

3. ENVIRONMENTAL SUSTAINABILITY



Environmental sustainability is a major global concern, with regions showing minimal progress. As expected, the burden of increased climate change and energy intensity is higher for North America and to a lesser extent for Europe and Central Asia, while the burden of poor environmental health is the main concern for developing

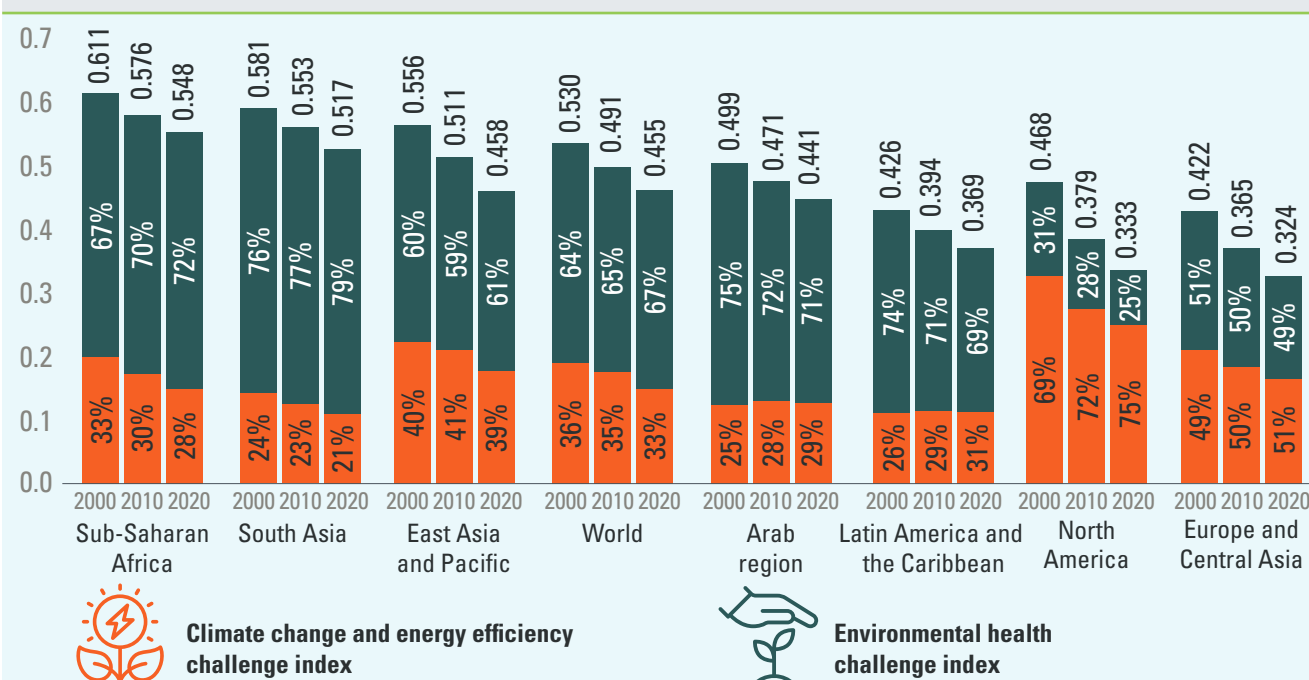
regions. Reflecting the seriousness of the challenge, no region recorded a low or very low environmental sustainability index score. Sub-Saharan Africa is the most challenged, largely owing to its very high score on the environmental health dimension. Europe and Central Asia is the least challenged region.

A. Main findings

Regional environmental sustainability challenge scores for 2000, 2010 and 2020 are based on components on climate change and energy efficiency, and environmental health (figure 24). All regions witnessed slight reductions

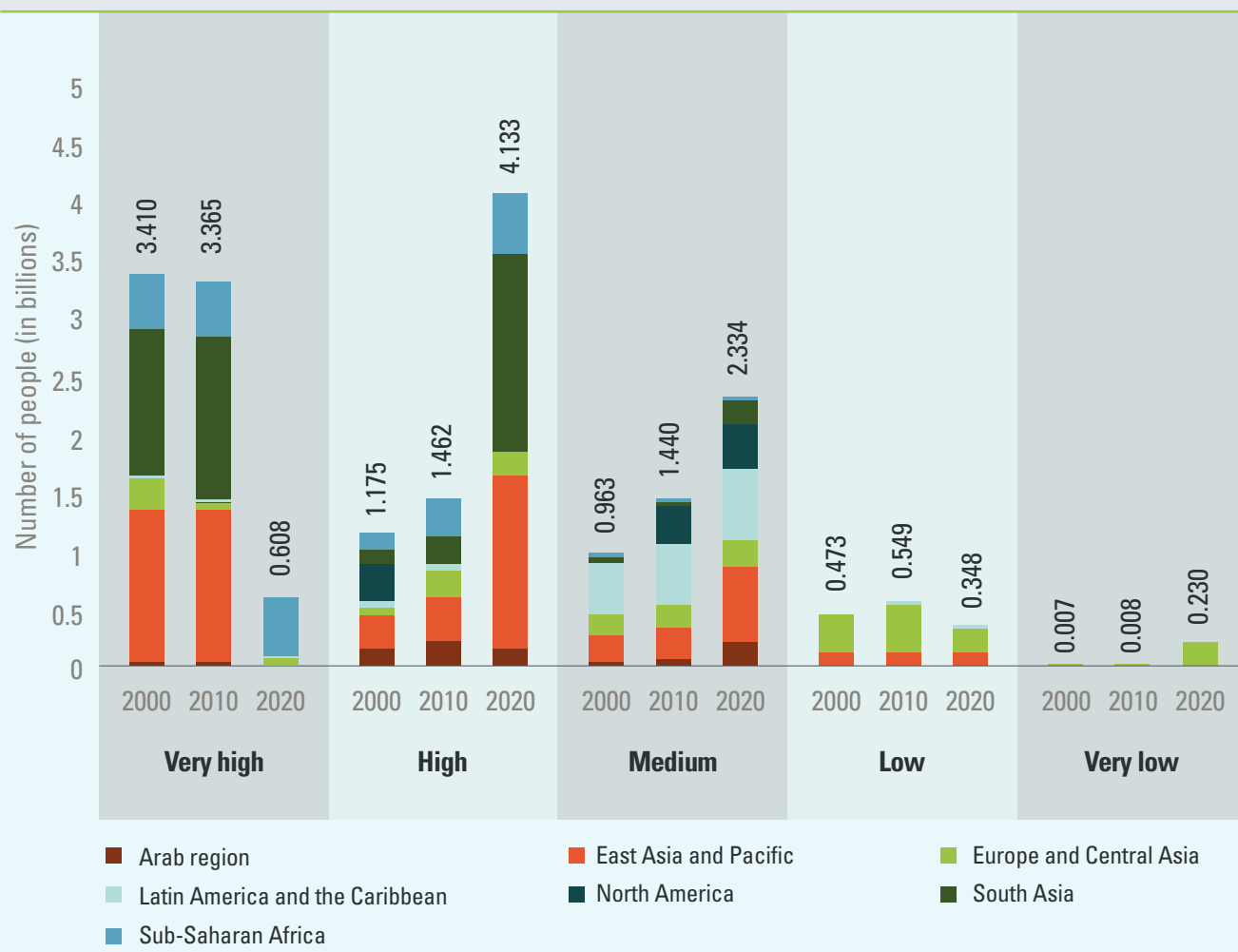
in their scores, indicating a decline in their environmental challenges. Europe and Central Asia retained the least challenged position for all three years; North America had the biggest drop in scores.

Figure 24. Environmental sustainability challenge index regional scores and dimension shares, 2000, 2010 and 2020



Source: ESCWA calculations.

Figure 25. Population in each environmental sustainability challenge index category by region, 2000, 2010 and 2020



Source: ESCWA calculations.

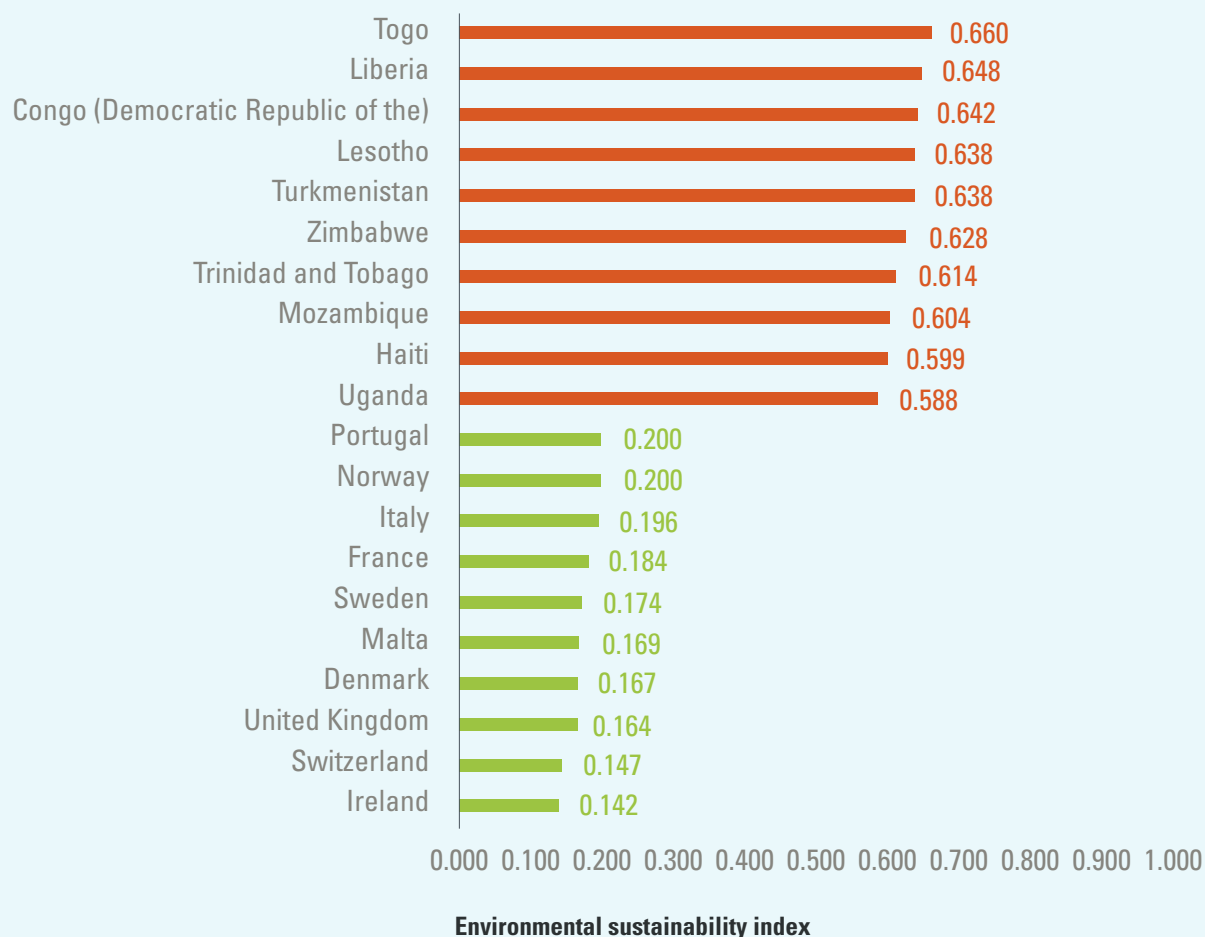
Most regions have a higher environmental health challenge than a climate change and energy efficiency challenge, with South Asia having the highest share of environmental health at around 80 per cent. The only two regions with a higher climate change and energy efficiency share are Europe and Central Asia and North America. In the latter, three quarters of its score came from this dimension. Developed regions that have resolved basic environmental health challenges, such as access to clean water and sanitation, and reduced household solid fuels and PM 2.5 exposure, tend to exert higher planetary pressures.

Only 7.5 per cent of the world's population live in low- and very low-challenge countries on environmental

sustainability, mostly in Europe (figure 25). A striking 62 per cent is in very high- and high-challenge countries. Some improvements in the distribution between these two categories is evident, with several countries in South and East Asia and the Pacific moving from very high challenges to high challenges. China and India should be highlighted, given their significant demographic weight. Progress is insufficient, however, given the large share of people still far from realizing a sustainable development path.

Among countries, the 10 least challenged are in Europe (figure 26). Many have adopted proactive green energy strategies. For instance, in the past 10 years, Denmark has witnessed a rise in its share of modern renewables

Figure 26. Least (green) and most (red) challenged countries globally on the environmental sustainability challenge index, 2020



Source: ESCWA calculations.

from 15 to 35 per cent of the total primary energy supply. It aspires to achieve 100 per cent green electricity by 2030 and zero net greenhouse gas emissions by 2050.³⁷ The

most challenged countries are mostly from Sub-Saharan Africa along with Haiti and Trinidad and Tobago from the Caribbean and Turkmenistan from Central Asia.

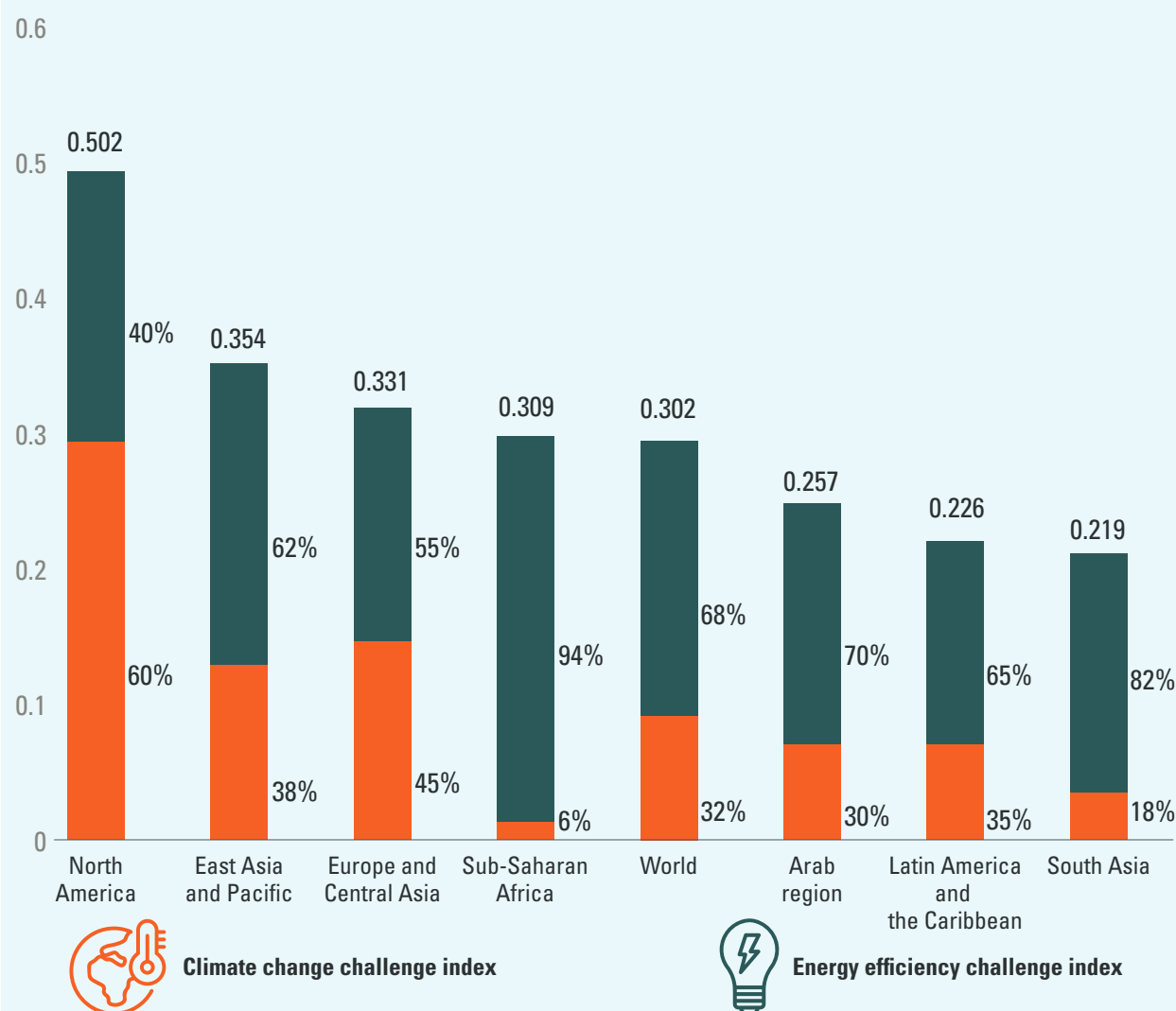
©iStock-South_agency



Box 2. Zooming in on climate change and energy efficiency challenges

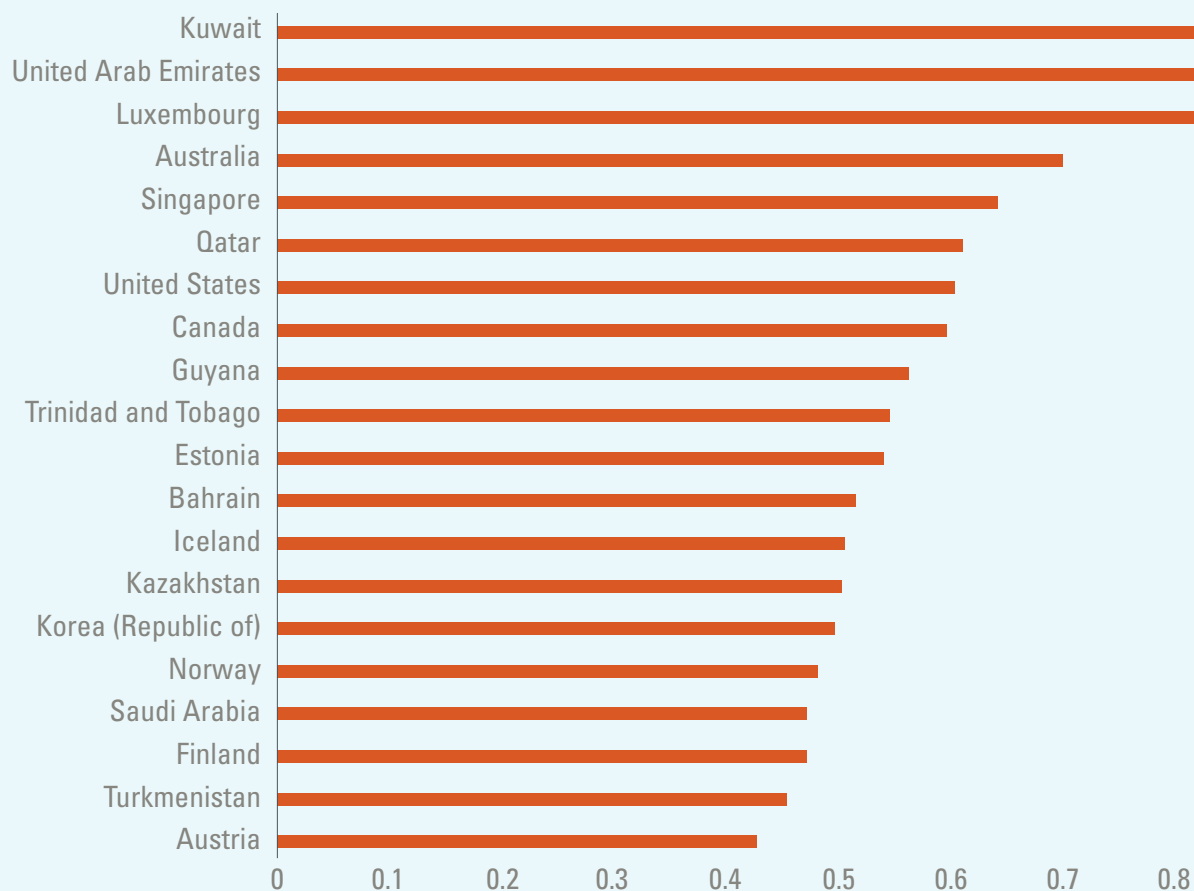
While most of the population living in low-and very low-challenge countries is in Europe and Central Asia, it is important to note that lower scores in richer regions are a result of good environmental health performance. However, when it comes to climate change and energy efficiency, these regions are among the largest emitters and therefore the largest contributors to climate and planetary pressures. For instance, North America scores by highest on the climate change and energy efficiency challenge with a high score of 0.502 (figure A). More precisely, the climate change challenge score of North America stands at 0.602, compared to a score of 0.04 for Sub-Saharan Africa. As for Europe and Central Asia, it scores relatively better on this front as many middle-income and Asian countries are included in this region, but if we look at the 20 highest challenged countries in terms of climate change, almost half of them are high-income European countries (figure B).

A. Climate change and energy efficiency challenge index regional scores and sub-dimension shares, 2020



Source: ESCWA calculations.

B. Most challenged countries globally on the climate change challenge index, 2020



Source: ESCWA calculations.

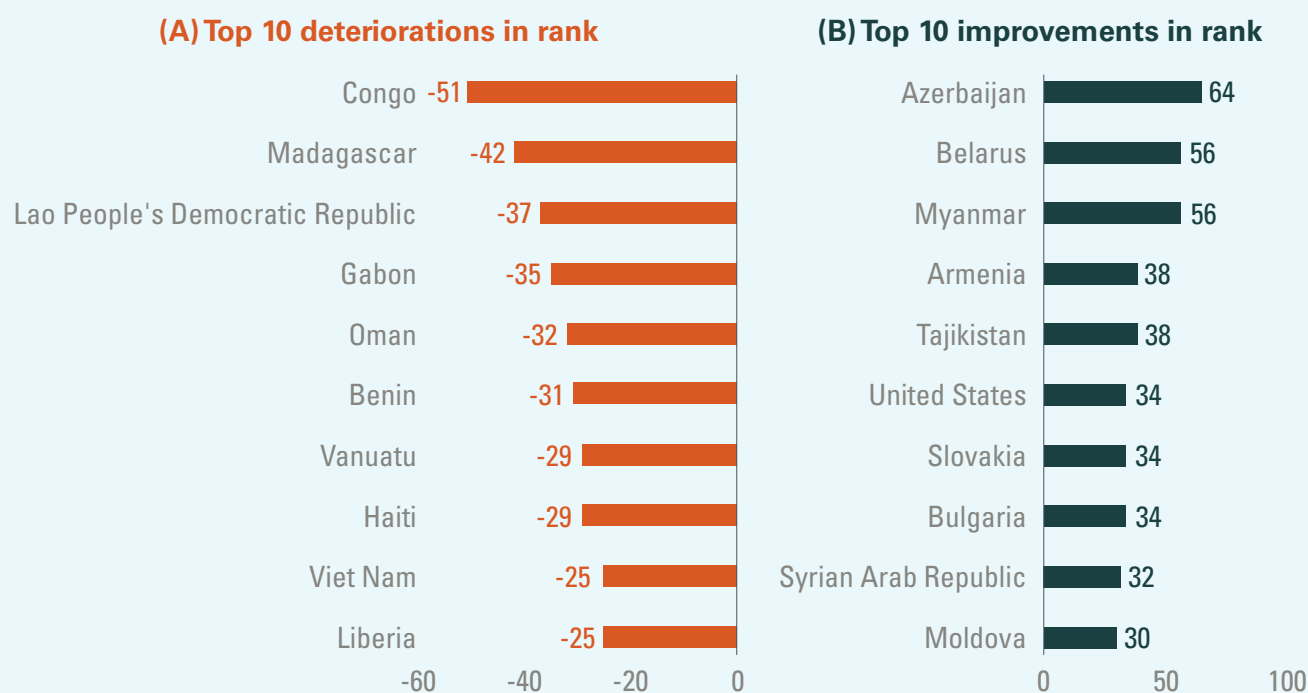
The slight decline in environmental sustainability challenge scores in the past decade indicates that countries worldwide are starting to become more aware of the importance

of preserving the environment. There are considerable disparities in progress, however, and some countries face increased environmental sustainability challenges (figure 27).

©kynny/iStock / Getty Images Plus via Getty Images



Figure 27. Top improvements and deteriorations on the environmental sustainability index (2020 rank minus 2000 rank)



Source: ESCWA calculations.

There is no regional narrative on sustainability progress since countries from all regions are among the top global winners and losers on the environmental sustainability index. The United States is among the top 10 globally for an improved ranking, due to advances on both dimensions of environmental sustainability, especially environmental health. In the Arab region, The Syrian Arab Republic has made among the top improvements but this is unfortunately explained by reduced energy consumption from the economic devastation caused by conflict. Several post-Soviet countries are at the top, including Azerbaijan, Belarus and Tajikistan. These countries had very high challenges in environmental health in 2000 and have shown dramatic improvements in the past two decades,

especially in access to water and sanitation and solid waste management.

Among the 10 countries that deteriorated the most in the ranking, half are low-income and least developed countries in Sub-Saharan Africa (figure 27). Their growth patterns have been associated with a significant rise in their material footprint, which is not surprising given their relatively low baselines. Overall, the results indicated that some of the most challenged countries are adopting environmentally friendly policies, mainly to reduce fossil-fuel energy dependency and climate change pressures, while the poorest countries are moving in the other direction as they embark on economic transformation.

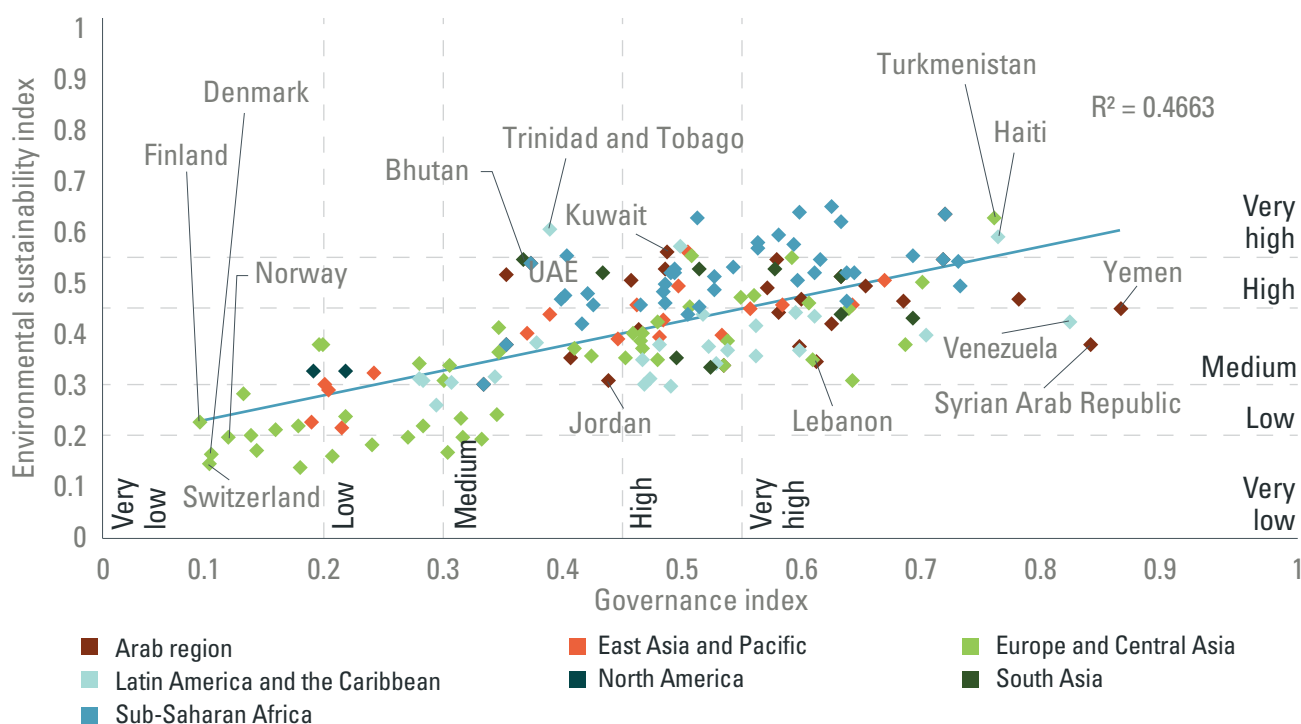


B. Influencing factors

Governance influences environmental sustainability but the relationship is not straightforward. Overall, the governance challenge index seems to have a positive correlation with the environmental sustainability index (figure 28). Governance seems to affect each component of the environmental sustainability index differently, however. It is negatively correlated with climate change (figure 29), highlighting the fact that some of the richer countries with better governance systems, like Canada, Luxembourg, Singapore and the United States, are also among the world's biggest emitters of greenhouse gases. Consistent with these results, one of the main global challenges is that no clear relationship exists between energy efficiency and governance. The main conclusion is that governance systems in the richer world are generally not effective when it comes to addressing global sustainability challenges. They must explore how to develop policies to meet the benchmarks of the Paris Agreement on climate change.

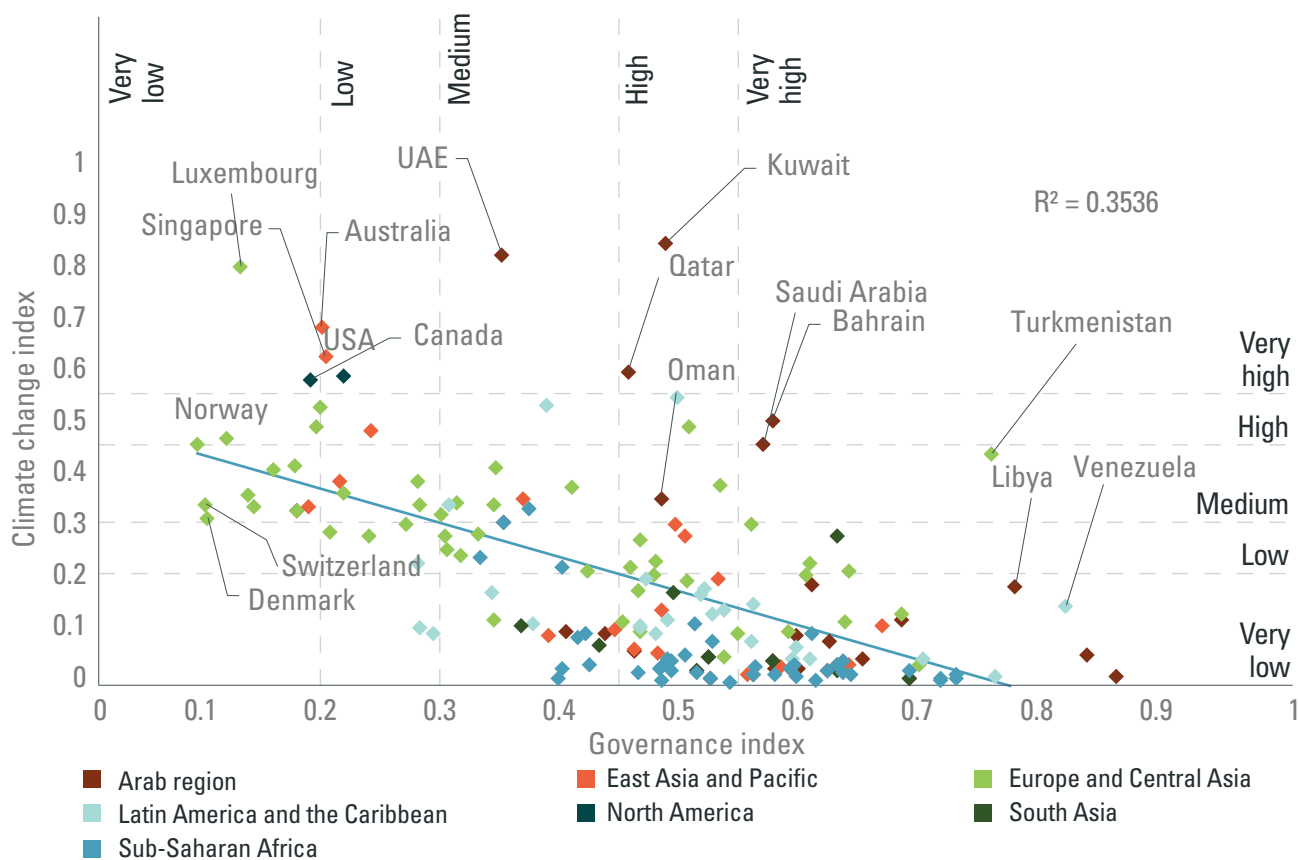


Figure 28. Governance and environmental sustainability



Source: ESCWA calculations.

Figure 29. Governance and climate change



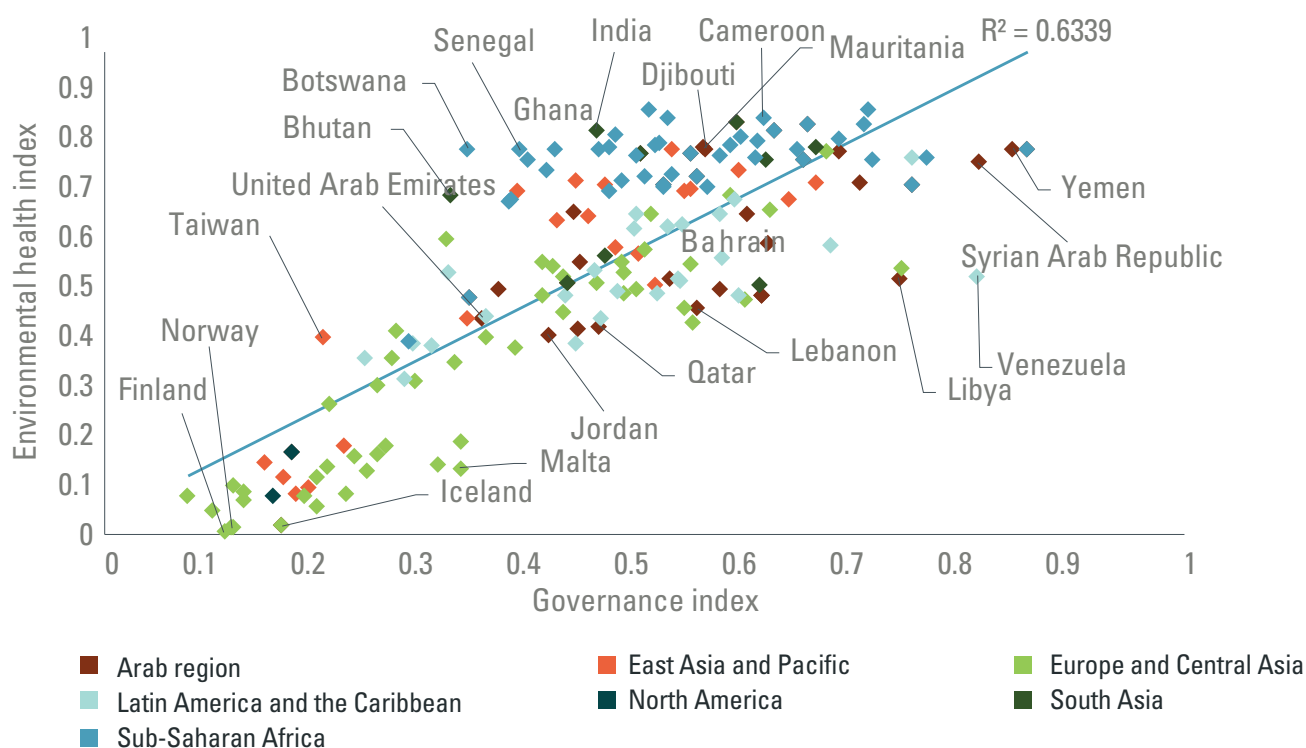
Source: ESCWA calculations.

On the other hand, environmental health and governance move in tandem, suggesting that good governance is key for better-quality air, access to drinking water and sanitation, good waste management and absence of

heavy metals (figure 30). Not surprisingly, the most challenged countries in terms of governance, such as the Syrian Arab Republic and Yemen, also have the worst environmental health, which is also partly due to conflict.



Figure 30. Governance and environmental health



Source: ESCWA calculations.

Examining the nexus between environmental health and healthy life expectancy reveals a strong positive relationship (figure 31). This is expected since the environmental health index was designed to capture the health impact of environmental factors such as

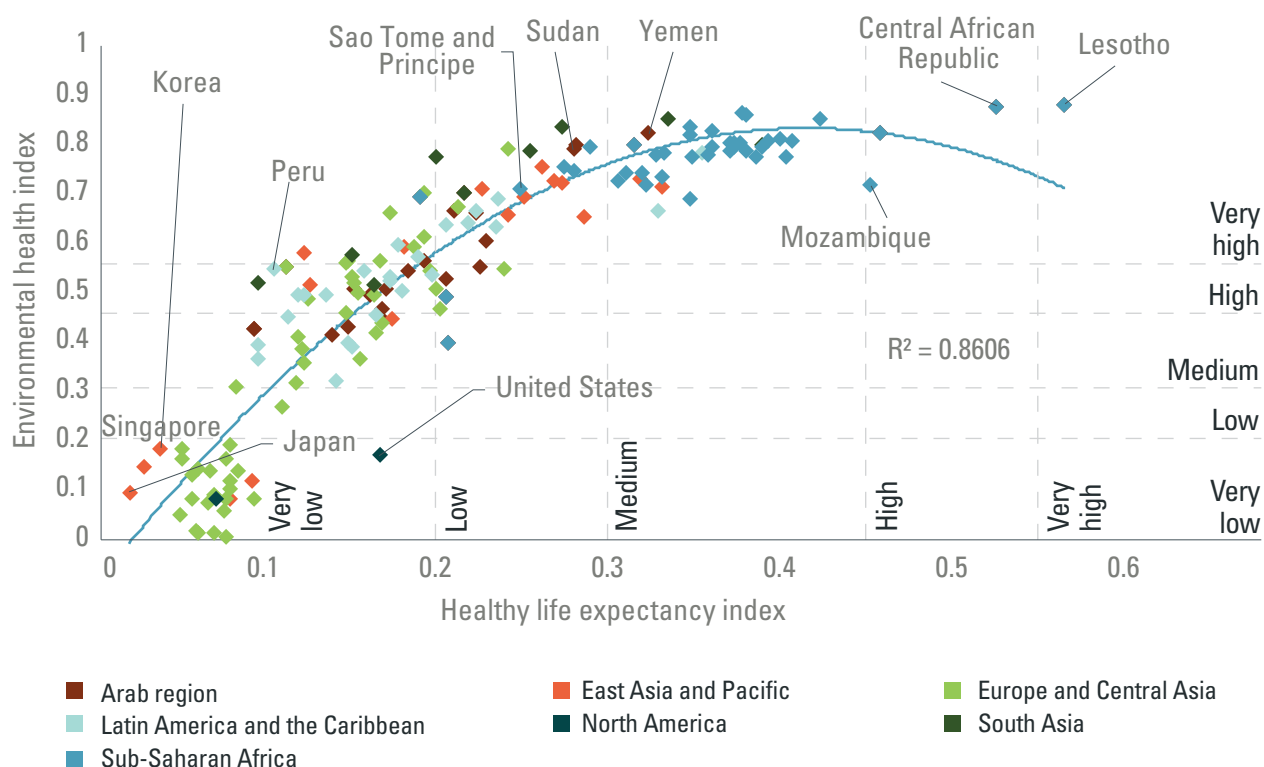
air pollution and access to water and sanitation. But the relationship is not linear. Only after reaching a relatively low-challenge level on the environmental health index does healthy life expectancy start to significantly improve.

©Stock-Mordolf

Environmental health and governance move in tandem, suggesting that good governance is key for better-quality air, access to drinking water and sanitation, good waste management and absence of heavy metals.



Figure 31. Healthy life expectancy and environmental health



Source: ESCWA calculations.

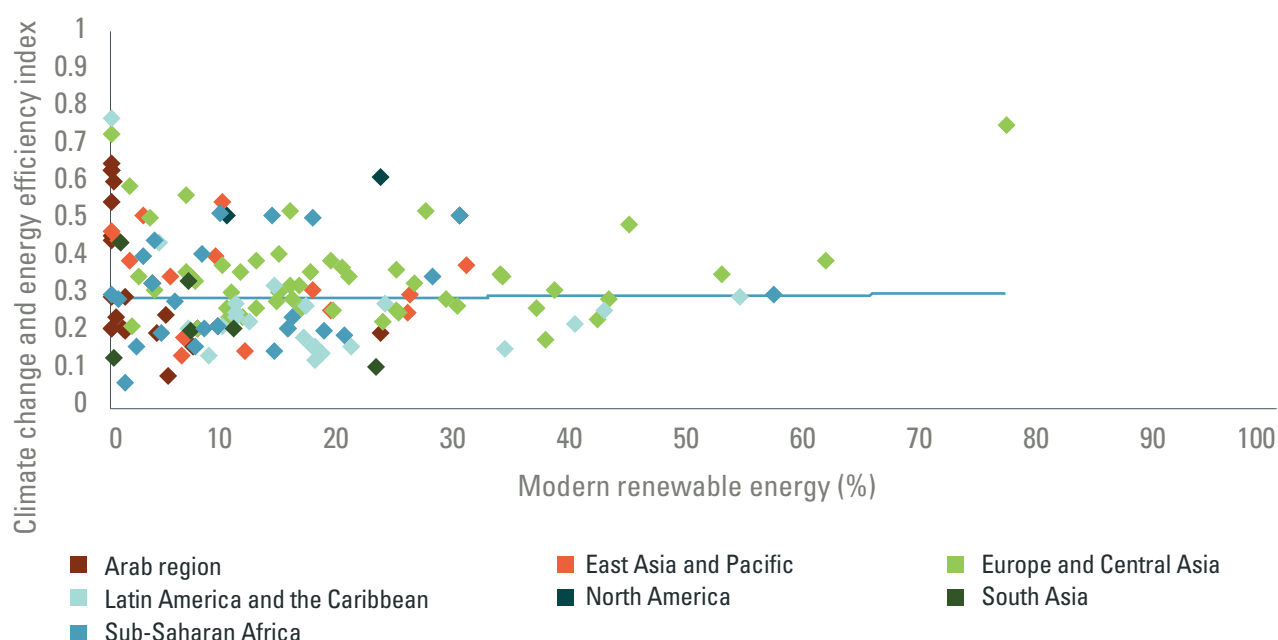
Another important finding is the lack of a correlation between modern renewables and climate change and energy efficiency (figure 32). This can be explained by countries' insufficient adoption of green technologies, leading to an insignificant impact on planetary

pressures or energy savings. It is essential for countries to accelerate efforts to encourage clean sources of energy that reduce carbon dioxide and other greenhouse gases and the material footprint while also improving energy efficiency.

©iStock-PeopleImages

The environmental health index was designed to capture the health impact of environmental factors such as air pollution and access to water and sanitation.



Figure 32. Climate change and energy efficiency and modern renewables

Source: ESCWA calculations.

C. Conclusion

The SDGs and the 2030 Agenda for Sustainable Development highlight environmental sustainability as a major global challenge but the environmental sustainability index confirms that regions have shown little progress. Developed countries should take more steps towards reducing energy intensity and material footprints, as the main paths to tackle sustainability challenges. Developing countries carry a double burden. They should focus primarily on improving environmental health but

they also need to avoid the climate change and energy consumption trajectories taken by richer countries in the past. Technological advancements can make this easier for poorer countries but adopting them requires significantly more support from the richest countries.

In the end, global sustainability is contingent on prompt and prudent actions by all countries. Not taking these will result in human development failures for current and future generations.