INTEGRATING BIODIVERSITY INTO THE SUSTAINABLE DEVELOPMENT AGENDA

An analysis of Voluntary National Reviews

UN❂ WCMC
environment programme

Integrating biodiversity into the Sustainable Development Agenda: An analysis of Voluntary National Reviews

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Executive summary

- Because of the foundational role of nature to our societies, economies and to quality of life for all, 14 of the 17 Sustainable Development Goals (SDGs) have nature's elements as critical to their delivery. However, current negative trends in biodiversity loss and ecosystems degradation could significantly undermine progress towards 35 out of 44 SDGs targets related to poverty, hunger, health, water, cities, climate, oceans and land.

- Every year, countries present their progress towards the 2030 Agenda for Sustainable Development before the High-Level Political Forum (HLPF), through Voluntary National Reviews (VNRs). VNRs clearly illustrate country priorities for sustainable development.

- In 2020 the HLPF takes place under the theme "Accelerated action and transformative pathways: realizing the decade of action and delivery for sustainable development". In view of the theme of this Forum, this analysis systematically reviews a relevant sample of 30 VNRs in order to assess the level of biodiversity inclusion in the various national SDG implementation processes.

- This analysis shows that only 20% of the selected VNRs mention biodiversity as a priority for sustainable development and only approximately half of the sampled countries have mainstreamed biodiversity throughout their VNRs.

- All the 30 VNRs reviewed mention biodiversity at least twice. The upper third of the sample mentions biodiversity more than 20 times per 100 pages. The country that refers to biodiversity the most is New Zealand with more than 50 mentions per 100 pages. The country with the lowest ratio is Panama, which mentions biodiversity only 3 times over 100 pages.

- All selected VNRs mention biodiversity in relation to at least one of the biosphere-related SDGs and 70% of the VNRs mention biodiversity in relation to at least one economy-related SDG. However, only one third mentions biodiversity when reporting on society-related goals such as SDG 3, 4 or 5 (Good health and wellbeing, Quality education, Gender equality).

- 70% of the countries mention at least one environmental crime in their VNRs, the most common being illegal, unreported and unregulated fishing and illegal wildlife trade. Moreover, 20 countries identify a range of challenges incurred in the implementation of SDGs 14 and 15 and in reporting against biodiversity-related targets, including data availability issues, increasing pressures on ecosystems and lack of technical capacity.

- Raising decisionmakers' awareness globally of the importance of biodiversity as well as providing tools for enhancing technical capabilities for mainstreaming and reporting will be fundamental to improve future reporting on the Agenda 2030.

- The introduction of a common reporting framework for VNRs would allow more emphasis to be placed on an evidence-based assessment of challenges and gaps, in addition to an enumeration of success stories to identify good practice and the sharing of experiences. The Convention on Biological Diversity (CBD) Secretariat may wish to consider submitting to the HLPF an updated set of suggested fields and guidelines to report against based on the

post-2020 global biodiversity framework. This would allow countries to focus their VNRs on issues pertaining to the drivers of biodiversity loss, people's dependencies on nature, biodiversity mainstreaming, accountability and awareness raising. In addition, further guidance and support for countries to focus on using the biodiversity indicators in preparing the VNRs would be valuable.

- Multi-stakeholder consultations are important for raising awareness of the 2030 Agenda, especially at the local level, and therefore increasing the integration of biodiversity in the VNRs. The recommendations of civil society and local communities could be incorporated in the VNRs and a follow-up system be put in place for transparency and accountability.

- In the aftermath of the COVID-19 pandemic, it is particularly crucial for VNRs to highlight the connections between nature and human health, given that the continued degradation of biodiversity and ecosystems may lead to new outbreaks in the future. In addition, the role of vulnerable groups such as women, youth and indigenous people in protecting and restoring biodiversity could be further explored also in line with the 'leaving no one behind' principle. Finally, the importance of education in shaping how we behave towards nature would also deserve some more attention in the VNRs.

- Very few VNRs reflect on the contribution of biodiversity and ecosystem services in terms of natural capital. The use of natural capital accounting systems or of multi-dimensional measurements, such as the Inclusive Wealth Index, could be further promoted to better account for and analyse country progress towards sustainable development.

- Further integration of country biodiversity and climate change agendas at the national level could be explored in the VNRs, particularly by describing how countries can meet both biodiversity and climate targets including through the use of nature-based solutions. A key challenge outlined by countries in terms of scarce data availability could be tackled by deploying geospatial monitoring tools.

1 Policy background and rationale

The 2030 Agenda for Sustainable Development was adopted by all United Nations (UN) Member States in 2015 (UN, 2015). Central to the Agenda are the 17 Sustainable Development Goals (SDGs), which provide a roadmap for all countries towards peace and prosperity for people and the planet. The SDGs build on decades of global action for sustainability including the Earth Summit, (the UN Conference on Environment and Development) (UN, 1992), the Millennium Development Goals (MDGs), and the Rio+20 UN Conference on Sustainable Development (UN, 2012). The Goals and their targets are "integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental" (UN, 2015).

The 2030 Agenda encourages member states to "conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country-led and country-driven" (UN, 2015). These Voluntary National Reviews (VNRs) are presented to the annual High-level Political Forum (HLPF) and constitute a useful tool to assess country-level progress on sustainable development. Despite some positive initial advancement in terms of frameworks, coherence and multi-stakeholder approach, recent assessments have shown that "the world is not on track for achieving most of the 169 targets that comprise the Goals" (Independent Group of Scientists appointed by the Secretary-General, 2019).

According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) the implementation of the 2030 Agenda could be significantly undermined by current negative trends in nature. Biodiversity – defined as "the variability among living organisms from all sources" (UN, 1992)– is essential for achieving the Sustainable Development Goals, as it provides the basis for human wellbeing through ecosystem services and nature's contribution to people. However, human actions are threatening around 25% of species with global extinction, 75% of the global land surface is significantly altered, and 66% of the ocean area is experiencing increasing cumulative impacts. Because of the SDGs' indivisible and integrated character, 14 of the 17 goals have nature's elements as critical to their delivery (CBD, 2019). The loss of biodiversity may negatively impact progress towards 35 out of 44 targets related to poverty, hunger, health, water, cities, climate, oceans and land (Sustainable Development Goals 1, 2, 3, 6, 11, 13, 14, and 15) (IPBES, 2019).

As just 10 years remain to achieve the goals of the 2030 Agenda, countries will need to accelerate progress in what UN Secretary-General António Guterres has called the "Decade of Action for the Sustainable Development Goals". Understanding the interactions between SDGs and acting upon potential synergies and trade-offs will be crucial elements for success. Parties to the Convention on Biological Diversity (CBD) have been urged on several occasions to strengthen the interlinkages between nature and sustainable development (CBD, 2018) and to mainstream biodiversity throughout the implementation of all relevant SDGs (CBD, 2016). Yet, considering what has been reported so far through the VNRs to the HLPF, it seems that much work on the integration of biodiversity in national sustainable development policies remains to be done. With 21 of the 169 SDG targets set to expire in 2020 and 12 of them focusing on biodiversity, it is vital that such integration efforts are sustained. The post-2020 global biodiversity framework now due for adoption in 2021 can help to provide momentum in this respect.

Many recent studies have analysed the interactions between SDGs and underlined the importance of embracing a systemic approach to the implementation of the Agenda 2030, including through improved management of its environmental dimension. Folke *et al* (Folke, Biggs, Norström, Reyers, & Rockström, 2016) conceptualise a three-dimensional diagram, whereby the economic and society-related SDGs are embedded in the biosphere. Pradhan *et al* (Pradhan, Costa, Rybski, Lucht, & Kropp, 2017) carry out a quantitative analysis of the interaction of SDGs indicators to identify synergies and trade-offs. Through a similar approach, Barbier and Burgess (Barbier & Burgess, 2019) advise countries against attempting to attain SDG 1 – No Poverty at the expense of other critical SDGs, especially those associated with the environment. Finally, Scharlemann *et al* (Scharlemann, et al., 2020) illustrate how environment–human linkages influence most interactions between SDGs and how these should support decision making in 2020 and beyond.

Some analyses of the implementation of the 2030 Agenda have focused on the VNRs and their environment or biodiversity dimension (see section 2 below). For instance a policy brief by the United Nations Environment Programme (UNEP) assesses the VNRs as review mechanisms and suggests recommendations to strengthen national reporting on the SDG environmental dimension (UNEP, 2018). An Information Document by the CBD Secretariat provides guidance for reporting progress on biodiversity to the High-Level Political Forum (CBD, 2018). Moreover, there is an abundant literature outlining the importance of embedding biodiversity considerations in multiple sectorial activities to achieve sustainable development (OECD, 2018). However, no documents have so far evaluated or compared the extent to which biodiversity is mainstreamed in VNRs.

This report from UNEP-WCMC reviews a relevant sample of VNRs in order to assess the level of biodiversity inclusion in the various national SDG implementation processes. The report takes into consideration all 17 Goals and related targets as reported in the VNRs, with a focus on SDG 14 – Life below water and SDG 15 – Life on Land. Its aim is to provide a contribution to the global discussion leading towards the post-2020 global biodiversity framework which offers insights into how member states are integrating biodiversity into national sustainable development planning and enhancing policy coherence across related international environmental processes. The information contained within it will be used in a number of ways for communication and outreach including as the basis for policy briefings to UNEP technical divisions and regional offices.

This analysis comes at a timely moment: 47 countries will present their VNRs to the 2020 HLPF under the theme of "Accelerated action and transformative pathways: realizing the decade of action and delivery for sustainable development". Of these, 26 countries will present their VNR for the first time, 20 will be second time presenters and 1 third time presenter.

Moreover, the Forum comes at a time when the need for inclusive and green action has never been stronger. The COVID-19 outbreak has shifted the world's attention towards crisis management and the imminent need for reinforced system resilience. Whilst governments' immediate priority is to contain the health crisis and reduce its worst economic impacts, the recovery from the pandemic offers an opportunity for rethinking global socio-economic systems and accelerating the implementation of the Sustainable Development Goals.

2 Previous analyses and methodology of this study

The United Nations Department of Economic and Social Affairs (UNDESA) publishes an annual synthesis report which reviews the VNRs presented to that year's HLPF and which highlights countries' priority actions. In the 2019 Synthesis Report (UNDESA, 2019), UNDESA observed that, in the context of SDG 14 and 15, countries noted challenges in terms of ecosystem and biodiversity management and all countries were making significant efforts to halt the decline of biodiversity through establishing protected areas. However, beyond SDGs 14 and 15 biodiversity is mentioned in different degrees, and biodiversity mainstreaming varies from country to country.

A policy brief issued by UNEP (UNEP, 2018) acknowledges the progress made by Member States between 2016 and 2017 in integrating the environmental dimension in the VNRs, underlines a series of challenges both in terms of action and reporting, and provides recommendations for future VNRs. A brief analysis on the biodiversity dimension of VNRs provided guidance for further mainstreaming (CBD, 2018). It showed that in 2017 biodiversity was covered to varying degrees in all but one report and was mentioned more than 20 times in the reports prepared by seven countries (i.e. Belgium, Portugal, Cyprus, Chile, Uruguay, Malaysia and Thailand). Biodiversity coverage increased from 2017 to 2018 with the upper quartile of reports mentioning biodiversity 31 times per 100 pages and the lower quartile of reports mentioning biodiversity 11 times per 100 pages.

Based on a relevant sample of VNRs, this analysis will depart from the existing studies in order to explore: (1) the level of integration or recognition of biodiversity in the review process; (2) the contexts in which biodiversity is mentioned and how it links to the social and economic dimension of sustainable development; (3) progress towards implementation of biodiversity-related goals and targets, including countries' main identified challenges and possible solutions.

A total of 189 countries have submitted (or will have submitted by 2020) their VNRs. Of these, 30 VNRs (i.e. approx. 15% of the total) were taken into consideration for the purpose of this analysis. The sampling is based on three criteria: (1) the country's Human Development Index (HDI); (2) the country's population size; (3) the UN regional group to which the country belongs. Accordingly, Table 1 shows the countries selected for this study.

2017	2018	2019
Argentina*	Albania	Azerbaijan
Brazil	Latvia	Cameroon
Ethiopia	Lebanon	Fiji
India*	Mali	Guatemala
Italy	Romania	New Zealand
Kenya*	Vietnam	Saint Lucia
Malaysia		Serbia
Nepal*		Sierra Leone
Netherlands		South Africa

Panama*		Tunisia
Peru*		Turkey
Sweden		United Kingdom

Countries that will present a new VNR at the HLPF 2020

Table 1: List of sampled VNRs per publication year.

The country breakdown according to their HDI score is as follows: 10 very high; 11 high; 6 medium; 3 low (UNDP, 2019). The country breakdown according to population size (UNDESA, 2019) is as follows: 4 countries belong to the first quartile (less than 2.8 million inhabitants); 6 countries belong to the second quartile; 8 countries belong to the third quartile; and 12 countries belong to the fourth quartile with highest population size.

The regional breakdown is as follows: 7 countries in the UN Africa Group, 7 in the Asia-Pacific Group, 5 in the Eastern European Group, 6 in the Latin American and Caribbean Group, and 5 in the Western European and Others Group (WEOG). Turkey belongs to both Asia-Pacific and WEOG groups. Moreover, 2 countries are Small Islands Developing States (SIDS).

As far as the publication year is concerned, 12 of the considered VNRs were published in 2017, 6 in 2018, and 12 in 2019. Moreover, 6 of the selected countries are currently working on their second VNR to be presented at the HLPF 2020 (i.e. Argentina, India, Kenya, Nepal, Panama, Peru). All VNRs are publicly available on the Sustainable Development Goals Knowledge Platform (UN, 2015).

The analysis was conducted in two phases. The first phase (quantitative analysis) consisted of a word search through each of the 30 sampled VNRs in order to answer to a series of 12 questions. These questions explored how often biodiversity-related terms are mentioned in the VNRs, in what sections of the VNRs and in connection to which SDG biodiversity is mentioned the most, which national policies, plans and strategies are mentioned in relation to biodiversity, and other relevant issues such as any mention of environmental crimes in the VNR or the key challenges faced by countries in implementing biodiversity-related goals and targets. The word search focuses on countries' description of stocks (biodiversity, ecosystems, natural resources) rather than flows (ecosystems services, nature's contribution to people) in order to explore to what extent natural capital is recognised. Further refinements to the analysis in future could include ecosystems services such as food provision, water purification, flood control, and cultural inspiration.

The second phase (qualitative analysis) consisted of a qualitative review of the 30 selected VNRs, in order to better understand into which modalities countries mainstream biodiversity actions. Following the methodology used by UNEP's policy brief on the environmental dimension (UNEP, 2018), the sampled VNRs were divided in four categories according to the level of recognition and mainstreaming of biodiversity in the documents (see Annex I for more details). The various sections of the VNRs were subsequently analysed in order to explore the interlinkages referred to by countries between biodiversity and progress on the 17 SDGs and related targets. Finally, best practices and examples by countries were highlighted per section, goal or target.

3 Quantitative analysis: to what extent is biodiversity mentioned in the VNRs?

A word search was conducted through the sample of selected Voluntary National Reviews (VNRs) (30 out of 189) in order to count the number of times the term "biodiversity" or related concepts (i.e. "biodiversity/biological diversity", "ecosystems/habitats", and "natural capital/resources") are mentioned in the documents. The word search explored the sections and the SDGs where these terms were the most used. The results show the key international and national frameworks in place to implement biodiversity-related goals and targets. For the purpose of this analysis, reference to stocks of natural resources includes geology, soil, air, water, and all living things.

3.1 Are "biodiversity" and/or related terms mentioned in the VNRs? *If yes*: how many times are they mentioned per 100 pages?

All 30 VNRs mention biodiversity at least twice. The upper third of the sampled reports mentions biodiversity more than 20 times per 100 pages. The country that refers to biodiversity the most is New Zealand with more than 50 mentions per 100 pages. The lower third of the reports mentions biodiversity less than 9 times per 100 pages. The country with the lowest ratio is Panama, which mentions biodiversity only 3 times over 100 pages. Chart 1 below shows the ranking of countries according to the "biodiversity/biological diversity" search.
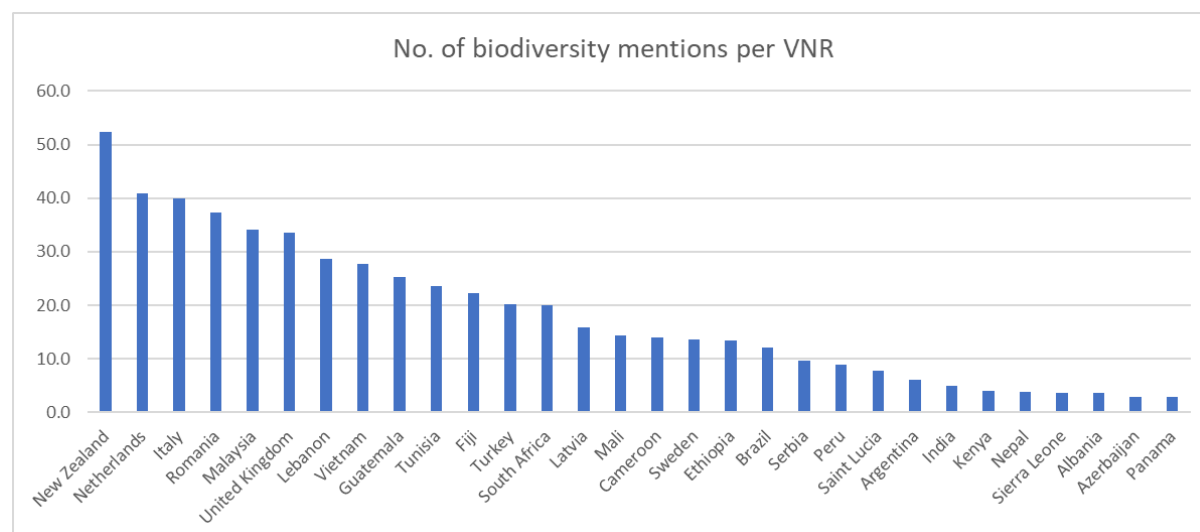
Chart 1: Number of times the terms "biodiversity" and/or "biological diversity" are mentioned per 100 pages in the 30 sampled VNRs

It should be noted however that some countries may not use the terms "biodiversity" or "biological diversity". For this reason, a further search for other related concepts was conducted (i.e. "ecosystems/habitats" and "natural capital/resources"). The two sets of ranking in comparison remain quite similar; however, there are some notable exceptions. Panama, which ranks last in the "biodiversity" word-search, is among the middle-ranking countries when it comes to "ecosystems" and "natural capital". Brazil ranks very low in the "ecosystems" word search but appears in the upper third for the word search "natural capital/resources".

Chart 2 shows the ranking of countries according to the aggregated "biodiversity, ecosystems, and natural capital" search. This second aggregated set of figures is considered to be the most accurate representation of the level of inclusion of biodiversity in the VNRs.
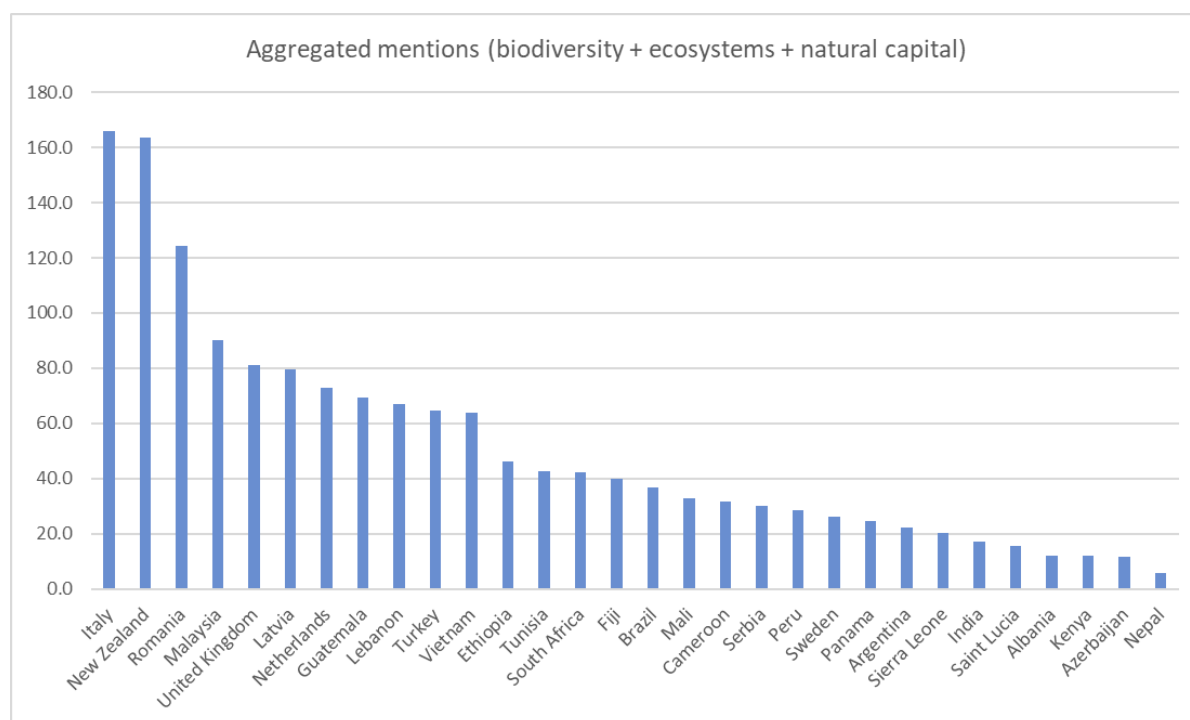
Chart 2: Number of times the terms "biodiversity, ecosystems, natural resources" are mentioned per 100 pages in the 30 sampled VNRs

3.2 Does the number of biodiversity mentions (and related terms) vary over time?

According to the selected sample of VNRs, biodiversity is mentioned on average 49.8 times every publication year (i.e. 2017, 2018, 2019). Chart 3 shows there seems to be no clear variation in the number of mentions over time. Of 6 selected countries (i.e. Argentina, India, Kenya, Nepal, Panama, Peru) who are currently reviewing their existing VNRs and who will publish a new VNR in time for HLPF 2020, 5 out of 6 appear in the lower third of the ranking chart. While these countries mention biodiversity relatively less often than other selected countries, it is possible that biodiversity will be mentioned more often in the new VNRs because of this year's strong focus on nature in the international agenda. The following chart shows the number of aggregated mentions per VNR colour-coded according to the publication year.
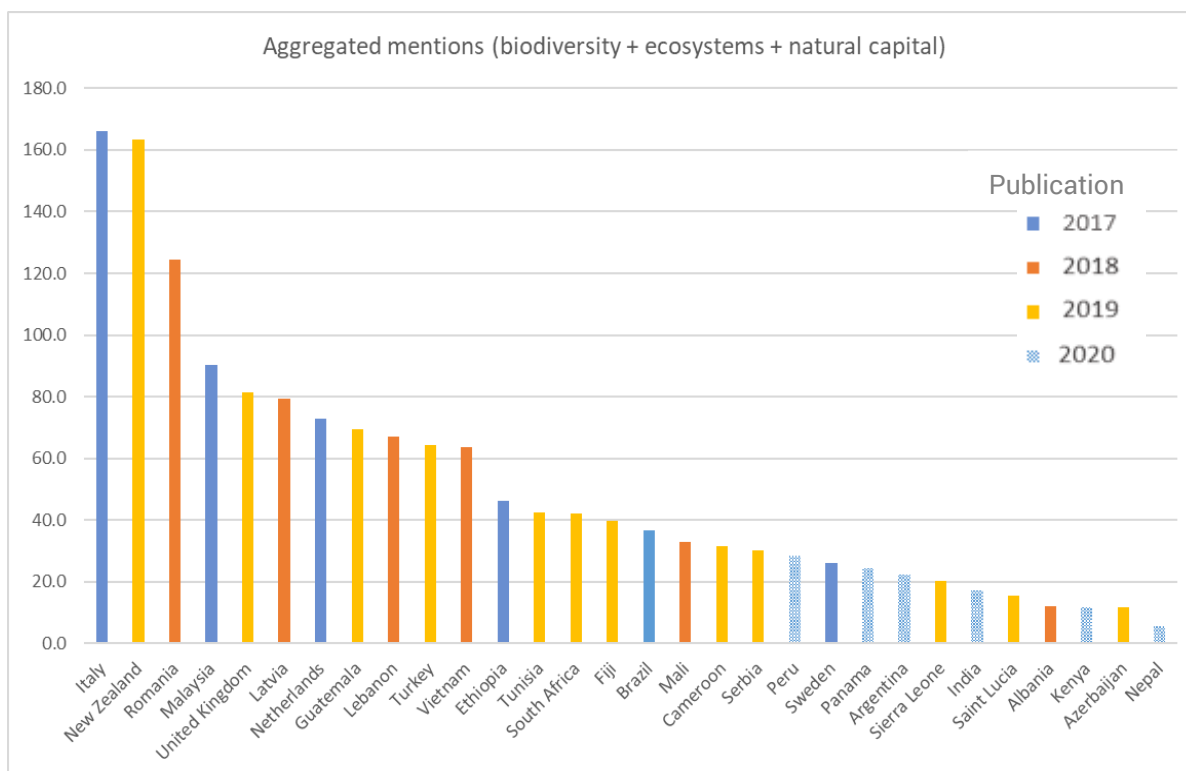
Chart 3: Number of times "biodiversity" – and related concepts – are mentioned per 100 pages in the sampled VNRs and colour-coded according to the publication year

3.3 In which VNR section is biodiversity mentioned the most?

Table 2 shows that almost all selected countries mention biodiversity in the section on progress made against SDGs and associated targets, and 14 countries mention biodiversity in their annexes (either while reporting against specific SDG target indicators for SDGs 14 and 15 or while attaching the minutes from stakeholders' engagement meetings). Italy mentions biodiversity in its opening statement, South Africa in its conclusions and Malaysia makes reference to biodiversity in the "Means of implementation" section. Both Turkey and the United Kingdom indicate concrete "next steps" while talking about biodiversity.

VNR sections	Countries mentioning biodiversity in the section
Opening statement	Italy
Highlights	Lebanon, Malaysia, Nepal, Vietnam
Introduction	Guatemala, Mali, Tunisia
Methodology	South Africa
Policy and enabling environment	Albania, Fiji, Netherlands, New Zealand, Peru, Romania, Sierra Leone, South Africa, Turkey, Vietnam
Progress on goals and targets	Albania, Argentina, Brazil, Cameroon, Ethiopia, Fiji, India, Kenya, Latvia, Lebanon, Malaysia, Mali, Nepal, Netherlands, New Zealand, Panama, Peru, Romania, Saint Lucia, Serbia, Sierra Leone, South Africa, Sweden, Tunisia, Turkey, United Kingdom, Vietnam

Means of implementation	Malaysia
Next steps	Turkey, UK
Conclusion	South Africa
Annexes	Albania, Argentina, Cameroon, Ethiopia, Fiji, Guatemala, Kenya, Latvia, Lebanon, Mali, Peru, Serbia, Sierra Leone, Turkey

Table 2: Countries mentioning biodiversity per VNR section

3.4 Does the report mention biodiversity as a priority in the introductory sections?

Chart 4 shows that 20% of the analysed countries mention biodiversity as a priority in the introductory sections of their VNRs (i.e. opening statement, highlights, introduction, methodology, policy and enabling environment). These are Guatemala, Italy, Latvia, Malaysia, New Zealand, and Romania, which appear in the first third of countries in Chart 2.
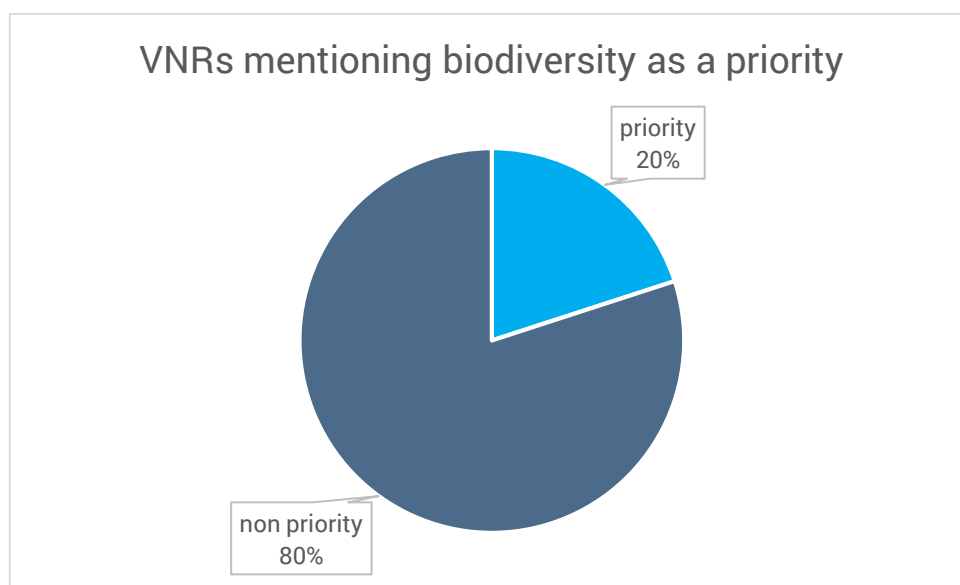
Chart 4: Percentage of VNRs mentioning biodiversity as a priority in the introductory sections

3.5 Does the report mention climate change as a priority? *If yes*, is there any explicit link between climate change and biodiversity?

Chart 5 shows that almost half of the countries (i.e. 14) indicate climate change as a priority. Four out of these 14 countries, although they do not explicitly mention biodiversity as a priority, link biodiversity to their national priority actions on climate change.

VNRs mentioning climate change as a priority

non priority 53%
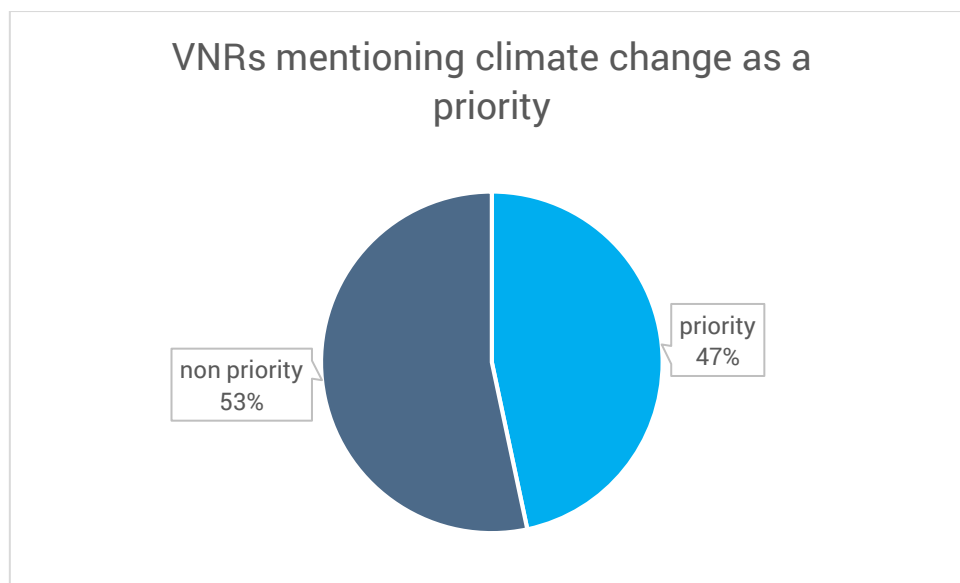
priority 47%

Chart 5: Percentage of VNRs mentioning climate change as a priority

3.6 In relation to which SDGs is biodiversity mentioned in the VNRs?

Table 3 shows that mentions of biodiversity occur across all SDGs with the exception of SDG 16 - Peace, justice and strong institutions; 26 VNRs report on progress made under SDG 14 - Life below water, 23 VNRs include some reporting on SDG 15 - Life on land, and the majority (93%) of the documents mention biodiversity in relation to at least one SDG other than 14 and 15. Four countries mention neither SDGs 14, 15 nor the related targets, but somehow include biodiversity when reporting against other goals such as SDG 8 - Economic growth (Azerbaijan), or SDG 13 - Climate action (Sierra Leone, Saint Lucia). Table 3 shows which countries mention biodiversity in relation to the different SDGs.

The frequency of biodiversity mentions per SDG varies depending on the country and on the VNR publication year. Every year, there is a specific set of SDGs against which countries are encouraged to report progress in their VNRs. Being a voluntary review, countries are free to decide whether to report on all SDGs or just the ones related to that year's HLPF SDG focus. This might explain the omission of SDG 14 or 15 from some of the selected VNRs.

SDGs	Countries mentioning biodiversity in relation to the SDG
1 - No poverty	Brazil, Ethiopia
2 - Zero hunger	Argentina, Azerbaijan, Brazil, Cameroon, Ethiopia, Guatemala, Italy, Latvia, Malaysia, New Zealand, Sweden, Turkey, United Kingdom
3 - Good health and wellbeing	Italy, New Zealand, Romania, United Kingdom, Vietnam
4 - Quality education	Italy, Kenya, Latvia, Romania

5 - Gender equality	Cameroon, Fiji, Turkey, United Kingdom
6 - Clean water and sanitation	Albania, Ethiopia, Guatemala, Italy, Latvia, Lebanon, New Zealand, Peru, Romania, United Kingdom, Vietnam
7 - Affordable and clean energy	Azerbaijan, Guatemala, Mali, Tunisia, United Kingdom, Vietnam
8 - Decent work and economic growth	Azerbaijan, Guatemala, Italy, Kenya, Malaysia, New Zealand, Peru, South Africa, United Kingdom, Vietnam
9 - Industry, innovation and infrastructure	Argentina, Fiji, Latvia
10 - Reduced inequalities	Serbia
11 - Sustainable cities and communities	Cameroon, Fiji, Guatemala, Italy, Turkey, United Kingdom
12 - Responsible consumption and production	Albania, Cameroon, Guatemala, Italy, Kenya, Latvia, Lebanon, Malaysia, Netherlands, New Zealand, Tunisia, Turkey, United Kingdom, Vietnam
13 - Climate Action	Albania, Azerbaijan, Brazil, Cameroon, Ethiopia, Fiji, Guatemala, Italy, Kenya, Latvia, Lebanon, Malaysia, Mali, Netherlands, Saint Lucia, Sierra Leone, South Africa, Tunisia, Turkey, United Kingdom, Vietnam
14 - Life below water	Albania, Argentina, Azerbaijan, Brazil, Ethiopia, Fiji, Guatemala, India, Italy, Kenya, Latvia, Lebanon, Malaysia, Mali, Netherlands, New Zealand, Panama, Peru, Serbia, South Africa, Sweden, Tunisia, Turkey, United Kingdom, Vietnam
15 - Life on land	Albania, Cameroon, Fiji, Italy, India Guatemala, Kenya, Latvia, Lebanon, Malaysia, Mali, Nepal, Netherlands, New Zealand, Peru, Romania, Serbia, South Africa, Sweden, Tunisia, Turkey, United Kingdom, Vietnam
16 - Peace, justice and strong institutions	None reported
17 - Partnerships for the goals	Argentina, Cameroon, Fiji, Guatemala, Italy, Latvia, Malaysia, Netherlands, New Zealand, South Africa, Sweden, United Kingdom, Vietnam

Table 3: Countries mentioning biodiversity in relation to SDGs

Chart 6 is based on the classification by Folke *et al* (Folke, Biggs, Norström, Reyers, & Rockström, 2016), that divides SDGs in three categories: economy-related goals (8 – Decent work and economic growth, 9 - Industry, innovation and infrastructure, 10 - Reduced inequalities, 12 - Responsible consumption and production); society-related goals (1 – No poverty, 2 – Zero hunger, 3 – Good health and wellbeing, 4 – Quality education, 5 – Gender equality, 7 – Affordable and clean energy, 11 – Sustainable cities and communities, 16 - Peace, justice and strong institution); and biosphere-related goals (6 – Clean water and sanitation, 13 – Climate Action, 14 – Life below water, 15 – Life on land). SDG 17 – Partnerships for the goals is considered as being cross-cutting in nature.

The chart shows the number of the sampled VNRs mentioning biodiversity in relation to the various SDGs. The highest number of VNRs logically mention biodiversity in relation to SDG 14 and/or 15. Other than the biosphere-related SDGs, biodiversity is most often mentioned in the VNRs in relation

to SDG 12, 17, 2 (Responsible consumption and production, Partnerships for the goals, Zero hunger). Below are some key observations:

- All selected VNRs mention biodiversity in relation to at least one of the biosphere-related SDGs.

- 70% of the VNRs mention biodiversity in relation to at least one economic SDG (in particular SDG 8 - Decent work and economic growth and 12 - Responsible consumption and production).

- 11 VNRs do not mention biodiversity in relation to any society-related SDG. No VNR mentions biodiversity directly in relation to SDG 16 (Peace, justice and strong institutions). Only one third of VNRs mentions biodiversity in relation to SDG 3, 4 or 5 (Good health and wellbeing, Quality education, Gender equality).

- 56% (of the selected VNRs mention biodiversity in relation to national or global partnerships or engagements (SDG 17).
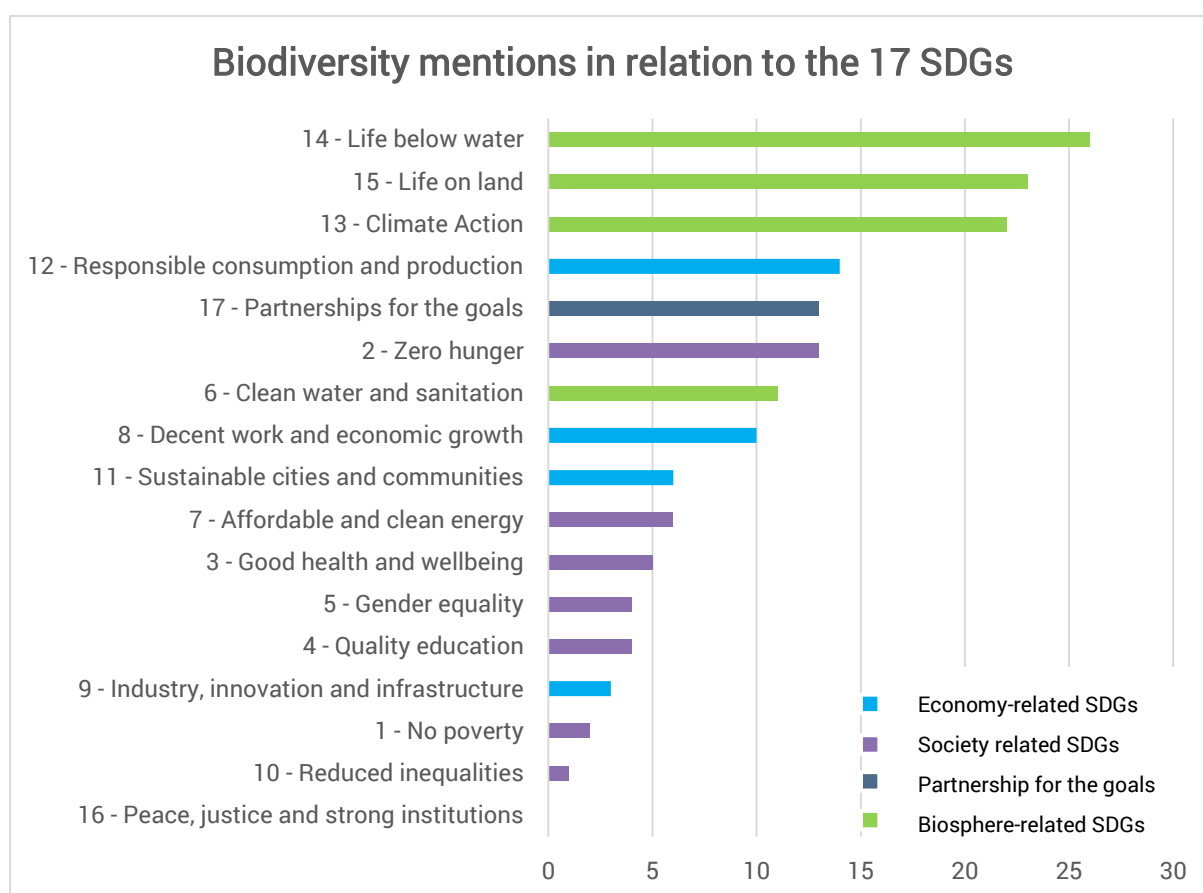

Chart 6: Number of mentions of biodiversity in sampled VNRs by SDG

3.7 Is there any reference to the country's National Biodiversity Strategy and Action Plan (NBSAP) and/or to any other national strategies, policies, or laws on biodiversity?

The results are shown in Table 4 below. More than half of the selected VNRs (16) make reference to the country's National Biodiversity Strategy and Action Plans (NBSAP). Out of the 14 countries that do not mention NBSAPs, 10 mention other national strategies, policies or laws on biodiversity.

Country	NBSAP	National laws, strategies, policies
Albania	Y	Strategic Document for Biodiversity Protection, 2016 Strategic Plan for Marine and Coastal Protected Areas, 2017 Law on protected areas, 2016 Moratorium on forest timber exploitation
Argentina	N	Pampa Azul, National Invasive Alien Species Strategy
Azerbaijan	Y	None reported
Brazil	N	National Plan for Agroecology and Organic Production, National Policy for Sea Resources, National Coastal Management Plan, National Adaptation Plan for Climate Change, Programme for Conservation and Sustainable Use of Biodiversity
Cameroon	Y	Plan d'Action National de lutte contre la Désertification (Plan de reboisement sahel vert), Loi No 94/01 du 20 janvier 1994 portant sur le régime des forêts et de la faune, Stratégie nationale REDD+
Ethiopia	N	Rural Development Package, Water Management Policy, Climate-Change-Resilient Green-Economy Development Strategy
Fiji	Y	National Adaptation Plan, National Land Use Plan, LEDS, 1992 Forestry Act and the Forest Bill No. 13 of 2016, Green Growth Framework
Guatemala	Y	Plan Nacional de Desarrollo, Plan de Acción Nacional de Cambio Climático, REDD+, Pacto Ambiental
India	N	None reported
Italy	Y	European Biodiversity Strategy, National Strategy for the Marine Environment, Strategic Plan for Research and Innovation in the Agricultural-food and Forestry sector, National Plan on Biodiversity of Agricultural Interest; National Strategic Plan for biological sector, Reporting on the State of Natural Capital, Partnership Agreement 2014- 2020 (POR FESR, PSRN, PON Pesca); Rural Development Programmes
Kenya	N	Fisheries Management and Development Act, Forest Conservation and Management Act, Wildlife Conservation and Management
Latvia	N	National Development Plan, National Sustainable Development Strategy
Lebanon	Y	Forest code, law on forest fire, Protected Areas Framework Law, Urban plans
Malaysia	Y	National Coastal Zone Physical Plan (NPP-CZ), Coral Triangle Initiative Malaysia National Plan of Action (CTI-NPOA), Mangrove Planting Programme, National Oil Spill Contingency Plan, National Action Plan of Management of Fishing Capacity and the National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing, National Policy for

		Biological Diversity 2016–2025, National Forestry Policy 1978 (Amendment 1992), Second National Mineral Policy 2009, Wildlife Conservation Act 2010 (Act 716), National Parks Act 1980, Biosafety Act 2007, National Tiger Conservation Action Plans 2008–2020, Elephant Conservation Action Plans 2013–2022, National Forestry Policy 1992, National Action Plan on Peatlands 2011
Mali	Y	Politique Nationale sur les Changements Climatiques, Stratégie Nationale de Développement Durable, Politique Nationale de l'Aménagement du Territoire, Cadre Stratégique d'Investissement de Gestion durable des terres, politique Nationale Forestière, Politique Nationale de Protection de l'Environnement, Stratégie Nationale de Biodiversité, le Programme d'action national (PAN) pour la lutte contre la désertification, le Plan d'action pour la gestion intégrée de la fertilité des sols
Nepal	N	None reported
Netherlands	N	EU Marine Strategy Framework Directive, EU Biodiversity Strategy
New Zealand	Y	Commonwealth Blue Charter, Marine Environment Platform, National Environmental Standards for Plantation Forestry, National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, National Policy Statement on Indigenous Biodiversity
Panama	N	Ley Nacional de Pesca
Peru	N	None reported
Romania	N	Program of Environmental Protection through Biodiversity Conservation
Saint Lucia	Y	Nationally Appropriate Mitigation Action
Serbia	N	Law on Disaster Risk Reduction and Emergency Management, The Law on Soil Protection
Sierra Leone	N	None reported
South Africa	Y	National Environmental Management Biodiversity Act, National Biodiversity Economy Strategy
Sweden	N	EU regulation on invasive alien species
Tunisia	Y	Loi n° 2009-49 du 20 juillet 2009 relative aux aires marines et côtières protégées; Stratégie nationale de protection de l'environnement post-2020; Programme d'action national de lutte contre la désertification (2018-2030), Stratégie nationale de prévention, gestion et lutte contre les espèces exotiques envahissantes (2019-2030); Stratégie de conservation des eaux et du sol (2030); Stratégie nationale de développement et de gestion durable des forêts et des parcours (2015-2024)
Turkey	Y	National Climate Change Strategy, Climate Change Adaptation Strategy and Action Plan, Biological Diversity Strategy and Action Plan, National Wetland Strategy, Turkish National Marine Research Strategy Document, National Forestry Programme, National Strategy and Action Plan for Combating Against Desertification, National Drought Management Strategy and Action Plan, National Basin Management Strategy, Strategy and Action Plan for Combating Agricultural Drought in Turkey, Law on Environment and Law on Forests

United Kingdom	Y	UK Marine Strategy, GB Invasive Non-Native Species Strategy, GB pathway action plan for zoos, England's Tree Health Resilience Strategy, National Planning Policy Framework for England, Rural Development Programme, Scotland's Forestry Strategy 2019-2029, Woodlands for Wales strategy, Wales Natural Resources Policy
Vietnam	Y	Law on Environmental Protection, Law on the Sea of Viet Nam, Law on Natural Resources and Environment of Sea and Islands, Law on Fisheries, Law on Forest Protection and Development, Law on Forestry, Strategy of Environmental Protection, Strategy of Viet Nam Forestry Development 2006-2020, Strategy of Special-use Forests Management and National Strategy on Biodiversity up to 2020 with a vision to 2030

Table 4: Mentions of NBSAPs and/or other national laws, policies, or strategies

3.8 Are the following UN conventions/frameworks mentioned in the VNR: Convention on Biological Diversity (CBD) and/or the Nagoya Protocol, United Nations Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC), UN Convention on the Law of the Sea (UNCLOS), the Sendai Framework? *If yes,* is there any explicit link to biodiversity?

The results are shown in Table 5. Half of the selected VNRs mention the Convention on Biological Diversity at least once, but only three (Lebanon, Sweden and the United Kingdom) refer to the Nagoya Protocol.

As far as the other Rio Conventions are concerned, almost all countries (27) mention either the UNFCCC and/or the Paris Agreement; however only half of these countries (14) refer to the biodiversity aspects of the Paris Agreement, the common reference being to reducing emissions from deforestation rather than to nature-based solutions to adapt to climate change. The UNCCD is mentioned in 8 VNRs, of which 7 (Cameroon, Fiji, Guatemala, Italy, Lebanon, Mali, Vietnam) establish a clear link between biodiversity and the fight against desertification.

The Sendai Framework and/or other Disaster Risk Reduction (DRR) measures are mentioned several times in the VNRs (23 out of 30); however only 5 countries (Italy, Kenya, Serbia, Tunisia and Turkey) establish a clear link between DRR and biodiversity. Conversely, only 9 countries mention UNCLOS; however almost all of them (7 out of 9) associate the Convention with biodiversity conservation. The following table summarises the result of the UN Conventions count search and the presence/absence of linkages to biodiversity.

UN Convention	Total n. of mentions	Clear link to biodiversity
CBD	15	n/a
UNCCD	8	7
UNFCCC/ Paris Agreement	27	14
UNCLOS	9	7
Sendai Framework/DRR	23	5

Table 5: Number of VNRs mentioning the selected UN Conventions and number of VNRs establishing a clear link between the Conventions and biodiversity

3.9 Is there any reference to any other biodiversity-related convention and/or multilateral environmental agreement (MEAs)?

Several other conventions and/or MEAs related to biodiversity are cited by some of the VNRs. Those mentioned at least twice are: Ramsar Convention, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Convention for the Prevention of Pollution from Ships (MARPOL), Barcelona Convention and Stockholm Convention. Moreover, the International Union for Conservation of Nature (IUCN) and its Red List is cited in four VNRs (Argentina, Guatemala, Italy, Vietnam).

Participation in other regional agreements/arrangements is often reported in the VNRs. For instance, Albania, Italy, Sweden and the UK mention various European Union (EU) directives and regulations, such as the EU Habitats Directive, Birds Directive, Invasive alien species Regulation and/or the EU Biodiversity Strategy. Similarly, three of the five selected Mediterranean countries (i.e. Lebanon, Tunisia and Turkey) make reference to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.

3.10 Does the VNR present any numerical, graphical and/or spatial representation of biodiversity?

Two thirds of the VNRs provide numerical, graphical and/or spatial representation of biodiversity. 90% of them provide at least one set of statistical data (percentages) on the country's protected areas, wetlands, aquaculture shares, agricultural land and/or forest areas. Albania, Guatemala, Romania, UK and Vietnam present graphs on national Protected Areas (PAs) or Marine Protected Areas (MPAs), forest area, habitat conservation, fish stocks, birdlife and/or hazardous substances. Only the UK, however, illustrates biodiversity-related data through spatial representation (see the map in Figure 1 below).

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Source: Welsh Government, Well-being of Wales Report 2017-18
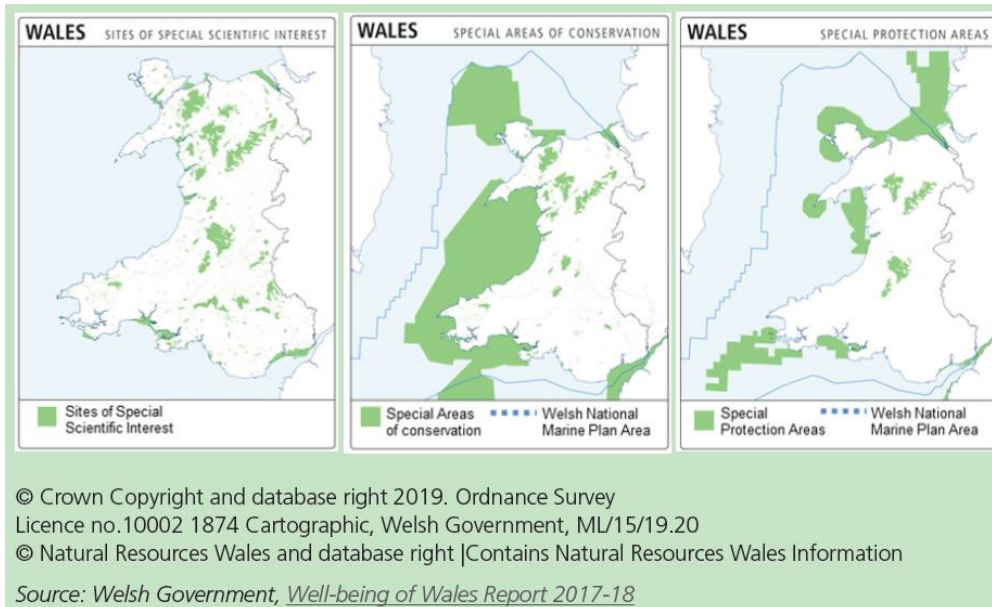
Figure 1: "Welsh Sites of Special Scientific Interest" Voluntary National Review of progress towards the Sustainable Development Goals, United Kingdom of Great Britain and Northern Ireland, June 2019

3.11 Does the VNR mention environmental crimes (such as wildlife trafficking or illegal deforestation)?

70% of the countries mention at least one environmental crime in their VNRs, the most common one being illegal, unreported and unregulated fishing. Though many VNRs discuss issues linked to deforestation and/or illegal logging, only Cameroon's VNR mentions illegal deforestation as an environmental crime. Similarly, only Italy considers 'biodiversity loss' as being criminal in nature. Chart 7 shows the number and types of environmental crimes that are referred to in the VNRs.
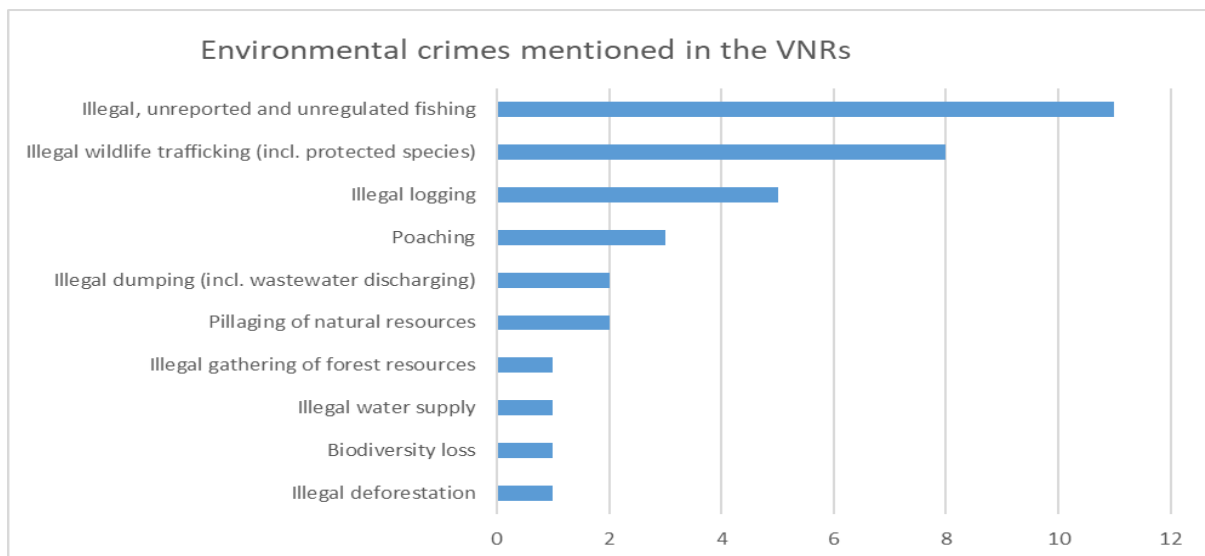
Chart 7: Number of mentions in the VNRs per type of environmental crimes

3.12 Does the VNR mention any challenges in achieving biodiversity-related targets?

Chart 8 shows the challenges reported by the 30 countries incurred in the implementation of SDGs 14 and 15 and/or in the reporting against biodiversity-related targets. The main ones include: data availability and/or collection, pressures on ecosystems (production/agriculture systems, climate change), implementation/enforcement, need for improved management, lack of technical and/or institutional capacities, statistical challenges.

Chart 8: Types of challenges and frequency of appearance highlighted in the sample of 30 VNRs in connection to biodiversity

4 Qualitative analysis: to what extent is biodiversity mainstreamed throughout the VNRs?

To understand the level of integration or recognition of biodiversity in the Sustainable Development Goals implementation and review process, the 30 sampled VNRs were analysed based on the following four criteria used in UNEP's Policy Brief (UNEP, 2018):

Category 1	Category 2	Category 3	Category 4
Countries that do not mention or recognise the importance of biodiversity	Countries that broadly recognise the importance of biodiversity though do not mention specific actions	Countries that mention specific actions in relation to biodiversity	Countries that demonstrate capacity of integrating biodiversity into national and local actions

Table 6: Four categories of progress towards integration of biodiversity in the VNRs

Countries categorised using these four criteria in terms of progress towards SDG implementation are tabulated in Annex I. The Annex Table also presents implementation strategies, plans and initiatives, as well as national legislation concerning biodiversity. As highlighted in the previous section, all sampled VNRs mention biodiversity and recognise its importance of sustainable development, hence no country falls in category 1. In terms of category 2, 5 VNRs broadly recognise the importance of biodiversity though do not mention any specific action. In Category 3, 9 VNRs mention specific actions in relation to biodiversity but do not mainstream biodiversity throughout the document. Finally, 16 countries fall into category 4 and demonstrate a clear capacity of mainstreaming biodiversity throughout the document, therefore integrating it into national and local actions.

The key considerations which emerged from the qualitative analysis are highlighted in the following paragraphs. The analysis focused on the integration of biodiversity in the section of the VNRs dedicated to 'Progress on goals and targets' as per the common reporting guidelines developed by UNDESA (UNDESA, 2019). However, given the voluntary character of the reviews, not all countries strictly follow the suggested common reporting, thus making a comparative analysis more challenging. The section below highlights differences and similarities in reporting on biodiversity, in view of presenting examples and best practices for future VNRs.

4.1 VNRs drafting process, methodology and structure

Most of the VNRs are elaborated and compiled through a participatory process which takes into consideration the inputs of key national decision makers and stakeholders. Information was gathered through inter-ministerial coordination, public consultations were often used to validate the assessments and, occasionally, UN agencies in the country also contributed to the process. In some cases (e.g. Vietnam), the drafting process was supported by an international donor.

Overall, **multi-stakeholder engagement** seems to be beneficial for including more biodiversity-related issues in the VNRs. Sierra Leone's VNR, for instance, does not mention nature (except for natural resources) throughout the document, yet the annexed "Civil Society Organisations (CSO) Position Paper on SDG Implementation" states that:

"'In care of our common home' we are concerned that the exploitation of our natural resources and biodiversity is neither respecting ecological boundaries nor is it fully translating into; value-adding activities, adequate employment opportunities, and enhanced economic and environmental returns for the country."

An annex in Lebanon's VNR, which summarises consultations with Civil Society Organisations, recognises "Environmental Conservation and biodiversity" as a key priority for action under SDG implementation.

Despite the inclusiveness of the drafting process, the analysed VNRs consist of catalogues of actions undertaken under reported SDGs rather than a systematic review of SDG targets at a national level. Countries decide whether to report advancements under all SDGs or address only a selected set which reflect individual governments' sustainable development priorities. The same is also true for the targets, which vary from VNR to VNR and which seem to be selected according to the level of progress and data availability. For instance, 13 of the selected countries report against target 14.5 on conserving at least 10% of coastal and marine areas by 2020 and 16 against target 15.1 on the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, while other targets (such as 14.b on access for small-scale artisanal fishers or 15.6 on fair and equitable sharing of the benefits arising from the utilization of genetic resources) are mentioned just a couple of times in the selected VNRs. The lack of a structured reporting system makes it difficult to assess implementation and compare progress.

Many of the VNRs follow the structure proposed by the Handbook developed and periodically reviewed by UNDESA (UNDESA, 2019) and report progress achieved either against all SDGs or a selection based on that year's HLPF theme. However, biodiversity appears to be better mainstreamed in the VNRs that are not structured by SDG but by theme or government priorities instead. For example, Italy's VNR is divided into five sections on "People, Planet, Prosperity, Peace and Partnership" and biodiversity appears to be the foundation of the second section. Guatemala's VNR is structured around the country's national development priorities and biodiversity is one of them. In both cases, references to nature appear throughout the documents, and connections to the social- or economic-related SDGs are clearly established.

4.2 Leaving no one behind

An underlying principle for the 2030 Agenda is to 'leave no one behind'. Countries presenting their VNRs to the HLPF are strongly encouraged to assess how this principle is mainstreamed in the implementation of the SDGs, describe how vulnerable groups have been identified and what policies and programmes are being implemented to support their empowerment (UNDESA, 2019).

Some of the analysed VNRs mention biodiversity in connection to this principle. Romania's VNR underlines the importance of including key sustainable development issues (such as biodiversity and natural resources management) in all education systems from primary to adult learning (p. 26). Sierra Leone bases its national review on the 'leaving no one behind' principle and establishes a link between natural resources management and justice for future generations:

"We have noted above, under the integration of the three dimensions of sustainable development, some of the key achievements made by the state in ensuring management of natural resources for the present and future generations. It has enforced compliance from businesses and communities to environmental protection protocols and guidelines. Additionally, the country has made significant strides in improving the management of mineral, water and land resources over the years with a view to ensuring responsible production and consumption of environment resources, consistent with SDG 12." (p. 23)

The UK's VNR includes a box on "Leave no one behind examples" for each SDG. Examples for SDG 14 and 15 comprise:

- "In England, since 2016 the European Maritime and Fisheries Fund has awarded £800,000 each to six Fisheries Local Action Groups (FLAGs) to deliver fisheries-focussed, community-led local development. FLAGs support projects that address local sustainable economic growth, social inclusion and job creation in coastal and inland communities which depend on fishing and aquaculture, and support fishing communities to adapt to the latest fisheries policy." (p.169)

- "The Welsh Government arranged for the alignment of the Community Advice and Listening Line, a mental health helpline for Wales, to send referrals to the Fishermen's Mission in Wales, helping those facing uncertainty in the fishing industry and providing practical care to fishermen and their families." (p.169)

- "The Green Infrastructure Fund supports projects in some of Scotland's most deprived urban communities to make best use of their local environment, help tackle effects of climate change, attract business and boost job opportunities." (p. 180)

- "The UK's Darwin Initiative funds projects protecting biodiversity in developing countries. Its priority is to secure benefits for poorer, more vulnerable communities. For example, in Papua New Guinea, funding has been provided since 2001 to train indigenous people so that they can work with scientists to protect rainforests threatened by industrial logging." (p. 180)

4.3 Biodiversity and the economic dimension of the SDGs

Nature is fundamental to our economies. It provides soil, air, water, minerals, timber and a variety of other materials fundamental for the lives of all. Various VNRs recognise the role that natural capital or resources play in ensuring economic growth. Even if not specifically linked to SDGs 8 or 9, almost all countries allude to the economic value of **natural resources** and the importance of managing them sustainably.

For example, Azerbaijan recognises that its dependency on the energy and natural resources sector (which accounts for 35% of GDP and net export income) may have a negative impact on the environment and constitutes a challenge to Azerbaijan's transition into a low carbon economy (p. 20). Guatemala focuses on the potential of the country's resources and includes "access to water and management of natural resources" and the "economic value of natural resources" as two of the ten key priorities for national development. Along the same line, Peru proposes its vision for the country's future in 2030, including as a priority the sustainable management of natural resources, and links their conservation to the country's future wellbeing (p. 13).

However, fewer VNRs recognise the contribution that stocks of **natural capital** might make to their industries and communities. Latvia's VNR acknowledges the interlinkages between the country's natural and cultural capital and their contribution to the country's "economic innovation and eco-efficiency" (p.10). Italy recognises natural capital accountability as "decisive to promote long-lasting growth by focusing on environmental quality" (p. 38) and sets it as one of the pillars of the National Strategy for Biodiversity. Finally, New Zealand places natural capital at the heart of its sustainability policies (p. 9):

"Our natural capital, or natural resource base, is woven into the fabric of every New Zealander's health and wellbeing, the country's brand and Te Ao Māori [The Māori world]. Our land, forests, waterways and oceans are the foundation of our economy."

Some VNRs recognise the need for more research and data to assess **the economic value of biodiversity**. To this end, in 2019 the UK launched a review led by Professor Sir Partha Dasgupta "to quantify the economic benefits of biodiversity globally and identify actions that can be taken to simultaneously enhance biodiversity and deliver economic prosperity" (p.191). South Africa's National Biodiversity Economy Strategy (NBES) provides a framework for businesses and economic activities that directly depend on biodiversity or contribute to its conservation. New Zealand is currently developing a suite of "wellbeing indicators" that will go beyond mere GDP growth and will measure the country's human, social, physical/financial and natural capital (p. 11).

Several countries mention biodiversity in relation to **sustainable consumption and production** patterns or circular economy (SDG 12). In order to orient consumption towards sustainability, Vietnam has applied "some economic tools such as natural resources taxes of mineral mining and water, an environmental protection tax and environmental protection fees on wastewater" (p.66) and "has abolished direct subsidies and is phasing out indirect subsidies for fossil fuels" (p. 67). By promoting renewed patterns of consumption and production, the UK aims at preserving its stock of resources and minimise the damage causes to the environment (p. 148):

"The UK is working to preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. The UK's work on natural capital is helping to

ensure that the value of biodiversity and ecosystems informs decision-making. The introduction of the carrier bag charge and landfill tax have already had significant impacts on behaviour."

However, the "circular economy" concept appears to be more appealing to European countries (Italy, Latvia, Sweden and the UK). Other countries prefer to speak about **green growth**. In the section dedicated to SDG 12, Kenya's VNR mentions the country's Green Economy Strategy that aims at "support development efforts towards addressing key challenges such as poverty, unemployment, inequality, environmental degradation, climate change and variability, infrastructure gaps and food insecurity". The document adds that "a green growth path results in faster growth, a cleaner environment and high productivity" (p. 40). In Malaysia, green growth is one of the key pillars of the national development plan (p.12):

"The nation is well-endowed with natural resources and mega-biodiversity that is valuable not only to Malaysia but also to the global community. In this regard, measures are being undertaken to protect, conserve and sustainably use natural resources towards promoting green growth".

Finally, only Serbia's VNR seems to mention the need for **equal access and rights** to sustainable management of natural resources (SDG 10): "Strategy of Rural Development is based on the vision of promoting natural resources and cultural heritage management in rural areas, in line with the principles of sustainable development, with the aim of creating rural areas which are attractive to the youth and other populations living there" (p. 59).

4.4 Nature-human interactions

Very few analysed VNRs establish a clear link between ecosystem services, biodiversity and **poverty alleviation** (SDG 1). A notable exception is Ethiopia's VNR, that attributes the country's recent progress to the implementation of policies aimed at bringing together economic growth, social and environmental development, infrastructure and democratic institutions (p. 20):

"For long, awareness creation centering on environmental development have been given; under the leadership and coordinated social mobilization of the rural communities in particular have successfully been deployed to soil and water conservation works, to works for the preservation of genetic diversity and to watershed management works. Results were exemplary and served as show cases for other countries for as well. These works have caused the agricultural productivity to rise and food security to be ensured."

Conversely, interlinkages between biodiversity and **food security** (SDG 2) are tackled from various perspectives depending on the VNR. Cameroon recognises "promoting biodiversity" as one of the fundamental targets to be achieved under SDG 2, along with "fighting against hunger and malnutrition" and "strengthening sustainable production systems" (p. 91). Sweden's challenges regarding Goal 2 include tackling the population's increasing overweight and obesity, ensuring environmental sustainability and biodiversity in agriculture and strengthening all sustainability dimensions in the entire food chain. Finally, the UK focuses on the need to maintain the genetic diversity of seeds, plants and animals (p. 42), while Vietnam explores the connection between agriculture production growth and ecosystem degradations when arguing for the need for more climate-smart agriculture (p. 32).

Despite the crucial role of biodiversity for **human health** (SDG 3) – both in terms of impacts and benefits – very few countries explicitly refer to the link between health and nature. Vietnam, for instance, states that "conservation of biodiversity as per SDG 15 will help protect people's health, promote food production and reduce poverty" (p. 83). Romania underlines the economic importance of the genetic diversity of the country's main tree species, as they are valuable in ensuring resistance to disease and pests (p. 76).

Other countries refer to the impact that air, soil or water pollution might have on national health systems. Italy, for example, mentions the link to reduced "population exposure to anthropogenic and environmental risk" (p. 9) and New Zealand refers to a "National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health" (p.103). Additionally, New Zealand specifies the need for bringing more sustainability in the national healthcare sector, particularly in terms of GHG emission reduction (p. 35). Only the UK briefly refers to the interlinkages between nature and mental health (p. 169).

Similarly, the selected VNRs seem not to explore the relationship between biodiversity and **quality education** (SDG 4). There are some exceptions: Kenya mentions the 'National Green Schools and Forest Ecosystems Management' programme (p.43) designed to protect and conserve natural resources and to inculcate education for sustainable development in the country to avert natural resources depletion. Romania's report, while describing the national education strategy, illustrates its broad scope by including biological and landscape diversity (p.26). Both Latvia and Italy underline the importance of "natural heritage" and the latter highlights the need for strengthening "education and training, institutional capacity, transfer of know-how, technology and innovation and addressing heritage protection, even in post-conflict crisis and natural disasters" (p. 89).

The linkages between biodiversity and **gender equality** (SDG 5) are also seldom mentioned in the VNRs. Some countries, such as Cameroon and the UK, emphasise the key role of women in sustainable forest management. Turkey highlights the project 'Aegean's Women Fishers' as an example of action to boost job creation and women visibility in the fisheries sector (p. 116). Similarly, Fiji (p. 62) praises the work undertaken by The Women in Fisheries Network, whose mission is to facilitate the role of women in sustainable fisheries at all levels, including decision-making.

Only few countries establish a clear link between nature and **clean energy** (SDG 7). Azerbaijan (p. 21) and Tunisia (p. 103) mention as a key challenge the impact on non-clean energy use on the countries' climate and environment. Guatemala's VNR speaks about the potential of the country's bioenergy in the forestry and sugarcane sectors (p. 190). Mali underlines the importance of traditional energy sources, particularly wood energy which represents the main source of energy for Malian households (p. 41). Other countries, such as Turkey, the UK and Vietnam briefly mention the share of biomass in their energy mix.

Various VNRs refer to the role of **cities and communities** in protecting nature while benefitting from its services (SDG 11). According to Guatemalan civil society, more action is needed from central and local authorities in order to implement target 15.9 on integrate ecosystem and biodiversity values into national and local planning, particularly when it comes to protecting indigenous people and natural resources (p. 290). Fiji (p. 62), Vietnam (p. 74) and the UK (p. 169) mention the work of local marine communities in promoting, preserving and protecting marine resources. Moreover, several

countries such as Brazil, Guatemala, New Zealand and South Africa underline the key role played by local knowledge and **indigenous people** in conserving and restoring biodiversity.

Finally, no VNR mentions biodiversity while reporting against SDG 16 on **peace and justice**. However, several countries underline the need for stronger institutional mechanisms for nature conservation. Albania, for instance, recognises that low institutional and financial capacities are sometimes the reasons for slow implementation of environmental legislation (p. 52). Kenya lists among the challenges faced in implementing SDG 15 "inadequate institutional capacities" and "lack of participatory coordination frameworks in land and forestry management which allow joint planning, monitoring and reporting by key stakeholders" (p. 44). In Vietnam, the enforcement of the Law on Biodiversity seems to be a challenge for different reasons, including "a lack of coordination and consensus on assignment of State management responsibility for biodiversity" (p. 76).

4.5 Biodiversity, water and climate change

The connection between biodiversity and **sustainable water management** (SDG 6) is clearly established by several VNRs. Ethiopian Water Management Policy aims at ensuring that water ecosystem sustainability is well coordinated with the country's socio-economic development:

"Massive public mobilization has been made possible in order to engage them in large scale water and soil conservation and watershed management. Results achieved are remarkable by way of increasing forest-coverage, reducing sediment transportation and deposits in large dams, preserving genetic diversity, replenishing surface water and recharging sub-surface/ ground water etc. Potable water supply, small scale irrigation development, increasing agricultural productivity, improving food security and reducing poverty are all the commendable results of these endeavors." (p. 19)

Albania and Guatemala recognise access to water and integrated water management respectively as national strategic priorities and mention biodiversity while reporting on progress achieved in these fields. Turkey recognises the importance of ecosystem-based approaches in water management and pollution prevention:

"Ecosystem based approach, taking into account the quality and volume of water resources, is used for prevention of marine pollution and protection of marine ecosystem. Monitoring and prevention of pollution, identification and protection of biological diversity are a common practice." (p.114)

Half of the analysed VNRs mention **climate action** (SDG 13) as one of the national priorities. However, not all of them clearly link climate and biodiversity agendas. Albania, Brazil, Cameroon, Fiji, Guatemala, Italy, Kenya, Lebanon, Malaysia, South Africa, Turkey, the UK and Vietnam describe efforts to adapt to the effects of climate change through the implementation of National Adaptation Plans (NAP) or **reforestation programmes** such Reduced Emissions from Deforestation and Degradation (REDD+). Examples of reforestation actions specifically linked to climate adaptation comprise:

- Awareness-raising campaigns organised in the framework of the REDD+ project in Cameroon for local communities, including youth and women, on sustainable forest management to combat climate change;

- Fiji's "4 million trees in 4 years" initiative in support to the New York Declaration on Forests which aims to end natural forest loss by 2030;

- National Afforestation/Reforestation Program (NARP) by the Lebanese Ministry of Agriculture, also known as the "40 Million Trees Program", aims at planting 40 million forest trees in public lands within the next years;

- Saint Lucia promotes sustainable land management and livelihoods to face climate change through mango biodiversity programmes aimed at increasing mango cultivation on farm and forest land (p. 35).

- Tunisia's Sustainable Forest Management Strategy (2015-2024) aims at reforesting 16,000 ha per year, while strengthening green economy practices, awareness raising of climate risks, and public-private partnerships.

- As part of the implementation of the UK government's 25 Year Environment Plan, £50 million of funding has been announced for a new Woodland Carbon Guarantee to stimulate domestic carbon offsetting and incentivise new tree planting; and £10 million of funding in the October 2018 Budget for a Challenge Fund to plant and maintain at least 100,000 urban trees and contribute towards planting one million new trees in urban areas;

- Since 2009, Vietnam has been involved in REDD+ initiatives with 44 projects supporting awareness raising, capacity building, piloting, modelling and preparedness. UN-REDD Phase II will include activities that will reduce CO2 emissions by as much as to 24.6 million tonnes during 2018-2025.

The VNR of the United Kingdom is the only document in this analysis mentioning **nature-based solutions** and their contributions to the fight against climate change: "Nature-based solutions are crucial for climate mitigation and adaptation, as well as for addressing biodiversity loss. (…) The UK is developing and implementing nature-based solutions through the Clean Growth Strategy, for example, by providing funding for woodland expansion and peatland restoration." (p. 160).

Various VNRs talk about climate change and **disaster vulnerability** and establish a link with biodiversity, particularly through forest management. Kenya, for instance, recognises that "forests play a critical role as a carbon dioxide sink as well as building resilience to climate change" (p. 41). Italy declares it is strengthening capacity to cope with natural disasters by also promoting "green infrastructure" (p. 14). While reporting on progress against SDG 15, Serbia presents its National Disaster Risk Reduction Platform, an operational body designed to "coordinate protection activities, as well as direct policies aimed at disaster risk reduction" (p. 66).

4.6 Life below water – implementing SDG 14

A very high number of VNRs (26) report on progress made under SDG 14. This shows the high interest of countries in these issues but may also be linked to the fact that SDG 14 was considered for reporting at the High-Level Political Forum 2017 and most of the countries selected for this analysis (12 out of 30) presented their VNR at that meeting. The following paragraphs explore some examples of best practices and success stories on conserving oceans and marine resources highlighted in the selected VNRs.

The question of **marine pollution** (target 14.1) is highlighted in several VNRs. Marine pollution is part of India's agenda for promoting the 'Blue Revolution':

"For tracking the levels of marine pollution along the coastline, the country has developed the Coastal Ocean Monitoring and Prediction System. Additionally, an oil spill management system has been put in place for responding to arising emergencies" (p. viii).

Turkey champions ecosystem-based approaches, taking into account the quality and volume of water resources, to monitor and prevent marine pollution (p. 114). The Tunisian national biodiversity plan focuses on the impact of waste-water treatment on marine and coastal areas and mentions incentives to industries to curb pollution. Latvia (p. 85), New Zealand (p. 97), Sweden (p. 37), and the UK (p. 170) highlight efforts to reduce marine pollution from land-based sources, including through banning single-use plastic bags and managing the input of contaminants and nutrients into the marine environment.

Various VNRs mention **ocean acidification** (targets 14.3 and 14.a) as a growing challenge. However, only New Zealand (p. 100) and the UK (p. 171) expand on concrete action to tackle it, including through international cooperation and increased scientific knowledge. Both countries are funding research programmes to provide new knowledge on acidification and its impacts on coastal ecosystems, and are raising awareness on the issue through international partnerships such as the Commonwealth Ocean Acidification action group and the Global Ocean Acidification Observing Network.

Ending **illegal, unreported and unregulated fishing** (target 14.4) appears to be a key issue highlighted by the VNRs and more than a third list it as a major environmental crime. Malaysia has established various programmes to ensure "sustainable fisheries and aquaculture activities in the country, including enforcing zoning regulations for fishing areas and promoting good aquaculture practices through certification schemes" (p. 31). South Africa utilises advanced technologies such as nano-satellites and vessel tracking decision-support tools to monitor illegal fishing in the country's waters (p. 95). Sweden describes measures such as fishing limitations, coastal quotas, small-scale fishing regulations, which are implemented in order to "strengthening fish stocks and have positive effects on other ecosystem functions and services" (p. 37).

According to the World Database on Protected Areas (UNEP-WCMC, IUCN, 2020), only one third of the analysed countries (i.e. New Zealand, United Kingdom, Brazil, The Netherlands, Romania, Latvia, South Africa, Sweden, Argentina, Cameroon) seem to be on track to achieve target 14.5 on the coverage of **marine protected areas** by 2020. Various VNRs mention the 10% target and related legislation in place. This is the case for Albania, Italy, Lebanon, Panama, Sweden, the Netherlands, Kenya, and Tunisia. However, very little is reported on the measures that are implemented in order to achieve this target and comply with national and international commitments. Although their marine protected areas coverage represents only around 3% of their coastline, Guatemala (p. 178) and Malaysia (p. 31) describe their efforts in implementing this SDG target and emphasise the importance of conserving and restoring marine resources as a source of alternative livelihoods for local communities. Vietnam identifies the issue of limited funding as a major challenge for maintain already established MPAs and their operations (p. 73).

Finally, New Zealand (p. 119), the Netherlands (p. 30) and the UK (p. 177) recognise the specific challenges faced by Small Island and Developing States (SIDS) in terms of climate change, sea level rise, water acidification, and disruption of marine ecosystems, thus fund development programmes

overseas aimed at increasing **SIDS economic benefits** (target 14.6). In this framework, Fiji's VNR (p. 62-65) shows high commitment in locally managing marine protected areas – whose coverage is proposed to reach 30% by 2021 – and promoting the sustainable use of marine resources – which sustain key economic sectors such as fisheries and tourism.

4.7 Life on land – implementing SDG 15

Progress made under SDG 15 is covered in 23 VNRs. Many of them evaluate the **state of natural ecosystems** (targets 15.1, 15.2, 15.4 and 15.9) and related policies and programmes in place to promote conservation, restoration and sustainable use practices.

Wetland ecosystems, together with the Ramsar Convention, are mentioned in connection to the challenge of national biodiversity loss. New Zealand, for instance, has lost almost 90% of the country's wetlands with significant losses during the last decade and the remaining areas in continuous decline (p. 51). Romania's wetlands have almost halved, particularly along the Danube River where much of the land was converted to agricultural use (p. 76). Vietnam's VNR mentions wetlands in connection to water management issues (SDG 6), emphasising that water pollution is one of the main threats in the country and that national plans on wetlands conservation and sustainable development should be more systematically implemented (p. 43).

Mountain ecosystems (target 15.4) are seldom mentioned. Turkey reports on progress towards the achievement of target 2.4 by providing details of the country's Mountain Green Cover Index (SDG indicator 15.4.2) and overall 83.3% of its mountain areas are covered by green vegetation. However, soil erosion, improper agricultural practices and land use, overgrazing, pollution of topsoil, and demand from increasing population pressure are putting the country's land and natural areas under desertification risk (p. 118). To these pressures, Romania's VNR adds that "highly sensitive mountain ecosystems are also particularly threatened by inappropriate forms of tourism and associated infrastructure development" (p. 71). Sweden (p. 37) recognises that 12.5% of important biodiversity areas in the Swedish mountains fall under protected areas (indicator 15.4.1).

Forests (target 15.2) are recognised as economic cornerstones by many countries. The forestry sector represents, for instance, 5.2% of Latvian GDP and 20% of national export earnings (p. 88). Mali underlines the great potential of the forestry sector as only 17% of its national territory is used for production purposes, while the natural regeneration rate is set at 7 million tonnes per year (p. 17). Most of the countries analysed seem to have in place measures such as national plans and projects to fight against **deforestation and land degradation** (target 15.3). Some examples include:

- Cameroon's "Green Sahel" project has been implemented within the framework of the National Action Plan to Combat Desertification. From 2008 to 2019, the project has contributed to the protection and restoration about 22,000 ha of degraded land.

- In the period 2009-2016, an area of 7,912 ha of degraded land in Romania was forested and forest protection belts were installed on an area of 568 ha, within and outside forestry land. Moreover, the Forestry Code Law establishes tight sanctions against forest contraventions (p. 82-83).

- South Africa's Department of Environmental Affairs is championing programmes to restore and rehabilitate degraded land aimed at improving natural species diversity, catchment stability as well as agricultural productivity. Over four years, these programmes rehabilitated 190 wetlands, rehabilitated or restored over 100,000 ha of land, trained 1648 environmental monitors, and treated over 762,000 ha to eliminate invasive plants.

- Turkey financially supports the United Nations Convention to Combat Desertification (UNCCD) and organised its 12th Conference of the Parties under the heading of Land Degradation Neutrality (LDN). Turkey was one of the first countries which set National LDN Targets.

- Vietnam has established a National Coordination Board for implementation of the UNCDD in 2003, while desertification prevention has been integrated into climate change responses and natural disaster mitigation. Pilot projects to fight desertification have been developed and integrated with global mechanisms, especially in Ninh Thuan and Binh Thuan provinces.

Particular attention is dedicated in some VNRs to **mangrove ecosystems**. Panama recognises the need for reinforcing the conservation and restoration of mangroves ecosystems as a mean to both adapt and mitigate climate change (p. 64). India's government supports research and development activities with an emphasis on mangrove biodiversity and has registered an increase of 112 square km in the mangrove cover of the country as compared to the previous assessment (p. 25). Through the International Climate Fund (ICF), over £10 million has been committed by the UK between 2016-23 to design and introduce a model of sustainable development for mangrove habitats globally (p. 177).

Degradation of natural habitats, biodiversity loss and extinction of threatened species (target 15.5) is a major concern for most of the VNRs and is often linked to anthropogenic drivers. In Romania, for instance, there are 3,700 species of higher plants and the country is a centre of population density for a variety of threatened and endangered animals such as bears, wolves and lynx, which have been extirpated from most areas of Europe. However, Romania's VNR recognises that "the country has suffered a progressive loss of biodiversity as a result of human activity. In particular, agriculture, industrial development, transportation and the expansion of cities have profoundly affected the biological diversity, both generally and locally" (p. 76). The baseline assessment on SDG's in Fiji revealed that of the 2,543 known plants species, 281 are endangered and of the 68 bird species, 17 are endangered. Fiji's review recognises climate change and sudden-onset events as exacerbating causes of biodiversity loss and underlines that since 2005 all major economic sectors must undergo stringent Environment Impact Analysis (EIA) to prevent further degradation of Fiji's natural ecosystems (p. 67).

Genetic resources and benefits sharing (target 15.6) as an issue is mentioned only rarely in the VNRs reviewed. Only three VNRs refer to the Nagoya Protocol, i.e. Lebanon, Sweden and the UK. The latter funds three genebank collections and four crop Genetic Improvement Networks (GINs) in order to maintain the genetic diversity of seeds, plants and animals (p. 42). Similarly, Vietnam has developed a database on genetic resources and traditional knowledge associated with genetic resources, and formulated guidelines for access to genetic resources and benefit sharing (p. 76). Finally, South Africa's Forest Molecular Genetics programme aims at developing a Centre for Tree Genomics and Biotechnology research with a focus on the genetic control of woody biomass traits for fibre, bioenergy and biomaterials production (p. 99).

About 70% of the analysed VNRs mention one or several environmental crimes and the related challenges, and a third of the documents refer specifically to **poaching and/or illegal wildlife trafficking** (target 15.7). Turkey's review presents a set of actions the country is undertaking to fight against bio-trafficking, such as developing regulations on protection, control, inspection, increasing capacity of security forces and raising public awareness (p. 120). The UK hosted the 2018 Illegal Wildlife Trade Conference, where 65 governments adopted the London Declaration on IWT and committed to increase investment to counter trafficking and enhance conservation (p. 189). South Africa's VNR mentions poaching and trafficking prevention as challenges for two reasons: first, despite the international efforts, rhinos still represent the highest share of the country's illegally traded species; second, despite increased surveillance and response capabilities, Kruger National Park detected a dramatic increase of the number of incursions (p. 99). Finally, Guatemala reports a detailed analysis of the proportion of illegally traded species according to CITES categorisation (p.187).

The impact of **invasive alien species** on land and water ecosystems (target 15.8) is also perceived as a key threat to biological diversity and some actions for prevention and control are outlined in the VNRs. Sweden mentions EU Regulation 1143/2014 on the prevention and management of the introduction and spread of invasive alien species which Swedish authorities are working to implement (p. 38). In Vietnam, "the prevention and control of invasive alien species has achieved some certain results, with effective eradication measures and communication to prevent people from producing and releasing harmful aquatic species. There have also been targeted inspections of imported plants and animals to prevent invasive alien species, pest risk analysis of eight species which may become invasive alien species, distribution mapping of seven pest species in Viet Nam and bio-security certification of four genetically modified maize events" (p.76).

4.8 Means of implementation and the global partnership

More than half (56%) of the selected VNRs discuss means of implementation and global partnership in relation to biodiversity and sustainable development (SDG 17). Specifically on **partnership and capacity building**, the Netherlands reports to have concluded more than 200 Green Deals, involving over 1,500 companies and Civil Society Organisations (CSOs). Green Deals are "cross-sector partnerships on themes like energy, transport, biodiversity, water, resources, climate, food and construction (that) accelerate economic growth while promoting energy saving, sustainable fuel use and a clean environment" (p. 36). UK funding provided in support of biodiversity in developing countries, "has risen from a baseline of £38.8 million of Official Development Assistance (ODA) per annum between 2006-10 to over £136 million in 2015" (p.189). Both Sweden's (p. 79) and Fiji's VNRs mention the joint efforts in organising the 2017 UN Ocean Conference to stimulate increased cooperation, launch innovative partnerships, and renew governments' and non-state actors' commitments to achieve Goal 14 on seas and marine resources.

Science and technology investments and advancements are also mentioned in relation to biodiversity. Argentina commits to dedicate up to 5% of its national budget by 2030 to promote scientific knowledge and the development of capacities for marine research and technological transfer through the adoption of conservation policies and the sustainable use of resources (p. 59). New Zealand spends "approximately $1.6 billion per year on science and innovation investments and a significant amount of this budget has recently been dedicated to marine science and

technology, for instance through the Marine Environment Platform" (p 99). Advanced technology is being employed in South Africa to study marine and terrestrial environments and enforce regulations promoting sustainability (see above).

Almost half of the analysed VNRs recognise the importance of **data in monitoring and reporting** against progress on biodiversity-related targets, while underlining that data availability remains one of their biggest challenges. South Africa's review acknowledges that "there is an urgent need for the generation of data across sectors to better understand development challenges and improve monitoring of progress. A lack of appropriate data impairs policy formulation and the monitoring of progress in many policy areas, such as: (…) the quality of groundwater, ecosystem and biodiversity evaluation" (p. 119). While discussing means of implementation, Malaysia's VNR report states (p. 61):

"Malaysia will need funding and technical assistance to develop national indicators and baselines to assess the progress of the 2030 Agenda and SDGs. Channelling resources to develop data for national indicators will be critical for evidence-based decisions and future plans. Technical assistance in developing proxy indicators may be needed in capacity building and "info-structure" development (e.g., using big data and open data for data collection)."

Finally, the VNRs present various examples of actions related to **finance and resource mobilisation**. Around 1% of the Official Development Assistance received by Fiji between 2011-2018 was dedicated to ocean finance, but the country would like to allocate an increasing amount of resources to this important issue (p. 64). Malaysia is pioneering innovative resource mobilisation in the environment sector through initiatives such as the Biodiversity Finance Initiative (BIOFIN), Reduced Emissions from Deforestation and Degradation (REDD+) and Payment for Ecosystem Services (PES) (p. 61). Sweden is one of the largest donors both to the Green Climate Fund and the Global Environment Facility and has promoted actions to support developing countries in fulfilling their commitments under the UN's five climate and environment conventions (p. 78). Through the ICF, the UK supports developing countries to respond to the challenges and opportunities that climate change presents. This support includes projects and mechanisms such as the BioCarbon Fund Initiative for Sustainable Forest Landscapes, the Forest Carbon Partnership Facility, the Forest Governance, Markets and Climate Programme, Blue Ventures Carbon Project, and the Blue Carbon Fund (p. 177-189).

5 Conclusions and recommendations

The COVID-19 global pandemic in 2020 has highlighted amongst many things the complex relationships between biodiversity loss, environmental degradation and human health, and underlined the multiple interlinkages between the environmental, social and economic SDGs. UNEP's Frontiers Report (UNEP, 2016) highlighted that 75% of all emerging infectious diseases are zoonotic in nature and UNEP will publish in 2020 a rapid environmental assessment on zoonotic disease providing an important update in the current state of knowledge. Although the relationship between ecosystem health and human health is a complex field of enquiry, it is clear that conserving, restoring and ensuring the sustainable use of natural ecosystems will be crucial to help prevent future outbreaks. From this perspective, the Agenda 2030 represents a roadmap that countries can follow in order to ensure economic prosperity while protecting the planet and its people.

Given the foundational role of nature for our economies and societies, most of the Sustainable Development Goals are largely indivisible as well as dependent on biodiversity. The Voluntary National Reviews (VNRs) are therefore a key tool to assess the state of SDG implementation at country level and the integration of biodiversity into all dimensions of the 2030 Agenda. This paper takes into consideration a representative sample of 30 VNRs and analyses how and to what extent biodiversity is integrated in the documents.

Key findings suggest that there is broad recognition of the role that biodiversity, ecosystem services and natural resources play in the functioning of national socio-economic systems. In almost all the VNRs analysed, countries show that they have national biodiversity-related legislations and action plans are in place which align with international conventions (see Table 4). In addition, various VNRs provide concrete examples of implemented actions aimed at tackling the challenges related to biodiversity and ecosystem services loss. However only half of the analysed countries manage to demonstrate through their VNRs a capacity of integrating and mainstreaming biodiversity throughout the implementation of the 2030 Agenda.

It is recognised that a VNR represents only a fragment of a country's actions and commitments towards sustainable development. The succinct character of the VNRs combined with the lack of a unified reporting structure mean that VNRs cannot capture exhaustively the various country-level interventions. Nonetheless, this qualitative analysis outlines a set of national examples and best practices which underpin the importance of nature and biodiversity and demonstrate progress towards Agenda 2030 Goals.

Considering the above, the following recommendations are suggested for consideration by Member States and the UN system to further strengthen the biodiversity dimension of VNRs:

- Despite the existing guidelines prepared by the UN Secretary-General and the regular updates by UNDESA, the structure of the VNRs varies from country to country thus making knowledge sharing and analysis challenging. Whilst retaining the underlying principles of inclusiveness and flexibility, the introduction of a common reporting framework would allow more emphasis to be placed on an evidence-based assessment of challenges and gaps, in

addition to an enumeration of success stories to identify good practice and sharing experiences (ECOSOC, 2020).

↓ The CBD Secretariat may wish to consider preparing for the HLPF an updated set of suggested fields and guidelines on biodiversity and the VNRs based on the post-2020 global biodiversity framework once it is agreed in 2021. This would allow countries to focus their VNRs on issues pertaining to the drivers for biodiversity loss, people's dependencies on nature, biodiversity mainstreaming, accountability and awareness raising. In addition, further guidance and support to countries, focusing for example on using SDG biodiversity indicators in preparing their future VNRs, would be valuable. Such an approach would support CBD Decision XIII/3 (CBD, 2016) which, amongst other things, "urges Parties, when implementing the 2030 Agenda for Sustainable Development, to mainstream biodiversity in the implementation of all relevant Sustainable Development Goals, thus promoting linkages between efforts to implement national biodiversity strategies and action plans and Sustainable Development Goal strategies and plans."

↓ One of two approaches to VNRs has been adopted by countries, namely VNRs that report progress under each (or a selection of) SDGs or VNRs that adopt a cross-cutting thematic approach. Whereas the former approach allows countries to provide more details on targets, the latter approach is better suited to highlight country-specific progress, focus on hindrances to progress as well as policy successes, and underline interlinkages among SDGs. Biodiversity seems to be better mainstreamed in the VNRs that adopt a cross-cutting theme approach, as this allows consideration of potential trade-offs and barriers as integrated sustainable development actions (for instance improving food security while avoiding land-use change; or building resilient infrastructures without impacting ecosystems health).

↓ Multi-stakeholder consultations are important for raising awareness, especially from the local level, and therefore increasing the integration of biodiversity in the VNRs. Many VNRs annexes report on the outcome of these consultations and biodiversity is almost always mentioned as a key issue by civil society organisations and local communities. Their recommendations could be incorporated in the VNRs and a follow-up system put in place to support enhanced transparency and accountability.

↓ Biodiversity-human interactions could be brought to the fore more prominently in the VNRs. In the aftermath of the COVID-19 pandemic, it is particularly crucial to highlight the connections between nature and human health, given that the continued degradation of biodiversity and ecosystems may lead to new infectious disease pandemics in the future. In addition, the role of vulnerable groups such as women, youth and indigenous people in protecting and restoring biodiversity could be further explored also in line with the 'leaving no one behind' principle. Finally, the importance of education in shaping how we behave towards nature would also deserve some more attention in the VNRs.

↓ Almost all VNRs allude to the economic value of natural resources and the importance of managing them sustainably. Some go further and explore the negative impacts that economic growth has on nature. However, very few VNRs reflect on the contribution that biodiversity and ecosystems services have in terms of natural capital. The use of natural capital accounting systems or of multi-dimensional measurements, such as the Inclusive

Wealth Index, could be further promoted to better account for and analyse country progress towards sustainable development.

- Further integration of country biodiversity and climate change agendas at the national level could be explored in the VNRs, particularly by describing how countries meet their related climate and biodiversity targets including by deploying nature-based solutions. A key challenge outlined by countries in terms of scarce data availability could be tackled through the use of Earth Observation (EO) systems and geospatial monitoring tools such as Digital Earth (Digital Earth Africa, 2019) and Nature Map (IIASA, IIS, UNEP-WCMC, SDSN, 2020).

Given that only 10 years remain to achieve the 2030 Agenda and progress has been insufficient so far (Independent Group of Scientists appointed by the Secretary-General, 2019), there is a growing need to increase the effectiveness and efficiency of action by targeting multiple SDGs. This is why the UN Decade of Action was launched at the beginning of 2020 to accelerate progress and deliver on the global goals. The UN Decade of Ecosystem Restoration is also a crucial catalyst for accelerated action in support of the environmental SDGs. There is, therefore, a pressing opportunity to enhance our relationship with nature to better contribute towards achieving the SDGs, including by understanding and acting on potential synergies and trade-offs between the Goals (Scharlemann, et al., 2020). 2020 could still be a 'Super Year' for nature, if the international community heeds the dramatic warnings – from the harrowing impact of the COVID-19 pandemic to the devastation caused by wildfires across the globe - and seizes the opportunity to act decisively to reset humanity's relationship with nature and to set the world on track to a more sustainable future.

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Annex I - Qualitative analysis table

Annex Table – Qualitative analysis table
1. Countries that do not mention or recognise the importance of biodiversity
All countries mention or recognise the importance of biodiversity in their VNRs
2. Countries that broadly recognise the importance of biodiversity though do not mention specific actions

Azerbaijan (VNR 2019)	One of the main targets of the National Strategy for 2017-2020 on the conservation and sustainable use of biodiversity in the Republic of Azerbaijan is to achieve sustainable socioeconomic development from an ecological point of view. Azerbaijan's VNR acknowledges that its dependency on energy and natural resources sector (which account for 35% of GDP and net export income) may have a negative impact on the environment and constitute a challenge to the country's transition into a low carbon economy. It also recognises the potential impact on non-clean energy use on the country's climate and environment. Natural capital and resources are mentioned in connection to SDG 7 and 13. References to sustainable agriculture (SDG 2), environmental education (SDG 4), green growth (SDG 9), costal ecosystems and fisheries (SDG 14) are also present.
Nepal* (VNR 2017)	Nepal's VNR focuses on the Millennium Development Goals' achievements and unfinished agendas. The review underlines that some of the agendas within MDG 7 on environmental sustainability remain unfinished and more needs to be done particularly in relation to drinking water, sanitation and health achievements, to reduce biodiversity loss and protection against the negative effects of climate change. Nepal recognises the importance for major sectoral plans and policies to be aligned and mainstreamed with SDGs, including the national Forest Sector Strategy and Nature Conservation National Strategic Framework.
Peru* (VNR 2017)	Peru's 2030 vision aims to ensure that all people enjoy a prosperous and full life, with decent employment and in harmony with nature, considering reserves of resources for future well-being. This will be achieved, among other things, through concerted efforts for the conservation and sustainable management of natural resources, and urgent action to address climate change. The following progress on goals and target is reported in an annex: average marine acidity has a pH between 7.6-8.3 in 2015 (target 14.3), sustainable fisheries as a percentage of GDP is 0.31 in 2015 (target 14.7), forest area as a proportion of total land area is 53.8 in 2014 (target 15.1).
Saint Lucia (VNR 2019)	Sustainable growth and climate change are national priorities for Saint Lucia. The VNR mentions National Biodiversity Strategy and Action Plans and National Reports while assessing progress against SDG 13. Saint Lucia promotes sustainable land management and livelihoods to face climate change through mango biodiversity programmes aimed at increasing mango cultivation on farm and forest land.
Sierra Leone (VNR 2019)	Despite not reporting directly against SDG 14 and 15, Sierra Leone bases its national review on the 'leaving no one behind' principle and establishes a link between natural

	resources management and justice for future generations. Additionally, the country reports having made significant strides in improving the management of mineral, water and land resources over the years with a view to ensuring responsible production and consumption of environment resources, consistent with SDG 12. The annexed "CSO Position Paper on SDG Implementation" reports civil society's concern that the exploitation of natural resources and biodiversity is neither respecting ecological boundaries nor is it fully translating into value-adding activities, adequate employment opportunities, and enhanced economic and environmental returns for the country.
3. Countries that mention specific actions in relation to biodiversity	
Albania **(VNR 2018)**	Biodiversity is mentioned in relation to SDG 6 on water management. The review assesses Albania's progress in the adoption of a new modern environmental legislation since 2011, through a process driven by efforts to approximate the EU environmental standards. In the field of nature protection, transposition of major EU directives is at an advanced stage, with the Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC), at 98 percent and 95 percent, respectively. Transposition of these directives progressed in 2017 with approval of the Law 'On Protected Areas'. One key achievement in 2016 was the presentation of the Strategic Plan for Marine and Coastal Protected Areas, incorporated into the Strategic Document for Biodiversity Protection and approved by government by a decision of Council of Ministers and presented at a meeting of Parties to the Convention on Biological Diversity. In February 2016, Parliament adopted a ten-year moratorium on forest timber exploitation for business purposes. The purpose of the law was to reduce negative impacts of overexploitation of the country's forest resources. Nevertheless, implementation of the legislation lags behind, in terms of institutional and financial capacities in place.
Argentina* **(VNR 2017)**	Argentina's VNR focuses on SDG 14 on life below water. Biodiversity is also mentioned in connection to sustainable agricultural production (SDG 2) and to the role of science and technology for productivity innovation in maritime spaces (SDGs 9 and 17). The review establishes a strong link between marine biodiversity and economic development. Policies aimed at meeting SDG 14 are strongly articulated with one of the 100 priorities set by the national government called Pampa Azul. Argentina commits to dedicate up to 5% of its national budget by 2030 to promote scientific knowledge and the development of capacities for marine research and technological transfer through the adoption of conservation policies and the sustainable use of resources.
Brazil **(VNR 2017)**	Brazil's VNR focuses on SDG 14 on life below water and on sustainable use of marine resources. Natural resources are also mentioned in connection to poverty reduction (SDG 1), food security (SDG 2) and climate change adaptation (SDG 13). The Program for Oceans, Coastal Zone and the Antarctic promotes the qualification of human resources, research, monitoring and logistics necessary for generating knowledge about marine resources and their sustainable use, as well as the

	development of actions that enabled the implementation of the National Policy for Sea Resources (PNRM). The Integrated Coastal Management Project (Orla Project) – one of the instruments included in the National Coastal Management Plan – is an action focused on organising and managing coastal areas. The Program for Conservation and Sustainable Use of Biodiversity has been developing actions to expand coverage, strengthen and structure the management of conservation units in coastal and marine zones; to reduce the risk of extinction of endangered species, and control invasive alien species. Regarding protected areas, the targets include, by 2019, the consolidation of 11 federal conservation units, and the expansion of the marine and coastal protected area system from the current 1.5% to 5% of the Brazilian marine territory. By 2016, 12,100 families living in protected areas of sustainable use were served by the Green Grant Program, created for increasing income and social and productive inclusion of communities living in conservation units of sustainable use.
Ethiopia (VNR 2017)	The issue of sustainable use of natural resources is referred to in connection to poverty reduction (SDG 1) and sustainable agriculture (SDG 2). Water ecosystems and resources are also mentioned in relation to SDG 6 and 14. In 2015/16, about 20.3 million people (9.5 million women and 10.8 million men) participated in community water shade development all over the country. These measures have preserved the biodiversity, helped maintain perennial base flows to dams and curbed excessive sediment transport to hydro dams. The water resources policy and strategy of the country gives the direction for the efficient and appropriate harnessing of the water resources of the country including embarking on development interventions that would respond to droughts and flood control effectively. A set of indicators is reported in the annex under the heading "SDG 14 - Conserve and sustainably use the water resources for sustainable development".
India* (VNR 2017)	India's VNR mentions biodiversity primarily in relation to SDG 14. A clear agenda has been formulated for promoting the 'Blue Revolution'. For tracking the levels of marine pollution along the coastline, the country has developed the Coastal Ocean Monitoring and Prediction System. Additionally, an oil spill management system has been put in place for responding to emergencies arising out of oil spills. Further, the Integrated National Fisheries Action Plan, 2016 is being implemented to promote the livelihoods of fishing communities as well as the ecological integrity of the marine environment. Giving new impetus to port-led development, the Sagarmala programme is improving port connectivity, port-linked industrialization and coastal community development. India's government supports research and development activities with an emphasis on mangrove biodiversity and has registered an increase of 112 square km in the mangrove cover of the country as compared to the previous assessment.
Kenya* (VNR 2017)	Kenya's VNR links biodiversity and climate change through forest conservation (SDG 13). The 2016 Forest Conservation and Management Act provides for the conservation and management of public, community and private forests, and areas of forest land that require special protection.

While describing achievements under SDG 14, the review mentions the concept of blue economy now adopted to ensure that economic development of the ocean contributes to true prosperity. In Kenya, Coast Development Authority (CDA) is mandated to provide integrated development planning, coordination and implementation of projects and programmes within the coast region. Kenya's EEZ and adjacent environment is well endowed with unique coastal resources that include the sea, rivers, springs, lakes, deltas, water catchments, hills and rangelands, marine resources, fisheries, tree crops, forestry (mangroves), Kayas, minerals (gemstones), wildlife (Hirola, butterflies), tourism, diverse cultures, monuments and history. The Government enacted Fisheries Management and Development Act 2016 and also continue to enforce controls for exploitation of fisheries resources. The main challenges highlighted by the VNR in relation to SDG 14 are the lack of baseline data on marine life and environment management and the presence of invasive and alien species.

As for SDG 15 implementation, in addition to the 2016 Forest Conservation and Management Act, a number of initiatives were undertaken, and include natural forest conservation through rehabilitation of 600,000 ha of the five major water towers. Green Schools and Commercial Tree Growing for a Green Economy programme were established. The Bamboo Development and Commercialization Strategy (2014-2017), Green Economy Assessment Report and Sustainable Environmental and Restoration Programme were launched.

Challenges underlined in relation to SDG 15 include: inadequate institutional capacities, lack of participatory coordination frameworks, insufficient funding, illegal logging, low sewerage coverage, natural calamities and resource-based conflicts.

Natural heritage and resources are briefly mentioned in the sections of the VNR dedicated to SDG 11 and 12.

A table with data on targets 14.4.1 and 15.1.1 is presented as an annex.

Mali (VNR 2018)	Mali's VNR highlights in its introduction the link between agricultural production and the inadequate management of environmental problems such as land degradation, biodiversity loss, unsanitary conditions, river stilting, and the deterioration of its living environment. The review details Mali's progresses in the implementation of SDG 15. Various laws and national strategies are in place in the country, including: Politique Nationale de l'Aménagement du Territoire (PNAT) de 2006; Cadre Stratégique d'Investissement de Gestion durable des terres (CSI/GDT); politique Nationale Forestière; Politique Nationale de Protection de l'Environnement (PNPE); Stratégie Nationale de Biodiversité; Programme d'action national (PAN) pour la lutte contre la désertification, le Plan d'action pour la gestion intégrée de la fertilité des sols. Several programmes and projects have been implemented under SDG 15: i) natural resources management project in the context of climate change that aims at amplifying good practices of sustainable management of land, water and biodiversity; ii) the Projet d'Accroissement de la Productivité Agricole au Mali (PAPAM) project that aims at increasing the use of sustainable practices on land and water within the production system in order to stop, reduce and reverse current trends in Mali's agri-food systems.

Panama* **(VNR 2017)**	Panama's VNR lists a set of actions and challenges in relation to the implementation of SDG 14. Projects and actions include: IKI project, phase I of project "Limpieza de la Ciudad y la Bahía de Panamá", the action "Protección de las Áreas del Océano" through which the country extended marine protected areas coverage from 3.7 to 13.5 %, phase III of the project SPINCAM implemented by UNESCO's Intergovernmental Oceanographic Commission (IOC) and the Permanent Commission for the South Pacific (CPPS), project "Protección de reservas y sumideros en los Manglares y Áreas Protegidas de Panamá", the new National Fisheries Law, and the National Dialogue for Fisheries and Sustainable Fisheries Management in the Special Marine Protection Zone. Within these initiatives, Panama faces several challenges that it must address for full implementation of SDG 14. Increasing participation in global and regional instruments for the protection and preservation of the marine environment is one of them, as well as the further development and implementation of environmental impact assessment processes covering activities planned under its jurisdiction or control that may cause substantial pollution or harmful and significant changes in the marine environment. It intends to jointly develop and promote contingency plans to respond to incidents of pollution and other incidents that may have significant adverse effects on the marine environment and biodiversity; integrate into national and, where appropriate, regional strategies for the management of marine waste, especially in the coastal area, ports and maritime industries, including recycling, reuse, reduction and disposal; address consumption and production patterns; and improve the implementation of coastal control measures.
Serbia **(VNR 2019)**	Serbia's VNR reports in detail on progress in the implementation of SDG 15 in the country. Since 2013, Serbia has a National Disaster Risk Reduction Platform, in accordance with UN recommendations. In accordance with the Law on Emergency Situations, the National Platform is an operational and professional body designed to coordinate protection activities, as well as direct policies aimed at disaster risk reduction. In 2018, the Platform became the Law on Disaster Risk Reduction and Emergency Management. The Law on Soil Protection (2015) regulates the protection of soil. The NNKD recognizes agriculture, hydrology, forestry, health and biodiversity as the sectors most affected by climate change. According to the NNKD, some of the scenarios show variations of up to 50% in crop yield by 2100, provided the current trend in irrigation continues. Serbia is committed to reducing greenhouse gas emissions by 9.8% by 2030 compared to 1990 levels. By 2020 the plan is also to introduce measures to prevent and significantly reduce the impact of invasive alien species on land and water ecosystems, alongside activities to integrate ecosystem and biodiversity values into national and local planning for the needs of the Poverty Reduction Strategy and reporting. These activities are related to the ten-year Framework Programme on Sustainable Consumption and Production in which all countries will participate, depending on the level of development and capacities of each country. By the end of 2030, it will be necessary to ensure the preservation of mountain ecosystems, their biodiversity, with the aim of improving their capacities so that they provide benefits essential for sustainable development.

4. Countries that demonstrate capacity of integrating biodiversity into national and local actions	
Cameroon (VNR 2019)	**Progress on goals and targets** Cameroon's VNR integrates biodiversity throughout the document and mentions biodiversity-related policies and projects while reporting on progress towards SDG 2, 12, 13 and 15. • **SDG 2** Cameroon recognises "promoting biodiversity" as one of the fundamental targets to be achieved under SDG 2, along with "fighting against hunger and malnutrition" and "strengthening sustainable production systems". On SDG 2, the review mentions the sustainable use of natural resources in relation to the national responsible fisheries code. A programme of restoration of mangrove ecosystems had as objective planting 30 000 mangroves between 2010 and 2018. The projects "Projet de Développement de l'Elevage (PRODEL)" and "Projet d'Investissement et de Développement des Marchés agricoles (PIDMA)" also include biodiversity objectives. • **SDG 12** Cameroon's National Biodiversity Strategy and Action Plan as well as a programme on sustainable use of resources are mentioned in connection to SDG 12 on sustainable consumption and production. • **SDG 13** Section dedicated to SDG 13 mentions awareness-raising campaigns organised in the framework of the REDD+ project in Cameroon for local communities, including youth and women. Sustainable forest management is mentioned to combat climate change. **SDG 15** • Progress on SDG 15 is thoroughly reported. Four sectoral strategies are in place and include the "Stratégie de Développement du Secteur Rural (SDSR)" and the "Stratégie Nationale du Développement Durable (SNDD)". A national forest law (94/01 from 20th January 1994) is currently under revision. Cameroon's "Green Sahel" project has been implemented in the framework of the National Action Plan to Combat Desertification. From 2008 to 2019, the project has contributed to protect and restore about 22,000 ha of degraded land. • Cameroon underlines various challenges in implementing SDG 15: identifying alternative sources of revenue in view of the reduction of poaching and logging activities; combating erosion and river stilting phenomena; classifying and managing protected areas; managing and restoring permanently forest coverage; developing national and regional schemes for sustainable land management.
Fiji (VNR 2019)	**Progress on goals and targets** Fiji's VNR reports extensively on the SDGs environmental dimension, while focusing the document particularly on climate action (SDG 13). **SDG 14** • The major pieces of legislation are the Fisheries Act 1942, Ports Authority of Fiji Act 1975, The Marine Spaces Act 1978, Marine Act 1986, Sea Ports Management Act 2005, Maritime Safety Authority Decree 2009, National Biodiversity Strategy and Action Plan 2017- 2024, Offshore Fisheries Management Decree 2012, International Seabed Mineral Management Decree 2013, and the latest Tuna Management Plan (2010).

	- Various other policies and documents are in the development phase and include: the National Fisheries Policy (draft), the Fiji Aquaculture Strategy (draft), the Fiji Inshore Compliance Strategy (draft), the Inshore Fisheries Policy & Framework (draft), the Inshore Fisheries Data Sharing Policy (draft) and the Ocean Policy. **SDG 15** - Activities in the forestry sector build up from the 1992 Forestry Act and the Forest Bill No. 13 of 2016. The Forest Bill No. 13 of 2016 was enforced to address and strengthen inconsistencies between the Forestry Decree and the Fiji Forest Policy Statement of 2007, the REDD+ Policy and administration of the forest sector further enforced provisions of the Fiji Forest Harvesting Code of Practice (FFHCOP). Fiji has committed to the World Bank's Emissions Reduction Programme (ERP). The ERP builds on the implementation of the long-term decarbonisation strategy outlined in the Fiji Low Emission Development Strategy (LEDS). It is a milestone achievement under the REDD+ programme to protect and enhance Fiji's forests and determine the value of carbon credits. - The Environment Management Act of 2005 prevents further degradation of Fiji's natural ecosystems. - The development of the National Land Use Plan will inform the process of rural land and resources allocation and development. - Incorporating the Agriculture Forestry and Other Land Use (AFOLU) sector into the Nationally Determined Contributions (NDCs) under the Paris Agreement will also re-emphasise the critical resources to address sustainable and managed land and forests.
Guatemala (VNR 2019)	**Highlights** Guatemala's VNR is structured based on the country's national development priorities and biodiversity is one of them. References to nature appear throughout the documents, and connections to the social- or economic-related SDGs are clearly established. **Progress on goals and targets** The VNR focuses on the potential of the country's resources and includes "access to water and management of natural resources" and the "economic value of natural resources" as two of the ten key priorities for national development (SDG 8 and 9). Guatemala recognises integrated water management as national strategic priorities and mention biodiversity while reporting on progress achieved under SDG 6. The VNR speaks about the potential of the country's bioenergy in the forestry and sugarcane sectors (SDG 7). The VNR presents the point of view of civil society, local authorities and indigenous people in protecting and restoring natural resources (SDG 11). The document describes efforts to adapting to the effects of climate change through the implementation of National Adaptation Plans (NAP) or reforestation programmes such REDD+ (SDG 13). Almost all SDG 14 and 15 targets are reported with detailed analysis and reference to national indicators. Although marine protected areas coverage represents only around 3% of their coastline, the VNR describes efforts in implementing these SDG targets and emphasise the importance of conserving and restoring marine resources as a source of alternative livelihoods for local communities. Progress on indicator 15.1.2 is reported using UNEP-WCMC's IBAT tool. Finally, Guatemala reports a detailed

	analysis of the proportion of illegally traded species according to CITES categorisation. The VNR pays particular attention to partnerships, funding and research opportunities (SDG 17).
Italy (VNR 2017)	**Opening statement** Italy's VNR highlights the fundamental importance of biodiversity to achieving the 2030 Agenda and the SDGs. In its foreword, the report states: "Following the 2030 Agenda, the [National Sustainable Development Strategy] shapes a new vision towards a circular, low-emission economy, resilient to climate impacts and to other global changes endangering local communities, prioritising the fight against biodiversity loss, alteration of the fundamental biogeochemical cycles (carbon, nitrogen, phosphorus) and land-use change." **Progress on goals and targets** Italy's VNR includes a section about "planet preservation" which highlights the following points: • It is crucial to adequately consider the link between the health of terrestrial and aquatic ecosystems, social well-being and economic perspectives within territorial development and infrastructure policies. • In this sense, the ability to account Natural Capital is decisive to promote long-lasting growth by focusing on environmental quality. This objective is at the basis of the first report on the State of Natural Capital, coordinated by a Natural Capital Committee, composed by representatives of institutions and research experts. • In 2010, Italy adopted a National Strategy for Biodiversity, building on a participatory and shared process involving institutional, social and economic actors concerned with Natural Capital accountability and mainstreaming.
Latvia (VNR 2018)	**Highlights** Latvia's VNR presents strong society-economy-nature nexus examples, where the role of biodiversity is recognised in the country's transition towards a "eco-efficient economy". The country's natural and cultural capitals are presented as strictly interlinked. **Progress on goals and targets** • **SDG 12** Sectoral planning documents partially set targets related to the circular economy, for instance, Environmental Policy Guidelines 2014-2020 target environmental quality, biodiversity and sustainable use of natural resources. • **SDG 13** Links between climate adaptation and biodiversity established through National Preparedness Plan. **SDG 14** • At a national level, in 2016 the Programme for Achieving Good Marine Environmental Status 2016-2020 was adopted to define the measures for achieving and preserving good marine environmental status of the maritime waters under Latvia's jurisdiction. • Currently the most significant measures for improving the status of the marine environment, and for reducing the pollution load from land sources, are those included in the 2016-2021 management plans for Latvia's largest rivers • In 2018, work continues on the Marine Spatial Plan based on an ecosystem-based approach that respects the unified principles of the Baltic Sea Region as

	well as the characteristic features of the relevant marine ecosystem and land areas that are functionally related to marine areas. • Launched in 2012 by the NGO - Foundation for Environmental Education, the annual My Sea campaign involves a regular clean-up activity. **SDG 15** • One of the goals of the National Development Plan is to "Maintain the country's natural resource capital as the basis for sustainable economic growth and promote its sustainable use while minimising both natural and human-activity-caused risks to the quality of the environment". • The VNR recognises that the forestry sector represents 5.2% of Latvian GDP and 20% of national export earnings.
Lebanon (VNR 2018)	**Highlights** National and sectoral legislation, policies and strategies in Lebanon have partially incorporated sustainability principles in line with the country's commitments under multilateral environmental treaties, protocols and conventions. Lebanon now has an environment protection law, a national biodiversity action plan, and an action plan for SCP for the industrial sector. **Progress on goals and targets** • **SDG 12** The environment protection law (444/2002), and a number of application decrees, support the SCP concept by cleaner production techniques, biodiversity conservation, prevention of natural resource degradation, environmental monitoring (pollution sources and abatement systems) and setting landfill standards and promoting recycling. • **SDG 13** Lebanon has mainstreamed climate change adaptation into various sector strategies. The National Biodiversity Strategy and Action Plan (adopted in 2018), the National Water Sector Strategy (adopted in 2012), the Ministry of Energy and Water's national energy strategies, and the forestry strategies all include climate change action. • **SDG 14** In 2018 the Cabinet endorsed the National Biodiversity Action Plan (prepared in 2016) that includes the protection of coastal and marine biodiversity. **SDG 15** • Lebanon's second National Biodiversity Strategy and Action Plan (2016–2030) (endorsed by the Cabinet in April 2018) aims to increase nature reserves to five percent of its territory by 2030 and increase natural terrestrial and marine ecosystems within the protected areas network to 20 percent. • Biodiversity and land natural resource protection are covered by the Forest Code. Other laws are being developed such as the draft law on Protected Areas Framework Law (…) Sustainable land management is governed by Decree-Law No69 of 1983 on urban development. (…) Decree-Law No. 69 of 1983 also called for localized detailed urban plans to be made that include zoning and a regulatory framework that sets out the plots, categories, and construction rules for each zone. • The CNRS-L funds several research projects, through its local grant research programme and International research programmes, related to conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems.

	• The impact of the Syrian crisis, and large numbers of informal settlements, have negatively affected Lebanon's land use and ecosystem and impacted on its land. **Annex – Stakeholders consultation tables** CSOs underline "Environmental Conservation and biodiversity" as key priority. Recommendations from CSOs include: protect natural water resources from environmental degradation especially the Litani river; protect and increase green cover; encourage rural development and tourism; support development and protection of HIMA's which refers to an area set aside for the conservation of natural capital, typically fields, wildlife and forests); raise awareness on conservation of natural resources; include environment in educational curriculums; implement environmental impact assessment to all projects.
Malaysia (VNR 2017)	**Highlights** **Environmental Endowment -** Maintained 55.2% forest cover, 12.1% as terrestrial protected areas and 3.36% as marine protected areas. Malaysia participates in international transboundary conservation efforts, namely, Heart of Borneo initiatives for forests and Coral Triangle Initiatives for marine areas. **Progress on goals and targets** According to Malaysia's VNR, the nation is well-endowed with natural resources and mega-biodiversity that is valuable not only to Malaysia but also to the global community. In this regard, measures are being undertaken to protect, conserve and sustainably use natural resources towards promoting green growth. **SDG 14** • Malaysia has introduced policies and measures to sustainably manage marine and coastal areas, including the National Coastal Zone Physical Plan (NPP-CZ) and the Coral Triangle Initiative Malaysia National Plan of Action (CTI-NPOA). • A successful Mangrove Planting Programme was initiated in 2005 to mitigate pollution caused by solid waste disposal • Illegal fishing practices, overfishing and harmful fishing practices are mitigated through the National Action Plan of Management of Fishing Capacity and the National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing. **SDG 15** • Malaysia has taken commendable steps to protect its biodiversity with the formulation of various policies and legislation such as the National Policy for Biological Diversity 2016–2025, National Forestry Policy 1978 (Amendment 1992), Second National Mineral Policy 2009, Wildlife Conservation Act 2010 (Act 716), National Parks Act 1980, Biosafety Act 2007 and others • To address the issue of forest fragmentation, transboundary projects also have been initiated, including the Central Forest Spine in Peninsular Malaysia and the Heart of Borneo, which involves Sabah and Sarawak states. **Means of implementation** Malaysia will need funding and technical assistance to develop national indicators and baselines to assess the progress of the 2030 Agenda and SDGs. Channelling resources to develop data for national indicators will be critical for evidence-based decisions and future plans. Technical assistance in developing proxy indicators may be needed in capacity building and "info-structure" development (e.g., using big data

	and open data for data collection). Innovative resource mobilisation is an area that requires technical and legal knowledge and funding. For example, in the environment sector, Malaysia is exploring alternative sources of financing through initiatives such as the Biodiversity Finance Initiative (BIOFIN), Reduced Emissions from Deforestation and Degradation (REDD+) and Payment for Ecosystem Services (PES). These pilot projects are instrumental to support mobilisation of additional resources.
Netherlands (VNR 2017)	**Enabling environment** The introductory section of the VNR underlines how the data show that there is room for improvement in the areas of social inclusion, environmental pressure and biodiversity. Dutch oversea territories are reported to take joint action to enhance marine biodiversity and promote sustainable energy. **Progress on goals and targets** • **SDG 2**: Through policies on agricultural trade and investment, the Netherlands supports emerging and developing countries' efforts to regulate local markets, increase agricultural biodiversity and reduce greenhouse gas emissions. **SDG 14**: • The Netherlands complies with the EU Marine Strategy Framework Directive. • In the Caribbean part of the Kingdom, a commission for marine biodiversity and fisheries is responsible for the management of the Exclusive Economic Zone (EEZ) around the islands. • The Caribbean Research and Management of Biodiversity foundation conducts studies in the region in cooperation with international institutes, promoting scientific tourism. • In the UN negotiations on biodiversity beyond national jurisdiction (BBNJ), the Netherlands advocates the protection of biodiversity in marine areas through legally binding agreements, compulsory Environmental Impact Assessments prior to new activities on the high seas, and effective international agreements on a fair and honest way of sharing the benefits of exploitation of marine genetic resources. **SDG 15**: • The Netherlands follows the EU Biodiversity Strategy and major points of the EU policy agenda including Natura 2000. • In addition, it invests in international networks like the Global Land Tool Network and the International Land Coalition, and in partnerships with CSOs, knowledge institutions, financial institutions and the private sector. • At the same time, Dutch embassies in developing countries support partner countries' implementation of improved land policies and promote fit-for-purpose land administration through the Land Administration for National Development (LAND) partnership with the Netherlands' Land Registry. • **SDG 17:** Specifically on partnership and capacity building, the Netherlands reports it has concluded more than 200 Green Deals, involving over 1,500 companies and CSOs: Green Deals are "cross-sector partnerships on themes like energy, transport, biodiversity, water, resources, climate, food and construction (that) accelerate economic growth while promoting energy saving, sustainable fuel use and a clean environment"

New Zealand (VNR 2019)	**Policy and enabling environment**
	Statistics New Zealand has developed "Indicators Aotearoa New Zealand – Ngā Tūtohu Aotearoa", a new suite of statistical indicators that go beyond economic measures, such as GDP and include wellbeing and sustainable development to help inform government policy and investment decisions.
	Progress on goals and targets
	SDG 6: New Zealanders highly value clean and healthy water ecosystems, with kaitiakitanga or the responsibility to provide good environmental stewardship being a defining tenet for Māori and the wider community.
	SDG 12: Beef + Lamb New Zealand Ltdis a farmer levy-funded industry organisation representing New Zealand's sheep and beef farmers. Their 2018-2022 Environment Strategy and implementation plan lays out a progressive long-term vision for the sector based around four priority areas – healthy productive soils, thriving biodiversity, reducing carbon emissions and cleaner water.
	SDG 14:
	• There is strong domestic alignment between government policy and most of Goal 14's targets, for example on sustainable fishing, fisheries subsidies, general implementation of international law of the sea, and fishers' access to marine resources and markets. New Zealand's marine and coastal ecosystems are managed and protected through a range of legislative instruments and policies implemented by multiple agencies.
	• The Fisheries Change Programme will ensure that the country has increasingly accurate and timely information about commercial fishing activity to inform fisheries management decisions and the right policy settings to protect and grow the economic, social, and cultural benefits of fisheries to all New Zealanders.
	• Data paucity and the scale of polluting activities (for example farming and forestry) also make it difficult to assess potential progress on preventing and reducing marine pollution by 2025.
	• Finally, in terms of research, New Zealand spends approximately $1.6 billion per year on science and innovation investments and a significant amount of this budget has recently been dedicated to marine science and technology.
	• New Zealand is championing an Action Group on ocean acidification, which seeks to improve the Commonwealth membership's capability to effectively address its impacts.
	• A global litter database and solutions platform is being developed.
	SDG 15:
	• The VNR reports "With New Zealand's many unique species and ecosystems, guardianship or kaitiaki is in our nature and at the heart of what it means to be a Kiwi."
	• New Zealand has multiple frameworks designed to protect the land and ecosystem services, which are framed by our New Zealand Biodiversity Strategy and a range of tools and legislation such as including National Environmental Standards for Plantation Forestry to manage the environmental effects of forestry, and a National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.

	• The country has set a goal to plant one billion trees over 10 years, called the One Billion Trees Programme. • The Predator Free 2050 programme brings together communities and wider organisations to eradicate New Zealand's most damaging introduced predators
Romania (VNR 2018)	**Policy and enabling environment** Romania's VNR includes on 'Leaving No One Behind' and features its national efforts in the arenas of health, education and culture. In describing its education strategy, the Romania report illustrates the broad scope, including biological and landscape diversity. **Progress on goals and targets** Romania's VNR includes a comprehensive report on progress for SDG 15, including extensive coverage of biodiversity in the following areas: • Actual state of biodiversity • Management of the protected areas • Ecosystems Diversity • Species Diversity • Genetic Diversity • Human Influence on the ecological systems • Economy and biodiversity • Threats for biodiversity • Overall assessment of conservation status of habitats and species • Improving/deteriorating trends of habitats and species with an unfavourable conservation status • Overall assessment of conservation status of habitats and species by biogeographical and marine • Region • Overall assessment of conservation status by habitat category and species group • Frequency of main pressures and threats • Forest ecosystems • Partnership with other associations The Program of Environmental Protection through Biodiversity Conservation (part of Romania Governing Program 2018-2020) addresses the fundamental role of habitat played in biodiversity conservation, main habitat targeted being represented by forest ecosystems. Romania underlines the economic importance of the country's main tree species genetic diversity as they are valuable in ensuring resistance to disease and pests. Romania's wetlands have almost halved, particularly along the Danube River where much of the land was converted to agricultural use. Highly sensitive mountain ecosystems are also particularly threatened by inappropriate forms of tourism and associated infrastructure development. In the period 2009-2016 an area of 7,912 ha of degraded land in Romania was forested and forest protection belts were installed on an area of 568 ha, within and outside forestry land. Moreover, the Forestry Code Law establishes tight sanctions against forest contraventions.

	In Romania there are 3,700 species of higher plants and the country is a centre of population density for a variety of threatened and endangered animals such as bears, wolves and lynx, which have been extirpated from most areas of Europe. However, Romania's VNR recognises that "the country has suffered a progressive loss of biodiversity as a result of human activity. In particular, agriculture, industrial development, transportation and the expansion of cities have profoundly affected the biological diversity, both generally and locally".
South Africa (VNR 2019)	**Summary** Goal 14: The legal and policy framework supports efforts to maintain the sustainability of marine resources. Goal 15: Forest coverage appears to be declining, but greater information is necessary to monitor changes in land resources and biodiversity. Redressing legacies of inequitable ownership and land distribution, spatial mismatches in land management and unsustainable land practices remain major challenges. **Progress on goals and targets** SDG 7 The Reagenz project – The DST Industry and Environment Directorate's Reagenz project is aimed at exploiting indigenous microbial biodiversity as a basis for competitive advantage. **SDG 14** • *Main messages:* The legislative and policy framework emphasizes the importance of the sustainability of marine resources. Advanced technology is being employed to study marine environments and enforce regulations promoting sustainability. • Following the formulation of the National Framework for Sustainable Development (NFSD)**,** South Africa approved the 2012−2014 National Strategy for Sustainable Development and Action Plan (NSSD 1). The Plan emphasizes the strategic importance of enhancing monitoring and reporting systems for improved environmental performance. Consistent with SDG 14, NSSD 1 also emphasizes the importance of valuing, protecting and enhancing environmental assets and natural resources (including coastal and marine environments). However, a key challenge faced by the NSSD was assigning value to natural resources and ecosystems that would generate financial resources to support biodiversity conservation over the medium term • Data challenges limit South Africa's ability to report formally on most of the SDG 14 targets. However, oceans and coasts are overseen by a comprehensive and progressive policy and legal framework that supports achievement of the Goal, and several programmes are having an impact on progress. • Advanced technology is being used to study marine environments and help enforce regulations designed to preserve sustainability. Research chairs were established at the South African Institute for Aquatic Biodiversity (SAIAB) and the South African Environmental Observation Network (SAEON) to study ocean and land environments, respectively. (…) The South African National Space Agency South African National Space Agency (SANSA) has contracted the French South African Institute of Technology at the Cape Peninsula University of Technology to develop, fabricate, test and launch a nano-satellite, ZACUBE-2, which is a

	precursor mission for a constellation of nine 3U cubesats that will be used to monitor illegal fishing in South African oceans.
	SDG 15
	- *Main messages:* Although there are policies and laws to promote the sustainable use of land resources, a substantial share of land is degraded, and forest cover appears to be declining. More data is being generated to monitor changes in land resources and biodiversity.
	- Legislation and national policies have prioritized sustainable development as a guiding principle. The NDP acknowledges that human wellbeing is dependent on the health of the planet and that South Africa will need clear long-term development strategies to sustainably manage natural endowments. DEA is championing programmes to restore and rehabilitate degraded land, and to improve ecosystem performance that generally will lead to carbon sequestration, better water yields and improved quality.
	- The National Biodiversity Economy Strategy aims to promote a new generation of partnerships between protected areas, the private sector and communities.
	- Climate change presents key challenge in terms of the biodiversity that supports forests. Preventing the poaching and trafficking of protected species remains a challenge.
	- Critical issues going forward: National reporting has historically omitted ecosystems and biodiversity. South Africa's data management systems are historically devolved to various government departments, each with their own data systems, resulting in a legacy of 'silo' reporting. Legacies of inequitable ownership and land distribution, spatial mismatches in land management and unsustainable land practices undermine South Africa's ability to sustainably manage land resources and ecosystems in a way that promotes fair and equitable sharing of the benefits.
	Conclusion
	There is an urgent need for the generation of data across sectors to better understand development challenges and improve monitoring of progress. A lack of appropriate data impairs policy formulation and the monitoring of progress in many policy areas, such as the quality of groundwater, ecosystem and biodiversity evaluation.
Sweden (VNR 2017)	**Progress on goals and targets**
	SDG 2
	- According to the Swedish Board of Agriculture's 2017 follow-up of Sweden's environmental objective "A Varied Agricultural Landscape", which includes the preservation and strengthening of biodiversity, the trend is negative.
	- Sweden's challenges regarding Goal 2 include tackling the population's increasing overweight and obesity, ensuring environmental sustainability and biodiversity in agriculture and strengthening all sustainability dimensions in the entire food chain.
	SDG 14
	- Sweden has adopted the UN Convention on the Law of the Sea. In 2016, Sweden adopted measures entailing that at least 10 per cent of its marine areas are protected. Together with Fiji, Sweden initiated the major UN Ocean Conference in

New York in June 2017, which aims to promote the measures necessary to achieve Goal 14.

- In 2017, Sweden will contribute SEK 150 million to strengthened international initiatives. These include sustainable fisheries through the UN's Food and Agriculture Organization (FAO), sustainable management of protected areas in collaboration with local populations through the Blue Action Fund, reduced marine littering through the United Nations Environment Programme (UNEP), and strengthened work on oceans and climate through the International Union for Conservation of Nature and Natural Resources (IUCN).
- Emissions of nitrogen and phosphorus, and marine debris and plastic in the ocean are tangible problems. Eutrophication and the spread of anoxic bottom waters are also major problems in the Baltic Sea.
- The chemical status of Swedish coastal waters is not good due to generally high levels of mercury. Some fish stocks are increasing, while the status of others is critical in parts of the seas surrounding Sweden.

SDG 15

- As regards preventing and managing the risk and spread of invasive alien species, there is an EU Regulation on the prevention and management of the introduction and spread of invasive alien species which Swedish authorities are working to implement.
- Sweden is party to the Treaty on Plant Genetic Resources and to the Nagoya Protocol, which both aim to promote access to, and the reasonable and equitable sharing of, the benefits arising from the use of genetic resources.

Current work in Sweden to implement the 2030 Agenda

Food security

Agriculture also needs to contribute to the conservation and protection of threatened species and biodiversity. It is necessary to develop agriculture effectively without bringing about a negative environmental impact.

Municipalities and county councils

The comprehensive plan has separate plans and strategies for various dimensions of social sustainability – such as public health, accessibility and gender equality – and the environment – such as water, transport, sustainable meals, nature and biodiversity, energy and climate, ecocycle and non-toxic environment, construction and planning.

Research collaboration and partnerships

Every year, World Water Week is held in Stockholm, gathering hundreds of water experts from all over the world. Stockholm International Water Institute organises the week and leads a variety of projects and programmes that employ evidence-based research to contribute to the implementation of a variety of water-related goals in the 2030 Agenda.

Resilient societies and landscape-based approaches for sustainable land use

There is an increasing insight into the need for integrating resilience into development measures in several sectors, scales and regions.

Circular and bio-based economy

Sweden wants to adopt an integrated approach to resolve food security, the energy issue and the transition to a circular and bio-based economy.

Tunisia (VNR 2019)	**Introduction** The country's environment and natural resources are under multiple pressures. The main environmental problems at present include (i) water resource degradation and wastewater treatment, (ii) inadequate waste management, (iii) air pollution, (iv) desertification and soil degradation (v) coastal degradation (vi) climate change and (vii) biodiversity loss. **Progress on goals and targets** **SDG 14** • The update of the National Action Plan in 2015 as part of the implementation of the Strategic Action Programme (PAS) to combat pollution from land-based activities (under the Barcelona Convention) has updated the list of sensitive areas according to the methodology developed by the Mediterranean Action Plan. • The objectives of the Sustainable National Development Strategy (SNDD) 2014-2020 also aim to strengthen the integrated and harmonious management of the coastal strip, combat coastal erosion and preserve coastal and island ecosystems. • The 2016-2020 National Development Plan plans to combat illegal fishing and protect marine wealth from pollution and biodiversity conservation by continuing to implement the satellite monitoring system on large and medium-sized vessels (1000 boats). • Goal 3 of the 2011-2020 Strategic Plan for Biological Diversity in Tunisia emphasizes the elimination and revision of subsidies harmful to biodiversity. • Pollution, the effects of climate change and over-exploitation of resources mainly due to non-compliance with periods of biological rest and insufficient human resources to control appear to be the main challenges of Target 14.4. **SDG 15** • The problem of overexploitation and degradation of forest resources in Tunisia is due to two essential deficiencies. First, in the absence of reliable and up-to-date data on forest space trends and changes, it is difficult to track forest ecosystems and activities. Second, although a system for monitoring the annual achievements of forest and pastoral plantations has been in place since 1990, national forest and pastoral inventories are both irregular and incomplete. • To accelerate these efforts, Tunisia has implemented a national forest and sustainable forest and range management strategy (2015-2024) to strengthen reforestation. • Tunisia has several strategies to preserve terrestrial ecosystems and protect biodiversity. However, several challenges remain and persist. Despite all these challenges, some experiments deserve to be strengthened in order to achieve the SDG15 targets. These include: (i) conservation agriculture; (ii) organic farming.
Turkey (VNR 2019)	**Progress on goals and targets** **SDG 2** • The National Gene Bank and Herbarium was established in 2010 as Turkey's second seed gene bank while the National Starter Culture Gene Bank was established in 2017 to protect biodiversity and guarantee food security for future generations.

- Next steps under SDG 2 include developing legislation to preserve genetic resources and biodiversity.
- **SDG 13** In the context of climate change, ecosystems and biodiversity, and such socio-economic sectors as water resources, agriculture, industry, energy, transport, housing, tourism, forestry and health sectors stand out.

SDG 14
- In addition to NDPs and strategic plans of relevant public institutions, key policy documents on SDG 14 include the National Climate Change Strategy, Climate Change Adaptation Strategy and Action Plan, Biological Diversity Strategy and Action Plan, National Wetland Strategy, Turkish National Marine Research Strategy Document.
- SDG 14 is assessed on two focus areas: i. Prevention of marine pollution and protection of ecosystem, and ii. Sustainable production and stock management of aquaculture products.
- An ecosystem-based approach, taking into account the quality and volume of water resources, is used for prevention of marine pollution and protection of marine ecosystem. Monitoring and prevention of pollution, identification and protection of biological diversity are a common practice.
- Seventeen regional agreements to which Turkey is a signatory (such as Barcelona, Bucharest Conventions), the relevant protocols and EU directives at the stage of harmonisation (Water Framework Directive and Marine Strategy Framework Directive) take into account the ecosystem-based management.
- In the context of sustainable production of aquaculture products and stock management, activities are undertaken for monitoring stocks, protection of endangered species, and reinforcement of stocks through fish-stocking.
- A Fishing Boats Monitoring System (BAGIS) was established in 2016 to prevent and inspect illegal fishing which is one of the important threats affecting the sustainability of aquaculture resources.
- Grants are given to small and medium sized enterprises under the Programme for Supporting Rural Development Investments to create alternative sources of income in the field of aquaculture and processing, packaging and storage of aquaculture products. Low-interest investment credits and business loans are provided for fisheries and aquaculture by Ziraat Bank and Agricultural Credit Cooperatives.

SDG 15
- In addition to NDPs and strategic plans of relevant public institutions, key policy documents on SDG 15 include the National Climate Change Strategy and Action Plan, National Forestry Programme, National Strategy and Action Plan for Combating Against Desertification, National Drought Management Strategy and Action Plan, National Basin Management Strategy, Strategy and Action Plan for Combating Agricultural Drought in Turkey, National Biological Diversity Strategy and Action Plan.
- SDG 15 is assessed on two focus areas: i. Conservation and sustainable management of terrestrial ecosystems and ii. Conservation of biodiversity and genetic resources.

	• The National Strategy and Action Plan to Combat Desertification (2015-2023) defines the activities and responsibilities. Combating desertification and land degradation solutions are ongoing. • In the context of conservation and sustainable management of terrestrial ecosystems, works are undertaken on combating desertification, land degradation, soil pollution, deforestation and drought risks.
United Kingdom (VNR 2019)	**Progress on goals and targets** • **SDG 2** The UK is working with a broad range of stakeholders to maintain the genetic diversity of seeds, plants and animals. To deliver this ambition the UK funds three genebank collections and four crop Genetic Improvement Networks (GINs). • **SDG 6** Protecting the Thames from sewage will significantly improve the river's water quality and biodiversity. In Northern Ireland, DAERA's new agricultural-environment scheme, the Environmental Farming Scheme (EFS) aims to address specific environmental needs, primarily related to biodiversity and water quality. • **SDG 11** The Central Scotland Green Network (CSGN) aims to make Central Scotland a more attractive place to live in, do business and visit, help absorb carbon dioxide, enhance biodiversity, and promote active travel and healthier lifestyles. • **SDG 12** The UK is working to preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. The UK's work on natural capital is helping to ensure that the value of biodiversity and ecosystems informs decision-making. The introduction of the carrier bag charge and landfill tax have already had significant impacts on behaviour. **SDG 13** • Nature-based solutions are crucial for climate mitigation and adaptation, as well as for addressing biodiversity loss. The UK is developing and implementing nature-based solutions through the Clean Growth Strategy, for example, by providing funding for woodland expansion and peatland restoration. • As part of the implementation of the UK government 25 Year Environment Plan, £50 million of funding has been announced for a new Woodland Carbon Guarantee to stimulate domestic carbon offsetting and incentivise new tree planting; and £10 million of funding in the October 2018 Budget for a Challenge Fund to plant and maintain at least 100,000 urban trees and contribute towards planting one million new trees in urban areas. **SDG 14** • Fisheries and marine management is largely devolved. Strong progress on Goal 14 can already be seen across the UK and it has reaffirmed its commitment to the Goal. Good progress has been made on achieving Good Environmental Status in UK seas and more than 50% of UK waters, including Overseas Territories, are set to be in Marine Protected Areas by 2020. The UK continues to work with the fishing industry and its world-class marine scientists to make sure more fish stocks are fished at sustainable levels, helping a new generation of fishermen to prosper.

	- The UK is at the forefront of global efforts to tackle marine plastic and has introduced one of the world's toughest bans on microbeads. Going forward, the focus is to better understand and address the impacts of climate change on the ocean and to work with others to tackle the main challenges facing the ocean, regionally and globally. - Some "Leaving No One Behind" examples described in the VNR include: In England, since 2016 the European Maritime and Fisheries Fund has awarded £800,000 each to six Fisheries Local Action Groups (FLAGs) to deliver fisheries-focussed, community-led local development. The Welsh Government arranged for the alignment of the Community Advice and Listening Line, a mental health helpline for Wales, to send referrals to the Fishermen's Mission in Wales, helping those facing uncertainty in the fishing industry and providing practical care to fishermen and their families. **SDG 15** - Better protection of ecosystems, improved management of protected sites, incentives for farming and woodland management, and funding for peatland restoration have all borne results in the UK. In recent years, there have also been a number of species conservation successes. - However, much work remains. The extent and condition of the UK's land-based ecosystems, including forests, remain affected by past changes in land use, and by pollution, invasive non-native species and climate change. Whilst long-term declines in the number and distribution of certain species have slowed in some cases, continued action is needed to tackle ongoing declines across many groups. - The UK is also committed to leading international action to protect biodiversity. The UK continues to champion efforts to address global degradation and loss, investing in conservation and coordinating action in the fight against illegal wildlife trade, including introducing one of the world's toughest bans on ivory sales. - Some "Leaving No One Behind" examples described in the VNR include: 2019 is the Year of Green Action, The Green Infrastructure Fund supports projects in some of Scotland's most deprived urban communities. Over £300,000 is being invested in a new forestry apprenticeship pilot in Wales. In Northern Ireland, Business in the Community Northern Ireland together with Ulster Wildlife delivers the Business & Biodiversity Charter. The UK's Darwin Initiative funds projects protecting biodiversity in developing countries.
Viet Nam (VNR 2018)	**Highlights** In the executive summary of its 2018 VNR, Viet Nam highlighted the following two points: - SDG 14: "To date, numerous policies related to SDG 14 have been improved and finalized, such as the Law on Environmental Protection, Law on Vietnamese Sea, Law on Natural Resources and Environment of Sea and Islands, Law on Fisheries, Strategy for Fisheries Development, Strategy for Sustainable Exploitation and Use of Natural Resources and Protection of Marine Environment, and National Strategy on Bio-diversity until 2020 and Vision to 2030.

- SDG 15: "Numerous policies related to SDG 15 have been issued, including the Law on Forest Protection and Development, Law on Bio-diversity, Law on Forestry and related strategies. The formulation of master plans is considered an important tool to conserve bio-diversity, with 18 provinces having formulated and approved provincial master plans for bio-diversity conservation.

Policy and enabling environment – integration of the three dimensions

Viet Nam's 2018 VNR contains a section on linkages in SDGs Implementation: "Conservation of biodiversity as per SDG 15 will help protect people's health, promote food production and reduce poverty. Therefore, SDG 15 is closely related to others, especially SDGs 1, 2, 3, 13 and 14."

Progress on goals and targets

- **SDG 2** Climate Smart Agriculture Box - Additionally, a large proportion of agricultural production growth has been traded off by the increasing environmental cost from overuse of production inputs such as intensive land use, inefficient water use, chemical fertilizers and pesticides, which further contribute to ecosystem degradation.
- **SDG 6** Viet Nam has issued and implemented a number of policies related to SDG 6, including management, conservation and rational use of water resources. This has been emphasized in laws and policies, such as the Law on Environmental Protection, Law on Construction, Law on Biodiversity, Law on Water Resources as well as Resolution No.24-NQ/TW of the Central Committee on pro-active Climate Change Adaptation and strengthening of natural resources management and environmental protection.
- **SDG 12** In order to orient consumption towards sustainability, Viet Nam has applied some economic tools such as natural resources taxes of mineral mining and water, an environmental protection tax and environmental protection fees on wastewater. The Law on Natural Resources 2009 regulates eight groups subject to taxes.

SDG 13
- For protection and development of natural ecosystems and enhanced GHG absorption capacity, Viet Nam has implemented the NAP on GHG emissions mitigation through REDD+. As of 31 December 2016, the total national forest area is 14,377,682 ha, which means a forest coverage of 41.19 per-cent or an increase of 0.35 per-cent compared to 2015. In 2017 forest coverage reached 41.5 per-cent. Since 2011, the national forest area has increased by 989,607 ha, i.e. an average increase of 160,000 ha annually.
- Despite the increased forest area, forest quality tends to decrease. The natural forest area is reduced by 62,675 ha during 2011-2017 period, mostly in the Central Highlands, the Southwest and the Red River Delta.

SDG 14
- In order to effectively implement its commitments in multilateral environmental agreements, Viet Nam has promulgated many policies, advocacies and measures for conserve and sustainable use of marine and island resources. Among them are the Law on Environmental Protection, the Law on the Sea of Viet Nam, the Law on Natural Resources and Environment of Sea and Islands, the Law on

Fisheries and a series of documents guiding the detailed implementation of these laws.

- The investigation, research and assessment of biodiversity in the sea and islands of Viet Nam have received much attention. However, the results show that the seagrass ecosystem is at risk of degradation while as many as 100 marine species are being threatened, and rare marine species that have been included in the Red Book of Viet Nam and the IUCN Red List should be protected through relevant measures (2015).
- Mangrove ecosystems are also seriously degraded. Viet Nam has established 10 marine protected areas (MPA).
- About 70 per-cent of the vessels in Viet Nam are mainly operating in coastal waters, accounting for about 35 per-cent of the total catch. However, the area for fisheries exploitation only occupies 11 per-cent of the exclusive economic zone which used to be the traditional fishing area of Viet Nam.
- Example of initiative: The Ha Long-Cat Ba Alliance Initiative was launched in 2014 to build the partnership between State agencies, businesses and communities to promote conservation activities and protect Ha Long Bay and Cat Ba archipelago.

SDG 15

- Viet Nam has issued numerous policies related to SDG 15. They include the Law on Biodiversity, Law on Environment Protection, Law on Forest Protection and Development, Law on Forestry, Resolution 24- NQ/TW dated 3 June 2013 of the 11th Party Central Committee on active responses to climate change, improved natural resource management and environmental protection along with such strategies such as the Strategy of Environmental Protection, Strategy of Viet Nam Forestry Development 2006-2020, Strategy of Special-use Forests Management and National Strategy on Biodiversity up to 2020 with a vision to 2030.
- Regarding desertification prevention, Viet Nam joined the UN Convention to Combat Desertification and issued a National Action Plan to Combat Desertification in 2006.
- Afforestation has been actively implemented with an average of 225,000ha of forest planted annually, of which 90 per-cent are production forests and forest plantation productivity continues to be improved.
- Viet Nam has successfully implemented the policy of forest environmental services payment, which helps generate income for households participating in forest protection and improves values of forestry products and forest protection efficiency.
- Viet Nam has implemented different activities to conserve endangered, precious and rare species, yet there is still scope for enhancements.
- Viet Nam has made a great deal of effort to develop policies and finalize governance mechanisms for wildlife trade control.
- The prevention and control of invasive alien species has achieved results, with effective eradication measures and communication to prevent people from producing and releasing harmful aquatic species.

	- The implementation of SDG 15 encountered some difficulties as promulgation of sub-laws for enforcement of the Law on Biodiversity remains slow and enforcement is challenging. - Therefore, it has been necessary to revise, amend and supplement laws relating to biodiversity and strengthen organization and management systems, assignments and decentralization of bio-diversity State management responsibilities. - Example of initiative: To allow the voices of communities dependent on forests to make valuable contributions to the negotiation and implementation of the Voluntary Partnership Agreement on Forest Law Enforcement, Governance and Trade (VPA/FLEGT) in Viet Nam and forest management, protection and development.

Countries that will present a new VNR at the HLPF 2020