Chapter 26

Science Panel for the Amazon (SPA)

***Working Group* 9**

CONSERVATION AND SUSTAINABLE DEVELOPMENT POLICIES FOR THE AMAZON

Lead Authors: Ane Alencar and Lilian Painter

SUSTAINABLE DEVELOPMENT GOALS (SDGS) AND THE AMAZON

Lead Authors: Lilian Painter[1] and Ane Alencar[2]

Contributing Authors: Aoife Bennett[3], Paulette Bynoe[4], Camilo Guio[5], Maria M. Murmis[6], Belen Paez[7], Daniel Robison[8], Martin von Hildebrand[9], Valeria Ochoa-Herrera[10]

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Lead Authors: Lilian Painter[1] *and Ane Alencar*[2]

Contributing Authors: Aoife Bennett[3]*, Paulette Bynoe*[4]*, Camilo Guio*[5]*, Maria M. Murmis*[6]*, Belen Paez*[7]*, Daniel Robison*[8]*, Martin von Hildebrand*[9]*, Valeria Ochoa-Herrera*[10]

AUTHOR AFFILIATION:

[1]Lilian Painter, Wildlife Conservation Society, C. Gabino Villanueva Nº 340 Entre 24 y 25 de Calacoto Casilla: 3 - 35181 SM, Bolivia, lpainter@wcs.org

[2]Ane Alencar, Amazon Environmental Research Institute, ane@ipam.org.br

[3]Aoife Bennett, National Intercultural University of the Amazon, aoife.bennett@gmail.com

[4]Paulette Bynoe, University of Guyana, Turkeyen Campus, Greater Georgetown, Guyana, paulette.bynoe@uog.edu.gy

[5]Camilo Guio, Fundación Gaia Amazonas, Cl. 70a #11-30, Bogotá, Cundinamarca, Colombia, cguio@gaiaamazonas.org

[6]Maria R. Murmis, Universidad Andina Simón Bolívar de Quito, Toledo, Quito 170143, Ecuador, mariamurmis@gmail.com

[7]Belen Paez, Fundación Pachamama, Vía Lumbisí Km 2, Office 5, Quito 170157, Ecuador, belenpaez@pachamama.org

[8]Daniel Robison, Future Generations University, 400 Road Less Traveled, Franklin, WV 26807, drobison@future.edu

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[9]Martin von Hildebrand, Fundación Gaia Amazonas, Cl. 70a #11-30, Bogotá, Cundinamarca, Colombia, mvhildebrand@gmail.com

[10] Universidad San Francisco de Quito, Diego de Robles y Vía Interoceánica, Quito, Ecuador, vochoa@usfq.edu.ec

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ACRONYMS AND ABBREVIATION

CODS	Centre of the Sustainable Development Goals for Latin America and the Caribbean
GBV	Gender Based Violence
GDP	Gross Domestic Product
GEF	Global Environment Fund
GNP	Gross National Product
GtC	Gigatons of carbon
HDI	Human Development Index
IBGE	Brazilian Institute of Geography and Statistics
ICT	Information and Communication Technologies
ILK	Indigenous and Local Knowledge
IPC	Income per Capita
IPLCs	Indigenous peoples and local communities
LAC	Latin America and the Caribbean
MDGs	Millennium Development Goals
NDC	Nationally Determined Contributions
OAS	Organization of American States
OECM	Other Effective Conservation Measures
OTCA	Amazon Cooperation Treaty Organization
PHDI	Planetary Pressures-adjusted Human Development Index
SDGs	Sustainable Development Goals

SDSN	Sustainable Development Solutions Network
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

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KEY MESSAGES

- A resilient Living Amazon vision means placing the People, Peace, Prosperity and Partnership dimensions of the 2030 Agenda within the limits placed by the Amazonian biome, in particular securing 80% of forest cover and aquatic connectivity, and is incompatible with current extractive development practices.

- Trade-offs amongst the different SDGs can be reduced and synergies maximized by refining the approach and developing locally relevant indicators.

- Progress at the landscape or watershed level must be consistently scaled and supported by multilevel governance at the local, regional and national levels.

- Efforts are required to increase effectiveness and coherence between the commitments to the Paris Agreement and the 2030 Agenda.

- The SDG targets focusing on strengthening scientific and technological capacity and access to information must be complemented with biocultural or co-production approaches between western science based and Indigenous knowledge systems.

- Safeguarding the rights of nature and Indigenous people is essential to achieve the 2030 Agenda in the Amazon.

- The Amazon region has been greatly affected by the COVID-19 pandemic, possibly setting back SDG achievement. The COVID-19 crisis is a wake-up call; humans are having massive and potentially irreversible impacts on nature, and achieving the SDGs is more urgent than ever.

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ABSTRACT

Within the framework of the Sustainable Development Goals (SDGs), the 17 goals are clustered in five dimensions, each beginning with the letter P: “People, Planet, Prosperity, Peace and Partnership”. Chapter 26 discusses the relevance and limitations of definitions of the Sustainable Development Goals for each of these five dimensions, considering the Amazonian context. For the People dimension, limitations of the definition of poverty for the Amazon, the role of ecological and cultural capital, ethnic and gender disparities, and policy propositions for sustainable livelihoods are discussed. In the Planet dimension, the chapter discusses the Agenda 2030 objectives to protect the planet from degradation; including through sustainable consumption and production, sustainable natural resource management and taking urgent action on climate change, so that it can support the needs of the present and future generations. Here we discuss the limitations of this vision – a collection of natural resources to be managed as opposed to the Amazon and Nature as a Subject. In the Prosperity dimension, the chapter discusses objectives to ensure access to energy, inclusive and sustainable economic growth, employment, resilient infrastructure, industrialization and innovation, reduced inequality within and among countries, and sustainable cities and human settlements. Policy propositions to achieve Peace in the Amazon are discussed in terms of advances and gaps, and Partnerships are analyzed across borders in the Amazon. In order to achieve the 2030 Agenda multi-level governance is critical to leverage results obtained through localizing of goals, targets and indicators at a landscape and watershed scale, including self-determined Life Plans; thus, placing the People, Peace, Prosperity and Partnership dimensions within the limits placed by the Amazonian biome, maintaining 80% of forest cover and aquatic connectivity. This green and inclusive vision must be promoted in the post-COVID-19 recovery and a Global Partnership for a Living Amazon established to channel resources in recognition of the global importance of the Amazon for a healthy planet.

Keywords: Sustainable Development Goals, 2030 Agenda, Living Amazon, Nature Based Solutions.

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1 GRAPHICAL ABSTRACT

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1. INTRODUCTION

In September 2000, world leaders signed the Millennium Declaration, committing to achieving a set of eight measurable goals by 2015. These goals included the eradication of poverty and hunger; achieving universal primary education; promoting gender equality; reducing child mortality; improving maternal health; combating HIV/AIDS, malaria, and other diseases; and ensuring environmental sustainability. The Millennium Declaration presented development as a right (United Nations, 2000) and its implementation through specific goals (Millennium Development Goals, or MDGs) was successful in achieving the reduction of global poverty and infant mortality, the increase of children enrolled in primary education and in the access to drinking water, and improvements in the fight against malaria, HIV/AIDS, and tuberculosis (United Nations, 2015).

The Sustainable Development Goals (SDGs) build on this progress, respond to the widening inequality and social exclusion within many countries, and the human impacts on the environment that exceed planetary boundaries (Steffen et al, 2011). The SDGs propose sustainability across all human development dimensions, global partnerships and a human rights agenda (UN General Assembly, 2015).

2. EVALUATION OF RELEVANCE AND LIMITATIONS OF DEFINITIONS OF SUSTAINABLE DEVELOPMENT IN THE AMAZON:

In the last 20 years, an important amount of public resources has been channeled to the Amazon region for the implementation of the MDGs and SDGs, and some progress has been made in reducing extreme poverty, increasing access to basic water and sanitation, improving education, as well as in establishing protected areas and legal recognition of Indigenous lands (CODS, 2020; Collen, 2016). Presently, however, all eight countries are still lagging in current achievement of all indicators and only Colombia is on track to achieving poverty eradication indicators by 2030. Overall, given current trends, no country will achieve the SDGs in the next 50 years (CODS, 2020).

Additionally, despite some isolated policies to support a more sustainable pathway post 2015, all countries have largely continued to implement development models that are increasing social inequalities and are based on agricultural expansion, mining, oil and gas, as well as

timber extraction. Expansion of the road network, which began in the 1960s is a common driver of deforestation and encroachment into protected areas and Indigenous lands. Not surprisingly, this has increased the level of violence and social unrest across the region (see Chapters 14-20).

Countries in LAC, and those in the Amazon are not an exception, have faced challenges in identifying and reporting indicators of national progress towards the 2030 agenda (CEPAL, 2019). An effort to address this, by the Centre of the Sustainable Development Goals for Latin America and the Caribbean (CODS) with the support of the United Nations Sustainable Development Solutions Network (SDSN) has identified new metrics to compare advancement in the region (CODS, 2020). We use the measurements gathered by this Centre to evaluate success in achieving the 2030 Agenda in the Amazon.

Within the framework of SDGs, the 17 goals are clustered in five intertwined dimensions, each beginning with the letter P: "People, Planet, Prosperity, Peace and Partnership". In this chapter, we argue that in order to maintain ecosystem integrity, and promote economic prosperity and social justice for Amazonian citizens of today and tomorrow, we must look beyond the vision of nature as a collection of natural resources to be managed for social and economic development. Instead, we propose that a resilient Living Amazon vision means placing the People, Prosperity, Peace and Partnership dimensions within the limits of the Amazonian biome (Figure 26.1). This means ensuring that actions to respond to each dimension are compatible with maintaining 80% of forest cover and aquatic connectivity; increasing effectiveness and coherence between the commitments to the Paris Agreement and the 2030 Agenda, including true cost accounting of development projects.

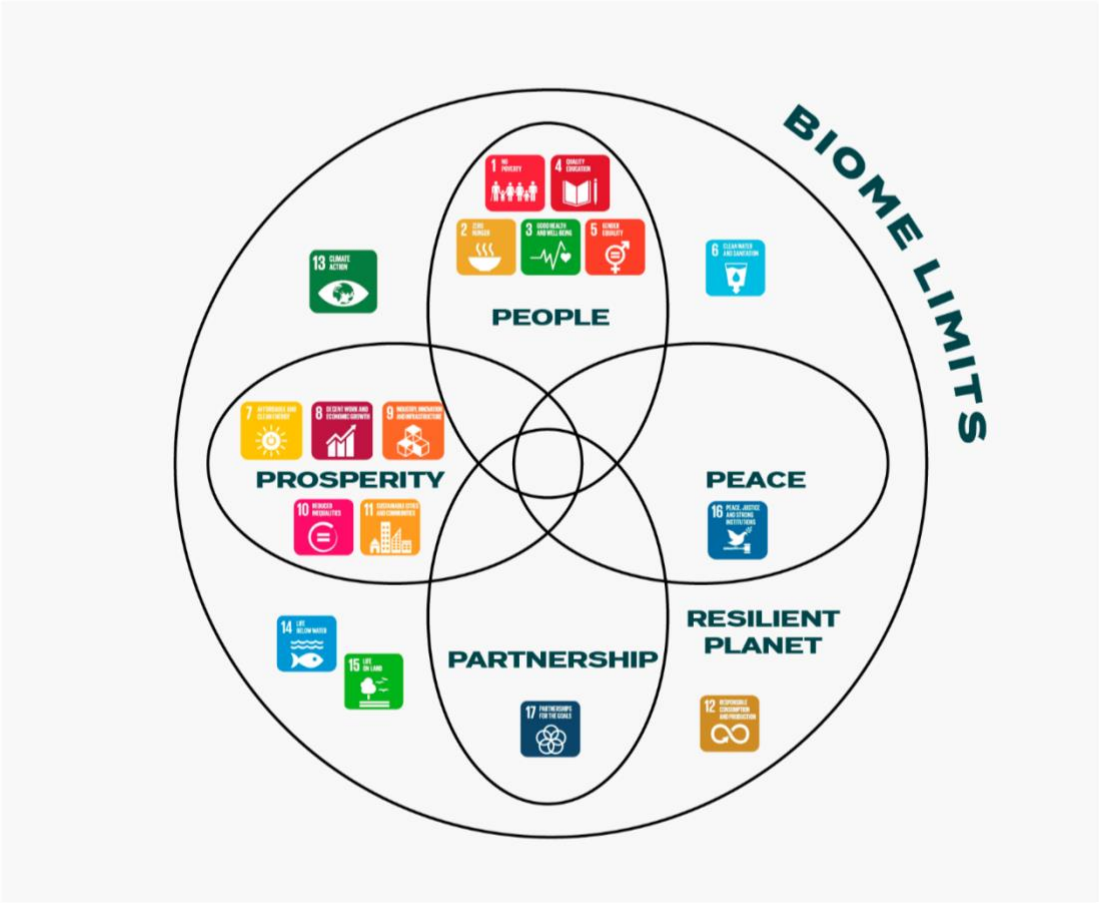

Figure 26.1 Living Amazon Vision and the SDGS.

2.1 People

The 2030 Agenda text for the People dimension states: "We are determined to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfil their potential in dignity and equality in a healthy environment". The 2030 Agenda for Sustainable Development establishes People as one of the overarching core elements, under which five of the sustainable development goals are included: No Poverty (SDG 1), Zero Hunger (SDG 2), Good Health and Wellbeing (SDG 3), Quality Education (SDG 4) and Gender Equality (SDG 5).

According to the 2019 SDG index established by the CODS, there is a moderate to significant lag in the "performance" of all countries in the region in achieving indicators for all the SDGs of this dimension (Figure 26.2), in comparison with global averages. These comparisons are made using a list of indicators selected based on the availability of data (Annex 26.1).

Additionally, in almost all cases, countries in the Amazon are not advancing at a rate or "trend" that would be necessary to achieve these goals by 2030 (Figure 26.2). This index distinguishes between negative trends, no progress, moderate progress (a lineal trend lower than 50% of what would be required to achieve the goal in 2030), and values above 50% that are classified as following the expected trajectory.

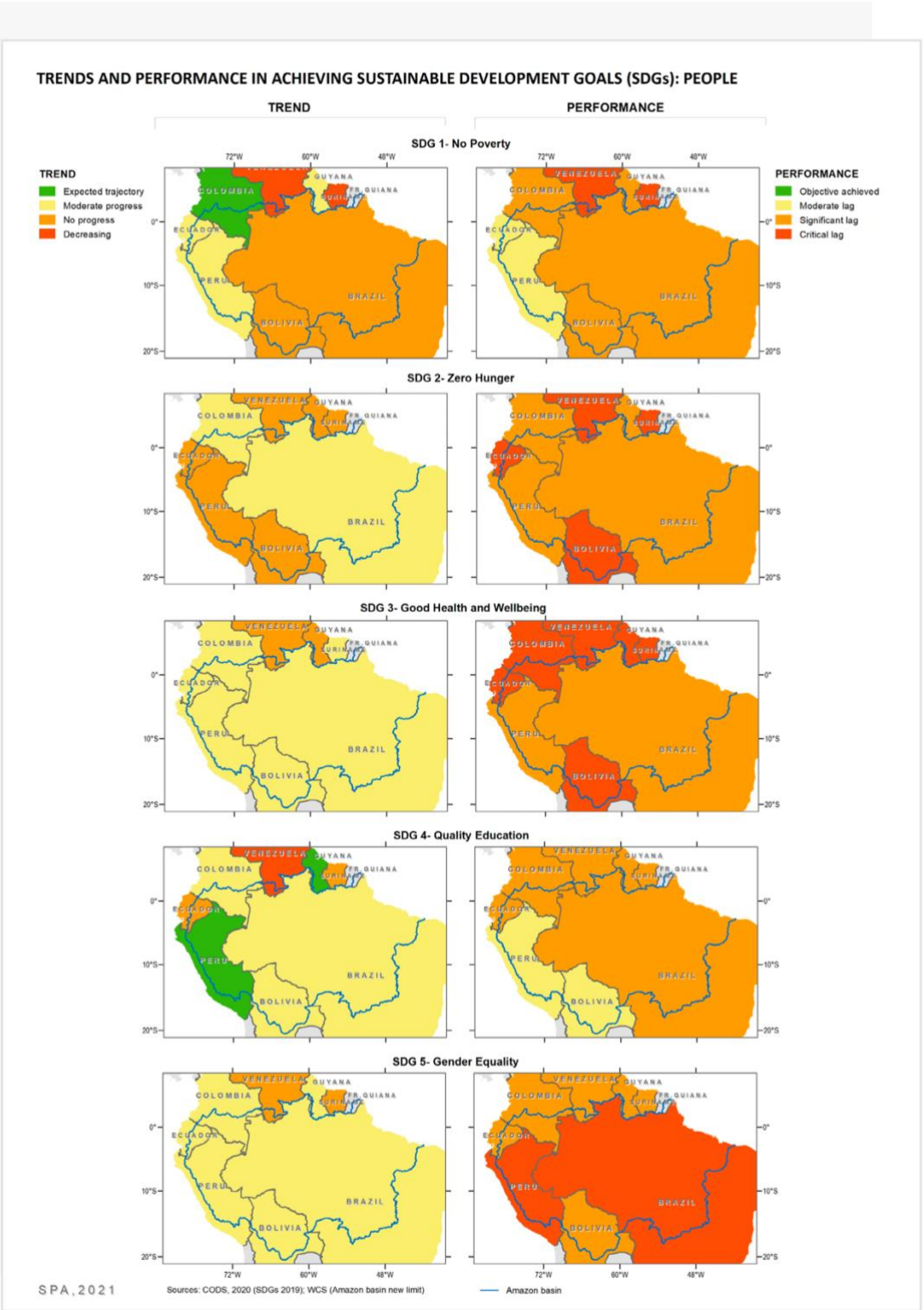

Figure 26.2 Performance and trends in achieving SDGs of the People dimension (based on 2019 Data CODS, 2020).

As a result of the COVID-19 pandemic this situation has worsened. Despite having a population that is much younger than that of US/Canada and Europe, LAC is the region with the second highest cumulative death rate as a result of COVID-19 in the world. It is also likely that there is important under reporting of COVID-19 deaths (Roux et al 2021). This is a result of weak public health systems, limits of social safety nets and high levels of inequality. Inequality is visible in the direct effects on health, for example by the fact that the cases and deaths among Indigenous people in Brazil due to COVID-19 are under-reported by 14% and 103%, respectively; and in the same manner, the incidence and mortality rates in Indigenous populations were 136% and 110% higher to the national average values (Fellows et al 2021). Moreover, uneven access to vaccines and health care systems are creating inequalities among countries in the region (CEPAL, 2021). Therefore, universal access to the COVID-19 vaccines is imperative, regional and global solidarity is required to reduce inequalities, mitigate social impacts, and speed the recovery.

The pandemic is likely to exacerbate inequality by setting back advances in reducing poverty and extreme poverty prevalence in LAC by 12 and 20 years respectively (ECLAC 2021a,b). This indirect and lasting impact of the pandemic will affect rural areas of LAC more extremely due to the higher rates of poverty, of 45.7% in comparison to an average of 30.5% in 2019; and extreme poverty of 21.2% in comparison to 11.3% overall. It will also affect children between 0-14 years old living in poverty (47.2%) and extreme poverty (19.6%); and Indigenous people with an incidence of poverty and extreme poverty of 46.7% and 17.3%, respectively (ECLAC 2021a).

The long-term impacts over poverty and inequality will also operate through education. The pandemic is affecting over 170 million students across different levels in LAC (World Bank 2021a). The remote learning strategies adopted in LAC result in exclusion for 46% of children (5 – 12 years) living in households without internet (ECLAC, 2021b). In terms of impact this is likely to result in poor performance in primary and secondary school, increased dropout rates; and decreased physical and emotional well-being, including loss of access to school meals (World Bank, 2021a). The pandemic has also affected food security in particular through the impacts of lockdowns on both physical access and household income (Devereux et al. 2020).

Regarding gender equality, women have been at the front line in the response during the pandemic. In 2019, women represented over 70% of health sector staff in the Amazon countries. Additionally, women have faced long-working days and high risk of infections, as well as greater domestic responsibilities and increased domestic violence. Adolescent fertility rates are also expected to be set back and affect the most vulnerable girls due to restriction on access to birth control, increased unwanted pregnancies due to abuse and sexual violence, and suspension of sexual education programs (ECLAC 2021b). Responses of governments to increased violence against girls and women since the pandemic have been varied; Colombia, is a good example where services to protect women were considered essential (ECLAC 2021b).

2.1.1 What are the limitations of the definition of poverty in the Amazon?

The definition utilized for understanding and remediating human poverty has shortcomings, as most operational definitions of poverty do not provide an objective concept of the 'problem' (Piachaud, 1987). Yet, despite these limitations, definitions remain central to decision making about the design and implementation of appropriate sustainable development objectives (Schreckenberg et al., 2018). Poverty is generally measured by comparing a person's or family's income derived through a specific (or multiple) livelihood strategy(ies) to a set poverty threshold or minimum amount of income needed to cover basic needs.

The Human Development Index (HDI) arose as an effort to include human welfare in development assessments that before 1990 had previously considered only Gross National Product (GNP) (UNDP, 1990). It is a composite index of life expectancy, education, and *per capita* income indicators, which are widely used today to rank countries into tiers of human development (including poverty). The HDI transcends accumulation of commodities and financial wealth to focus on conditions for long, healthy and creative lives. However, although the HDI is a critical index to guide poverty alleviation it is based on averages and can mask inequality.

This year, the Human Development Report has addressed the challenges faced in the Anthropocene age by adjusting the HDI by the pressure placed on the planet, creating the Planetary Pressures-adjusted Human Development Index (PHDI) (UNDP, 2020).

The targets of poverty eradication included under SDG 1 in Agenda 2030 include support for people harmed by climate-related extreme events and other economic, social and environmental shocks and disasters, in addition to ending poverty and ensuring social protection for all. SDG 2 seeks sustainable solutions to end hunger and to achieve food security and its targets focus on improving access to food and the widespread promotion of sustainable agriculture. The targets for SDG 3 include improving reproductive, maternal and child health; addressing priority communicable and non-communicable diseases; achieving universal health cover and access to medicines and vaccines. SDG 4 targets focus on securing access to quality education and lifelong learning opportunities.

Although there is certainly progress in the integrality of development metrics, the need for generalizations required at a global level signify an obstacle for diversity and cultural specificity. Because of the lack of similar data between different countries in the Amazon and Latin America as a whole, comparisons almost exclusively rely on income, consumption and access to social assistance programs and basic services, referring to government led health, education and infrastructure programs (CODS, 2020). The lack of mainstreaming of local solutions in development metrics hinders progress to adequately consider all forms of poverty alleviation strategies and hence to channel development funding to these diverse approaches.

The challenge of the multidimensionality and complexity of the definition of poverty and indeed sustainable livelihoods – especially on the ground and in specific contexts - is not new; and the need for subnational approaches for effective implementation is broadly recognized. “Localizing” is the process of taking into account subnational contexts in the achievement of the 2030 Agenda through the identification of goals, targets and indicators to determining the means of implementation (UN-Habitat and UNDP, 2016). The Global Taskforce of Local and Regional Governments brings together the major international networks of local governments to present their perspectives to the SDGs, climate change agenda and the New Urban Agenda. However, a similar platform in support of Indigenous territories is lacking and Indigenous peoples and local communities - IPLCs (and their institutions) own definitions of poverty remain poorly understood and operationally mostly absent in sustainable development planning, design and implementation in the Amazon. Colombia represents a notable exception because of the advances achieved in the recognition of Indigenous autonomy and access to government funds to support their consolidation. This is true despite the numerous advances by the Indigenous movement in establishing

Indigenous territorial plans in all countries in the region. Life plans share a common characteristic of representing the shared consensus for management for a collective Indigenous land, including organizational aspects, territorial zoning, natural resource use, cultural revalorization, gender, and their needs for basic services and engagement with the state and non-state stakeholders (Lehm, 2019). One way of thinking about poverty in a rich, heterogeneous and multidimensional way, is to think about the different types of capital available in a specific place.

2.1.2. Natural and Cultural Capital: Rethinking sustainable 'livelihoods'

The socio-economic circumstances of people in Amazonia are not influenced merely by their individual action and behavior, but more importantly, to various assets that are available to them and their level of engagement in the decision-making processes regarding their self-determined development (Gutiérrez-Montes et al., 2009). Further, while the poor may not possess cash or savings in the current monetized world, they may possess both material and non-material assets that provide opportunities for a household to obtain their basic needs (Davis, 1998; Verrest, 2007). The Sustainable Livelihood Framework identifies five types of livelihood assets or capitals: natural assets, human assets, physical assets, social capital and financial assets (DFID, 2000). A successful investment strategy in these capitals would lead to a sustainable society where these stocks are enhanced and not reduced or depleted.

Critically, in the Amazon natural and social capital are unique and highly threatened. The Amazon basin is the most biologically significant biome on Earth, home to the highest number of species per area, as well as the highest number of endangered species and endemic species for several taxonomic groups (see Chapter 3). In the Amazon, biological and cultural diversity are intrinsically connected, and have co-evolved as social-ecological systems, designated as biocultural diversity. Amazonian IPLCs have played an important role in shaping, protecting and restoring Amazonian ecosystems and biodiversity under different changing contexts (see Chapters 10 and 13). Hence, natural and social capital are irreplaceable and the over extraction of these capitals is already resulting in diminishing returns from these dividends today and critically threatening the rights of future generations.

Kinship and social networks, local and hybrid (including increasingly intercultural) knowledge systems, beliefs, customs, norms, language and a wide range of culturally related

activities, such as oral folklore, arts, crafts, music and gender roles can play a significant role in the sustainability of human societies and their respective sustainable livelihoods. The social organization around cultural capitals in supporting (or not) other capitals such as economic, human, physical and ecological/natural is essential to maintain or initiate sustainable livelihoods. For example, several studies show that even relatively modern supply chains of natural resources from rural areas to urban hubs, such as charcoal, are based on and rely on kin networks across the chain (Bennett et al., 2013).

Furthermore, cultural capital, through local to international coalitions and through its power to reconcile and incorporate new realities into existing knowledge and belief systems; is critical to strengthen resilience and guide adaptation to a crisis that threatens livelihood loss. Increasing attention, although still limited, is being directed towards the role of culture as a social capital that contributes or limits the development and well-being of people; as well as to the capacity for territorial management for a diversity of objectives including conservation. This is best illustrated in the Amazon by initiatives linked to spiritual values such as the Amazon Sacred Headwaters Initiative in Ecuador and Peru (Koenig, 2019); and with efforts to implement Indigenous territorial management plans or Life Plans in their multiple dimensions (Lehm, 2019).

Given the scale of threats and connectivity requirements to maintain the natural capital of the Amazon, it is important to remember that this cultural capital is not limited to the local level. There are multi-level vertical organizational structures, as well as horizontal linkages between Indigenous territorial organizations within the same country, and beyond enabling new dynamics of political representation and empowerment within the international policy arena. Development in the Amazon can therefore be considered a cultural as much as an economic or social process, and thus it is necessary to increase or enhance awareness of locally-specific cultural traditions, strengths and perspectives through intercultural research and communication.

2.1.3. Ethnic and gender disparities in the Amazon

The 2030 Agenda has three guiding principles: i) human rights-based approach; ii) leaving no one behind; and iii) gender equality and women's empowerment. SDG 5 aims to ensure equal opportunities for women and girls by removing discrimination and violence, as well as by

improving access to paid employment, sexual and reproductive health and reproductive rights, and decision-making power.

Brazil and Peru have critical lags in achieving gender equality and all other countries show significant lags in relation to average global performance (Figure 26.2). Moderate progress is being achieved across the region except for the case of Suriname and Venezuela, for example through a reduction in the gender gap in terms of access to education. However, reported gender-based violence is high, for example in Colombia, 39% of Amazonian women have recently indicated they have been victims of physical violence and the region has the highest percentage of female rape in the country, with 7 women per 100 (Collen, 2016). In 2014, the United Nations International Children's Emergency Fund (UNICEF) reported a third of women in Guyana had been a victim of Gender Based Violence (GBV; Contreras-Urbina 2019).

On the other hand, each of the 17 Sustainable Development Goals and targets are relevant to Indigenous peoples' rights and well-being. To make Indigenous peoples visible and capture the inequalities they face across all the Sustainable Development Goals, Indigenous peoples have been advocating for data disaggregation and community-based data in official statistics. Although there has been some progress in reducing inequalities, Indigenous peoples, especially Indigenous women, still face higher illiteracy rates, higher infant mortality, the highest rates of maternal fertility, lower education rates, and the highest poverty levels (Collen, 2016). Nevertheless, the subsistence importance of fisheries, wildlife and subsistence agriculture are not taken into account in these global measurements. This is despite the fact that the inclusion of these non-market resources can half the estimates of poverty in Indigenous communities with access to healthy rivers and forests (Salinas et al., 2017). Hence, consolidating and maintaining access to ancestral lands and a healthy environment is a key strategy to implement the 2030 Agenda in the Amazon, in particular with regards to inclusive pathways. Documenting and communicating this contribution are also key to increase government support to Indigenous territorial management as part of the national poverty alleviation strategies.

Ethnic and gender disparities in the Amazon arise from deep rooted systemic historical dynamics and have important cultural, psychological and identity reach, as well as generation of distrust which impedes progress. There is structural violence, where social structures or institutions prevent vulnerable people from meeting their basic needs, and injustice at every

level of governance. These power dynamics result in lack of recognition of land rights of Indigenous people; limited participation of women and Indigenous groups in decision-making processes and poor access to health care, education and employment for rural communities (World Bank, 2015).

2.2 Planet

The 2030 Agenda text states that "We are determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations."

In this section, we evaluate the most relevant aspects of this vision and the key gaps existing for the Amazon biome. The 2030 Agenda for Sustainable Development, establishes "Planet" as one of the overarching core elements, under which four of the sustainable development goals are included: Clean Water and Sanitation (SDG 6), Responsible Production and Consumption (SDG 12); Climate Action (SDG 13) and Life on Land (SDG 15). Conserve and sustainably use the oceans, seas and marine resources (SDG 14) is not included because it is not relevant for the Amazon biome.

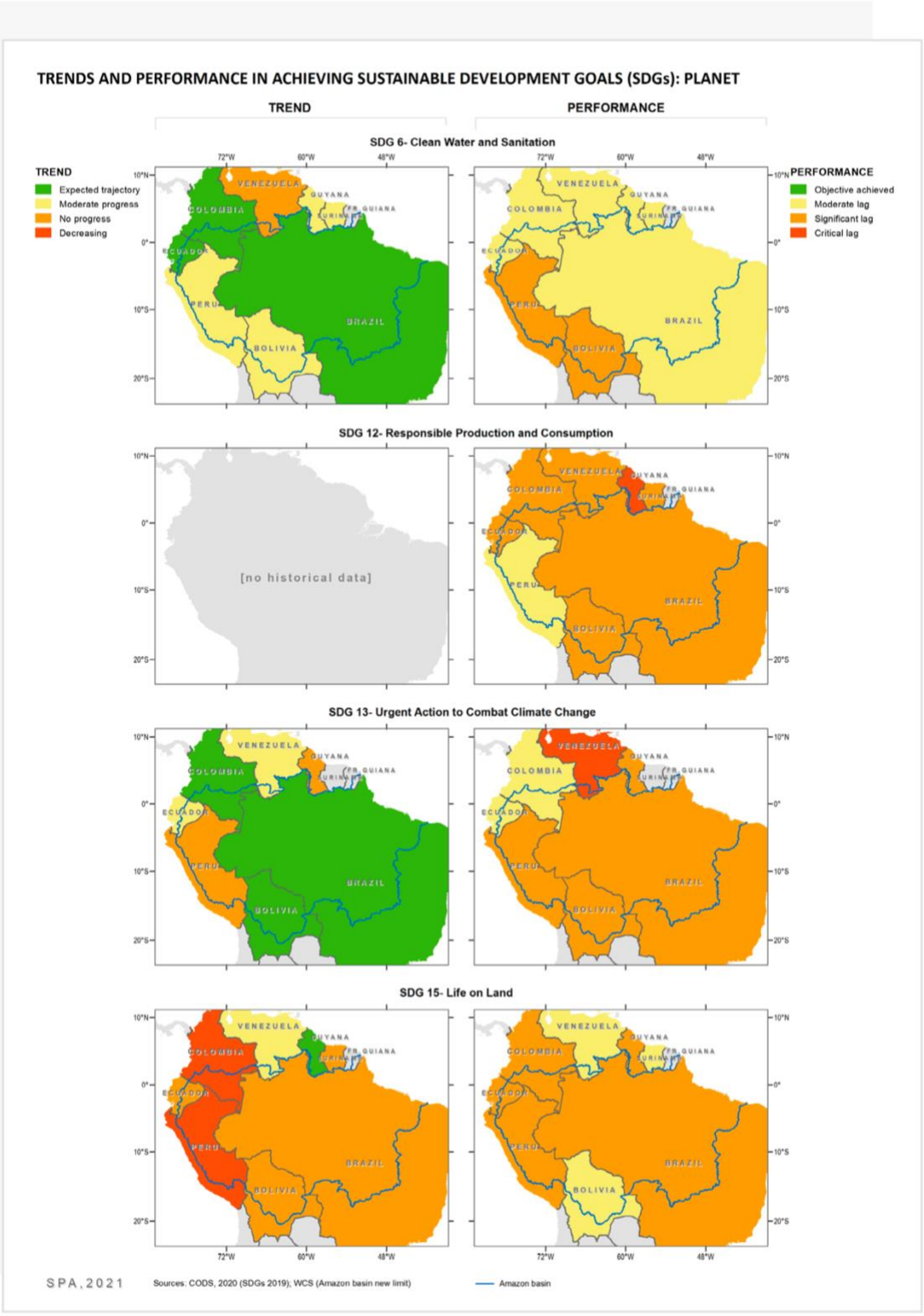

Figure 26.3 Performance and trends in achieving SDGs of the Planet dimension (based on 2019 Data CODS, 2020).

2.2.1. SDG 6: Clean Water

Targets for SDG 6, "Clean Water", include universal and equitable access to drinking water and sanitation; improved water quality and quantity by addressing sources of pollution and increasing efficiency of use; integrated water resource management, protection and restoration of critical ecosystems; international cooperation and capacity building, as well as local community involvement. These targets reflect the importance of natural ecosystems for water provision and access to water quality and quantity as a basic human right and a key requirement for sustainable development. They also reflect the need to address pollution, current pressures and conflicting demands for fresh water in a context of climate change.

SDG 6 on clean water and sanitation provides a unique opportunity to accelerate progress on the 2030 Agenda. Water is crucial for reducing poverty and inequality, and enabling peace, justice and sustainability. Mainstreaming water in the national and subnational planning of other sectors is critical for increasing policy coherence and effectiveness, for optimizing the use of limited resources available to implement the 2030 Agenda, and for integrating strategies to end poverty. As such, in the Amazon and all of Latin America, there have been advances in relevant legislation, including the recognition of access to water as a human right. However, access to safe water remains a challenge.

Throughout the region, illegal mining, waste disposal, agroindustry and other activities are impacting water quality and people's health (Rocha-Roman et al., 2018). By 2015 mining polluted at least 30 rivers in the amazon and affected 88 Indigenous lands, including 32 in Peru and 29 in Colombia (Vallejos et al 2020). Pollution of surface waters also threatens human health and aquatic life in particular in areas of the greatest expansion of agroindustry. For example, in Brazil, after flexibilization of the process of authorization of pesticide use, in 2019 alone the government allowed the use of at least 474 new agrochemicals, including many banned in other countries (Ferrante and Fearnside, 2019).

The Amazon is the largest watershed in the world, but nevertheless the Regional Technical Team on Water and Sanitation of the World Health Organization (WHO), states that in 2018 out of the 8.5 M people in Latin America that lack access to potable water supply, the majority are found in Brazil, Colombia, Peru, Ecuador and Bolivia. In fact, according to Fundación Aquae (2017), in 2020 89% of the people living in the Peruvian Amazon had no access to drinking water; and according to the Brazilian Institute of Geography and Statistics

(IBGE), 38% of households in the state of Amazonas had no household connections to running water in 2018 (WHO and UNICEF 2020). This lack of access to domestic basic sanitation services is an obstacle to regular hand washing, a critical action to reduce COVID-19 transmission. In addition, because only a limited number of households in the Amazon are served by sewage collection or treatment, there is a significant emission of pharmaceuticals and other wastewater contaminants into freshwater ecosystems, in particular downstream from important urban areas such as Manaus (Fabregat-Safont et al 2021).

Overall, the Amazon, as well as the rest of Latin America, have made moderate progress in providing access to water and sanitation to most of the population, but this progress is markedly slower in the rural areas (CEPAL, 2019) and the region still shows a moderate lag in its performance in comparison to average performance in achieving selected indicators. Brazil, Colombia and Ecuador are following a trend that will allow them to ensure adequate access to water and sanitation to all their population by 2030; but, Guyana, Peru, Bolivia and Suriname will not fully reach this goal, in particular Peru and Bolivia which have a significant gap in coverage to date. Meanwhile, Venezuela's progress has halted in advancing towards this goal (Figure 26.3 and Annex 26.1 for details of indicators used). Additionally, although water provision services have improved, sewage treatment has not progressed at the same speed of population growth and there are still marked asymmetries between urban and rural areas. Access to water is not always stable and of high quality because of droughts and poor infrastructure. The Amazon countries are facing greater frequency, intensity and geographic extent of floods and droughts (see Chapter 22).

Paradoxically, many of the principal cities in the region are increasingly experiencing water scarcity as a result of poor planning, climate change and deforestation (World Water Week, 2020). These threats are broadly included in the clean water targets measured through three dimensions: i) developing an enabling environment, ii) appropriate institutional capacity, and iii) financing and management instruments.

The creation of the necessary institutional framework for water management by basin is very heterogeneous in its attributions, as well as access to financing, structure, access to technical support and others. Brazil, Colombia, Ecuador, Venezuela and Peru established basin management bodies by law. Bolivia implements watershed management programs, while Guyana has a draft policy and roadmap for Integrated Water Resource Management. Suriname has yet to develop an institutional basis for guiding integral actions for

management of watersheds beyond specific sectorial interests. Nevertheless, even where this institutional framework exists, there are very few cases where these instances have the necessary technical capacity, continuity, enforcement, international coordination, and financial resources to achieve integrated watershed management objectives fully (Dourojeanni Ricordi, 2020).

Although the need to work across different scales, including the transboundary scale, is addressed in the 2030 Agenda (UN Water, 2020), the role of the Amazon for water provision at a global scale is not. Given the Amazon's size and political divisions, both conservation and sustainable development projects are not always planned at the appropriate Amazon Basin scales. It has been particularly difficult to address these threats at the scales at which Amazon aquatic ecosystems function but, there are some encouraging advances. In terms of cross-border agreements for watershed management, there is increasing progress between Colombia, Peru, Brazil and Ecuador in the Putumayo basin; and between Bolivia, Brazil and Peru in the Madre de Dios watershed. All eight countries have also come together through an agreement between the Amazon Cooperation Treaty Organization (OTCA), the United Nations Environment Program (UNEP), the Global Environment Fund (GEF) and the Organization of American States (OAS) to implement a Project for the Integral and Sustainable Management of Cross-border water resources in the Amazon river basin (OTCA/PNUMA/OEA, 2006).

Connectivity between Indigenous territories and protected areas at a landscape and watershed level are an enabling condition; thus, Indigenous people should be seen as key stakeholders in achieving integrated watershed management, and not only passive recipients of a focus on equitable access to basic services. In addition, the indicators on the transboundary cooperation agreements should address the level to which Indigenous communities from different countries are cooperating on territorial management. To address this participation indicators could include recognition of rights and integration of Indigenous Life Plans found within the same watersheds by relevant sectoral policies; as well as degree of inclusion of Indigenous people in the implementation of these policies as rights holders.

The cultural importance of water and sacred nature of rivers is also an aspect that is critical for integrated river basin management with the participation of Indigenous people, many of whom have a deep connection with water-bodies identifying them with ancestors, forest spirits and their history; as is the case of the Kukama (WCS, 2016), and the sacred

headwaters of the Amazon initiative in Peru and Ecuador (Koenig, K. 2019). The cultural value of water does not seem to be contemplated in Goal 6. Although culture could come into play in the references to public participation and stakeholder groups (Target 6a and 6b), there is no explicit mention and could easily be overlooked. There are additional opportunities to specifically include Indigenous participation in monitoring efforts of target 6.5, which evaluates the degree of integrated water resources management implementation, by including culture in environmental flow requirements (target 6.4.2). The role of women in the affirmation and transmission of these cultural values is particularly important in the Amazon. Thus, the connections between Goal 5 and 6 are critical, specifically, ensuring that women are empowered to participate in activities across Goal 6 targets and allowed to include the cultural values of water in the concepts encompassed by Goal 6. Recent advances in promoting intercultural dialogue between Indigenous and Local Knowledge (ILK) with scientific knowledge represent an opportunity to integrate cultural management practices in national or regional watershed management plans.

2.2.2. SDG 12: Responsible Production and Consumption

With regards to sustainable production and consumption, SDG 12 targets and indicators reflect the impact of socioeconomic and demographic changes resulting from the increasing numbers joining the middle class, and the need to respect the planetary boundaries when dealing with economic growth. Action to address climate change is prioritized because of its multiple impacts on nature and people, in particular marginalized groups. These targets recognize that there are limits to the extent and intensity of natural resource extraction (See Figure 26.1 and Annex 26.1 for details of specific indicators).

In Colombia, Bolivia and Ecuador retail food losses are equivalent to the requirements to reduce by half the percentage of the undernourished in their populations; whilst Brazil and Guyana, who have already achieved this goal, could reach zero hunger with the amount of food wasted from retail. Hence, addressing food loss and waste reduction is key to eradicate hunger in the Amazon (FAO, 2015).

Colombia, Ecuador and Peru have all established strategies to promote a circular economy since 2019, and all Amazonian countries have laws or strategies for waste management. The consumption of single-use plastic has increased during the pandemic, with an exponential

increase in the use of gloves, masks, food packaging, wrapping, among others. Although the global production of single-use plastic increased worldwide, recycling programs were suspended and negatively affecting waste pickers which account for 1.8 million people in LAC and are responsible for recovering around 50% of recycling material (BID, 2021).

Making use of digital innovation will be key to realizing circular economy opportunities. Colombia, Brazil and Bolivia are countries that are rapidly adopting digitally-driven innovation (Muruzábal, 2018). Nevertheless, in the absence of policy, fiscal and training support, these opportunities are likely to be taken up by larger companies, leaving small businesses at a disadvantage. The same risk for monopolization is present in the agricultural sector. In Bolivia, Ecuador, and Peru, the agricultural sector employs approximately 30 percent of the population, of which a large proportion are small holders. Therefore, a transition to a circular and nature-based economy must prioritize smallholders and Indigenous land rights, as well as food sovereignty in order to avoid stimulating land grabbing by large-scale production of commodities by agro-businesses (Mills 2015). This transition also requires support from the international community in order to create and maintain sustainable food systems (e.g., European Union-Mercosur agreement that includes commitments to tackle deforestation as well as social safeguards). Close international cooperation through robust standards is necessary to ensure that the transition to a circular bioeconomy delivers real environmental benefits and to promote innovation in high value-added sectors thorough research.

The goal for responsible production and consumption aims to decouple environmental degradation from economic growth; promote resource use efficiency by applying life cycle thinking; and support developing countries take a different pathway to that historically taken by most developed countries. In the case of Amazonia, this pathway may involve leveraging knowledge regarding production and natural resource management practices that were traditional before the influx of “modernity”, rather than new practices altogether. Nevertheless, these traditional practices will need to be adapted to a different context including increased pressures and chronic labor scarcity in rural households.

In order to achieve transformative change, and reverse the current advancement of degradation in the Amazon, two elements are missing in these targets and their indicators. On the one hand, indicators related to sustainable management and efficient use of natural resources do not consider resource flows driven by demands that originate in markets located

outside the region. In this case, consuming countries do not account for the environmental impacts and human costs that their demands for beef, soy, oil and gas, timber and gold generate. Secondly, this vision of production and consumption is limited by the presentation of nature as a mere collection of natural resources to be managed and whilst excluding the existence of different spiritual and immaterial connections with nature, as well as its value for all life on Earth (see Chapter 10).

These different value systems represent an important potential for coupling responsible production and consumption with respect for human rights and with opportunities arising through collaboration with Indigenous people. These opportunities include strengthened governance over Indigenous territories covering more than a quarter of the Amazon and the livelihood and climate benefits this entails. Additionally, strengthening biocultural or co-production approaches between Western and Indigenous knowledge systems would complement the targets focusing on scientific and technological capacity; as well as increased access to relevant information and awareness. Co-production and biocultural approaches do not imply a return to the past but Targets 12.2 (sustainable management and efficient use of natural resources), 12.5 (reduce waste generation) and 12.8 (information and awareness) could all include the traditional production practices, for example, reintroducing leaves used as food wrapping rather than promoting the use of biodegradable plastic or the recycling of petroleum-based plastic wrapping. Target 12.7 (public procurement practices) should mention purchase of local and traditional products as a priority. Consistent with this, information and awareness programs (Target 12.8) should aim to include traditional practices and knowledge that are conducive to the attainment of Goal 12. In addition, it is critical that Target 12.c. on the removal of harmful fossil fuels "to reflect environmental impact" and explicitly mention "social impacts".

2.2.3. SDG13: Urgent Action to Combat Climate Change

SDG 13 targets relate to urgent action to combat climate change and its impacts; address resilience and adaptive capacity to hazards and natural disasters; integration of climate change measures into national policies; improved education and capacity building; global financial mobilization; and inclusive and climate resilient planning and management. The urgency of addressing climate change in the Amazon is two-fold: i) the Amazon is a giant

carbon reservoir holding 100-150 gigatons of carbon (GtC) (see Chapter 6) and its forest a giant cooling mechanism, and therefore any solution to tackle global climate change must consider reducing deforestation in the Amazon; and ii) climate change and deforestation threaten to reduce the whole of the Amazon as a water processor of global importance by reducing atmospheric moisture transport and respective recycling of precipitation (Chapter 22). In fact, studies show that the Amazon is close to reaching a point of no return where tropical forest could be replaced by savannah-like degraded ecosystems over 60% of the basin (Nobre et al., 2016).

SDG 13 is relevant to the Amazon at four scales: local, national, regional and global. Targets and indicators included in this goal, as currently stated, relate to the national level, except for the commitments to global financial mobilization. All countries in the Amazon are signatories of the Paris Agreement and are implementing policies to combat climate change under the United Nations Framework Convention on Climate Change (UNFCCC). Table 26.1 presents the advancement of Amazonian countries in fulfilling commitments to the Paris Agreements. All countries have submitted their INDCs and NDCs, and Brazil, Colombia, Peru and Surinam have updated their NDC. Mitigation targets are included in many of the commitments but not by Bolivia, Guyana and Suriname. All communications, except Brazil, include commitments to increase adaptation capacity. Half have included specific policy frameworks to enhance the NDCs and potential alignment with the 2030 Development Agenda is mentioned in particular in Colombia and to a lesser degree by Venezuela, Suriname, Guyana and Bolivia.

Table 26.1. Advancement of Amazonian Countries in fulfilling commitments to Paris Agreement. Developed with data from Climate Watch (2020).

	Bolivia	Brazil	Colombia	Ecuador	Guyana	Peru	Suriname	Venezuela
Submitted INDC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NDC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Updated NDC	No	Yes	Yes	No	No	Yes	Yes	No
Inclusion of mitigation targets	No	Yes	Yes	Yes	No	Yes	No	Yes
Inclusion of adaptation targets	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Specific Legal/policy	No	Yes	Yes	Yes	No	No	Yes	No

frameworks to enhance NDC								
Potential alignment between NDCs and SDGs	1	0	7	0	2	0	3	3

The Paris Agreement is a powerful tool for action because it involves specific targets to which governments can be held accountable. Additionally, there are linkages between the SDGs indicators and the expected results of NDC implementation. Nature-Based Solutions underpin the Sustainable Development Goals by supporting vital ecosystem services, biodiversity, and access to fresh water, improved livelihoods, healthy diets, disaster risk reduction, and food security from sustainable food systems. It is important to highlight that the COVID-19 pandemic only had a temporary effect in reducing CO_2 emissions, and the total emissions are still increasing and heading for a temperature rise of +3^{o}C during this century (UNEP 2020).

Reducing deforestation and restoring forest cover is recognized within the commitments of all Amazonian countries within their Nationally Determined Contributions (NDC) documents (UNFCCC, 2021). However, in order to address the rapid land use change and deforestation arising from the direct, indirect and cumulative impacts of threats that operate across the biome, such as increased road infrastructure development, oil and gas, gold mining and agro-industrial development; we need conservation and restoration actions (see Chapters 27-29) operating under a common regional vision (see Chapter 25) and addressing the international and global forces that may be driving these phenomena. Additionally, a common regional vision is required if we are to avoid the effects of deforestation in one area affecting the South American Monsoon system (Boers et al., 2017). Initiatives such as the NDC partnership (2018) and NDC Latin America and the Caribbean (LAC; Samaniego 2019), a digital information platform to support action on Climate Change in Latin America and the Caribbean, represent models that can guide the establishment of an Amazonian regional vision to address climate change. At a subnational scale, the progress achieved in engaging local governments in the 2030 development agenda is encouraging (though communities of practice such as the Local 2030 network), and local climate change action is critical to strengthen the existing targets and indicators of SDG 13, for example, through the recognition of different identities and knowledge systems within countries. Recognition of the potential of these local differences to enhance education, awareness raising and human and institutional capacity programs leads to improvements in climate change mitigation,

adaptation, impact reduction, and early warning. Furthermore, lack of such recognition could undermine these objectives. Encouraging governments to consider local knowledge and practices in the climate change measures of Target 13.2 would highly contribute to attaining SDG 13.

2.2.4. SDG15: Life on Land

Targets for SDG 15 address actions to protect, restore and promote sustainable use of terrestrial ecosystems with equitable access and benefit sharing; sustainably manage forests, combat desertification, halt and reverse land degradation, prevent biodiversity loss; address illegal wildlife trade; integrate ecosystems and biodiversity into development policies; and mobilize financial resources.

All these targets highlight the major direct threats to terrestrial ecosystems; which must be addressed through actions outside of protected areas, for example within Indigenous lands, allowing for conservation of forests at the Amazon scale. However, these targets and indicators require implementation to consider the particular values and urgent threats to the Amazon (Science Panel for the Amazon, 2020). For SDG 15, four essential approaches are key: i) the inclusion of the mutually dependent relation between forests and rivers, and bordering or related ecosystems, such as wetlands, leading to the need to include conservation and management actions at a watershed scale; ii) the inclusion of biodiversity and species focused management, and not only ecosystem conservation, as management objectives outside of protected areas; iii) the recognition of spiritual and cultural values of nature, and thus their inclusion as objects of the protection and restoration measures for the sustainable use and management of land; and iv) the inclusion of IPLC's traditional knowledge and livelihood systems into national and local planning and development processes, strategies and accounts.

In terms of interventions, Amazonian conservation at scale can be achieved by building on the current designation of 50% of the region as national and subnational protected areas, as well as Indigenous lands (RAISG 2019). In order to maintain 80% of forest cover in the Amazon, required to avoid Amazon's potential tipping point (Lovejoy and Nobre, 2019), these areas need to be connected through new protected areas or OECM (Other Effective Conservation Measures), sustainable natural resource use management and restoration interventions. The Leticia Pact signed in 2019 by all countries in the Amazon, except

Venezuela, represents an opportunity for coordination across the biome to maintain healthy forests and rivers by: addressing natural disasters and ecosystem degradation caused by illegal mining and fires; establishing early warning systems for deforestation and degradation; monitoring of climate change and biodiversity at a watershed scale; promoting responsible consumption and bio economy; empowerment of women and Indigenous people; citizen education and mobilization of international finance in support of these objectives.

2.3 Prosperity

In the 2030 Agenda, the Prosperity dimension is summarized as: “We are determined to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.” The Prosperity dimension includes the following SDGs: SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all), SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all), SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation), SDG 10 (Reduce inequality within and among countries), and SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable).

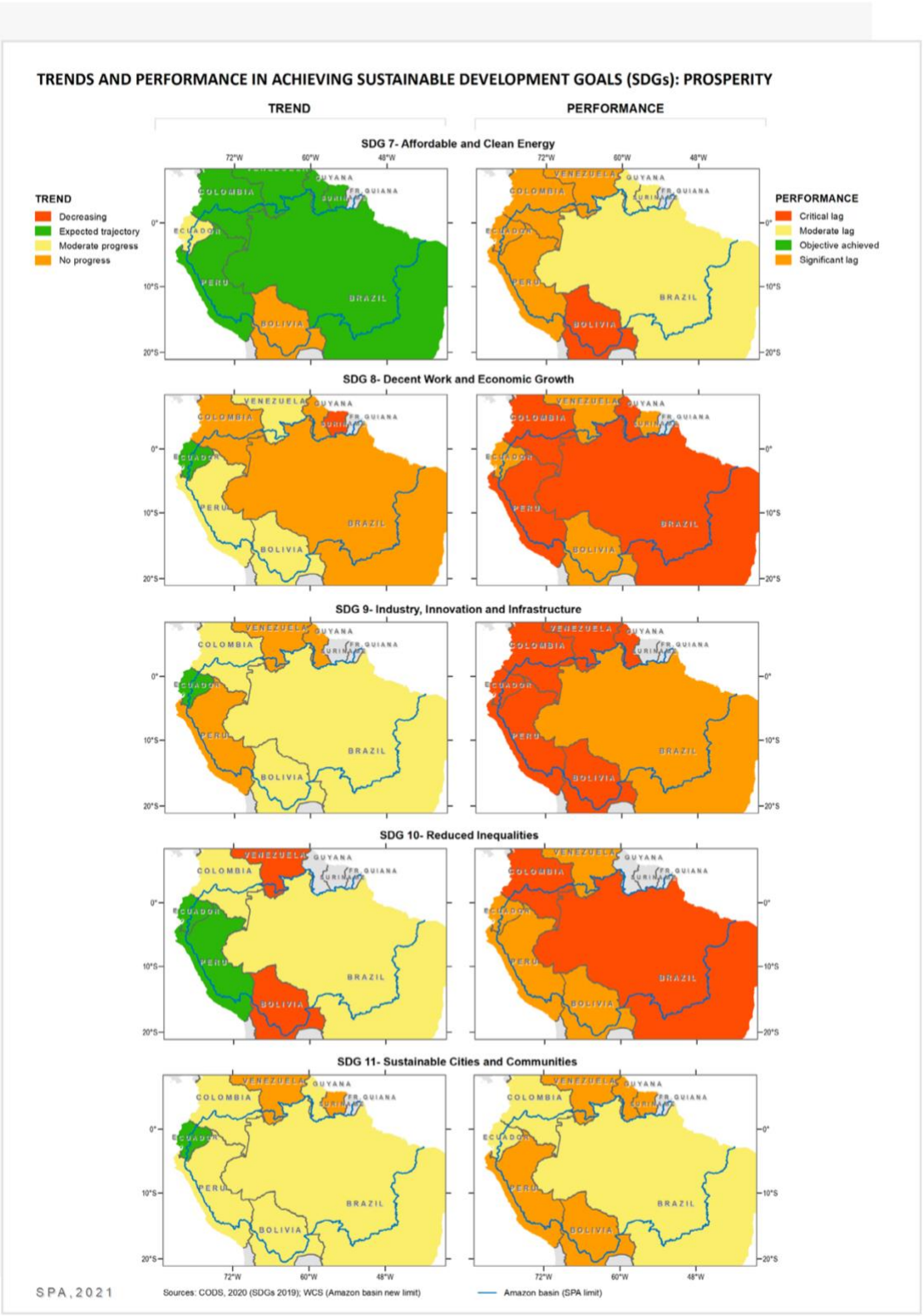

Figure 26.4 Performance and trends in achieving SDGs of the Prosperity dimension (based on 2019 Data CODS, 2020).

Since the 1990's there has been noteworthy progress in improving access to electricity both in the urban and rural areas of Latin America (Iorio and Sanin 2019) and current trends show most countries are moving towards achieving this target. Despite the developments in research and innovation, practical application of sustainable energy projects remains difficult and costly. As a result, there are still moderate to significant lags in comparison to global averages in access to affordable and clean energy in all countries in the region, and a critical lag in Bolivia (Figure 26.4 and Annex 26.1 for details of specific indicators). It is also important to highlight that this indicator does not include trade-offs between hydroelectric project generation in lowland Amazonia and emissions from forest loss, nor does it consider impacts on ecosystems and aquatic connectivity and local fisheries, with the Madeira basin being the most impacted by current and future planned dams (Santos et al., 2020).

With regards to SDG 8, the countries in the Amazon basin show significant to critical lags in performance, and varying trends towards achievement of decent work and economic growth.

The modest contributions of Amazonian regions to their country's Gross Domestic Product (GDP) is growing, but this growth is a result of unsustainable economic activities linked to habitat loss and degradation. This represents a negative spiral as ecosystem services support economic growth and jobs in key sectors such as agriculture, tourism, forestry and fisheries, pharmaceuticals, textiles and food. A knowledge-based, sustainable use of biological resources or bioeconomy, is the only way to break that paradox while maintaining climate stability and a healthy environment, key requirements to maintaining infrastructure and reducing loss of working days and productivity due to social vulnerabilities to natural hazards (ECLAC/ILO, 2018). Therefore, when we discuss prosperity we should be primarily interested in the benefits from regenerative or sustainable practices (Fath et al., 2019). For example, throughout the countries that share the Amazon, Income Per Capita (IPC = Gross Domestic Product divided by population) greatly increased between 2000 and 2014. The region as a whole tripled its IPC in that period (World Bank, 2020). This was a result of increased prices worldwide for basic natural resources, both renewable and non-renewable, and accelerating extractive activities across the region. These indicators need therefore to be tied to specific regenerative development pathways. Inclusive and sustainable industrialization and innovation feature strongly in SDG 9 of the 2030 Agenda for Sustainable Development and are key to move the countries in the region beyond the role of exporters of raw materials and create quality jobs in the urban and rural areas. An obstacle for

this transition is access to technology, information and communication technologies (ICT), and relevant training and capacity building (UNIDO, 2015).

2.3.1 Inequalities in generation of wealth from Amazonian resources

There are significant inequalities in the Amazon according to 2018 Gini coefficients, ranging from 0.42 in Bolivia to 0.54 in Brazil (World Bank, 2021b). The informal sector dominates employment across the Amazon, in rural areas where opportunities for formal employment are rare, and even in urban areas. In 2019, the informal sector represented 64% of employment in Bolivia, around 60% in Ecuador and Peru, and ranged down to 41% of the employed in Brazil (CEPALSTAT, 2021). The COVID-19 pandemic has negatively impacted the labor market and income, and as expected inequality and vulnerability have increased in the region. This is not surprising as only 21.3% of the population in Latin America can work remotely. In the second quarter of 2020 formal employment rates contracted by 10.7% in Brazil, 12.0 % in Bolivia, 16.1 % in Ecuador, 21.8 % in Colombia, 34.9% in Peru and across the region affecting principally women (ECLAC, 2021a). Unemployment has also impacted informal workers, for instance in the case of Brazil, informal employment rate dropped in the second quarter of 2020 to 36.9% (4.3% lower than in the same period in 2019), affecting principally young people aged 14 -17 years (35.2%) and 18-24 years (21.9%) (ECLAC 2021a). To offset the COVID-19 pandemic, social protection measures were adopted in the region. A total of 75,237 million USD of cash and in-kind transfers were conducted by South American governments between March and December of 2020. However, those measures are not enough to stop poverty, inequity, and vulnerability. Inequality has increased in the region, the reduction in the Gini index was slowed before the pandemic, and has worsened by 2.9% in the last year (ECLAC 2021a).

Structural changes are required to address inequality. Across Latin America, women are closing the gender gap in their participation in the labor force, but policies are still required to better support their participation, e.g., strengthening their legal rights, improving childcare, educational and job training policies (Novta and Wong, 2017). There are numerous obstacles for regenerative wealth generation by Indigenous peoples and local communities that prevent them from accessing opportunities from their deep knowledge of biodiversity and maintain the cycle of degradation and poverty linked to extractive activities. These obstacles include

legal land rights, access to financial services, niche markets, and ICT. Additionally, as recognized by the Leticia Pact, the global inequality of access to technology and industrialization needs to be addressed to shift the region from a source of primary natural resources (see Chapter 11) towards knowledge and service-based industries, or bioeconomy (see Chapter 30).

Finally, inequality is also an issue that must be considered in relation to SDG 11 (Sustainable cities and communities), in particular in a region where rapid urbanization has led to lags in providing management of waste, good services and protection from environmental risks for the most vulnerable. The need to improve this poor performance (Figure 26.4) is recognized by cities and local governments of the region (UCLG peer learning 2018), and in discourse also is the need to learn from the past and propose a new development model based on bio economy. The urban constituency is also needed to support protected areas and Indigenous people in their increasing struggles to defend their lands from encroaching development; and propose a joint urban/rural resilient Amazon vision (see Chapters 14, 25 and 34).

2.4 Peace:

The 2030 Agenda text for the Peace dimension states: "We are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development". SDG 16 and its targets respond to peace, justice and strong institutions. All countries in the Amazon have significant or critical lags in indicators related to safety, perception of corruption and rule of law; and only half of the countries are making moderate progress to improve these indicators (Figure 26.5 and Annex 26.1 for details of specific indicators).

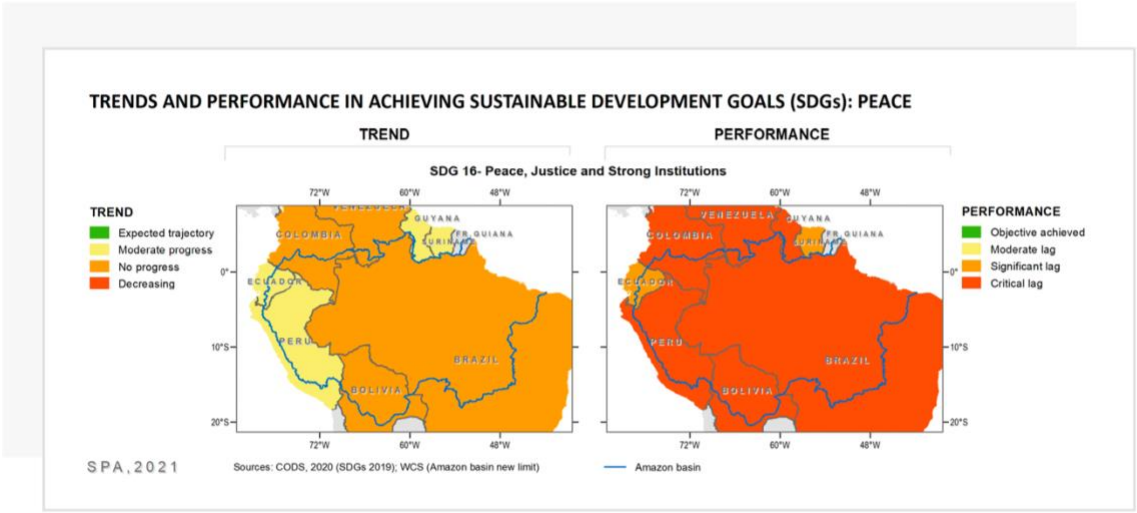

Figure 26.5 Performance and trends in achieving SDGs of the Peace dimension (based on 2019 Data CODS, 2020).

Corruption has historically been a hurdle for all of Latin America, undermining growth, democracy and governance, and the rights of millions (Simon and Allbers, 2020). The region remains one of the most violent in the planet, with Venezuela having the highest number of intentional homicides per 100,000 (56.3) and Suriname the lowest (5.5) (UNODC, 2020). Violence is highest in poor urban neighborhoods and on the outskirts of cities and poverty and inequality at the local level are strong predictors of violence. These are driven by rapid and unregulated urbanization, a dearth of quality jobs; limited law and order institutional capacity; and a vicious cycle of worsened quality of life and increased insecurity (IDB, 2018). The production, trafficking, and distribution of drugs in LAC has also been behind the increase in violence in recent years.

2.4.1 Environmental justice, human rights and peace in the Amazon

The United Nations has drawn attention to the challenges associated with the prevention, management and resolution of natural resource-induced conflicts that could well define global peace and security in the twenty-first century (Ban Ki-Moon, 2012). Across different time periods military, religious, commercial and industrial ventures have looked to profit from the abundance of resources in the Amazon. Historical booms such as rubber and Brazil nut extraction resulted in displacement, annihilation and enslavement of Indigenous people. Today, the Amazon is a region with great national and international geopolitical relevance

due to the presence of strategic resources, its environmental and cultural importance, and its status as a cross-border region. The dispute over the nature and richness of the Amazon's resources has been a major factor in the emergence and maintenance of conflicts.

Illegal activities such as gold mining, and drug, human and wildlife traffic, occur with a preference in the border areas of the region. For example, illegal gold mining takes place mainly in river basins shared with other countries, such as the Putumayo and Caquetá rivers between Brazil, Colombia, Ecuador and Peru (Heck and Tranca 2014). Additionally, illegal gold mining is linked with a process of militarization of environmental management. In Colombia, the concept of "environmental security" has been inserted in the National Development Plan 2018-2022. In Peru, the national government designed a plan against illegal mining in the Amazon region of Madre de Dios with the installation of three military bases within the framework of "Operation Mercury", for which a state of emergency was declared, during which constitutional rights were suspended. On the other hand, Venezuela has established a "Military Economic Zone" in the Orinoco Mining Arc where the armed forces are in charge of controlling and directing mining exploitation. The weak presence of the state across large parts of the Amazon makes controlling illegal activities difficult and because of this working with local governments, communities and Indigenous lands to increase territorial control is an effective strategy. As such a possible strategy to address the impact of mining is engaging with small scale artisanal miners to improve their capacity for implementation of environmental and social safeguards, whilst maintaining key environmental areas free from mining and eradicating illegal activities.

Thirty years ago, constitutional reforms across the region began to recognize the multiple cultural and ethnic characteristics of their countries (Van Cott, 2010). Building on these reforms, Indigenous organizations have continued to demand political inclusion and minimization of the negative effects of development in their traditional lands. They have also been behind innovations in recognizing nature as a subject of rights. The relationship between peace and the environment has led to the construction and development of notions such as environmental peace, in which it is assumed that there are clear and multiple links between armed conflicts and disputes over natural resources and the environment. For example, the link between nature and peace is immersed in the Colombia Peace Agreement, forming a fundamental part of it, and is associated with the new vision for the country, which "allows the achievement of a sustainable society, united in diversity, based not only on the cult of

human rights but also on mutual tolerance, on the protection of the environment, and on respect for nature, its renewable and non-renewable resources and its biodiversity" (Gobierno Nacional de Colombia and FARC-EP, 2016). This link is also recognized in the constitutions of Bolivia (2009) and Ecuador (2008) in the concepts of living well or *Sumak Kawsay*, in an approach that recognizes the importance of nature and multiculturalism for peace (Hidalgo-Capitan et al., 2014). However, lack of respect for Indigenous rights continues to be an obstacle for peace in the region and threatens the integrity of collective rights and the life of individuals. Global Witness reported 98 murders of environmentalists in the Amazon in 2019, of which 40% were Indigenous leaders. Colombia is the country with the highest number of murders of environmental defenders (64), followed by Brazil (24), Venezuela (8), Peru and Bolivia (one each) (Global Witness, 2020). Peace in the Amazon will not be achieved without safeguarding the environment and Indigenous rights.

2.5 Partnerships

The 2030 Agenda text for the Partnership dimension states: "We are determined to mobilize the means required to implement this Agenda through a revitalized Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people".

The targets related to Partnerships aim to strengthen the means of implementation and revitalize global cooperation for sustainable development through national and international resource mobilization; developing fairer and integral policies to address the debt and promote investment to support SDG implementation in least developed countries; capacity building and technological cooperation and transfer through enhanced information and communication technology in support of developing countries; and equitable trade and market access. These targets also address systemic issues such as policy and institutional coherence for global macroeconomic stability, sustainable development and poverty alleviation; multi-stakeholder partnerships, including public, private and civil society to share knowledge, expertise, technology and financial resources; and enhanced capacity for monitoring and accountability, including new indicators of progress disaggregated data by age, gender, ethnicity and other relevant characteristics to complement existing measurements such as gross domestic product. Overall, the region shows moderate to significant lags in performance in the Partnership dimension. Only Suriname is following a path that will allow it to achieve the

goal by 2030, and all the other countries are following trends that will result in only moderate progress, no progress, or even decreasing performance in the case of Bolivia and Venezuela (Figure 26.6 and Annex 26.1 for details of specific indicators).

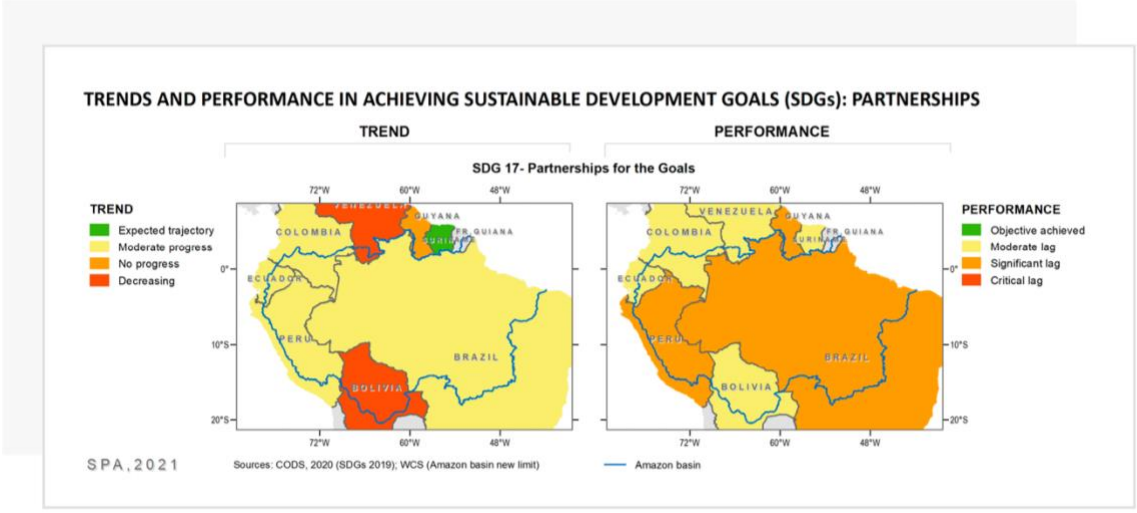

Figure 26.6 Performance and trends in achieving SDGs of the Partnerships dimension (based on 2019 Data CODS, 2020).

Global recognition of the biodiversity, cultural and environmental value of the Amazon biome has led to important international support to the region. As an example, between 2013-2015 approximately U$1.07 billion were invested in environmental protection mostly by bilateral (for example, Germany, Norway, USA) or multilateral institutions (for example, Global Environment Facility, Interamerican Development Bank, European Union), the Gordon and Betty Moore Foundation, Fundo Vale and WWF (Strelneck and Vilela, 2017). However, these investments are made in a context of much larger investments in unsustainable infrastructure and energy projects that are the drivers behind deforestation. For example, US$ 7.6 billion invested in road projects that would result in the loss of 1.1 million hectares across the Amazon (Vilela et al., 2020); and according to Fair Finance International (2020), from 2015 to 2020, 33 major European based Financial Institutions invested a combined total of 20 billion US$ in companies directly involved in deforestation in Brazil. These investments are made within an extractive economy model responding to demands from external markets, whilst generating within the Amazon a cycle of ecosystem degradation, poverty and reduced resilience.

Hence, in order to address these inconsistencies, a global partnership for a Living Amazon must be established and must consider the critical role of the Amazon for global climate regulation whilst considering stakeholder needs across different geographic scales and generations.

Landscape and sub-basin level plans represent the best opportunity to establish place-based management visions that consider multiple objectives and time scales. Implementation of these place-based integral territorial plans will require partnerships between all legitimate rights holders to reach consensus around a shared vision of ecosystem integrity. These rights holders have differentiated rights and authority and may include Indigenous people in collective lands, agricultural communities, private natural resource management concessions, protected areas and local governments.

At a national scale, urban stakeholders are key to support local efforts to maintain ecosystem integrity, resilient livelihoods based on nature-based economies and strong participatory governance for social justice (see Figure 25.2, previous Chapter). Urban stakeholders can shift their consumption to reduce their environmental impact and support responsible markets, and exert their citizen rights to demand government policies to halt deforestation and degradation, as well as transparency, justice and human rights. Government plans must also guide and support local landscape and sub-basin level plans bolstering human rights, including those of future generations; providing information, basic services, appropriate resilient infrastructure, promoting innovation, providing incentives and disincentives to economic activities. Partnerships between different countries, such as the Leticia Pact, are particularly important to incorporate environmental costs of infrastructure and extractive projects in environmental regional common goods, in particular across watersheds. Currently, environmental permitting mechanisms fail to incorporate impacts at a landscape and watershed level, as well as indirect and cumulative impacts.

Partnerships are also important to highlight the global consequences of not respecting limits of modifications of the Amazon for global commitments to human rights and climate change; and hence to mobilize international resources that are commensurate with the local costs of conservation in the Amazon and the local, regional and global benefits it generates. However, implementation of an agreement for conservation in the Amazon will require a paradigm shift that empowers and leverages multi-cultural partnerships and those between local stakeholders through decentralized bioregions, defined by cultural, terrestrial and aquatic connectivity,

within and across national borders. Progress at the bioregional level must be scaled and supported by multilevel governance at the national and Amazon biome level in order to distribute effective application of law enforcement, policy and financial resources. Finally, the partnerships at different scales between the private sector, research institutes and civil society organizations are required to support investment, science, innovation and research that leverages biological and cultural diversity in the region.

All countries will need to recover from COVID-19. Instead of scaling back their ambitions to achieve the SDGs, the crisis can be an opportunity for transformative investment towards a more sustainable and fair future (Lancet COVID-19 Commission 2021). Access to internet connectivity for the entire Amazonian population is key to foster innovation for the achievement of the SDGs.

3. CONCLUSIONS

The devil is in the details. Just as the 2030 Agenda highlights the complementarity between the different sustainable development objectives, progress in the implementation of one objective can lead to negative impacts on another (Katila et al., 2019). At the present, policies to address hunger, access to energy, job creation and economic growth, and infrastructure can fulfil SDG targets whilst having catastrophic impact on the Amazonian natural capital and as a result on the sustainability of these investments. In fact, the largest threats to a resilient future in the Amazon include lowland dams, that are counted as contributing to the provision of affordable and clean Energy (SDG 7); and road infrastructure (SDG 8) fueling agricultural expansion (SDG 2). Similarly, there can be trade-offs or synergies between SDG 15 and decent work and economic growth (SDG 8).

The future of Amazonian countries and of the other countries of the world ultimately depends on global natural resources and biodiversity, and the sustainable use of these resources within the limits of the biome. In 2019, Amina Mohammed, the United Nations Deputy Secretary-General, opened the senior-level meeting of the Global Partnership for Effective Development Cooperation, in New York, recognizing that there is a long way to go to achieve the SDG targets due to siloed approaches and making a call to new approaches. Amazonian countries have the potential to propose a new approach to development that maintains ecological integrity and diversity, social justice and rights, economic prosperity and equity (see Chapter 25). This transformation towards a Living Amazon requires

international finance and regional partnerships. However, transformative change occurs at a landscape or watershed level where the trade-offs or synergies between different priorities can be assessed; including gender, ethnicity and generational differences; and resilience and the rights of future generations considered. Leveraging local knowledge and agency will ensure ownership and accountability.

A context to minimize trade-offs and maximize synergies amongst the different SDGs can also be established through international and national policies providing incentives for sustainability standards in the private sector. National policies and investments also have severe impacts and regional and global agreements must include clear and binding agreements to prevent them.

In order to respect the limits placed by the Amazonian biome, 80% of forest cover must be maintained in a matrix where pristine or near-pristine landscapes hold the greatest environmental and cultural values and include protected areas, Indigenous territories and fiscal lands that require policies to secure their management and guarantee their existence in perpetuity. The costs of conserving these areas must be recognized based on their role in conserving a healthy planet. On the other hand, these pristine or near pristine areas are surrounded by areas with different levels of degradation that require policies to provide incentives that support restoration and management in ways that are consistent with sustainable production and that reduce, rather than increase, pressures for continuing advance of farming and ranching frontier into healthy ecosystems in the context of a transition from an extractive based economy to a nature-based economy (see Chapters 25, 27-30). Equally, important is the reduction of subsidies to the palm oil, timber, soy, beef and biofuels sectors. Payment programs and land use taxes on agricultural land can be effective and also much less costly than command-and-control interventions (Souza-Rodrigues, 2019). There is an urgent need of an integrated public policy response in the Amazonian countries to overcome the pandemic with a sustainable and equitable recovery by fostering intersectoral public action, regional integration, and international solidarity and cooperation in order to achieve the 17 Sustainable Development Goals (SDGs) within the 2030 Agenda for Sustainable Development placing the most vulnerable at the center of the policy response (Leon and Cardenas, 2020).

In the post-pandemic future, it is imperative to think about opportunities to build more effective, equitable and resilient health, environment, economic and social systems in the

long run. Energy transitions towards renewable sources and reduction in the consumption of fossil fuels, sustainable mobility with inclusive urban policies, universal access to digitalization, development of the health-care manufacturing industry, development of sustainable bioeconomy, promoting circular economy and sustainable tourism are strategic sectors that have the potential to allow a greener, inclusive, and transformative recovery (ECLAC 2021b). The advance of the SDGs of the 2030 Agenda requires long-term investments, recapture employment with digital change, implementation of innovation and technology, the promotion of sustainable consumption patterns that should focus on impact-based value chains to be resilient and offer a social, economic, and environmental response at the personal, local, and regional level within the climate change, biodiversity loss and pandemic crisis (Gonzalez-Perez et al. 2021).

4. RECOMMENDATIONS

- Establish a Global Partnership for a Living Amazon channeling financial and technical resources that are commensurate with the global importance of the biome for climate change and a healthy planet.

- Advance in localizing goals, targets and indicators to implement 2030 Agenda at a landscape and watershed scale, including self-determined Life Plans.

- Ensure alignment of international finance and markets with the 2030 Agenda for a Living Amazon by establishing and enforcing standards of true cost accounting of development projects; and measure and mitigate the material footprints of countries receiving resource flows from the Amazon.

- A green, inclusive, and transformative post-COVID-19 recovery should be promoted, placing the most vulnerable at the center of an integrated policy response based on rights, incentives, digitalization, innovation, technology, and sustainable production and consumption.

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6. CORE GLOSSARY

Anthropocene: geological epoch dating from the onset of significant impacts of human activities on Earth's geology and ecosystems.

Bioculture: The inter connection between biological and cultural diversity that arises from the multiple locally specific definitions, interpretations, beliefs and natural resource and ecosystem management practices.

Circular Economy: Approach which entails decoupling economic activity from the consumption of finite resources and generation of waste.

Governance: The process of governing undertaken by the state, private sector or local rights holders through laws or social norms and institutions.

Life Plan: A participatory territorial management plan developed through consensus, establishing agreements around a collective shared vision for the future and associated land use decisions.

Nature Based Economy or Bioeconomy: Knowledge-based production and use of natural resources that provide goods and services in an environmentally-friendly way.

True Costs: The difference between the market price of a commodity and the cost or benefit of that commodity to society due to impacts on common goods.

Annex 26.1. Indicators used by the Center of Sustainable Development Goals for Latin America and the Caribbean

SDG 1:

% people living on less than $1.9 a day.

% people living on less than $3.2 a day

% of poorest quintile covered by social protection programs.

SDG 2:

% under nutrition

% lack of growth (children younger than 5)

% emaciation (children younger than 5)

% obesity, BMI≥ 30

Cereal yield (t/ha)

Index of Sustainable Management of Nitrogen

FAO: Food Price Volatility Index

SDG 3:

Maternal mortality rate (per 100,000 live births)

Neonatal mortality rate (per 100,000 live births)

Infant mortality rate (younger than 5) (per 100,000 live births)

Tuberculosis incidence (per 100,000 people)

Prevalence of HIV (per 1,000 people)

Mortality rate from cardiovascular disease, cancer, diabetes, and chronic respiratory disease (ages 30-70) (per 100,000 people)

Mortality rate attributable to domestic and environmental air pollution (per 100,000 people).

Mortality rate due to traffic accidents (per 100,000 people)

Life expectancy at birth (years)

Teen age fertility rate (per 1,000 women between 15-19)

Births attended by specialized health personnel (% births)

Percentage of surviving infants receiving 2 vaccines recommended by the WHO.

Universal Health Coverage Tracer Index

Subjective well-being (Average score, 0-10)

Suicide rate (per 100,000 people)

Incidence rate of malaria (per 1,000 people at risk)

SDG 4:

Average net enrollment rate in primary education (%)

Rate of conclusion of secondary education (%)

Rate of literacy (15-24 year old, both sexes) (%)

Gross rate of matriculation in tertiary education (%)

Gross rate of matriculation in preschool education (%)

SDG 5:

Demand for modern family planning methods satisfied (15-49 year olds) (%)

Proportion of the average of years of education of women in relation to men (over 25 years)

Relative participation of women in the labor force of women in relation to men (%).

Seats occupied by women in parliament (%)

Gender salary gap (%)

Women (between 20-24) married or in some kind of union before the age of 15 (%).

Women that have experimented violence from their intimate partner (age 15+) (%)

SDG 6:

Population with access to drinking water basic services (%)

Population with access to basic sanitary services (%)

Extraction of fresh water as a percentage of total renewable water resources (%)

Ground water depletion in imports (m^3/year/capita).

SDG 7:

Access to electricity (%)

Access to fuel and clean technology for cooking (%)

CO_2 emissions from fuel and electricity production (MtCO2/TWh)

Regulatory Indicators for Sustainable Energy (RISE)

Chapter 26

SDG 8:

Prevalence of modern slavery (victims per 1,000 people)

Unemployment rate (% labor force)

Adults with a bank account or another financial institution (%)

Children (age 5-14) involved in child labor (%)

GDP growth (% average in the last 5 years)

Young population not working or studying (% youth between 15-24)

SDG 9:

Population that uses the internet (%)

Number of people subscription to broad band (%)

Number of scientific or technical articles in indexed journals (per 1,000 people)

Infrastructure quality (Global Competitiveness Index)

Logistics Performance Index

Public expenditure in research and development (% GDP)

Patent application (per 1,000,000 people)

SDG 10:

Gini coefficient adjusted to the highest income

Palma coefficient (Average income 10% highest / average income 40% lowest)

SDG 11:

Average annual concentration of particulate material PM2.5 in urban areas (μg/m3)

Urban population with access to improved water access (%)

Satisfaction with public transport (%)

Direct annual economic losses caused by disasters (%GDP)

SDG 12:

Electronic residues generated (kg/capita)

Municipal solid residue (kg/year/capita)

Percentage of residual waters of human precedence that receive treatment (%)

SDG 13:

CO_2 emissions related with energy (tCO_2/capita)

CO_2 imported emissions, adjusted by technology (tCO_2/capita)

CO_2 emissions generated by fossil fuel exports (kg/capita)

People affected by climate disasters (per 100,000 people)

SDG 15:

Average terrestrial protection over key biodiversity areas (%)

Average fresh water protection over key biodiversity areas (%)

Red List Index of species survival

Deforestation driven by extraction of raw materials (%)

Threats to terrestrial biodiversity for importation (per 100,000 people).

SDG 16:

Homicide rate (per 100,000 people)

Non-condemned inmates as a percentage of the prison population

Registered births with the civil authority (younger than 5 years old)

Corruption perception index (0-100)

Population that feels safe walking alone at night in the city where they live (%)

Property rights (1-7)

Global Index of Press Freedom

World Justice Project: Rule of Law Index – civil and criminal justice

World Justice Project: Rule of Law Index – Open government

SDG 17:

Tax Haven Score (0-5)

Public expenditure in health and education (%PIB)

Tax revenue (%PIB)

State statistical capacity (0-100)