



Collaborative Learning and Co-creation toward Sustainable Living

Sustainable ways of living' cannot simply be defined as achieving fewer negative impacts through raised awareness or actions on a purely individual level. While such are important, the type, scale and overall effect of the processes differ. Sustainable ways of living in the truest sense are generated and enabled by and within whole communities through collective learning and action. The key to sustainable living lies in the capabilities of local people and groups to continuously revisit the conditions that shape their daily lives, such as natural ecosystems, technology, infrastructure, rules and norms and to create alternative contexts that support responsible living and reliable livelihoods.

It is important to note that the goals for achieving sustainable ways of living or enabling contexts are not always clear from the outset. Those working on the challenge of advancing sustainable living need to continuously re-evaluate current and desired conditions through questions such as **What are the challenges that threaten communities and livelihoods? What resources are available to tackle them? and What value can we create for our communities and our lives, and how can we share it?**

To continuously revisit these questions and realise fundamental differences in living conditions, those concerned need to continue learning and working together with others with different areas knowledge, skills, concerns, and desires or needs.

Collaborative learning and co-creation are essential drivers in all efforts toward sustainable living. They have two significant benefits:

- 1** Local initiatives aim to create alternative ways of meeting the needs of communities and families. It is thus imperative to undertake trial and error processes and experiments that combine technologies and resources to find practical alternatives for local production and consumption. Practical solutions often remain unclear until tested, as in the cases of renewable energy introduction which benefitted the daily lives of local communities, or in the improvement of local farm production through using local traditional knowledge.

2 Through the process of trial and error, initiatives are often confronted with unexpected situations; it is not uncommon for cooperation with governments to stall due to changes in political system or to be hampered by disasters or economic fluctuations. Facing such unexpected challenges, participants carrying out local initiatives will need to reconsider their context and capabilities and make modifications or changes as they see fit in order to adapt to the situation in carrying out objectives.

Some of the key lessons involved with collaborative learning and co-creation from the SLE projects are as follows:

1 All projects place collaborative learning and co-creation as core ongoing activities and engage with local key organisations such as local authorities, producers or women's groups, educators and schools, technology providers and NGOs.

2 Physical and virtual spaces were identified or set up to facilitate collaborative learning and co-creation.

a. **Physical venues:** Local community activity centres, meeting rooms in workplaces and government offices, schools, etc., were used for the information exchange among participants, training programmes and dissemination of results.

b. **Experimental sites:** The project in Zimbabwe set up experimental farms in the community, where residents could experiment with different livelihood options, including livestock and crop production, processing and marketing. People gathered at pilot facilities to learn about the benefits of these alternative approaches and develop the skills needed to implement them. Other experiment cases include the solar-powered irrigation and solar-thermal dried fruit production equipment in Armenia, pilot facilities such as biogas generators and solar panels in Colombia and Peru, and geothermal greenhouse cultivation in Chile. These initiatives were used as spaces for collaborative learning and co-creation, for designing alternative ways of meeting needs and revealing and sharing the benefits.

Co-creation on construction methods and living experiences in sustainable houses

The project in Malawi has established a model sustainable housing site with four identical dwellings. Some of the innovations incorporated into the dwellings include:

- Construction with cement blocks
(instead of conventional construction using kiln-fired bricks)
- Solar photovoltaic panels for electricity; solar water heaters for domestic water heating from renewable energy rather than electricity, charcoal or firewood
- Water harvesting from roofs for use in gardening

The model sustainable housing site was designed to serve two main purposes. First, the houses demonstrated how sustainable houses can be designed. They provided evidence of alternative approaches, training and capacity building to students and builders in terms of construction methods and materials and the utilisation of sustainable technologies.

Second, they served to showcase and raise awareness on sustainable urban lifestyles. People can freely visit the site and ask tenants specific questions about their experiences living in sustainable houses (e.g., visitors can inquire if solar water heaters lead to cost savings on energy bills and provide a reliable service). Through the project implementation based on these approaches, the project has facilitated co-creation of knowledge on sustainable housing design and enabled new values and concepts to be explored with a view to developing various routes that communities can follow towards creating sustainable houses and cities.

Additionally, the design of the low-cost and low-carbon module houses and the concept of sustainable urban lifestyles have a huge potential to engage with low-income groups. The Government of Malawi currently plans to provide 10,000 houses to low-income civil servants such as police officers, immigration department officials and army personnel. Part of the project's brief was to utilise an approach enabling low-income families to play an active role through practical inputs in demonstrating sustainable and low-cost urban living.



- c. **Virtual spaces:** Online communication in the projects was lively. Especially in view of the COVID-19 pandemic, use was made of WhatsApp and other mobile communication tools to share information with local community members, modify activities, report progress, and share results. In Colombia, the help of young people was crucial to the shift to online—going online was a catalyst for more intergenerational interaction than had ever been experienced in that community previously.



Colombia

Creative Response to the COVID-19 Pandemic

The Colombian project aimed at the recovery of traditional crops organised sessions named Sustainable Lifestyle Schools. The first two sessions took place prior to the pandemic and enabled participants to gain a basic level of knowledge and formulate cooperative relationships.

Then, before the third session, the country became affected by the COVID-19 pandemic. Project teams and community participants responded by viewing the crisis as an opportunity, and began creating communication channels that work in a lockdown situation. They initially used multi-party calls, then created a WhatsApp group. Additionally, they gathered in the virtual community at 5:30 am every Wednesday, following the traditional custom of morning coffee in Colombia. The audio clips of characters created by the coordinators facilitated the participants' weekly learning activities. The knowledge and experiences of the participants were also shared through photos, writings, music and short videos. To date, 3,000 WhatsApp messages and more than 2,000 photographs and videos have been shared both from the community and the UTA team to promote the Technology Baskets.

Each farm was virtually visited, and the visits provided an opportunity to meet all the family members—children, youth, parents and grandparents. Recordings of each activity were edited and turned into a podcast or radio programme format that was returned via WhatsApp to the families involved on a weekly basis. This allowed people to listen to the programme as a family with ease and on their own time schedules. The project also used this medium for developing tutorial videos on Technology Baskets to allow people to choose appropriate technologies themselves. Participating families, including youth, contributed to the creation of written and multimedia contents.

Thus, the creative response to the pandemic provided the project team and participating families the opportunity to cultivate powerful methodological tools for their future actions.

3 Collaborative learning and co-creation provide the following benefits:

- a. **Sharing current problems and revealing possible benefits of alternative ways of living:** Starting with local people's concerns such as income and health, participants can gradually dive deeper into the root causes of the issues, including the multiple linkages between these issues and national and global sustainability issues. In this way, people can re-evaluate their capabilities to work together to address both local, regional and global challenges through trial and error in their day-to-day activities.

Philippines

Visualizing the Benefits of Energy Efficiency

The government of the Philippines has undertaken substantial efforts to introduce and accelerate energy efficiency and conservation (EE&C), aimed at building and establishment operators. However, these do not target the general public—a major electricity consumer segment.



The project led by ICLEI Southeast Asia focused on engaging local communities to promote sustainable energy consumption and carbon emissions reduction. The objective was accomplished by improving their access to pertinent information and helping them visualize the benefits of EE&C. A comprehensive understanding of EE&C is one of the keys to transitioning to a sustainable pathway.

In 2020, the COVID-19 pandemic forced the transition of many aspects of life, including sustainability. This led to use of the Internet to reach out to and engage with local communities. The project developed online learning resources, including an online platform that functions as a 'one-stop-shop' resource on EE&C. Dubbed ACCELERATE, the platform is tailored to raise awareness and provide information for residents, businesses and local governments across the Philippines. ACCELERATE contains zero-to-low-cost energy-saving tips for households and small businesses, simplified summaries of national policies on energy and sustainability, and other accessible knowledge products.

Additionally, the project team produced a comic book titled Chuchay Learns to Save Energy, which uses a narrative involving a young girl learning about EE&C in order to convey information on estimated cost savings of each EE&C measure. The project team chose the comic medium to make the topic of energy efficiency more accessible and engaging for local communities, especially youth.

The capacity-building and awareness-raising efforts undertaken by the project contributed to the uptake of EE&C in households across the Philippines. Within about nine months, the ACCELERATE platform had received around 25,000-page visits from almost 17,000 users, while 500 printed copies of the book Chuchay Learns to Save Energy were distributed to the cities of Pasig and Parañaque.

b. Learning and trying alternative ways of living: Training programmes in community centres and experimental farms, for example, can enable participants to learn and try various alternative actions, such as using renewable energy sources, improving agricultural production, or bringing their produce to market. They can also review their daily modes of consumption and learn safer practices concerning health and hygiene. Such alternative measures are then tested at their homes or farms, and the results are shared and learned by their peers, leading to real-world knowledge being accumulated in the community.

The Colombian project introduced a unique method called *Technology Baskets*. Participants select and use the technologies and tools provided by the baskets and share the lessons and tips with the community and maintain them through engagement with a collective fund. Their experience of testing, evaluating, and managing together with their neighbours grows the capacities to work together toward the shared goals of creating more resilient ways of living.

c. Assessment of achievements and consideration for the way forward: It is also vital that participants share and review their achievements and failures in order to capitalise on what they have learned. All projects involved measurement of their outcomes and impacts, including greenhouse gas emissions reduction. Many project teams worked on monitoring and evaluation together with local participants, which allowed the participants to capture the impacts of their actions or non-achievements in order to consider the way forward.

Evaluation can also lead to broader usages or communication of the achievements and lessons. The project in Armenia included the experience of collaboration between local farmers and university students within the university curriculum. Furthermore, farmers, the Water Users Association and the university contributed to fulfilling the requirements of the national regulations and grew capacities in data access, assessment, and collaboration through the joint monitoring. The experience gained will enable them to apply for the national programme to improve their irrigation systems. In such way, collaborative learning and co-creation are essential to generating broader significance from local activities.



Use of Technology Baskets to Encourage Selection and Adaptation of Technologies

With the aim of improving local conditions, rural development projects need to include the process of learning and reflecting on local conditions through the proactive engagement of local participants. However, projects are not always successful in bringing about use of the intended technologies or knowledge introduced. Sometimes, the transferred technologies do not correspond to the real needs in terms of local living, or local participants are reluctant to learn about alternative solutions to their daily problems.

The Technology Baskets Approach responds to such challenges. In this approach, local participants play a central role in developing, testing and applying solutions towards achieving sustainable ways of living. Based on the integral visions developed through these collaborative learning processes, experts and local families analyse local needs. The Baskets offer a handful of technologies and knowledge to improve their day-to-day production or consumption, such as in crop or livestock production, use of renewable energy, reuse of wastes and so on, together with the necessary tools or materials. Some technologies are for family use, but others may be communal. Furthermore, participants jointly manage the Baskets and raise funds to sustain and improve the Baskets programme. In this sense, Technology Baskets can also be recognised as Community Baskets, which keep evolving through the continued efforts of local participants and experts to bring in technologies, experience, and funds. The process is accompanied by monitoring and evaluation in order to continually provide more effective means of improving livelihoods and lifestyles and enable upscaling.



In summary, projects intended to enable sustainable ways of living can utilise collaborative learning and co-creation of alternative patterns of production and consumption. The techniques used involve creating both physical and virtual spaces and the processes of joint learning, planning, attempting practical actions that influence day-to-day living, and assessing the associated benefits for further learning.

The following points should be considered in facilitating collaborative learning and co-creation toward successful local initiatives:

1 Engaging with marginalised people: Efforts toward responsible lifestyles and reliable livelihoods are desired to engage with marginalised people. The vulnerabilities or disadvantages related to the living conditions of such peoples are deeply entangled with the root causes of unsustainable living of entire communities or cities. Thus, their concerns as well as knowledge on basic needs, natural resources and social networks can greatly assist society in shaping sustainable and reliable forms of living. In other words, a society enabling marginalised people to take part in a transition it is undergoing is one that can offer sustainability and dependability for its people into the future.

2 Listening attentively: Local participants and organisations have individual motivations and concerns, which need to be listened to. Particular attention should be paid to people who do not usually have a voice. Cooperation with local key organisations and authorities such as local administrators, educators, community leaders, and leaders of specific groups such as women, farmers or water users is essential for all types of local initiatives. At the same time, networking with external partners is also vital as it can provide critical resources such as technologies, funds and marketing channels, and access to resources beyond the communities concerned.

3 Creating spaces for collaborative learning: It is crucial to include both discussions and learning in classrooms and meeting rooms as well as opportunities for local people to participate and create something using their hands in order to avoid one-way communication. It is also important to use virtual technology to foster multidirectional information sharing.

4 Flexibility and adaptability: Project activities often do not go as planned. Both implementers and supporters need to learn on the ground and flexibly adapt to ever-changing situations. Uncertainties may pose challenges to implementation but also provide the opportunity to dive deeper into the causes of problems and elaborate on certain activities. Thus, flexibility and adaptability are the keys to successful implementation and knowledge co-creation toward capacitating people to live sustainably.

Adapting the Project Implementation in Response to the Pandemic

The ongoing COVID-19 pandemic is an unprecedented global health crisis. Most institutions were caught off-guard and daily life needed to drastically change to contain the virus and minimize loss of life. But while the world has virtually ground to a halt, concerns such as climate change persist and continue to worsen.

In the Philippines, the COVID-19 situation proved to be highly challenging. Project activities were put on hold for months as the partner cities reallocated resources towards pandemic response. Further, strict quarantine protocols limited the project team's mobility and access to the city, which hampered the implementation of scheduled activities.

As a project implementer of a climate change mitigation project focused on information dissemination and face-to-face communication, the project team needed to be able to flexibly adapt to the changing situation created by the pandemic. The project team identified the risks and challenges associated with different scenarios, and modified the planned strategies to lessen the impact of the pandemic on the project. Efforts were made to ensure that outputs were delivered as expected while ensuring the stakeholders remained safe from exposure to COVID-19.

Based on these circumstances, the project employed a shift from in-person workshops and lectures to an online format. Further, the target audience was switched from community-based households to local government staff whom the project's Energy Advocates could more easily and safely interact with. A portion of the budget was also reallocated to purchase personal protective equipment to ensure the health and safety of the Energy Advocates during unavoidable on-the-ground operations.

Despite the above challenges, however, the project fulfilled its goal of educating the intended audience on energy efficiency and conservation almost completely remotely. An online survey was also conducted to measure the potential impacts of the project interventions.



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by Atsushi Watabe, Dumisami Chirambo, Lylían Rodríguez Jiménez, Jose Bernardo B. Gochoco III,
and Katrina Toliongco

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