Unlocking the potential of nature and humanity for sustainable development

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UNOSD
UNITED NATIONS OFFICE FOR SUSTAINABLE DEVELOPMENT

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Learning Brief: Design-Thinking to Accelerate Solutions for the Sustainable Development Goals

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The Sustainable Development Goals

SUSTAINABLE DEVELOPMENT GOALS

In 2015, the global community has decided upon a blueprint on what kind of society we would like to live in; the blueprint is also referred to as the 2030 Agenda for Sustainable Development, and the details of the blueprint are reflected through the 17 Sustainable Development Goals (SDGs). Regardless of where they are located or what the GDP per capita is, 193 United Nations member states have not only agreed upon the 2030 Agenda, but also started to share how they are internalizing the Goals for national policy making.

As we enter the decade of acceleration, understanding synergies and trade-offs among 17 SDGs will be critical. One way of thinking about inter-connectedness among SDGs is through the 5 P's: **People, Prosperity, Planet, Peace**, and **Partnership**.[i] By doing so, we realize that many global, national and local issues are often times a result of interactions among three dimensions of sustainable development: the social, environmental and economic pillars. Specific mechanisms to measure progress on SDGs can be seen through 230 indicators.[ii]

> "Everything we do during and after this crisis [COVID-19] must be with a strong focus on building more equal, inclusive and sustainable economies and societies that are more resilient in the face of pandemics, climate change, and the many other global challenges we face."
>
> António Guterres
> *Secretary-General, United Nations*

With less than 10 years left to achieve SDGs, world leaders have declared the current decade as the Decade of Action that would accelerate solutions in 2019. One year later, COVID-19 pandemic hit across the world, resulting in declines in human development, both in rich and poor countries.[iii] It has also served as a magnifying glass for inequalities, highlighting vulnerable groups that had limited access to, for example, health care, clean water and sanitation, and job security.

As we aim for recovery from COVID-19, the global community has started to reflect on our values and design a new area of development that balances economic, social and environmental progress. The crisis has revealed how our "normal" lives had taken a strain on the healthy functioning of the environment.[iv] So now, more than ever, there is a need for integrated solutions that are not only socially inclusive but also takes account of anthropogenic pressures on planetary boundaries.

Youth can lead the Transformation – Accelerating well-designed solutions for SDG 4 , 15 & 17

Today, there are 1.8 billion people between the ages of 10-24—they are the largest generation of youth in history (UN, 2019).[v] Nearly 90 percent of youth live in developing countries, and these numbers are expected to grow—between 2015 and 2030 alone, about 1.9 billion young people are projected to turn 15 years old, yet youth are not leading the implementation of the 2030 Agenda (UN, 2019).[vi] Youth are not just beneficiaries, they are leaders that can design solutions to recover from the COVID-19 pandemic and accelerate progress for sustainable development in every community across our globe.

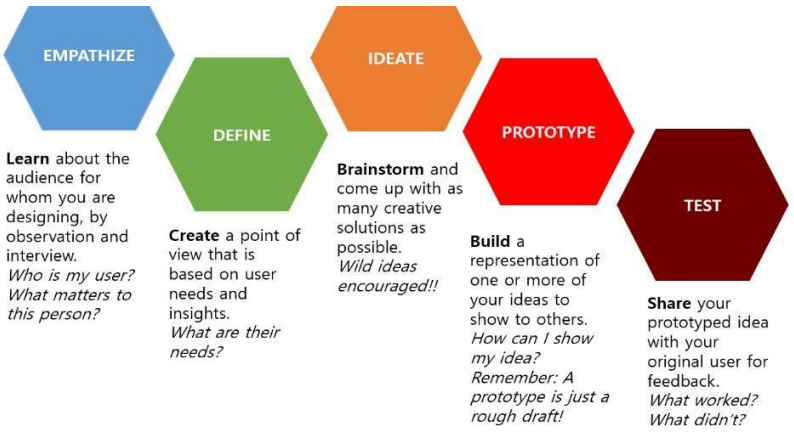
As we explore ways to build back better, the renewed outlook on the intersection between natural and human systems for sustainable development requires us to conduct critical evaluation of how we are protecting, managing and storing terrestrial habitats. Forests (SDG 15) are not only home to numerous species but are providers of key ecosystem services for humanity: provisioning services (e.g. freshwater, food, fiber) and regulatory services (e.g. climate regulation, water purification, and flood control). Finding innovative ways for sustainable land use, responsible forest management and environmental stewardship will require buy-in from diverse stakeholders, ranging from citizens, consumers, businesses to national governments and international organizations. Consequently, education (SDG 4) and partnerships (SDG 17) needs to be considered concurrently to unlock the potential of nature and humanity for sustainable development.[vii]

Sustainable by Design

To tackle the complexity of challenges today, it is imperative that the solutions developed are effective and they are most effective when designed in a **participatory** way – a **user-centric** way. Engaging today's youth is of primary importance in forging the leadership, empathy, ideas, energy and hope to demand change and design effective solutions to these challenges.[ix] Consumer products, industrial processes, government programmes and more can all benefit from design that focuses on **end-user needs**; design that aims for **impact across the SDGs**. For example, SDG 12 focuses on 'ensuring Sustainable Consumption and Production patterns', with targets aiming to reduce waste and pollution. But, some of our products are not designed for recycling. Did you know that only 9% of plastic waste has ever been recycled?[x] Many plastic straws, toys and more simply don't meet **the business case** for recycling. How can we better design our products to be less resource intensive, easily reusable and 100% recyclable? Only if they are **sustainable by design**.

In 2019 alone Overseas Development Assistance, or the money that countries send to developing countries to ensure impact on areas under the SDGs totalled **$147 billion**, nearly the same level as in 2018.[xi] This number has already begun to decline due to the Pandemic and so has Foreign Direct Investment and other flows that can enable **financing solutions**. Financing is often the biggest challenge to scale-up an idea, so we need to ensure all the financing going towards solutions for development are effective and **sustainable by design**.

Stanford D-School Design-thinking Methodology



Design-Thinking to get us there

Design thinking is a simple step process that can be applied to solve problems, developing tailored solutions according to the end-user's needs. It allows those who use it, including corporations, civil society, students or entrepreneurs a way to "**understand users**, challenge assumptions, redefine problems and **create innovative solutions** to prototype and test."[xii] The standard design-thinking process has **Five steps** - 1. Empathize, 2. Define, 3. Ideate, 4. Prototype and 5. Test – with academic institutions like the Stanford D.School (Hasso Plattner Institute of Design at Stanford University) popularizing this process for impact on sustainable development as well.

Let's Learn about Design-thinking for Sustainable Development – Let's learn about two cases on 1. When design-thinking could've helped and 2. When design-thinking did help!

The following cases were developed to share how design-thinking's stages are all important. From the first part on empathy, it's fundamental to start any solution journey by understanding the end-user's needs. This means studying the community, all potential users and more. It also means defining the exact needs, challenges, prioritises and worldviews, social norms or more that may act as barriers or problems. Understanding the barriers to the current problem or challenge is fundamental in development – sometimes a simple solution can make the difference. As a third step, ideating or brainstorming the potential solutions from all angles and with beneficiaries can make all the difference. We can find market gaps, products and services that do not exist but could make the difference. All potential solutions must then Prototyped and Tested with the original users. This could lead to restarting the process too, so it is a cycle that can be repeated for success. In the end, the process means identifying effective solutions that can be scaled-up and make a true impact to accelerate the SDGs!

CASE 1. Playpumps - When design-thinking could've helped

The Playpump was developed as a fun solution to provide water for communities in need of this vital resources. Instead of a normal handpump, the novel Playpump could act like a merry-go-round, pumping water as children pushed it around. It also allowed children to stay in schools as they did not have to fetch water. They also had access to clean drinking water, latrines, and hand-washing facilities, and were able to attend schools without water-related diseases. In 2009, however, it was revealed that Playpump led to child labour (SDG 8.7).[xiii] The Playpumps required more pumping effort than normal, and as a result water quantities pumped declined and UN reports evaluating the pump noted "there is often insufficient quantity of water to carry out other activities such as gardening and sanitation. Some schools stopped or drastically reduced their small-scale irrigation efforts as a result".[xiv] In the end, the Playpumpfailures were because it was not designed with the users in mind – millions of funds were spent in vain.

Former Playpump sites in Africa are abandoned or simply went back to the former hand pumps, but the organization is still trying to ensure effectiveness today. If it had really succeeded, it would have achieved access to equitable sanitation, paying special attention to vulnerable women and girls (target 6.2) under SDG 6 and SDG Target 3.9.

CASE 2. Pasikola transport service - When design-thinking did help

The Makassar government has developed a masterplan to create an integrated system to mitigate traffic congestion and increase demand for public transportation.[xv] In 2018, the United Nations Development Programme and UN Global Pulse Lab Jakarta jointly held a workshop on the value of design thinking approaches to Makassar officials to ease the heavy traffic congestion. They discovered that Pete -Pete, the main mode of transport in the capital, did not meet the public's needs or school-children's needs for safety. This citizen-led solution - designed to be user-centric - became a successful pilot.

This is a good example of how design-thinking can be applied to advance the SDGs and targets on sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children (target 11.2) under SDG 11 on sustainable cities. This design thinking solution also supported SDG 3.6, to halve the injuries from road traffic accidents. Pasikola reduced traffic congestion, became reliable school transportation, saved parents time, and supplemented Pete-Pete drivers' income. The city decided to adopt Pasikola as a core public service and dedicated a budget for its continuation in 2019. In line with SDG 16.6 on effective, accountable and inclusive government, the initiative also increased the citizen participation in designing better user-centred public services, through the Public Sector Innovation Lab.[xvi]

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