which are capable of penetrating deep into the respiratory tract and can cause severe health damage.
11	5	[b]	Access to improved water source, piped (% of urban population)	WHO and UNICEF	The percentage of the urban population with access to improved drinking water piped on premises. An "improved" drinking-water source is one that, by the nature of its construction and when properly used, adequately protects the source from outside contamination, particularly fecal matter.
12	5		Electronic waste (kg/capita)	UNU-IAS	Waste from electrical and electronic equipment, estimated based on figures for domestic production, imports and exports of electronic products, as well as product lifespan data.

Table A.2: (continued)

SDG	Transformation	Notes	Indicator	Source	Description
12	3		Production-based air pollution (DALYs per 1,000 population)	UNEP	Emissions of air pollution embodied in goods and services produced. Air pollutants are converted into disability-adjusted life years lost (DALYs) to aggregate across types of pollution.
12			Air pollution associated with imports (DALYs per 1,000 population)	UNEP	Emissions of air pollution embodied in imported goods and services. Air pollutants are converted into disability-adjusted life years lost (DALYs) to aggregate across types of pollution.
12	4		Production-based nitrogen emissions (kg/capita)	UNEP	Reactive nitrogen emitted during the production of commodities, which are then either exported or consumed domestically. Reactive nitrogen corresponds to emissions of ammonia, nitrogen oxides and nitrous oxide to the atmosphere, and of reactive nitrogen potentially exportable to water bodies, all of which can be harmful to human health and the environment.
12			Nitrogen emissions embodied in imports (kg/capita)	UNEP	Emissions of reactive nitrogen embodied in imported goods and services. Reactive nitrogen corresponds here to emissions of ammonia, nitrogen oxides and nitrous oxide to the atmosphere, and of reactive nitrogen potentially exportable to water bodies, all of which can be harmful to human health and the environment.
12	5		Exports of plastic waste (kg/capita)	UN Comtrade	The average annual amount of plastic waste exported over the last 5 years expressed per capita.
13	3		CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	Global Carbon Project	Emissions from the combustion and oxidation of fossil fuels and from cement production. The indicator excludes emissions from fuels used for international aviation and maritime transport.
13	3		CO ₂ emissions embodied in fossil fuel exports (kg/capita)	UN Comtrade	CO ₂ emissions embodied in the exports of coal, gas, and oil. Calculated using a 5-year average of fossil fuel exports and converting exports into their equivalent CO ₂ emissions. Exports for each fossil fuel are capped at the country's level of production.
14	4		Mean area that is protected in marine sites important to biodiversity (%)	Birdlife International et al.	The mean percentage area of marine Key Biodiversity Areas (sites that are important for the global persistence of marine biodiversity) that are protected.
14	4		Ocean Health Index: Clean Waters score (worst 0–100 best)	Ocean Health Index	The clean waters subgoal of the Ocean Health Index measures to what degree marine waters under national jurisdictions have been contaminated by chemicals, excessive nutrients (eutrophication), human pathogens, and trash.
14	4		Fish caught by trawling or dredging (%)	Sea Around Us	The percentage of fish caught by bottom trawling, a method of fishing in which industrial fishing vessels drag large nets (trawls) along the seabed. This indicator is the sum of the series for bottom trawling, shrimp trawling, and dredging.
14	4		Fish caught that are then discarded (%)	Sea around Us	The percentage of fish that are caught only to be later discarded.
14			Marine biodiversity threats embodied in imports (per million population)	Lenzen et al. (2012) data updated to 2018	Threats to marine species embodied in imports of goods and services.
15	4		Mean area that is protected in terrestrial sites important to biodiversity (%)	Birdlife International et al.	The mean percentage area of terrestrial Key Biodiversity Areas (sites that are important for the global persistence of biodiversity) that are protected.
15	4		Mean area that is protected in freshwater sites important to biodiversity (%)	Birdlife International et al.	The mean percentage area of freshwater Key Biodiversity Areas (sites that are important for the global persistence of biodiversity) that are protected.

Table A.2: (continued)

SDG	Transformation	Notes	Indicator	Source	Description
15	4		Red List Index of species survival (worst 0–1 best)	IUCN and Birdlife International	The change in aggregate extinction risk across groups of species. The index is based on genuine changes in the number of species in each category of extinction risk on The IUCN Red List of Threatened Species.
15	4	[b]	Permanent deforestation (% of forest area, 3-year average)	Curtis et al. (2018) data updated to 2021	The mean annual percentage of permanent deforestation over the last 3-year period. Permanent deforestation refers to tree cover removal for urbanization, commodity production and certain types of small-scale agriculture whereby the previous tree cover does not return. It does not include temporary forest loss due to cuttings within the forestry sector or wildfires. Since data on tree cover gains are not available, the annual net loss cannot be calculated, thus the indicator is an estimate for gross permanent deforestation.
16		[a]	Absence of Armed Conflict (worst 0–100 best)	Ibrahim Index of African Governance	This indicator measures the number of violent events in both state-based and non-state-based conflicts as well as instances of non-state-based conflict within a country's territory.
16			Unsentenced detainees (% of prison population)	UNODC	Unsentenced prisoners as a percentage of overall prison population. Persons held unsentenced or pretrial refers to persons held in prisons, penal institutions or correctional institutions who are untried, pretrial or awaiting a first instance decision on their case from a competent authority regarding their conviction or acquittal.
16			Timeliness of administrative proceedings (worst 0–1 best)	World Justice Project	Measures whether administrative proceedings at the national and local levels are conducted without unreasonable delay.
16			Expropriations are lawful and adequately compensated (worst 0–1 best)	World Justice Project	Measures whether the government respects the property rights of people and corporations, refrains from the illegal seizure of private property, and provides adequate compensation when property is legally expropriated.
16	6		Birth registrations with civil authority (% of children under age 5)	UNICEF	The percentage of children under the age of five whose births are reported as being registered with the relevant national civil authorities.
16	6		Corruption Perceptions Index (worst 0–100 best)	Transparency International	The perceived levels of public sector corruption, on a scale from 0 (highest level of perceived corruption) to 100 (lowest level of perceived corruption). The CPI aggregates data from a number of different sources that provide perceptions of business people and country experts.
16		[a]	Accountability & Transparency (worst 0–100 best)	Ibrahim Index of African Governance	Assesses institutional and civic check and balances, absence of undue influence on government, disclosure of financial and judicial information, as well as the accessibility of this information.
16	1		Children involved in child labor (%)	UNICEF	The percentage of children, between the age of 5 and 14 years old, involved in child labor at the time of the survey. A child is considered to be involved in child labor under the following conditions: (a) children 5-11 years old who, during the reference week, did at least one hour of economic activity or at least 28 hours of household chores, or (b) children 12-14 years old who, during the reference week, did at least 14 hours of economic activity or at least 28 hours of household chores. We assumed 0% child labor for high-income countries for which no data was reported.
16	6		Press Freedom Index (worst 0–100 best)	Reporters Without Borders	Degree of freedom available to journalists in 180 countries and regions, determined by pooling the responses of experts to a questionnaire devised by RSF.

Table A.2: (continued)

SDG	Transformation Notes	Indicator	Source	Description
16		Access to and affordability of justice (worst 0–1 best)	World Justice Project	Measures the accessibility and affordability of civil courts, including whether people are aware of available remedies; can access and afford legal advice and representation; and can access the court system without incurring unreasonable fees, encountering unreasonable procedural hurdles, or experiencing physical or linguistic barriers.
16		Crime is effectively controlled (worst 0–1 best)	World Justice Project	Measures the prevalence of common crimes, including homicide, kidnapping, burglary and theft, armed robbery, and extortion, as well as people's general perceptions of safety in their communities.
17		Government spending on health and education (% of GDP)	UNESCO	The sum of public expenditure on health from domestic sources and general government expenditure on education (current, capital, and transfers) expressed as a percentage of GDP. This indicator is based on the World Bank health and education spending datasets, sourced from WHO & UNESCO respectively. Values are carried forward for both health and education, but a value in a given year is only reported if at least one data point is a real observation (not carried forward).
17		Corporate Tax Haven Score (best 0–100 worst)	Tax Justice Network	The Corporate Tax Haven Score measures a jurisdiction's potential to poach the tax base of others, as enshrined in its laws, regulations and documented administrative practices. For countries with multiple jurisdictions, the average value across the jurisdictions was assigned to the country.
17	6	Statistical Performance Index (worst 0–100 best)	World Bank	The Statistical Performance Index is a weighted average of the statistical performance indicators that evaluate the performance of national statistical systems. It aggregates five pillars of statistical performance: data use, data services, data products, data sources, and data infrastructure.
17	[a]	Tax revenue (% GDP)	IMF	Tax revenues are compulsory transfers to the central government for public purposes. Certain compulsory transfers, such as fines, penalties, and most social security contributions, are excluded. Refunds and corrections of erroneously collected tax revenues are treated as negative revenue. It is reported as a percentage of GDP.
17		Index of countries' support to UN-based multilateralism (worst 0–100 best)	SDSN	The Multilateralism Index uses five indicators which are then aggregated in a composite index: i) Percentage of UN Treaties ratified; ii) Unilateral coercive measures; iii) Membership and participation in selected United Nations organizations; iv) Militarization and participation in conflicts; v) International Solidarity and Financing. The Multilateralism Index aims to hold countries accountable for implementing the principles of the UN Charter and provides an independent diagnosis of countries' efforts to promote multilateralism.
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Source: Authors.

Note: [a] Indicator not from the Sustainable Development Report; added for relevance to Benin and ECOWAS. [b] Indicator used for the analyses in Part 1.

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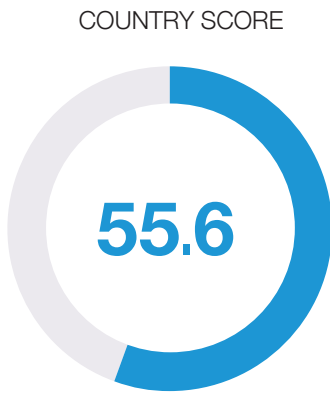
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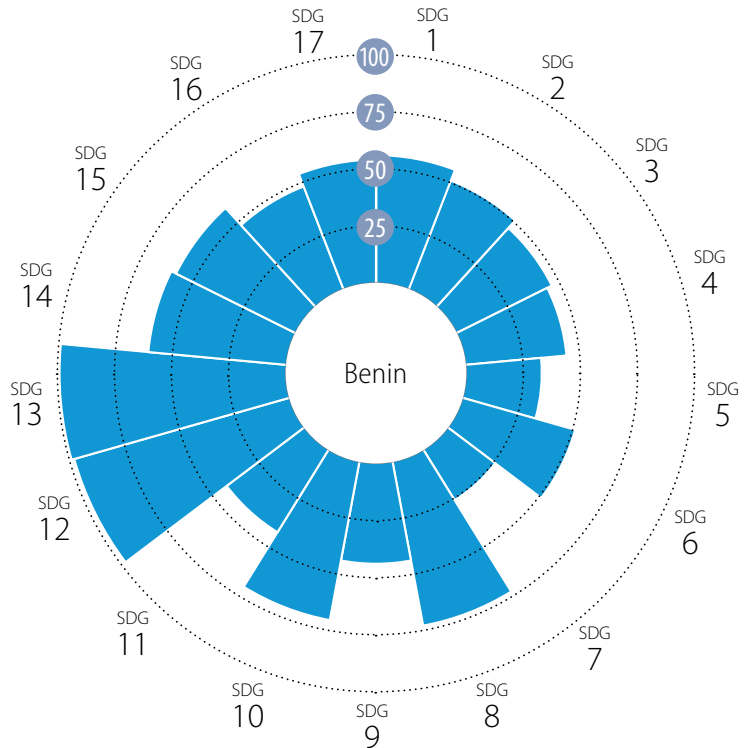


Country profiles

OVERALL PERFORMANCE



PERFORMANCE BY SDG



SDG DASHBOARDS AND TRENDS



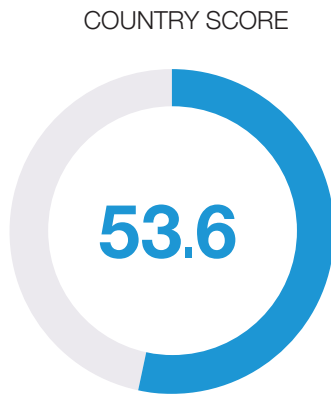
Note: The full title of each SDG is available here: https://sdgs.un.org/fr/#goal_section

SDG1 – No Poverty	Value	Year	Rating	Trend
Poverty headcount ratio at \$2.15/day (2017 PPP, %)	14.4	2024	●	↑
Poverty headcount ratio at \$3.65/day (2017 PPP, %)	36.0	2024	●	↔
SDG2 – Zero Hunger				
Prevalence of undernourishment (%)	9.9	2021	●	↓
Prevalence of stunting in children under 5 years of age (%)	30.4	2022	●	↔
Prevalence of wasting in children under 5 years of age (%)	5.0	2018	●	●
Prevalence of obesity, BMI ≥ 30 (% of adult population)	11.2	2022	●	↓
Cereal yield (tonnes per hectare of harvested land)	1.4	2022	●	↔
Fertilizer consumption (kg per hectare of arable land)	40.7	2021	●	↑
Sustainable Nitrogen Management Index (best 0–1.41 worst)	0.65	2018	●	↑
SDG3 – Good Health and Well-Being				
Maternal mortality rate (per 100,000 live births)	522.6	2020	●	↔
Neonatal mortality rate (per 1,000 live births)	28.6	2022	●	↔
Mortality rate, under-5 (per 1,000 live births)	80.8	2022	●	↔
Incidence of tuberculosis (per 100,000 population)	52.0	2022	●	↔
New HIV infections (per 1,000 uninfected population, all ages)	0.1	2022	●	↑
People living with HIV receiving antiretroviral therapy (%)	81.0	2022	●	↑
Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs (%)	37.0	2018	●	●
Malaria mortality rate (per 100 000 population)	82.4	2022	●	↔
Coverage of Preventive Chemotherapy for Neglected Tropical Diseases (%)	73.2	2022	●	↓
Age-standardized death rate due to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in adults aged 30–70 years (%)	22.6	2019	●	↔
Age-standardized death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	202.0	2019	●	●
Traffic deaths (per 100,000 population)	24.8	2021	●	↔
Life expectancy at birth (years)	59.8	2021	●	↔
Adolescent fertility rate (births per 1,000 females aged 15 to 19)	83.9	2019	●	●
Births attended by skilled health personnel (%)	80.8	2022	●	↔
Surviving infants who received 2 WHO-recommended vaccines (%)	68.0	2022	●	↔
Universal health coverage (UHC) index of service coverage (worst 0–100 best)	38.0	2021	●	↔
Subjective well-being (average ladder score, worst 0–10 best)	4.4	2023	●	↔
SDG4 – Quality Education				
Participation rate in pre-primary organized learning (% of children aged 4 to 6)	80.7	2018	●	●
Net primary enrollment rate (%)	94.6	2022	●	↓
Lower secondary completion rate (%)	29.1	2022	●	↓
Mean years of schooling (years)	3.1	2022	●	↔
Literacy rate (% of population aged 15 to 24)	66.4	2022	●	●
SDG5 – Gender Equality				
Demand for family planning satisfied by modern methods (% of females aged 15 to 49)	28.0	2017	●	↔
Ratio of female-to-male mean years of education received (%)	46.8	2022	●	↔
Ratio of female-to-male labor force participation rate (%)	82.5	2023	●	↔
Seats held by women in national parliament (%)	26.6	2024	●	↔
Women in ministerial positions (%)	17.4	2023	●	↔
SDG6 – Clean Water and Sanitation				
Population using at least basic drinking water services (%)	67.4	2022	●	↔
Population using at least basic sanitation services (%)	19.5	2022	●	↔
Freshwater withdrawal (% of available freshwater resources)	1.0	2021	●	↑
Anthropogenic wastewater that receives treatment (%)	9.6	2020	●	●
Scarce water consumption embodied in imports (m ³ H ₂ O eq/capita)	310.5	2024	●	↑
SDG7 – Affordable and Clean Energy				
Population with access to electricity (%)	42.0	2021	●	↔
Population with access to clean fuels and technology for cooking (%)	4.6	2021	●	↓
CO ₂ emissions from fuel combustion per total electricity output (MtCO ₂ /TWh)	7.5	2022	●	↑
Renewable energy share in total final energy consumption (%)	8.0	2020	●	↓
Consumer affordability of electricity (scale 0 to 100)	78.3	2021	●	↑
SDG8 – Decent Work and Economic Growth				
5-year average GDP Growth per capita (%)	3.2	2022	●	↑
Unemployment rate (% of total labor force, ages 15+)	1.4	2024	●	↑
Victims of modern slavery (per 1,000 population)	3.0	2022	●	●
Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	48.6	2021	●	↑
Fundamental labor rights are effectively guaranteed (worst 0–1 best)	0.61	2022	●	●

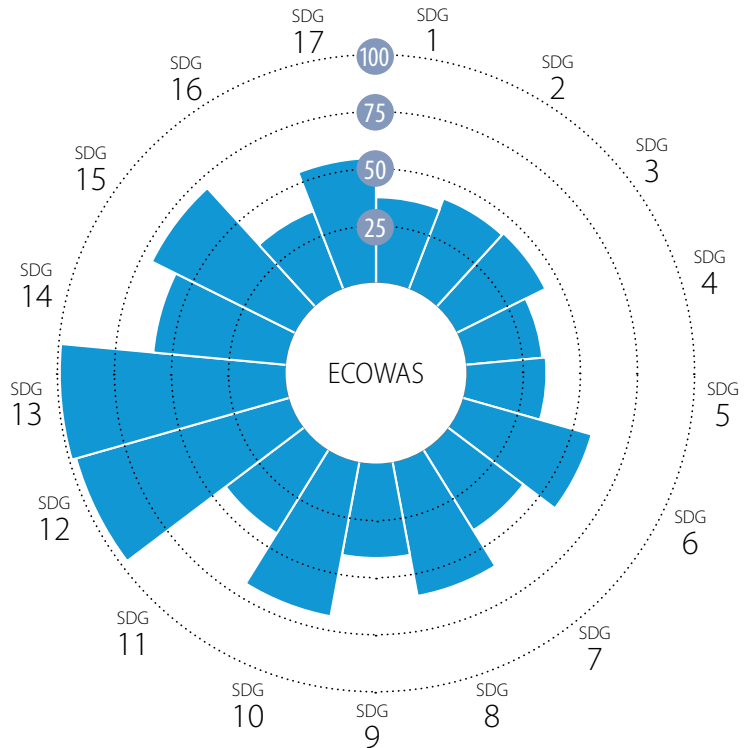
SDG9 – Industry, Innovation and Infrastructure	Value	Year	Rating	Trend
Population using the internet (%)	33.8	2022	●	↔
Mobile broadband subscriptions (per 100 population)	67.2	2022	●	↑
Rural population with access to all-season roads (%)	81.1	2024	●	●
Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	2.5	2023	●	↔
Articles published in academic journals (per 1,000 population)	0.1	2022	●	↔
SDG10 – Reduced Inequalities				
Gini coefficient	37.9	2018	●	●
Palma ratio	1.4	2021	●	↑
SDG11 – Sustainable Cities and Communities				
Proportion of urban population living in slums (%)	67.9	2020	●	↔
Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM _{2.5}) (µg/m ³)	41.3	2022	●	↔
Access to improved water source, piped (% of urban population)	47.8	2022	●	↓
SDG12 – Responsible Consumption and Production				
Electronic waste (kg/capita)	0.8	2019	●	●
Production-based air pollution (DALYs per 1,000 population)	0.4	2024	●	↑
Air pollution associated with imports (DALYs per 1,000 population)	0.6	2024	●	↑
Production-based nitrogen emissions (kg/capita)	10.6	2024	●	↔
Nitrogen emissions embodied in imports (kg/capita)	1.8	2024	●	↑
Exports of plastic waste (kg/capita)	0.0	2023	●	↑
SDG13 – Climate Action				
CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	0.6	2022	●	↔
CO ₂ emissions embodied in fossil fuel exports (kg/capita)	*	0.0	2023	●
SDG14 – Life Below Water				
Mean area that is protected in marine sites important to biodiversity (%)	0.0	2023	●	↔
Ocean Health Index: Clean Waters score (worst 0–100 best)	15.8	2023	●	↓
Fish caught by trawling or dredging (%)	0.5	2019	●	↑
Fish caught that are then discarded (%)	0.0	2019	●	↔
Marine biodiversity threats embodied in imports (per million population)	0.0	2018	●	●
SDG15 – Life on Land				
Mean area that is protected in terrestrial sites important to biodiversity (%)	66.7	2023	●	↔
Mean area that is protected in freshwater sites important to biodiversity (%)	0.0	2023	●	↔
Red List Index of species survival (worst 0–1 best)	0.91	2024	●	↑
Permanent deforestation (% of forest area, 3-year average)	0.2	2022	●	↔
SDG16 – Peace, Justice and Strong Institutions				
Absence of Armed Conflict (worst 0–100 best)	97.1	2021	●	↔
Unsented detainees (% of prison population)	64.9	2019	●	●
Timeliness of administrative proceedings (worst 0–1 best)	0.41	2022	●	●
Expropriations are lawful and adequately compensated (worst 0–1 best)	0.5	2022	●	●
Birth registrations with civil authority (% of children under age 5)	85.6	2018	●	●
Corruption Perceptions Index (worst 0–100 best)	43.0	2023	●	↔
Accountability & Transparency (worst 0–100 best)	42.4	2021	●	↓
Children involved in child labor (%)	24.8	2018	●	●
Press Freedom Index (worst 0–100 best)	56.7	2024	●	↓
Access to and affordability of justice (worst 0–1 best)	0.49	2022	●	●
Crime is effectively controlled (worst 0–1 best)	0.77	2022	●	●
SDG17 – Partnerships for the Goals				
Government spending on health and education (% of GDP)	3.5	2022	●	↓
Corporate Tax Haven Score (best 0–100 worst)	*	0	2021	●
Statistical Performance Index (worst 0–100 best)	62.9	2022	●	↑
Tax revenue (% GDP)	10.6	2019	●	↔
Index of countries' support to UN-based multilateralism (worst 0–100 best)	72.7	2023	●	●

* Imputed data point

OVERALL PERFORMANCE



PERFORMANCE BY SDG



SDG DASHBOARDS AND TRENDS



Note: The full title of each SDG is available here: https://sdgs.un.org/fr/#goal_section

SDG1 – No Poverty	Value	Year	Rating	Trend
Poverty headcount ratio at \$2.15/day (2017 PPP, %)	26.1	2024	●	→
Poverty headcount ratio at \$3.65/day (2017 PPP, %)	46.3	2024	●	→
SDG2 – Zero Hunger				
Prevalence of undernourishment (%)	14.3	2021	●	↓
Prevalence of stunting in children under 5 years of age (%)	29.4	2022	●	→
Prevalence of wasting in children under 5 years of age (%)	7.4	2022	●	●
Prevalence of obesity, BMI ≥ 30 (% of adult population)	11.3	2022	●	↓
Cereal yield (tonnes per hectare of harvested land)	1.6	2022	●	→
Fertilizer consumption (kg per hectare of arable land)	20.0	2021	●	↗
Sustainable Nitrogen Management Index (best 0–1.41 worst)	0.87	2018	●	↓
SDG3 – Good Health and Well-Being				
Maternal mortality rate (per 100,000 live births)	733.7	2020	●	→
Neonatal mortality rate (per 1,000 live births)	31.0	2022	●	→
Mortality rate, under-5 (per 1,000 live births)	91.7	2022	●	→
Incidence of tuberculosis (per 100,000 population)	166.1	2022	●	→
New HIV infections (per 1,000 uninfected population, all ages)	0.3	2022	●	↑
People living with HIV receiving antiretroviral therapy (%)	70.3	2022	●	↑
Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs (%)	61.3	2022	●	●
Malaria mortality rate (per 100 000 population)	76.2	2022	●	→
Coverage of Preventive Chemotherapy for Neglected Tropical Diseases (%)	57.3	2022	●	→
Age-standardized death rate due to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in adults aged 30–70 years (%)	19.5	2019	●	↗
Age-standardized death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	179.6	2019	●	●
Traffic deaths (per 100,000 population)	20.5	2021	●	↗
Life expectancy at birth (years)	56.8	2021	●	→
Adolescent fertility rate (births per 1,000 females aged 15 to 19)	87.6	2021	●	↗
Births attended by skilled health personnel (%)	62.6	2022	●	●
Surviving infants who received 2 WHO-recommended vaccines (%)	67.4	2022	●	↗
Universal health coverage (UHC) index of service coverage (worst 0–100 best)	40.1	2021	●	→
Subjective well-being (average ladder score, worst 0–10 best)	4.7	2023	●	→
SDG4 – Quality Education				
Participation rate in pre-primary organized learning (% of children aged 4 to 6)	45.0	2022	●	→
Net primary enrollment rate (%)	71.2	2023	●	→
Lower secondary completion rate (%)	44.6	2022	●	→
Mean years of schooling (years)	5.6	2022	●	→
Literacy rate (% of population aged 15 to 24)	72.3	2022	●	●
SDG5 – Gender Equality				
Demand for family planning satisfied by modern methods (% of females aged 15 to 49)	39.8	2020	●	→
Ratio of female-to-male mean years of education received (%)	66.3	2022	●	→
Ratio of female-to-male labor force participation rate (%)	78.3	2023	●	→
Seats held by women in national parliament (%)	13.4	2024	●	→
Women in ministerial positions (%)	15.3	2023	●	↓
SDG6 – Clean Water and Sanitation				
Population using at least basic drinking water services (%)	75.6	2022	●	↗
Population using at least basic sanitation services (%)	39.5	2022	●	→
Freshwater withdrawal (% of available freshwater resources)	8.3	2021	●	↑
Anthropogenic wastewater that receives treatment (%)	0.8	2020	●	●
Scarce water consumption embodied in imports (m ³ H ₂ O eq/capita)	186.0	2024	●	↑
SDG7 – Affordable and Clean Energy				
Population with access to electricity (%)	55.6	2021	●	→
Population with access to clean fuels and technology for cooking (%)	15.8	2021	●	→
CO ₂ emissions from fuel combustion per total electricity output (MtCO ₂ /TWh)	3.3	2022	●	→
Renewable energy share in total final energy consumption (%)	6.3	2021	●	→
Consumer affordability of electricity (scale 0 to 100)	87.7	2021	●	↑
SDG8 – Decent Work and Economic Growth				
5-year average GDP Growth per capita (%)	0.6	2022	●	↓
Unemployment rate (% of total labor force, ages 15+)	3.3	2024	●	↑
Victims of modern slavery (per 1,000 population)	6.1	2022	●	●
Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	44.8	2021	●	↗
Fundamental labor rights are effectively guaranteed (worst 0–1 best)	0.51	2022	●	●

SDG9 – Industry, Innovation and Infrastructure	Value	Year	Rating	Trend
Population using the internet (%)	37.2	2022	●	↗
Mobile broadband subscriptions (per 100 population)	50.4	2022	●	↑
Rural population with access to all-season roads (%)	85.7	2024	●	●
Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	2.4	2023	●	↓
Articles published in academic journals (per 1,000 population)	0.1	2022	●	→
SDG10 – Reduced Inequalities				
Gini coefficient	36.7	2018	●	●
Palma ratio	1.5	2021	●	●
SDG11 – Sustainable Cities and Communities				
Proportion of urban population living in slums (%)	47.7	2020	●	→
Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m ³)	53.0	2022	●	→
Access to improved water source, piped (% of urban population)	41.7	2022	●	↓
SDG12 – Responsible Consumption and Production				
Electronic waste (kg/capita)	1.7	2019	●	●
Production-based air pollution (DALYs per 1,000 population)	0.3	2024	●	↑
Air pollution associated with imports (DALYs per 1,000 population)	0.6	2024	●	↑
Production-based nitrogen emissions (kg/capita)	10.8	2024	●	→
Nitrogen emissions embodied in imports (kg/capita)	2.3	2024	●	↑
Exports of plastic waste (kg/capita)	0.1	2023	●	●
SDG13 – Climate Action				
CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	0.5	2022	●	→
CO ₂ emissions embodied in fossil fuel exports (kg/capita)	419.4	2023	●	●
SDG14 – Life Below Water				
Mean area that is protected in marine sites important to biodiversity (%)	18.2	2023	●	→
Ocean Health Index: Clean Waters score (worst 0–100 best)	33.0	2023	●	↓
Fish caught by trawling or dredging (%)	13.6	2019	●	↑
Fish caught that are then discarded (%)	4.1	2019	●	↑
Marine biodiversity threats embodied in imports (per million population)	0.0	2018	●	●
SDG15 – Life on Land				
Mean area that is protected in terrestrial sites important to biodiversity (%)	73.2	2023	●	→
Mean area that is protected in freshwater sites important to biodiversity (%)	70.8	2023	●	→
Red List Index of species survival (worst 0–1 best)	0.88	2024	●	↓
Permanent deforestation (% of forest area, 3-year average)	0.6	2022	●	↓
SDG16 – Peace, Justice and Strong Institutions				
Absence of Armed Conflict (worst 0–100 best)	43.1	2021	●	↓
Unsented detainees (% of prison population)	58.3	2022	●	●
Timeliness of administrative proceedings (worst 0–1 best)	0.37	2022	●	●
Expropriations are lawful and adequately compensated (worst 0–1 best)	0.5	2022	●	●
Birth registrations with civil authority (% of children under age 5)	65.7	2021	●	●
Corruption Perceptions Index (worst 0–100 best)	30.6	2023	●	↓
Accountability & Transparency (worst 0–100 best)	46.4	2021	●	↓
Children involved in child labor (%)	28.8	2020	●	●
Press Freedom Index (worst 0–100 best)	55.5	2024	●	↓
Access to and affordability of justice (worst 0–1 best)	0.53	2022	●	●
Crime is effectively controlled (worst 0–1 best)	0.60	2022	●	●
SDG17 – Partnerships for the Goals				
Government spending on health and education (% of GDP)	5.3	2022	●	→
Corporate Tax Haven Score (best 0–100 worst)	4.9	2021	●	●
Statistical Performance Index (worst 0–100 best)	61.1	2022	●	↗
Tax revenue (% GDP)	8.0	2020	●	↓
Index of countries' support to UN-based multilateralism (worst 0–100 best)	73.5	2023	●	●



BENIN SUSTAINABLE DEVELOPMENT REPORT 2024

Progress towards SDG 6: Safe drinking
water and sanitation for all

September 2024

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