

OPPORTUNITIES AND CHALLENGES FOR THE BLUE ECONOMY IN URUGUAY

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POLICY BRIEF
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OPPORTUNITIES AND CHALLENGES FOR THE BLUE ECONOMY IN URUGUAY. POLICY BRIEF.

Prepared by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and GRID-Arendal, with technical support from national expert consultant Ian Ruiz.

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Executive summary

This policy brief presents the findings of a Rapid Assessment of existing progress, gaps, challenges and opportunities for the development of a sustainable blue economy in Uruguay. The Assessment found that Uruguay has strong policies and regulations to safeguard nature and to promote sustainable development of sectors in the blue economy. However, effective implementation of the existing framework is constrained by a lack of cross-sector integration, limited access to long-term funding, incoherent monitoring and non-compliance with existing regulations. The key gap identified for developing a sustainable blue economy is the absence of a coherent governance approach for Uruguay's ocean and coast.

The policy brief provides recommendations for actions that could support the development of a sustainable blue economy in Uruguay. One central action that could provide a strategic starting point is the development of an integrated sustainable blue economy policy that sets out a shared vision for a sustainable blue economy and provides a strategic

framework for delivery (recommendation #1). This should be supported by an assessment of drivers of change for marine and coastal ecosystem services, strong leadership, cross-sectoral management and planning, collaboration with coalitions of actors across the blue economy and sustainable finance mechanisms for all aspects of blue economy governance (recommendation #2). These enabling actions would also help strengthen the implementation of existing policies and regulations.

Actions were also identified to enable a more diversified and equitable blue economy. Key recommendations include: firstly an assessment of monetary and non-monetary benefit flows across value chains in the blue economy to help direct the fair and equitable distribution of benefits (recommendation #7), and secondly a detailed analysis of the tourism sector to help ensure that future tourism developments deliver benefits to multiple actors in society while remaining within the safe limits of coastal and marine ecosystems (recommendation #9).

1 A Rapid Assessment of Uruguay's blue economy – context and ambition

1.1 Context

Uruguay's coast extends over 670 km from the Rio de la Plata Estuary to the sandy beaches, dune ecosystems and lagoons of the Department of Rocha, facing the nutrient rich Atlantic. The country's marine and coastal areas provide important natural resources and benefits to Uruguay's economy and society. Managed responsibly, the blue economy can contribute to securing a sustainable future for the country that also delivers against its commitments to the United Nations Sustainable Development Goals.

Uruguay's National Environment Plan for Sustainable Development and the National Biodiversity Strategy set out the national policy direction to deliver sustainable development, sustainable resource use and biodiversity conservation. Both strategies include particular consideration of Uruguay's marine and coastal areas.

The protection of the natural environment is also anchored in Article 47 of Uruguay's Constitution, placing the protection of biodiversity and ecosystems above other individual or sectoral interests.

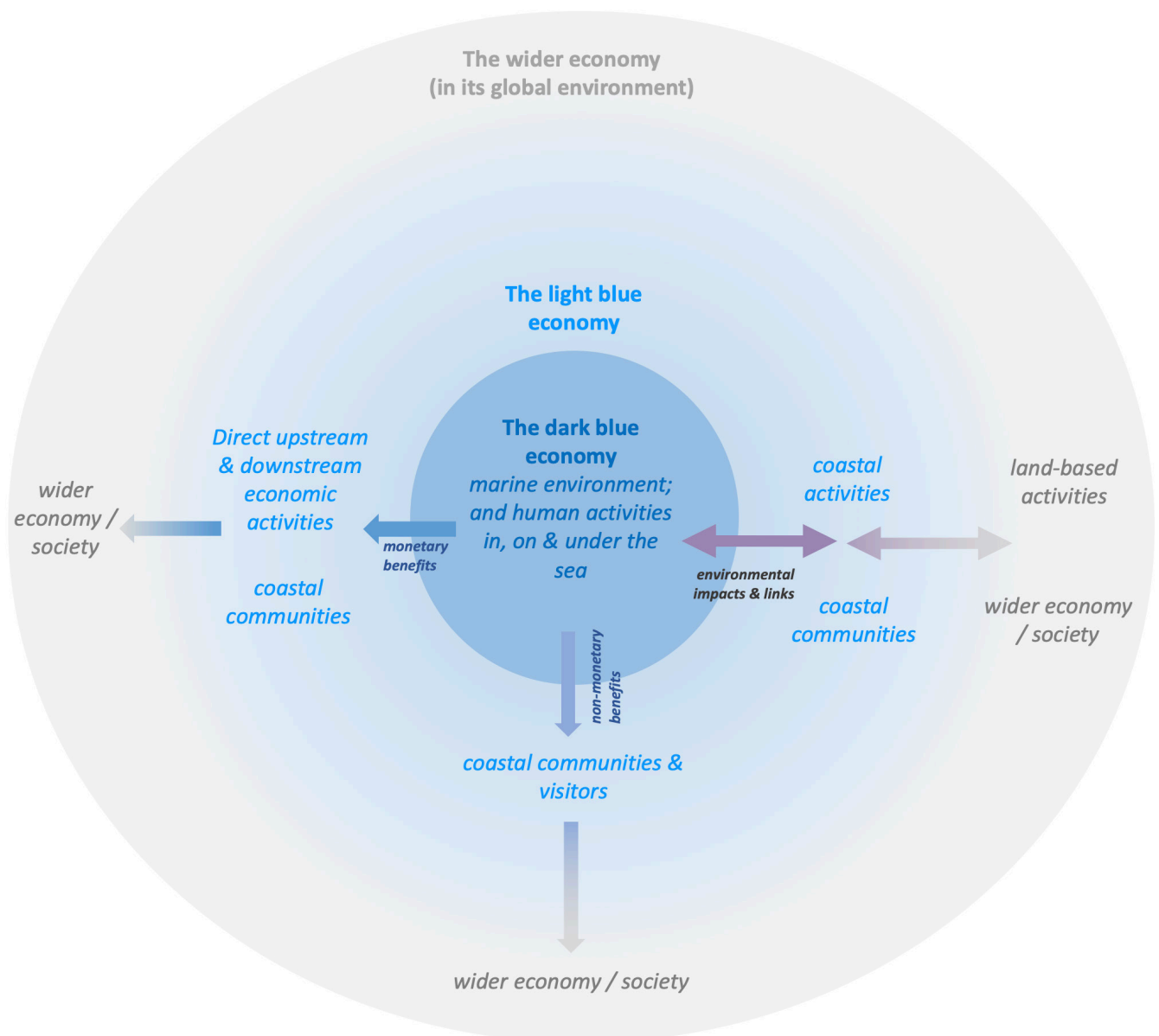


Figure 1. The dark blue and light blue spheres of the blue economy. The arrows represent benefit flows in the blue economy: 1) monetary benefits to the left, 2) non-monetary benefits at the bottom (e.g. health, wellbeing, cultural values), and 3) ecosystem linkages flowing both ways to the right.

The blue economy includes the marine and coastal environment, actors, interactions and benefit flows across the dark blue and light blue spheres shown in Figure 1. A sustainable blue economy should operate within, and contribute to, a safe and just space for humanity by keeping resource use within ecologically sustainable limits, protecting marine and coastal ecosystems, and ensuring the equitable distribution of monetary and non-monetary benefits.

1.2 The Sustainable Blue Economy and Growth Initiative

The Sustainable Blue Economy and Growth Initiative aims to support Uruguay in identifying opportunities for developing a sustainable blue economy that generates equitable benefits from the country's marine and coastal environment. The Initiative is carried out by the United Nations Resident Coordinator Office in Uruguay (RCO), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP). The UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and GRID-Arendal, in close collaboration with an in-country expert, provided technical support to this Initiative by carrying out a Rapid Assessment that identified key opportunities, gaps and challenges for developing a sustainable blue economy in Uruguay.

1.3 A Rapid Assessment of Uruguay's blue economy

This policy brief presents the findings of the Rapid Assessment on a) existing progress, b) gaps, challenges and opportunities, and c) recommendations for actions that could support the development of a sustainable blue economy. Underpinning concepts and baseline information, as well as the Rapid Assessment methodology that was developed by UNEP-WCMC and GRID-Arendal, are provided in the annexes.

The Rapid Assessment provides an insight into how well Uruguay's current policies are already delivering a sustainable blue economy and where the gaps and opportunities for future development might be. The Assessment focused on five key sectors (tourism, fisheries, agriculture, aquaculture and marine renewable energies), interactions between these sectors, impacts on the marine and coastal environment and ongoing efforts to protect the environment. The Assessment was not comprehensive as important topics like climate change and pollution were not investigated in detail. The outcomes nevertheless provide a starting point for the future development and diversification of Uruguay's blue economy in line with the country's social, environmental and economic priorities.

2 An overview of five key blue economy sectors

The Rapid Assessment looked at five sectors that are, or could in future be, important for Uruguay's blue economy. Tourism has been identified as one of seven priorities for sustainable development in Uruguay. The tourism sector is predominantly focused on the coast and highly seasonal in the summer months. The sector has grown in recent years, with increasing numbers of foreign visitors mainly from neighbouring countries. Fisheries have been part of Uruguay's economy for over a century and form part of the country's cultural heritage. Though today, the sector's contribution in terms of Gross Domestic Product is small. Almost 90 percent of the fish landed in the country is exported to over 50 countries worldwide, with main markets in China, Brazil, Nigeria and the United States. Agriculture is central to Uruguay's economy and important to consider in the blue economy due to its downstream impacts on the marine and coastal environment and potential consequences for economic activities taking place there. Over 90 percent of the country's land area is in agricultural use for livestock rearing (mainly cattle and sheep), crop production (dominated by soya) and forestry. Over the last 30 years, export-oriented agriculture has intensified driven by foreign investments and a strong global interest in soya and forestry products. Uruguay exports approximately 70 percent of its agricultural products to over 140 destinations, the main markets being China and Brazil.

Table 1 shows illustrative figures for tourism, fisheries and agriculture that provide approximate high-level indicators of the scale of the three sectors in Uruguay's economy. It should be noted that these figures do not take into consideration other important aspects of the respective roles of each sector for Uruguay's economy and society, such as cultural linkages, equity and social benefits.

Two sectors that currently do not exist but could play a role in Uruguay's future blue economy are marine aquaculture and marine renewable energy. With growing global markets for fish products, aquaculture could present an opportunity for economic diversification. A number of coastal and marine areas that would be suitable for mariculture have already been identified. However, the Rapid Assessment found that the development of marine aquaculture is currently not considered a viable option and a potential expansion of the sector would likely focus on freshwater harvests. Uruguay's marine renewable energy potential has been preliminarily explored for opportunities to increase the country's renewable energy resources. However, as projections show that national energy needs will be sufficiently met by land-based sources over the next decades, and given the considerable costs, technical challenges and limited existing infrastructure within the country to support marine installations, there are currently no drivers that might incentivise interest in developing marine renewables.

Table 1. An overview of illustrative figures for tourism, fisheries and agriculture in 2019. These figures are based on different sources and therefore may not be exact and entirely comparable.

Sector	Contribution to Gross Domestic Product (%)*	Contribution to Gross Domestic Product (US\$)	Number of jobs	Contribution to total national employment (%)
Tourism	7% ⁽¹⁾	3,923 million ⁽²⁾	126,474 ⁽¹⁾	7.1% ⁽³⁾
Fisheries	0.2%*	117 million ⁽⁴⁾	2,873 ⁽⁵⁾	0.2% ⁽³⁾
Agriculture	5.8% ⁽⁵⁾	3,276 million ⁽⁵⁾	137,801 ⁽⁵⁾	7.7% ⁽³⁾

* Based on a Gross Domestic Product of US\$ 56,046 million in 2019. World Bank.

1 Based on information provided by MINTUR.

2 Estimated based on 7% contribution to US\$ 56,046 Gross Domestic Product.

3 Based on approximate total national employment of 1.8 million in 2019. MGAP. Anuario estadístico agropecuario 2020.

4 Based on information from MGAP-DINARA.

5 Based on data from MGAP. Anuario estadístico agropecuario 2020.

3 Gaps, opportunities and recommendations for a sustainable blue economy

The Rapid Assessment identified six areas in which action could be taken to develop a sustainable blue economy that includes the dark blue and light blue spheres (Figure 1), operates within the safe and just space for humanity, and delivers against the Sustainable Development Goals:

1. Develop a national blue economy policy framework
2. Enable stakeholder engagement and pursue equity
3. Pursue opportunities for sustainable economic development
4. Improve the protection of the marine and coastal environment
5. Support climate change mitigation and adaptation
6. Strengthen monitoring and evaluation

3.1 Develop a national blue economy policy framework

Existing progress

Uruguay has a strong framework of legislation and regulations to safeguard ecosystems and biodiversity. Protection of the natural environment is a high-level priority set out by the Constitution and embedded in the regulatory frameworks for key productive sectors.

Policies and national strategies for the five sectors and protection of the natural environment set the direction for responsible resource use, sustainable economic development and promotion of social and cultural values in balance with nature.

Existing efforts to establish a circular bioeconomy provide an opportunity for integrating principles of circularity and sustainable production processes into the development of a sustainable blue economy.

Gaps, challenges and opportunities

The blue economy is not treated as a policy area in its own right. There is no integrated blue economy policy or mechanism for strategic policy oversight. Furthermore, there is limited collaboration between actors across sectors and across the government

silos that regulate them. This reflects a general lack of ocean-oriented culture in Uruguay.

Limited human resources and a lack of long-term funding to support policy implementation are leading to non-compliance with existing regulations. Long-term funding mechanisms and proper implementation of existing policies and plans within each of the sectors included in this Rapid Assessment would result in significant progress towards a sustainable blue economy.

The sustainable blue economy concept outlined in this policy brief and its annexes provides a lens through which the existing policy landscape can be examined, drivers and pressure points better understood, new cooperation and integration mechanisms established, and the indicated resource capacity gaps addressed.

Recommendations

1. Develop an integrated national sustainable blue economy policy (strategy or roadmap) that sets out a shared national vision for a sustainable blue economy and provides a strategic framework for delivery. This framework should:

- Bring together the existing policy foundation and identify mechanisms to enhance implementation of existing laws, regulations and policies.
- Establish new cooperation and integration mechanisms across blue economy sectors and policy silos and provide strategic oversight for policy implementation, enforcement, monitoring and evaluation.
- Be adaptive to change in knowledge and circumstances and reviewed and updated regularly.

A sustainable blue economy vision should encompass all spheres of the blue economy from ocean to land, stay within the safe and just space within ecological limits and social equity and align with the UN Sustainable Development Goals.

2. Support development and implementation of the sustainable blue economy policy, and strengthen implementation of the existing policy framework, by putting in place the following:

- An assessment of drivers of change and risks for marine and coastal ecosystem services to inform policy and implementation priorities.
- Clear and strong leadership to generate momentum, secure commitment and drive action.
- An integrated, cross-sectoral approach that could be implemented through marine spatial planning, integrated coastal zone management, or other ecosystem-based integrated ocean management.
- An inter-ministerial coordination mechanism to improve implementation of existing laws and regulations, make best use of limited resources and reduce bureaucracy.
- A collaborative approach to policy implementation, working with coalitions of actors from across the blue economy spheres, thereby creating and fostering an ocean culture for the country (with knock-on opportunities, e.g. in education, arts and public engagement).
- Sustainable finance mechanisms that secure funding and human resources for all aspects of blue economy governance (including strategic planning, implementation and enforcement, monitoring, stakeholder engagement, as well as innovative production methods and business ideas).

CASE STUDY

Innovative sustainable finance in the Seychelles

The Seychelles developed an innovative sustainable finance mechanism in the form of sovereign 'blue bonds', which raised US\$15 million upon establishment. Blue bonds raise funds that can then be reinvested in sustainable ocean activities.

More information is available here: https://bluecharter.thecommonwealth.org/wp-content/uploads/2020/10/D17094_V2_CBC-Case-Studies_14_BlueEcon_Seychelles.pdf

3.2 Enable stakeholder engagement and pursue equity

Existing progress

Stakeholder and community engagement and empowerment are mandated at the highest level of government (e.g. through the laws on responsible fishing and small-scale producers) and implemented through number of initiatives and management processes. The Local and Zonal Artisanal Fisheries Councils are recognised as important bodies for bringing different coastal stakeholders together.

Social and cultural values are a national strategic priority and rooted in policies for sustainable development. Both artisanal fisheries and small-scale agricultural production are promoted as activities of national interest. Artisanal fisheries are considered part of the country's cultural heritage. Tourism is recognised as a human right to leisure, knowledge and culture.

Significant efforts exist to engage with stakeholders and communities across different sectoral processes and initiatives. This includes engagement with artisanal fishermen through Local Zoning Councils and various initiatives to improve their conditions and livelihoods.

Gaps, challenges and opportunities

Lack of secure, long-term funding for initiatives involving local communities and stakeholders is currently limiting success of engagement and leaving stakeholders frustrated.

The experience of the Local and Zonal Artisanal Fisheries Councils and persisting conflicts between artisanal fishermen and other coastal stakeholders suggest that engagement with artisanal fishing communities could be improved. Several attempts have already been undertaken, with limited success as difficulties and frustrations about the effectiveness of engagement processes remain on both sides (administration and artisanal fishermen).

The Rapid Assessment did not identify any integrated, strategic mechanisms to ensure equitable distribution of benefits in the blue economy, apart from the law to support artisanal fishermen and small-scale producers. Despite this existing regulation, direct access to markets for

artisanal fishermen and small-scale agricultural producers is still limited.

Existing ambitions to recognise and safeguard the cultural heritage of artisanal fisheries are not yet met. This is despite a provision in the law regulating fisheries and aquaculture that requires priority to be given to fishermen from local communities when new fishing permits are granted.

Recommendations

3. Embed fair and equitable distribution of benefits as a core consideration in all decision-making processes of the blue economy and ensure that decision-making processes **actively involve coalitions of actors and cross-sectoral coordination**, to help build a strong social foundation for the sustainable blue economy.

4. Involve local communities and sea users (including artisanal and commercial fishermen, recreational users and tourism businesses) in the planning and implementation of protection measures to help avoid conflicts, increase local buy-in and compliance, and ensure equitable distribution of impacts and benefits.

5. Improved engagement between administration and artisanal fishermen could be facilitated by:

- Ensuring sustainable finance for community initiatives to maintain long-term engagement and avoid stakeholder frustration over lack of impact of their involvement.
- Using monitoring and indicators to provide evidence of the impact of engagement initiatives.
- Analysis of previous engagement attempts to better understand the barriers to success and identify lessons learned to inform future engagement.

6. Any future plans for development of coastal space (e.g. for tourism) should consider existing conflicts between different users, safeguard access rights for local communities and artisanal fishermen, and avoid displacing existing users without providing equitable alternatives.

7. Undertake an assessment of monetary and non-monetary benefit flows across value chains in the blue economy to identify equity shortfalls

and inform potential future programmes to direct the fair and equitable distribution of benefits. In particular, **a review of the value chain from artisanal fish catch to consumer** could reveal opportunities for removing barriers to direct market access and creating sustainable finance options for artisanal fishing communities. This may help strengthen implementation of the existing law to promote small-scale producers and artisanal fisheries. Given the importance of exports for Uruguay's economy, an assessment of value chains should include consideration of benefits that flow out of the country.

8. Investigating options for ensuring that Uruguay's blue economy provides opportunities for a diverse range of actors could support economic stability and prosperity overall. Diversity is a strength that can result in better decision-making and increased benefits for the economy, society and natural environment. This includes diversity of gender, age and different groups of society. Questions to investigate could include: What is the role of women in Uruguay's blue economy? Can equality, inclusion and fair representation of minority groups be improved?

CASE STUDY

Community-based fisheries management in Thailand

In Phng Nga Bay, Thailand, a community-based fisheries management programme was created to address issues such as competing coastal uses, overfishing, and pollution. The project resulted in many benefits including increased fisheries productivity, reduced conflict, and improved ownership.

More information is available here: https://sustainabledevelopment.un.org/content/dsd/dsd_aofw_mg/mg_success_stories/csd7/os2.htm

3.3 Pursue opportunities for sustainable economic development

Existing progress

Existing laws and policies include provisions for environmental protection as well as the safeguarding of equity and cultural values. If properly implemented, these laws and policies provide a good foundation for sustainable development.

The development potential for offshore renewables and marine aquaculture has been assessed in recent years. There is, at present, limited scope for expansion, diversification or further economic development in these sectors.

The possibility of hydrogen fuel production for export to markets overseas is starting to be explored. However, uncertainties remain about the feasibility and benefits of this potential new activity.

Gaps, challenges and opportunities

Of the five sectors covered in the Rapid Assessment, tourism seems to hold the greatest potential for varied sustainable and nature-based development opportunities. This includes opportunities for tourism businesses themselves and for related actors (e.g. opening new markets for artisanal fishermen and small-scale producers, providing employment alternatives for fishermen offering trips for tourists).

Recommendations

9. Carry out a detailed analysis of the tourism sector to take a granular and location-specific look at interactions of different tourism activities and development options with other sectors and with the natural environment. The analysis should consider the variable environmental and social context along different stretches of coast. This analysis would help to ensure that future tourism developments deliver benefits to multiple actors in society while remaining within the safe limits of coastal and marine ecosystems.

10. Analyse full value chains across the dark and light blue spheres of the blue economy (e.g. from fish catch to consumer) to help identify opportunities for economic diversification and equitable distribution of benefits in future. The analysis should cover all relevant sectors and including flows of monetary values and non-monetary benefits from marine and coastal ecosystem services.

11. Any possible new activities (e.g. hydrogen fuel production for export) should undergo careful assessment of the social and environmental impacts and of the flows of economic benefits from these activities (e.g. who would benefit, what social shortfalls could they help address). The assessment should include any ancillary

developments needed to deliver the activity under consideration (e.g. new coastal infrastructure and increase in large vessel traffic).

CASE STUDY

Turning waste materials into opportunities in South Africa

In South Africa, the Western Cape Industrial Symbiosis Programme connects companies to identify mutually beneficial opportunities for unused or waste materials to be integrated into supply chains. As of October 2020, the programme has redirected over 100,000 tonnes of waste and generated over USD\$8.5 million.

More information is available here: https://www.ellenmacarthurfoundation.org/assets/downloads/Africa%E2%80%99s-first-industrial-symbiosis-programme_Case_Study.pdf

3.4 Improve the protection of the marine and coastal environment

Existing progress

The National System of Protected Areas (SNAP) is mandated by law. The legislation sets out harmonised planning and management criteria for protected areas.

Permits and annual quotas for maximum allowable catch are in place for fisheries to ensure sustainable and responsible use of fisheries resources.

There is a strong regulatory framework to control and reduce the environmental impacts of the agricultural sector, including downstream pollution. This includes watershed management plans and application of no-till farming.

Gaps, challenges and opportunities

There is currently no mechanism for identifying critical or important marine and coastal ecosystems, habitats and species to help prioritise conservation efforts. The SNAP includes only one marine protected area. Five terrestrial protected areas have a marine component. In total, the SNAP covers about 0.7 percent of Uruguay's territorial sea and exclusive economic zone. Systematic conservation planning could create a more representative network.

Angling and sport fishing activities are currently unregulated. This is resulting in negative environmental impacts and competition with artisanal fishermen for resources.

In light of an expanding tourism sector, mechanisms are needed to manage coastal land use change and development, and to protect important coastal vegetation.

Poor water quality resulting from land-based pollution is having persisting impacts on coastal ecosystems and users. Despite existing efforts, agricultural runoff continues to be an important source contributing to this pollution.

Recommendations

12. Identify critical/important ecosystems, habitats and species to help prioritise conservation and restoration efforts. This should include ecosystems that provide critical functions for climate change adaptation or mitigation, nursery and feeding areas for commercial fish, and important areas for cetaceans and turtles.

13. Strengthen the marine coverage of the SNAP by applying systematic conservation planning principles (e.g. connectivity, representativity) and by improving its coverage of critical/important marine ecosystems, habitats and species.

CASE STUDY

Systematic conservation planning of marine protected area network in the United States

In the United States, spatial conservation planning techniques were used to develop a Marine Protected Area network around the California Channel Islands. Monitoring has since shown increases to fish population densities and fish sizes, with consequent benefits for local fisheries.

More information is available here: https://www.iucn.org/sites/dev/files/import/downloads/mpanetworks_makingithappen_en.pdf

14. Consider regulations for angling and sport fishing, including maximum catch limits, minimum sizes, seasonal closures or no fishing zones (e.g. in nursery areas).

15. Promote Conservation Agriculture as the foundation for regenerative agriculture and link related policy and practice to the sustainable blue economy policy framework.

3.5 Support climate change mitigation and adaptation

Existing progress

Uruguay's national energy transition is exemplar. Up to 98 percent of the country's electricity is generated from land-based hydro, solar and wind power and biomass. Given the country's rich renewable energy sources on land, the development of offshore installations is not required to meet domestic needs or export ambitions.

It has been identified that climate change and changing sea conditions may pose risks for fisheries due to shifts in species distribution and increased frequency and intensity of bad weather.

Gaps, challenges and opportunities

Although some issues were identified in relation to fisheries, the Rapid Assessment did not address climate change in detail. Therefore, these findings are not exhaustive and there may be other climate change risks to Uruguay's blue economy that were not identified. Some of the recommended actions may already be addressed by the National Climate Change Policy.

Recommendations

16. Ensure alignment of the National Climate Change Policy with a future integrated sustainable blue economy policy and with strategies for coastal and marine environmental protection, to secure climate resilience of the blue economy and enable coastal and marine nature-based solutions for carbon sequestration and coastal protection.

17. Assess climate change risks for all sectors and actors in the dark and light blue spheres of the blue economy and develop an integrated climate change mitigation and adaptation strategy that aligns with the integrated sustainable blue economy policy. This should include:

- Mitigation of/adaptation to risks to fishermen.

- Assessment of the climate risks and vulnerabilities for coastal developments, communities and users, and mitigation/adaptation action where needed.
- Regulations for new infrastructure developments and renovation of existing infrastructures in coastal areas to consider climate change impacts (e.g. sea level rise, extreme weather events, etc.).

18. Identify ecosystems that provide critical functions for climate change adaptation and/or mitigation and prioritise these for conservation and restoration efforts as nature-based solutions for carbon sequestration and coastal protection.

19. Provide incentives (or create requirements) for coastal resorts to become carbon neutral. This could also add value to the image of Uruguay as a sustainable tourism destination.

CASE STUDY

Climate neutral tourism in Aruba

In Aruba, the Bucuti & Tara Beach Resort implemented many innovative and scalable sustainability actions such as eco-certifications, water cycling, and waste diversion. The hotel is the first climate neutral resort in the Caribbean and won the Global United Nations 2020 Climate Action Award for Climate Neutral Now.

More information is available here: <https://unfccc.int/climate-action/momentum-for-change/climate-neutral-now/bucuti-and-tara-beach-resort>

3.6 Strengthen monitoring and evaluation

Existing progress

A National Environmental Observatory has been set up to consolidate and facilitate access to data.

Gaps, challenges and opportunities

Currently, there is strong reliance on project-based initiatives for monitoring the extent and condition of ecosystems. As a result, there is no systematic approach, lack of continuity in data, and limited access to data held by different institutions.

Existing protected areas lack monitoring programmes and indicators needed to track their impact and effectiveness. There is no management plan and monitoring programme for the only marine protected area in the SNAP. Overall, less than half of the 17 protected areas in the SNAP have management plans in place.

Recommendations

20. Develop a coherent strategic, coherent and consistent monitoring and evaluation framework for the blue economy, with a system of social and environmental indicators that span across the five guiding principles* of a sustainable blue economy. Monitoring should be designed to:

- Ensure development is progressing in a sustainable direction.
- Ensure best available options are applied.
- Enable adaptive approaches as conditions in society, the natural environment or the economy change.
- Facilitate stakeholder engagement and generate support by demonstrating how their actions to support positive change make a difference.

21. Ensure each protected area in the SNAP has a dedicated monitoring programme that combines environmental and social indicators to facilitate environmental protection as well as opportunities for low-impact and regenerative activities within the protected areas.

* The five guiding principles of a sustainable blue economy are about: 1) healthy ecosystems, 2) equity and inclusiveness, 3) climate stability and resilience, 4) sustainable consumption and production, and 5) circular economy approaches. The principles are part of a Sustainable Blue Economy Transition Framework developed by UNEP and its partners. More information about the full principles is available in Annex 1.

ANNEXES



ANNEX 1: Conceptual context and Rapid Assessment methodology

1 Guiding vision and principles for a sustainable blue economy

For the purpose of the Rapid Assessment of Uruguay's blue economy, the "blue economy" was defined as the marine and coastal environment, actors, interactions and benefit flows across the dark blue and light blue spheres shown in Figure 1. The "dark blue" sphere consists of the marine and coastal ecosystems and the activities people carry out there. The dark blue sphere generates benefits (money, health and wellbeing benefits, and non-monetary ecosystem services) that flow to human populations on land,

creating a land-based "light blue" sphere of the blue economy. In the light blue sphere, these benefits materialise and flow into the wider economy. Thus, the blue economy is strongly embedded within the wider economy. The blue economy nevertheless deserves attention as a policy area in its own right for a number of reasons: 1) the sea is ecologically distinct from the land, presenting very different conditions and challenges; 2) coastal areas tend to be densely populated and subject to cumulative pressures from land and sea; and 3) human activities at sea tend to be regulated by different (usually less developed and more fragmented) governance mechanisms.

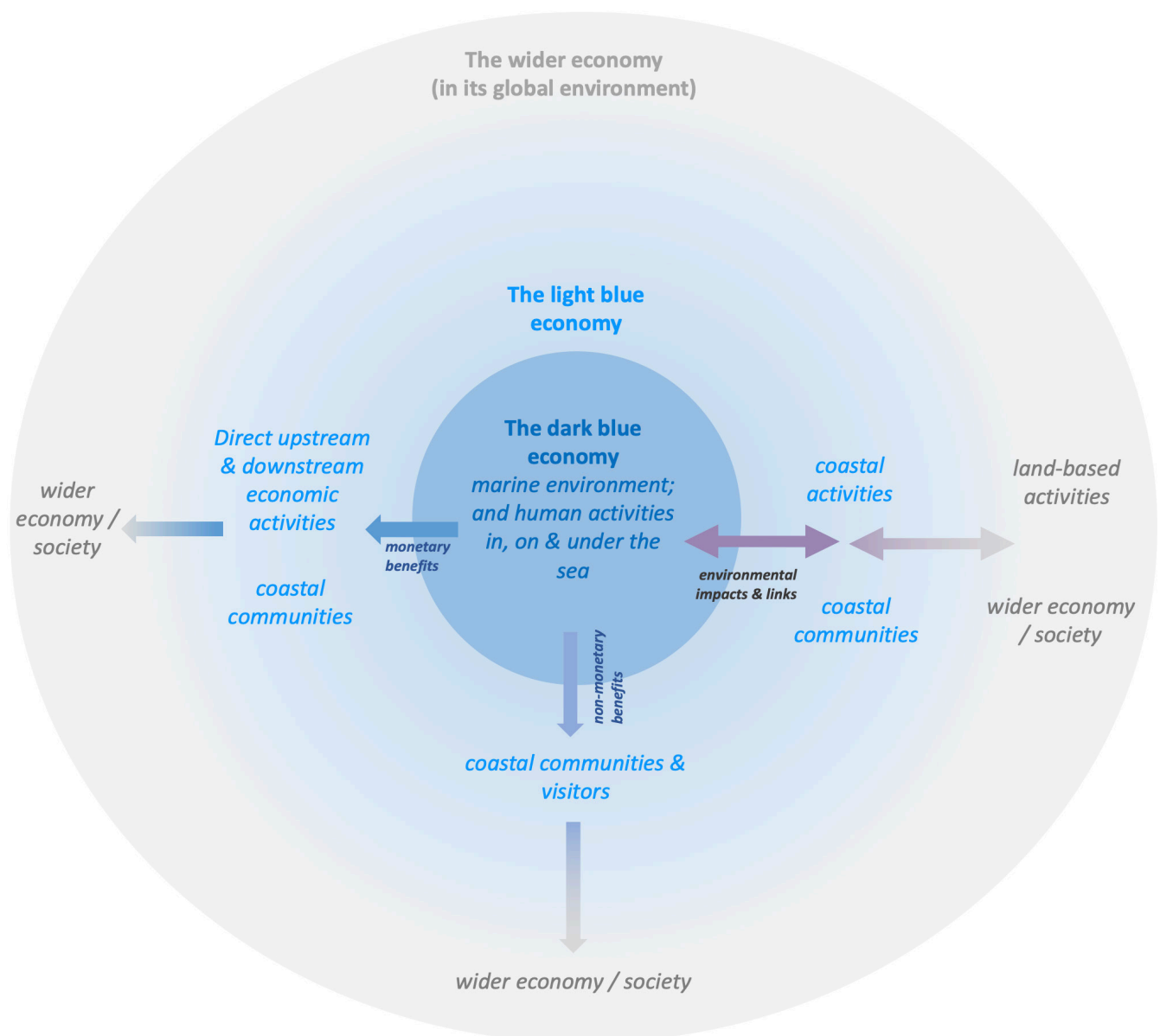


Figure 1 (repeated). The dark blue and light blue spheres of the blue economy.

In a sustainable blue economy, human activities in the dark blue and light blue spheres must stay within, and contribute to, a “safe and just space” for humanity, operating within ecosystem limits and adding to the social foundation of a country.¹ This means that a sustainable blue economy has to:

- protect and regenerate marine ecosystems (with their assets and services),
- keep resource use within ecologically sustainable limits, and
- distribute benefits (monetary and non-monetary) equitably, prioritising flows towards areas where there are the biggest social shortfalls.

The concept of the “safe and just space” aligns with the UN Sustainable Development Goals (SDGs), recognising that the SDGs are interdependent and together define key parts of the ecological ceiling and social foundation. SDG 14 ‘Life underwater’ positively supports the SDGs focused on human wellbeing and economic development^{2,3} illustrating that social and economic goals cannot be met without safeguarding ocean ecosystems. Therefore, environmental protection and regeneration have to be seen as an integral part of sustainable economic development, not as a trade-off against the economy.

The United Nations Environment Programme (UNEP) is working on a framework to guide governments through their role in the transition to a sustainable blue economy.⁴ This Transition Framework has five guiding principles that provide a way of framing the safe and just space of a sustainable blue economy. The Rapid Assessment presented here is based on these five principles, which are:

Principle 1: The Sustainable Blue Economy protects, restores and regenerates healthy ecosystems.

Principle 2: The Sustainable Blue Economy delivers equitable and inclusive processes and outcomes.

Principle 3: The Sustainable Blue Economy enables climate stability and resilience.

Principle 4: The Sustainable Blue Economy delivers sustainable consumption and production.

Principle 5: The Sustainable Blue Economy applies circular economy approaches.

2 Rapid Assessment approach

The Rapid Assessment focused on five sectors that are relevant to Uruguay’s blue economy: 1) Tourism, 2) Fisheries, 3) Agriculture, 4) Aquaculture, 5) Marine renewable energies.

The Rapid Assessment considered each of the five sectors separately, as well as interactions between the sectors, impacts on the marine and coastal environment, and ongoing efforts to protect the environment. Thus, the Assessment spanned across a) the dark blue and light blue spheres presented in Figure 1, b) well-established sectors as well as potentially emerging ones, and c) the economic, social and environmental dimensions of the blue economy. Agriculture, of central importance to Uruguay’s wider economy, was included because of its downstream impacts on the marine environment and potential consequences for any economic activities taking place there.

Baseline information⁵ was collated for each of the five sectors, and on the marine and coastal environment, to generate a broad picture of: 1) the current status of the economic sectors, 2) existing plans or strategies for future development, 3) the interactions between tourism, fisheries and agriculture, and 4) the impacts each of these sectors has on the marine and coastal environment. A consultation document summarising the baseline information was shared with stakeholders for feedback to ensure the information was as accurate, complete and up to date as possible. This consultation process involved multiple rounds of reviews and a series of in-depth interviews with the Ministries responsible for tourism, fisheries and aquaculture, renewable energies, agriculture and the environment.

For the Rapid Assessment itself, each of the five guiding principles in the UNEP Sustainable Blue Economy Transition Framework was broken down into a set of more specific assessment criteria. The baseline information was assessed against each criterion to establish whether this is fully met, partially met or not met under the status quo. Through this process, existing progress, gaps, challenges and opportunities were identified. The findings of the Rapid Assessment are presented in this policy brief.

ANNEX 2: Current state of key blue economy sectors in Uruguay

1 Tourism

Tourism in Uruguay is predominantly focused on the Atlantic coast and Rio de la Plata and highly seasonal in the summer months (December to March). Among the most popular destinations are Punta del Este and Piriápolis, where the main beach resorts and water sports facilities are located. From here, boat trips go to nearby islands for dive excursions, whale watching and sport fishing trips. About 80 percent of sport fishing activity by boat is concentrated in this area. Another popular tourism destination, although less developed in terms of infrastructure, is the department of Rocha. In Rocha, the main attractions are the extensive sandy beaches and dune ecosystems at Cabo Polonio, which is part of the National System of Protected Areas (SNAP), and the coastal lagoons that are popular for birdwatching. Uruguay's tourism sector has grown in recent years, with increasing numbers of foreign visitors mainly from the neighbouring countries, Argentina and Brazil.

Tourism has been identified as one of seven priorities for sustainable development in Uruguay. The future direction of tourism development is set by the 'National Development Strategy Uruguay 2050', the 'National Plan for Sustainable Tourism 2030' and the Strategic Plan for 2020-2024 of the Ministry of Tourism. The Ministry's five strategic priorities for the coming years are to: 1) diversify, 2) promote innovation, 3) position tourism as a driver of economic development, 4) build capacity, and 5) align social, cultural, environmental and economic development with human development (focusing on the health and wellbeing of people). The promotion of social and cultural values and the protection of the natural environment are key cornerstones of Uruguay's tourism policy. This is also reflected in the country's brand 'Uruguay Natural' used to promote Uruguay as a tourism destination.

2 Fisheries

The fisheries sector has been part of Uruguay's economy for over a century, although its contribution in terms of Gross Domestic Product today is small. Fish consumption in Uruguay is low. Almost 90 percent of the fish landed in the country is exported to over 50 countries worldwide, with main markets in China, Brazil, Nigeria and the United States. Uruguay's

industrial fishing fleet includes about 55 vessels of 15-60 metres length and an average 360 Gross Register Tonnes. This fleet accounts for around 80 percent of total annual landings. It operates out of two ports (Montevideo and La Paloma), fishing in areas from 7 nautical miles beyond the baseline in the Rio de la Plata and in the Argentine-Uruguayan Common Fishing Zone. The majority of the fleet targets hake, croaker and whiting using bottom trawls.

Artisanal fishing is a part of the country's cultural heritage. The artisanal fishing fleet fluctuates between 500 and 700 vessels of 3-10 metres length and 10 or less Gross Register Tonnes and contributes around 20 percent of total annual landings. The artisanal fleet uses 46 ports and landing sites along the country's estuarine and oceanic coastline, with the majority of artisanal vessels operating on the Rio de la Plata (about 398 vessels), in nearshore areas (within 15 miles) along the Atlantic coast (about 80 vessels), and in the coastal lagoons (about 45 vessels), using gillnets and longlines. Artisanal fishing also takes place from land using different fishing gear such as gillnets, traps or manual collection.

3 Agriculture

Agriculture (livestock rearing, crop production and forestry) is central to Uruguay's economy. Over 90 percent of the country's land area is in agricultural use. Uruguay's agricultural sector is characterised by extensive cattle ranches and large agricultural enterprises that produce for export. Livestock, mainly cattle and sheep, makes up over 50 percent of agricultural production. Crop production is dominated by soya, with forestry production also increasing in significance. Over the last 30 years, export-oriented agriculture has intensified driven by foreign investments and a strong global interest in soya and forestry products. Uruguay exports approximately 70 percent of its agricultural production to over 140 destinations. The main markets are China and Brazil. Many of the agricultural products for export are processed in the six coastal departments on the Rio de la Plata and Atlantic Coast. Agricultural production in the departments of Rocha and Maldonado is focused on cattle, rice and forestry; in Montevideo, Canelones, San Jose and Colonia, production is focussed on horticulture and dairy farms.

4 Aquaculture

Aquaculture production is currently very limited in Uruguay and concentrated on freshwater species. With growing global markets for fish products, the expansion of aquaculture could present an opportunity for diversification of the national economy. The National Aquaculture Zoning project (2011-2013) identified a number of coastal and marine areas that would be suitable for the development of mariculture. However, the consultation indicated that the development of marine aquaculture is currently not considered a viable option given the investment and new technology it would require. A potential expansion of the aquaculture sector in Uruguay would likely focus on enhancing freshwater harvests from land-based closed systems, with some added potential within natural freshwater systems.

5 Marine renewable energies

Uruguay has made considerable progress on generating electricity from domestic renewable energy sources. Up to 98 percent of the country's electricity is generated from land-based hydro, solar and wind power and biomass. Marine renewable energy does not currently exist in Uruguay. The country's offshore wind potential has been preliminarily explored for opportunities to expand and diversify Uruguay's renewable energy resources. However, preliminary projections show that up to 2040 (and likely beyond), national needs, as well as exports to neighbouring countries, will be sufficiently met by land-based renewable energy sources. Given the considerable costs and technical challenges of building and operating marine installations, and limited existing infrastructure within the country to support this sector,

there are currently no drivers that might incentivise interest in developing marine renewables (wind, wave or tidal), nor are there any plans to do so.

The consultation highlighted the possibility of future investment in offshore hydrogen-based fuel generation. The possibility of exporting hydrogen-based fuel to European markets has been evaluated. However, there are no concrete plans or policies in place at present, and there is currently considerable uncertainty over whether this is likely to become a viable part of Uruguay's future blue economy.

The National Energy Policy 2005-2030: transition to domestic renewable energy resources

The first phase of the national energy transition focused on renewable electricity. The second phase will focus on the decarbonisation of transport and industrial sectors. This will be done through direct or indirect electrification using processes that allow to convert renewable electricity into storable fuels.

Table 1 provides an overview of illustrative figures for tourism, fisheries and agriculture. These figures are included here as approximate indicators of the scale of the three sectors in Uruguay's economy. However, it should be noted that the figures are based on different sources and therefore may not be exact and entirely comparable. If a comparison of the sectors were needed in future, other values would be required to ensure accurate consideration of the respective roles of each sector for Uruguay's economy and society. For example, cultural linkages,

Table 1 (repeated). An overview of illustrative figures for tourism, fisheries and agriculture in 2019. These figures are based on different sources and therefore may not be exact and entirely comparable.

Sector	Contribution to Gross Domestic Product (%)*	Contribution to Gross Domestic Product (US\$)	Number of jobs	Contribution to total national employment (%)
Tourism	7% ⁽¹⁾	3,923 million ⁽²⁾	126,474 ⁽¹⁾	7.1% ⁽³⁾
Fisheries	0.2%*	117 million ⁽⁴⁾	2,873 ⁽⁵⁾	0.2% ⁽³⁾
Agriculture	5.8% ⁽⁵⁾	3,276 million ⁽⁵⁾	137,801 ⁽⁵⁾	7.7% ⁽³⁾

* Based on a Gross Domestic Product of US\$ 56,046 million in 2019. World Bank.

1 Based on information provided by MINTUR.

2 Estimated based on 7% contribution to US\$ 56,046 Gross Domestic Product.

3 Based on approximate total national employment of 1.8 million in 2019. MGAP. Anuario estadístico agropecuario 2020.

4 Based on information from MGAP-DINARA.

5 Based on data from MGAP. Anuario estadístico agropecuario 2020.

equity and social benefits related to the various sectors and potential environmental costs and benefits would need to be considered.

Tourism is regulated by the Law on Regulation of Tourism Activities (Law N°19.253), which recognises tourism as a human right to leisure, knowledge and culture, as well as an activity of cultural, economic and social interest. It requires economic development to be in balance with environmental protection, setting out limits to ensure the sustainability of tourism activities.

Fisheries and aquaculture are regulated by the Law on Responsible Fishing and Promotion of Aquaculture (Law N°19.175). The law regulates the conservation, research, sustainable development and responsible use of hydrobiological resources and ecosystems, referring to the FAO Code of Conduct for Responsible. Under this law, a Fisheries Advisory Council as well as Local and Zonal Artisanal Fisheries Councils for were set up to enable participation of stakeholders in fisheries management. The law also established an Aquaculture Advisory Council to facilitate exchange with the aquaculture sector. The Argentine-Uruguayan Common Fishing Zone is managed by the Joint Technical Commission of the Uruguayan-Argentine Maritime Front (CTMFM). The CTMFM carries out annual stock assessments and sets annual maximum allowable catches. Industrial and artisanal fishing fleets are regulated by permits that determine target species and area of operation. Uruguay also has regulations (and has conducted extensive research) to mitigate bycatch of turtles and sea birds. Furthermore, different mechanisms are in place in Uruguay's territorial sea and exclusive economic zone to protect and sustainably manage fishing resources (e.g. preventive closures of fish stocks, temporary closures of bivalve harvesting, closure of areas to fishing activity).

Multiple laws and regulations control the environmental impact and the production processes of the agricultural sector. These cover the responsible and sustainable use of soil and water, the use of agrochemicals and fertilisers, and a national certification system for organic production. In 2019, the Government passed a new Law on the Promotion and Development of Production, Distribution and Consumption Systems for Agroecological Products (Law N° 19.717). Under this law, a cross-ministerial, multi-stakeholder honorary commission was formed to develop a

National Plan for the Promotion of Production based on Agroecology.

Over the last decade, efforts have been made to establish the circular bioeconomy as the new paradigm for economic development in Uruguay. The aim is an economy based on the sustainable use of natural resources and ecosystem services in circular processes that are more resource-efficient, produce less waste and pollution, and maintain and restore the regenerative cycles of nature. The circular bioeconomy transformation of Uruguay's productive sectors provides an opportunity for integrating two key principles of a sustainable blue economy – circularity and sustainable resource use – into the development of the country's blue economy.

The regulatory framework for both fisheries and agriculture in Uruguay aims to protect and promote small-scale producers. In 2014, the national Government adopted a law that declares artisanal fishing and family farms activities of general national interest and promotes public purchases from these (Law N°19.292). The law sets out provisions to facilitate access for artisanal fishers and small-scale agricultural producers to development projects, markets for their products and to the national social security system, providing access to health care, retirement and pensions, among other benefits.

The protection of the natural environment is anchored in Article 47 of Uruguay's Constitution and regulated through the Law on the General Protection of the Environment (Law N° 17.283). This places the protection of biodiversity and ecosystems above other individual or sectoral interests. The conservation of natural resources is included as a priority concern in the regulatory frameworks governing individual sectors. To protect (and, where appropriate, restore) the environment, Environmental Impact Assessments have been required by law since 1994 for public and private developments and construction activities (Law N° 16.466).

In 2000, the national Government adopted a law setting up the National System of Protected Areas (SNAP) (Law N° 17.234). This law harmonises the planning and management criteria for areas to be protected and sets out standardised management guidelines. The SNAP currently includes 17 protected areas, covering about 1.05 percent of the national territory. Currently, there is only one

marine protected area (Isla de Flores) although five other protected areas include a marine component. The SNAP covers about 0.7 percent of Uruguay's territorial sea and exclusive economic zone. A new marine protected area is under discussion around

Isla de Lobos. In 2013, the territorial sea and exclusive economic zone of Uruguay were declared by law as a sanctuary for whales and dolphins that come to the nutrient-rich waters off Uruguay to feed (Law N° 19.128).

ANNEX 3: Interactions in Uruguay's blue economy

1 Impacts on the marine and coastal environment

1.1 Tourism impacts

A positive visitor experience in Uruguay depends on clean beaches and seas, good water quality, and healthy wildlife populations that support sport fishing and wildlife watching experiences. Negative impacts of coastal tourism can come from uncontrolled urban development that destroys coastal ecosystems and reduces space for nature, marine infrastructures that interrupt natural sediment dynamics, pollution from waste and littering, unregulated extraction of fish through angling and sport fishing, or disruption of breeding and feeding of wildlife through noise disturbance or the presence of people. The significance of these impacts depends on the destination's carrying capacity in terms of number and density of visitors and infrastructure.

The risk of these negative impacts is particularly high in the well-developed, urbanised beach resorts of Punta del Este and Piriápolis that are receiving a high volume of visitors. Other areas, such as Cabo Polonio, remain relatively less developed and accessible, and therefore receive a much lower volume of visitors. The sandy beaches, dune ecosystems and coastal lagoons of Rocha offer potential opportunities for less impactful, nature-based tourism, including wildlife watching. The pristine natural environment is a key asset in this area. So, avoiding the potential negative impacts that may arise from poorly managed infrastructure development and damaging tourist behaviour will be essential. Efforts to avoid this should build on work already being undertaken by the Ministry of Tourism (e.g. to promote good practices in whale watching).

1.2 Fisheries impacts

The management of fishing impacts in Uruguayan waters is a transnational issue as these waters are fished by vessels from Uruguay and Argentina under the Argentine-Uruguayan Common Fishing Zone agreement. The Rio de la Plata estuary and the coastal lagoons are vital breeding areas for marine fish and invertebrates. Maintaining these areas in

good environmental condition is especially important for the sustainability of fisheries, in particular as there has been a significant decline in fisheries landings in recent years.

Existing regulations aim to reduce the environmental impacts of fishing in order to protect the marine natural capital base for sustainable fisheries and other human activities that depend on it. However, environmental damage is still evident, particularly resulting from the industrial fleet, over 90 percent of which uses bottom trawls that damage seabed habitats. Another common problem is bycatch, which affects species of high conservation importance such as turtles, albatrosses, petrels and dolphins that commonly become entangled in gillnets.

Artisanal vessels are much smaller and individually have much less capacity to cause environmental degradation. However, the number of vessels is much higher. Furthermore, in coastal areas, the lack of adequate infrastructure for artisanal fishermen contributes to unregulated and unmanaged waste disposal, creating a source of pollution. In some coastal areas, artisanal fishermen also come into conflict with wildlife. A particular problem exists with sea lions (*Otaria flavescens*) that take fish from the fishermen's gillnets or longlines, damage the fish that remain in the nets, and cause damage to the gear itself, causing some artisanal fishermen to call for a cull of sea lions.

Uruguay has productive fishing grounds with a mixture of tropical and temperate species. Climate change will likely raise water temperatures and potentially shift these assemblages towards predominantly tropical species. This could result in the loss of temperate species that prefer colder waters such as hake and cold-water clams. Furthermore, an increase in frequency and intensity of windy weather may reduce accessibility of fishing grounds in future, especially for smaller vessels.

1.3 Agriculture impacts

Agricultural activities are causing significant downstream impacts on the estuarine ecosystems,

coastal lagoons and coastal waters of Uruguay. These impacts occur through runoff of eroded soils, nutrients from animal waste and synthetic fertilisers, and pesticides into waterways. In recent years, there has been a trend towards more intensive and industrialized forms of crop agriculture (often in monocultures) that depend on high levels of agrochemical inputs. Moreover, the expansion of the agricultural frontier is taking place on virgin or resting natural fields, in low-lying areas and in deforested areas, which produces a triple negative effect: loss of biodiversity, water pollution and increased greenhouse gas emissions. The intensification and expansion of agriculture is also negatively impacting buffer zones that play an important role for habitat connectivity and reducing run-off. The increase in global demand for soya and forestry products have been a key driver of the expansion of cultivated land in Uruguay.

The impacts that the expansion and intensification of agriculture is having on coastal ecosystems is well documented. In the coastal department of Canelones, all sites monitored between 2016 and 2017 showed non-compliance with environmental standards, and 95.5 percent of river and stream points found to be eutrophic. Blooms of cyanobacteria in coastal environments affected by nutrient-rich freshwater runoff have reduced bathing water quality. During periods of heavy rainfall in recent years, these blooms have affected beaches along hundreds of kilometres of coast from the department of Colonia to the department of Rocha, with health alerts issued for bathers.

Poor water quality is not exclusively caused by agriculture (other sources of pollutants, such as urban wastewater, were not captured in this Rapid Assessment). Climate change is likely to further exacerbate the issue as more frequent intense rainfall events and higher water temperatures will create increasingly favourable conditions for algal growth.

Measures are being taken within the agriculture sector to address downstream impacts. Most crop cultivation in Uruguay is done with no-till farming, introduced in the late 1990s to reduce soil degradation. The adoption of no-till farming contributed to the expansion of crops into previously uncultivated land. However, if no-till is combined with crop rotation and continuous organic soil cover, this farming system (known as Conservation

Agriculture⁶) holds great potential to restore healthy soils, reduce surface run-off and erosion while restoring biodiversity and maintaining high crop yields. Continuous organic soil cover using crop residues or cover crops can also be used to control weeds and pests, reducing the dependence on synthetic herbicides and pesticides.

2 Sector interactions

2.1 Tensions between artisanal fishermen and other coastal residents

Tensions exist between artisanal fishermen and other users and residents of coastal areas when fishermen land their catch on public beaches without authorisation. Territorial conflicts also exist among artisanal fishermen over mooring spaces and landing spots for their catch. These tensions are exacerbated by the lack of adequate infrastructure and poor hygienic conditions under which artisanal fishermen process their catch, often discarding fish waste on the beaches where they operate. The social dynamics of these tensions are too complex for this Rapid Assessment to fully understand. It appears that artisanal fishermen in poor and unsanitary living conditions at these beach landing sites are perceived as a disenfranchised social group by some and as a disturbance and annoyance by others, while potentially also taking pride in their identity as fishermen living a life beyond norms imposed by others. However, it also appears that the fishermen themselves take pride in their identity and lifestyle away from urban conventions and beyond social norms.

2.2 Tensions between industrial and artisanal fishermen

Artisanal and industrial fishermen compete for the same fish species but under unequal conditions. As industrial vessels are larger, more powerful and able to operate further out at sea, they have the capacity to remove the larger share of the resources. On the other hand, industrial vessels do not have access to the fishing resources in the area up to seven nautical miles from the coast, which is restricted to artisanal fisheries.

2.3 Conflicts between artisanal fisheries and sports fishing

Artisanal fishing vessels and sports fishers often compete for the same space and resources in

coastal waters, causing conflicts. A factor that might add to the tension is that fish caught by sports fishers is sometimes illegally sold to restaurants and consumers, causing competition for artisanal fishermen in selling their catch. More generally, the expansion of water sports and boating activities is causing tension between the artisanal fishing community and recreational users.

2.4 Downstream impacts of agriculture on fisheries

The downstream impacts of agriculture on water quality pose problems fisheries. Poor water quality

threatens the quality and safety of fish for consumption. Over recent decades, there has been an increase in the duration and intensity of red tides and a greater presence of harmful algae and cyanobacteria, which has led to the closure of bivalve fisheries.

2.5 Downstream impacts of agriculture on tourism

The downstream impacts of agriculture on water quality also pose problems for tourism. Red tides and greater presence of harmful algae and cyanobacteria threaten the quality of the coastal tourism experience and pose a risk to the health of tourists and residents.

ANNEX 4: Sources of information

The main sources for the information on the five sectors and natural environment presented in Annex 2 and 3 are included here. For further details about the information on which this Rapid Assessment is based, including a full list of references, please refer to the background documents in the technical annex available on the website of UN Uruguay. Information was also gathered through direct consultations with relevant ministries, in particular on the topics of aquaculture, marine renewable energies, sector impacts and interactions.

Tourism

Consultation with the Ministry of Tourism (MINTUR)
Datos y estadísticas oficiales del MINTUR
Oficina de Planeamiento y Presupuesto (2019). Hacia una Estrategia Nacional de Desarrollo, Uruguay 2050. Volumen XI. El turismo del futuro en Uruguay. Estudio Prospectivo.
Uruguay Natural (2009). Plan de Marketing Estratégico y Operativo del Turismo de Uruguay. MINTUR.

Fisheries

Consultation with the National Directorate of Aquatic Resources (DINARA) of the Ministry of Livestock, Agriculture and Fisheries (MGAP)
Oficina de Estadísticas Agropecuarias. Anuario estadístico agropecuario 2020. MGAP.
Instituto Nacional de Estadística (2019). Anuario Estadístico Nacional 2019, 96ª versión.
DINARA (2010). Pesquería artesanal de corvina en Uruguay. Frente Marítimo, Vol. 21, p23-35.
Programa EcoPlata (2008). Aportes sobre la pesca artesanal en la costa uruguaya.

Agriculture

Consultation with the Office for Agricultural Planning and Policy (OPYPA) of the Ministry of Livestock, Agriculture and Fisheries (MGAP)
Oficina de Estadísticas Agropecuarias (DIEA). Anuario estadístico agropecuario 2020. MGAP.
Banco Central de Uruguay. Estadísticas e indicadores. Cuentas nacionales.
Uruguay XXI (2020). Informe sectorial Agronegocios. DIEA (2018). Encuesta agrícola “primavera 2017”.

Aquaculture

Consultation with the National Directorate of Aquatic Resources (DINARA) of the Ministry of Livestock, Agriculture and Fisheries (MGAP)
Dirección Nacional de Recursos Acuáticos (2019). Boletín Estadístico Pesquero 2018. Montevideo, MGAP-DINARA, 52 p.

Marine renewable energies

Consultation with the Ministry of Industry, Energy and Mining (MIEM)
Oficina de Planeamiento y Presupuesto (2019). Hacia una Estrategia Nacional de Desarrollo, Uruguay 2050. Volumen X. Presente y futuro de las energías renovables en Uruguay.

Natural environment

Consultation with the Ministry of Environment (MA)
Sistema de Información del Sistema Nacional de Áreas Protegidas (SNAP)

Annex notes

1. Raworth (2017). Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist. Vermont: Chelsea Green Publishing.
2. Singh et al. (2018). A rapid assessment of co-benefits and trade-offs among Sustainable Development Goals. *Marine Policy*, 93, pp. 223–231.
3. WWF (2020). Improving international ocean governance for life below water. Report.
4. The Sustainable Blue Economy Transition Framework was developed by UNEP and its partners and will be available on the UNEP website. For more information, please contact ole.vestergaard@un.org.
5. The baseline information is available in a separate technical annex on the website of UN Uruguay.
6. More information on Conservation Agriculture is available here: <http://www.fao.org/conservation-agriculture/en/>



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