

Second Assessment of the Impact of COVID-19 on Forests and Forest Sector in the Latin America region

Ivan Tomaselli

February 2022

Prepared for the 17th session of the
United Nations Forum on Forests

The sixteenth session of the UN Forum on Forests (UNFF16) in April 2021 requested the Forum secretariat, in collaboration with members of the Forum, CPF member organizations and stakeholders, to conduct an assessment of the challenges faced by countries, and the strategies, recovery measures and best practices for reducing the impact of COVID-19 on forests and forest sector, and to present it to the Forum at its seventeenth session in May 2022. To conduct this second assessment, the UNFF Secretariat commissioned a series of assessments in different regions and subregions.

The views and opinions expressed herein are those of the authors and do not necessarily reflect those of the United Nations Secretariat. The designations and terminology employed may not conform to United Nations practice and do not imply the expression of any opinion whatsoever on the part of the Organization.



CONSULTING
ENGINEERING
MANAGEMENT

United Nations
Forum on Forests
Secretariat

Assessment of the Challenges Faced by Countries, and the Strategies, Recovery Measures and Best Practices for Reducing the Impact of COVID-19 on Forests and Forest Sector

Latin America and the Caribbean Region

FINAL REPORT

05UNF0121

Ivan Tomaselli

CURITIBA – PR, BRAZIL
FEBRUARY /2022

STCP Engenharia de Projetos Ltda.

Rua Euzébio da Motta, 450, Juvevê - Curitiba/PR

Brazil - 80530-260 - +55 41 3252-5861

www.stcp.com.br |    

ACKNOWLEDGEMENTS

I would like to thank all of you who have contributed to this invaluable work. I appreciate the time you have taken to respond to our questionnaire and sharing your country information. The results will be shared with international community through the UNFFS.

My deep appreciation to Ms. Marilyn Headley, who prepared the section on the assessment of the COVID-19 impacts in the Caribbean sub-region.

I wish also to express my gratitude to the officers and staff members of the UNFFS, especially Peter Gondo, Njeri Kariuki and Afsa Kemitale-Rothschild who rendered their help and guidance during the period of consultancy work.

My sincere thanks to my colleague Sofia Hiramuri (PhD), consultant of the STCP Engenharia de Projetos Ltda, for her hard work and dedication in assisting me to gathering and compiling the information from countries in the Latin America sub-region. Her collaboration and thoughtful suggestions were instrumental to complete the work.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	7
1 – INTRODUCTION	10
1.1 – BACKGROUND	10
1.2 – OBJECTIVES	10
1.3 – METHODOLOGY AND SOURCES OF INFORMATION	11
2 – MAIN FINDINGS OF THE ASSESSMENT	12
2.1 – LATIN AMERICA SUB-REGION	12
2.1.1 – CHALLENGES FACED BY COUNTRIES	12
2.1.2 – KEY MEASURES ADOPTED TO MITIGATE THE COVID-19 IMPACTS	24
2.1.3 – IMPACTS OF THE MEASURES ADOPTED AND RECOVERY	33
2.1.4 – BEST PRACTICES IDENTIFIED IN LA SUB-REGION	36
2.2 – THE CARIBBEAN SUB-REGION	38
2.2.1 – IMPACT OF COVID-19 ON COUNTRIES IN THE CARIBBEAN	38
2.2.2 – OTHER STAKEHOLDERS	60
3 – RECOMMENDATIONS AND WAY FORWARD	63
3.1 – RECOMMENDATIONS FOR THE CARRIBEAN REGION	63
3.2 – PREPARING FOR THE FUTURE POST-COVID	64
REFERENCES	65
ANNEX – LIST OF CONTRIBUTORS BY COUNTRY	71

List of Symbols

%	Percentage
€	Euros
Ha	hectares
Jun	June
m ³	cubic meters
Nº	number
R\$	Brazilian currency Reais
S/	Peruvian Soles (Soles Peruanos)
Ton	Tonnes
USD	United States dollar
Var	Variation

List of Acronyms

ADEX	Exporters Association of Peru (<i>Asociación de Exportadores de Peru</i>)
AFD	Development Finance Agency
ATP	Emergency Assistance Program for Work and Production (<i>Asistencia de Emergencia al Trabajo y la Producción</i>)
BMZ	Federal Ministry for Economic Cooperation and Development
BNDES	National Bank for Economic and Social Development (<i>Banco Nacional de Desenvolvimento Econômico e Social</i>)
BNF	National Development Bank (<i>Banco Nacional de Fomento</i>)
BPC	Base de Prestaciones y Contribuciones
CANARI	Caribbean Natural Resources Institute
CEDRO	Drug Abuse Prevention Education and Information Center (<i>Centro de Educación e Información para la Prevención del Abuso de Drogas</i>)
CEPAL	Economic Commission for Latin America (<i>Comissão Econômica para a América Latina e o Caribe</i>)
CNI	National Confederation of Industry (<i>Confederação Nacional de Indústria</i>)
CONAFOR	National Forest Commission of Mexico (<i>Comisión Nacional Forestal</i>)
CORFO	Chilean Economic Development Agency
CORMA	Chilean Wood Corporation (<i>Corporación Chilena de la Madera</i>)
CPF	Collaborative Partnership on Forests
CSO	Civil Society Organizations
DADS	Directorate of Environment and Sustainable Development (Dirección de Ambiente y Desarrollo Sostenible/DADS Ministerio de Relaciones Exteriores y Movilidad Humana)
DOF	Document of Forest Origin (<i>Documento de Origem Florestal</i>)
EbA	Ecosystem-based Adaptation
ECLAC	Economic Commission for Latin America and the Caribbean
EGM	UNFF Expert Group Meeting

EMP	Environmental Management Plan
EU	European Union
EUBSP	European Union Budget Support programme
FAO	Food and Agriculture Organization of the United Nations
FCF	Forest Conservation Fund
FD	Forestry Department
FDI	Foreign Direct Investment
FEDEMADERAS	National Federation of Timber Industries
FGTS	Government Severance Indemnity Fund for Employees (<i>Fundo de Garantia do Tempo de Serviço</i>)
FNPD	Forestry and National Parks Division
FOGAPE	Small Enterprise Guarantee Fund (<i>Fondos de Garantía para el Pequeño Empresario</i>)
FOSIS	Solidarity and Social Investment Fund
FU	Forestry Unit
FWPD	Forestry, Wildlife and Parks Department
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFC	Guyana Forestry Commission
GFFFN	Global Forest Financing Facilitation Network
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HURECC	Urban Renewal, Environment and Climate Change
IBA	Brazilian Tree Industry (<i>Indústria Brasileira de Árvores</i>)
IBAMA	Brazilian Institute for the Environment and Renewable Natural Resources
ICU	Intensive Care Units
IBGE	Brazilian Institute of Geography and Statistics (<i>Instituto Brasileiro de Geografia e Estatística</i>)
IDB	Inter-American Development Bank
IEDI	Institute of Studies for Industrial Development (<i>Instituto de Estudos para o Desenvolvimento Industrial</i>)
IFE	Emergency Family Income
IFSA	International Forestry Students' Association
ILO	International Labor Organization
INDAP	Institute for Agricultural Development
INDEC	National Institute of Statistics and Censuses of the Argentine Republic (<i>Instituto Nacional de Estadística y Censos de Argentina</i>)
INFOR	Forestry Institute (<i>Instituto Forestal</i>)
IOF	Tax on Financial Transactions (<i>Imposto sobre Operações Financeiras</i>)
IPCA	Broad National Consumer Price Index (Índice Nacional de Preços ao Consumidor Amplo)
IRP	Personal Income Tax (Impuesto a la Renta Personal)
KfW	Bank Kreditanstalt für Wiederaufbau

MAATE	Ministry of Environment, Water and Ecological Transition (<i>Ministerio de Ambiente, Agua y Transición Ecológica</i>)
MMA	Ministry of the Environment of Brazil
MPA	Marine Protected Areas
MSMEs	Micro, Small and Medium-sized Companies
LA	Latin America
LAC	Latin America and Caribbean
LACFC	Latin American and the Caribbean Forestry Commission.
LPG	Liquid Petroleum Gas
MoE	Ministry of the Environment.
NGO	Non-Government Organization
NTPI	National Tree Planting Initiative.
OECD	Organization for Economic Cooperation and Development
OIT	International Labor Organization (<i>Organización Internacional del Trabajo</i>)
PAHO	Pan American Health Organization
PCA	Plot for annual cutting (<i>Parcelas de Corta Annual</i>)
PCR	Polymerase Chain Reaction
PIS/PASEP	Social Integration Program/ Civil Servant Patrimony Formation Program (<i>Programa de Integração Social/ Programa de Formação do Patrimônio do Servidor Público</i>)
PPE	Personal protective equipment
PPM	Monthly Provisional Payments
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SBB	Stichting voor Bosbeheer en Bostoezicht
SERFOR	National Forest and Wildlife Service
SFB	Brazilian Forest Service (<i>Serviço Florestal Brasileiro</i>)
SFISS	Sustainable Forestry Information System Suriname
SFM	Sustainable Forest Management
SINAFLOR	Brazilian National System for the Control of the Origin of Forest Products
SMEs	Small and Medium-sized Enterprises
SVG	St. Vincent and the Grenadines
UAV	Unmanned Aerial Vehicle
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFF	United Nations Forum on Forests
UNFFS	United Nations Forum on Forests Secretariat
USA	United States of America
USAID	United States Agency for International Development
VAT	Value Added Tax
WHO	World Health Organization
WRI	World Resources Institute

EXECUTIVE SUMMARY

The COVID-19 pandemic has had several negative effects in terms of industrial production, employment, income and public health in Latin America and the Caribbean (LAC) region. The current scenario presents an uneven trend in terms of economic and employment recovery, with a more pronounced impact on women, young people, people with less education and the population in a situation of social vulnerability.

Forests contribute to economic development and human well-being, and their roles in providing income and livelihoods are critical, especially for rural communities, indigenous peoples, small farm owners and other forest-dependent communities. Therefore, it is important to assess the impacts of COVID-19 on forests and forest dependent people.

In this context, the UNFF Secretariat hired Dr. Ivan Tomaselli to conduct the sub-regional assessment of the challenges faced by the LA countries, and Ms. Marilyn Headley for the assessment in the Caribbean sub-region, including the strategies, recovery measures and best practices for reducing the impact of COVID-19 pandemic on forests and the forest sector. This report presents the main findings of the referred assessment.

The approach used for this study was based on the collection, compilation and analysis of primary and secondary information. As for primary data and information gathering, a questionnaire was prepared by the Consultant, which was sent to relevant stakeholders identified. Secondary information consisted of a literature review, including published studies and reports, news, policy briefs and other relevant publications available.

➤ Main challenges faced by countries

Among the main challenges that the pandemic brought to the countries of the LAC region, stands out that to contain the spread of COVID-19, the main measure adopted was to suspend some economic activities, which led to a global economic crisis, with a devastating effect on LAC, a region that already suffers from poverty and social inequality.

• Impact of COVID-19 in LAC Region

The COVID-19 pandemic affected the region in a devastating manner, it is estimated that approximately 47.2 million were infected and 1.6 million of lives were lost to the COVID-19 up to December 2021 in LAC region.

• Overview of main Macroeconomic Impacts

In 2020, the economic decline generated an estimated drop of 7.1% of GDP in the LAC region. The contraction of economic activity also generated a significant increase in the unemployment rate, estimated at around 10.5%, a deep drop in participation in the labor market and a considerable increase in poverty and inequality. Industrial production presented a strong retraction, mainly in the second quarter of 2020. The economic crises also had an impact on prices increase and inflation in some countries, mainly in Brazil. The Foreign Direct Investment (FDI) in 2020 was 34.7% less than in 2019 in LAC region.

• Impacts on forest sector

The impacts of the COVID-19 pandemic on the forest sector were less evident when compared to other sectors of the economy and happened in a similar way in most LAC countries. The impact on the forest sector varied among countries, depending on the activities in the forest sector. With the reduction in inspection activities, there was also an increase in non-compliance with legislation, an

increase in deforestation and forest degradation caused by forest fires. Regarding sustainable forest management, the distancing measures and definition of essential activities were decisive on the impact of the pandemic in the forest sector. Government of some countries such as Argentina and Brazil considered forest production chain as an essential activity, on the other hand, Colombia, Ecuador, Mexico and Trinidad Tobago had restrictions on forest production activities. One of the main impacts of the COVID-19 pandemic on the industrial sector of forest products and by-products was the increase in external demand and exports in some countries, mainly led by the currency depreciation, while in other countries there was a reduction in production and, consequently, in exports.

➤ **Key measures to mitigate the COVID-19 impacts**

Social isolation was one of the main measures adopted by federal and state governments in the LA region to prevent the dissemination of COVID-19. However, each country and each state handled this measure differently. The establishment of essential services that could work during the emergency period was also one of the most used strategies among LAC governments to maintain the economy and try to control the COVID-19 dissemination. Between the health measures, governments of the region had to increase the capacity of their health care systems to deal with the crisis, together with facilitating access for all populations. Additionally, vaccination efforts are the result of some measures adopted by countries such as national immunization plans and agreements with laboratories in the vaccine manufacturing for the population. Among the economic measures, credit lines for small and medium-sized companies, reductions in prices and taxes for health and hygiene products, debt renegotiation, as well as direct payment assistance to low-income people are highlighted. Special funds for economic recovery and assistance to people in vulnerable situations were also created. Some programs were also created to maintain the existing jobs or create new ones.

➤ **Impacts of the measures adopted and recovery**

An economic recovery of LAC countries is expected for the next years. LAC countries should have a growth of 5.2% in 2021, considering the advance of the vaccination schedule in most countries, the relaxation of mobility restrictions, the positive effects of advanced economies and the rise in commodity prices. It is important to highlight that, in addition to the prospect of economic recovery, there is a drastic reduction in the number of cases and deaths from COVID-19, reflecting the advance of vaccination in most countries. This is a key point for the population to resume their activities at a pre-pandemic level. Regarding forest sector specifically, a few government measures were taken to reduce the impact of the COVID-19 pandemic in LA. In the Caribbean countries, the Heads of all the forestry institutions have put in place strategies and recovery measures to mitigate the impact, e.g. increase use of technology, encourage investment in the forest sector by larger companies and implement projects for forest dependent communities.

In terms of economic recovery, the outlook for the forest sector is generally optimistic, partly because of the resumption of civil construction in the US, the main destination market for solid wood products of LA countries. Production and export levels have returned, or will most possibly return to pre-pandemic levels, for most countries of the region along the next few months in 2022. Considering the advance of vaccination, tourism and ecotourism will also present a recovery with the reopening of borders and resumption of activities in tourist spots.

➤ **Best practices identified**

Among the health measures, highlights include the mandatory use of masks, in addition to hand hygiene, increased capacity for beds to care for more patients, and measures for the production and

application of vaccines in the population. Among the economic measures, emergency credit lines stand out, especially for Small and Medium-sized companies in the production sector and rural producers as well as emergency aid to the population. Regarding social measures, most countries of the region created programs to ensure the maintenance of employment and income, which were essential to reduce the impact of COVID-19 on people's lives. Specifically for the forest sector, in most countries, forestry was considered as an essential activity, which to some extent reduced the impact of the pandemic on the sector. In the Caribbean countries, establishment of greater collaboration with communities and NGOs in SFM, developing targeted incentives for forestry activities, more online services, virtual meetings and increase use of technology were cited among the best practices, and some countries tweaked their current strategic plans to guide recovery.

1 – INTRODUCTION

1.1 – BACKGROUND

The COVID-19 pandemic brought a global crisis, which caused a change in the levels of production and consumption of several products, aggravated the levels of inequality in emerging countries, in addition to worsening existing environmental problems, such as deforestation and forest fires. COVID-19 brought impacts to society, reaching countless communities, including those farther away, affecting forests and forestry several ways.

Due to the broad range of vital services that forests provide for economic functioning and human wellbeing, as well as their roles in providing income, livelihoods, and well-being of people, especially rural communities, indigenous peoples, small farms holders, and other forest-dependent communities, it is important to assess the impacts of COVID-19 on forests and forest-dependent people.

In light of the above, the United Nations Forum on Forest (UNFF) Secretariat plans to conduct a global assessment of the challenges faced by countries, and the strategies, recovery measures and best practices implemented for reducing the impact of COVID-19 on forests and forest sector, through commissioning several regional assessments in each of the following five UN regions, namely, Africa, Asia-Pacific, Eastern Europe, Latin America and Caribbean, and Western Europe and Other Groups.

The results of the assessments will be discussed at a virtual UNFF global Expert Group Meeting (EGM), with participation of experts from Members of the Forum, Collaborative Partnership on Forests (CPF) member organizations, regional partners and major group representatives in January 2022. The key findings of these assessments and the outcome of expert group meeting will be incorporated in the official documents for consideration of UNFF17.

In this context, the UNFF Secretariat hired Dr. Ivan Tomaselli to conduct the sub-regional assessment of the challenges faced by countries, and the strategies, recovery measures and best practices for reducing the impact of COVID-19 pandemic on forests and the forest sector for Latin America sub-region. Also, the Consultant produced a regional assessment report on the findings of the assessments of the Latin America and Caribbean region in collaboration with the consultant for the Caribbean sub-region, Ms. Marilyn Headley.

This document is the Consolidated Final Regional Assessment Report, comprising the main findings of the assessment. The report looks at the challenges faced by countries, the strategies and recovery measures, best practices implemented for reducing the impact of COVID-19 on forests and the forest sector in LA and the Caribbean (LAC) region.

1.2 – OBJECTIVES

In view of the above, and based on the Terms of Reference, the main objectives of the work are:

- ✓ *To conduct the sub-regional assessment of the challenges faced by countries, and the strategies, recovery measures and best practices for reducing the impact of COVID-19 pandemic on forests and the forest sector for Latin America (LA) sub-region and the Caribbean sub-region; and*
- ✓ *To produce a regional assessment report on the findings of the assessments of the Latin America and Caribbean region in collaboration with the consultant for the Caribbean sub-region.*

1.3 – METHODOLOGY AND SOURCES OF INFORMATION

1.3.1 Geographic Coverage

The study covers the Latin America sub-region and the Caribbean sub-region. The analysis in the LA sub-region is focused mainly on the countries with the highest concentration of forest production, including, Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Paraguay. The Caribbean sub-region included countries such as Bahamas, Barbados, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Lucia, St. Vincent & the Grenadines, Suriname and Trinidad & Tobago.

1.3.2 Sources of Information

The information used in this product is from primary and secondary sources:

- **Primary:**

Primary information includes contacts of UNFF Regional Focal Points provided by UNFF and the FAO sub-regional office (in case of the Caribbean sub-region) in order to obtain general information about COVID-19 in the forestry sector. Additionally, the consultant made contacts with main relevant stakeholders via application of a questionnaire to obtain targeted information.

- **Secondary:**

It consisted of literature review, including published studies and reports, news, policy briefs and other relevant publications available.

1.3.3 Approach used to carry out the study

The approach used for this product was based on the collection, compilation and analysis of information. As for primary data and information gathering, a questionnaire was prepared by the Consultants, which was sent to the UNFF focal points provided by the UNFF secretariat and relevant stakeholders identified; followed by consultation with specific stakeholders suggested by focal points to enrich findings from the literature review. This final report is based on secondary information / literature review and questionnaire responses.

Survey questionnaires were sent by email. A questionnaire accompanied by the introduction letter of the Consultant provided by UNFF Secretariat was sent out to a total of 52 relevant stakeholders mentioned-above, including governmental organizations/institutions, civil society, the private sector, and others. Of which 23 people responded to the questionnaire. After collecting the questionnaires, and reviewing related-literature, websites and other documents, virtual meetings with relevant stakeholders and representatives of the country were organized to get additional information.

As for literature review, it is noteworthy that not all countries analyzed have the same database. Therefore, the contents of information differ among the countries because each country provides information varying in the level of detail. Moreover, the period of analysis varied according to the data availability.

After gathering secondary information, the Consultant prepared a first draft report, which as submitted to UNFF Secretariat. Then, a final report has been prepared to be presented at the UNFF Expert Group Meeting - EGM (virtual) organized by UNFF held on 2-4 February 2022. After the virtual EGM, the Consultant consolidated the information collected, and inputs from the EGM were incorporated into this final analysis of results.

2 – MAIN FINDINGS OF THE ASSESSMENT

The main finding of the assessment is analyzed separated by sub-region (Latin America and the Caribbean) as the type of information and level of detail differs among the region. Therefore, the structure of each region has been adapted to the format, according to information obtained.

2.1 – LATIN AMERICA SUB-REGION

2.1.1 – CHALLENGES FACED BY COUNTRIES

The COVID-19 pandemic has brought several challenges related to public health, economy and market, industrial production, labor market and others. Therefore, people had to adapt to this new reality, working from home and changing their consumption patterns. Governments also had to take measures to contain the spread of the virus, reduce the impact of the pandemic on the economy, protect society from unemployment, hunger and misery.

This sub-section describes the main challenges related to macroeconomic impacts and challenges on the forest sector faced by selected LA countries.

2.1.1.1 – Impact of COVID-19 in LA Region

The COVID-19 pandemic affected the region in a devastating manner. It is estimated more than 47.2 million infections and that 1.6 million of lives were lost to the COVID-19 up to November 2021 in LAC region. For a few months, Latin America was the epicenter of the pandemic, a scenario that has been improving with the advance of vaccination in many countries. The table below shows an overview of the pandemic in some countries in Latin America.

Table 1 – Cumulative confirmed COVID-19 cases and deaths in selected countries

Country	Cumulative Confirmed deaths (Dec/21)	Cumulative Confirmed cases (Dec/21) (in Million)
Argentina	116,771	5.36
Brazil	614,457	22.18
Chile	38,716	1,78
Colombia	129.163	5,10
Peru	201,770	2,25
Uruguay	6,145	0,41

Source: Our World in Data (2021).

There was an increase in poverty, unemployment, inflation, reduction of foreign investments and industrial production. All sectors were affected, with a major impact on unemployment, especially related to young people with less formal education, as well as women and socially vulnerable people.

The interruption of selected economic activity as a result of the social distancing measures applied by countries to mitigate or reduce the COVID-19 contagion curve and, in parallel, make health systems sustainable, had an effect on economic performance from all countries in the region.

2.1.1.2 – An Overview of Macroeconomic Impacts

The main macroeconomic impacts in Latin America during the pandemic period were examined. Latin America and the Caribbean will grow in 2021, although the pandemic remains present and the crisis has aggravated longstanding structural problems in the region: low investment and productivity, informality, unemployment, inequality and poverty. Therefore, recovering investment and employment, especially in environmentally sustainable sectors, is key to a transformative and inclusive recovery (ECLAC, 2021).

The health and economic crisis caused by the COVID-19 pandemic sustained an estimate of the largest GDP contraction worldwide since 1946, as a result of a generalized drop in economic activity. In the LA region, the crisis triggered a considerable contraction in international trade, strong fluctuations in commodity prices and high volatility in financial markets. If different health, economic, social and inequality indicators are considered, it is likely that LAC is the region most hit by the pandemic among emerging countries, according to CEPAL (2020a).

Between the 2014-2019 periods the region already had a low economic growth, on average 0.3% and specifically in 2019 the growth rate was 0.1%. In 2020, the economic depression together with the need to implement measures of confinement, physical distance and closure of production activities, generated an estimated drop of 7.1% of GDP in the LAC region (ECLAC, 2021).

The regional growth projection for 2021 is 5.9% and warned that the region will experience a deceleration in 2022, with an estimated expansion of 2.9%. Growth in 2021 is mainly attributable to the low basis of comparison, after the contraction recorded in 2020, along with the positive effects arising from external demand and the rise in the price of commodities that the region exports, as well as to increases in aggregate demand (CEPAL, 2021d).

The contraction of economic activity also generated a significant increase in the unemployment rate, estimated at around 10.5%, a deep drop in participation in the labor market and a considerable increase in poverty and inequality (ECLAC, 2021).

Table 2 presents the GDP along the last three years, as reported by the World Bank. The data shows that the GDP in 2020 dropped drastically in all countries, particularly Argentina and Peru.

Table 2 – Comparative GDP of selected countries

Country	GDP Annual Growth Rate (%)		
	2018	2019	2020
Argentina	-2.6	-2.1	-9.9
Brazil	1.8	1.4	-4.1
Chile	3.7	0.9	-5.8
Colombia	2.6	3.3	-6.8
Peru	4.0	2.2	-11.1
Uruguay	0.5	0.4	-5.9

Source: World Bank (2021).

The COVID-19 pandemic also had an impact on price hikes and inflation in some countries. In Brazil, the Extended Consumer Price Index (IPCA) closed 2020 at 4.52%, the highest since 2016 (6.29%). This increase was mainly affected by the prices of soy oil (103.79%), rice (76.01%), housing (5.25%), electricity (9.14%), meat (17.97%) and others (IBGE, 2021). Information on the consumer price index of selected countries of the region is presented in Table 3.

Table 3 – Consumer Price Index of selected countries

Country	Consumer Price Index (%)	
	2019	2020
Argentina	53.8	36.1
Brazil	4.31	4.52
Chile	3	3
Peru	2.14	1.83
Uruguay	7.88	9.76

Sources: DATOSMACRO, STATISTA, IBGE (2021).

In 2020, LAC received 105.48 billion of Foreign Direct Investment (FDI), 34.7% less than in 2019. The natural resources and manufacturing sectors, with reductions of -47 % and -38%, respectively, were the most affected in 2020 (CEPAL, 2021).

In Bolivia, as in other countries worldwide, the impact of COVID-19 has been devastating for the national economy. During 2020 Bolivian economy decreased 12 points. Some regulations of the transitional government prevented basic services, including electricity, from increasing its price and suspension in the obligation to pay monthly consumption bills has been established. On the other hand, the inflation is under control (Bolivia Questionnaire, 2021).

In the case of Chile, its economy is going through one of the biggest economic crises in its history, with a 6% drop in GDP in 2020; the loss of more than a million jobs; and an increase in absolute poverty that, according to ECLAC forecasts, would be close to 4%. At the level of economic sectors, the most affected continue to be services, mainly those intensive in personal contact, tourism and domestic work, as well as other sectors such as civil construction and commerce. Inflation in Chile has been over 3% per year in recent months (3.6% in May/2021), and it remains within the tolerance range of the Central Bank. In terms of electricity price, it has shown an upward trend since the end of last year due to the rebound in petrol prices at the international level (CONAF Chile Questionnaire, 2021).

Furthermore, industrial production presented a strong retraction, mainly in the second quarter of 2020. In LAC this retraction was -24.2% in Apr-Jun/20 compared to the same quarter of the previous year, and -21.4% compared to the 1st quarter/20. This result was mainly due to the results of industries in Brazil (-22.1%), Argentina (-22.6%) and Mexico (-29.8%) (IEDI, 2020).

All LA countries were severely affected by the economic crisis caused by the COVID-19 pandemic in 2020. It is still early to quantify a long lasting impact, but with the progress of vaccination /immunizations and the resumption of economic activity, these indicators may be much more optimistic from 2021 onwards.

2.1.1.3 – Impacts on the Forest Sector

The impacts of the COVID-19 pandemic on the forest sector were less evident when compared to other sectors of the economy. For some countries such as Brazil, production and exports of products related to the pulp and paper chain increased between 2019 and 2020. The management of natural forests had its role reduced in some countries. These preliminary results will be detailed in the following items.

a. Forests and Sustainable Forest Management

The pandemic brought immediate challenges to the forest sector. One of them, by being recognized as an essential sector, led companies to have to deal with new health and safety conditions, changing production and market dynamics and, in some jurisdictions, reducing the availability of workers.

Forests and sustainable forest management can be considered essential mechanisms to reduce poverty, as they are important sources of income in countries with vast areas of tropical forests in Latin America. Despite its resilience, the forest sector has faced and faces challenges since the beginning of the COVID-19 pandemic.

The first concern was the loss of primary tropical forests due to deforestation and forest degradation in 2020. Brazil was the country that lost the most primary forests in 2020, with a 25% greater loss compared to 2019, an area equivalent to approximately 1.7 million ha (WRI, 2021).

Other LA countries also had a considerable loss from deforestation, with emphasis on [Bolivia](#), [Peru](#), [Colombia](#) and [Mexico](#). Information of deforestation of selected countries of the region is presented in Table 4.

Table 4 – Deforested area in 2020 in selected countries

Country	Deforested area in 2020 (1000 ha)
Brazil	1,700
Bolivia	250
Peru	170
Colombia	165
Mexico	80

Source: WRI (2021).

In the case of Brazil, specifically in the Amazon, in addition to deforestation, a major cause of forest degradation was the increase of forest fire outbreaks. In 2019, most fires were identified in already deforested areas, unlike 2020, where a vast extension of forests suffered from fires, which spread due to dry weather and below normal rainfall (WRI, 2021). In addition to destroying vast areas rich in biodiversity, fires also pose a serious risk of economic loss by destroying areas of managed natural forest or plantation forests.

Forest fires also pose serious risks to people's health and lives, as they trigger the onset of chronic respiratory diseases, which usually affect mainly children and elderly people, the latter being a risk group for COVID-19. With hospitals full of COVID-19 patients, the risk of respiratory diseases caused by smoke from fires overload on public health, especially in areas with greater social vulnerability, usually small towns located in rural areas, areas with greater concentration of forestry activities.

The impact of the pandemic on forest management and related activities happened in a similar way in most LA countries. The distancing measures and definition of essential activities (which could or could not operate during 2020 and 2021) were decisive on the impact of the pandemic in the sector. In [Argentina](#), for example, the national government, through Administrative Decision 450/2020, expanded the list of activities and services declared essential in emergency situations and included activities related to the production, distribution and commercialization of forest products, allowing these activities to keep working.

In [Brazil](#), State and Municipal Governments determined the essential activities that could work during the pandemic period. Thus, the impact of the pandemic on the forest sector may have been different in each state. A court decision was identified that affected some states in the legal Amazon (Pará, Rondônia, Amazonas and Mato Grosso). In these states, any movement of wood registered the Brazilian National System for the Control of the Origin of Forest Products (SINAFLO) was limited, as well as obtaining the Document of Forest Origin (DOF). This decision was in force between May and

June 2020, and affected the production chain of the tropical timber sectors (PORTAL AMAZONIA, 2020).

Also in Brazil, the production of pulp and paper, since the beginning of the pandemic, was considered an essential activity, which was allowed to operate normally during the emergency period, thus, the planted forests sector was less affected. Similarly, the governments of Chile and Uruguay also included forestry production activities as essential services, being able to operate during the emergency period, in some cases with restrictions (TOMASELLI, 2021).

In the case of Paraguay, sustainable forest management was less affected, taking into account that activities along the silvicultural chain did not come to a full stop. However, primary industrial activity had some limitations. IFSA Paraguay said that the forest sector in the country is going through a good moment with the perspectives of post-pandemic recovery. Sustainable forest management is a frequent challenge in Paraguay, which is why the impacts generated by the pandemic have aggravated the sector's challenges (IFSA Paraguay questionnaire).

Other countries had restrictions on forestry activities, such as Colombia, Ecuador and Mexico. In Mexico, the forestry sector was not considered an essential activity and was paralyzed for several months due to the pandemic. This led to a reduction in production, especially at the community level, where many people temporarily lost their jobs or had their wages reduced (TOMASELLI, 2021).

In Chile, the health crisis has slowed down the functioning of the various areas of society and has required the adaptation of a new work scheme in the midst of the crisis. Among the positive aspects, new opportunities emerged such as the design and implementation of how forest restoration will contribute to a green or sustainable reactivation of the country, generating new sources of employment and a valuation of the ecosystem services that will be generated by the areas to be restored. Additionally, sustainable forest management and nature-based solutions have the potential to contribute to green economies, from a landscape-scale restoration approach (CONAF Chile Questionnaire, 2021).

In Ecuador, forest management whose objective is timber processing for export, was less affected, since the forest producers continued with activities of harvesting, mobilizing and timber processing, different from companies whose processing is aimed at the domestic market, these were affected between the months of March-August 2020 (DADS Ecuador questionnaire).

In Mexico, the perception of the most affected production activities by the COVID-19 health emergency in the forest sector, include: a) Rural, adventure and nature tourism (49%); b) Forest processing industry (21%); c) Timber production (wood extraction) (21%); d) Non-timber forest production (5%); and e) Commercial forest plantations (4%). Also, the pandemic affected the following areas: a) Marketing of forest products (49%); b) Deforestation /illegal logging /changes in land use (46%); c) Insecurity (43%); d) Quality of life (38%); e) Financial capacities (36%); f) Forest product markets (24%); g) Positioning of the forest sector (16%); h) Social inclusion (12%); i) Competitiveness (10%); j) Human capacities (8%); and k) Technological capacities (4%) (CONAFOR Mexico Questionnaire).

In Peru, containment measures directly affected sustainable forest management, considering that the suspension of activities during containment period, when the season in which logging is allowed in Annual Cut plot (Parcelas de Corta Annual - PCA), known as "zafra", has stopped for several months. Originally, it was scheduled between May and November. In addition, the forest concession areas were affected by the suspension of forest management activities (LA REPÚBLICA, 2021a). Also in Peru, another challenge stressed was transport logistics, due to the lack of availability of containers. As a result, ship owners are entering the land-based logistics business. Due to the initial quarantines, many forest engineers went back to their home regions, thus there was a reduction in

the number of skilled workers. By the end of 2021, this scenario has somewhat been regularized, with annual certification audits being resumed in the country (ADEX Peru questionnaire).

In addition, some environmental agencies had their operation suspended or restricted service, which was the case in [Brazil](#) and [Colombia](#). As a result, administrative deadlines for environmental agencies were suspended, as well as possible delays in issuing environmental licenses, management plans and monitoring in general. With this limitation of functioning by environmental agencies, there was possibly a failure in inspection, which may have resulted in an increase in illegal logging in tropical forests in LAC, in addition to an increase in forest fires (WRI, 2021).

b. Livelihoods of Forest Dependent People

The pandemic also brought several challenges for people who depend on the forest and may have critically affected the forest and agricultural production, involving mainly small farmers and family extractors. According to a survey carried out (IDB, 2021a), the main problems found were: the difficulty of obtaining inputs, access to labor and production flow problems, in addition to mobility restrictions.

In addition, the COVID-19 pandemic has had a devastating effect on many indigenous and tribal territories in the region. Not only has it infected thousands of dwellers, also many forest communities have lost markets for their forest products and tourism services, and government efforts to prevent invasions, forest fires and illegal logging in these territories have weakened. In the current pandemic context, these invasions not only threaten the forests, but also endanger the lives of the inhabitants (FAO, 2021).

Indigenous peoples are more vulnerable to epidemics due to worse social, economic and health conditions than non-indigenous peoples, which increase the potential for the spread of diseases. Particular conditions affect these populations, such as the difficulty in accessing health services, whether due to geographic distance or the unavailability or insufficiency of health teams (ISA, 2021).

Furthermore, a challenging point is that the livelihoods of many peoples create an exposure to infectious diseases that people in cities are not exposed to, as most indigenous peoples live in collective houses and, it is common among many of them to share utensils, such as gourds, bowls and other objects, which favors contagion situations (ISA, 2021).

In [Mexico](#), 44% of the survey respondents answered that the health emergency has had a great deal of negative effect on the conservation and restoration of forest ecosystems; and 36% said that it had some or little impact. On the other hand, 20% responded that it had very little or no impact at all (CONAFOR Mexico Questionnaire).

From January 2020 to August 20, 2021, based on information available, around 600 thousand cumulative confirmed cases of COVID-19, including 15 thousand deaths, were reported in indigenous peoples or communities of 18 countries in the region (PAHO/WHO, 2021).

Among the focus countries of this study, the highest number of cases and deaths recorded are in [Colombia](#) (68,716), [Chile](#) (66,716) and [Brazil](#) (52,425) (PAHO/WHO 2021). Table 5 presents a summary of the registry of confirmed cases and deaths registered among indigenous people in some LA countries.

Table 5 - Number of confirmed cases and deaths from COVID-19 among indigenous people (by August/2021)

Country	Number of confirmed cases of COVID-19	Number of deaths by COVID-19
Argentina	2,993	100
Bolivia	28,764	556
Brazil	52,425	785
Chile	66,724	1.193
Colombia	68,716	1.975
Costa Rica	2,321	34
Ecuador	5,832	216
Mexico	21,046	3.253
Paraguay	482	56
Peru	30,720	670

Source: PAHO / WHO (2021).

c. Forest Industries and Demand for Forest Products and Services

The challenges faced by the forest-industrial sector caused by global health crisis had different impacts when it comes to natural or plantation forests. Although LAC's share in the global wood market has increased significantly over the last years, this growth was closely linked to the expansion of planted forests located mainly in Brazil, Chile and Uruguay.

One of the main impacts of the COVID-19 pandemic on the industrial sector of forest products and by-products was the increase in external demand and exports in some countries, while in others there was a reduction in production and, consequently, in exports.

In Argentina, the forest sector represented 1.1% of total country's exports in 2020. Its exports reached 606 million dollars and decreased 12.3% compared to the same period of the previous year. Almost half of the forest sector exports of the country (48%) corresponded to pulp and paper products (mainly chemical pulp of coniferous wood, paper and cardboard) and the timber sector (pine sawnwood, profiled coniferous wood and log) contributed with 32% (INDEC, 2020).

In Bolivia, there are two phases in relation to the COVID-19 pandemic. The first phase is in 2020 when the pandemic outbreak coincided with a transitional government that was wise not to paralyze the production of goods and some services, without risking the population. This is the case of the forestry industry, which, throughout 2020, was authorized to work in the primary industry production and exports of stocks were allowed. Trade has been the most affected activity by COVID-19, followed by the secondary and tertiary industry. In the post-confinement phase of COVID-19, segments of secondary transformation were the most affected, such as production of plywood and veneers. These segments face other problems, including: a) illiquidity; and b) imports, especially the particleboard industry. Currently, exports are also significantly affected due to problems in international logistics, such as the lack of transport and containers (Bolivia Questionnaire, 2021).

For Brazil, the increase in exports stood out, this was probably driven by the depreciation of Brazilian currency (Real) and higher demand of forest products in the domestic market from other countries, such as the United States, China and Vietnam. Information on the country exports of selected forest products, pre and over the pandemic period, are presented in Table 6.

Table 6 – Exports of Brazilian of Selected forest Products

Product	2019	2020	Var. (2019-2020)	Projection 2021	Var. (2020-2021)
Tropical Plywood	89	102	15%	120	19%
Tropical Sawnwood	532	450	-15%	460	2%
Pine Plywood	2,06	2,46	19%	2,55	4%
Pine Sawnwood	2,46	3,03	23%	3,2	6%

Source: Tomaselli (2021)

In Chile, timber forest exports totaled almost USD 4.9 billion in 2020, which indicated a 12.6% decrease compared to the previous year, when USD 5.6 billion were exported, constituting the lowest result in the last five years (CORMA, 2021). Despite this decline in 2020, Chile's forest sector has shown a recovery. In July and August, exports of forest products registered the highest values of the year, with USD 590 million in July and USD 577 million in August, an increase over 30% in relation to its peers last year. With these numbers, the accumulated in the first eight months of the year registers an amount of around USD 3.8 billion, a 15.3% growth in relation to the same period of last year (INFOR, 2021).

Additionally in Chile, movement restrictions have impacted the transport of forest products from production sites to market centers, affecting the income of both, producers and sellers. The wood value chains were seriously affected by the COVID-19 pandemic, but the intensity of the impact were not homogeneous. The pulp and paper sector reported a positive impact, as it supplies products classified as essential, such as sanitary and hygiene products, and paper and cardboard for product packaging, in order to support the increase in trade demand electronic and delivery services since the lockdowns began (CONAF Chile Questionnaire, 2021).

In Ecuador, there was a stoppage in the timber supply between March and July 2020. The time when forest management plans were not implemented during this period was covered in the forest use licenses. Currently, according to the records of Ministry of Environment, Water and Ecological Transition (MAATE), there has been an increase in the use of the “balsa” (timber mainly used to manufacture wind power turbine blades and boats) at national level, as a result of the high commercial value of the supply and demand that the national and international market has generated. The use of this species requires permits from the competent authorities that are granted according to the forest laws and regulations in force (DADS Ecuador questionnaire).

In the case of Peru, the export of wood products in 2020 totaled USD 94 million, the lowest figure in the last decade and that indicates a contraction of -24.7% compared to the previous year. In 2020, jobs related to wood exports totaled around 22 thousand, a negative variation of -23% compared to the previous year (LA REPÚBLICA, 2021). In 2020, Peruvian exports of wood frame totaled US\$ 13.6 million, a 6.3% growth compared to the previous year; and the exports of decking (floorings and tables for outdoors) is highlighted with an amount of US\$ 13.0 million and a 5.3% growth compared to the previous year (ADEX Peru questionnaire).

In Colombia, the National Federation of Timber Industries (FEDEMADERAS) monitored the performance of the forestry sector in Colombia to strengthen sectoral information. A summary of the

information based on the survey involving responses from 73 forest-related companies¹ (FEDEMADERAS, 2021), is presented below:

- a) Performance and sales decline: 45 forest companies (62% of all companies interviewed) report that the COVID-19 pandemic have limited their operations during the first half of 2021. A total of 27 companies did not identify a drop in sales of forest products during 2021, compared to 2020. Out of 35 companies that identified a decrease in sales, 11 companies reported a decrease between 11% to 30% and 13 companies between 31% and 50%. It is concerned that 10% (7 companies) showed a decrease in sales by a percentage greater than 50%;
- b) Variation/change in demand: more than half (55%) of companies reflects positive results; 22 companies showed that their demand was maintained and 18 that increased, while 25 companies indicated a decrease in demand;
- c) Price variation: most of the companies (34) kept their prices constant, and 27 companies increased the prices of the products;
- d) Loss of competitiveness: the survey result shows a perception of the forest sector that 35 companies stated a loss of competitiveness, but 38 companies said the opposite;
- e) Expectation of economic performance: the responses reflect an optimistic view of the sector as 92% of the companies reported that the performance can be stable or positive
- f) Payroll variation: the behavior of the payroll reflected positive results for the forest sector, since 70% of the companies indicated that their payroll in the first half of 2021 was maintained or increased compared to the previous year, while 18 companies state that their payroll decreased, and require support and incentives for the sector. The companies state that the payroll decreased in 2021 as a result of COVID-19 (blockades and closures), with a significant impact on the demand of the wood market and the loss of potential customers due to access and mobility restrictions. A significant reduction in sales, production and operations was faced. For all this, there were cuts in personnel, suspension of contracts and the organizational structure itself of companies had to be streamlined.

In Mexico, the surveys carried out in 2020, 87% of respondents considered that the COVID-19 pandemic has affected the implementation of activities within the forest sector, whereas 13% considered it has not affected. Similarly, 76% of respondents considered that the COVID-19 pandemic has aggravated the problems within the forest sector. Also, the negative impacts on forestry activities, generated by the implementation of measures to address the COVID-19 health emergency, were considered to be the following: a) Unemployment (14%); b) Low demand for products (11.3%); c) Illegal logging (11%); d) Stagnation of productive activities (6.3%); e) Economic (6.3%); f) Closing markets (6.3%); g) Product mobility (5.7%); h) Low sales (4.3%); i) Lack of jobs (4%); j) Production decrease (3.7%); k) Delay in procedures (3.3%); and l) Insecurity (3%). Moreover, almost half of respondents indicated that their income from activities carried out in the forest sector decreased by 40-60% (CONAFOR Mexico Questionnaire).

In Paraguay, sanitary restrictions were the main challenges for the forest industries. Considering production and demand for products and services, the sector recorded relatively low losses compared to other segments. The exports of Paraguayan forest products, for example, showed a

¹ Companies include those that deal with: Forest plantations, forest plantation harvesting, commercialization/trade, primary and secondary processing mills, services, natural forest harvesting.

significant increase. Paraguay's timber sector has an average of US\$ 100 million in shipments per year, however, it is estimated that in 2021 these exports will increase by around 70% (IFSA questionnaire).

In Peru, the influence of the tourism and ecotourism sector on the country's economy stands out, this was mostly affected by the containment measures to combat COVID-19 pandemic. The pandemic has devastated the Peruvian tourism sector. From receiving 4.4 million foreign tourists and entering USD 4.7 billion in foreign exchange in 2019, it has gone on to receive 850 thousand between January and October 2020, a fall of 77% almost uniform across all source markets (IDB, 2021b).

In Uruguay, exports from the forestry (wood, timber products, pulp, paper and cardboard) reached USD 1.5 billion in 2020, which represents 18% of the country's total exported goods. In 2020, foreign sales of pulp alone totaled USD 1.1 billion, 28% lower than in 2019. In 2020 Uruguay's exports by-products reached USD 347 million, representing a 3% drop compared to 2019. On the other hand, other products such as sawnwood (7%) and wood-based panels (21%) showed an increase in their exported amounts, with the United States being the main destination for these products (GOBIERNO DE URUGUAY, 2021).

The COVID-19 pandemic also caused disruption in the logistics of international trade. As a measure to prevent COVID-19, shipping companies began to adopt measures to mitigate losses due to the drop in demand, such as the cancellation of scale and transport services. On the other hand, the recovery of the economy in some countries led to an increase in orders for inputs and goods in foreign trade at levels above projections and the logistical capacity of ship owners and port terminals. This scenario had some effects on the international trade of products, such as jamming in ports, lack of containers, excessive high freight values and products accumulated in warehouses and ports (CNI, 2021).

d. Labor Market and Employment

According to the Economic Commission for Latin America and the Caribbean (CEPAL) and the International Labor Organization (OIT), in 2020, the pandemic triggered the biggest crisis experienced in the labor markets of LAC since 1950. Worldwide, the labor markets of the region were the most affected by the crisis generated by COVID-19, the number of employed fell 9.0% in 2020, and a recovery is expected along 2021 (ECLAC, 2021a).

In Chile, quarantines and the prohibition to operate for commercial activities where the population is concentrated (e.g. restaurants) inevitably have a damaging effect on employment. Some of the economic activities can be done remotely, but many activities can only be carried out in person, especially those in the manufacturing sector, construction or transport. In those activities, employment was reduced of the longer quarantines. Some companies in the forest sector had difficulty managing the economic pressure caused by the pandemic and stopped hiring of personnel as a strategy. According to a study carried out by the Santiago Chamber of Commerce, in LAC, and including all productive sectors, Peru, Costa Rica and Chile were among the countries where unemployment rates increased the most between March and July 2020. Furthermore, despite the forestry sector's potential to promote growth and employment, work deficits have been worsened by the pandemic (CONAF Chile Questionnaire, 2021).

The International Labor Organization estimates that in 2020 approximately 39 million people in Latin America lost their jobs. The COVID-19 pandemic affects mainly low-skilled workers and also exacerbates high inequality of the region (IDB, 2021c). Colombia was the country presenting the highest unemployment rate in 2020 (16.1%), followed by Peru (13.9%) and Brazil (13.5), according to S&P Global Ratings (2021), as shown in Table 7.

Table 7 - Unemployment Rate of LA Selected Countries

Country	Unemployment rate (%)	
	2019	2020
Argentina	9.8	11.9
Brazil	11.9	13.5
Chile	7.2	10.0
Colombia	10.5	16.1
Mexico	3.5	4.5
Peru	6.6	13.9

Source: S&P Global Ratings (2021).

The contraction in employment in 2020 was much deeper in sectors such as hotels (19.2%), construction (11.7%), commerce (10.8%) and transport (9.2%), which together concentrate close to 40% of employment in LAC. In turn, industry (8.6%) and other services (7.5%) also registered contractions; while in agriculture the loss of jobs was comparatively lower (2.4%) (CEPAL, 2021b).

Many workers, mainly informal, could not continue with their work and had to exit the market, which prevented them from generating income for their homes and acting in a counter-cyclical manner as in previous crises. Likewise, the closure of care services and schools implied a heavy workload within homes, which in general is distributed overloading unevenly, especially to women (CEPAL, 2021b).

e. Forest Financing and Investments

Latin America has possibly been the region of the world most affected economically by the pandemic. The region was already in a phase of slow growth before the pandemic, especially if we consider its status as an emerging middle-income region. As expected, the impact of the COVID-19 crisis led to a sharp drop in internationalization processes, with an estimated reduction of 80% in Foreign Direct Investment in 2020 compared to the previous year.

This drop was mainly associated with postponed investments of large companies' expansion programs, waiting for the uncertainties to dissipate. In addition, also during the pandemic, there were important investment operations abroad and some companies expanded internationally. This scenario may have been a little different in the forest sector. As demand for pulp and paper increased during the COVID-19 crisis period and most companies of this segment continued their expansion and investment plans. Chilean Arauco, which bought two factories in Mexico for USD 160 million, and Chilean company CMPC, which acquired the Brazilian SEPAC for USD 329 million (GLOBAL LATAM, 2020).

In Brazil, it is estimated that up to around USD 10 billion will be invested by 2024 in the country's forest-based industry, mainly from companies that use timber from forest plantations as raw material. These investments are concentrated in the states of Santa Catarina and Paraná, with the expansion of wood-based panel (Berneck) and paper / pulp plant (Klabir and WestRock), in Mato Grosso with the installation of Euca Energy pulp mill, expansion of the plant of Bracell in São Paulo, installation of a new Suzano factory in Espírito Santo and, finally, construction of a factory for the production of dissolving pulp in Minas Gerais (FOLHA, 2021).

In addition to investments in the forest-based industry, there is an increase in investments in green bonds in some LA countries. This type of investment is characterized by the issuance of debt securities to finance projects that generate environmental benefits or mitigate the impact of climate change (SWISS INFO, 2021).

This type of investment had a significant increase in 2020 and 2021, which was leveraged by the climate crisis, aggravated by the COVID-19 pandemic. According to the Inter-American Development

Bank (IDB) estimate, green bonds reached an amount of US\$12.5 billion in 2020 and US\$ 8.0 billion in 2021 in LAC. The region represents only 2% of the global green bond market, with Brazil, Chile and Mexico responsible for 85% of these investments (SWISS INFO, 2021).

In Paraguay, forestry financing and investments are always a challenge to the forest sector, but during the pandemic, the main challenge has been to obtain financing for the conservation or restoration of degraded areas (IFSA questionnaire).

f. Institutional Capacity

The pandemic resulted in the reduction of institutional capacity of countries of the LA region, mainly in the public sector.

In Brazil, for example, there was a reduction in IBAMA'S inspection performance, due to the adoption of measures to fight the COVID-19 pandemic, which included, among others, the reduction in the number of civil servants able to exercise of police power because they fall into risk groups. As a result, approximately 40% of the operations planned for the year were canceled (MMA, 2021)

Similar situation occurred in other countries of LA, where the Institutional capacity of agencies involved in monitoring, control, capacity building and other activities related to forest management were affected by the pandemic. Forestry and environmental agencies involved in monitoring and supporting forest-related activities were only partially operating, and restricted to office with reduced work hours, in response to the measures to prevent the dissemination of coronavirus (TOMASELLI, 2021).

In Paraguay, compliance with legislation is a challenge that was aggravated by the reduction in the institutional capacity of public agencies, a situation that was intensified by the emergence of some conflicts (IFSA Paraguay questionnaire).

g. International and Regional Cooperation

Regional and international cooperation projects could be considered as important allies to contribute to the development of strategies to deal with the impact of the pandemic on markets and the world economy. Some initiatives in the environmental and forestry sector aimed at mitigating the impacts of the pandemic were identified in LAC.

In Brazil, given the situation of the COVID-19 pandemic, the German Ministry for Economic Cooperation and Development (BMZ) carried out “Emergency Collaborative Actions” with projects that benefit indigenous peoples and traditional communities. These actions were carried out through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and in cooperation with the Amazon Fund/BNDES (GIZ, 2020). On November 24, 2020, another agreement was signed with the German federal bank Kreditanstalt für Wiederaufbau (KfW), in the amount of € 25.5 million that will be donated to the project “Innovation in Agricultural Production Chains for Forest Conservation in Legal Amazon”. The project's objective is to expand and strengthen sustainable practices in the meat, soy and timber production chains in states in the Legal Amazon (CANAL RURAL, 2020).

Peru received support from the United States Agency for International Development (USAID). The USAID was announced a project to provide assistance, in partnership with the Peruvian non-profit organization CEDRO (Centro de Educación e Información para la Prevención del Abuso de Drogas), Rainforest Foundation US along with Microfinanzas Prisma and other private partners, for the Social and Economic Recovery of the Amazon starting in May 2020. The project will involve an investment of US\$ 3 million. This alliance seeks to mitigate the impacts of the COVID-19 pandemic on vulnerable populations in Peru, particularly on indigenous communities and other areas of the Amazon. The Alliance also addresses economic recovery by providing business development assistance to micro, small and medium-sized entrepreneurs and expanding access to credit lines for business expansion.

Also, in response to the COVID-19 pandemic, the *Programa Pro-Bosques* in Peru provided technical assistance to national and sub-national counterparts to prepare biosecurity guidelines for safe logging and provided guidance to beneficiaries on accessing public financing for forest sector activities, through Peru's economic reactivation initiative (USAID, 2021).

The crisis of health caused by COVID-19 was the focus in 2020 of international aid that Chile received from other nations or world organizations, which delivered about US\$ 10 million to the country to face the pandemic and also to implement cooperation projects. Within the total amount of aid received USD 4.2 million were from Germany, Japan, Adaptation Found, IDB, the World Bank, Switzerland and the European Union, for the implementation of initiatives in the area of the environment. Chile maintained a strong cooperation with Argentina, with projects developed from the Antofagasta Region to the Los Lagos Region, mainly in the areas of economic cooperation for development and the environment (EMOL, 2021).

2.1.2 – KEY MEASURES ADOPTED TO MITIGATE THE COVID-19 IMPACTS

The COVID-19 pandemic broke out in the LA region on February 26, 2020, when Brazil confirmed the first case in São Paulo and many more cases began to appear in other countries in the following weeks. The first cases observed in the region in late February and early March were mainly related to travelers returning to or arriving from Europe, Asia and North America regions.

In response, most countries in Latin America decided, during March, to close their borders, except for the return of citizens and residents. In addition, countries implemented measures to restrict the opening of public spaces and restrictions on social events. Some countries have applied stricter national measures such as curfews, targeted lockdowns and/or partial or total confinement rules.

2.1.2.1 – Limitation of social contacts

Social isolation was one of the main measures adopted by federal and state governments in the LA region to prevent the dissemination of COVID-19. However, each country and each state handled this measure differently.

In Argentina, the main social isolation measures adopted were (GOBIERNO DE ARGENTINA, 2021):

- a) Suspension of face-to-face classes in all schools in the country;
- b) Authorization and remote work for the public and private sector;
- c) Prohibition of non-resident foreigners entering the country;
- d) Special provisions for public transport, such as requiring buses to only run with seated passengers to avoid overcrowding

More recently, in August 2021, the Argentine government determined new general preventive measures, strengthening social isolation, such as suspension of activities and gatherings in closed spaces, prohibition of recreational practice of any sport in closed places where more than 10 people participate, closed restaurants between 11 pm and 6 am, among others.

In Brazil, Federal Law No. 13.979/2020 established measures to deal with the emergency caused by COVID-19. This law provides for social isolation and quarantine as a way to avoid contamination. The situation in Brazil was unusual, as there were contamination peaks throughout 2020 and 2021, which occurred differently in the states. Thus, states and municipalities established specific decrees in periods of high rates of contamination, death and overcrowding of intensive care unit (ICU) beds in public and private hospitals. Some of the main measures adopted by the states during this period were:

- a) Closing of restaurants, shops, gyms and other services, except essential services;
- b) Restriction of social events in closed spaces;
- c) Curfew with restricted circulation in public spaces and streets at specific times
- d) Prohibition of access to beaches and other areas;
- e) Reduction in public transport capacity and others.

Social isolation in Brazil was partial, with a national average rate of 31% throughout 2020, reaching 50% along some periods of 2021 (VEJA, 2021).

The Government of Chile has decided for a strategy to control COVID-19 contamination which has been called strategic and dynamic quarantine, in which communities alternate social distancing/isolation depending on the epidemiological situation of that community/location, allowing the movement of people only in the case of essential services. Furthermore, Chile has taken other more restrictive measures, such as prohibiting the movement of people between 10 pm and 5 am, closing of schools throughout the country and closing all borders. On September 27, 2021, the Chilean government decreed the end of the state of emergency in the country at a time when the country has already vaccinated more than 88% of its population against the COVID-19 (GOBIERNO DE CHILE, 2021; G1, 2021b).

Peru's government closed the country's borders at the beginning of the pandemic, instructed people to go out their homes only for essentials, such as buying food and medicine, and decreed curfews at different times in all cities. Failure to comply with the measures or posting false information about COVID-19 could lead to imprisonment.

However, according to BBC News (2021), maintaining isolation in Peru was a challenge due to some specific local conditions:

- a) About 71% of the workforce in Peru lives in the informal sector or works in commerce;
- b) Need to go out often to supermarkets, for example, as only around 22% of poor families in Peru have a refrigerator, not being able to store enough food;
- c) Supermarkets and banks were the main sources of contagion because they were always full;
- d) Around 12% of poor families in Peru live in overcrowded housing, making it difficult to maintain social distance at home.

In Mexico, the federal government only made recommendations for social distancing and left the states and municipalities to decide on more specific quarantine measures. In addition, meetings of more than 50 people were prohibited and non-essential activities in the public, private sectors were suspended. At least three Mexican states, in addition to the capital, have adopted distancing measures, such as closing schools, beaches, religious temples and churches and non-essential services. Some have imposed curfews and imprisonment for those who break the rules (BBC, 2020).

Bolivia and Paraguay adopted similar measures of Peru (BBC News, 2021). The government of Uruguay did not decree mandatory quarantine; however, it closed the country's borders and suspended classes at schools and universities.

2.1.2.2 – Essential services/operation

The establishment of essential services that could work during the emergency period was one of the most used strategies among LAC governments to maintain the economy working and try to control the COVID-19 dissemination.

The Brazilian government defined, through Decree No. 10.282/2020, a broad list of essential services, including: all services related to health, public and private security, national and civil defense, transport, telecommunications and internet, electric energy and others. It is also noteworthy that the states of the federation were free to establish measures regarding the operation of essential services.

It is also noteworthy that forest production aimed mainly at manufacturing pulp and paper was considered essential in most LA countries.

2.1.2.3 – Health Measures

Health care systems in most LA countries have significantly lower capacity than the OECD average, with lower health expenditure, fewer hospital beds and health professionals per capita, in addition to weak disease surveillance and tracking systems (OECD, 2020).

Faced with these challenges, governments of the region had to implement measures to increase the capacity of their health care systems to deal with the crisis, together with facilitating access for all populations. Some of the measures included building emergency hospitals in record time (e.g., Argentina), providing additional ICU beds (e.g., Colombia and Peru) and training health professionals to work in intensive care units (e.g., Brazil and Chile). Additionally, some governments made arrangements with private clinics to immediately increase the number of beds available (OECD, 2020).

Chile issued Decree No. 356 which determined that clinics should increase their ICU bed capacity by 20% in one week and 100% in one month. Some countries, such as Uruguay and Argentina, have also developed their own test kits with state-funded research from leading national universities, together with technology companies (OECD, 2020).

In Brazil government has zeroed import taxes on products for medical and hospital use. In addition, the Ministry of Economy, through Inter-ministerial Ordinance No. 12.683/2020, authorized the hiring over 5 thousand temporary professionals to strengthen the health area (GOVERNO DO BRASIL, 2021). Some companies of the forest sector operating in Brazil also made efforts and investments in health measures to combat COVID-19. Bracell, Cenibra, CMPC, Duratex, Gerdau, Ibema, International Paper, Klabin, Suzano, Veracel and Westrock invested at least R\$114 million in solidarity actions to purchase respirators, face masks, hand sanitizer, sanitary water, hospital gowns, gloves, in addition to investment and direct donation of materials in infrastructure or for the operation of 15 hospitals (IBÁ, 2020).

The government of Paraguay took as an emergency measure, together with the Ministry of Health, the purchase of medicines and health supplies in the amount of 530 billion Guaraní, within an established timetable. In addition, the government of Paraguay prioritized the hiring of health professionals, with an additional staff of approximately 2,700 people (IFSA Paraguay Questionnaire).

Vaccination was one of the most important health measures adopted by countries in the LA region. There are important asymmetries between developed countries and middle-income countries, among those where most countries in LAC are found in the dynamics of vaccination. Vaccination efforts are the result of some measures adopted by countries such as national immunization plans and agreements with laboratories in the vaccine manufacturing for the population. Among the main measures of the countries, some stand out (CEPAL, 2021c):

- In Argentina, in November 2020, the Law on Vaccines Aimed at Generating Acquired Immunity against COVID-19 was enacted. In December 2020 the government approved Strategic Vaccination Plan against COVID-19, which provided for the supply of vaccines and

supplies needed to vaccinate the target population and transfers to the provinces through different programs;

- In Bolivia, the public health measure created refers to the obligation to implement biosecurity measures, including the vaccination strategy (Bolivia Questionnaire, 2021).
- In Brazil the Ministry of Health launched the National Plan for the Operationalization of Vaccination against COVID-19 in February, 2021.
- In Chile the Vaccine Road began in May 2020, when the Government contacted the main and most promising laboratories that were studying and trying to discover a vaccine. Agreements and contracts have been signed with Pfizer / BioNTech, Sinovac, AstraZeneca-Oxford, Johnson & Johnson and Covax. Considering the great advances of the vaccination plan, which exceeds 11 million people with both doses' vaccination, and more than 23 million doses administered. It is expected that with and gradual opening up and the relaxation of mobility restrictions, the processes linked to investment will accelerate, as well as continue to bolster economic activity (CONAF Chile Questionnaire, 2021).
- Colombia created the national vaccination plan in February, 2021, defining the vaccination schedule and priority groups of the population.
- The government of Peru established a vaccination plan in October, 2020, including a schedule that prioritizes high-risk individuals.

Vaccination has advanced well in most LA countries. On 14 October, 2021, PAHO reported that 39% of the LAC population has a plan of vaccination against COVID-19. However, this advance of vaccination has been uneven across countries. For example, Uruguay has surpassed 80% of vaccination, while Paraguay and Bolivia have less than 40% of the population fully vaccinated.

The updated status of vaccination in Latin America is presented in Table 8, considering fully vaccinated population.

Table 8 - Status of COVID-19 vaccination in some countries of Latin America (as of November/2021)

Country	Share of fully vaccinated population (%)
Argentina	68.8
Bolivia	36.9
Brazil	65.8
Chile	85.1
Colombia	51.5
Costa Rica	65.5
Ecuador	67.1
Paraguay	38.4
Peru	60.2
Uruguay	76.5

Source: Our World in Data (2021)

2.1.2.4 – Economic Relief/Stimulus Measures

Most LA countries have adopted economic stimulus measures to help companies and individuals, especially those included in economically vulnerable situations, often with a focus on micro and small businesses.

In Argentina the main economic policies adopted by the government stands out (OECD, 2020):

- a) A credit line of € 43 million for SMEs from the Nation Bank (Banco Nación) at preferential rates, including € 36 million for companies producing food, medical supplies, personal hygiene and essential goods, for working capital and/or investments, and other € 7.2 million exclusively for telework;
- b) Flexible fiscal measures, such as minimizing personal and corporate taxes;
- c) Prices of food, personal hygiene, medicines and medical frozen products for 30 days;
- d) Public banks will support private companies with working capital for up to 180 days;
- e) Monetary policy easing.

The Brazilian government also established economic measures to combat the impacts of the COVID-19 pandemic (GOVERNO DO BRASIL, 2020). The most relevant were:

- a) Measures to facilitate the renegotiation of up to USD 690 billion in debt for companies and families to stimulate the economy;
- b) Low interest credit line for small and medium-sized companies;
- c) Government waived to collect the Tax on Financial Transactions (IOF) on credit operations during the crisis to stimulate economic activity;
- d) USD 6.1 billion program to subsidize the salaries of people in situations of contract suspension / reduced hours;
- e) Creation of emergency assistance in the amount of R\$ 600 for low-income or unemployed Brazilians;
- f) Provisional Measure that transfers R\$ 21.5 billion from the Social Integration Program/ Civil Servant Patrimony Formation Program (PIS/PASEP) to Government Severance Indemnity Fund for Employees (FGTS) and releases a withdrawal of R\$1,045 per worker.

In Chile, several government economic measures were taken, including:

- a) Launch of a US\$ 12 billion emergency plan for the Emergency Family Income Project, local governments, civil society organizations, increased unemployment protection and health services (OECD, 2020);
- b) The Ministry of Finance and the Internal Revenue Service, has suspended the monthly provisional payments (PPM) of the Income Tax of companies for three months (ILO,2020);
- c) The Central Bank of Chile reduced the monetary policy interest rate by 50 basis points, to 0.50% (ILO,2020);
- d) Law No. 21.225/2020 established a capitalization of the Bank of Chile for USD 500 million, which will be mainly destined to grant credit line to SMEs and to the persons (ILO, 2020).

The government of Colombia launched in July 2020 the post-COVID economic recovery plan focused on job creation and international e-commerce to reduce unemployment rate to 6% by the end of 2022. It also established specific tax-free days, such as VAT to promote consumption. In addition, it established economic recovery measures for SMEs (OECD, 2020).

The government of Mexico has a package of support measures for SMEs that includes financing of 25,000 pesos per company or person, to be paid in three years, including a three-month grace period. It also created a solidarity market platform, in which SMEs can find local markets to carry out transactions, outside the platform, with potential consumers of their products and services, promoting the consumption of local products and services. The Mexican government's economic measures also encompass economic intelligence units, which work to provide broader business opportunities for Mexican exporting SMEs, in a remote format. In addition, credit and microcredit are offered to different categories of companies (GOBIERNO DE MÉXICO, 2021).

In addition, the Environmental Compensation Program for Change of Land Use in Forest Lands, which provides economic resources to interested individuals and legal entities that meet the eligibility criteria, requirements and other provisions related to requesting them, indicated in the Guidelines for Operation of the Environmental Compensation Program for Change of Land Use in Forest Lands and that are located in the priority areas defined by CONAFOR based on the high and very high risk levels of incidence of pests and forest fires (CONAFOR Mexico Questionnaire).

As main economic measures, the government of Paraguay allowed the fractioning of the IRP (Impuesto a la renta personal) in up to 5 interest-free installments with exemption from fines. The Central Bank of Paraguay also determined the reduction of the monetary policy interest rate, from 4% to 3.75%. To stimulate the commercial sector, a reduction in the import tariff on capital goods and e-commerce facilities was established, with an emphasis on the services sector (IFSA Paraguay Questionnaire).

Peruvian government implemented its Economic Plan to combat COVID-19, with approved measures equivalent to S/ 143 million soles. These resources are aimed at strengthening health services to control the impact of COVID-19, economic support for the most vulnerable families and measures to support small businesses (MEF PERU, 2020).

In Uruguay, an investment stimulus plan was launched with new tax breaks for large investments. Also, credit lines of approximately USD 50 million were issued to companies (OECD, 2020).

2.1.2.5 – Funding Programs

The Pan-American Health Organization (PAHO)/WHO created the PAHO COVID-19 Response Fund, in which donations are requested to support individual countries and territories in LAC to combat the pandemic. Several governments of LA countries have also created programs aimed to allocate funds to combat the impacts of COVID-19 on the economy and health of the population. Among the funds identified in the LA region, include:

In Brazil, the government allocated USD 100 billion in 2020 and R\$ 97.2 billion in 2021 for measures to fight the pandemic. Most of this resource was aimed at the Emergency Assistance Program for people in vulnerable situations, which totaled USD 70 billion in 2020 and 2021 (GOVERNO DO BRASIL, 2021b).

In Peru, the Ministry of Economy and Finance expanded the coverage of the “Crescer Fund” credit by up to 90% for micro, small and medium-sized enterprises to reducing the economic impact of the COVID-19 (GOBIERNO DE PERÚ, 2020), and the government of Chile destined USD 12 billion as an emergency fund for the Emergency Family Income Project (OECD, 2020).

In Colombia, the Government increased the capital of the National Guarantee Fund with 70 billion Colombian Peso in loans for different sectors of the economy and protection of employment (PARLAMENTO ANDINO, 2021).

The Banco Nacional de Fomento (BNF) of Paraguay made available a special line of working capital for the production sector. Additionally, FONPLATA (Development Bank) granted the BNF a revolving

credit line of USD 36 million, with a term of 8 years, whose resources can be applied to the financing of small and medium-sized companies that are part of the export-related value chains.

In Peru, the National Forest and Wildlife Service (SERFOR) of the Ministry of Agrarian Development and Irrigation, in coordination with different regional authorities in Cajamarca, Loreto, Ucayali and San Martín, has been working on a proposal for the preparation of a financing program to facilitate access of small non-timber forest producers under the AGROPERÚ Fund. This program seeks to promote the competitiveness of economic activities based on sustainable use of biodiversity (ADEX Peru questionnaire).

The World Bank has also supported LAC to respond to the impacts caused by COVID-19, through new operations and redirection of resources of existing projects (WORLD BANK, 2021b). The World Bank approved a USD 500 million loan for Argentina to strengthen the battle against COVID-19, through the purchase of vaccines for more than 30% of the population, as well as activities to support implementation of the national vaccination plan. In Uruguay, the World Bank approved a USD 20 million emergency loan to support the Uruguayan government's efforts to minimize the impact of the COVID-19 pandemic on the health system.

2.1.2.6 – Investment and Financing Measures

Some governments have created measures to boost the national economy and these initiatives include lines of credit and financing, mainly for small and medium-sized companies.

In Chile, measures related to financing and investments in the forestry sector include:

- FOGAPE-COVID - It strongly expands the small enterprise guarantee fund, increasing state guarantees by up to USD 3 billion, allowing companies to finance up to 1 million UF in annual sales (previously only up to 350 thousand UF). Over 283 thousand credits were issued, of which 97% were destined to small and medium-sized companies;
- Support through productive development programs, such as Solidarity and Social Investment Fund (FOSIS), Institute for Agricultural Development (INDAP) and Chilean Economic Development Agency (CORFO);
- New administrative services for entrepreneurship and recapitalization of SMEs.

According to the Ministry of Finance of Chile, the balance of loans with FOGAPE's guarantee, as of June/ 2021, the different financial institutions have granted over 113 thousand loans, of which 97% have been to SMEs (CONAF Chile Questionnaire). In addition, through Law 21.288 COVID-19 Transitory Emergency Fund, the federal government of Chile has allocated significant resources to reactivate the economy. In the case of the forestry sector, three measures were considered (CONAF Chile Questionnaire, 2021):

- Establishment of forest fire brigades: To date, 87 out of 89 brigade bases have been tendered and their work has begun. The remaining two are in the bidding process;
- Park Guard building project at the Torres del Paine National Park, which will improve the living conditions of the park rangers who work in the most isolated areas, and will increase security for more than 80 thousand people who visit the park all seasons;
- Economic Reactivation Program for small and medium-sized forest owners, including forest management, afforestation or recovering an area of 24 thousand ha in two seasons 2021 (19,304 ha) and 2022 (4,826 ha), in both private and public forests, from the Coquimbo region to Magallanes to promote economic reactivation and job creation in the rural areas.

In relation to financing and credit, in some countries specific lines for financing aimed at the forest-based sector, as well as small producers and family farmers, have been identified.

In Brazil, the Amazon Plan, an initiative of three private banks (Itaú, Bradesco and Santander) has the objective of leveraging sustainable development in the region. In addition, the Brazilian Forest Service (SFB) decreed the postponement of the payment due date of the installments related to forest production of the first two quarters of 2020 to December in forest concession contracts. Argentina created the Forest Sustainability and Competitiveness Program IDB 2863 / OC-AR, and Peru has established a Direct Financing Program for Forest Plantations as well as a program for the forest out grower scheme and Sustainable Management of Forest Production with about 513 million soles in nine regions.

In Bolivia, no specific measure to financing and investments for the forest sector were identified. However, in terms of production, the government made available a credit line to companies. But that have not been very effective due to the excessive bureaucracy for its access (Bolivia Questionnaire, 2021).

Other national initiatives were identified in Paraguay and Mexico. In Paraguay, a credit incentive for sustainable forest production in the country through the National Development Bank (BNF) and the Financial Development Agency (AFD) was developed and in Mexico the incentive was created through the National Financing for Agricultural, Rural, Forest and Fisheries Development 2020-2024. Nonetheless, the 2020 surveys asked community forest enterprises whether they had their own sources of financing or access to alternative or external sources of financing, e.g. loans and grants, to help their companies' recovery from the pandemic, 70% answered they do not have any means to recover and 30% answered they do have some sort of conditions. But when asked if they considered the financing to be enough, 69% answered that that is not sufficient (CONAFOR Mexico Questionnaire).

2.1.2.7 – Social and Employment-related Measures

The governments of LA countries have established social measures related to the maintenance of employment and income, especially for people in a socially vulnerable situation. These measures include expanding existing programs or creating new ones to reach the population not covered by existing programs.

In Argentina, the Emergency Assistance Program for Work and Production (ATP) was created by Decree 332/2020 (BO 04/01/2020) to provide immediate economic relief to those companies and workers directly affected by the fall in the economic activity after the contingency measures implemented during the Health Emergency. The Program consists of (GOBIERNO DE ARGENTINA, 2021):

- Postponement or reduction of up to 95% of the payment of employer contributions to the Argentine Integrated Social Security System;
- Complementary salary paid by the federal government for male and female workers dependent on the private sector;
- Zero Rate loans for people abide by the Monotax (monotributo) for independent workers (monotax borrowers), a comprehensive unemployment benefit system.

In Bolivia, the government established the labor order measure related to employment tenure, that is, the workers covered by the employment tenure (job immobility) during the pandemic may not be dismissed, impaired or transferred without just cause. No specific measure related to forest-dependent people has been established (Bolivia Questionnaire, 2021).

In Brazil, the government adopted measures to support people in vulnerable situation, workers and employers (GOVERNO DO BRASIL, 2021), including:

- “Bolsa Família” is a program aimed at family household units in poverty and extreme poverty, financial aid changes from R\$ 89 to R\$178 per month during the pandemic;
- Payment of Emergency Assistance of R\$ 600 per month to people in vulnerable situations;
- Prohibition of electricity cuts due to payment default by residential consumers and providers of essential activities between March 25, 2020 and 31 July,2020;
- Emergency Program for Maintenance of Employment and Income, where employers can make individual or collective agreements with their employees, lasting up to 120 days and reduce working hours and wages or suspend employment contract.

The government of Chile has created the following social related measures:

- The Employment Protection Law for COVID-19 (Law 21.288/2020), which establishes that workers with a contract affiliated with unemployment insurance who comply with the conditions established by the law can have an indefinite contract, a fixed term or by work or task. It also applies to domestic workers. The rules do not apply to women using maternity leave of absence (BCN, 2021);
- The Emergency Family Income (IFE), an economic aid for households that received insufficient informal and formal income and these resources diminished because they could not work due to COVID-19. The amount of the benefit depends on the number of people in the household and the socioeconomic situation of the family in the state of emergency;
- COVID-19 Emergency Bonus, a special bonus that is part of the Government's Economic Emergency Plan, which aims to support the most vulnerable families in the health contingency due to COVID-19;
- Special benefit for independent workers aimed at workers who faced a decrease of at least 30% of their income from salary compared to the average income in the last 12 months. If the taxpayer registered an average monthly income, between April 2019 and March 2020, equal to or less than \$ 320,500 Chilean Peso, the benefit could reach up to 70% of the amount of the monthly drop in their income. If the average monthly income was higher than \$ 320,500, the benefit was calculated proportionally to the decrease in income (GOBIERNO DE CHILE, 2021).

In Paraguay, the Ministry of Labor, Employment and Social Security promoted four (4) Policies (MTESS, 2021):

- Sustaining Employment: Protection Plan for Formal Workers; compensation for suspension of employment contracts, compensation for vulnerability and others.
- Reactivation of Employment: job intermediation and guidance services; Paraguay Poguapy Plan, which benefited 131 MSMEs with training, technical assistance and capital goods.
- Formalization and Social Security: Promotion of the Regulation and Legislation of teleworking, the Unemployment Insurance Law, the Regulation of the Suspension of Employment Contracts, the Emergency Law and its regulations, and the Law of extension of the validity of the Emergency Law
- Occupational Health and Safety: design and application of occupational health and safety protocols to maintain healthy work environments to prevent the spread of COVID-19.

In Peru, the following social related measures were identified (PARLAMENTO ANDINO, 2021b):

- Creation of temporary jobs through the transfer of S/ 150 million Peruvian Soles; Agroperú Fund with S/ 440 million soles to directly finance small agricultural producers; and Agrobanco with S/ 100 million soles to finance credit at low interest rates;
- Operation of the Peru Jobs platform, through which citizens can access different job offers in the pandemic period;
- Allocation of a bonus corresponding to S/ 380 soles for households living in poverty or extreme poverty;
- Bonus of S/760 soles to benefit more than one million households that are part of the rural sector.

In Uruguay, the main measures were (GOBIERNO DE URUGUAY, 2021b):

- Payment of the subsidy of 1.5 Base of Benefits and Contributions (BPC) per month, during a quarter, to 19,000 workers in the sectors most affected by the pandemic;
- Special subsidy for partial unemployment until June 30, 2021;
- Flexibility in the use of unemployment insurance and right to use it for a shorter time and even part-time, to contemplate the sectors affected by the partial stoppage of their activities.

2.1.3 – IMPACTS OF THE MEASURES ADOPTED AND RECOVERY

2.1.3.1 – General Assessment

Despite the immeasurable impact of the pandemic on the economy and on people's lives, a recovery is expected for 2021 and 2022. This economic recovery may occur differently among countries and economic sectors, as a result of economic measures and fiscal stimulus implemented by some governments.

The World Bank perspectives (2021) estimate that LA should have a growth of 5.2% in 2021, considering the advance of the vaccination schedule in most countries, the relaxation of mobility restrictions, the positive effects of advanced economies and the rise in commodity prices.

Also, according to the World Bank (2021), the following perspectives stand out (World Bank, 2021):

- Brazil's economy is expected to grow 4.5% in 2021, supported by a new round of emergency payments to families and by good domestic and international credit conditions;
- Mexico's economy is expected to grow 5% in 2021 as the manufacturing and services sectors will be benefited from the growing export demand associated with strong USA growth;
- Growth in Argentina is expected to recover 6.4% in 2021;
- Colombia's economy is expected to expand by 5.9% in 2021;
- Chile's and Peru's are expected to grow by 6.1% and 10.3%, respectively.

The dynamics of economic growth from 2021 onwards are subject to uncertainties resulting from the uneven progress in vaccination processes and the ability of countries to reverse the structural problems behind the low-growth course they showed prior to the pandemic.

For the International Monetary Fund, the three key issues and how these issues will be addressed starting in 2021 will have an impact on economic growth. First, it is important to know how short-term restrictions will affect resumption before vaccines begin to provide effective protection to the entire society. Furthermore, how public policies and vaccination campaigns can boost economic

activity. Finally, how financial conditions and raw material prices will evolve. The latter will be critical for South American countries whose economies depend to a great extent on exports (El País, 2021).

Employment rates in some LAC countries experienced a relative recovery in 2021, although for the most part they are well below pre-pandemic levels. The quality of available jobs has also declined, as well as the number of hours of paid work per week. For the LAC region, in 2021, the employment rate stood at around 62%, almost 11 percentage points below the pre-pandemic level. In addition, formal employment dropped 5.3% in the region, while self-employment grew 5.7%, and the proportion of workers in small companies increased 8% (ISTOÉ, 2021)

Along with the prospects for economic improvement, a great advance is already recognized in terms of a reduction in the number of new cases and deaths from COVID-19 in the region. Table 9 shows a summary on the reduction in the number of daily deaths from COVID-19 in selected LAC.

Table 9 – Comparative number of daily deaths from COVID-19 in selected countries in Latin America

Country	Dec/2020	Dec/2021
Argentina	163	31
Brazil	964	301
Chile	18	4
Colombia	161	51
Mexico	387	85
Peru	120	54

Source: Our Word in Data (2021).

When comparing daily deaths in December 2021 and in the same period in 2020, the reduction in all analyzed countries is remarkable. This reduction reflects the advance and effectiveness of vaccination and containment measures used.

Regarding the labor market, ILO (2021) estimates that the recovery of the LA economy is still insufficient to recover the jobs lost during the COVID-19 pandemic. This situation resulted in a labor market characterized by a high unemployment rate and a strong predominance of informal jobs. About 70% of the jobs generated from mid-2020 to the first quarter of 2021 are informal jobs. In the first quarter of 2021, about 76% were considered self-employed/ independent workers and just over a third was informal workers.

2.1.3.2 – Forest Sector

Few government measures were taken to reduce the impact of the COVID-19 pandemic on the forest sector and forest industry. The main measure adopted by some countries was the inclusion of forest production activities as an essential service during the pandemic, which may have positively impacted the production and trade of forest products. In Brazil, the forest sector was able to operate normally in most states, while other countries, such as Colombia, Ecuador, Paraguay and Peru had restrictions on forest activities.

As for more specific measures related to the forest sector, the Brazilian Forest Service postponed the payments of the installments of forest production that the concessionaires pay quarterly to the government, seeking to guarantee the maintenance of jobs and financial health of companies.

The Peruvian government implemented an economic stimulus package called the “Reactiva” 1 and 2 Program to boost the private sector recovery during the COVID-19 crises. This stimulus guarantees

the lowest interest rate (1.1 % for loans under the Program) offered to companies. In Bolivia, no specific measure related to Sustainable Forest Management or industrial production or market / trade of forest sector was created to mitigate the impact of the pandemic (Bolivia Questionnaire, 2021).

Also in Chile, the Economic Reactivation Program for small and medium-sized forest owners, including forest management, afforestation or recovering an area of 24 thousand ha, involving private and public forests, bolster the local economy. This is promoting economic reactivation and job creation in the rural areas. Among the expected results, it is indicated that this project will improve the direct income condition of more than 2 thousand families and the generation of around 31 thousand direct jobs. This will directly contribute to the restoration of the economic income of this target group and the revitalization of local economies. To date, activities in 15 thousand ha have been carried out on 814 properties (CONAF Chile Questionnaire, 2021).

In terms of economic recovery, the outlook for the forest sector is generally optimistic, partly because of the resumption of civil construction in the US, the main destination market for solid wood products of LA countries. Production and export levels have returned, or will most possibly return to pre-pandemic levels, for most countries of the region along the next months.

The population's consumption patterns have changed. They started to consume more hygiene and cleaning materials, whose raw material comes, in large part, from pulp. In addition, with the fact that restaurants and shops have closed temporarily, the population started to use more food delivery services and on line acquisition of goods, increasing the demand for paper packaging.

Additionally the work format also has changed, with many companies migrating to the home office modality, thus, people started to invest to reform houses and to acquire modern and comfortable wooden furniture, increasing the demand of forest products such timber, veneer, plywood and other wood-based panels.

This is a trend that will possibly continue in the future. In Brazil, for example, the production and apparent consumption of pulp, paper and wood base panels are already higher than were in 2020 and 2019, as shown in Table 10 (IBÁ, 2021).

Table 10 - Production and apparent consumption of pulp, paper and wood-based panels in Brazil (2019-2021)

Product	Item	Unit	2019	2020	Variation (19-20)	2021*	Variation (20-21)
Pulp	Production	1,000 ton	19,691	20,953	6%	22,340	7%
	Consumption	1,000 ton	5,218	5,510	6%	7,172	30%
Paper	Production	1,000 ton	10,535	10,184	-3%	10,625	4%
	Consumption	1,000 ton	5,458	5,236	-4%	5,512	5%
Wood-based panels	Consumption	1,000 m ³	6,695	7,138	7%	8,197	15%

*Estimated data for 2021, based on preliminary results.

Source: IBÁ (2021).

The Argentina forest sector has shown a recovery in 2021, considering that total exports in the first semester of 2021 totaled 376 million dollars and increased 28.3% compared to the same period of the previous year (INDEC, 2021).

In Chile, the trend is similar, wood exports totaled US\$ 581 million in July 2021, a 34% increase over the same month in 2020, with a cumulative total of around US\$ 3.2 billion in the first seven months of the year, representing an 13% increase over the same period in 2020 (CORMA, 2021).

In Mexico, as a result of the 2020 surveys, the following recovery measures were proposed:

- Advocating for the forest sector is designated as essential due to its links with the agro-food and construction industries.
- Developing a strategy to promote consumption to reactivate the economy in the forest sector.
- Providing direct incentives for the employment and income of forestry producers and workers in the forest chain.
- Supporting profitable and competitive productive projects via feasibility studies, incentives and financing.
- Combating illegal logging, which affects the market and price of forest products.
- Taking advantage of development opportunities in the forest sector through the T-MEC.
- Designing and establishing fiscal incentives to promote the reactivation of the forest sector.

In addition, CONAFOR, through the implementation of its programs, carries out actions to support continuous improvement of the forest sector. The Budget Program S219 – Support for Sustainable Forestry Development, is one of the main programs. Its objective is to support the owners, those who have legitimate landownership rights and inhabitants of forest areas so that they can implement actions that contribute to the protection, conservation, restoration and incorporation of forest land into SFM; as well as the strengthening of value chains, which in turn contribute to the adaptation and mitigation of the effects of climate change through the execution of components, concepts and support modalities (CONAFOR Mexico Questionnaire).

In Peru, in the third quarter of 2021, wood exports totaled US\$ 86 million, 34.5% more than in the same period in 2020. The largest shipments were molded wood (US\$ 22 million, + 140.6 %), slats and non-assembled parquet floorings (US\$12 million, +4.2%) and other tropical woods (US\$12 million, +32.8%). The recovery of wood shipments in the first 10 months of 2021 compared to 2019 was promoted by France and USA, which increased their demand by 175.3% and 60.6%, respectively. The high percentages are due to a statistical effect in view of the situation caused by the pandemic in 2020. National wood consumption increased, due to restrictions and remote working. Many had to buy furniture, desks, chairs and other products. This trend was worldwide, so prices increased, reducing the availability of wood. Added to this was the decrease in wood from Chile (*Pinus Radiata*), since prices have favored selling its wood to other markets (ADEX Peru questionnaire).

It is also noteworthy that tourism and ecotourism have a strong participation in the economy of LA countries, especially Argentina, Brazil, Peru and Chile. Considering the advanced vaccination phases in these countries and the recovery of the economy, it is very likely that people will start to travel more and tourism and ecotourism activities will be boosted by this recovery.

2.1.4 – BEST PRACTICES IDENTIFIED IN LA SUB-REGION

All countries have implemented financial support measures to uphold businesses and individuals, most often with a special focus on the vulnerable population. It is still too early to say which of these practices were in fact effective in reducing the impact of COVID-19 on the economy, and were sufficient to mitigate the social impact. Some of the best practices identified are highlighted below.

✓ **Health measures**

The health measures adopted by countries of the region were essential to combat COVID-19, save lives and re-establish public health. Despite being a challenge in many countries with very specific local conditions, social isolation is the main sanitary measure to control COVID-19, together with the use of face masks and hand hygiene helped to reduce the dissemination of the pandemic.

In general, countries of the LA region significantly increased capacity of hospitals to treat infected people, and specially the availability of ICU beds. Measures related to vaccination were put in place, such as national immunization plans and agreements with laboratories involve the production of vaccines for the population.

✓ **Economic measures**

Development of emergency credit lines, especially for Small and Medium-sized companies in the production sector and rural producers, were made available in most countries of the region. Other initiatives such as fiscal measures, tax reduction or exemption were also implemented by a majority of the countries, and help to mitigate the economic impact of the pandemic.

Measures to facilitate access to credit and debt renegotiation, involving small, medium and even larger companies, were also important to maintain operations and employment. Emergency aid in the form of direct transfer to the population, especially low income and poor family, created a condition to boost consumption and reactivate the economy.

✓ **Social measures**

Most countries of the region created programs to ensure the maintenance of employment and income, involving among other the direct transfer of financial resources to support vulnerable population. Other social measures involved the non-suspension of electricity supply and other services due to non-payment.

In some countries companies were encouraged to retain workers, based on a more flexible working legislation, including individual or collective agreements between employers and employees, and creation of temporary jobs regulation, with government subsidy. This avoided dismissals of employees and closing companies. Programs also included a temporary unemployment benefit and adjustment of labor laws to facilitate the use of unemployment insurance.

✓ **Specific measures for the forestry sector**

The forest sector as a whole was in general benefited from the general measures put in place by governments of the region to mitigate the social and economic impact of the pandemic.

In any case, the forest sector benefited, in most countries, from the fact that it was considered as an essential activity. This was extremely important to mitigate the impact of the COVID-19 pandemic in the forest and forest industry operations.

Other initiatives supported the forest sector, such as postponement of the payment of installments of forest production in forest concessions areas, and economic stimulus package to boost the recovery of forest-based companies. Nevertheless, only a few countries of the region have adopted the initiatives to support specifically the forest sector.

2.2 – THE CARIBBEAN SUB-REGION

2.2.1 – IMPACT OF COVID-19 ON COUNTRIES IN THE CARIBBEAN

This sub-section examines the challenges faced by each country, the strategies, recovery measures, challenges in addressing the impact of COVID-19, best practices implemented for reducing the impact of COVID-19 on forests and the forest sector and recommendations. In addition to the selected countries two representative institutions were interviewed, the Caribbean Natural Resource Institute and the FAO Regional Forest Office for the sub-region.

2.2.1.1 – BAHAMAS

The Bahamas is an archipelagic state consisting of several hundred islands, cays, rocks and islets, with 32 larger islands, with a total land area of approximately 1.0 million ha, with almost 515,000 ha of forest cover, corresponding to 51% of the total land area. The three types of forests in Bahamas are: i) coppice broadleaf forest; ii) pine forest; and, iii) mangroves; these are managed as conservation forests.

The Forestry Unit in the Ministry of Environment and Natural Resources has a small staff of 11, based in Nassau on New Providence Island. The Unit is guided by the Forestry Act (2010) and the Forestry Regulations (2014) plus the Protected Tree Order with 127 species listed as protected, including *Pinus caribaea* var *Bahamensis*, found on the four Pine islands (Andros, Grand Bahamas, Abaco, and New Providence), all of the 4 mangroves species indigenous are also included in the list.

The COVID-19 pandemic which is still very serious in the Bahamas has affected the staff and their activities in the Forestry Unit. They introduced a shift system to ensure that the health protocols for the COVID-19 were adhered to at all times. Inter-island travel was restricted, so the forestry staffs were not able to visit the forests on the other islands. This affected their ability to monitor the forests, and carry out ongoing projects.

The GEF-funded Pine Island National Inventory project for the four pine islands of Grand Bahamas, Andros, New Providence and Abaco, was scheduled for start-up prior to COVID. The Projects will conduct the National Inventory of *Pinus caribaea* plus prepare a National Forest Management Plan and establish the National Forest Estate. They have also identified two Conservation Forest Areas. Two (2) conservation forest plans, and a financial plan will be prepared for these areas. The start of the project has been affected by the COVID-19 pandemic, the original time lines had to be adjusted, and the funding identified for the project in the budget was diverted to COVID related activities. New or additional funds are difficult to get; however, they are expecting to get another allocation during the review of the upcoming budget.

The meetings which were scheduled with the community members had to be rescheduled. It was very difficult to hold face to face meetings and also travelling to the different islands to hold these meeting was restricted. They will resume travel when the restrictions are lifted. PCR (Polymerase Chain Reaction) tests will have to be done prior to travel to the other islands. The Forestry Unit is still planning the project; they are currently getting assistance from FAO. They recently signed an agreement to carry out the Geographic Information System (GIS) component of the project. Another agreement is to be signed with a Jamaican company to assist with developing the platform to analyze data collected from the inventory.

➤ Strategies and Recovery Measures

- The Bahamian government has committed to have 20% of its forests as protected areas for the Caribbean Challenge Initiative. This target of 20% was achieved, including the wetlands and the terrestrial mangroves forests in the marine protected areas. The Forestry Unit is now given the responsibility to co-manage these wetlands and mangrove forests marine protected areas (MPA). However, the resources were not increased; a request was made for additional resources. Recently, the Cabinet approved the hiring of 5 additional persons. Staff will be hired, trained and then redeployed to the satellite offices to cover the new areas.
- The FAO had set up training programme for the Forestry Unit staff to receive forestry training and get a certificate. Initially a trainer engaged to offer the course, after that a template was prepared and is used by the Unit to train new staff in house. The certificate programme is recognized by the public sector and is now a requirement for all new recruits to the Forestry Unit.
- In order to get more international recognition of the Bahamas forest sector, the FU is preparing a National Forest Plan and developing a system of National Forest Estates to be declared as protected areas. The National Forest Plan is almost completed, this will help to promote the forest sector of the Bahamas, and show what the Bahamas is doing towards Sustainable Forest Management (SFM) and protection.
- There is a proposal from the newly elected Government which is focused on natural resources, to create an Agency which deals with all the natural resources, forestry will be a major component. The other natural resources salt, aragonite/calcium carbonate from the sea, sand, and limestone and other minerals will be part of the new Agency. Revenue generation will be one of the main goals for the Agency.
- Part of the COVID recovery plan is to prepare for the opening up of the Tourism sector which was closed. The inflow of tourists was reduced from 5 million to zero during the COVID outbreak, no revenue was earned from the sector. With the return of stop over tourists they will visit the forests to do bird watching, nature tourism, ecotourism, blue holes. Looking to put in place programs to attract the visitors.
- In the national plan they have identified areas to attract the tourist, exploit marine resources e.g. an Eleuthera island (MPA) has unique marine life endemic seahorse, blue holes, tourist come to dive in the hundreds of blue holes in the Bahamas.
- As part of the new portfolio as Co-managers of the Marine Protected Areas they will be looking at ways to generate additional revenue from the user fees from persons who utilize these attractions.

During Hurricane Dorian in 2019, the forest on the east end of grand Bahamas 28,328 ha of pine and mangrove forests were destroyed. 18,211 ha of pine forests in northern Abaco were also destroyed by Hurricane Dorian. Salvaging operations were scheduled to take place; this was halted by the onset of the COVID-19 pandemic in 2020 as a result of the restriction on travel between the islands. As soon as the restrictions are lifted the staff will be able to travel to the islands and finalize the Environment management plan for the sites. On completion and approval of the Environmental Management Plan (EMP) the company contracted to doing salvaging will get environmental certificate to start the salvaging.

➤ **Challenges in Addressing the Impact of COVID-19**

- Travels between the islands were restricted as part of the measures implemented by the Government of the Bahamas. This has affected their ability to monitor the forests, and carry out ongoing projects.
- Small staff complement with only one person formally trained in Forestry.
- The funding identified for Projects in the budget was diverted to COVID related activities.

➤ **Best Practices**

- The Forestry Unit is preparing a National Forest Plan and developing a system of National Forest Estates to be declared as protected areas. The National Forest Plan is almost completed, the activities in the will guide the COVID recovery plans.
- Transferring the responsibility for the protection of mangroves in the Marine Protected Areas to the Forestry Unit.
- The newly elected Government, which is more focused on the country's natural resources, has proposed the creation of an Agency which will deal with all the natural resources, forestry will be a major component in the new Agency.

➤ **Recommendations**

- Increase the number of forestry staff, especially with the creation of the new Agency with responsibility for the natural resources.
- Approve funds in the new budget for the Forestry Unit.
- Encourage persons to get formal training (first or second degree) in Forestry Science.
- Provide additional information on the Global Forest Financing Facilitation Network (GFFFN) to the Bahamian forest sector.

2.2.1.2 – BARBADOS

Barbados has a total land area of 43,000 ha, with approximately 9,000 ha of forest cover, corresponding to 20% of the total area. The Soil Conservation Unit in the Ministry of Agriculture and Food is responsible for managing the forests in Barbados (FAO, 2015a). The forests are managed mainly for conservation, ecosystem benefits/services, and ecotourism activities.

Since the lockdown measures were instituted with the onset of the pandemic up to October 2021 there has been no reforestation activity in Barbados. However, the maintenance/weeding of the plantations up to age 5 years are ongoing.

The main revenue sources of the forest sector are from ecotourism activities, the persons from the community offer hikes and tours to the tourists.

With the spread of infections from COVID-19 the government implemented 2 lockdown periods during which almost all economic activities ceased. The airports were also closed resulting in a reduction in the number of tourists. With the reduction in the number of visitors there were no customers for the guided tours or hikes. The Barbadians, who would normally go on tours and hikes, were reluctant to interact with other persons resulting in fewer persons visiting the forests for recreation. Many persons also lost their jobs which meant they did not have discretionary funds for

social/recreational activities. With the downturn in the number local and foreign customers the revenue earnings of community persons were reduced significantly.

Some positives noted in the forest sector; the reduction in agricultural activities over time is resulting in the increase in forest cover. Also, with the reduction in the number of visitors to the forests an increase in the quality of the forests is expected.

➤ **Strategies and Recovery Measures**

- The Ministries of Agriculture and Environment have developed a project to plant one million trees on public and private lands. The implementation of the project which started in 2020 has been affected by the pandemic. They have recrafted the project; there is now greater involvement of the public. Persons are given forest and/or fruit tree seedlings. Each individual is encouraged to care for the seedlings and report on the survival of the plants; the response from the public has been fairly successful. During September the Ministry introduced a competition for persons involved in the project. The person who planted the most seedlings during the week of September 22nd won a prize. This encouraged many persons to participate in the tree planting project.
- The project will be extended beyond the original completion date to ensure that the million trees are planted and maintained.

➤ **Challenges in Addressing the Impact of COVID-19**

- In enforcing the new COVID-19 protocols the Unit has had to expend additional funds to acquire masks, PPE, water boots and gloves for the staff, plus install sanitization stations throughout the offices, and sanitize all the vehicles. With the social distancing protocols fewer officers are allowed to travel in one vehicle. These increase costs for the new unbudgeted expenses will adversely affect their budget.

➤ **Best Practice**

- Increase the production of seedlings in the nurseries to ensure that there are adequate supplies of seedlings for distribution to the public and planting on government lands.

➤ **Recommendations**

- Review the current tree planting project to determine how to get additional lands established with the involvement of the Private sector in collaboration with the Government of Barbados.

2.2.1.3 – DOMINICA

Dominica has a total land area of 75,000 ha, with approximately 45,000 ha of forest cover, corresponding to 60% of the total land area. Approximately 70,000 people of its population were moderately affected by the COVID-19 pandemic until mid-2021. There was a significant spike in the number of corona virus cases in August 2021, increasing from 200 cases with no deaths to 3000 cases and 20 recorded deaths. Prior to that, the cases of COVID-19 were mostly imported, until July 2021 when they had community spread of the virus across the island.

The staff of the Forestry, Wildlife & Parks Division (FWPD) was not significantly affected by the disease. In September 2021, there were a few cases among the staff. The FWPD instituted a number

of measures to deal with the increase in cases among the staff. This included rotation of staff, instituting a shift system for the staff, the number of persons in the offices was reduced to facilitate the prescribed social distance. During the period when the lockdown was introduced only essential staff were allowed to work for that month.

The activities of the FWPD were affected by the curfews established by the Government to curb the spread of the COVID-19. When the curfews were in place, the activities of the field staff were significantly affected. They were unable to go out for extended periods; as result less work was accomplished. With the relaxation of the curfews, the staff was able to return to field activities on a regular basis.

Transportation of staff to carry out field activities was affected since the onset of the pandemic. The FWPD had to lend the Division's fleet vehicles to the Police to assist with the management of the crisis. They have since gotten back most of the vehicles that were loaned to the Police. During that period when the vehicles were on loan to the Police, staff who own vehicles would utilize their own vehicles, but were reluctant to have others travel with them in their vehicles. Additionally, with the increase in the use of private vehicles there were increases in the number of refund claims for mileage. There is a limit to the amounts that can be refunded annually. However, with the pandemic they are managing to flex that limit. The main activities of the FWPD are:

- Conservation and Protection of the forest estates;
- Maintain the integrity National Parks/Recreational facilities and collect the user fees.

The protection and law enforcement activities of the FWPD were only affected when the country was under lockdown. Except for hours during the curfews the Forest rangers and Forest guards were able to carry out their normal activities. They noted that an uptick in illegal logging was their main concern.

The Forestry, Wildlife and Parks Division manages the collection of user fees and maintains the integrity of 12 Ecotourism sites (FWPD, 2022). The sites include features such as, waterfalls, hiking trails, bird watching, and Boiling lakes. Tourists from the cruise ships are the most frequent visitors, along with some residents visit the sites. With the onset of the pandemic and the downturn in/closure of the tourism sector the number of visitors to the parks reduced significantly. This resulted in loss of revenue earnings from the Parks. User fees from the use of the parks are a major revenue source not only for the Division but for the country. However, this is an ongoing expenditure, the FWPD still has to maintain the integrity of the sites; an ongoing expenditure with reduced or no income.

Whereas, the FWPD is responsible for the collection of fees and the maintenance of the sites, the local communities around these sites provide the services to the visitors. They operate as the tour guides, tour bus drivers, and sell local craft to the visitors. With the significant reduction in the number of visitors the revenue streams for these community members have literally dried up. Some of the community members have turned to farming to bolster their income during this period.

The local tour bus companies who transport the tourists to the Ecotourism sites have also loss revenue, these companies are privately owned and depend on the revenue from the tourists.

The Kalinagos (formerly known as the Caribs) are an indigenous forest dependent group in Dominica, who has been affected by the reduction in overseas and local visitors. The Kalinagos utilizes non timber forest products to make baskets, beads, and other jewelry using botanical products. These craft products are sold to the tourists, with the onset of the COVID-19 pandemic that revenue has been lost. The Kalinagos do some farming but not on a large scale, their main revenue source is from sale of their craft items

Main products from the forests are:

- Wood for construction;
- Fuelwood for charcoal production.

Sawmilling operations are small in Dominica, wood is mainly used for construction, and taken mainly from privately owned forests, using mainly chainsaws. Approximately 75% of the forest in Dominica is on private lands. The workers in the construction sector are classified as essential; as such the industry was not significantly affected by the lockdown in the country. During the period, the demand for local wood increased which gave a boost to the sector.

Charcoal production is also done on a small scale in Dominica, and is used mainly for meat barbecue. There was a slight decline in demand, because of the COVID measures which are in place in the country. There are fewer large gatherings and not as many persons purchasing from the road side vendors.

➤ **Strategies and Recovery Measures**

- Continue to implement the UNDP-funded Project, which is assisting with Reforestation and Trail Enhancement.
- Implement a project for the Kalinago/Caribs to rehabilitate trails on their communal lands in the allocated territory.
- With the opening up of the tourist sector, and the pending return of the cruise ships the FWPD has to ensure that the Ecotourism sites and properly maintained and ready to facilitate the arrival of the tourists.
- Because of the high levels of COVID vaccination hesitancy in Dominica and the resistance to testing among staff; the Division will be encouraging staff to get their vaccination which is free for Dominicans.
- Persons will be advised that all staff that has to interact with the tourists will have to be vaccinated.

➤ **Challenges in Addressing the Impacts of COVID-19**

- Financing for the activities of the FWPD is provided by the Government of Dominica. Due to the strain on the budget brought on by the pandemic, the budget allocation for the Division has been reduced.
- The capital budget for project activities has been reduced by 50%. This has affected the reforestation activities, rehabilitation of the trails, and the maintenance of the national parks.

➤ **Best Practice**

- They continue to maintain the Ecotourism sites even while there are no visitors.

➤ **Recommendations**

- Liaise with potential partner agencies, e.g. UNEP, UNDP, and the World Bank to secure post-COVID funds to assist in filling the gap created with the reduction of their Capital budget.

- Some of the initiatives in GFFFN should be revamped include increase of the funds available for capacity development in Dominica in the post-COVID era.

2.2.1.4 – GRENADA

Grenada has a total land area of 34,000 ha, with 17,000 ha of forest cover, corresponding to 50% of the total land area; 75% of the forest lands are privately-owned, 25% are public lands managed by the Forestry and National Parks Department (FNPDP). Their main activity is conservation of the state-owned forests; and applied forest research. However, during the pandemic no research work was done by the FNPDP, except the research work on the Grenada Dove. Activities in the Mt. Hartman Forest continued as part of the ongoing Development plan for the area (FAO, 2015b).

The wider forest sector was affected by the COVID-19 pandemic, specifically the furniture making industry. The lockdown measures which were instituted by the Government of Grenada to tackle the disease, affected the supply of wood to the furniture makers. The local sawmillers had very little timber available for processing to supply to the furniture makers. The sawmillers usually purchased timber from both the Government and the private suppliers, but during the periods of lockdown they were unable to get enough supplies.

The employment levels in the forest sector were not severely affected by the pandemic the numbers remain stable.

The members of the local communities who normally go hunting were affected by the measures put in place to control the spread of COVID-19. With the curfews which meant early night time lockdown made it impossible for the local community members to conduct their traditional livelihood activities.

➤ **Strategies and Recovery Measures.**

- The Government of Grenada provided financial assistance for many of the sectors affected by COVID-19, including the forest sector
- Implement the practice of collaborative forest management as a tool to be used in this COVID era.
- Other initiatives will be implemented as soon as the staff capacity increases.

➤ **Challenges in Addressing the Impacts of COVID-19**

- The FNPDP does not have a large staff complement however, this was a problem before the onset of the COVID-19 pandemic. It has become a bigger concern as the FNPDP implements the measures mentioned above.

➤ **Best practices**

- The FNPDP does not have enough staff to undertake a number of the forestry activities in the forest; they are offering technical advice and services to the NGOs and Private groups who are working in the forest sector.
- Collaborative forest management with communities and NGOs, to best utilize the human and financial resources.

➤ Recommendations

- Need to increase the staff complement in the FNPD of Grenada, to allow more foresters/technicians to be able to carry out the conservation and research work in the department.
- Need more regional collaboration for the development of projects and initiatives to respond to the COVID-19 pandemic.

2.2.1.5 – GUYANA

Guyana has a total land area of 21.1 million ha, with 18.1 million ha of forest cover, corresponding to 86% of the total area. Amerindian lands are approximately 15%. Harvesting and conservation are the main activities in the forest sector.

COVID-19 affected the forest sector in Guyana significantly. In addition, heavy rainfall resulted in severe flooding in several coastland and hinterland areas. The flooding was declared a national disaster by the President of Guyana, on June 10, 2021. This impacted the forest sector tremendously, in particular the core operational aspects of the Guyana Forestry Commission (GFC) and the private forest stakeholders. It has affected production levels significantly as forest concessions were inaccessible due to damaged road networks.

The Guyana Forestry Commission (GFC) is mandated to oversee all state owned forests in Guyana. The COVID-19 pandemic caused the delay in routine activities and other project implementation, including:

- Reduction in the number of pre-harvest inventories conducted by private companies.
- 2.5% field verification exercises required for pre-harvest approval.
- Delays in field work for the National Forest Inventory.

This has resulted in severe financial constraints for the GFC which is a semi-autonomous agency.

With the restrictions on face-to-face interactions, engagement with and among the forest dependent communities was limited. In the early days of the pandemic in March to May 2020, some Amerindian villages under the leadership of their Toshua and Village Council went into lockdown. Since the revenue stream of most of these communities is through logging and sale of non-timber forest products, this has created a socio-economic constraint on the livelihoods of the Amerindians in these areas.

This caused a delay in the community organizations complying with their National Insurance Scheme and the Guyana Revenue Authority requirements. However, with revisions to the Official Gazette from the Government of Guyana, engagements have resumed. Prior to that, special permissions had to be sought from the Guyana Police Force and the Neighborhood Democratic Council. However, some virtual meetings were conducted with the communities; the only issue was some were plagued with connectivity issues.

In 2020 the timber production volumes fell to 337,000 cubic meters, the lowest in five years; while exports fell to an all-time low of US\$30.6 Million. This was also the lowest for the five-year period.

During the early months of the pandemic many concessions were not operable due to safety reasons. This has resulted in a noticeable decrease in employment. Implementations of many projects were also delayed; this affected many opportunities for investment in the forest sector. This coupled with the flooding has resulted in an estimated 3500 persons in the sector losing their jobs.

➤ **Strategies and Recovery Measures**

- The GFC got the Government of Guyana to include forest services as an essential service in late 2020. This opened up the way for harvesting and other forest management operations to resume. By August 2021 production increased by approximately 25.24% over the corresponding period in 2020;
- To alleviate the detrimental effects that COVID-19 has had on the forest sector, the Government of Guyana through the Ministry of Natural Resources is working towards revitalizing the sector;
- The GFC is working with other government agencies to undertake emergency repairs for selected road networks, to improve the access to concession areas;
- Identify forest areas for allocation to new concessionaires for harvesting;
- Encourage both local and external entities to invest in timber harvesting. This can include joint ventures with large companies to increase production under SFM guidelines;
- Encourage other types of investments in reforestation programs on degraded sites; marketing of forest products, and forest related consultancies;
- The GFC continues to lobby for increased collaborations with other agencies;
- Identify other financial mechanisms.

➤ **Challenges in Addressing the Impact of COVID-19 Sector**

- COVID-19 also affected the revenue earnings for the GFC. The combination of low production and drop in exports resulted in the GFC losing over GY\$200M in revenue. As a result, the GFC was unable to cover all the staff emoluments and operational costs. The government of Guyana in August 2020 approved a budget of GY\$350M to support the GFC. The additional funds were used to cover employment costs and pay utility bills.

➤ **Best practices**

- Developed targeted incentives to support harvesting activities and encourage production of value-added products;
- Encourage operators to share and/or lease equipment within the same logging districts to aid in the recovery process.

➤ **Recommendation**

- Continue to lobby the Government to supplement the GFC's budget until revenue flow increases.

2.2.1.6 – HAITI

Haiti which shares the island of Hispaniola with the Dominican Republic has a total land area of approximately 2.7 million ha. The protected areas are approximately 357,718 ha or 13% of the total land area.

The main activities of the Ministry of Environment (MoE) are reforestation, forest management and forest fire control. In an effort to reduce the infection levels during the COVID-19 pandemic, the

government of Haiti introduced quarantine periods at different times in 2020. During these quarantine periods the activities on the MoE were significantly reduced. The activities affected most were the reforestation programs and controlling the forest fires.

The staff from the MoE were unable to travel to the communities during the quarantine periods to meet with the community members. This seriously affected the involvement of the officers with the communities.

Due to the lack of/or reduction in the activities of the MoE there was a loss/or reduction of some short-term jobs in the sector.

➤ **Strategies and Recovery Measures**

- Plan to increase reforestation activities/programs in the next few years.
- Increase the production capacity of the existing nurseries/germplasm centers.

➤ **Challenges in Addressing the Impact of COVID-19**

- The COVID-19 pandemic had a negative impact on public funding which also affected the funds allocated to the MoE. As a consequence, the plans to construct three new nurseries called Germplasm centers in Haiti were seriously affected.

➤ **Recommendation**

- Mobilize financial resources to assist developing countries to recover from the impacts of the COVID-19 pandemic.

2.2.1.7 – JAMAICA

Jamaica has a total land area of approximately 1.1 million ha, with approximately 439,938 ha of forest cover, which corresponds to 40% of the total area. The Jamaica's Forestry Department (FD) manages 117,000 ha, the remainder is privately owned. The country was severely affected by the COVID-19 pandemic from March 2020 going through 3 waves of infection. The government established a number of measures to mitigate the spread of the COVID-19. The operations of the FD were severely impacted by the disease, affecting their ability to carry out their day-to-day activities, including:

- Reforestation and plantation maintenance
- Applied forest research
- Forest Governance/ monitoring of forest estates
- Alternative livelihoods for communities adjacent to the forest estates
- Nursery production
- Public education and awareness
- Plantation assessment

The restricted measures, in particular the 'no movement days' instituted by the Government of Jamaica, affected the staff's ability to go to the forests to keep track of any illegal activities. Many of the reforestation activities were stalled especially the 3 million tree planting initiative. In October 2019, the Prime Minister launched the National Tree Planting Initiative (NTPI), to plant 3 million trees

across Jamaica, one for each Jamaican. In 2020, the implementation of the project was severely affected by lack of funds. The funds which were promised for the implementation of the NTPI were not forthcoming as the government had to adjust the national budget to accommodate the additional costs incurred in combatting the COVID-19 pandemic. The NTPI proceeded at a much slower pace than was anticipated at the launch in 2019. The FD utilized their recurrent budget to ensure that seedlings were available to be planted for the NTPI. The production of seedlings in the nurseries during the lockdown period was also affected, as persons were not allowed to go to the nurseries to water the plants. In 2020, the FD approached the private sector to get them more involved in the initiative. The private sector responded positively, currently there are a number of companies which have come on board to assist with seedling production, the distribution of the seedlings, and the planting trees on Forest Estates and in the urban areas.

The implementation the NTPI also slowed down because the forest officers were not able to engage the public as planned. Public stakeholder meetings and consultations were significantly reduced; they had to resort to using mainly social media to engage the public. All the schools were having classes online, so engaging the students in the classrooms or out in the forest was not an option. New approaches were developed, and the information was shared with the students through their online platforms.

In 2021, the number of seedlings planted in the NTPI increased but the target is still a long way off. For 2021/2022, the FD proposes to increase the private sector involvement and encourage more persons to get involved and plant up their urban spaces.

The alternative livelihood activities supported by the European Union Budget Support Programme (EUBSP) which started in 2018/2019 was slowed down due to COVID-19; however, they are still on track to meet the target of 46 completed projects by June 2022.

Staff had to make adjustment in how they carried out their work with community groups in particular the Local Forest Management Committees. There were fewer meetings and other types of engagements, when they had meetings the numbers were very small to adhere to the COVID protocols. The Rural Sociologists and the foresters continue to engage them mostly virtually and provide support for the groups. Although there were the challenges in the modalities used to engage/employ community members as casual laborers, there was no decline in the number of persons who were employed by the FD. There was a marginal increase in employment figures which may be attributed to the increase in the number of seedlings planted in year 2 of the NTPI.

The UNEP-funded “Adopt a City Project” is being implemented to reforest degraded areas in the watershed which supplies water to the capital city of Kingston. Two hectares of mangroves will be planted along the coastal areas of Port Royal in collaboration with the University of the West Indies. The third aspect of the project is aimed at building climate resilience in lower income communities in Kingston through EbA interventions. Trees will be planted in schools, parks, homes and community centers, in these communities.

Monitoring of the Forest Estate – Since the onset of COVID-19, there has been an increase in the numbers of incidences of illegal activities within the forest estates. With the new COVID-19 measures in place, forest rangers were not able to travel out to the forests as often as they needed. Since fewer persons were allowed to travel in one vehicle, and with no additional vehicles available, monitoring of the forest estates was reduced.

Foresters and forest technicians who would normally be assigned for 4 days per week to assess different forest estates, and are usually lodged in private facilities close to the forest estate, they were also affected. The number of persons who could be lodged in any one facility had to be reduced to have adequate space for each individual. This resulted in additional cost for the FD to rent other facilities to ensure that the health protocols for COVID-19 are observed. The other option is to

reduce the number of technicians who would be assigned, which would result in additional time to complete the assessment. This added to the spiraling costs while at the same time there were budget cuts.

Even though work from home was mandated for non-essential staff in the government service, it was impossible for the foresters and technicians to work in the forests from home. They were scheduled to work on rotating roster system.

➤ **Strategies and Recovery Measures**

The Jamaica's FD has developed a number of strategies to mitigate the fallout from the COVID-19 pandemic. Some measures have already been adopted, including:

- Implementation of the recommended health protocols for COVID-19 and ensure that they are adhered to by all staff.
- Encourage staff to get vaccinated. With the high levels of vaccination hesitancy in Jamaica, the Ministry of Housing, Urban Renewal, Environment and Climate Change (HURECC) set up a vaccination facility at the Ministry for their staff and family. This was extended to the FD staff. Members of staff, who would be involved in activities such as engaging the students and community meetings, were reminded that they had to be vaccinated to carry out these functions.
- Annual staff meeting which was not held in 2020 was convened virtually in 2021 over 2 days due to the spike in COVID cases at the time.

For the future, the following strategies and measures will be implemented:

- Increase revenue intake – additional seedlings will be produced in the nurseries for sale to the public.
- Get back to selling timber – there is a moratorium right now, the process to restart will be accelerated.
- Greater reliance on technology:
 - For the virtual engagement of students and community members;
 - To create virtual tours of the forest estates as an engagement tool for the general public;
 - Utilize UAV (Unmanned Aerial Vehicle) drone solutions to execute forest management activities;
 - Improve the monitoring of the forest estates with the use of additional trail cameras in the forests.
- Increase use of social media platforms to send the forestry messages out to the public.
- Targeted/focus expansion on urban forestry/tree planting activities as 'COVID safe' ventures.
- Prioritize FCF (Forest Conservation Fund) certification for Jamaica, using the EUBSP funds in collaboration with the Bureau of Standards to develop interim standards.

➤ **Challenges in Addressing the Impact of COVID-19**

- The Agency faced a number of financial challenges, during the 2020-2021 period. The FD's budget was reduced during the tabling of the Supplemental Budget for 2020-2021; however, the funds for the EUBSP are still available and those activities continue.
- The funds for the NTPI have not materialized for the 2021-2022 period. It is expected that some funds will be allocated for the 2022-2023 financial year.
- The training/capacity building activities for staff have been reduced due to lack of funds. The cost for the training sessions has also increased because of the need to have adequate space for each person at these sessions, requiring either a bigger facility or fewer participants.

➤ **Best Practices**

- New approaches for communicating with the different publics were developed, including sharing forestry information with students through their online learning platforms.

➤ **Recommendations**

- There is a paucity of trained forestry personnel in Jamaica; need more online training opportunities for FD staff.
- Lobby the Government of Jamaica to approve the funding necessary for the full implementation of the NTPI to meet its goal of planting 3 million trees, one for every Jamaican.
- Work with the Planning Agency of Jamaica to develop project proposals and submit these to the EU, GEF, UNDP and other international partners.
- Develop a second phase of the current EU Budget Support Programme which will end in 2022, to continue some of the activities in the current programme.
- Develop additional partnerships with the private sector and other government entities to establish forests on degraded public and private lands.
- Review and update the National Action Plan/National Forest Management and Conservation Plan to include activities to enable the sector to recover from the impact of COVID-19.
- Identify additional local and external partners to continue to implement the National Action Plan/National Forest Management and Conservation Plan.
- Provide technical assistance and support the engagement with key partners, e.g. FAO and other UN agencies.

2.2.1.8 – ST. LUCIA

St. Lucia has a total land area of 61,600 ha, with approximately 25,700 ha of forest cover. The Forestry Department (FD) manages approximately 9,000 ha of forest reserves. The remaining is privately owned forests.

The COVID-19 pandemic has had a devastating impact on the country in general, with the tourism sector more seriously affected. This has resulted in a large number of persons losing their jobs. Many of these persons who were in the tourism sector shifted their activities back to agriculture. Farming activities increased significantly as persons tried to earn a living from farming to cushion the loss

from the reduction in revenue. With the shift back to agriculture the forest cover in the country was under threat. Many persons had resorted to clearing the forest cover to convert the lands to farming. At the same time, the measures instituted by the Government across the island including daily curfew hours, affected the movement of the forest officers. Most persons knowing of the restrictions on the forest officers took the opportunity to gain access the forest reserves. The FD had to increase its surveillance and monitoring activities to prevent/reduce these illegal activities.

They encountered some challenges as the island was divided into two zones, north and south, there were police check points at the border of these zones. If one did not have a permit, you could not pass the border into another zone. The FD requested permits for the field staff from the National Emergency Management Office, to allow the staff to pass freely from one zone to the other. That system is still in place, and used when there is an emergency curfew. However, since Government vehicles were allowed to go through the check points, the FD used them sometimes, for the field staff which also allowed them to move throughout the two zones. The need to have persons kept at safe distances hampered their operations. The number of persons who could travel in the vehicle had to be reduced. They had to utilize a number of vehicles to carry the staff to the forests for their monitoring activities.

St. Lucia has a network of Nature Trails in their forest estates which attracted many local and foreign visitors. During the pandemic the trails had to be closed. This led to a big loss in revenue to the FD, even though the revenue usually goes to the central government coffers. In order for the FD to reopen these nature trails they had to have COVID certification for all the trails. The approval had to be issued from Ministry of Health and Ministry of Tourism to ensure that the trails were in a satisfactory condition to accommodate the visitors, both local and foreign. All the stipulated protocols such as sanitization had to be in place.

There are a number of ecotourism sites which are privately owned and managed. Many of the owners were participants in the heritage tourism programme a few years ago, and were encouraged to offer their forests and attractions e.g. waterfalls to the tourists.

During the pandemic both the FD's sites and those operated by the private land owners had significant reduction in their revenue. The FD collected approximately EC\$100,000/year prior to 2020, since the pandemic the revenue has fallen to zero. Because many of the businesses have closed there has been significant drop in employment numbers of the local persons on these ecotourism sites. Recently there have been a few requests for tours but they are very few. One proposal is to develop public/private partnerships in the management of the sites. Both the public and the private entities will be competing for the same clientele post COVID, a partnership would ensure that they both benefit. This will be after the sites receive certification from the Ministries of Health and Tourism.

Apart from the nature trails and ecotourism activities charcoal production is another forest related activity. This was not significantly affected by COVID-19; there may have been a slight increase in production because more persons are getting involved after they lost their jobs.

The FD has a 10-year strategic plan (FD, 2015) which guides the division in its annual plans. The activities include:

- Reforestation and afforestation.
- Sustainable forest management.
- Wildlife management.

The Division has the jurisdiction to enforce the Wildlife Management Act and the Forests, Soils, and Water Conservation Act. This also covers the management of the watersheds which are critical in supplying water for consumption.

The implementation of the 10-year plan scheduled for 2020 to 2021 was not significantly impacted by COVID-19. They have been able to continue with their reforestation activities, but were affected by the passage of Hurricane Elsa, even though the damage to the forest was not great, only a small percentage of damage to the forests. Access was impeded as there were some land slippages.

➤ **Strategies for mitigating against the impact of COVID-19**

- Increase access to computers for all.
- Improve internet service and greater access to the internet across St. Lucia.
- Request capital funds from the government and external agencies.
- At the 32nd session of the Latin American and Caribbean Forestry Commission (LACFC, 2021) held in September 2021, a number of opportunities were identified during the meeting there were, they also noted that there were a number of financial sources that could be tapped.
- Protocols developed in the Forestry Division to manage the rotation of staff and to be opened for business to the public with reduced interactions.
- Increase training opportunities for staff to build capacity.
- Get support for protecting our forests through REDD+, create incentives for persons to keep the forest cover and earn revenue.
- Agroforestry programme to be continued.
- Once the tourism sector opens up, there is a plan to implement an ecotourism project to operate the Wildlife Education and Conservation Centre plus an ex-situ snake breeding facility to increase the number of the rare and endemic St. Lucian Racer, which is now only on one of the St. Lucian islands. There are two facilities on site at the FD, they will:
 - Show case wildlife, endemic reptiles and birds;
 - Cruise ship passengers can visit and see the St. Lucian wildlife, not having to go to the forests see and hear the wildlife in their short 1 day trip to the island;
 - Trails will be upgraded and used for community activities and for the tourists.
- An initiative which is driven by the Economic Development Ministry aims to get additional funds to be allocated for the following:
 - Increase forest cover especially mangroves in the forest reserves;
 - Re-demarcate the boundary lines which were affected by the Hurricanes;
 - Create a public awareness programme to give the public a greater understanding of the forests.
- Have discussions with the banking sector on how to put a value to the benefits of the forests, use the forests to generate revenue.

➤ **Challenges in addressing the Impacts of COVID-19**

- The Forest Division received a reduction in the allocation of funds from the central government that was budgeted for them over the period. The allocation periods were modified from quarterly to monthly.
- The unavailability of essential materials and supplies has adversely affected the COVID-19 recovery forest programme.
- Also, Funds for the implementation of Community forests activities were reduced due to shift in allocations of funds to tackle the COVID-19 pandemic. A number of livelihoods projects, which are critical for the recovery efforts, such as broom making with Latanya palm leaves, and using the shoots of the palm to make wine which is usually exported, and bee keeping and honey production were severely affected.
- The two GEF funded projects are still operating; viz. the Integrated Ecosystems Management and Restoration of Forests in the South East Coast Project, and the Integrated Water, Land, and Ecosystems Management in the Caribbean Small Island Developing States Project, the work programs were not affected significantly. However, the implementers were unable to hold large community group meetings because of the restrictions which are in place. They resorted to virtual meetings but not everybody has access to the technology and some are not “tech-savvy”. They still try to meet persons face to face in smaller numbers. This slowed the implementation of the projects.

➤ **Best Practices**

- The 10-year Strategic Plan for the forest sector is still being implemented and will guide the forest programs to assist with the post pandemic recovery

➤ **Recommendations**

- Seek capital funds from the government and external agencies to assist with the recovery measures.
- Need assistance from the UNFF to develop a livelihoods project to manage the feral/wild pigs problem in the forests. The feral pigs originally domesticated animals have been in the forest for over 100 years become a nuisance to the farmers, wandering from the forests, destroying their crops, seeds and seedlings. The animals also contaminate the water sources in the forests. There is a potential livelihood component; formalized hunting seasons will be created to reduce the population. The local communities would benefit from the hunting by selling the meat of animals. The population of the pigs will be monitored to maintain a manageable number.

2.2.1.9 – ST. VINCENT AND THE GRENADINES

St. Vincent and the Grenadines (SVG) are a group of islands with a total land area of 34,400 ha, with approximately 15,000 ha of forest cover or 43% of the total land area.

The majority of the forests in SVG are publicly owned they are managed by the Forestry Department. Their main activity is conservation of the forest estates.

In April 2021, the La Soufriere volcano erupted in St. Vincent and the Grenadines. The island was divided into different zones; red, orange, yellow and green depending on the proximity to the

volcano, red is closest. With COVID-19 in the 'community spread' phase this created additional problems for the government of SVG, as persons in the red and orange zones had to be evacuated. Some were placed in shelters; others were transferred to cruise ships and ferries. Many persons went to live with family and friends in the green zone. With this crowding of persons in the shelters, ferries and homes the possibility of the infection spreading was great.

The forests were severely affected by the volcano eruption the pyroclastic flow destroyed over 60% of the forest cover on the volcano itself. Ash falling in large quantities on the trees caused tree limbs to be broken, and some trees snapped under the weight of the ash.

During the pandemic the implementation of projects were slowed down mainly due the restrictions in movement of staff and other personnel. In addition, the population is the red zone.

The interaction between the Forestry Department's staff and the community members was impacted. The extension services and dissemination of information to the communities were retarded. Because of the restrictions which were imposed by the government the technical staff were not able to go out and meet with the different communities.

However, there was no significant impact from the COVID-19 pandemic on the forest dependent communities.

There is a micro timber industry in SVG utilizing trees from the plantation forests. With the onset of the COVID-19 pandemic the demand for local timber slowed down significantly.

➤ **Strategies and Recovery Measures**

- The FD will be developing alternative ways of getting information to the public.
- The Departmental and individual work plans will be adjusted to accommodate the changes caused by the pandemic.

➤ **Challenges in Addressing the Impact of COVID-19**

- Staff productivity was significantly reduced, many were affected by the disease and had to take sick leave. There was one occasion when the headquarters was practically closed for a week.
- Staff who resided in the Red Zone prior to the eruption of the La Soufriere volcano who were displaced or in shelters had to be transported to the forest estates when they were needed to undertake forest activities in the red and orange zones.

➤ **Best Practices**

- Increase surveillance of the forest estates to reduce the possibility of the increase in the number of incidences of trespass from persons who would wish to collect fuelwood from the forests if there were a complete lockdown of the country, which may result in the unavailability of LPG to the citizens.

➤ **Recommendation**

- In seeking external funds to assist SVG to recover from the volcano eruptions, the Forestry Department should lobby for the inclusion of significant amounts of funds for the restoration and rehabilitation of the forests which were destroyed by the volcano.

2.2.1.10 – SURINAME

Suriname has a total land area of 16.4 million ha, with forest cover of approximately 15.2 million ha (2019), corresponding to 95% of the total land area. It is located in the north eastern coast of South America. The majority of the forest area in Suriname is public forest; there are very little privately owned forests. The estates are managed by the Foundation for Forest Management and Production Control/ Stichting voor Bosbeheer en Bostoezicht (SBB) in the Ministry of Land Policy and Forest Management.

The main activities in the forest sector are:

- Timber production - Roundwood production, transportation of roundwood, processing of roundwood in sawmills, and timber export.
- Nature conservation - Enforcement of the Nature Conservation Law and the Game Law, monitoring of export of Fauna, Public awareness and training, Forest Research.

Due to the COVID-19 pandemic the government established measures, including periods of total lockdown in the country, which led to no or low levels of activities in the forest sector. That resulted in the decline of roundwood production, transport and processing of wood in the sawmill; export of timber also declined.

The timber production statistics showed that the production of timber declined by about 50% in 2020 compared to 2019.

The forest dependent communities in Suriname were also affected by the pandemic. One important community forest activity is timber production for commercial use. This is done by a third party that has an agreement with the community. A certain royalty is paid to the community for each cubic meter of log produced based on an agreed amount. Due to the total lockdown, the production activities within the community forests declined significantly. This led to the decline of income from timber production, for the Communities.

Additionally, majority of the laborers in the forest sector (especially in logging activity) are members of the forest dependent communities. Due to the decline in timber production, this group had less income.

Another issue regarding the forest communities is the availability of goods and services produced or sold in the coastal/town area. In the total lockdown period, it was difficult to transport goods or provide the services that were produced or sold in the coastal/town area, to the forest communities who live in the interior area. It was also difficult to transport the products produced by the communities, such as agroforestry products, wild meat and fish, to the coastal area where almost 75% of the population of Suriname live and the biggest markets are situated.

Overall, the forest industry in Suriname was severely affected by the COVID-19 pandemic, mainly in the following areas:

- **Sustainable Forest Management/Logging**
 - The roundwood production declined by almost 50% in 2020 compared to 2019. It is expected that the roundwood production which has not yet recovered will pick up by the end of 2021;
 - The export of timber declined;
 - Processing in the sawmills also declined, leading to a shortage of material for further processing such as in the furniture factories and for the building construction sector;

- There were periods during the pandemic when the enforcement activities of the forest guards in the field were at a low level. In these periods the SBB did not have an adequate overview of the situation in the forest area.
- **Nature Conservation**
 - Field (monitoring) activities by the game wardens/Rangers stagnated for more than 50% of the time;
 - Training sessions and awareness activities in the field stagnated significantly;
 - Visitors to the nature parks decreased significantly more than 80%. This was most significant within the ecotourism areas;
 - Forest Research also stagnated;
 - Personnel from the government and government foundations related to Nature Conservation received some “COVID financial support”.

Due to the decline of roundwood production, timber processing and export, the employment in the forest sector declined over the period. Unfortunately, at this time there are no reliable figures available.

➤ **Strategies and Recovery Measures**

- The sector is encouraged to do the payments by internet banking. Thus, reducing unnecessary physical contact.
- To avoid overcrowding in the office, a shift system was introduced. Laptops are purchased so that some of the office staff can work from home and online.
- All the time the COVID safety rules are taken into consideration e.g., distancing, hand washing, mask wearing etc.
- Ongoing awareness campaign about COVID for persons in the forest sector.
- Encourage greater awareness of the need to be vaccinated.
- Virtual meetings are organized for internal SBB staff and the external stakeholders in the sector, using zoom, team meetings and other available platforms to avoid physical contact.
- Meeting with the persons in the sector who do not have the above-mentioned facilities, in small groups with a maximum of 15 persons.

➤ **Challenges in addressing the impact of COVID-19**

- The operational cost of SBB is financed with the income from forest revenues. Due to the decline in the production of timber and the delay in the payment of the fees, some months the cash flow of the SBB was severely affected resulting in a noticeable deficit. To overcome this, some of the payments were postponed, only paying salaries to staff.

➤ **Best practices**

- The SBB instituted a shift system in the office.
- SBB has a log tracking/sustainable forestry information system (SFISS) in place, harvesting plans and cutting registers can be submitted online into the system.

- SBB encouraged persons in the sector to make payment of forest fees using internet banking as much as possible, to avoid unnecessary physical contact.

➤ Recommendations

- Explore the possibilities of creating a fund for the forest sector to overcome the impact of the COVID-19 Pandemic.
- Continue with virtual meetings for both the internal (SBB) and external meetings.

2.2.1.11 – TRINIDAD AND TOBAGO

The twin island republic of Trinidad and Tobago has a total land area of 512,800 ha, with approximately 226,000 ha of forest cover, corresponding to 44% of the total area. The country was severely affected by the COVID-19 pandemic. Lockdown measures were in place during 2020 and for an extended period in 2021.

During this period, the operation of the Forestry Division (FD) in the Ministry of Agriculture, Land and Fisheries was severely hampered by the effects of COVID-19. Thirteen members of staff in the FD contracted the COVID-19, ten have recovered and three died from the disease. At one point, there were forty members of staff on quarantine. This affected the activities of the FD significantly, especially when the country was in lockdown. They had strict adherence to the protocols in the office, wearing of masks, frequent hand-washing and hand sanitizing. However, there were cases in that staff would have interaction with infected family members but they would not advise the management team about the cases.

The Forestry Division was declared an essential service by the government of Trinidad and Tobago, the forest officers were allowed to go out to the forests, albeit in reduced numbers. Most of the main activities of the FD were affected, including:

- Plantation management
- Nursery production
- Protection of the forest estates
- Licensing and monitoring of sawmills
- Issuing licenses for minor forest products
- Wildlife management
- Maintenance of National Parks

Plantation activities were reduced to about 50% of the normal day-to-day field work over the period 2020 - 2021. During lockdown periods, plantation activities ceased; there was no planting during the planting season of June – December 2020. Up to September 2021, approximately forty (40) hectares were planted after the second lockdown period in 2021. The target for the rest of the 2021 planting season is 200-250 hectares. However, the reduction in staff and the observance of the protocols in particular social distancing, resulting in fewer forest officers being able to travel out to the forests. This may also affect the reforestation target for 2021.

The protection of the forest reserves was a great challenge for the FD; with the onset of COVID-19, the resulting lockdowns, and loss of jobs across the islands; persons started going into the forest to occupy the lands, and as result “land grabbing” increased significantly. They were expanding their land holdings, clearing lands and selling lands. In their quest to increase agricultural activities persons

felt that with the lockdowns there were greater opportunities for their illegal activities. The patrolling of the forest estates and enforcement activities had to be stepped up. Persons were also bringing in illegal wildlife into the country, some have been apprehended. This meant that all of the forest rangers and game wardens had to be deployed, to take control of the situation. Social distancing in the vehicles is a problem, means that the FD now had to arrange for additional trips carrying fewer people. This meant additional cost per person for each trip.

Approximately, 95% of the sawmills are not considered essential by the government of T&T, they had to cease operations. Only the sawmills that supplies pallets for the manufacturing sector and lumber for funeral homes were operating. The sawmill operators faced critical issues with the reduced activities and expressed their concerns. The industry has suffered massive losses in revenue, which resulted in the layoff of approximately 50% of their staff.

Harvesting and removals from the private forests were also affected as they were reduced to a minimum. The FD staff had fewer sawmills to monitor and licenses are issued annually. This meant that the staff could focus on the patrolling and enforcement activities.

The fire season was controlled in Trinidad and Tobago, there were fewer fire outbreaks in the forests compared to the previous years, and it was a rainy year. They did not require as many officers to deal with the fires so they also got to focus on the enforcement and patrolling (FAO, 2008).

Visits to the National Parks were reduced significantly because of the lockdown measures and the downturn in the tourism sector. Several projects in the national park were put on hold, such as repairs to infrastructures, maintaining the general aesthetics of the sites. With the closure of the construction sector, this affected the availability of contractors to carry out the works in the national parks.

With the opening up of the country, visitors are slowly beginning to return to the national parks, locals are not able to travel abroad; they are seeking local recreational facilities. To meet the forthcoming increase in visitors to the parks, the maintenance activities have started to bring the facilities up to standard. This will mean that the staff will have to work harder to speed up maintenance activities. The FD has applied to the Ministry for permission to take on temporary staff, to assist with these activities, and for plantation activities; they are awaiting approval.

The hunting season in Trinidad and Tobago is usually from October to February. Last year 2020/21 it was reduced to one month. Following the lifting of some of the measures, the hunting season started on October 1, 2021. Additional Game wardens were recruited to assist with the protection of the forests estates and to monitor the hunters.

The sale of forest products was also impacted by the COVID-19 pandemic. The harvesting of Teak was significantly reduced. Sawmillers would normally access 2 state concessions for harvesting each year. None was issued in 2020, and only one so far in 2021. Additionally, the dry season was very wet, whereas that was beneficial for the fire season – fewer fires, it hampered the harvesting activities. Dressed Teak is usually exported to the international market; however, with the downturn in the global markets the demand for teak was significantly reduced. Exports of Teak and Teak products halted since the pandemic. Teak is the main export product in the forest sector. The sawmillers now have to find local markets for their teak products.

The other minor forest products, such as bamboo and Kashima leaves are used mainly for cultural events, weddings and funerals. There has been no demand for these products during the pandemic, as the protocols currently only allow 10 – 15 persons at weddings and funerals. However, these products were a minor revenue source, not a great loss of annual revenue.

➤ **Strategies and recovery measures**

- The FD has identified the need for additional staff:
 - To carry out activities on the plantations;
 - to increase the production of seedlings in the nurseries;
 - to increase the patrolling and enforcement activities as Game Wardens;
 - to carry out maintenance of the sites to facilitate the return of visitors in the National parks.
- The Government to offer additional licenses for harvesting of teak.
- Local markets for teak and teak products to be identified.
- FD conducted a number of media briefings during the lockdown/ slowdown periods to inform population how they can assist with the protection of the forests resources, using the traditional and social media channels. Addressing the following topics:
 - Discourage persons from cutting the forests and the “land grabbing”;
 - How to protect the forests;
 - Information on Agroforestry practices - plant trees that will bear fruits e.g. breadfruit along with timber and conservation trees;
 - Stop hunting in the closed season;
 - Allow the wildlife to return/replenish during this period of lockdown.
- Encourage persons to have ‘Staycations’ visit the forests e.g., the Caroni Swamp to enjoy the birds and the natural beauty.

➤ **Challenges in addressing the impact of COVID-19**

- Lack of funds to implement some of the strategies outlined above was a big challenge.
- Government funds had to be reallocated to other sectors, such as health, to deal with the COVID-19 pandemic. It is expected that as the country gets the number of COVID cases under control, funds will be allocated to the forest sector and the projects can resume with funds allocated to them in the new budget year.
- Over 70% of all projects being implemented by the Forestry Division were put on hold since the onset of the pandemic.
- Earnings/revenue from sawmilling, harvesting and export of forests products were cut significantly. The Government unable to assist the sector with any financial support. One proposal is to allocate additional licenses for harvesting of teak.
- The FD offers incentives, such as free seedlings and equipment at subsidized rate for the private forest landowners; they own approximately 60% of the forest lands in Trinidad and Tobago. For the last year and a half, the FD received no applications from the private sector for incentives and subsidies. Recently there have been some increased activities from the private landowners/planters. They have started to request timber seedlings to replant their lands, as they get back into business

➤ **Best practices to reduce the impact of COVID-19**

During the period of the COVID pandemic, the FD has been offering virtual tours of the forests of Trinidad and Tobago. Persons who were not able to physically visit the forests were given a chance to see the beauty of the forests. The virtual tours also encouraged persons to take ‘Staycations’ and visit the forests when the country opens up again.

➤ **Recommendations**

- Reallocate funds for the FD and the forest sector in the new budget.
- The Government of Trinidad and Tobago to allocate additional licenses for harvesting of Teak.
- New local markets for Teak and Teak products should be identified to substitute for the drop in demand in the export markets.
- Sharing information on the strategies used by other countries to encourage their forests sectors.
- What mechanisms are other countries using to keep the forest industry alive during the pandemic.

2.2.2 – OTHER STAKEHOLDERS

2.2.2.1 – CARIBBEAN NATURAL RESOURCES INSTITUTE (CANARI)

The Caribbean Natural Resources Institute (CANARI) is a non-profit technical institute based in Trinidad and Tobago, with over thirty years of experience in research, policy influence and capacity building for participatory governance in the Caribbean (CANARI, 2022).

CANARI is currently conducting research to track funds that are available from different sources e.g., the World Bank and ECLAC, to the Caribbean countries for COVID recovery. They are also focusing on the budget presentations from the eight Caribbean governments, to identify how much of the COVID recovery budgets will be allocated to the forest sector. Generally, not many of the Governments in the Caribbean countries are investing in the forest sector. They will also be looking out for any post COVID recovery investments which will have a negative effect on the environment. For example, investments in the Blue Economy are focusing on the hotels, which may be detrimental to the coastal forests and mangroves. The research by CANARI which is still ongoing will be completed in December 2021, if the results become available, they could be included in the final paper.

In discussions with the Civil Society Organizations (CSO) in the environment/forest sector it was highlighted that their operations have been severely affected. They are restricted by the lockdown measures, unable to carry out their conservation and patrolling activities. There has been a massive reduction in funding, with very little or no user fees being collected. This has resulted in job losses for their staff.

At the same time, many persons who have lost their jobs in these Caribbean territories have resorted to going into the forests, to eke out a living. The social protection measures currently in place are inadequate.

There are some small amounts of funding available for pandemic recovery. These projects are hampered by the inability of the teams to meet face to face. This slowed down the implementation

of the projects. Some have had to return monies because they could spend the funds during the pandemic period.

➤ **Recommendations**

- The CANARI's research findings could be presented to the UNFF at the meeting in January 2022. An in-depth look at the budgets of the countries most affected could be a follow up study.
- Climate resilience to be at the center of the recovery plans.
- Nature based solutions are very important, all the countries should be encouraged to include in their recovery plans.
- Need funding for ecosystem restoration in the Caribbean.
- Channel funds to the CSOs to lead the on the ground implementation, the Government agencies should be the coordinators.

2.2.2.2 – FAO SUB-REGIONAL OFFICE

The Forestry Officer for the sub-region reported that most of the projects in the Caribbean were not severely affected by the COVID-19 pandemic. For the projects which were ending persons were able to do their reports remotely. Guyana, Jamaica and Belize are preparing GEF medium-size proposals in collaboration with the FAO. The preparation of the proposals continued remotely with the representatives from countries, as most of the preparatory work was already completed. The startup dates have been pushed back, and the stakeholders' meetings have also been postponed until smaller face-to-face meetings can be organized. The projects should be finalized in late 2022 early 2023.

➤ **Challenges in Addressing the Impact of COVID-19**

- The forestry activities in the Caribbean are dependent on government funding; most of these have been affected by the COVID-19 pandemic.
- The smaller islands have been experiencing difficulties in accessing funds from the Green Climate Funds.
- In most of the territories funds from the FAO are usually channeled to agricultural activities, it is expected that this will improve will greater involvement of the forest sector.

➤ **Recommendations**

- Need to identify other sources of income not dependent on the tourism sector.
- Invest in ecosystem restoration, larger and well-structured programs over longer periods which are also sustainable.
- Create tax breaks for private forest owners;
- Provide tax breaks for the other activities of large companies when they invest in the forest sector.

- Develop more community projects. They reforest the degraded lands persons will be reimbursed for the planting the following year for the trees that have been established, using agreed rates and prices.

3 – RECOMMENDATIONS AND WAY FORWARD

3.1 – RECOMMENDATIONS FOR THE CARRIBEAN REGION

- Ensure that adequate funds are allocated to the forest sector in the countries' budgets in the new financial year to enable the entities to implement the strategies identified to aid in the recovery from the impact of COVID-19 on the forest sector.
- Increase the staff complement especially in some of the smaller forestry organizations, to enhance the current work of the Forestry Entities.
- The UNFF should explore the possibilities of creating a fund for the forest sector to overcome the impact of the COVID-19 Pandemic
- Some of the initiatives in GFFFN should be revamped to include an increase in the funds available for capacity development in Caribbean countries in the post – COVID era.
- There is a need for more online forestry training opportunities for staff.
- Countries should liaise with potential international partner agencies e.g., UNDP, FAO, EU, UNEP, GEF, World Bank to secure funds to assist in their post COVID recovery programme.
- Need more regional collaboration for the development of projects and initiatives to respond to the COVID-19 pandemic.
- Develop sustainable livelihoods projects for the forest dependent communities to assist them in their recovery programmes.
- The CANARI's research findings could be presented to the UNFF at the meeting scheduled for January 2022 and an in-depth look at the budgets of the Caribbean countries should be undertaken.
- Climate resilience to be at the centre of the recovery plans.
- Nature based solutions are very important, all the countries should be encouraged to include these in their recovery plans
- Secure funding for Ecosystem restoration in the Caribbean
- Channel funds to the CSOs to lead the on the ground implementation, the Government agencies should be the coordinators
- Need to identify other sources of income for the community groups reduce their dependency on the tourism sector.
- Invest in ecosystem restoration, larger and well-structured programmes over longer periods which are also sustainable.
- Encourage the private sector/private forest land owners to invest in the forest sector by creating tax breaks for private forest owners;
- Provide tax breaks for the other activities of large companies when they invest in the forest sector.
- Develop more community projects. When they reforest the degraded lands persons are then reimbursed the following year for the trees that have been established, using agreed rates and prices.

- Sharing information on the strategies used by other countries to encourage their forests sectors

3.2 – PREPARING FOR THE FUTURE POST-COVID

The COVID-19 pandemic has been lasting for nearly two years and continues to create significant challenges for society and several business segments. Since the beginning, the forest sector has quickly adapted their operation and behavior to meet health and safety requirements.

The forest-based sector proved to be an important segment to face the challenges imposed by the COVID-19 pandemic. It supplies several products, such as pulp, which is the basis for the manufacture of hygiene and health materials and packaging paper. In addition, wood products have been used to supply people's house, who have adapted to a new modality of work from home environment.

In the short to medium-term this trend is expected to continue and become a new pattern. This is a leverage opportunity for the forest sector, with the growing demand for wood and pulp products, with the resumption of the Chinese market and the civil construction industry in the United States, major consumers of forest products from LA countries.

The pandemic could become an opportunity for countries to become greener and more inclusive societies and economies. The forest sector has great potential for this, as it can effectively help reduce poverty, generating employment and income, showing its resilience to structural changes.

However, to be included in these opportunities, the sector needs to face some challenges, such as deforestation and competition with illegal logging, forest fires, lack of inspection and compliance with environmental laws, in addition to changes in supply and demand in the market.

It is essential to integrate small farmers, traditional communities and small and medium-sized forest companies in sustainable supply chains, including the value chains of timber and non-timber forest products in recovery measures and strategies. It is also essential to include REDD+ mechanisms, payments for environmental services and the carbon market in this green recovery, in order to value not only forest products, but also environmental services.

In this context, it is important to create and implement policies, programs, strategies and partnerships for national and international cooperation, aimed mainly at:

- Monitoring and inspection of forests to prevent deforestation and forest fires;
- Implementing incentive mechanisms to encourage sustainable production, whether from natural or forest plantations;
- Proposing creation of credit lines with low interest rates, specific for forest production of wood and non-wood products;
- Promoting trade and consumption of sustainable and legal forest products, supporting national production.

REFERENCES

ASSOCIAÇÃO BRASILEIRA DA INDÚSTRIA DE MADEIRA PROCESSADA MECANICAMENTE – ABIMCI (2020). **Balanco das exportações 2020**. Available at: <https://abimci.com.br/balanco-das-exportacoes-2020/>

BBC News (2020). **Coronavírus: o mapa interativo que mostra as medidas e tipos de isolamento adotados na América Latina**. Available at: <https://www.bbc.com/portuguese/internacional-52248493>

BBC News (2021). **Cuarentena en Perú: 5 factores que explican por qué las medidas de confinamiento no impiden que sea el segundo país de América Latina con más casos de covid-19**. Available at: <https://www.bbc.com/mundo/noticias-america-latina-52748764>

BIBLIOTECA DEL CONGRESO NACIONAL DE CHILE – BCN (2021). **Ley de protección al empleo por COVID-19**. Available at: <https://www.bcn.cl/leyfacil/recurso/ley-de-proteccion-al-empleo-por-covid-19>

CANAL RURAL (2020). **Amazônia: Alemanha doa 25 mi de euros para produção sustentável de carne, soja e madeira**. Available at: <https://www.canalrural.com.br/noticias/brasil-acordo-alemanha-conservacao-amazonia/>

CANARI - CARIBBEAN NATURAL RESOURCES INSTITUTE (2022). **Home**. Available at: <https://canari.org/>

CEPAL (2020b). **Balanco Preliminar das Economias da América Latina e do Caribe**. Available at: https://repositorio.cepal.org/bitstream/handle/11362/46606/1/S2000882_pt.pdf

CEPAL (2021a). **Em meio à crise da COVID-19, a América Latina e o Caribe receberam em 2020 o menor valor de investimento estrangeiro direto da última década**. Available at: <https://www.cepal.org/pt-br/comunicados/meio-crise-covid-19-america-latina-o-caribe-receberam-2020-o-menor-valor-investimento>

CEPAL (2021b). **Coyuntura Laboral en América Latina y el Caribe**. Available at: https://repositorio.cepal.org/bitstream/handle/11362/46955/1/S2100277_es.pdf

CEPAL (2021c). **COVID-19 Observatory in Latin America and the Caribbean**. Available at: <https://cepalstat-prod.cepal.org/forms/covid-countrysheet/index.html?country=ARG>

CEPAL (2021d). **A América Latina e o Caribe crescerão 5,9% em 2021**. Available at: <https://www.cepal.org/pt-br/comunicados/america-latina-o-caribe-crescerao-59-2021-refletindo-arrasto-estatistico-que-se-moderara>

COMISSÃO ECONÔMICA PARA AMÉRICA LATINA E O CARIBE – CEPAL (2020a). **Pandemia de COVID-19 levará à maior contração da atividade econômica na história da região: cairá -5,3% em 2020**. Available at: <https://www.cepal.org/pt-br/comunicados/pandemia-covid-19-levara-maior-contracao-atividade-economica-historia-regiao-caira-53>

CONFEDERAÇÃO NACIONAL DA INDÚSTRIA – CNI (2021). **Fretes Internacionais e Disponibilidade de Contêineres: Efeitos da Pandemia Briefing do Setor Privado**. Available at: https://static.portaldaindustria.com.br/portaldaindustria/noticias/media/filer_public/8c/00/8c000b7b-3b93-4da8-8622-851dffc50e40/cfb-fce_gt-comexlogistica_fretescntrs_infograficoconsultaagendapropostas.pdf

CORPORACIÓN CHILENA DE LA MADERA - CORMA (2021a). **Exportaciones forestales cayeron en 12,6% en 2020, resultado más bajo del último quinquenio**. Available at:

[https://www.corma.cl/corma-exportaciones-forestales-cayeron-un-126-en-2020-resultado-mas-bajo-del-ultimo-quinquenio/#:~:text=Las%20exportaciones%20forestales%20madereras%20totalizaron%20US\\$244.887%20millones%20en,inform%C3%B3%20la%20Corporaci%C3%B3n%20Chilena%20de%20la%20Madera%20E2%80%93Corma-](https://www.corma.cl/corma-exportaciones-forestales-cayeron-un-126-en-2020-resultado-mas-bajo-del-ultimo-quinquenio/#:~:text=Las%20exportaciones%20forestales%20madereras%20totalizaron%20US$244.887%20millones%20en,inform%C3%B3%20la%20Corporaci%C3%B3n%20Chilena%20de%20la%20Madera%20E2%80%93Corma-)

DATOSMACRO (2021a). **IPC de Argentina**. Available at: <https://datosmacro.expansion.com/ipc-paises/argentina>

DATOSMACRO (2021b). **IPC de Chile**. Available at: <https://datosmacro.expansion.com/ipc-paises/chile>

ECLAC - Economic Commission for Latin America and the Caribbean (2021b). **Economic Survey of Latin America and the Caribbean**. Available at: https://repositorio.cepal.org/bitstream/handle/11362/47193/10/S2100607_en.pdf

EMOL (2021). Ayuda internacional en pandemia: Chile recibió US\$ 10 millones para enfrentar el covid-19 y ejecutar proyectos de cooperación. Available at: <https://www.emol.com/noticias/Nacional/2021/05/26/1021982/Ayuda-Internacional-Pandemia.html>

El País (2021). **FMI melhora cenário e estima recuperação econômica de 4,1% para a América Latina e o Caribe**. Available at: <https://brasil.elpais.com/economia/2021-01-26/fmi-melhora-projecao-e-estima-recuperacao-economica-de-41-para-a-america-latina-e-o-caribe.html>

FAO - FOOD AND AGRICULTURE ORGANIZATION (2008). **Fire Management Working Papers Implementing the Fire Management Voluntary Guidelines Report of the Trinidad and Tobago regional workshop 20-23 November 2007**. Available at: <https://www.fao.org/3/aj119e/AJ119E.pdf>

FAO - FOOD AND AGRICULTURE ORGANIZATION (2015a). **Global Forest Resources Assessment 2015, Country Report. Barbados**. Available at: <https://www.fao.org/3/az162e/az162e.pdf>

FAO - FOOD AND AGRICULTURE ORGANIZATION (2015b). **Global Forest Resources Assessment 2015 - Country Report: Grenada**. Available at: <https://www.fao.org/3/az225e/az225e.pdf>

FAO - FOOD AND AGRICULTURE ORGANIZATION (2020). **The impacts of COVID-19 on the forest sector: How to respond? Rome, Italy**. Available at: <http://www.fao.org/3/ca8844en/CA8844EN.pdf>

FAO - FOOD AND AGRICULTURE ORGANIZATION (2021). **Los pueblos indígenas y tribales y la gobernanza de los bosques**. Available at: <http://www.fao.org/3/cb2953es/cb2953es.pdf>

FD - Forestry Department / Saint Lucia Forests and Lands Resources Department (2015). **Strategy 2015–2025**. Available at: <http://extwprlegs1.fao.org/docs/pdf/stl192162.pdf>

FEDEMADERAS (2021). **Reporte de Resultados – Encuesta Forestal Semestral, Agosto 2021**. Available at: https://fedemaderas.org.co/wp-content/uploads/2021/09/20210909_EncuestaFedemaderasVC.pdf

FOLHA (2021). **Indústria florestal deve investir R\$ 53,5 bilhões até 2024**. Available at: <https://www1.folha.uol.com.br/seminariosfolha/2021/05/industria-florestal-deve-investir-r-535-bilhoes-ate-2024.shtml>

FORESTRY UNIT | GOVERNMENT OF THE BAHAMAS. Ministry of the Environment & Housing. **The Official Website of the Government of The Bahamas**. Available at: <https://www.bahamas.gov.bs/bahamasforestry>

FWPD - FORESTRY, WILDLIFE & PARKS DIVISION / GOVERNMENT OF THE COMMONWEALTH OF DOMINICA (2022). Home/ Forest Management section. Available at: <https://forestry.gov.dm/>

G1 (2021). **Brasil deve ter a 14ª maior taxa de desemprego do mundo em 2021, aponta ranking com 100 países.** Available at: <https://g1.globo.com/economia/noticia/2021/04/11/brasil-deve-ter-a-14a-maior-taxa-de-desemprego-do-mundo-em-2021-aponta-ranking-com-100-paises.ghtml>

G1 (2021b). **Com 88% da população vacinada, Chile anuncia fim do estado de emergência para Covid-19.** Available at: <https://g1.globo.com/mundo/noticia/2021/09/27/com-88percent-da-populacao-vacinada-chile-anuncia-fim-do-estado-de-emergencia-para-covid-19.ghtml>

GIZ (2020). **Cooperação com o Fundo Amazônia/BNDES.** Available at: https://www.giz.de/en/downloads/Factsheet_Fundo_Amaz%C3%B4nia_PT_2020.pdf

Global LATAM (2020). **Series Inversión Extranjera.** Available at: https://issuu.com/segibpdf/docs/global_latam_2021

GOBIERNO DE ARGENTINA (2021): **¿Qué medidas está tomando el gobierno?** Available at: <https://www.argentina.gob.ar/coronavirus/medidas-gobierno>

GOBIERNO DE CHILE (2020). **Ministro de Salud informa sobre casos recuperados y estrategia de cuarentena dinámica.** Available at: <https://www.minsal.cl/ministro-de-salud-informa-sobre-casos-recuperados-y-estrategia-de-cuarentena-dinamica/>

GOBIERNO DE CHILE (2021). **Ingreso Familiar de Emergencia (IFE).** Available at: <https://www.chileatiende.gob.cl/fichas/78385-ingreso-familiar-de-emergencia>

GOBIERNO DE MÉXICO (2021). **Medidas económicas.** Available at: <https://www.gob.mx/covid19medidaseconomicas>

GOBIERNO DE PERÚ (2020). **MEF amplía cobertura de créditos del Fondo Crecer hasta 90% para las micro, pequeñas y medianas empresas a fin de reducir el impacto económico del coronavirus COVID-19.** Available at: <https://www.gob.pe/institucion/mef/noticias/108921-mef-amplia-cobertura-de-creditos-del-fondo-crecer-hasta-90-para-las-micro-pequenas-y-medianas-empresas-a-fin-de-reducir-el-impacto-economico-del-coronavirus-covid-19>

GOBIERNO DE URUGUAY (2021). **Sector Forestal en Uruguay.** Available at: <https://www.uruguayxxi.gub.uy/uploads/informacion/a29771e03cc49e42fe516c01b0d271dc0fc4cbe.pdf>

GOBIERNO DE URUGUAY (2021b): **Medidas del Gobierno para atender la emergencia sanitaria por coronavirus (COVID-19) en materia de Trabajo.** Available at: <https://www.gub.uy/presidencia/politicas-y-gestion/medidas-del-gobierno-para-atender-emergencia-sanitaria-coronavirus-covid-19-2>

GOVERNO DO BRASIL (2021). **Enfrentamento à Covid-19.** Available at: <https://www.gov.br/pt-br/noticias/financas-impostos-e-gestao-publica/2-anos/2-anos-1/enfrentamento-a-covid-19>

GOVERNO DO BRASIL (2021b). **Monitoramento dos Gastos da União com Combate à COVID-19.** Available at: <https://www.tesourotransparente.gov.br/visualizacao/painel-de-monitoramentos-dos-gastos-com-covid-19>

INDÚSTRIA BRASILEIRA DE ÁRVORES - IBÁ (2020). **Empresas do setor florestal investem R\$114 milhões para auxiliar os brasileiros no combate à COVID-19.** Available at: <https://iba.org/empresas-do-setor-florestal-investem-r-114-milhoes-para-auxiliar-os-brasileiros-no-combate-a-covid-19>

INDÚSTRIA BRASILEIRA DE ÁRVORES - IBÁ (2021). **Estatísticas da Indústria Brasileira de Árvores / 2º trimestre de 2021.** Available at: https://iba.org/datafiles/publicacoes/cenarios/66cenarios_2.pdf

INTER-AMERICAN DEVELOPMENT BANK - IDB (2021). **Retos para la agricultura familiar en el contexto del covid-19: Seguimiento tras 6 meses de crisis. v. 1, 25 p.** Available at: <https://publications.iadb.org/publications/spanish/document/Retos-para-la-agricultura-familiar-en-el-contexto-del-COVID-19-Seguimiento-tras-6-meses-de-crisis.pdf>

INTER-AMERICAN DEVELOPMENT BANK - IDB (2021b). **Evolución del turismo en Perú 2010-2020, la influencia del COVID-19 y recomendaciones pos-COVID-19.** Available at: <https://publications.iadb.org/pt/publications/spanish/document/Evolucion-del-turismo-en-Peru-2010-2020-la-influencia-del-COVID-19-y-recomendaciones-pos-COVID-19-nota-sectorial-de-turismo.pdf>

INTER-AMERICAN DEVELOPMENT BANK - IDB (2021c). **Informalidad en los tiempos del COVID-19 en América Latina: implicaciones y opciones del amortiguamiento.** Available at: <https://publications.iadb.org/pt/publications/spanish/document/Informalidad-en-los-tiempos-del-COVID-19-en-America-Latina-Implicaciones-y-opciones-de-amortiguamiento.pdf>

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA – IBGE (2021). **Inflação acelera em dezembro e chega a 4,52% em 2020, a maior alta desde 2016.** Available at: <https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/29871-inflacao-acelera-em-dezembro-e-chega-a-4-52-em-2020-a-maior-alta-desde-2016>

INSTITUTO NACIONAL DE ESTADÍSTICA Y CENSOS – INDEC (2020). **Complejos exportadores. V. 5, n 38.** Available at: https://www.indec.gob.ar/uploads/informesdeprensa/complejos_03_21311B84F340.pdf

INDEC (2021). **Complejos exportadores. V. 5, n 159.** Available at: https://www.indec.gob.ar/uploads/informesdeprensa/complejos_09_216C11F7ABA3.pdf

Instituto Forestal – INFOR (2021). **Las Exportaciones Forestales registran un crecimiento de 15,3% en los ocho primeros meses del año.** Available at: https://wef.infor.cl/bannerdestacados/2021/161/destacado_161.php

INSTITUTO DE ESTUDOS PARA O DESENVOLVIMENTO INDUSTRIAL – IEDI (2020). **O Impacto da Covid-19 na indústria mundial.** Available at: https://iedi.org.br/cartas/carta_iedi_n_1034.html

INSTITUTO SOCIOAMBIENTAL - ISA (2021). **COVID-19 e os Povos Indígenas.** Available at: https://covid19.socioambiental.org/_

INTERNATIONAL LABOR ORGANIZATION (ILO, 2020). **CHILE Y CRISIS DEL COVID-19: POLÍTICAS DE RESPUESTA.** Available at: https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-santiago/documents/genericdocument/wcms_743071.pdf

ILO (2021). **OIT: América Latina e Caribe enfrentam recuperação insuficiente do mercado de trabalho com predomínio de empregos informais.** Available at: https://www.ilo.org/brasilia/noticias/WCMS_819030/lang-pt/index.htm

ISTOÉ (2021). **Emprego na América Latina teve recuperação, mas segue abaixo do pré-pandemia.** Available at: <https://www.istoedinheiro.com.br/emprego-na-america-latina-teve-recuperacao-mas-segue-abaixo-do-pre-pandemia-2/>

LACFC - LATIN AMERICAN AND CARIBBEAN FORESTRY COMMISSION / FAO (2021). **COVID-19 Impacts on the Forest Sector and Communities in LAC and Recovery Opportunities.** FO:LACFC/2021/3. Available at: <https://www.fao.org/3/cb6003en/cb6003en.pdf>

LA REPÚBLICA (2021a). Perú aprovecha menos del 20% de sus bosques de producción permanente desde la pandemia. Available at: <https://larepublica.pe/economia/2021/03/16/peru-aprovecha-menos-del-20-de-sus-bosques-de-produccion-permanente-desde-la-pandemia/>

LAND PORTAL FOUNDATION (2021). Forest Policy for Jamaica 2017. Available at: <https://data.landportal.info/pt/library/resources/lex-faoc168632/forest-policy-jamaica-2017>

MINISTERIO DE ECONOMÍA Y FINANZAS - MEF PERU (2020). Plan económico del Perú frente al COVID-19. Available at: <https://www.mef.gob.pe/planeconomicocovid19/>

MINISTÉRIO DO MEIO AMBIENTE - MMA (2021). Plano Nacional para Controle do Desmatamento ilegal e Recuperação da Vegetação Nativa 2020-2023. BALANÇO DE ATIVIDADES 2020. Available at: https://www.gov.br/mma/pt-br/assuntos/servicosambientais/controle-de-desmatamento-e-incendios-florestais/copy3_of_Balano2020DocumentoCompleto.pdf

MINISTERIO DE TRABAJO, EMPLEO Y SEGURIDAD SOCIAL (MTESS) | Gobierno de Paraguay (2021). Informe de Gestión. Available at: <https://www.mtess.gov.py/noticias/ministra-bacigalipo-realizo-informe-de-gestion-esta-manana>

MINISTRY OF AGRICULTURE, FISHERIES, PHYSICAL PLANNING, NATURAL RESOURCES AND CO-OPERATIVES (2022). Forestry Department. Available at: <http://agriculture.govt.lc/ministries/agriculture-food-production-fisheries-and-rural-development/forestry>

MINISTRY OF AGRICULTURE, LAND & FISHERIES (2022). Forestry Division. Available at: <https://agriculture.gov.tt/divisions-units/divisions/forestry-division/>

Mongabay (2010a). Grenada Forest Information and Data. Available at: <https://rainforests.mongabay.com/deforestation/2000/Grenada.htm>

Mongabay (2010b). Haiti Forest Information and Data. Available at: <https://rainforests.mongabay.com/deforestation/2000/Haiti.htm>

OECD (2020). COVID-19 in Latin America and the Caribbean: An overview of government responses to the crisis. Available at: <https://www.oecd.org/coronavirus/policy-responses/covid-19-in-latin-america-and-the-caribbean-an-overview-of-government-responses-to-the-crisis-0a2dee41/#section-d1e688>

Our World in Data (2021). Coronavirus (COVID-19) Vaccinations. Available at: https://ourworldindata.org/covid-vaccinations?country=OWID_WRL

PARLAMENTO ANDINO (2021). Principales medidas adoptadas por el gobierno colombiano frente a la emergencia provocada por la COVID-19. Available at: <https://www.parlamentoandino.org/images/actualidad/informes-covid/Colombia/Principales-medidas-adoptadas-por-el-gobierno-colombiano.pdf>

PARLAMENTO ANDINO (2021b): Principales medidas adoptadas por el gobierno peruano frente a la emergencia provocada por la COVID-19. Available at: <https://www.parlamentoandino.org/images/actualidad/informes-covid/Peru/Principales-medidas-adoptadas-por-el-gobierno-peruano.pdf>

Portal Amazônia (2020). Suspensão desde maio, manejo florestal sustentável é liberado pelo TRF1. Available at: <https://portalamazonia.com/economia-na-amazonia/manejo-florestal-sustentavel-liberado-pelo-trf1>

Research Gate (2001). Grenada land cover and forest formations, 2001. Available at: https://www.researchgate.net/figure/Map-of-land-cover-and-forest-formations-of-Grenada-circa-2001-excludes-Grenadian-islands_fig2_266079175

S&P Global Ratings (2021). **Panorama económico para América Latina 2021: Pese a mejora en crecimiento, las debilidades pre pandémicas persisten.** Available at:

<https://www.spglobal.com/assets/documents/ratings/es/pdf/2021-03-25-panorama-economico-para-latam-2021-pese-a-mejora-en-crecimiento-las-debilidades-prepandemicas-persisten.pdf>

STATISTA (2021a). **Evolución anual de la tasa de inflación en Perú desde 2015 hasta 2026.** Available at: <https://es.statista.com/estadisticas/1190212/tasa-de-inflacion-peru/>

STATISTA (2021b). **Evolución anual de la tasa de inflación en Uruguay desde 2015 hasta 2026.** Available at: <https://es.statista.com/estadisticas/1190233/tasa-de-inflacion-uruguay/>

SWISS INFO (2021). **La inversión verde crece en Latinoamérica como plan de supervivencia.** Available at: https://www.swissinfo.ch/spa/d%C3%ADa-medioambiente-latinoam%C3%A9rica_la_inversi%C3%B3n-verde-crece-en-latinoam%C3%A9rica-como-plan-de-supervivencia/46678874

TOMASELLI, I. (2021). **Initial Assessment of the Impact of COVID-19 on Sustainable Forest Management Latin American and Caribbean States.** Available at: <https://www.un.org/esa/forests/wp-content/uploads/2020/12/Covid-19-SFM-impact-LAC.pdf>

UNDESA - United Nations Department of Economic and Social Affairs Forests (2021). **Co-Chairs Summary of the UNFF Expert Group Meeting on the Assessment of the Impact of the COVID-19 Pandemic on Sustainable Forest Management.** Available at: <https://www.un.org/esa/forests/events/egm-covid-jan-2021/index.html>

UNECOSOC - United Nations Economic and Social Council (2021). **E/CN.18/2021/8 – Impact of the pandemic on Forests and the Forest Sector, Note by Secretariat UNFF 16th Session 2021.** Available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N21/120/62/PDF/N2112062.pdf?OpenElement>

USAID - UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (2021). **COOPERACIÓN DEL GOBIERNO DE LOS ESTADOS UNIDOS AL PERÚ EN RESPUESTA AL COVID-19.** Available at: https://www.usaid.gov/sites/default/files/documents/USG_COVID-19_Peru_FS_Spanish-July_2021.pdf

VEJA (2021). **COVID: Brasil nunca fez o mínimo de isolamento social para deter o vírus.** Available at: <https://veja.abril.com.br/blog/maquiavel/covid-brasil-nunca-fez-o-minimo-de-isolamento-social-para-deter-o-virus/>

WORLD BANK (2021). **Perspectivas Econômicas Globais: América Latina e Caribe.** Available at: <https://thedocs.worldbank.org/en/doc/600223300a3685fe68016a484ee867fb-0350012021/related/Global-Economic-Prosppects-June-2021-Regional-Overview-LAC-PT.pdf>

WORLD BANK (2021b). **Respuesta del Banco Mundial a la COVID-19 (Coronavirus) en América Latina y el Caribe.** Available at: <https://www.bancomundial.org/es/news/factsheet/2020/04/02/world-bank-response-to-covid-19-coronavirus-latin-america-and-caribbean>

WORLD HEALTH ORGANIZATION - WHO (2021). **Actualización Epidemiológica, Enfermedad por coronavirus (COVID-19).** Available at: https://iris.paho.org/bitstream/handle/10665.2/54717/EpiUpdate21August2021_spa.pdf?sequence=2&isAllowed=y

WORLD RESOURCES INSTITUTE Brasil (2021). **Perda de florestas tropicais primárias aumenta em 12% de 2019 a 2020 no mundo.** Available at: <https://wribrasil.org.br/pt/blog/florestas/perda-de-florestas-tropicais-primarias-aumenta-em-12-de-2019-2020-no-mundo>

ANNEX – LIST OF CONTRIBUTORS BY COUNTRY

COUNTRY	INSTITUTION	CONTACT
Bahamas	Ministry of the Environment and Housing, Forestry Unit	Mr. Christopher Russell
Barbados	Ministry of Agriculture and Food Security, Soil Conservation Unit	Ms. Michelle Wilson Howard
Bolivia	CBF – Camara Forestal de Bolivia (<i>Forestry Chamber of Bolivia</i>)	Mr. Jorge Ávila
Chile	CONAF – Corporación Nacional Forestal (<i>National Forestry Corporation</i>)	Ms. Constanza Daniela Troppa Tapia
Colombia	FEDEMADERAS – Federación Nacional de Industriales de la Madera (<i>National Federation of Wood Industry</i>)	Ms. Alejandra Ospitia
Dominica	Forestry Wildlife and Parks Division, Government of the Dominica	Mr. Minchinton Burton
Ecuador	Dirección de Ambiente y Desarrollo Sostenible/ Ministerio de Relaciones Exteriores y Movilidad Humana (<i>Ministry of Foreign Affairs and Human Mobility</i>)	Mr. Walter Schuldts
Grenada	Forestry & National Parks Department, Ministry of Agriculture, Forestry and Fisheries	Mr. Anthony Jerimiah
Guyana	Guyana Forestry Commission	Ms. Indera Hoorilall, Technical Officer
Guyana	Guyana Forestry Commission	Mr. James Singh, Commissioner of Forests
Haiti	Ministry of the Environment, Watershed Management and Risk and Disaster Mitigation	Mr. Louverture Ostine,
Jamaica	Forestry Department of Government of Jamaica	Mr. Ainsley Henry
Mexico	Comisión Nacional Forestal de México	Mr. Camilo Oviedo Bautista
Paraguay	IFSA – Asociación Internacional de Estudiantes de Ingeniería Forestal (<i>International Forestry Student's Association</i>)	Mr. Steve Guzmán G.
Peru	ADEX – Asociación de Exportadores de Peru (<i>Peruvian Exporters Association</i>)	Mr. Erik Fischer
St. Lucia	Forestry Department, Ministry of Agriculture, Food Production, Fisheries and Rural Development	Mr. Alwin Dornelly
St. Lucia	Forestry Department, Ministry of	Mr. Pius Haynes, UNFF Focal

COUNTRY	INSTITUTION	CONTACT
	Agriculture, Food Production, Fisheries and Rural Development	Point
St. Vincent & the Grenadines	Forestry Department, Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour	Mr. Fitzgerald Providence
Suriname	Foundation for Forest Management and Production Control, Research & Development,	Mr. Rene Somopawiro, Director
Suriname	FAO Sub-Regional Office	Mr. Claus Martin Eckelmann, Forestry Officer
Trinidad & Tobago	Caribbean Natural Resources Institute	Ms. Nicole Leotaud, Executive Director
Trinidad & Tobago	Caribbean Natural Resources Institute	Ms. Natalie Boodram, Senior Technical Officer
Trinidad & Tobago	Forestry Division, Ministry of Agriculture, Land and Fisheries	Mr. Denny Dipchansingh



CONSULTING
ENGINEERING
MANAGEMENT

© STCP Engenharia de Projetos Ltda. All rights reserved.

All rights, permission to copy, publish, stored in a retrieval system all or parts of the document, transmit, in any form or by any means or for any purpose, except for bona fide copy by the contracting party of this document, as expressed in the title, are reserved.

STCP Engenharia de Projetos Ltda.

Rua Euzébio da Motta, 450, Juvevê
Curitiba/PR - Brazil - 80530-260 - +55 41 3252-5861
www.stcp.com.br |    