Executive summary

Peru's rich natural heritage is coming under increasing pressure

Peru is a megabiodiverse country, with a variety of tropical and subtropical climates, the Humboldt current flowing along its coast, the Andes mountains running from north to south and the Amazon in its eastern part, all of which give it a great diversity of ecosystems and natural wealth. Peru has the second largest extent of Amazon forest and more than half of its surface area is forested. Peru is also the world's largest single species fisheries producer (anchovies) and has huge reserves of ores and hydrocarbons: it is Latin America's largest gold producer and the world's third largest producer of copper. The country is experiencing a remarkable economic growth thanks to macroeconomic stability, trade and investment openness and natural-resource-based exports. However, it has failed to resolve its acute social inequality and the pressures on its biodiversity and ecosystems. Moreover, Peru is highly vulnerable to environmental changes, particularly those related to climate change and extreme events such as the El Niño phenomenon.

Despite significant progress, urbanisation processes (such as the Lima-Callao conurbation, which is home to almost 10 million people) testify to unmet needs in relation to drinking water and sanitation provision, air pollution, urban transport, and treatment and disposal of waste, especially hazardous waste. Although Peru's greenhouse gas emissions and intensity are low thanks to the availability of hydroelectric power and natural gas, it does produce significant emissions from deforestation and land use change.

Notable progress in the field of environmental law and institutions that require effective implementation.

The Peruvian Constitution recognises the right to live in a healthy environment. Progress made in the 1990s, such as the promulgation of the Environment and Natural Resources Code in 1990 and the establishment of the National Environment Council (CONAM) in 1994, paved the way for the development of a significant body of environmental protection legislation, which culminated with the General Environment Act of 2005 and the establishment in 2008 of the Ministry of the Environment. Subsequently, the assumption of powers by the environmental authority, previously in the hands of sectoral authorities, the decentralisation of environmental powers to subnational and local authorities, and the development of environmental compliance and certification institutions marked a period of efforts to foster cross-sectoral co-ordination and the effectiveness. However, the pressures exerted by sectoral aspirations on compliance and certification systems that have yet to be fully consolidated, together with uneven regional and local resources and capacity development, have hampered proper environmental stewardship by environmental institutions, as have significant gaps in land-use planning and in the formalisation of land ownership. Henceforth, special attention will have to be paid to effective implementation of policies and legislative frameworks.

In Peru, access to environmental information is guaranteed by the Transparency and Access to Public Information Act. In addition, the country has made efforts to develop an integrated national environmental information system, has taken significant steps to strengthen environmental citizenship and participation and guarantees prior consultation of indigenous communities regarding activities in their territories by law. There is still room for improvement in public participation, especially in environmental impact assessment processes. Significant progress has also been made in relation to environmental justice, with the creation of a special prosecutor for environmental crimes, specific prosecutors within the Public Prosecutor's Office and district courts in this area. However, environmental information still suffers from major gaps, heterogeneity, dispersion and lack of consistency, which affects policymaking and informed participation. Moreover, the large number of socio-environmental conflicts existing in Peru may reflect citizens' limited ability to influence environmental decision-making. The large number of resulting disputes speak to the need to improve the capacities and co-ordination of the justice system.

Achieving an environmentally sustainable and socially inclusive growth model remains a challenge

Peru is well aware of its economic dependence on natural resources and the welfare effects of environmental costs, and has embraced the concept of green growth and undertaken commitments to reduce greenhouse gas emissions in the framework of the Paris Agreement. Furthermore, the country is party to the international conventions on environmental matters and participates actively in regional co-operation efforts. Yet there is still a lack of consistency between development policies, plans and strategies, on the one hand, and environmental targets, on the other; there are failures of co-ordination, both horizontal and vertical, among the various government institutions; and there are problems in reconciling investment promotion measures with efficiency and effectiveness in environmental protection policies.

Peru’s environmental policy is based mainly on regulation and oversight measures, but makes limited use of economic instruments. The success of this strategy requires stronger enforcement and compliance processes. Moving towards a greener growth model will require a more robust system of market incentives that raises environmental considerations higher in the tax system. Environmental tax revenues are very low and tax collection from the exploitation of natural resources could be higher. In addition, there is no way to finance environmental infrastructure while user charges remain below the cost of service provision. Despite continuous growth, public spending on the environment is still too low for the authority to discharge its responsibilities properly and to promote investment in environmental infrastructure taking into account social considerations and territorial disparities. The analysis of the environmental impact of public expenditures and subsidies offers an opportunity to undertake green reforms.

There are numerous unmet needs in relation to environmental infrastructure

Peru’s strong economic growth has helped to close gaps in basic environmental infrastructure services, particularly in urban areas, where drinking water coverage has risen to over 90% of the population and sanitation to over 80%. However, in rural areas the backlog is significant. Despite efforts, considerable investment is still needed to provide universal access to safe water and improved sanitation structures and wastewater treatment. Furthermore, while per capita waste generation is still low in Peru, the

infrastructure for disposing of it is inadequate and is concentrated in the capital and other major cities. Large investments are needed for the treatment and recovery of solid and hazardous waste, as well as for its proper disposal.

With the population so highly concentrated in urban areas, much stronger mechanisms are required to monitor, control and mitigate negative impacts on the environment and health. Most major cities suffer from congestion problems, even though the motorisation rate is still very low compared with the OECD countries. These problems are exacerbated by unfettered urban sprawl. More must be done to support urban development master plans emphasising more sustainable transport and aligned with national infrastructure investment. In addition to improving fuel quality, it is essential to develop infrastructure for air quality monitoring networks, given that only partial information is available at present.

Assessment of the environmental impacts of public investment, strengthening of the system of environmental permits and the systematic expansion of strategic environmental assessments in key policies, plans and programmes and, particularly, in the areas of energy and transport, are all tools that will contribute to improving the design and alignment of incentives for a green growth strategy.

Significant efforts are needed in relation to solid waste management and control of chemicals

Peru generates less than half the municipal solid waste per day per capita than the OECD average, which stands in contrast to its poor infrastructure for disposal and treatment. Almost half of all solid waste is improperly disposed of in illegal landfills, by uncontrolled burning or in water courses and the ocean. High tax arrears constrain waste collection by municipal authorities and limit their ability to make the necessary investments in proper collection, treatment and final disposal of waste. Rates need to be devised to guarantee municipal collection and cover the cost of services, while taking due account of social considerations. There have been positive developments: the General Solid Wastes Act seeks to ensure the proper management of waste and the Ministry of the Environment has implemented programmes and projects to support municipalities in modernisation schemes, waste separation at source, selective waste collection and investment in comprehensive waste management, although much remains to be done in terms of awareness-raising and separation at source, reuse and recycling. Certain steps have already been taken to extend the responsibility of producers in respect of electrical and electronic waste, but these need to be further developed. There is little information and only limited traceability with respect to non-municipal waste, which is handled by sectoral authorities.

Imports and the use of chemical substances have both grown considerably, but the information to manage them properly is lacking. The use of pesticides in agriculture and of substances harmful to the ozone layer in industry is subject to controls under the Stockholm Convention on Persistent Organic Pollutants, the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer. Although Peru already has policies of a general nature, it would be advisable to improve the specific regulatory framework for chemicals in order to take into account their life cycle and to include prevention and risk management. Inter-institutional co-ordination and greater investment in the environment, health and agriculture are essential to strengthen oversight and risk management. Peru is implementing a Pollutant Release and Transfer Register; however, the identification, registration, determination of

origin and location of chemicals and hazardous substances and products, particularly in the case of those imported without a tariff heading, remain a challenge. There is also room to improve port surveillance infrastructure, including the management and monitoring of product entry.

Peru's ratification of the Minamata Convention on Mercury represents an important step in its efforts to reduce the emission and release of mercury, particularly in small-scale and artisanal mining, but it is essential to tighten regulation and control and tackle illegal mining. The laws regulating mine closure and environmental liabilities address mining-related risks to human beings and the environment. Although Peru keeps an inventory of mining-related environmental liabilities, only 10% of these have remediation instruments.

The use of natural resources and green markets offer multiple opportunities for sustainable development

Peru has a number of different eco-regions, which are home to 84 of the 117 types of biomass recognised in the world, as well as rich and varied marine ecosystems. Cultural and ethnic diversity enshrines valuable traditional knowledge regarding the uses and properties of flora and fauna species and genetic resources. Peru’s agro-biodiversity is among the richest in the world, and represents one of its most valuable natural and cultural assets. On the other hand, nature tourism has become an increasingly important activity in the country.

Peru’s rich ecosystemic, genetic and biological heritage offers opportunities for eco-innovation, biotrade, ecotourism, gastronomy, traditional medicine and the development of new niches of international competitiveness that Peru is tapping more and more. To reap the benefits of this economic potential, Peru must fully take these elements on board in research and development policies, managing scientific and traditional knowledge by fostering the development of knowledge hubs and new market niches, and building approaches that take into account the state of ecosystems and strengthen payment for environmental services.