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United Nations University (UNU) Summary Input for 2021 HLPF and ECOSOC

"Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development"

1. **Impacts of the COVID-19 pandemic:** UNU institutes across the globe have identified several critical impacts that the COVID-19 pandemic has had on the implementation of the SDGs under review in the 2021 HLPF including:
    a. Digital service and delivery: digital technological solutions have been widely adopted in response to COVID-19, affecting how people work, communicate, consume, produce and learn. While public service delivery using digital technologies has accelerated to cope with the pandemic impacts, there remains continued risk of further inequalities (SDG 10) with the exclusion of marginalized individuals, communities and countries. Governments with digital service production and delivery systems have been faster and better at assessing and responding to the crisis compared to emerging economies or those with federally fragmented service delivery.
    b. Work and livelihoods: Employment opportunities (SDG 8) have been impacted in the short-term, with job losses in some countries concentrated on low-wage workers, women and minority groups.[1] Access to alternative sources of income, especially for vulnerable populations in urban/peri-urban centres have also been affected. In other cases, new channels and opportunities have opened where communities have pooled resources, and improvements in awareness of local consumption and links between human and environmental health have been seen (SDG 10). The short-term effects of the pandemic have had a large impact on employment in the developing world, in particular due to extensive engagement and reliance on global trade through global value chains, falling unequally on marginalized segments of society and exacerbating existing inequalities (SDG 8).[2]
    c. Reallocation of resources: A focus on funding for the public health crisis has seen resources diverted from programmes and projects on other SDGs, including on *climate change* (SDG 13) where studies in climate-affected areas have been discontinued; on *education* (SDG 4[3]) where learning centres have been closed, and (new) *partnerships* with national governments and donors (SDG 17) have been impacted; and on *responsible consumption* (SDG 12) which has seen a decline in public interest due to the focus on priorities to deal with the pandemic.
2. **Actions, policy guidance, progress, challenges and areas requiring urgent attention** identified by UNU institutes include:

[1] See Annex IV for UNU-MERIT input
[2] See Annex IV UNU-MERIT input for more details of the impact of COVID-19 on global value chains.
[3] See Annex II UNU-IAS input and Annex III UNU-EHS input

a. Governance:
    i. ***Governing with new technologies:*** while the advent of digital innovations has made communication between governments and their citizens easier, there remains a lack of understanding in how to make these tools effective in decision-making and fit-for-purpose for governance, while also exacerbating risk of misuse of the same technologies[4]. More research is needed to identify aspects of personal privacy, societal security and formulation of regulatory norms to cope with these technological changes.
    ii. ***Systems thinking:*** the COVID-19 crisis has highlighted the inadequacy of fragmented and siloed approaches to managing global risks while also trying to transition towards sustainability. Acceleration towards the SDGs will require new perspectives, new thinking and new approaches starting with systems thinking to analyse complex systems across environmental, social and economic domains. Policymaking will need to be more integrated, coherent and inclusive.
b. Investment: as countries prioritise economic recovery from the pandemic, meeting the needs of the most vulnerable requires greater support and investment for small-and-medium-sized enterprises, particularly those in primary production and livelihood activities, as well as accelerating efforts to provide adequate, safe and affordable housing with people-centred and pro-poor housing policies. Significant changes to existing infrastructure policies are also required to continue the transition towards sustainable consumption and production. For example, strategies for transforming the value chain for food consumption should be aimed at strengthening food security and nutrition systems, improving food quality, building resilience and reducing environmental impact.
c. Employment opportunities: governments responses to recovering from the COVID-19 pandemic may become a catalyst for more rapid deployment of automated technologies. This brings with it a risk of diminished employment opportunities in some sectors, particularly low-skilled workers, women and those from developing countries. Specific policy responses to the continued impact of automation on job opportunities will be required.
d. Diversification: the long-term impacts of COVID-19 on trade and global value chains in the developing world are expected to be significant. Supply chain disruptions may lead to firms investing more in automation to limit these negative effects, while also encouraging a greater focus on geographically closer suppliers or increased diversification of suppliers. Policy responses to these impacts will need to be broad including diversifying from traditional sectors within global value chains which can be automated to more dynamic and new sectors such as creative/digital economies, and non-routine tasks.
e. Knowledge sharing and capacity development: the combination of computational capacity, advances in artificial intelligence, machine learning, data mining, smart devices and their use on harnessing data requires more understanding. While interdisciplinary knowledge fields are being applied to these areas with traditional research areas of computer, data and statistical sciences working in conjunction with those from the social, environmental and

[4] See Annex I – UNU-EGOV input

earth sciences, many countries lag behind in accessing these new branches of knowledge. Democratisation of big data and artificial intelligence research, with a focus on upholding personal privacy, national prosperity and socio-political security, should become a priority area for governments world-wide.

3. **Assessing the principle of "ensuring no one is left behind" against the background of COVID-19:** UNU institutes have found critical gaps which need to be addressed to ensure the principle of 'ensuring no one is left behind' remains relevant during and post COVID-19. These include:
    a. Data: disaggregated data on geographical location, gender, age, income and educational levels is required to properly assess the digital inclusion of marginalized communities and provide policymakers with greater value for decision-making. Yet the pandemic has highlighted how few of these indicators are collected.[5]
    b. Addressing inequalities: the pandemic has revealed and exacerbated inequalities at different levels including: a digital divide gap (where distance learning has highlighted the uneven access to digital resources particularly for non-formal, rural, low-skilled, learners with disabilities); a generation gap (where national health responses focused on the elderly has left youth and young adults lacking opportunities leading to rising suicide rates and mental health issues in this group); increased disparity in access to water and sanitation (particularly for the poorest); a changing labour market as a result of the COVID-19 pandemic (will likely be increasingly dominated by short-term assignments and more limited job opportunities for long-term or permanent contracts). Education, in early childhood, formal schooling as well as life-long learning programmes will need to be considered, as will a functioning and effective social protection system. Addressing underlying social injustices and vulnerabilities which have been exposed by the COVID-19 pandemic will enable building back better for current and future crises.

    However, some coping strategies employed during the pandemic have highlighted valuable approaches and resources for reducing inequality, such as communities sourcing alternative means of employment utilizing natural resources and biodiversity.[6]

4. **Cooperation, measures and commitments to promote sustainable and resilient recovery:** UNU institutes have identified several approaches to enhance cooperation and strengthen commitments to promote sustainable and resilient recovery including:
    a. Systems thinking: with COVID-19 underscoring the systemic and compounding nature of risks and impacts to communities, a systems thinking approach can underpin coherent governance responses. This can be achieved by different government planning bodies cooperating across sectors to ensure policy coherence. For example, a One Health approach, which addresses the links between human health, animal health and the environment should be considered in policymaking.

[5] See Annex I for UNU-EGOV's input
[6] See Annex II for UNU-IAS inputs related to this point

b. Landscape approach: COVID-19 has highlighted the interlinkages between humans, animals and the environment. Adopting a wider lens which encompasses cause and effect in trade-offs and synergies between a range of actors and across multiple levels, can help societies to build back better. Landscape approaches can be incorporated into governance to enhance systemic cooperation at the local level, allow people to build on existing social capital and take advantage of local natural resources, while also expanding cooperation to new stakeholders and developing innovative solutions to enhance resilience and sustainability.
c. Regional integration: effective responses to the impact of the pandemic on trade and global value chains, particularly in the developing world, can be better achieved through regional integration and the development of regional value chains. For developing countries this can be key to diversifying risk, reducing vulnerability and encouraging industrial development. Developing further regional integration agreements can be an important means of developing resilience.

5. **Measures and Policy recommendations to build an inclusive and effective path to achieve the 2030 Agenda** suggested by UNU institutes, in addition to those already referenced, include:
    a. Data[7]:
        i. as an integral component in the daily lives of citizens and source of information for decision making by governments, digital technologies need to be strengthened to ensure effective delivery of services
        ii. Protocols and processes should be adopted to secure electronic identity management
        iii. The type of data, how it is selected and shared needs to be reconsidered to include the most vulnerable and marginalized members of society
        iv. Mechanisms should be established to promote and potentiate the use of disruptive technologies including artificial intelligence, smart devices and their use on harnessing data.
    b. Mainstreaming the SDGS:
        i. National governments and key stakeholders should promote efforts to mainstream the SDGs into national policies, including National Development Plans (NDCs). This could help in developing inclusive development agendas, emphasise multi-stakeholder engagement and cross-sectoral policymaking
        ii. Integrating risk finance consideration[8] into NDC planning can offer benefits beyond financial protection including through detecting and pricing risk to help attach real value to resilience investments.
    c. Landscape approaches: have the potential to accelerate the sustainable use of biodiversity through implementation of strategies for balancing multiple objectives through collaboration between multiple sectors and diverse stakeholders. This can play a critical role in achieving the 2030 Agenda.

[7] See Annex I for more details of UNU-EGOV's recommendations
[8] See Annex III for more information on the Background Note on MCII (2020): Enhancement of Nationally Determined Contributions in the Context of Climate and Disaster Risk Financing by UNU-EHS.

d. Providing learning opportunities[9]: inclusive life-long learning opportunities (in-person as well as online) should be made available so individuals can become part of the solution for achieving the SDGs A particular emphasis on design for vulnerable and marginalized communities should be taken into account.

6. Key messages to include in the Ministerial Declaration from UNU institutes include:[10]

a. Science must play a key role in informing recovery processes, providing conceptual clarity on coherence, developing tools to address systemic/dynamic risks and creating transformative pathways towards sustainability.

b. Educational systems around the globe must not only recover, but be built back better to crisis-proof institutions aiming to raise resilient learners to face the challenges of the 21st century, most notably, climate change.

c. The pandemic has revealed the importance of biodiversity as a safety net in times of crisis aiding in stress relief and supporting human mental and physical wellbeing. A green 'build back better' strategy supports sustainable development not only for human mental and physical well-being, but also to achieve multiple goals such as combatting climate change and reducing natural hazard risks are achieved.

d. Coherent, integrated and interconnected approaches are critical to achieve the SDGs and address the systemic impacts and future risks of pandemics and pressing environmental challenges, ensuring a green, inclusive, resilient recovery from COVID-19.

[9] See Annex II for more details from UNU-IAS

[10] More messages can be found at Annexes II from UNU-IAS and III from UNU-EHS

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Annex I

UNU Operating Unit on Policy-Driven Electronic Governance (UNU-EGOV), Portugal
Institute Input for 2021 HLPF and ECOSOC

"*Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development*"

1. Impacts of the COVID-19 pandemic on the implementation of the SDGs under review in the 2021 HLPF

Four ideas to highlight:

- **a.** There is emerging evidence that some pre-pandemic trends are being amplified. The digital transformation of public service delivery is accelerating, and risk of further exclusion of marginalized individuals, communities and countries is increasing. Recognition that services targeting children and their families need to be designed according to their needs to maximise value added but continues to be an opportunity missed. User-centric, personalised and proactive service delivery require a whole-of-government approach but only pockets of real-life examples emerge globally.
- **b.** Governments with digital service production and delivery ecosystems have been faster and better to assess and respond to the crisis (e.g. Republic of Korea, Northern Europe, Canada, New Zealand, Australia vs emerging economies or Federally fragmented service delivery).
- **c.** Innovation in the public sector service production (i.e. backend) including: (i) expand, rollout and allow for teleworking (systems and toolkits access); (ii) increase automation on existing data and knowledge; (iii) adopt protocols and processes for secure electronic identity management for remote access and capture the un-registered and financially excluded.
- **d.** Innovation in the public sector service delivery (i.e. frontend) especially: (i) expand online and call centre services; (ii) add chat and video-conference; (iii) promote and proactive deliver (e.g. piggybacking) information and services on existing services or knowledge of beneficiary groups – particular in social security services area.

2. Actions, policy guidance, progress, challenges and areas requiring urgent attention in relation to the SDGs

United Nation's Sustainable Development Goal emphasizes on the importance of better and informed governance for all. Better governance can be ensured only if the people in power can understand the residents who have empowered them to govern. The advent of digital innovations has made communication between the governed and the governments easier. Understanding the issues, visualizing the challenges, and monitoring progress are keys to achieve these goals. With the advent of computational capacity, advances of knowledge streams such as artificial intelligence, machine learning, data mining, statistical inference, and prevalence of technologies such as social networks and IoT devices, data has become ubiquitous. These rapidly generating data are now getting integrated into the core decision making sphere as complementary mechanisms of traditional data sources. However, integrating new technologies into decision making are

posing increasing concern as often these tools are not well understood, not designed in context of the varying socio-cultural aspect of the nation-states and can easily be used by people in power as a weapon to control human behavior in the socio-political sphere. Hence more research should be dedicated to understanding the aspects of personal privacy, societal security and formulation of regulatory reforms that are going to be urgent to cope up with the technological shift the world is now witnessing.

Theories of social science, environmental science, and earth sciences should be applied in conjunction with current research in computer science, data science and statistical sciences. New branches of inter disciplinary knowledge area are emerging. However, there is a knowledge divide among the countries in use and research of disruptive technologies such as artificial intelligence, smart devices and their use on harnessing data. The countries that are lagging in the new branch of knowledge, smart public and private service deliveries should get the access to resources that will ensure their fast assimilation in the process. Digital divide that the world saw with the advent to Internet will grow much bigger at the age of Big Data. Hence democratization of Big Data and Artificial intelligence research with focus on upholding personal privacy, national prosperity and socio-political security should be one of the focus areas of the world leaders. UNU-EGOV is relentlessly conducting research on these aspects and contributing in capacity building and engagement.

3. An assessment of the situation regarding the principle of "ensuring that no one is left behind" at the global, regional and national levels against of background of the COVID-19 pandemic in achieving the 2030 Agenda and the SDGs

Despite the call of the UN Secretary-General's High-level Panel on Digital Cooperation in 2019, the majority of national and international assessments continues to collect few indicators on gender equality, and many do not differentiate between different types of users. Without disaggregated data on geographical location, gender, age, income and educational level, the digital inclusion of marginalised communities cannot be assessed over time and is of limited value for decision-makers to refine initiatives and target resources to specific communities where the impact with be the biggest. There continues to be an urgent need to think the type of data and its segmentation being collected and ways it is shared particularly in relation to the traditionally marginalized such as children, women, rural areas, low-income households and individuals with limited educational attainment levels.

4. Various measures and policy recommendations on building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development

a. Strengthen the innovative whole-of-government service production and service delivery ecosystems build and consolidated during the pandemic (see 1.b above)
b. Adopt protocols and processes, secure electronic identity management for remote access and ensure that individuals newly given legally valid identities and are now financially included remain so (see 1.c. above).
c. There continues to be an urgent need to think the type of data and its segmentation being collected and ways it is shared particularly in relation to the traditionally marginalized such as children, women, rural areas, low-income households and individuals with limited educational attainment levels (see 3.a above).

d. Establish mechanisms to promote and potentiate the use of disruptive technologies such as artificial intelligence, smart devices and their use on harnessing data. The countries that are lagging in the new branch of knowledge, smart public and private service deliveries should get the access to resources that will ensure their fast assimilation in the process (see 2 above)

5. Key messages for inclusion into the Ministerial Declaration of the 2021 HLPF

a. Strengthen the innovative whole-of-government service production and service delivery ecosystems build and consolidated during the pandemic
b. Adopt protocols and processes, secure electronic identity management for remote access and ensure that individuals newly given legally valid identities and are now financially included remain so
c. There continues to be an urgent need to think the type of data and its segmentation being collected and ways it is shared particularly in relation to the traditionally marginalized such as children, women, rural areas, low-income households and individuals with limited educational attainment levels

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Annex II

UNU Institute for the Advanced Study of Sustainability (UNU-IAS), Japan

Institute Input for 2021 HLPF and ECOSOC

"Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development".

1. **Impacts of the COVID-19 pandemic on the implementation of the SDGs under review in the 2021 HLPF from the vantage point of your institute, bearing in mind the interlinkages with other SDGs**

   Responses to the COVID-19 pandemic (e.g., social distancing and lockdowns) have altered human–environment interactions, including how people appreciate their immediate natural environment, and where people seek to live and work. Changes in livelihood opportunities and other constraints have had different impacts across society [SDGs 1, 2, 3, 8, 10]. For example, lockdowns have affected access to alternate incomes, especially for vulnerable people working in urban/peri-urban centres. In some cases, they have opened new channels and opportunities, such as community pooling of resources to transport and market produce to local consumers. Awareness of local consumption, and linkages between human health and environment health, has improved [SDG 10].

   Due to the focus on public health, funding for programmes and projects on other SDGs has reduced. For example, some of the members of ProSPER.NET[11] have been forced to discontinue studies in climate-affected areas such as SIDS due to travel restrictions and funding cuts. Such disruptions in research and data collection of those climate affected areas may lead to a failure of timely interventions. Indeed, the impacts on education have been deep, affecting progress across the SDGs. A global survey by UNU-IAS in July 2020 found that members of the RCE network[12] had been unable to ensure learning continuity due to the closure of facilities (community learning centre, schools, HEIs), that partnerships with national governments [SDG 17] had weakened due to prioritisation of health issues, and that public interest in climate change [SDG 13] and responsible consumption [SDG 13] had declined.

2. **Actions, policy guidance, progress, challenges and areas requiring urgent attention in relation to the SDGs**

   A pressing challenge is how to adjust to the new livelihood opportunities and constraints that have emerged. Even while countries are prioritising economic recovery, there is growing recognition of the need to invest in and support small- and medium-sized enterprises, especially those linked to primary production and other such livelihood activities [SDGs 1, 2, 3, 8]. Those whose basic needs are not being

[11] A flagship initiative of UNU-IAS, the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net) is an alliance of higher education institutions in the Asia-Pacific region working to integrate sustainable development into education and research.

[12] The Regional Centres of the Expertise on ESD (RCEs) is a global network dedicated to translating the global agenda of sustainable development into local action.

met (e.g., minimum income, clean water) are most vulnerable to these changes, which can severely affect their lives and health [SDGs 1, 2, 3, 8, 10].

All stakeholders should, as a high priority, make substantial changes to existing infrastructure, policies, and norms so as to transition towards sustainable consumption and production [SDGs 1, 2, 12, 13, and 15]. Strategies for transforming the value chain related to food consumption should take into account strengthening food security and nutrition system, improving food quality, building resilience, and reducing environmental impact.

There is also an urgent need for national governments and local city authorities, in close collaboration with other stakeholders, to accelerate efforts to achieve adequate, safe, and affordable housing for all [SDGs 6, 7, 8, 11, and 12]. Housing is a critical component of sustainable development across all of the SDGs. Adequate, safe, and affordable housing drives access to basic services, contributes towards inclusive growth, and supports sustainable urban living. Priority should be placed on strengthening people-centred and pro-poor housing policies and investments.

3. An assessment of the situation regarding the principle of "ensuring that no one is left behind" at the global, regional and national levels against of background of the COVID-19 pandemic in achieving the 2030 Agenda and the SDGs

The pandemic has revealed and exacerbated pre-existing inequalities at different levels:

- Digital divides: as distance learning has become the only option to ensure learning continuity, uneven access to digital resources and related skills have widened gaps that already existed in non-formal, rural, low-skilled, out-of-school learners or learners with disability.
- Generation gaps: due to prioritisation of health issues, national responses have mainly focused on the elderly, leaving youth and young adults lacking in opportunities to reskill and upskill for the post-pandemic world. This effect has already been widely reported, with increasing suicide rates and mental health issues.[13]
- Water and sanitation: in 2017, only 71% of the global population used safely managed drinking water and just 45% used safely managed sanitation services. Unequal progress has been exacerbated by the pandemic, with the poorest countries and communities most affected, requiring acceleration in areas that are off track to meet the targets. Former projections may no longer be valid due to the disproportionate impacts of COVID-19. Decentralised, community-based management of water resources has strong potential to advance progress on water and sanitation-related goals as well as public health, and enhance resilience.

At the same time, some coping strategies employed during the pandemic have highlighted valuable approaches and resources for reducing inequality. For example, natural resources and biodiversity have been providing alternative means of survival (e.g., dietary intake, healing) for people, including migrants,

[13] The EU and the OECD have begun to discuss this challenge: http://www.oecd.org/gov/governance-for-youth-trust-and-intergenerational-justice-c3e5cb8a-en.htm

who are affected by the pandemic's impact on their income and livelihoods, and on global supply chains [SDGs 1, 2, 3, 12, 13].

4. Cooperation, measures and commitments at all levels in promoting sustainable and resilient recovery from the COVID-19 pandemic

COVID-19 has underlined the systemic and compounding nature of risks and impacts, and the need for coherent governance responses. This starts with systems thinking — the ability to analyse complex systems across environmental, social, and economic domains in an interconnected world. Co-operation between different planning bodies across sectors is important to ensure policy coherence and avoid conflicting outcomes. In particular, the pandemic has raised awareness of the need for all economic and social activities to be respectful of biodiversity and cultural contexts, to ensure that systemic vulnerabilities are not created or aggravated. Recognising this, the One Health approach, which addresses the links between human health, animal health, and the environment, needs to be fully incorporated in policies at all levels. Health-related elements should be mainstreamed in existing strategies across sectors and levels, with greater institutional interactions focused on human health, animal health and the environment. In particular, the links between human health and the environment need to be explored more in science, policy, and practice.

Due to the interlinkages throughout society and ecological flows it is important to apply a wider lens, encompassing cause and effect in trade-offs and synergies between different actors at multiple scales and levels. Landscape approaches are useful tools to incorporate such concept into governance and should be widely adopted as part of building back better [SDGs 1, 2, 3, 8, 10, 12,13,16, 17]. In particular, the concept of Socio-Ecological Production Landscapes and Seascapes (SEPLS) has strong potential to enhance systemic cooperation at the local landscape level, contributing towards building more sustainable and resilient societies [SDGs 1, 2, 3, 8, 10, 12, 13, 16, 17]. Indeed, at the level of local communities, people can build on existing social capital and take advantage of local natural resources to cope with new challenges. At the same time, they can expand cooperation to new stakeholders and develop innovation to enhance resilience and sustainability.

5. Various measures and policy recommendations on building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development

National governments and other stakeholders should promote efforts to mainstream the SDGs into national policies (SDG 17). National policies, including National Development Plans, could benefit from mainstreaming the 2030 Agenda in developing an inclusive development agenda, emphasising multi-stakeholder engagement and cross-sectoral policymaking. National development planning can be strengthened by promoting approaches relevant to the SDGs such as evidence-based decision-making, policy coherence for sustainable development, and budgeting for the SDGs. These could lead to meaningful public reform to promote synergies and address trade-offs, strengthen wider participation from actors at all levels of the society, and broaden the scope of development and implementation.

Landscape approaches — strategies for sustainably balancing multiple objectives through collaboration between multiple sectors and diverse stakeholders — have strong potential for accelerating the sustainable use of biodiversity, which will play a critical role in achieving the 2030 Agenda as well as the Post-2020 Global Biodiversity Framework. Landscape approaches provide a framework for enabling innovations and putting them into practice for collaborative use and management of multiple resources in a given area. They include adaptive and integrated processes for decision-making and implementation. By explicitly acknowledging practical trade-offs, challenges and barriers that may be faced by stakeholders, landscape approaches allow for synergies that ensure fair and equitable benefit-sharing as long-term outcomes [SDGs 1, 2, 3, 8, 10, 12, 13, 16, 17].

Inclusive learning opportunities throughout life enable individuals to become part of solutions for achieving the SDGs. Learning opportunities for sustainable development should be intentionally designed for the marginalised, e.g., gender minorities, rural populations, low-literate and low skilled youth and adults, elderly, and people with disabilities. Online and open learning with digital technology should also take inclusive design into account.

6. Key messages for inclusion into the Ministerial Declaration of the 2021 HLPF

- Coherent, integrated, and interconnected approaches are critical if we are to achieve the SDGs and address the systemic impacts and future risks of pandemics and pressing environmental challenges, ensuring a green, inclusive, and resilient recovery from COVID-19. Efforts to "build back better" while leaving no one behind would be a welcome and necessary paradigm shift, but without integrated policymaking and multilateral cooperation they are likely to result in business as usual. Science must play a key role in informing recovery processes, providing conceptual clarity on coherence, developing tools to address systemic/dynamic risks, and creating transformative pathways towards sustainability.

- A green "build back better" strategy supports sustainable development on many accounts, not only for human mental and physical well-being, but also to ensure that multiple global goals, such as combating climate change and reducing natural hazard risks, are achieved. It is critical that we take this opportunity by applying more integrated and inclusive approaches to policymaking and implementation to progress across multiple SDGs.

- Landscape approaches can be a vital tool for implementing the 2030 Agenda, with the potential to enhance local innovation, promote multi-level collaboration between diverse stakeholders, and ensure fair and equitable benefit-sharing of resource use and management in the long term.

- Accelerating progress on the SDGs will require an evidence-based approach to policymaking at all levels, and in particular an increased focus on monitoring and evaluation to enable revisiting of targets and adaptive implementation.

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Annex III

UNU Institute for Environment and Human Security (UNU-EHS), Germany
Institute Input for 2021 HLPF and ECOSOC

"*Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development*"

1. Impacts of the COVID-19 pandemic on the implementation of the SDGs under review in the 2021 HLPF

In light of the ongoing COVID-19 pandemic, and recognizing both the corresponding mid-term and long-term implications, UNU-EHS is actively considering ways to change its activities to support building back better, particularly in respect to environment and human security, and addressing the vulnerabilities which COVID-19 has exposed. COVID-19 has shown cascading impacts across sectors and societies, such as closing borders led to disruptions in global supply chains, closed nurseries and schools impacted on parents working in critical facilities, migrants affected by the crisis etc. As a result, UNU-EHS recognizes the need to further strengthen its research and policy support on systemic risk and green and just recovery. Furthermore, COVID-19 shed light on the fact that we live in a globally interconnected world, an aspect which UNU-EHS is actively working on in relation to its upcoming flagship report.

Due to the COVID-19 pandemic, events related to climate change and disaster risk reduction were all cancelled. UNU-EHS maintained its existing partnerships for SDG-related research and SDG implementation, but new partnerships are much harder to establish. SDG 17, "Partnerships for the Goals" may well be strongly affected by the pandemic.

COVID-19 has demonstrated the vulnerability of educational systems in times of crises at an unparalleled scale: at the end of March 2020, UNESCO documented more than 90% of learners across all educational levels worldwide to be affected by the pandemic. Such interruptions to learning and educational settings are known to go far beyond the mere transfer of knowledge, as their psycho-social and socio-economic impacts are well-established. Particularly, disadvantaged and vulnerable communities are the most exposed to risks in the process of transformational changes. Knowledge sharing for education and capacity building is now more essential than ever. UNU-EHS - true to its mandate in training the next generation of thought leaders but also, considering the SDGs, notably SGD 4 of enabling education to all and SDGs 5/10 of reducing inequalities – plans to review and further develop its education and capacity building offer in order to respond to global change and the challenges ahead.

The COVID-19 pandemic has also prompted a re-valuation of science and expertise in a time when the credibility of scientists was under constant pressure from post-truth politics.

2. Actions, policy guidance, progress, challenges and areas requiring urgent attention in relation to the SDGs

The crisis has illustrated the inadequacy of ad-hoc and siloed approaches to effectively manage global risks in the 21st century as we attempt to transition to sustainability. As we face a new normal in living with COVID-19, acceleration towards achieving the SDGs will require new perspectives, new thinking, and new approaches. We must seize this opportunity to revitalize efforts towards achieving sustainability through fundamental transformations in our social and economic models, our governance of risk, and our relationships with nature. COVID-19 has underlined the systemic and compounding nature of risks and impacts, and the need for coherent governance responses. This starts with systems thinking — the ability to analyse complex systems across environmental, social, and economic domains in an interconnected world. We can no longer afford to think and act in siloes. More integrated, coherent, and inclusive policymaking will be critical.

3. **An assessment of the situation regarding the principle of "ensuring that no one is left behind" at the global, regional and national levels against of background of the COVID-19 pandemic in achieving the 2030 Agenda and the SDGs**

COVID-19 exposes underlying vulnerabilities in our society. The WHO recommends 'testing, tracking and isolation' of COVID-19 cases as the 'backbone' of response to the pandemic. The extent to which countries are able to implement this recommendation critically depends on access to healthcare, to information, to livelihoods and to safe homes. These factors differ among people and point at underlying social injustices and vulnerabilities. It is the same factors that make people vulnerable to climate change and disaster. Responding to COVID-19 should go beyond finance for COVID-19 related healthcare facilities, testing materials and surveillance. By addressing the vulnerabilities, which COVID-19 exposes, we can build back better to be prepared for crises to come and ensure no one is left behind.

4. **Various measures and policy recommendations on building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development**

The MCII Section at UNU-EHS developed a **Background Note**[14], which outlined how integrating risk financing considerations into NDC planning can offer benefits beyond financial protection: through detecting and pricing risk, they also help to attach real value to resilience investments. The document served as integral input to a Policy Note prepared by the InsuResilience Global Partnership (IGP) and recommended how IGP, in collaboration with e.g. the NDC Partnership and UNFCCC, can work on addressing key issues that will leverage the NDC process for the development of risk finance. The recommended actions were adopted by the IGP Governance Body. UNU-EHS, respectively MCII, thus provided important input into policies supporting vulnerable countries.

5. **Key messages for inclusion into the Ministerial Declaration of the 2021 HLPF**

[14] MCII. (2020). Background Note: Enhancement of Nationally Determined Contributions in the Context of Climate and Disaster Risk Financing. Bonn, Germany: Munich Climate Insurance Initiative

Science must play a key role in informing recovery processes, providing conceptual clarity on coherence, developing tools to address systemic/dynamic risks, and creating transformative pathways towards sustainability.

We must ensure that educational systems around the globe will not only recover, but that they will be built back better into crisis-proof institutions aiming to raise resilient learners in face of the looming challenges of the 21st century, most notably climate change.

The pandemic provided opportunities for communicating the importance and value of biodiversity as a safety net in times of crisis. In light of COVID-19 restrictions, many citizens turned to nature as a form of stress relief, and to aid mental and physical well-being. The positive experiences arising from interactions with nature during these challenging times offer an opportunity to communicate powerfully how "building back better and greener" could work. Recognition of the value of green spaces should be encouraged long after the pandemic has passed and should aid action at the community level for habitat and biodiversity protection.

Efforts to "build back better" while leaving no one behind is a necessary paradigm shift, but without integrated policymaking and multilateral cooperation they are likely to result in business as usual. Focus on cooperation across sectors and scales, building on and thereby accelerating such coherence-building approaches is key.

Recovery measures could be assessed across a number of key dimensions, such as alignment with emission reductions, strengthening climate resilience, and reducing biodiversity loss. While urgent decisions are needed in each of these areas, long-term perspectives should be included to ensure well-being for all.

UNITED NATIONS UNIVERSITY

Annex IV

UNU Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT), The Netherlands

Institute Input for 2021 HLPF and ECOSOC

"*Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development*"

COVID-19, Automation and the Future of Work

Recent years have seen an increased focus on the impact – both positive and negative – of new digital technologies. The speed of progress in digital technologies and the rapid decline in their costs have created many opportunities, including the rise of digital platforms, the transformation of manufacturing through robotic automation, the use of digital solutions in finance (particularly providing financial solutions to the world's poor), and many more (UNEN 2020). These developments also have potentially negative impacts, however, including consequences associated with the global system of production and the future of work, among others. Such outcomes can enhance digital and economic divides and encourage unsustainable resource use, with the presence and scale of the digital divide within and across countries being highlighted by the COVID-19 pandemic.

Digital technological solutions have been widely adopted in response to the COVID-19 pandemic, affecting the way in which people work, communicate, consume, produce and learn. The crisis created by the pandemic potentially provides an opportunity to increase the speed and both the depth and breadth (or scope) of automation, with potential costs and benefits for global development and the achievement of the SDGs.

One particular concern relates to the impact of COVID-19 on employment opportunities, both in the short-term but also in a longer-term perspective as the global economy recovers from the pandemic. Evidence suggests that the initial short-run impact of COVID-19 has had a significant impact upon employment opportunities, with job losses in some countries concentrated among certain segments of society, including low-wage workers (Cajner et al. 2020), women (Alon et al. 2020), and in some cases minority groups (Fairlie et al. 2020). In a global perspective, the estimated short-run effects of the pandemic on employment in the developing world is large, given these countries extensive engagement and reliance on global trade through global value chains (ILO 2020; see also World Bank 2021). Effects in the developing world have also been shown to fall upon certain segments of society unequally, exacerbating existing inequalities within countries (see Bottan et al 2020). The high incidence of informality in many developing countries further limits the effectiveness of social safety nets and of government responses to the pandemic in alleviating poverty, food shortages, and other short-term impacts of the pandemic.

Whether such inequalities and lack of job opportunities will persist as the global economy recovers from the pandemic remains an open question and will depend upon the extent to which the pandemic will be a catalyst for a more rapid deployment of automation technologies. Considering the case of the US, Autor and Reynolds (2020) argue that employment prospects may remain grim for low-wage workers, with the use of telepresence

technologies by former commuters and business travellers, for example, permanently lowering demand for low-wage in-person service occupations. Such effects may also be relevant for low-skilled workers in manufacturing, with the forced automation of production in many industries in response to the pandemic unlikely to be reversed. In this sense, the pandemic is likely to increase the speed and breadth of an existing and ongoing trend (see Acemoglu and Restrepo 2017) that emphasizes a change in the skill requirements needed to succeed in the labour market, the rise of the gig economy (with associated impacts on the 'quality' of work) and the rise of digital platforms that impact upon global value chains and the geography of production (World Bank 2019). As such, the longer term effects of the pandemic may well lead to diminished employment opportunities following an accelerated process of automation, the effects of which are likely to be felt most strongly among low-skilled workers and by women (see Chernoff and Warman 2021), as well as disproportionately by workers in the developing world.

Such concerns are strongly related to various SDGs, including those that are the focus of the HLPF 2021 (i.e., SDG8 on decent work and economic growth and SDG10 on reduced inequalities) as well as others (e.g., SDG5 on gender equality). They also demand an appropriate policy response. Here, existing work on the policy response to automation remains relevant (see, for example, World Bank 2019). These policies relate strongly to issues of education, both in early childhood and formal schooling, but also in promoting and investing in lifelong learning programmes. In the context of a labour market that will likely be increasingly dominated by short-term assignments and with more limited opportunities for long-term or permanent contracts, the importance of a functioning and effective social protection system is also likely to be crucial. In this context of frequent employment transitions and the increased use of the gig economy, a functioning and effective taxation system is also needed, to allow for the fiscal space needed to fund social protection systems. Global cooperation is likely an important component in creating an efficient taxation system.

COVID-19, Global **Value** Chains, Demand and Developing Countries

In many ways, the COVID-19 pandemic has hit the developing world less hard than the developed world (UN 2020). In terms of both cases and deaths related to COVID-19, for example, developing countries have been less severely affected than developed countries, which has allowed for more limited measures and restrictions in many cases. At the same time, the economic effects of the pandemic have been severe in large parts of the developing world. Many of these effects have been driven by the strong negative impact of COVID-19 on international trade and supply chains.

Trade, and global value chains (GVCs) more specifically, has long been considered an important driver of economic development. Indeed, despite the negative developments in GVCs since the global financial crisis – related to automation, reshoring, weak demand, increased protectionism, etc. – they remain an important focus of attention in development policy, with integration into and upgrading within GVCs often considered a sine qua non for development. The COVID-19 pandemic has had extensive and diverse impacts upon GVCs – and international trade more generally – however. One dimension of this relates to the strong decline in services trade, particularly related to travel and tourism, which remains an important source of exports, foreign exchange and growth in many developing countries (See The Commonwealth 2020). Negative impacts upon GVCs through supply chain disruptions and weak demand have also been extensive (UNCTAD 2020). In the immediate aftermath of the

COVID-19 pandemic, there is some evidence to suggest that weak demand was of particular importance in driving the initial trade effects of the pandemic (see, for example, Socrates 2020). The longer-term response will also likely depend upon how demand recovers as the global economy recovers from the pandemic and the extent of austerity measures, for example. The longer run impacts of supply chains cannot be understated, however. The observed supply chain disruptions and their associated costs may provide a strong incentive for firms to invest in automation technologies and to reshore production to shield against supply chain disruptions, potentially limiting the role that GVCs can play as a development ladder. Other effects may involve a geographical reorientation of GVCs, with an increased focus on more geographically close suppliers (i.e., nearshoring) or conversely increased diversification in terms of suppliers (Shingal and Agarwal 2020).

Responses to the effects of the pandemic on trade and GVCs in the developing world will need to be broad. Efforts to diversify away from the more traditional sectors and tasks within GVCs undertaken by developing countries (e.g. routine tasks that are at risk of automation, manufacturing and assembly activities) and towards more dynamic and new sectors (e.g. the creative and digital economy, non-routine tasks) will need to be an important component of the policy response. Regional integration and the development of regional value chains are also likely to be an important means for countries in developing countries to diversify risk, reduce vulnerability and encourage industrial development. In this context, the development of regional integration agreements, such as the AfCFTA, can be an important means of developing resilience.

The impact of the pandemic on global trade and upon the functioning of global value chains will undoubtedly have effects on many of the SDGs, including SDG8 on decent work and economic growth, SDG10 on reduced inequalities, and SDG9 on industry, infrastructure and innovation. In considering the response to the pandemic, SDG17 (Partnerships for the goals) is also highly relevant, particularly in the context of regional integration, for example.