Background Analytical Study UNFF18 Thematic Priority #1

Enhancing forest-based economic, social and environmental benefits

Progress, challenges and opportunities on Global Forest Goal 2

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In accordance with ECOSOC resolution 2020/14, the quadrennial programme of work of the United Nations Forum on Forests (UNFF) for the period 2021–2024 includes two thematically linked biennium: 2021–2022 (UNFF16 and UNFF17) and 2023–2024 (UNFF18 and UNFF19). According to this resolution, the thematic priorities should be based on the Global Forest Goals (GFGs) and targets, taking into account the programme of the High-level Political Forum on Sustainable Development (HLPF) and other relevant international forest-related developments.

In response to ECOSOC resolution 2020/14, the Bureau of UNFF18 decided that the thematic priorities for UNFF18 and UNFF19 to be as follows: (i) Enhancing forest-based economic, social and environmental benefits (GFG2); (ii) Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests, as well as the proportion of forest products from sustainably managed forests (GFG3); and (iii) mobilizing financial resources and strengthening scientific and technical cooperation; promoting governance frameworks to advance implementation; and enhancing cooperation, coordination and coherence, for sustainable forest management (GFG4, 5 and 6).

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Executive Summary

- An analysis of the status of progress towards the achievement of the Global Forest Goal 2 and targets of the UN Strategic Plan for Forests 2017-2030 revealed a number of key barriers hindering the efforts of country members to reach their forest-related goals in support of the 2030 Global Agenda. The main barriers include: (a) insufficient funding and limited access to market in many developing countries, (b) lack of standard metrics and methods to measure some targets, (c) insufficient technical assistance and capacity building, (d) weak forest governance, (e) climate change and (f) emerging crises such as the Russia-Ukraine war and the global economic inflation.
- Critical linkages exist between Global Forest Goal 2 (GFG 2) and the Sustainable Development Goals, and this study identified at least ten Sustainable Development Goals (out of a total of 17) whose realization is directly or indirectly supported by the achievement of the GFG 2 targets. These strong interlinkages call for an urgent acceleration of the efforts undertaken to achieve the GFG 2, in order to save the 2030 global agenda for sustainable development.
- The Article 5 of the Paris Agreement is exclusively dedicated to the contribution of forests to mitigating climate change. The realization of the goals underlined in Article 5 is supported by the actions undertaken to achieve the target 5 of the GFG 2, emphasizing the urgent need to maximize the potential of forests to address climate change and realize the Paris Agreement. This important linkage also brings into focus the underfunding of forests and forestry through climate finance, which is partly attributable to the inability to clearly communicate the full economic and financial value of forest-based solutions for adaptation.

- Several targets of the newly agreed Kunming-Montreal Global Diversity Framework (GBF) over the decade to 2030 have strong linkages with a wide range of activities undertaken to achieve the Global Forest Goal 2. Some examples include, (a) Target 1 which relates to the existence of sustainable management plans for forests, (b) Target 2 which is concerned with the expansion of protected areas systems, (c) Target 8 which deals with the mitigating role of forests and climate change and its impacts on biodiversity, and (d) Target 10 which focuses on the development of sustainable forest management initiatives for sustainable food security and agricultural development. These interlinkages make the realization of Global Forest Goal 2 vital to the achievement of the Kunming-Montreal Global Biodiversity Framework.
- Given the importance of Global Forest Goal 2 to the 2030 Agenda for sustainable development and other major international programmes, this paper identified a set of recommendations for consideration for the acceleration of the achievement of the GFG 2 targets:
    - In order to assist developing countries in their efforts to secure forest financing, the GFFFN should expand and multiply its training workshops on accessing funds from multilateral financing mechanisms. The UNFF and its members should also accelerate their activities to mobilize financing within the cross-cutting GFG 4.1 and 4.2.
    - Guidelines should be provided on the indicators required for some GFG targets, namely GFG 2.2, 2.3 and 2.4. The UNFF should accelerate communication between its members to ensure a common understanding of the indicators needed for specific GFG targets.

- The CPF should increase the technical assistance and capacity building support to country members, in (i) the valuation of non-wood forest products and ecosystem services and (ii) the development of their sustainable forest management proposals.
- The COVD-19 pandemic has laid bare our reliance on forests and reminded us of its importance in times of crisis. The pandemic has intensified pressures on forests, with an increasing number of marginalized and vulnerable communities using them as last resort safety-nets; forests also provided essential services and products to support public health, employment and disaster risk reduction. As countries develop their COVID-19 recovery plans, it is essential to reaffirm the critical role of forests in crisis preparedness and ensure that they are sustainably managed in anticipation of future crises. The UNFF and its members should step up their SFM activities to achieve the GFG 2.3 and GFG 2.5.
- The HLPF 2023 will be held in July 2023 to discuss the effective and inclusive measures to accelerate the recovery from the coronavirus disease (COVID-19); the theme will be "Accelerating the recovery from the coronavirus disease and the full implementation of the 2030 Agenda for sustainable development at all levels". It is important that these discussions include the crucial role of sustainable forest management as an efficient, cost-effective and nature-based approach to combat future viral epidemics, especially as several studies have found that ecosystem degradation and large-scale deforestation are drivers of emerging zoonotic diseases. An effective acceleration of the recovery from COVID-19 will involve an acceleration of the achievement of the global forest goals, and a full implementation of the 2030 Agenda will be difficult to achieve without the realization of its forest-

related goals. A second HLPF 2023 will be held in September 2023 as the SDG Summit, and the UN General Assembly should consider the adoption during this summit of a post recovery COVID-19 recovery package that includes a stimulus to accelerate the achievements of the GFGs of the UNSPF 2030.

- The Russia-Ukraine war and the rising energy and commodities prices have put the spotlight on our dependency on fossil fuel and revived the discussion about the use of forests for bioenergy production. The CPF and GFFFN should consider providing technical and financial resources for the acceleration of the production of bioenergy by country members as part of their activities to achieve GFG 2.4.
- Forests provide nature-based solutions to mitigating and adapting to climate change, yet they remain underfunded through climate finance. In addition to supporting the efforts to develop standard approaches for full monetary valuation of ecosystem services, the CPF should also support the adoption of those approaches in the member countries' long-term national adaptation and sustainable development plans.

Introduction

The United Nations Strategic Plan for Forests 2017-2030 provides a global framework for action at all levels to sustainably manage all types of forests, and to halt deforestation and forest degradation [1]. At the heart of the UNSPF are six Global Forests Goals (GFGs), whose importance for achieving sustainable development is underpinned by their alignment with the 2030 Agenda for sustainable development and its 17 Sustainable Development Goals (SDGs). The achievement of the Global Forest Goals is meant to foster and accelerate progress towards the SDGs and other international forest-related commitments and objectives such as the Kunming-Montreal Global Biodiversity Framework Biodiversity of the Convention on Biological Diversity (CBD), the Paris Agreement adopted under the United Nations Framework Convention on Climate Change (UNFCCC), among others.

A comprehensive examination of the status of forest resources and their trends over the period 1990-2020 was provided in 2020 by the FAO in the *Global Forest Resources Assessment 2020* [2]. A year later, the UNFF secretariat (under the United Nations Department of Economic and Social Affairs) released the *Global Forest Goals report 2021* [3], which provided a snapshot of the global efforts towards achieving the six GFGs and their 26 associated targets as contained within the UNSPF. Both the *Global Forest Resources Assessment Report 2020* (hereafter *FRA 2020*) and the *Global Forest Goals Report 2021* (hereafter *GFG Report 2021*) gave the most up-to-date evaluations of the challenges facing countries in meeting their commitments in forest-related international agreements. Corollary, the recently published *Sustainable Development Goals Report 2022* (hereafter *SDG Report 2022*) [4] produced a global overview of progress on the implementation of the 2030 Agenda for Sustainable Development, using the latest available data and estimates. The *SDG Report 2022* highlighted how a confluence of crises, dominated by

COVID-19, climate change and conflicts were creating spin-off impacts on food security, the environment, health and education, and thus putting the achievement of the 2030 Agenda for Sustainable Development in grave danger.

Given the linkages between the GFGs and the SDGs, and the integral role of forests to the 2030 global agenda (e.g. forests offer nature-friendly solutions to many global challenges, from combating climate change, land degradation and biodiversity loss, to building resilience against future crisis), understanding and addressing the major challenges to the achievement of international forest-related targets is an important step towards dealing with the obstacles jeopardising the 2030 Agenda. In this context, the 18th session of the UN Forum on Forests (UNFF18) will hold a technical session that will include an interactive exchange of experiences and lessons learned on thematic priorities, including the Global Forest Goal 2 (Enhancing forest-based economic, social and environmental benefits). In order to ensure a solid foundation for productive discussions on this thematic priority at UNFF18, this background paper reviews the current state of the progress on GFG2 and its targets, along with the three cross-cutting GFGs (GFG4, GFG5 and GFG6); the paper also analyzes and highlights the interlinkages between the GFGs under consideration, the SDGs and other international forest-related agreements (such as CBD and the Paris Agreement), with an emphasis on the importance of GFG2 to the 2030 Agenda for Sustainable Development. Based on the analysis, the paper makes a set of recommendations to accelerate the progress towards the achievement of GFG2.

1. Review of the Status of Progress towards the Achievement of GFG2

Global Forest Goal 2 (GFG 2) seeks to enhance forest-based economic, social and environmental benefits, including the livelihoods of forest-dependent people. As parts of its focus, GFG 2 aims to eradicate extreme poverty for all forest-dependent people (Target 2.1), increase the access to markets and finance for small-scale forest enterprises (Target 2.2), significantly increase the contributions and forests and trees to food security (Target 2.3), significantly increase the contribution of forest industry, forest-based enterprises and other forest ecosystem services to the economic, social and environmental development (Target 2.4), and enhance the contribution of all types of forests to biodiversity conservation and climate change mitigation and adaptation (Target 2.5).

1.1. State of progress on the Global Forest Goals 2 targets

1.1.1. Target 2.1: Extreme poverty for all forest-dependent people is eradicated

Efforts by countries to achieve Target 2.1 include programmes and activities that promote rural employment, empowerment, and poverty eradication.

Employment in the forest sector is an important indicator of the impact of forests on people, and it helps quantify the contribution of the sector to broader economic objectives. The *GFG Report 2021* noted that several countries had developed forest community plans and engaged local communities in supporting plantations. Some of the reported actions included, a *Native Forest and Community Forest Project* in Argentina that helped 150,000 forest-dependent people through the implementation of community plans for sustainable forest management; In the Philippines, the *Non-Timber Forest Products-Exchange Programme* helped community-based enterprises generate income from non-timber forest products such as forest honey, almaciga resin, food products (e.g., jams, jellies, and wine), fibers, traditional crafts, natural

dyes, and hand woven eco-textiles; In Ghana, through *poverty reduction programmes for forest dependent people*, portions of degraded forest reserves were allocated for crop production, and significantly increased food security for many forest dependent people in the country.
All of these actions resulted in an augmentation of employment opportunities and poverty reduction in the regions where they were implemented and provided evidence that forests could meet the subsistence needs and serve as safety nets in times of stress. However, much work remains to effectively measure progress towards the eradication of poverty in the highly vulnerable and diverse group of forest dependent people.

It should be noted that most jobs in the forestry sector in indigenous communities in developing countries are informal, and better data on those informal jobs should provide a more accurate picture on the employment in those highly vulnerable communities. Moreover, a possible measurement of the contribution of forests to poverty and hunger eradication in vulnerable groups can also be measured by the proportion of subsistence to commercial farming in those areas.

1.1.2. Target 2.2: Increase the access of small-scale forest enterprises to forest financing

Small-scale forest-dependent business are important contributors to the rural economy in most developing countries, despite being often overlooked in rural development planning because of their size and general lack of a focal point for assistance.

In the *GFG Report 2021,* fourteen countries described the steps taken by their governments to establish institutions and networks, create institutional bodies, implement

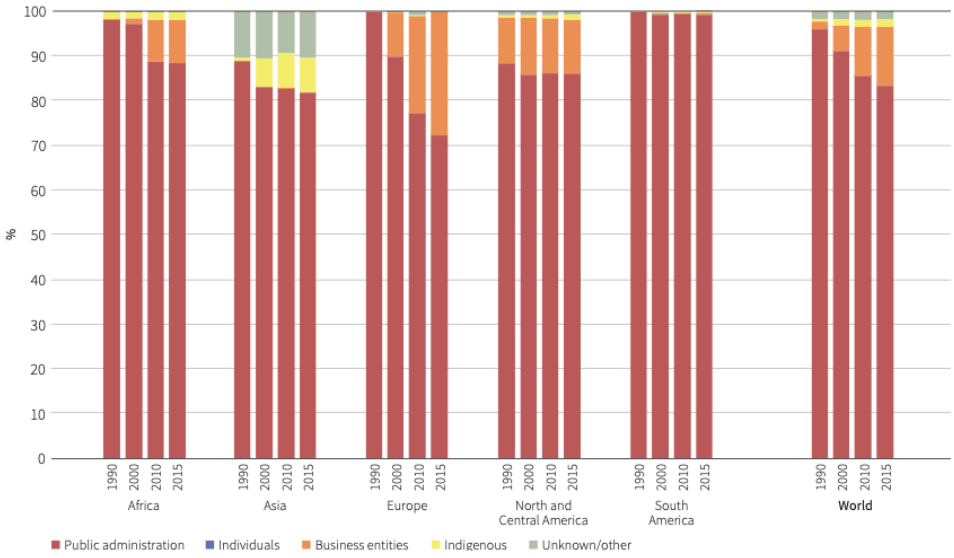
measures that revised laws, regulations, and policies to strengthen small-scale forest business[1] enterprises, and to promote their access to financing[2]. These actions benefited small businesses in many ways: some had a direct access to funding to kick-start their forest projects, while others were able to build capacity through training and access to information on grants funding, loans, and the funding process. For example, in Kenya, the Forest Investment Facility (FIF) offered a revolving loans scheme to support small-scale forest enterprises at the farm level for livelihood improvement. In Ghana, training was provided to small-scale wood industry players to access financial support and use machinery to reduce waste[3]. In Papua New Guinea, a *National Policy on Small to Medium Enterprises* was launched to increase the access of forest resource owners to small-scale forest enterprises and to help them venture into revenue and income generating activities.

Forest ownership and management rights can be considered as another sub-indicator of the progress on Target 2.2. Clear and secure forest ownership and management rights are important for encouraging public and private investment in forest. Indeed, the private sector is among the new, emerging sources of forest financing that can help the forest sector in many ways, including through large-scale investments using direct financing or carbon credits, through public-private partnerships aimed at reliable provision of health, education and transportation for remote, forest-dwelling communities, or through government-regulated sustainable practices for

[1] In Panama, Law No. 69 of 30 October 2017 created an incentive programme to increase forest cover and natural forest conservation, with the country emphasizing finance for forest development projects for farmers, indigenous people, and persons of African descent.
[2] For instance in Kenya, the Forest Investment Facility (FIF) offered a revolving loan scheme to support small-scale enterprises at the Farm level for livelihood improvement. In Panama, Law No. 69 of 30 October 2017 created an incentive programme to increase forest cover and natural forest conservation, with the country emphasizing finance for forest development projects for farmers, indigenous people, and persons of African descent.
[3] Since 2015, 800 artisans were trained as master craftsperson in downstream processing to reduce wastage.

forest management on timber concessions or private lands. The data from *FRA 2020* (Figure 1) showed that the proportion of publicly owned forests held by businesses increased from 2

Figure 1. Proportion of total area of publicly owned forests, by holder of management rights and region, 1990–2015



percent in 1990 to 13 percent in 2015, while the proportion held by public administrations globally decreased from 96 percent in 1990 to 83 percent.

There seems to be no agreed upon indicator for this target. However, in order to facilitate its measurement, it is possible to construct a set of dimensions of the target based on the variety of actions reported by the country members (or any other actions that align with a conceptual definition of the target). For example, three potential dimensions could be:

(a) Forest ownership and management rights: this is chosen as a dimension because forest tenure and management rights facilitate the access to credit. One indicator for this dimension is the "proportion of publicly owned forests with private management rights (businesses)".

(b) Development of training programmes & workshops on the access to forest funding and marketing strategies for forest products: one indicator for this dimension could be the "number of workshops or trainings organized and the number of participants"

(c) Reliable governance (laws, regulations) and institutional arrangements to facilitate the access of small-scale forest businesses to credit: one indicator would for example be the "expected impact" of a given regulatory reform.

The example above is suggestive, but it shows that progress on target 2.2 could be measured along the above pre-defined dimensions. The first of these dimensions measure SFM and is aligned with SDG 15.2.1.

1.1.3. Target 2.3: Increase the contribution of forests and trees to food security

Non-wood forest products[4], including foods, medicines, aromatic products, fodder, wild, meat and honey, are economically important for large numbers of people in many countries. The data collected for *GFG Report 2021* showed that several countries (e.g., Ghana, Guatemala, Guinea-Bissau, Jamaica, Niger) developed and implemented national policies, strategies, and plans that leveraged forests for the achievement of greater food security. Some other actions included:

- The promotion of agroforestry, agricultural diversification and the use of forest plantations in Niger, Thailand, Mauritius and Guatemala[5],
- The establishment of processing units for forest products in rural areas in Senegal[6],

[4] Non-wood forest products (NWFPs) is defined by FRA 2020 as "goods derived from forests that are tangible and physical objects from biological origin other than woods".

[5] For instance, Guatemala reported that, through its Institutional Strategic Plan 2017-2032, it will restore 275,000 hectares of deforested lands with forest plantations and agroforestry systems through incentives, licenses and other mechanisms.

[6] In Senegal, the National Forest Service and the food industry signed a memorandum of understanding to oversee the establishment of processing units for forest products in rural areas.

- The establishment of 15,000 community forests between national reserves and local communities in Thailand,
- The establishment of shelterbelts by many countries[7] to protect agricultural lands from erosion and loss of soil fertility

Owing to the high diversity of NWFPs and the informal nature of this sector (e.g. the contribution of this sector is usually very underestimated in developing countries), information on NWFPs is still very poor and scarce. The *GFG Report 2021* noted that most countries did not include the contributions of NWFPs to food security in their forest inventories or national statistics. The *FRA 2020* data also showed that only eighty-one countries and territories (representing 54% of the global forest area) reported quantitative information on the economic value of NWFPs, and for those countries the combined global economic value of foods (i.e. edible plants) and wild meat represented 48% of the total reported economic value of NWFPs in 2015, emphasizing the importance of forests to food security.

Given the low coverage of the data on NWFPs, the full scope of the contributions from forests to food security is undervalued and their socio-economic benefits particularly difficult to measure, leading often to the underestimation of the role of sustainable forest management in achieving Target 2.3.

There are various challenges that explain the difficulty in measuring the value of NWFPs. The NWFPs include several categories of goods, some of which have known market-based values; however, many NWFP markets are informal[8] and market players may have an interest in

[7] This was the case in Australia, Canada, Denmark, Hungary, New Zealand, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.
[8] In indigenous communities, a substantial number of people harvest NWFPs for non-market purposes such as home consumption, or for sale in local informal markets.

withholding information. Moreover, for a given product, the value network through the stages of "Collection of raw product, Processing and Marketing" usually involves a wide range of actors, including service providers and service-based value production, such as logistics, labor hiring, agents. These value chains differ between products and may be organized very differently in different countries; and quantifying each step of the chain requires data and, often, specialist knowledge spanning multiple disciplines, both of which are not readily available in some countries. Furthermore, summing values across multiple goods and services generally doesn't work if there are trade-offs between one good or service and another[9].

The Natural Capital and Valuation of Ecosystem Services (NCAVES)[10] project has implemented a system of Environmental-Economic accounting that was used to determine the value of NWFPs. For example, in 2016, the value of provisioning services of wild-harvested products was estimated at R$ 703.1 million for acai berry, and R$ 55 million for Brazil nut; for cultivated products, the value of provisioning services in 2016 was R$ 2 billion for acai and R$ 76.1 million for palm hearts[11].

Other dimensions of NWFPs involve services that aren't traded in markets. These include their contribution to ecosystem services, biodiversity conservation, traditional knowledge and cultural and social values [5, 6]. The challenges of measuring the social and environmental benefits of forests are discussed in the next section.

[9] Since the collection of fuelwood, for example, comes at the direct expense of carbon storage for a given area of forest, it makes little sense to sum these two values as if they were independent [12].
[10] The project Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES) project, was funded by the European Union via a Partnership Instrument and has been jointly implemented by the United Nations Statistics Division (UNSD) and the United Nations Environment programme (specifically the TEEB office), in collaboration with the secretariat of the Convention on Biological Diversity (CBD).
[11] The SEEA Ecosystem Accounts for Brazil, Policy Brief, available at: https://seea.un.org/content/seea-ecosystem-accounts-brazil-policy-brief

1.1.4. Target 2.4: Increase the contribution of the forest industry and forest ecosystem services to economic, social and environmental development

According to the *GFG Report 2021*, various actions were undertaken by reporting countries to strengthen the contributions of forest industry, other forest-based enterprises, and ecosystem services to development. These actions included the adoption of legislation, policies, strategies, and plans to promote the marketing of forest products, both wood and NWFPs[12]. Some countries discussed partnerships with private industry to stimulate forestry productivity[13]. Given that the diversity of non-wood forest products allows them to be used as raw materials in various industries (including construction, food and meat processing, pharmaceutical, handicrafts, among others), countries like Kenya introduced tax rebates for imported capital goods for forest industries.

Some developing countries implemented programmes and activities for the expansion and modernization of the forestry sector, resulting in an increased productivity and hence an increased contribution to GDP[14]; others reported on poverty reduction and forest conservation activities aimed at enhancing the livelihoods of communities in or near forested areas.
In developed countries, most actions focussed on programmes aimed at increasing productivity, diversifying the products generated and producing them more efficiently through environmental and management practices, and increasing the economic benefits generated[15].

[12] This was the case for Australia, Brazil, Bulgaria, Kenya, Nepal, Niger, Switzerland and Turkey.
[13] This was the case for Côte d'Ivoire, Indonesia, Japan, Kenya, Nepal, New Zealand, the Republic of Korea, Slovenia, Suriname, and Switzerland
[14] In Mexico, Forest production increased from 5.9 million cubic meters in 2012 to 9.0 million cubic meters in 2017, representing a 52.4% increase.
[15] For example, Canada invested C$55 million in funding over three years starting in 2017-2018 in projects aiming at reducing GHGs, increase green electricity production, create energy efficient building materials, generate renewable alternatives to fossil fuel-based products, and reduce water use.

The volume of wood removed from forests is an indicator of forest productivity. Global wood removals increased by 385 million m^3 from 2010 to 2018, with industrial roundwood and woodfuel accounting for 79.2% and 20.8% respectively of this increase. Reporting countries also provided data on forests managed with the objective of providing social services such as recreation, tourism, education, research, and the conservation of cultural or spiritual sites. The area of forest designated primarily for social services is an indicator of the social role of forest resources in national economies and dependent local communities. The *FRA 2020* data[16] showed that in 2020 the total area so designated was estimated at 186 million ha, which is equivalent to 6% of the forest area of the reporting countries; a slight global increase of the area of forest designated primarily for social services was observed in the last decade, with similar trends noticeable in all regions except Europe and South America.

Based on country reporting, target 2.4 registered the most progress of all GFG 2 targets. However, while wood products were easiest to quantify in economic terms, valuing and calculating the value from social and environmental benefits of forests remained a challenge.

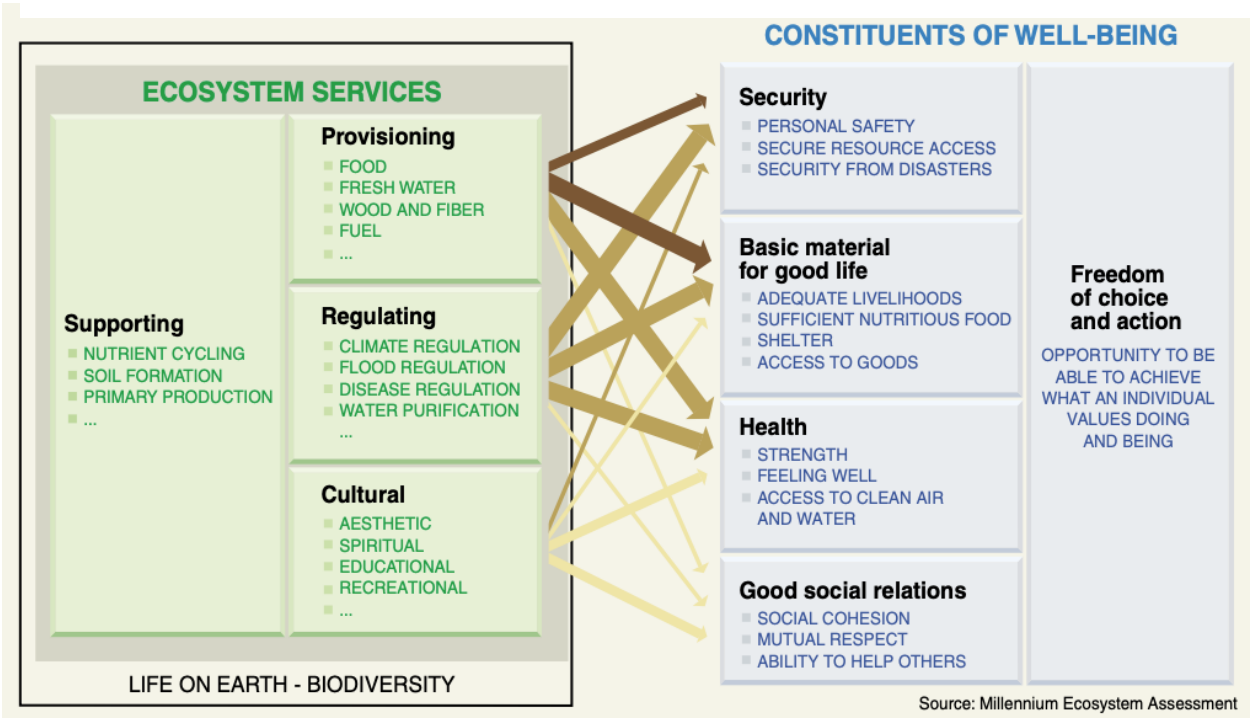
The challenges of measuring the social and environmental benefits of forests can be explained by looking at the linkages between ecosystem services and human wellbeing, as illustrated in Figure 2. The ecosystem services framework provides a useful way to think about the value of the environment as it focuses directly on the relationship with human wellbeing. Valuing ecosystem services is necessary for comparing the costs of ecosystem losses with income generation or development benefits associated with investments such as agricultural land

[16] The Fra 2020 data showed that only 66 countries, representing 66% of the total forest area, provided information on the area of forest designated primarily for social services.

clearing or road construction[17]. The first difficulty comes from the fact that ecosystem services are generally not traded in markets, and as such, their values are not expressed as market prices and must therefore be estimated by some means if they are to be compared to other values in monetary terms. Furthermore, this estimation requires an in-depth multidisciplinary understanding of the complex relationships between forest management choices, ecosystem condition and provisions, and human wellbeing. Another hurdle to overcome is the fact that the values of ecosystem services vary widely across space and time[18].

Some guidance exists on how to measure the socio-economic benefits of forests [7]. However, in order to establish a consistent and official framework for the measurement of

Figure 2. Strength of Linkages Between Categories of Ecosystem Services and Components of Human Well-being (Excerpted from the Millennium Ecosystem Assessment 2005)



[17] Some of the reasons for valuing ecosystem services include cost-benefit analysis of policy decisions; measuring trends in wellbeing; creating markets such as Payments for Ecosystem Services; or drawing attention to the costs of ecosystem loss.

[18] For example, 100 hectares of forest will provide more value to humans if it is located in the vicinity of a densely populated watershed; by contrast, it would provide very little direct value if it is remote from population.

ecosystem services, the United Nations Statistical Commission (UNSC) adopted the System of Environmental Economic Accounting - Ecosystem Accounting (SEEA EA)[19] in 2021. The SEEA EA complemented the original SEEA central framework that was adopted in 2012 by the UNSC as the international standard for environmental-economic accounting. The SEEA EA provides a framework for organizing and presenting statistics on the environment and its relationship with the economy, with the indicators of the level and value of "ecosystem services" in a given spatial area[20]. For example, the SEEA-EA was used to calculate the value of ecosystem services in Mexico[21], and the value of ecosystem services for "crop provisioning services" was estimated to be approximately 39% of the agricultural sector's total value added[22].

In order to help countries in their reporting of the socio-economic benefits of forests, the UNFF and its members should consider providing technical assistance and capacity building support to country members in the use of available resources such as the SEEA EA.

1.1.5. Target 2.5: Enhance the contribution of forests to biodiversity conservation and to climate change mitigation and adaptation

The actions undertaken by countries to achieve target 2.5 also supported progress towards the objectives of the Convention on Biodiversity (CBD), the UN Framework Convention on Climate Change (UNFCCC), the UN Convention to Combat Desertification (UNCCD), as well as the UN Forest Instrument (UNFI).

[19] Details on the System of Environmental Economic Accounting (SEEA) can be found at https://seea.un.org
[20] See https://seea.un.org/content/about-seea
[21] The SEEA Ecosystem Accounts for Mexico, Policy Brief, available at: https://seea.un.org/sites/seea.un.org/files/NCAVES_reports_briefs/ncaves_-_mexico_-_policy_brief_-_final_0.pdf
[22] The economic contribution of ecosystem services to agricultural production was calculated using the "residual value method". In this method, the value of the ecosystem services is calculated as the difference between the sales of crops, and all required human inputs, such as energy, labour, and capital inputs; the remainder, or 'residual', is assumed to be the value of the of ecosystem services, such as soil, water, nutrients, and pollination.

Country actions in support of the objective of the CBD included (i) the expansion of protected area systems[23], (ii) the development and implementation of evaluative biodiversity management[24] and (iii) policies and plans to conserve and sustainably use forest diversity[25]. The existence of long-term management plans is an indicator of the intention to sustainably manage forest resources. According to the *FRA 2020*, more than 2 billion ha of forest (i.e. more than half of the world total forest area) currently has management plans; this means that, as of 2020, CBD Aichi Biodiversity Target 11 (to protect at least 17% of the world's terrestrial area by 2020) was exceeded for forest ecosystems at the global level and for most regions. The *FRA 2020* data also showed that the area of forest under management plans is increasing in all regions. A similar global trend was observed in the area of forest primarily designated for biodiversity conservation[26].

Several actions were also undertaken by countries to optimize the role of forests in mitigating and adapting to climate change. Most actions often pertain to the implementation of national forest strategies and, in the case of developing countries, their REDD+ strategies. For example, in 2019 Panama approved a National Forest Strategy that included a REDD+ strategy with a horizon of 2050, in line with the country's nationally determined GHG contributions. In 2021 Ghana updated its Nationally Determined Contribution (NDC) under the Paris Agreement (2020-2030); this update[27] contained 47 mitigation and adaptation programmes, including Sustainable Forest Management, that are expected to build the resilience of over 38 million

[23] Examples include the case of Algeria, Liberia, Madagascar (Source: GFG Report 2020, page 30)
[24] Examples included the case of Japan, Jamaica (Source: GFG Report 2020, page 30)
[25] Examples included the case of the Republic of Korea, Mexico (source: GFG Report 2020, page 30)
[26] The analysis of the FRA 2020 indicated that 11% of the world's forest area is primarily designated for biodiversity conservation, and this area has increased globally by 111 million hectares between 1990 and 2020.
[27] See the Ghana's updated NDC at: https://unfccc.int/sites/default/files/NDC/2022-06/Ghana%27s%20Updated%20Nationally%20Determined%20Contribution%20to%20the%20UNFCCC_2021.pdf

people and generate absolute GHG reductions of 64 $MtCO_2e$. On the other hand, China used the support of GEF and FAO to implement a sustainable management project aimed at improving the capacity of forests in combating climate change.

1.2. Progress on Cross-cutting GFGs (GFG4, GFG5 and GFG6) and its impact on the GFG2 targets

The Global Forest Goal 4 (GFG 4)

The Global Forest Goal 4 addresses the critical resources needed to advance sustainable forest management, including financing, capacity development, and the transfer of environmentally sound technologies.

Its first target is to mobilize significant resources to finance sustainable forest management and to provide adequate incentives to developing countries to advance such management. Most countries indicated progress on this target by setting up financing mechanisms such as trust funds[28] to support SFM. In addition to trust funds, some other countries committed substantial funds for SFM in their national public budgets[29].

In its second target, the GFG 4 seeks to significantly increase forest-related financing from all sources at all levels, including public (national, bilateral, multilateral, and triangular), private and philanthropic financing. According to the *GFG report 2021*, nine donor countries[30] provided substantial contributions to bilateral and multilateral institutions, which help the

[28] Argentina, Botswana, Central African Republic, Kenya, Morocco, Panama, the Philippines, Senegal, and Thailand set up trust funds for SFM (See GFG Report, 2021)

[29] Cameroon, China, Morocco, Myanmar, and Nepal allocated funds for SFM in their national public budgets (GFG Report 2021).

[30] The donor countries are: Australia, Canada, Germany, Japan, New Zealand, the Republic of Korea, Switzerland, United Kingdom of Great Britain and Northern Ireland, and the United States of America. See the GFG Report 2021 (page 53) for a detailed description of each donor's contribution.

implementation of several SFM initiatives in developing countries and countries with transition economies. For example, in 2017 Germany provided €1.5312 billion for bilateral development cooperation initiatives and committed to providing €360.4 million to the World' Bank Forest Carbon Partnership Facility (FCPF).

The third GFG 4 target seeks to significantly enhance North-South, South-South, North-North and triangular cooperation, and public-private partnerships on science, technology in the forest sector. Numerous countries reported that they used international cooperation to promote SFM. The different initiatives highlighted cooperation with governments, non-governmental organizations (e.g. IUCN, WWF), the private sector, and multilateral international organizations (e.g. FAO, UNDP, UNEP, World Bank) among others. North-South cooperation was the most common form of regional cooperation reported by countries, and 18 countries reported participating in triangular cooperation.

The fourth GFG 4 target seeks to significantly increase the number of countries that have developed and implemented forest financing strategies. Forest financing strategies or equivalent policies at the national level result in sustainable forest management. With them, governments approach forest finance holistically, mainstream forests across the budgets of relevant sectors, and prioritize forests in development planning. All respondent countries in the *GFG Report 2021* reported having developed or implemented forest financing strategies for SFM and the UN Forest Instrument. It also emerged from *FRA 2020* that countries representing about 99% of the total forest area have indicated having developed national forest policies and forest legislations.

In its final target, the GFG 4 seeks to improve the collection, availability, and accessibility of forest-related information through multidisciplinary scientific assessments. Countries reported a range of initiatives to improve the accessibility of and the diversity of actors

contributing to forest-related information and data. Some of the actions undertaken included the development of web platforms to facilitate access to national forest information and data, and the investment in domestic forest-related scientific research. As an example, Canada helped establish a network of 31 countries, mainly in the developing world, to facilitate information sharing and best practices on sustainable forest management.

While many efforts were done within GFG 5 to mobilize financial resources from all sources and to promote technical cooperation between countries, many reporting countries cited "insufficient funding", "insufficient capacity in value-chain-marketing" and "capacity building" as the main obstacles to their achievement of the GFG 2 targets. This suggests an acceleration of activities within GFG 5.1, GFG 5.2 and GFG 5.3 in order to address the aforementioned challenges.

The Global Forest Goal 5 (GFG 5)

The GFG 5 aspires to promote governance frameworks to implement sustainable forest management, including through the United Nations forest instrument, and enhance the contribution of forests to the 2030 Agenda for Sustainable Development.

In its first target, the GFG 5 attempts to significantly increase the number of countries that have integrated forests into their national sustainable development plans and/or poverty reduction strategies. According to the *GFG Report 2021*, nearly all respondent countries reported that forests were integrated into their national sustainable development plans or poverty reduction strategies. Several countries also highlighted how they integrated the implementation of the UN Strategic Plan for Forests 2030 and the Global Forest Goals with the SDGs, especially

with regard to data gathering[31]. For instance, in Liberia the Forestry Development Authority integrated the UNSPF 2017-2030 into its Pro-poor Agenda for Prosperity and Development (PAPD) and its 10-year plan for Strategic Management for Sustainable Forest Management.

The second GFG 5 target aims to enhance Forest law enforcement and governance, including through significantly strengthening national and subnational forest authorities, and to significantly reduce illegal logging and associated trade. The ability of countries to enforce their laws and policies impacts forest outcomes; a 2013 World Bank brief[32] estimated the annual market value of losses from illegal logging globally to be over US$10 billion. Most reporting countries enacted measures to significantly strengthen national and subnational forest authorities, notably by increasing their law enforcement capacity. Other countries revised their legal frameworks to include decrees regulating logging and/or to devolve responsibility for forest law enforcement and governance from the central to the local level. In many instances, international cooperation agreements and instruments (e.g. CITES rules and regulations, EU Voluntary Partnerships Agreements, INTERPOL, Global Timber Tracking Network) were leveraged to help assure the legality of timber and forest-related industry. According to *FRA 2020*, 94 countries and territories said they had traceability systems mechanisms that provided the ability to trace the origin, location, and movement of wood products by means of recorded identifications - at the national level. Such systems help combat illegal logging. Despite these efforts, the absence of international standards or definitions made it difficult to compare and assess the effectiveness of measures meant to reduce illegal logging and related trade worldwide.

[31] Illustrative examples can be found on page 66 of the GFG report 2021.
[32] World Bank group,"Forest Law Enforcement and Governance". Available at: https://www.worldbank.org/en/topic/forests/brief/forest-law-enforcement-governance

The third GFG 5 target aims to ensure that national and subnational forest-related policies and programmes are coherent, coordinated, and complementary across ministries, departments and authorities, consistent with national laws, and engage relevant stakeholders, local communities and indigenous peoples, fully recognizing the United Nations Declaration on the Rights of Indigenous Peoples. Almost all countries in the world had policies and legal frameworks to promote sustainable forest management. Countries reported a wide range of mechanisms meant to improve cross-sectoral coordination between agencies. Some examples of mechanisms included having formal and informal regular inter-ministerial committees and consultations, or national forest programmes (or equivalent instruments) that articulate cross-sectoral coordination. Several processes were also in place to involve stakeholders, local communities and indigenous peoples in the policies and frameworks; they included for example, public consultations on forest issues, regular high-level forums where stakeholders interfaced with ministers and other decision makers, or multi-sectoral platforms on forest issues that garnered the participation of a wide range of stakeholders, including environmental NGOs, civil society representatives, and official agencies.

The last GFG 5 target seeks to ensure that forest-related issues and the forest sector are fully integrated into decision-making processes concerning land use planning and development. Most reporting countries had land use planning systems in place that integrated forest issues. This is often accomplished through a coordination between the land use authorities, such as the Ministry of land use, and the Ministry in charge of forests, in order to create a set of statutes for protected areas as well as agreed-upon plans for the use of forests.

In summary, the progress on GFG 5.1 (most countries integrated forests into their national sustainable development plans and/or poverty reduction strategies) is critical in supporting the achievements of several GFG 2 targets, including GFG 2.1, 2.3, 2.4 and 2.5. However, many countries cited "integrated forest management" as their major challenge in achieving the GFG 2. Moreover, despite the progress made on GFG 5.2, with many countries strengthening their forest law enforcement authorities, "corruption" and "illegal logging" were still cited as some of the main hurdles preventing countries from achieving their GFG 2 targets.

The Global Forest Goal 6 (GFG 6)

The GFG 6 aims to enhance cooperation, coordination, coherence and synergies on forest-related issues at all levels, including within the United Nations system and across member organizations of the Collaborative Partnership on Forests, as well as across sectors and relevant stakeholders.

The first target of GFG 6 is to ensure that forest-related programmes within the United Nations system are coherent and complementary and integrate the global forest goals and targets, where appropriate. Although the UN system put in place an extensive range of general coordination measures that dealt with its forest-related programmes, no data existed to determine whether or not these systems improved the coherence of UN system forest-related programmes.

The second GHG 6 target is to ensure that forest-related programmes across member organizations of the Collaborative Partnership on Forests (CPF) are coherent and complementary and together encompass the multiple contributions of forests and the forest sector to the 2030 Agenda for Sustainable Development. The CPF is an innovative voluntary inter-agency partnership on forests that was established in 2001 to support the UNFF and its member

countries, and to enhance cooperation and coordination on forest issues. The partnership is currently comprised of fifteen international organizations, institutions and secretariats that have substantial programmes on forests. The CPF member organizations pursued several activities consistent with achievement of target 2 of the GFG 6[33]. However, the lack of special mechanisms to evaluate the efficiency and efficacy of collective CPF activities makes it difficult to objectively evaluate the extent of progress in achieving target 2 of the GFG 6.

In its third target, the GFG 6 seeks to significantly enhance cross-sectoral coordination and cooperation at all levels to promote sustainable forest management and halt deforestation and forest degradation. According to the *GFG Report 2021*, nearly all respondent countries took action at the national and international levels to enhance cross-sectoral coordination and cooperation and to promote forests and sustainable forest management. The steps taken towards implementing this target involved addressing forest priority issues at the highest level of governance to ensure intersectoral coordination. For instance, Cameroon established a REDD+ Technical Secretariat that brought together representatives of the Presidency, the Prime Minister, and all stakeholders concerned with climate change-related issues. Many countries provided numerous examples of existing cross-sectoral mechanisms for forest-related issues and cited the involvement of a variety of stakeholders[34].

In its fourth target, GFG 6 seeks to achieve a greater common understanding of the concept of sustainable forest management and identify an associated set of indicators. The national contributions towards the achievement of this target included an array of communication initiatives focused on outreach to the general public, special events, and youth education to

[33] The CPF member organizations undertook several initiatives consistent with the achievement of target 2 of the GFG6. Some of these initiatives are described on page 76 of the GFG Report 2021.
[34] Examples of cross-sectoral mechanisms for forest-related issues can be found on page 78 of the GFG Report 2021.

improve understanding and awareness of sustainable forest management; forest authorities were actively involved in creating educational and environmental programmes and developing entire suites of communication products showcasing the benefits of forests to society and the planet. Awareness to SFM was also increased through Special Events, with many countries reporting celebrating the International Day of Forests (21 March), often with tree planting campaigns. In order to improve the next generation's understanding of SFM, some countries promoted SFM through schools, with the establishment of green clubs or the integration of SFM in school curricula and teaching materials. Finally, most countries reported developing and refining criteria and indicators (C&I) for sustainable forest management; For instance, Cameroon developed principles and criteria and indicators (PCIs) for SFM; from these PCIs, it created a grid for monitoring the implementation of development plans. In addition, the government encouraged forest companies to engage in forest certification systems.

The last target of GFG 6 is to strengthen the input and involvement of major groups and other relevant stakeholders in the implementation of the strategic plan and in the work of the forum, including intersessional work. Reporting countries provided several examples[35] that highlighted how they were involving relevant stakeholders in the implementation of the UNSPF 2017-2030 and in their sustainable forest management initiatives. Almost all countries reported planning forest activities in close collaboration with, and with the participation of, Major Groups and other relevant stakeholders.

[35] For example: (a) Ghana used the Multi-stakeholder Forest Dialogue Platform to involve major key stakeholders – like the Ghana Timber Organisation, the Ghana Wood Workers Association, traditional authorities, and youth – in the implementation of the UNSPF; (b) Kenya established regional forest conservation committees (FCCs) with broad stakeholder representation to guide forestry development in their respective regions.

While a lot of activities were undertaken to achieve GFG 6, forest governance challenges such as “cross sectoral coordination” and “integrated forest management” were named as the major issues preventing some countries from achieving their GFG 2 targets. These governance activities must be accelerated within the GFG 6.3 to help the realization of the GFG 2 targets.

2. Importance of GFG 2 to the achievement of the 2030 Agenda for Sustainable Development

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership.

In its resolution RES/2017/4, the UN Economic and Social Council invited other UN bodies to use the *UNSPF 2017-2030* as a reference, within the scope of their mandates, with a view to building synergies between the global forest goals and targets and their contribution to the achievement of the sustainable development goals. The Global Forest Goals are therefore aimed at “contributing to progress on the Sustainable Development Goals, the Aichi Biodiversity Targets (now the targets of the Kunming-Montreal Global Biodiversity Framework), the Paris Agreement and other international forest-related instruments, processes, commitments and goals”. Indeed, the thematic priorities of GFG 2 are critically aligned with several SDGs; the same is true for the cross-cutting GFGs (GFG 4, GFG 5 and GFG 6), which overlap with some of the means of implementation targets of the SDGs (SDG 17).

2.1. Linkages to the Sustainable Development Goals

The 2030 Agenda is a highly complex policy framework. This is reflected in the fact that the 17 goals have been translated into 169 targets, with a wide range of indicators and sub-

indicators. The SDGs are also the result of a complicated global political process, which is why according to the International Social Science Council [8], only 29% of the 169 targets are well defined and based on the latest scientific evidence. Nevertheless, the successful implementation of the SDG agenda is the only way forward to address the global sustainability challenge of ensuring human well-being, economic prosperity, and environmental protection.

Although several SDGs explicitly refer to forests (e.g. SDGs 6.6, 15.1, 15.2 and 15.b), there are many indirect linkages between forests and other SDGs. Table 1 shows an alignment of the GFG 2 and cross-cutting GFG targets (hereafter GFG2+) with the SDG targets.

***Table 1**. Alignment of the Sustainable Development Goals with the Global Forest Goals 2, 4, 5 and 6*

Agenda 2030		Global Forest Goals Targets
SDG	Targets & Indicators	GFG Targets
1	1.1	2.1
	1.a.1	4.1, 4.2, 4.3, 4.5
2	2.4.1 2.3.2	2.3
5	5.a.1 5.a.2	2.2 5.2, 5.3
6	6.6	2.4, 2.5
7	7.2.1, 7.a.1	2.4
8	8.3.1	2.1
9	9.3	2.2, 4.1, 4.2
11	11.4.1, 11.7.1	2.4, 2.5

Agenda 2030		Global Forest Goals Targets
SDG	Targets & Indicators	GFG Targets
12	12.2	2, 4, 5, 6
15	All	2, 4, 5, and 6
17	17.3.1, 17.7.1 17.14, 17.16	2.2, 4.5 5.1, 6.1 and 6.2

The SGD 15 is the sustainable development goal that includes specific targets on forests, with an aim to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss". It is supported by 10 targets, which include, among others, ensuring the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services (SDG 15.1), promoting the implementation of sustainable management of all types of forests and restoring degraded forests (SDG 15.2), and mobilizing and significantly increasing financial resources from all sources to conserve and sustainably use biodiversity and ecosystems (SDG 15.a). All of the SDG 15 targets are supported by the actions undertaken under the GFG 2 and the cross-cutting GFGs and would suffer from a lack of progress in those GFGs.

Similarly, the SDG 9.3[36] mirrors the GFG 2.2[37] for forest enterprises; therefore, the achievement of GFG 2.2 will support and contribute to the realization of SDG 9.3. It should also

[36] Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

[37] Increase the access of small-scale forest enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

be noted that several actions are undertaken under GFG 4.1 and GFG 4.2 (see section 1.2) to mobilize financial resources from all sources in support of GFG 2. The achievements of those targets (GFG 4.1 and GFG 4.2) will also indirectly contribute to the realization of SDG 9.3.

The SDG 6.6 aims to "Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes". The forest component of SDG 6.6 can be supported by various actions undertaken under the GFG 2.4 and 2.5 to promote efficient environmental management practices.

The SDG 2 seeks to "End hunger, achieve food security and improved nutrition and promote sustainable agriculture"; the realization of this target would be supported by the achievement of GFG 2.3 (Increase the contribution of forests and trees to food security). Some of the actions undertaken under GFG 2.3 can support the realization of SDG 2.3.2 (Average income of small-scale food producers, by sex and indigenous status) and SDG 2.4.1 (Proportion of agricultural area under productive and sustainable agriculture). However, these two SDG indicators (2.3.2 and 2.4.1) are currently tier 2 indicators as per the recent *Tier Classification for Global SDG Indicators* by the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs)[38]. Although they have internationally established methodology and standards, Tier-2 indicators data are not regularly produced by countries[39].

With respect to SDG 1 (End poverty in all its forms everywhere), the SDG indicator 1.1.1 (Proportion of the population living below the international poverty line by sex, age, employment status and geographical location - urban/rural) can be addressed with the actions undertaken under the GFG 2.1 (Extreme poverty for all forest-dependent people is eradicated);

[38] The *Tier Classification for Global SDG indicators* as of March 2021 is available at: https://unstats.un.org/sdgs/files/Tier%20Classification%20of%20SDG%20Indicators_29%20Mar%202021_web.pdf

[39] There are ongoing efforts from the FAO, who is the custodian agency for SDG indicators 2.3.2 and 2.4.1, to include questions in the reporting format of the data provided by reporting countries to address these indicators.

for instance, the employment in the forest sector is an information requested in the country reports as an indicator for GFG 2.1, and can be re-arranged to represent a partial component of the SDG indicator 1.1.1. Additionally, the SDG indicator 1.a.1 (Total official development assistance grants from all donors that focus on poverty reduction as a share of the recipient country's gross national income) can be linked to the actions undertaken under the GFG 4 (Mobilize financial resources from all sources to implement sustainable forest management and strengthen scientific and technical cooperation and partnerships), if data relating to forests are disaggregated.

The SDG 5.a.1[40] can be supported with the information gathered on the "Forest ownership and management rights" of forest-dependent people; this information is a sub-indicator to the GFG target 2.2 (Increase the access of small-scale forest enterprises to financial services). Furthermore, the achievement of SDG 5.a.2[41] will be bolstered by the accomplishing several targets under the GFG 5 (Promote governance frameworks to implement sustainable forest management and enhance the contribution of forests to the 2030 Agenda for sustainable development).

The achievement of the indicator SDG 7.2.1 (By 2030, increase substantially the share of renewable energy in the global energy mix) will be aided by the activities undertaken within GFG 2.4 to increase the production of bioenergy. These activities have become even more relevant in the light of the current global energy crisis (see section 3.8.2). Additionally, SDG 7.a.1 (International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems) is in line with

[40] SDG 5.a.1: (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure
[41] SDG 5.a.2: Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control

GFG 4.5 and GFG 6.4, which provide financial and technical supports for the implementation of GFG 2.

With respect to SDG 11, the targets SDG 11.4 (Strengthen efforts to protect and safeguard the world's cultural and natural heritage) and SDG 11.7 (By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities) are supported by conservation activities undertaken within GFG 2.5.

The realization of the SDG target 12.2 (Achieve the sustainable management and efficient use of natural resources) is supported by the achievement of the GFG targets 2.3, 2.4 and 2.5. The cross-cutting GFGs (GFG 4, GFG 5 and GFG 6) provide several mechanisms to promote sustainable forest management and will therefore indirectly support the achievement of SDG 12.2.

Finally, the means of implementation targets under SDG 17 provide another key component to realizing the 2030 Agenda through a revitalization of the global partnership for sustainable development. Several of its targets are supported by the GFGs. For instance, the SDG indicators 17.3.1 (Additional financial resources mobilized for developing countries from multiple sources) and 17.7.1 (Total amount of funding for developing countries to promote the development, transfer, dissemination, and diffusion of environmentally sound technologies) will be accelerated by the achievement of GFG 2.2 and GFG 4.5. Similarly, the SDG indicators 17.14 (Enhance policy coherence for sustainable development) and 17.16 (Enhance the Global Partnership for Sustainable Development) are partially supported by actions undertaken in their equivalent forest-related targets GFG 5.1 (Integration of forests into national sustainable development plans), GFG 6.1 (Ensure that Forest-related programmes within the United Nations

system are coherent and complementary and integrate the global forest goals and targets) and GFG 6.2 (Ensure that Forest-related programmes across member organizations of the Collaborative Partnership on Forests are coherent and complementary).

In the light of the multitude of linkages discussed above, with at least 10 SDGs (out of 17) having several targets and indicators linked to GFGs (2, 4, 5 or 6), the achievement of the 2030 Global Agenda appears to be heavily reliant on the realization of the Global Forest Goals 2 and the cross-cutting GFGs. These strong linkages stress the importance of accelerating the achievement of the GFG2+ targets in order to save the 2030 Agenda for sustainable development.

It is important to note that, in order to simplify the comparison between the SDG and GFG targets in the discussion above, this study does not take into account the possible interactions between pairs of SDGs [9]. A full analysis of SDGs calls for an integrated, holistic and multidimensional view on development, as relations between different SDGs are complex, and a focus on a specific SDG can reinforce trade-offs (or synergies) with other SDGs. For instance, biodiversity protection initiatives (SDG 15.2) in low-income nations can lead directly or indirectly to a reduction in average house incomes (SDG 1.1) in the vicinity of protected areas, creating a conflict between two SDG targets. These potential synergies or trade-offs between the goals make the SDG interactions complex, as they are clearly not independent from each other.

2.2. Linkages to the High-Level Political Forum (HLPF) 2023

The HLPF is the central United Nations platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at

the global level. HLPFs are held every year under the auspices of the Economic and Social Council, and every four years under the auspices of the UN General Assembly.

The HLPF 2023 will be held on July 2023 in New-York under the theme "Accelerating the recovery from the coronavirus disease (COVID-19) and the full implementation of the 2030 Agenda for Sustainable Development at all levels"; without prejudice to the integrated, indivisible and interlinked nature of the SDGs, the HLPF 2023 will also review in-depth Goals 6 on clean water and sanitation, 7 on affordable and clean energy, 9 on industry, innovation and infrastructure, 11 on sustainable cities and communities, and 17 on partnerships for the Goals[42].

Building on the linkages to the SDGs discussed in the previous section, it is notable that the GFG 2 will have a contribution to the work of the HLPF 2023. Indeed, all of the SDGs scheduled for an in-depth review during the HLPF 2023 are linked to GFG 2 targets as can be seen in Table 1. The COVID-19 pandemic has intensified pressure on forests and slowed or hampered progress on several GFG 2 targets (see section 3.6), with negative consequences on the SDGs in consideration for in-depth review during the HLPF 2023. For example, as a consequence of the halting of tourism during the pandemic, many park guides lost their jobs, which resulted in decreased forest patrols and conservation, leaving forests more exposed to unlawful activities, such as poaching and logging. Moreover, many indigenous peoples coped with the pandemic by retreating deeper into forests for food, fuel and shelter, and to protect themselves from the risk of COVID-19 infection[43]. These situations have hindered the progress on the achievement of several GFGs, including GFGs 2.2, 2.3, 2.5, 4.5 and 6.4, as well as on the SDGs 6, 7, 9, 11 and 17, by virtue of their linkages to the GFGs. What's more, decreased

[42] Details on the HLPF 2023 can be found at: https://hlpf.un.org/2023

[43] Anderson, M. (2020) Go Make Camps Deeper in the Forest. How the Amazon's Indigenous People are Handling the Threat of the Coronavirus. Time, 24 April 2020

conservation activities have led to a loss of biodiversity, deforestation and a reduction of forested areas, amplifying the effects of climate change (see section 3.5) and potentially increasing the risks of future viral epidemics. Studies[44] have indeed showed that the effects of the COVID-19 pandemic on biodiversity and ecosystem health can exacerbate drivers of zoonotic and infectious disease emergence, increasing the risk for future zoonotic pathogen spillover events and possible public health crises; these cyclic relationships create a positive feedback loop. For community forestry enterprises (CFE) in developing countries, a case study in Cameroon [10] revealed that other challenges came from the inability to engage with their partners, especially donors, technical support organizations and the private sector during the pandemic, with CFEs relying exclusively on perishable products suffering the most.

In order to address and mitigate the challenges of COVID-19 and the consequent economic and social crises, governments have introduced several support packages to help enterprises, including forestry enterprises, survive the pandemics. Some of the measures include tax reductions and delayed payments, favourable interest rates, additional credit lines, and direct subsidies for salaries. For example, in Canada the government of Alberta deferred the payment of timber dues for up to six months[45], while in the United States the Forest Service allowed loggers more time to fulfil their contracts in national forests[46]. Trade unions have also taken measures both to protect workers from being laid off and to ensure safe working conditions[47].

[44] Odette K.L. et al (2021), *The COVID-19 pandemic is intricately linked to biodiversity loss and ecosystem health*, www.thelancet.com/planetary-health, Vol 5, November 2021.
[45] Jo English, "Forest Industry Commends Government for Dues Deferral", International Forest Industries, 14 April 2020.
[46] U.S. Forest Service. "USDA Forest Service moves to support timber market, offers extension of timber contracts to address falling timber markets amid theCOVID-19 pandemic", 16 April 2020.
[47] International Labor Organization (ILO) Sectoral Brief, Impacts of COVID-19 on the forestry sector, June 2020

Despite being constantly under threat during the COVID-19 pandemic, forests were key in easing poverty in rural communities, and supported other crucial sectors such as public health, employment and disaster risk reduction; in addition, as discussed in the previous section, forests (and the GFGs) have multiple linkages to the SDGs. This suggests that the achievement of the global forest goals of the UNSPF 2017-2030 will provide us with a better preparedness for future pandemics by offering resilient, nature-based and less expensive solutions to fight the crisis. In discussing measures for « Accelerating the recovery from the coronavirus disease (COVID-19) and the full implementation of the 2030 Agenda for Sustainable Development at all levels », the participants to the HLPF 2023 should consider the establishment of post COVID-19 economic recovery packages that include a stimulus for the acceleration of the achievement of the UNSPF 2030[48] and the GFG targets.

2.3. Linkages to the Paris Agreement

Forests are central in developing cost-effective solutions to mitigating and adapting to climate change. For instance, forests remove carbon dioxide from the atmosphere and store it in long-lived pools such as trees and soils, and in doing so, have the potential to provide at least a quarter of the solution to meeting the goal of the Paris Agreement [11] of limiting the global temperature rise to 1.5^{o} Celsius. Moreover, forests regulate water flows, soil erosions, and protect coastal communities from extreme events such as rising sea level. On the other hand, the loss of forests through deforestation not only releases carbon dioxide into the atmosphere where it contributes to rising global temperatures, it also increases natural variability and the frequency and intensity of extreme weather events, including longer and more intense droughts, heavier

[48] This recommendation was also suggested in a UNDESA policy brief on June 2020:
UN Department of Economic and Social Affairs, *Forests: at the heart of a green recovery from the COVID-19,* policy Brief 80, June 2020.

rainfall leading to floods and landslides, and more frequent and intense tropical storms [12]; these extreme climate events are causing large human and socio-economic costs and are reversing development gains across various sectors [4], and the fact that they disproportionally affect poor people reemphasizes the role of forests as a critical buffer to the impacts of climate change on forest-dependent people. Progress towards limiting global temperature increase (i.e. achieving the Paris Agreement) would significantly ease the path towards many SDGs, such as those related to poverty, hunger, access to water, terrestrial and ocean ecosystems, forests, health. While only the SDG 13 directly calls for "urgent action to combat climate change and its impacts", its intrinsic links to all of the other 16 SDGs make the implementation of the Paris Agreement essential to the achievement of the whole 2030 Agenda for sustainable development. Reviewing the progress on realizing the Paris Agreement through the lenses of the progress on its forest-related goals provides important interlinkages with the GFGs, and highlights the importance of accelerating the realization of the GFG targets.

In its preamble, the Paris Agreement clearly recognizes the "importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity". It also includes an article (Article 5)[49] exclusively dedicated to the contribution of forests to mitigating climate change. In its paragraph 1, Article 5 refers to the conservation and enhancement of the sinks and reservoirs of greenhouses, including forests. Paragraph 2 of Article 5 encourages the

[49] The Article 5 of the Paris Agreement includes the following two paragraphs:
1)Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1 (d), of the Convention, including forests.
2) Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches.

implementation of specific actions to maximize the mitigating role of forests on climate change, including the development of new policy frameworks, the funding of REDD+ programmes, conservation and sustainable forest management. Various studies [13] showed that actions to halt forest loss and degradation, coupled with sustainable forest management, conservation and restoration can make an essential contribution to meeting the ambition of the Paris Agreement, with potential to provide nearly 30% of the solution to help avert climate catastrophe. Yet, according to a recent report by the UN-REDD Programme [14], the world is not on track to achieve forest goals of ending and reversing deforestation by 2030, critical for a credible pathway to the 1.5°C Paris Agreement goal.

Several actions undertaken under GFG 2.5 (Enhancement of the contribution of all types of forests to biodiversity conservation and climate change mitigation and adaptation) support and contribute to the achievements of the articles 5.1 and 5.2 of the Paris agreement. They include the development of REDD+ strategies in developing countries, the implementation of sustainable management projects designed to combat climate change, and the development or/and adoptions of policies governing the sustainable exploitation and the traceability of forest products. These actions are further strengthened by policies and regulations provided through activities in the cross-cutting GFG targets GFG 5.1 (Integration of forests into the national sustainable development plans), GFG 5.2 (Enhancement of forest law and governance) and GFG 5.3 (Coherence of national and subnational policies and programmes).

Additionally in its article 4.1, the Paris Agreement notes that the long-term goal of temperature reduction must be achieved “on the basis of equity and in the context of sustainable development and efforts to eradicate poverty”. This requirement could be interpreted in connection with forest management as ”sustainable forest management should not happen at the

expenses of poor forest-dependent people". In this case, Article 4.1 would be in line with the GFG 2.1 which focuses on the eradication of extreme poverty for all forest-dependent people, and with GFG 2.4 which aims to sustainably manage forest with the objective of providing social services.

The linkages between the GFG targets and the Paris Agreement discussed above underline the urgent need to unlock and maximize the potential of forests to address climate change and realize the Paris Agreement, and thus accelerate the achievement of the SDGs.

Despite the extensive benefits of forests discussed above and the importance of forests to the realization of the Paris Agreement, recent research [15] by the World Resources Institute (WRI) found that as little as 1.5% of all public international climate finance has gone to support nature-based solutions for adaptation in developing countries. In its *Adaptation Gap Report 2022*, the United Nations Environment Programme (UNEP) identified adaptation investment needs of more than US$160 billion per year by 2030 [16]. At a UN summit in 2009 in Copenhagen, the developed countries agreed to provide $100 billion a year to help developing countries deal with climate change. The Green Climate Fund (GCF) was set up as one of the ways to distribute that money; several difficulties in mobilizing funds for the GCF have since been reported[50].

There are several barriers hindering the scaling up of climate finance for forests. One is the lack of common definitions and guidelines to consistently track funding for forest-based solutions for adaptation, which makes it difficult to quantify and monitor these investments. For example, forest-based solutions for adaptation can be categorized under different use cases, including agriculture, forestry, coastal, urban, water management, and disaster risk reduction [15];

[50] Sophie Yeo, Nature (2019), "Where climate cash is flowing and why it's not enough". Available at: https://www.nature.com/articles/d41586-019-02712-3

however, there is some hope that with the decision by the GCF to introduce a results-based payment mechanism[51] for REDD+, the link between forests and climate will be strongly established, and this will ensure that a growing proportion of climate finance is allocated to forests. Another barrier is the lack of standard metrics and methodologies to measure the benefits from forest-based solutions for adaptation, which makes it difficult for countries and funders to compare them against other potential investment options. This is where the determination of the monetary value of the ecosystem services (see section 1.1.5) pertaining to climate change regulation becomes crucial; in order to scale up and mobilize additional sources of funding, the full economic and financial case for forest-based solutions for climate change must be clearly communicated. Technical assistance and capacity building support could be provided to help countries to develop, adopt and accelerate common approaches to quantify and value ecosystem services in ways that can inform policy and investment decisions. Otherwise, it will remain difficult for investors and other decision-makers to compare forest-based solutions with conventional approaches to, for example, infrastructure development.

2.4. Linkages to the Kunming-Montreal Global Biodiversity Framework (GBF)

The Kunming-Montreal Global Biodiversity Framework [17] was adopted on 19th December 2022 in Montreal during the fifteen meeting of the UN Convention on Biological Diversity. It builds on the Strategic Plan for Biodiversity 2011-2020[52] and on the post-2020

[51] The REDD+ results-based payments pilot programme is designed to boost public finance streams for REDD+ that support the measurement of emission reductions and then pays for them at the national level and within different countries. See also: https://www.greenclimate.fund/news/gcf-s-first-redd-results-based-payment-boosts-financial-incentive-to-protect-forests

[52] This plan included the 2011-2020 Aichi Biodiversity Targets, which were a set of five strategic goals and 20 targets that Parties to the UN Convention on Biological Diversity (CBD) used as a guiding framework for their national commitments towards biodiversity conservation, sustainable use and the equitable sharing of its benefits arising from the use of genetic resources.

Global Biodiversity Framework, and sets out an ambitious plan to implement broad-based action to bring about a transformation in society's relationship with biodiversity and to ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled. The framework has four long-term goals for 2050 related to the 2050 Vision for Biodiversity, and twenty-three targets for urgent action over the decade to 2030.

The Kunming-Montreal Global Biodiversity Framework is a fundamental contribution to the implementation of the 2030 Agenda for Sustainable Development, with SDG targets 14 and 15 focussing specifically on Life below water and Life on land, respectively; indeed, nearly half of the targets under SDG 14 and SDG 15 stemmed from the Aichi Biodiversity targets[53]. With reference to the SDG 15 (Life on land), six of its targets (SDG 15.4 thru SDG 15.9) are related to biodiversity conservation and forests, making the realization of the global forest goals vital to the achievement of the Kunming-Montreal Global Biodiversity Framework.

Table 2 summarizes the connections between the Kunming-Montreal Global Biodiversity Framework (hereafter GBF) targets over the decade to 2030 and the GFG 2. The third column in Table 2 explains the relationship[54] between the GFG in column 2 and the forest-related component of the GBF target in column 1.

[53] These Aichi targets expired in 2020, and the Parties to the UN Convention on Biological Diversity (CBD) adopted a revised suite of targets for the post-2020 global biodiversity framework.

[54] The targets of the Kunming-Montreal Global Biodiversity Framework cover all elements of biodiversity, including species, ecosystems (terrestrial, marine and other aquatic) and genetic diversity. The comparison in Table 2 refers only to the forest-related components of the targets.

Table 2.Linkages between the Kunming-Montreal Global Biodiversity Framework (GBF) targets over the decade to 2030 and the Global Forest Goals 2

GBF targets	Global Forest Goals	Comments (How GBF Targets relate to GFG Targets)
Target 1, Target 12	GFG 2.4, GFG 2.5	• Target 1 relates to the existence of sustainable management plans for forests, while Target 12 relates to the increase of the area of forests used for social services.
Target 2, Target 3	GFG 1*, GFG 2.5	• Targets 2 and 3 relate to the expansion of protected area systems and the increase of the area of forest under restoration and conservation.
Target 8	GFG 2.5	• Target 8 relates to the mitigating role of forests on climate change and its impacts on biodiversity.
Target 10	GFG 2.3, GFG 2.4	• Target 10 relates to the development of SFM initiatives for sustainable food security and agricultural development.
Target 11	GFG 2.4, GFG 2.5	• Target 11 relates to the ecosystem functions and services provided by forests.
Target 14	GFG 4.1, GFG 4.2 GFG 5.1, GFG 5.2	• Target 14 relates to the improvement of forest governance, the integration of SFM into the country long-term development plans, and the mobilization of financial resources for SFM.
Target 20, Target 21	GFG 4.3, GFG 4.5	• Targets 20 and 21 relate to the enhancement of scientific and technological cooperation between countries, and the improvement of the collection, accessibility, and availability of knowledge on biodiversity.

*GFG 1 is discussed in a related paper

Target 1 of the GBF seeks to ensure that "all areas globally are under participatory integrated biodiversity-inclusive spatial planning addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities". Progress on the "land" component of this target can be connected to the sustainable forest management activities implemented in GFG 2.4 for the expansion and modernisation of forests; another contribution to this target is the development by many countries of long-term management plans in support of the CBD as part of the actions implemented under GFG 2.5. As an indication of the amount of work still to be accomplished in order to achieve the Target 1 of having all land under an integrated biodiversity-inclusive spatial planning by 2030, it should be reminded that only about half of the global forest area is currently under long-term management plans, according to *FRA 2020*.

Target 2 of the GBF seeks to "ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity**"**, while Target 3 seeks to " ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed". The "terrestrial" component of Target 1is directly connected to the activities undertaken under GFG 1 (Reverse the loss of forest cover worldwide through sustainable forest management, including protection, restoration, afforestation and reforestation). Additionally, in reporting the activities undertaken towards the achievement of GFG 2.5, many reporting

countries indicated that they implemented several activities for the improvement and/or expansion of protected area systems [3].

The GBF Target 8 seeks to "minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solution and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity". The progress on this target is supported by the actions undertaken by countries under GFG 2.5 to support the CDB, such as, the expansion of protected area systems and the development and implementation of evaluative biodiversity management systems. This target is also supported by optimizing the role of forests in mitigating and adapting to climate change. Actions taken in GFG 2.5 in support of the Paris agreement (see section 2.3), such as the development of REDD+ strategies will also contribute to the realization of the GBF target 8.

The GBF Target 10 seeks to ensure that "all areas under agriculture, aquaculture and forestry are managed sustainably, in particular through the conservation and sustainable use of biodiversity, increasing the productivity and resilience of these production systems". The advances on this target are bolstered by many activities undertaken under GFG 2.3 and GFG 2.4 to promote SFM initiatives such as agroforestry, agricultural diversification and forest plantations to achieve greater food security.

The GBF Target 14 [55] seeks to integrate biodiversity values into a long-term development goal. This target is supported by many of the tools for the implementation of the GFGs provided

[55] Target 14 of the Kunming-Montreal Global Biodiversity Framework: "Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of this framework".

in the GFG 4 and GFG 5. This includes the activities to enhance forest governance (GFG 5.1 and GFG 5.2) or to mobilize financing from all sources and at all levels (GFG 4.1 and GFG 4.2) to support sustainable forest management.

The targets 20 and 21 of the GBF seek to strengthen capacity-building and improve the availability and accessibility of knowledge and information to guide an effective and equitable governance, and participatory management of biodiversity. These targets are supported by actions undertaken under GFG 4.3 and GFG 4.5.

3. Gaps and Challenges, Priorities and Opportunities in achieving the GFG2 and Cross-Cutting GFGs

The objectives of this section are threefold: (i) to reflect on the challenges raised by reporting countries in their voluntary national contributions to their efforts to achieve the GFG targets; (ii) to examine options to improve those challenges; and (iii) to identify key gaps in the measurement of the GFG indicators, the feasibility of addressing those gaps and the implications for the 2030 global agenda.

The reporting countries identified several issues hindering their progress towards achieving the GFG 2 targets. The most common issues raised included, inter alia, insufficient public and private funding, inadequacy of the public funding for meeting the forest sector needs, difficulties in accessing information on funding sources and application processes, weak forest governance, lack of technical capabilities, natural disasters, as well as some social challenges.

3.1. Insufficient forest financing and access to markets

According to the *GFG Report 2021*, at least 25 countries, mostly from Africa and Asia, cited “insufficient forest financing” and “access to market” as their most important challenges to

achieve sustainable forest management. Because of limited forest funding, some countries seemed to adopt an ad-hoc approach to financing, using a few mechanisms such as grants and subsidies to implement isolated SFM activities, while lacking the resources to pursue SFM activities within a long-term national sustainable development framework.

Sources for financing for sustainable forest management originate from the forest sector, but also climate (such as REDD+), agriculture (e.g. agroforestry) and forest-based ecotourism, among others. Additionally, this financing is composed of a wide array of different flows, public, private, domestic, international, from different stakeholders and sectors. This fragmented nature of forest finance partly explains the difficulty in accurately measuring resource flows for sustainable forest management [19]. Data on official development assistance (ODA)[56] compiled by the Organization for Economic Cooperation and Development (OECD) showed a gradual increase in gross disbursements of forestry ODA between 2002 and 2018, largely due to the emergence of REDD+ financing, some of which has been labelled as forestry ODA. With regard to private finance for forests, information is largely unavailable due to the difficulty in tracking; however, some case studies have indicated that, in developing countries and economies in transition, private investments in the forest sector can be several orders of magnitude[57] larger than the value of forestry ODA [20]. Against this background, let's address the specific issues identified by reporting countries on this subject.

The most important challenge cited by countries was the "limited investments" available for SFM projects. The UNFF took a major step to address the lack of funding for SFM initiatives

[56] the main forest ODA donors were European Union institutions, Germany and Japan, which provided over half of global forest ODA, followed by the United Kingdom of Great Britain and Northern Ireland, Finland, the Netherlands, Australia, and Sweden.

[57] The world bank estimated that private investments in the forestry sector was 24 times of the value of forestry ODA in 2008.

with the establishment of the Global Forest Financing Facilitation Network (GFFFN)[58] in 2015. At national level, one of the main priorities of the GFFFN was to assist developing countries in developing national forest financing strategies. These strategies aim to (i) map relevant sources of financing and (ii) design policies to harness them in a synergistic and complementary fashion, so as to provide the means of implementing sustainable forest management comprehensively and nationwide. To date, the network has helped 35 countries in the design of their national forest financing strategies and provided training to over 1,000 forestry professionals around the world in the development of SFM project proposals for submission to funding institutions.

However, it appears that a lot of work is still to be done to disseminate the opportunities offered by the GFFFN given that several countries also reported on their difficulties in accessing information on funding sources and application processes, with twelve countries highlighting problems in accessing forest financing from major multilateral donor organizations because of cumbersome criteria and procedural requirements (see *GFG Report 2021*). In order to help assist countries with information on new and emerging financing opportunities, the GFFFN developed a Clearing House on forest financing. The clearing house provides profiles of international development entities, philanthropic and private financial entities that invest in forests[59]. It also provides a platform to share data for best practices and lessons learned on successful projects on forest financing[60], as well as a wide range of learning materials[61].

[58] The Global Forest Financing Facilitation Network (GFFFN) was established in 2015 under the auspices of the UNFF to build the capacities of forest-related agencies in mobilising funding from multilateral sources for SFM by supporting them in developing project proposals. See the GFFFN website at https://forest-finance.un.org/content/about-gfffn

[59] See https://forest-finance.un.org/content/browse-our-database-financing-opportunities

[60] https://forest-finance.un.org/content/browse-our-database-good-practices-and-lessons-learned

[61] See https://forest-finance.un.org/content/browse-our-database-learning-materials

Another challenge highlighted by developing countries was the "insufficient capacity in value-chain-marketing and infrastructural deficiencies", that is the difficulty in getting their forest products to market. A previous FAO policy brief[62] found that one of the most important constraints that limit the financing of SFM was the low generation of revenue for forest owners and managers. The situation is often exacerbated in some countries by the existence of a non-regulated market for non-wood forest products and the difficulty to calculate the value of the social and environmental benefits of SFM. The difficulty to calculate the value of non-wood products was also highlighted in our reviewing of the progress on GFG 2.3 and GFG 2.4 in sections 1.1.3 and 1.1.4. In order to increase the visibility of forests, it is important that the full value and range of forest goods and services be recognized, including through payments for ecosystem services, so that these values may be internalized in GDP figures; this would bring them more fully in the political agenda. Developing a payment system for environmental services would for example include, among others, payments to mitigate and adapt to climate change, payments to improve water quality through better forest management and conservation, or payments for recreational amenities. The success of such system is heavily reliant on the local governments willingness to provide appropriate policy and institutional frameworks to support its implementation, notwithstanding the fact that governments might also be the most important buyers of environmental services.

A final challenge raised by the reporting countries was the lack of sufficient incentives for the private sector to invest in activities that would support the achievements of all six GFGs. Private investment in sustainable forest management is heavily needed, especially in the light of the 2012 study conducted by Collaborative Partnership on Forests (CPF) Advisory Group which

[62] FAO Forestry Policy Brief, Financing sustainable forest management.
Available at: https://www.fao.org/forestry/16559-0325ac13168b9c3d84d0279e2f8adc798.pdf

showed that the available funding for sustainable forest management from all sources would fall short, even by the most conservative estimation of needs [21]. There are numerous constraints that limit the private financing of sustainable forest management. First, the lengthy time frames for returns on investment in forestry are a disincentive to investment in the sector; forest management is a long-term investment (this is particularly true in the case of tree planting), whereas most lending policies favour short-term loans with low risks. Moreover, land cannot be used as collateral without clear land tenure, given that an uncertain land tenure would create a situation where investments could be contested by several parties. Political instability and conflicts are also an important factor in some regions as they could cause delays in a project or cause withdrawals of partners. Another important barrier to forest investment in developing countries and frontier markets is the fact that most institutional investors beyond the United States do not yet have "timber" as a clear asset class in their portfolios [20].

Ultimately most investors are after a profit in growth markets, and local governments must create enabling conditions to stimulate private forest investment. Some common key factors for success in stimulating both domestic and private industrial forestry investments[63] include: (i) Ease of land acquisition and clear land tenure arrangements, (ii) Local government willing to subsidize investments, (iii) Abundant skilled force, and (iv) Supportive overall investment climate, including political and economic stability, presence of "rule of law," simple and fair taxation, security of land tenure, and simplified bureaucracy.

3.2. Capacity Building

Several developing countries cited "capacity building and technological deficiencies" as obstacles to their progress in achieving the GFG 2 goals, with 13 countries indicating that they

[63] The key factors for stimulating forest investments cited here are discussed in Castren et al (2014).

lacked the capacity required to develop “bankable” FSM project proposals. The UN strategic Plan for Forest 2017-2030 stressed the fact that the “effective implementation of sustainable forest management is critically dependent upon adequate resources, including financing, capacity development and the transfer of environmentally sound technologies and, in particular, the need to mobilize increased financial resources, including from innovative sources, for developing countries”. In this regard, the achievements of the GFFFN are noteworthy, particularly their efforts in supporting countries to strengthen their capacity to mobilize funding for sustainable forest management by providing technical assistance and facilitating their access to information and data related to forest funding opportunities (see section 3.1). However, reviewing the specific nature of the issues raised by the individual countries will help determine whether their needs are effectively addressed within the current set of services offered within the GFFFN.

Capacity building is critical because strong human and institutional capacities are a stimulating factor for private investment. For instance, a readily available skilled force in forestry in a country increases their appeal for private investment in forestry. In this context, building technical and administrative capacities in forestry becomes an investment with long-term returns. While an analysis of the data on students enrolled in forest studies indicates a global increase (*FRA 2020*), it would be important to look at regional distributions of the data in order to identify where further resources could be deployed to improve capacity building.

3.3. Social challenges

Many reporting countries indicated that the difficulty of using sustainable forest management to eradicate poverty was their greatest challenge to achieving GFG 2. Land tenure and land rights, migration and education were among the most common issues cited.

The condition of forests depends on how they are used and managed, which in turn depends largely on who has rights to their ownership and management. In many developing countries the privately owned forests are not usually owned by individuals; local, tribal and indigenous communities generally account for more than 85% of the total privately owned forest area (see *FRA 2020*). This means that a lot of farmers farm on land held under customary tenure regimes, where land rights are not certified formally. Under customary tenure, people gain access to land as a social right, granted by virtue of their membership in a community. This situation creates a competition to get a piece of land, with women often disadvantaged by discriminatory social norms and practices[64,65]. For people living in forested areas, land is the foundation for security, shelter, and livelihood, and creates pathways to empowerment and economic opportunity. Forest tenure arrangements usually determine who can use which resources, for how long and under what conditions; tenure security and well-defined property rights are therefore essential in order to stimulate investment in land, diversification and intensification of production and provision of employment opportunities.

There is clearly a need to reform land tenure policies in developing countries, but it is also imperative that any land tenure policy fully acknowledges the social, cultural, spiritual, economic, environmental and political value of the land to indigenous peoples and other communities with customary tenure systems. For example, low-cost land tenure regularizations[66]

[64] Women in Half the World Still Denied Land, Property Rights Despite Laws (Press Release, World Bank). Available at https://www.worldbank.org/en/news/press-release/2019/03/25/women-in-half-the-world-still-denied-land-property-rights-despite-laws

[65] Sustainable Forest Management (SFM) Toolbox, Gender in Forestry (FAO)
Available at: https://www.fao.org/sustainable-forest-management/toolbox/modules/gender-in-forestry/basic-knowledge/en/

[66] The land regularization program in Rwanda was a low-cost intervention to clarify land tenure. It involved granting land rights to people after their customary rights have been clarified and documented, which reduced the uncertainty over intended inheritance of land. Legally married women were particularly favoured through this process.

to enhance tenure security in Ethiopia and Rwanda appear to have had significant positive effects, in terms of enhanced investments in soil conservation and tree planting, enhanced land productivity and land rental market activity [22, 23].

In order to provide some guidance on the principles of, and internationally accepted standards and practices for, the responsible governance of tenure, FAO has developed voluntary guidelines. These guidelines provide a framework that governments can use when developing tenure-related strategies, policies, laws, programmes and activities [24]. Ultimately, in addition to the regularizations of land tenure, the efforts undertaken by reporting countries under GFG 2, such as the development of policies to strengthen small-scale community forest businesses and capacity building initiatives in forest-based communities, must be accelerated to help address the social challenges encountered by the forest-dependent people.

3.4. Forest Governance

The quality of a country's legal framework and the rule of law are a strong determinant of SFM. Governance challenges featured prominently in VNCs from developing countries. Standout issues included: the need to improve cross sectoral coordination and integrated forest management; constraints resulting from political instability and corruption; unresolved land tenure issues; and illegal logging.

A close look at the issues raised above provides some insights into the ways governance affects the implementation of SFM. A "cross-sectoral coordination" would ensure that forest policies and laws are consistent with those of other sectors, such as agriculture, which is a significant driver of forest degradation and deforestation; the failure of governance in the agriculture sector will inevitably undermine the implementation of SFM. "Political instability and corruption" would be detrimental to the implementation of national and international forest-

related agreements and the enforcement of forest laws, while "land tenure arrangements" are critical to avoid land conflicts and to incentivise private forest investments. Governments, forest managers and development actors must understand the impacts of forest governance on SFM and be provided with guidance on what they can do to enable good forest governance.

To this end, the Program on Forests (PROFOR) and the Food and Agriculture Organization (FAO) of the United Nations developed the *Framework for Assessing and Monitoring Forest Governance*[67], which is now widely used for appraising forest governance, because it provides an overview of the elements that constitute good governance and can enable the implementation of SFM. The premise behind the framework is the idea that a widely accepted, comprehensive analytical framework can facilitate efforts within and among countries to improve forest governance. It is composed of three fundamental pillars: 1) policy, legal/regulatory and institutional frameworks; 2) planning and decision-making processes; and 3) implementation, enforcement and compliance. The framework also identifies six principles that cut across the three pillars and address the quality of governance: accountability, effectiveness, efficiency, fairness/equity, participation and transparency.

3.5. Climate change risks

According to the *FRA 2020* data, thirty-seven countries (representing 33% of the world's total forest area) reported annual data on the area of forests affected by severe weather events such as forest fires, droughts, and other environmental disturbances between 2002 and 2015. These extreme events may degrade forests and thereby reduce the provision of forest goods and services, which negatively impact the achievement of GFG 2.1 and 2.3; they also reduce the

[67] The Framework for Assessing and Monitoring Forest Governance was published in 2011 by PROFOR and FAO. It is available at: https://www.fao.org/climatechange/27526-0cc61ecc084048c7a9425f64942df70a8.pdf

provisions of biodiversity values, productivity and health, with a detrimental effect on the achievements of GFG 2.4 and GFG 2.5. Forest degradation may also negatively affect other land uses (e.g. by causing a loss of downstream water quality) and cause the emission of greenhouse gases.

It is generally agreed that ecosystem-based adaptation, which integrates the use of biodiversity and ecosystem services into an overall adaptation strategy, can be a cost-effective strategy for responding to the effects of weather and climate extremes [25]. For instance, forests have been used in the Alps and elsewhere as effective risk-reducing measures against avalanches, rockfalls, and landslides since the 1900s [26]; the damage caused by wildfires, wind erosion, drought, and desertification are reported to have been buffered by forest management, shelterbelts, greenbelts, hedges, and other 'living fences [27]; Adaptation strategies such as sustainable forest management, agroforestry systems and other ecosystem-based interventions were used to enhance resilience among the vulnerable communities in the Sub-Saharan Africa [28]. The above examples provide evidence of the value of ecosystem services in disaster risk reduction and adaption to climate change, and re-emphasize the importance of realizing the forest-related goals of the Paris Agreement as discussed in section 2.3.

Countries should explicitly consider ecosystem-based solutions for climate change mitigation and/or adaptation to risks associated with extreme weather events as an integral element of national and sectoral development decisions. As noted by a 2012 special report of the IPCC on "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation", the extent to which ecosystems support disaster risk reduction depends on a "complex set of dynamic interactions among ecosystem-related factors, as well as the intensity of the hazard and institutional and governance arrangements" [29].

3.6. Impacts of COVID-19

The forest sector provides work to at least 54.2 million women and men worldwide, many in the informal economy. Forests are central to mitigating the impacts of climate change, and around 1.6 billion people (or 25% of the global population), many of whom are indigenous and tribal peoples, depend on forests for food, income, jobs, energy and shelter [1]. This reliance on forests was widely exposed during the COVID-19 pandemic; disruptions in forest-related supply chains resulted in a sharp decline in exports throughout the world[68], putting livelihoods and businesses at risk; forest-dependent communities are the worst hit as they often have no social safety net to fall back on. As household incomes decrease and food becomes less available, people in rural areas are turning to forest products for subsistence, which is resulting in an overharvesting of natural resources. As a consequence, several regions now find the stability and viability of their forest sectors in jeopardy[69], and the achievement of the GFG under threat.

In our recovery from the COVID-19 crisis, it is important to ensure that forests continue to play a central role in people's wellbeing. Countries around the world are taking steps to "build back greener", creating a unique opportunity to invest in, expand and promote sustainable forest management practices. Investing in sustainable forest management and forestry jobs offer opportunities for a green recovery, and healthy forests build resilience against future pandemics[70].

[68] International Labour Organization (ILO). The effects of COVID-19 on trade and global supply chains, Research brief (2020).
[69] UN Forum on Forests, "Impact of the pandemic on forests and the forest sector: Note by the Secretariat", E/CN.18/2021/7. Accessible at: https://undocs.org/pdf?symbol=E/CN.18/2021/7
[70] UN DESA, Policy Brief No. 80, "Forests: at the heart of a green recovery from the COVID-19 pandemic" Available at: https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_80.pdf

3.7. Data collection & reporting

Progress on some GFG targets was difficult to track, either because of an unavailability of indicators on the targets or because of a lack of standardized and comparable data. For instance, the GFG 2.2 (Increase the access of small-scale forest enterprise to forest financing) has several potential dimensions (such as "new policies and regulations", "facilitation of the access to credit", "land tenure reforms", …), but the indicators associated with each dimension are not uniquely defined, which makes it difficult to measure progress towards the GFG in a consistent and comparative way.

Moreover, the assessment of progress on GFG 2.3 was hampered by the unreliability or unavailability of the information on the value of non-wood forest products, while the difficulty to calculate the value of ecosystem services undermined the evaluation of progress on GFG 2.4.

3.8. Impacts of Emerging Crises

3.8.1 Effects of the Russia-Ukraine war

Although it's still too early for a comprehensive assessment of the environmental damage of the Russia-Ukraine war given that the war is still ongoing, there are already worrying indications of the scope and the nature of the damage.

The territory of Ukraine is part of a broader region stretching across Central and Eastern Europe sometimes referred as the "Green Heart of Europe". It contains habitats that are home to 35% of Europe's biodiversity, including 70,000 plant and animal species[71]. These natural treasures are threatened by the war, with satellite data from the European Forest Fire Information

[71] "Assessing the environmental impacts of the war in Ukraine". Press release by WWF Central And Eastern Europe on 13th June 2022. Available at: https://wwfcee.org/news/assessing-the-environmental-impacts-of-the-war-in-ukraine

System indicating that fires sparked by military attacks have already damaged over 100,000 hectares of natural ecosystems. Furthermore, because of the war, 3.6 million people had been forced to abandon their homes and flee across borders for safety, conservation activities have been put on hold and several investments to improve the management of protected areas suspended, with the unfortunate consequence of setting back most of the progress made by Ukraine to achieve the GFG targets 2.1, 2.4 and 2.5.

The war also has significant indirect costs; it has severely disrupted the world timber trade and heightened concerns about deforestation due to illegal logging and forest fires. Russia is the world's largest exporter of softwoods, with a production of about 40 million cubic meters per year. International sanctions against Russia and Belarus have limited global timber supplies and the war has drastically hampered production in Ukraine. In this context, several timber-producing countries and exporters have taken steps to fill this gap, including easing some SFM measures to increase production. For example, In June 2022, Estonia announced a relaxation of logging restrictions on state-owned land, which is home to about half of the country's forests[72]. In Finland, for the first time, intensive deforestation has transformed the country's forests this year from a carbon sink to a source of emission[73]. In Russia, the government approved anti-crisis legislation to allow construction without environmental impact assessments in natural parks and protected areas such as Lake Baikal, the oldest (25 million years) and deepest (1,700 m) lake in the world, inscribed by UNESCO as the most outstanding example of a freshwater ecosystem[74]. In the United States of America, the House Resources Committee unveiled a "No Wood from

[72] "Ukraine war hits global timber trade and adds to risks for forests". Financial Times article published on 19th June 2022, and available at: https://www.ft.com/content/d6388b32-757b-4484-95ff-720b4b2319f3

[73] This assertion is based on Statistics Finland data (as of 28th November 2022), which is available at: https://www.stat.fi/en/publication/cktlcpwag38sg0c5561iqop0y

[74] FAO Council, 170th Session (CL 170/6), 13-17 June 2022. "Impact of the Ukraine-Russia conflict on global food security and related matters under the mandate of the Food and Agriculture Organization of the United Nations".

Tyrants" bill in April 2022 that bans timber imports from Russia and Belarus and allows an equivalent amount of domestic harvest to make up for the lost imports[75]. All of the above actions negatively impact the achievement of the GFG 2 targets.

Another critical issue is the prominent role that the Russian Federation and Ukraine play in global trade of food and agricultural products. Both countries are net exporters of agricultural products and play leading roles in supplying global markets in foodstuffs. For example, Russia is the top global wheat exporter, with a total of 32.9 million tonnes of wheat and meslin shipped in 2021, representing 18% of global shipments; Ukraine stood as the sixth largest wheat exporter in 2021, exporting 20 million tonnes of wheat, representing a 10% of the global market share [30]. The conflict has aggravated a global food market condition that was already disrupted by the COVID-19 pandemic, and has contributed to high international food commodity prices, creating a global food insecurity and jeopardizing the achievements of GFG 2.1 and SDGs 1 and 2.

Post-war reconstruction in Ukraine will be a monumental task and will require a thorough assessment of the overall environmental impacts in order to identify priorities and provide a basis for planning a restoration and reconstruction. A post-war recovery and development plan will offer Ukraine the opportunity to "build back better", by aligning its reconstruction with green economy and low-emission development principles; this will be done by ensuring that investments focus not just on reconstructing what has been destroyed, but on fundamentally transforming the country towards a sustainable future, with a green and net-zero economy.

[75] The draft of the "No Wood for Tyrants" Act is available at: https://www.congress.gov/bill/117th-congress/house-bill/7437/text

3.8.2 Global Inflation, Global Energy Crisis, and Soaring Food & Commodity Prices

The FAO's Food Price index showed a sharp increase in February 2022, driven by increases in vegetable oils and dairy prices, which were mainly caused by a robust demand in the recovery from COVID-19; the Food Price index then reached an unprecedented high in March 2022 after the Russian invasion of Ukraine propelled cereals and vegetable oils prices through the roof [31]. The Russian Federation and Ukraine are key suppliers of agricultural goods (see section 3.8.1) and the conflict directly disrupted exports of crude oil, natural gas, grains, fertilizer and metals, pushing up energy, food[76] and commodity prices to rise. The negative impacts of climate change on agriculture and forestry, underlined in the IPCC report on *Impacts, Adaptation and Vulnerability (AR6 WG2)* [32], have also added to this increasing food prices' volatility. The surging food inflation has worsened food insecurity and pushed vulnerable communities below the poverty line as countries are still struggling with the effects of the pandemic (with negative impacts on the achievement of GFG 2.1, SDG 1 and SDG 2). Moreover, there is a fear that higher food prices would lead to the intensification of agricultural practices and the expansion of agriculture into lands left fallow or under forest cover, which would increase GHG emissions and negatively impact the achievement of GFG 2.5.

[76] Another important contribution to the sharp food price increase was the announcement of India's ban on wheat export, which propelled wheat prices at € 435/t on May 16th 2022 (Euronext, Milling wheat futures prices, available here). The india's ban was motivated by concerns over its own food sovereignty facing (a) the war in Ukraine, and (b) expectations of yield decrease due to record breaking temperatures in March and April hitting farmers in wheat-producing northern India (AFP, Wheat prices hit record high after Indian export ban, April 2022, available here).

Energy prices also soared to historically high levels, especially natural gas, and added substantially to headline inflation[77]. In response to escalating energy prices, countries are putting in place measures to support low-income households (e.g. taxes on energy consumption, energy price caps, fuel rebates and cost subsidies) or to increase their domestic energy production (e.g. increase of drilling activities in the USA) [33].

In Europe, where the Russian Federation accounts for more than 40% of the natural gas imports, variations in energy inflation reflected varying shares of fossil fuel in the country electricity generation mix. Electricity price increases were more prominent in countries with high fossil fuel dependency (e.g. Ireland, Italy, Portugal, Spain and UK); conversely, energy price increases have been more subdued in countries with limited fossil fuel reliance in their electricity generation mix, where most electricity is produced using renewables (e.g. the Nordic countries) [34]. This means that a reduction of fossil fuel dependency would minimize the current economic disruption and serve the fight against inflation and climate change. Sustainable biofuels (ethanol, biodiesel, renewable diesel) are important fossil fuel substitutes for land-based transport and are critical to achieving net zero scenario. Activities that support the use of forests for energy production, including biomass for bio-energy production[78], must therefore be expanded. These activities contribute to the achievement of GFG 2.4, and their implementation could be facilitated by the financial and technical supports provided through the achievement of GFG 4.5 and GFG 6.4.

Ultimately, accelerating the green transition is the best way to limit vulnerability to spikes in

[77] The weight of energy goods and services in the consumer price indices (CPI) varies between 5% and 15% in most of Europe. However, because of the fast rise in prices, energy items directly accounted for about half of the annual CPI inflation rates in Europe in May 2022 [34].

[78] In the GFG Report 2021, some countries (e.g. Canada, Switzerland, Nepal, Serbia and the Slovak Republic) reported that they expanded their forest productivity to include bio-energy production.

fossil fuel prices and enhance energy security. The current crisis also highlights the complex relationships among geopolitics, energy and food security, climate change and sustainable development [33], and presents a unique opportunity to address these complexities holistically within a sustainability and net zero development framework.

4. Conclusions and Recommendations

This report has provided an analysis of the status of progress on the achievements of the Global Forest Goals 2 and discussed the challenges that reporting countries are facing in meeting those goals. Country members took a wide range of institutional, legislative, technical and financial actions to advance the achievements of the GFG2 targets.

On GFG 2.1, several countries developed forest community plans and implemented legislations aimed at boosting the employment of forest-dependent people. However, it is too soon to assess the full impacts of those actions on rural employment.

On GFG 2.2, various measures were taken to support small-scale enterprises by developing capacity building and by promoting and strengthening programmes that facilitate their access to financing. The diversity of the actions taken by countries to achieve this target made it difficult to determine a specific indicator to measure progress.

On GFG 2.3, many countries successfully developed plans and implemented national policies that used forests to achieve greater food security. However, owing to the informal nature of the forestry sector in some developing countries, the full scope of the contribution of forests and trees to food security is believed to be undervalued.

On GFG 2.4, countries reported several actions to strengthen the contribution of forests to economic, social and environmental development; however, it was difficult to discriminate between the contributions of the “forest industry” and the “forest ecosystem services”.

Additionally, the difficulty to calculate the value of the "ecosystem services" made it difficult to assess progress on this target.

On GFG 2.5, the majority of reported country actions supported the achievement of the international forest-related commitments under the CBD and the Paris Agreement.

While the successful gathering of the GFG indicators is a testament of the great global forest monitoring capacity, important information gaps remain. Countries need additional support to improve their capacity to collect and report data on a number of key forest indicators. Below are some recommendations:

a) Information dissemination.

A substantial number of countries appeared to be unaware of the resources and support offered by the GFFFN to help them in the development of their funding application. A review of information sharing is needed, especially with developing countries where communication infrastructures are often limited.

UNFF should step up its activities under GFG 4.5 to ensure the availability of and accessibility to all forest-related information.

b) Calculating the value of forest ecosystem services

The CPF should provide technical assistance and capacity building support to develop a coherent framework to evaluate the value of forest ecosystem services in order to assess progress on GFG 2.3, GFG 2.4 and GFG 2.5. It has the added advantage of increasing the value and the marketability of SFM, potentially helping small-scale businesses getting a better access to the markets. An appropriate determination of the value of ecosystem services will also help

demonstrate the monetary value of the mitigating effect of forests on climate change, which would potentially help address the current underfunding of forest-based solutions for adaptation.

c) Data Collection & Reporting

- *Facilitating the measurements of some multidimensional targets.*

The current format for reporting allows reporting countries to provide a list of actions taken to support the achievement of global forest goals. In some cases, like for GFG 2.2, the actions listed by countries may be so country-specific that it becomes difficult to consolidate them into simple dimensions for a global analysis.

Guidelines are needed in order to determine a set of indicators for GFG 2.2. UNFF should accelerate communication between its members within GFG 6.4 to ensure a common understanding of the indicators needed for specific GFG targets.

d) Capacity Building

In order to assist countries in building their institutional and human capacity, UNFF Members should step up their actions under GFG 2.2, GFG 4.5 and GFG 6.4. The current member organizations of the CPF cover a broad range of competencies on forest-related matters, and would be the appropriate setting to address capacity building issues.

e) Forest Financing

UNFF and its Members should accelerate its activities under GFG 4.1 and GFG 4.2 in order to help developing countries in their efforts to secure forest financing. The GFFFN should expand its training workshops on accessing funds from multilateral financing mechanisms, especially targeting those regions and sub-regions that are crucially in need of those information.

f) Climate Change

UNFF and its Members should step up its activities under GFG 2.5, with a focus on helping countries include climate change mitigation and adaptation in the country long-term sustainable development goals.

g) Forest Governance

In order to help address forest governance issues, UNFF and its Members should accelerate its activities under GFG 5.1, GFG 5.2 and GFG 5.3, with a goal of strengthening national and subnational policies and authorities.

h) COVID-19

Forests were critical in easing poverty in rural communities, and in supporting other crucial sectors such as public health, employment and disaster risk reduction at the height of the COVID-19 pandemic. Several studies have also found that ecosystem degradation and large-scale deforestation are drivers of emerging zoonotic diseases. The HLPF 2023 will be held in July 2023 to discuss the effective and inclusive measures to accelerate the recovery from the coronavirus disease (COVID-19), it is important that these discussions include stimulus measures to accelerate the achievements of the GFGs under the UNSPF 2030.

i) Impacts of the Russia-Ukraine War

In the context of the Russia-Ukraine war the transition towards an equitable and ecologically sustainable food system must be strengthened.

Within GFG 2.1, investments in real-time monitoring of food security threats from food price volatilities would provide insights into effective global and national responses [35]. One country intervention might be, for instance, to offer farmers subsidies or lower taxes on goods such as fertilizer and energy, as a response to an incoming food shortage.

Within GFG 4.5 and GFG 6.4, long-term investments should be made in climate-friendly agricultural research (i.e. agroforestry): the knowledge and innovation in agriculture will contribute to food security (GFG 2.1) and SFM (GFG 2.3 and GFG 2.4).

j) Global Inflation, Global Energy Crisis, and Soaring Food and Energy Prices

The high food prices will likely lead to a loosening of SFM regulations and a decrease in global forest area as more forests are being used for the expansion of agriculture. It is important that UNFF and its members tighten forest governance (GFG 5.1, 5.2 and 5.3), while at the same accelerate the effectiveness of the actions taken to improve the productivity of agroforestry and forest plantations in GFG 2.3.

While the current inflation is driven by a multitude of factors (including geopolitics, energy crisis, market dynamics and climate change), the soaring energy prices are contributing to at least half of the consumer price indices (CPI) in some regions. The rise in fossil fuel prices would promote incentives to conserve energy and to increase the use of renewables, with a positive effect on emissions reductions (GFG 2.5). UNFF and its members should accelerate the activities undertaken within GFG 2.4 to expand the production of bioenergy.

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