

PHILIP DEGENHARDT (Ed.)



BUILDING THE SOCIAL - ECOLOGICAL FUTURE

TRANSFORMATIVE APPROACHES IN VIETNAM

IMPRINT

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Editor: Philip Degenhardt

Project management: Tran Bao Ngoc Anh, Tran Thu Thao

Illustrator: Nguyen Vu Xuan Lan

Designer: Dan Ni

English editor: Laurence Newman

German translation: Jan-Peter Herrmann

Contributors: Chu Kim Duc, Nguyen Hue Phuong, Dang Thi Anh Nguyet, Bui Thi Thanh Thuy, Le Thi Thao, Vu Hong Trang, Tuan Ha, Huong Hoang, Huyen Khuat, Long Ha, Son Ho, Dang To Kien, Tran Thi Lanh, Ha Thi Hong Hai, Pham Phu Minh, Tran Thu Thao, Rainer Brohm, and Francine Mestrum.

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Building the Social-Ecological Future: Transformative Approaches in Vietnam

Introduction

The world is engulfed in multiple, simultaneous, and interrelated crises: The climate crisis, the COVID-19 pandemic, threats to health systems, the global financial crash and subsequent bank bailouts, humanitarian emergencies due to natural disasters, and global biodiversity loss. Each and every one of us is affected by them to some degree. And they all tell us one thing: More of the same is not an option. Many people feel like this. However, they are unsure what the right path to a socially and ecologically sustainable future might be.

The answer of the Rosa Luxemburg Foundation and other left actors worldwide is social-ecological transformation. But what does this mean in practice? And how is it different from the 'sustainable development' championed by others?

Firstly, our understanding of the initial analysis is different. Those of us who believe in a social-ecological transformation see that neoliberal capitalism¹—our current economic system—is faced with multiple crises. We seek a holistic answer. Therefore, our response must not look to solve each individual problem in isolation. Instead, it must grasp their interconnectedness and solve them together. In other words, it is essential to understand that these individual issues merge into one global, multi-layered crisis.

Secondly, another difference is our clear focus on social and ecological aspects in all projects and target-oriented concepts. This orientation is essential because purely economic development cannot create a better future for all. Just repeating old economic mechanisms with a little more green paint, as we so often see under the banner of sustainable development, will not be enough to overcome this multi-faceted crisis.

The social-ecological understanding of a global, multi-pronged crisis implies a clear rejection of the hegemonic dogma of neoliberalism. On a planet with limited resources, unlimited and unrestrained growth is impossible. Therefore, the prevailing view that social, economic, and societal development is only possible through economic growth must be challenged.

To promote a social-ecological transformation, the four destructive industries that most threaten our livelihoods must be transformed: These are energy, transport, industrial agriculture (including agribusiness), and security/the military-industrial complex. In exacerbating the current multi-faceted crisis, their interdependencies and relations with global finance and the tech sector are particularly noteworthy.

This destructive quartet is responsible for the worst pollution and the highest consumption of fossil fuels. Fossil fuels account for about 80 per cent of the world's energy supply. The transport sector alone is responsible for more than 60 per cent of global oil consumption and 25 per cent of carbon dioxide emissions. It is an immense accelerator of climate change and climate-induced migration. Likewise, globalized neoliberal agriculture leads to problems including monocultures, land grabs and displacement, loss of biodiversity, soil degradation, and drought, to name just a few. Meanwhile, the damage caused by wars, such as Agent Orange (a chemical defoliant used by the US military) in Vietnam, and radioactive munitions in Hiroshima and Nagasaki in Japan as well as

1. Attributes of this form of capitalism include a blind trust in market mechanisms, an increasing ignorance of social conditions, and the growing power of international companies.

elsewhere around the world, make the military-industrial complex unsustainable from a social-ecological perspective. Moreover, it devours huge amounts of capital. This money is then no longer available for other, less harmful sectors.

The multidimensional, interconnected crisis is largely caused by this quartet of destructive industries. Once we agree on the problem, we then need to consider the solution. This includes bringing together different progressive actors from all over the world with different experiences and ideas to oppose neoliberalism with a new economic and social model. But how can we build a counter-power against a greenwashed capitalism that tries to solve the current crisis with the very same mechanisms that created it?

Social-ecological transformation is our answer. It is a progressive, left-wing intervention in the discourse on sustainable development. It aims to overcome a development path that destroys social relations and ecological diversity. It combines and gives equal weight to theoretical and practical knowledge within a multidimensional approach. This means, that not only academics and politicians—but also indigenous communities, urban stakeholders, and other actors—must have a voice in shaping social-ecological transformation. Different balanced answers are needed on both large and small scales, which have to be worked out together.

Social-ecological transformation can be seen as a framework for transformative projects within societies. It is an open concept that should be developed on a broad basis and with as many partners as possible. Likewise, there must be networking between the actors involved in the debate as well as across national borders with others pursuing the same theoretical approach. Last, but not least, openness is needed. We must be responsive to local conditions, integrating them while also formulating precise ideas about what a social-ecological transformation could look like.

This book aims to contribute eight concrete examples from Vietnam to this debate. It includes ideas and initiatives from scientists, youth workers, and people who have been working with nature and for a sustainable coexistence for decades. This book supports the debate on a global social-ecological transformation from the following eight perspectives:

In the first chapter, adventure playgrounds and community gardens are presented as approaches to social-ecological transformation in towns and cities. The Think Playgrounds team describes how these initiatives bring communities together and make urban areas more socially and ecologically livable.

In the second chapter, our partner organisation, the Center for the Development of Community Initiatives and the Environment (C&E), describes the potential of Vietnamese students and how they are already a driving force for social-ecological transformation. C&E shows the commitment of students and highlights some recent success stories.

In the third chapter, journalist Vu Hong Trang tells the inspiring story of Tri, who not only inspires others with his Ecofish Vietnam project, but has also declared war on plastic waste.

In the fourth chapter, Nadja Dorschner and Hoang Hao Tra My interview agricultural experts at the Social Policy Ecology Research Institute (SPERI), who have been observing the



food and agricultural systems in Vietnam for decades, and describe the possibilities for building an ecologically sustainable and socially just food system.

In the fifth chapter, two young researchers, Ha Thi Hong Hai and Pham Phu Minh, use a case study to describe how farmers can become more climate-resilient through adapted production models and relate this to equitable climate change adaptation.

In the sixth chapter, Tran Thu Thao looks at dual-use approaches to agricultural land and explains how dual-use with solar energy can bring benefits for all.

In the penultimate chapter, Tuan Ha and his colleagues from the Thai Nguyen University of Agriculture and Forestry introduce the 'Evolutionary Learning Lab' as a transformative model for social-ecological transformation toward climate-resilient communities in Vietnam and describe what a new approach to solving complex problems could look like.

The eighth and final chapter sums up the book and discusses change and social justice through participatory knowledge production. The ideas and initiatives contained in the book are revisited by Francine Mestrum and their significance for social-ecological transformation in Vietnam is discussed.

I hope you enjoy reading and look forward to further exchanges.

A better world is possible.

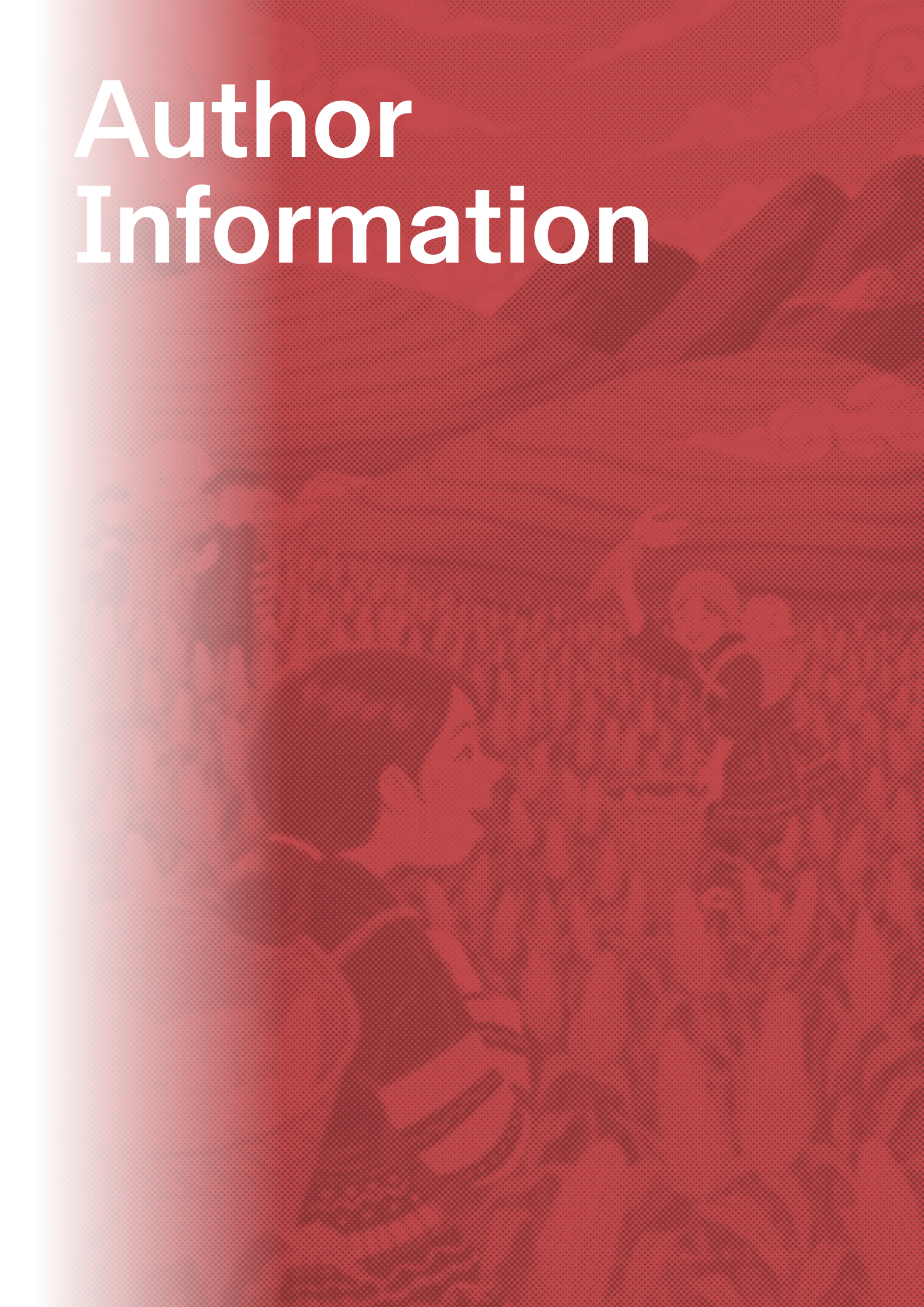
Philip Degenhardt
Regional Director
Rosa-Luxemburg-Stiftung
Southeast Asia - Hanoi Office

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Author Information

The background of the page is a red-tinted, halftone-style image. It depicts a person, possibly a woman, standing in a field of tall grass or reeds. The person is wearing a dark, long-sleeved top and a light-colored skirt or dress. The overall tone is artistic and somewhat abstract due to the halftone effect.

1. Think Playgrounds: The Adventure Playground and Community Garden Model as a Solution for Social-Ecological Transformation in Urban Areas

Think Playgrounds (TPG) is a pioneering social enterprise with a mission to promote children's 'right to play' through joint efforts with urban residents to build playgrounds and community gardens as well as to renovate welcoming and inclusive public spaces. TPG believes that qualitative public space built with communities is fundamental to achieving social equity as well as to increasing quality of life and the community connection of urban citizens. It is also the most sustainable solution for children living in cities in Vietnam to have a playful childhood.

2. Vietnamese Tertiary Youth as Social-Ecological Transformation Agents: Potential and Action for Change

The Center for Development of Community Initiatives and Environment (C&E) aims to support local communities, community-based groups, and civil society organisations in locally sustainable initiatives and to promote ecological sustainability, social equity, and justice. Since its establishment in 2008, C&E has worked with research institutes, education providers, NGOs, state agencies, and environmental community groups and networks on this mission. Its current projects focus on ecological lifestyles and social-ecological transformation.

C&E envisages a future for Vietnam in which communities and grassroots organisations actively participate in solutions to environmental problems, the sustainable use of natural resources, and the maintenance of sustainable lives for themselves.

The co-authors of this chapter have had extensive experience with C&E and its work. Dr. Dang Thi Anh Nguyet, BA, MASW, Ph.D., has been a Research Associate at C&E since 2009. Bui Thi Thanh Thuy, BA of Linguistic, is the Co-Founder and Deputy Director of C&E. Le Thi Thao, BSc, MSc, ESD, has been a Youth Project Officer at C&E since 2018.

3. Breaking a Norm, Breaking a Habit the Story of a Young Environmental Activist

Vu Hong Trang is a social entrepreneur and Gender Advisor at the Equal Asia Foundation. Trang holds an MA in European Studies from an Erasmus Mundus programme in France, Germany, and Sweden; an MA in Chinese Studies gained in China; and an advanced Diploma on Italian culture awarded in Italy. She previously worked as a Graduate Teaching Assistant at Peking University and a Project Assistant at UNICEF in Germany.

4. Vietnam's Food and Agricultural Systems at a Crossroads

Dang To Kien is Vice-Director and Programme Coordinator of the Social Policy Ecology Research Institute (SPERI). With a Master's degree in Forestry Science and Management, Kien focuses on the sustainable territorial governance of land, forests, water, ecosystem services, and biodiversity conservation as well as on landscape restoration.

Tran Thi Lanh is the Founder of SPERI. Her research interests are the relationship between tribes, colonialism, and the modern state.

Hoang Hao Tra My worked as a Project Manager at the Hanoi office of the Rosa-Luxemburg-Stiftung in Southeast Asia. Among other topics, she worked on the political ecology of natural resources management with a focus on agriculture policy and practices.

Nadja Dorschner worked in the Asia Unit of the Rosa-Luxemburg-Stiftung, Berlin, Germany. She is particularly interested in food sovereignty and the transformation of global trade structures.

5. Just Adaptation to Climate Change: a Meaningful Approach to Building the Adaptive Capacities of Local Smallholders in Vietnam

This team of two early-career researchers is passionate about bringing scientific knowledge to practice and building adaptive climate change capacity for communities in Vietnam. They believe that building true climate change resilience requires collaboration from all stakeholders to respond and adapt. It starts with equality and justice.

6. Introducing Dual-Use Approaches for Solar Energy and Food Production in Vietnam

Tran Thu Thao is an International Business student and a graduate of the National Economics University. She is passionate about development and worked as an Intern at the Rosa-Luxemburg-Stiftung for six months. The three words she would use to describe herself are: 'a constant learner', 'creative', and 'impactful'.

7. Using an Evolutionary Learning Lab as a Transformative Educational Tool for Social-Ecological Transformation toward Climate-resilient Communities in Vietnam

Dr. Tuan Ha is Acting Director at the Hi-tech Agriculture and Forestry R&D Center (HACEN), Thai Nguyen University of Agriculture and Forestry (TUAF). He holds a Ph.D. in Agricultural Systems Management from the University of Adelaide, Australia. He has extensive experience in research and on-the-ground management in a large number of areas, including in community development and resilience, gender studies, sustainable agriculture, agribusiness, agricultural systems research, livelihood development, transformative learning, participatory action research, business incubation and development, disaster risk reduction, and climate change adaptation. Dr. Ha has worked as a practicing scientist in both academic and development fields for a large number of international organisations and NGOs in Vietnam and overseas. He is a recipient of a number of competitive research grants, receiving two international and three national awards for his innovative research methodologies and impacts. Dr. Ha has published more than 70 peer-reviewed journal and conference papers and a large number of consultancy reports.

Huong Hoang MSc. is a Researcher at HACEN. She obtained her Master's degree in Agricultural Science from the University of Queensland. Her research interests include sustainable agriculture, hi-tech agriculture, and climate-resilient agriculture. She works on rural development projects promoting the production of native medicinal plants, the organic farming of local crops, and capacity building for extension workers and farmers in the Northern mountainous regions of Vietnam under the context of climate change.

Huyen Khuat MSc. is a Researcher at HACEN. She obtained her Master's degree from the Institute of Environmental Engineering at National Chiao Tung University, Taiwan. Her work and research experience cuts across a number of fields, including the treatment of environmental pollution, climate change, biodiversity, and natural resource planning in Vietnam. Her current research comprises technology-transfer activities, climate change impact assessment and adaptation, upland sustainable livelihoods, and natural resource management.

Long Ha is a Lecturer at the Faculty of Agronomy and a part-time Researcher at HACEN. He obtained his Master's by Research (Mphil) in Crop Science from the University of Queensland, Australia. His research experience includes crop science, sustainable agriculture, and hi-tech agriculture.

Dr. Son Ho is Deputy Dean of Forestry at TUAF. He obtained his Ph.D. in Global Environmental Change (2013) from the Australian National University. He has published peer-reviewed articles on indigenous knowledge and climate change adaptation of ethnic minority people in Vietnam. Dr. Son has also worked as a Deputy Director of the Agriculture and Forestry Research and Development Centre for Mountainous Regions, where he led many development projects. All these projects aimed to promote equality, rights and voices, and the empowerment of ethnic minority women in remote areas of Vietnam.

8. Social and Ecological Transformation in Vietnam: Social Justice with Participatory Knowledge Building as Tools for Change

Francine Mestrum has a Ph.D. in Social Sciences and has worked at European institutions and several Belgian universities. Her research concerns the social dimension of globalisation, poverty, inequality, social protection, public services, and gender. She is an active member of the International Council of the World Social Forum and Organising Committee of the Asia Europe People's Forum, co-ordinating its social justice cluster.

Think Playgrounds

**The Adventure Playground and Community
Garden Model as a Solution for Social-
Ecological Transformation in Urban Areas**

By Chu Kim Duc & Nguyen Hue Phuong

Efforts to spread social-ecological public space models in urban areas

Urban areas in Vietnam have a severe lack of public – and especially green – spaces. The amount of green space per person in Vietnam's cities is just 2-2.5m². To put that in perspective, that is far below the WHO's recommended minimum of 9m² of green space per person for urban areas. Indeed, Vietnam lags behind modern cities like Singapore (66.2m²/person) or Seoul (23.4m²/person) which both have an abundance of green space.

The main cause of this shortage is the fact that urban master plans prioritise housing and roads while saving precious little land for public spaces. At the same time, existing spaces are often in dispute and used for private purposes such as vending and parking. This has caused these spaces to narrow. Moreover, in current public spaces, management is unprofessional. This is, in large part, down to a lack of community participation. This causes public spaces to be degraded, deserted, or even turned into spontaneous landfills causing serious environmental pollution. Meanwhile, most public spaces have an inflexible and stereotypical design, and lack basic functions to meet the needs of users (children, young people, women, and the elderly). At the same time, the excessive use of concrete wastes space and has a negative environmental impact, limiting the growth of native organisms. Many public spaces are difficult to access or unsafe due to their closeness to major roads.

In 2014, Think Playgrounds (TPG) started as a volunteer group with the desire to create playgrounds for children in urban areas in Vietnam. The first project at Bai Giua, Red River, which was built on a small budget of just 10 million VND (€380/\$440) and with the support of volunteers and locals, was an important starting point. In the same year, TPG organised the first Play Day in early December. This received significant attention from the media and the local community, highlighting the lack of playgrounds in urban areas and their importance to children living in cities.

In its first two years, TPG received requests from communities to support the construction of public playgrounds for children in KTTs (socialist collective housing areas), schools, and cultural centers in Hanoi. Meanwhile, in remote and highland areas such as Cu Lao Cham Island (Quang Nam province); Ly Son island district (Quang Ngai province); and the Northwest high mountains (Yen Bai, Lao Cai, and Ha Giang provinces) TPG joined with local organisations and volunteer groups to build playgrounds for children.

Then, in 2016, TPG established a social enterprise to continue the group's mission more effectively and sustainably. Under this new business model, 51% of profits are reinvested into communities to build new playgrounds or to support the maintenance of existing playgrounds. As of 2020, TPG has worked with communities to build more than 200 playgrounds and community gardens while also renovating welcoming public spaces across Vietnam. TPG also promotes activities that advocate for children's rights to play. These include 'Play Day' events, play campaigns, and working with domestic and foreign experts to organise seminars for parents and education professionals about the role of play in child development. To date, more than 10,000 children and 1,000 parents and educators have attended events of TPG and its partners.

To diversify play, TPG continues to study experimental models from the UK, France, Germany, and Japan. These are then adapted to urban areas in Vietnam, for instance through the Playstreet, Loose-parts Play, and Adventure Playground models. These models have been proven to be feasible and flexible in densely-populated cities such as Hanoi and Ho Chi Minh City.

Community participation is prioritised when creating public spaces. Throughout this process, TPG continues to learn new, more effective methods to work and communicate with these communities so that their needs and problems are met. For example, TPG has utilised direct communication methods, spatial drawing and modelling, and place-making tools. These methods have empowered underprivileged groups

such as children, people with disabilities, and immigrants and helped them to raise their voices in urban renewal activities.

In 2019, TPG expanded its work. Now, it is no longer about just creating playgrounds. New, environmentally sustainable public spaces that can be accessed by anyone are being built. These include the parklet model in Tan Mai; the community garden model in Tan Mai, Ngoc Ha, and Dong Anh; public art in association with artists in Dong Anh and Tan Mai; and the low-carbon public space in Nghia Tan. These models not only contribute to creating welcoming public spaces but also promote environmental education and help change the lifestyles of urban communities. Various recycled and natural materials are used. For instance, a roof can be made from milk packaging and rubber tires. This, alongside DIY construction, raises awareness and changes behaviour regarding the use of more environmentally-friendly, sustainable alternatives that minimise concrete and industrial materials.

Furthermore, signboards are put up so that local people understand the process of setting up a public space. These also include climate solutions and information to educate and encourage people to participate in outdoor activities. Gardens are also a reasonable solution that not only enhance urban green spaces but also promote better environmental behaviours. These include taking advantage of organic waste sources, reducing the use of plastic bags, and using recycled materials to plant trees.

Looking ahead, TPG will prioritise the research and testing of green space models to help improve ecological diversity in urban areas. One example is the implementation of permaculture which helps promote community-based social connections and more effectively and sustainably connects ecological spaces in urban areas.

Bringing the adventure playground model back to Vietnam

During a business trip to Japan, a close friend of TPG sent some intriguing pictures of a long-standing adventure playground at Hanegi Park (Tokyo). Since then, TPG has dreamt of bringing this model to Vietnam, allowing children to be free to create and take charge of their play space. The playground is like a real factory with a variety of tools and materials, where children are not constrained by familiar play equipment such as swings and slides. They can comfortably express themselves while naturally connecting with each other and their environment. Moreover, this model also includes professional 'play workers'. These people have an important role in keeping the adventure playground unique and encouraging communities to participate in its design, construction, and operation.

The first true community adventure playground in Vietnam began to take shape in 2019, when TPG had a chance to work with professional experts from Tokyo Play under a project supported by the Japan Foundation. Their creative adventure playground models put children at the center of the space. It is a microcosm of the contrast between natural spaces and modern urban landscapes: full of mud and mess and tools and materials. It is a fun way for playgrounds to work, with children being exposed to fire with 'risky' tools such as shovels, saws, and hammers.

From April to July 2019, with professional guidance from the trainers at Tokyo Play, TPG—together with the community and volunteers—created the first adventure playground in the New Urban Area Eco-park. The core values and principles of the Japanese playgrounds have been transformed and adapted to the Vietnamese context through discussions with and training for management and the community. The playground was designed with specific areas including campfires, a carpentry workshop, digging areas, and

rope systems. The first 30 play workers were trained with important knowledge and skills. They were also inspired by Japanese experts to be able to coordinate the play space in accordance with the philosophy of adventure playgrounds. The three most important elements in the adventure playground philosophy are that it is: (i) built by and for children, (ii) open for free; and (iii) includes community participation.

In June 2019, TPG was delighted when the playground's campfire was lit for the first time, signalling an important milestone for adventure playgrounds in Vietnam.

Existing playgrounds brought about important changes in the mindset of stakeholders in the concept and operation of children's playgrounds. Parents, educators, volunteers, and partners had the chance to better understand the role of play: it is not a useless activity but one which is important for real-life child development. When they are free to play, children learn many important skills. Moreover, creating a playground requires the participation of many stakeholders—especially families—so that the play spaces are increasingly developed and sustainable.

Pre-arranged playgrounds with familiar equipment have gradually been replaced by free playground models. These promote awareness of children's right to play and support their comprehensive and creative development. More importantly, these playgrounds are being appreciated more and more for being close to nature, for using sustainable materials, and for requiring community participation in their operation and maintenance. Starting as a space for children, the playground then becomes an important public space where families and generations are connected and join together to improve the quality of life in the city.

At the Ecopark adventure playground, for instance, the community worked together to bring a group of scouts to participate in supportive activities for this space. From there, they carried out annual activities to make the living space at Ecopark more eco-friendly, such as planting trees and picking up trash. In addition, many residents have become more interested in welcoming playground models and in cooperating with TPG to conceptualise and develop these models in schools and communities. For instance, in Ngoc Ha, Dong Anh, and Tan Mai, from an initial public space, groups of women held dialogues, built ideas, and mobilised residents to join in meaningful activities to improve their living spaces. These included painting murals together, removing illegal garbage, or expanding public spaces to create healthier and more sustainable communities. Furthermore, in the adventure playground model in Khau Pha, from practising with local people to becoming a professional play worker, partners have also integrated to train and motivate local people to participate more in the process of organising tours. In doing so, they have helped to enhance capacity and improve livelihoods, preserving the typical socio-cultural features of this area. Meanwhile, in Bai Giua (Hanoi), from the adventure playground, TPG has connected the community with various partners to implement joint initiatives to help improve the quality of life for poor people there such as those concerning wastewater treatment and waste management.

Over the past two years, TPG has had the opportunity to discuss and exchange through many seminars with stakeholders such as planners, educators, investors, communities, and parents to share experiences and convince them to experience this adventure playground model.

After the first adventure playground, TPG developed a second at Bai Giua with a very small budget. TPG also tested the adventure tour model in Khau Pha for children in the city to connect with children in Mu Cang Chai district (Yen Bai Province). Furthermore, in later designs, the TPG team also incorporated the adventure playground concept into other playground designs such as in Du Noi playground, Neighbourhood 46, Dong Anh Town.

Building community gardens in urban areas

In narrow, crowded alleys, luscious green gardens are being cared for by women. Nearby, children laugh while watering the plants and asking questions about the diverse vegetables grown there. This is a scene from one of the friendly community spaces that help to preserve the agricultural heritage of the Vietnamese people being implemented by TPG and communities in crowded urban areas. Five of these community garden models are carefully nurtured every day in Dong Anh, Tan Mai, and Ngoc Ha, highlighting the spread of ecological public space models aimed toward the regeneration and efficient use of community resources.

According to American landscape architect Phoebe Lickwar: “We need to design public spaces that are regenerative, meaning public spaces that are characterised by a capacity for the renewal and growth of living systems. Regenerative spaces are dynamic, adaptable, diverse, and multifunctional. Regenerative spaces facilitate symbiotic relationships and equitable social structures. Regenerative spaces depend upon a relational ethic, where mutually beneficial partnerships are cultivated over time.”

Much of the urban garden design process is focused on training and communicating with local communities on how to operate and manage community gardens. TPG often invites women to be the core group for the construction of gardens. This is because they have a lot of experience growing vegetables (many are from the countryside or have grown vegetables at home) and can see the benefits of forming community gardens in residential areas. The process of building a community garden represents a great opportunity to bring together generations. Besides the core group of women, men in the neighbourhood, young volunteers, and children are all able to participate in a variety of jobs. These include making plant pots, pouring soil, planting trees, and decorating the garden. It is from these gardening sessions that experiences are shared and cultivation plans are formed so that everyone can feel like they are part of the garden and are all responsible for managing it. In Ngoc Ha ward and Dong Anh district, with the leadership of the Women's Union, the gardens are an incubator of initiatives, motivating groups of women to take action to improve living spaces in their communities. They have come together to separate household waste, with organic waste being used for the garden and recycled waste being collected and sold to raise funds to maintain public spaces. They also harvested vegetables and shared them with their neighbours during the COVID-19 pandemic. As a result, relationships have improved and communities have become more cohesive.

From an environmental perspective, the garden is also a suitable space for practising various green and sustainable activities. Women can learn about organic composting to reduce household waste, while young people can experiment with ways to collect and use rainwater to water plants or study methods of maintaining nutrients in the soil. This is also an interesting nature school for children, where they can learn about native plants, cultivation processes, and creatures.



Meanwhile, from a social perspective—and especially during the period of social distancing due to the COVID-19 pandemic—gardens are a spiritual and therapeutic space where people can share their feelings with each other. Bunches of vegetables; baskets of herbs and spices; and packages of herbal medicine (ginger, lemongrass, etc.) have become precious gifts that contain the community's love and represent their solidarity.

The open road ahead

TPG believes that the first foundations of the urban garden and adventure playground model have moved urban social-ecological transformation in Hanoi in a positive direction. In the long term, residential communities can transform and upgrade these initial models into more multi-dimensional ecological spaces with diverse flora and fauna and improve soil and water systems. From there, they can contribute to a broader ecological impact in the city. More importantly, from these initial models, the community has been empowered and honed their skills so that they are able to bond more closely while creating a higher-quality and more sustainable shared space.

Throughout the process of research and implementation, TPG has realised that the development of public spaces needs to ensure the following factors:

Firstly, renovating public space is an expansive and multidisciplinary process. It involves the community, government, and experts. However, the community must be considered as the most important factor in this process of creating and maintaining their public spaces.

Secondly, the most sustainable public spaces are those where activities are organised by the community themselves with love and attachment. This will ensure more effective maintenance of these spaces while also improving the health and spirits of local people.

Thirdly, the renovation of public spaces should be considered as a non-stop process. It does not end at the installation of one or two devices or the creation of physical space. Instead, it is a process of connection, dialogue, negotiation, adjustment, and healing of urban communities in relation to each other and to their surrounding environment.

To spread the word, TPG continues to connect with different partners; to share experiences with a wide range of stakeholders; and to practise with experts including ecologists, sociologists, and architects to create more multi-dimensional impacts at the community level as well as to advocate for policies at the national level. These urban renovations have a positive impact not only on society and public health; they also help to improve ecological space, reduce waste, and promote green behavioural education toward the development of more livable and sustainable cities. Meanwhile, in terms of policy, they encourage changes in local government action strategies on sustainable alternatives for public spaces. Practical impacts include minimising concrete, increasing green spaces, and reducing industrial equipment such as fitness machines. They also increase public participation and seek the consent of local people in the use and management of public spaces.



Vietnamese Tertiary Youth as Social- Ecological Transformation Agents

Potential and Action for Change

By Dang Thi Anh Nguyet, Bui Thi Thanh Thuy & Le Thi Thao

Introduction

Young people have been a positive force for Social-Ecological Transformation (SET) worldwide thanks to their courage, persistence, and time resources compared to older generations.¹ This chapter reviews the significant potential and actions for SET of Vietnamese Tertiary Youth (VTY). It draws on the literature and findings of a study into this group's SET perceptions and behaviours in 2020.² It then presents case studies of VTY fostering SET and calls for further empowerment of this group

Vietnamese tertiary youth as agents of change

Agents of change are pioneers who—in adopting new patterns of behaviour—initiate and promote new norms to groups, organisations, and/or societies.³ Many young Vietnamese students and lecturers have led SET with sustainable thinking and behaviours advocating for change. This has been evidenced in research from the Center for Development of Community Initiative and Environment (C&E), a Vietnamese Non-Governmental Organisation (NGO), under the sponsorship of the Hanoi office of the Rosa-Luxemburg-Stiftung Southeast Asia (RLS Hanoi) in 2020.

This study included an online survey of 896 VTY. It found that around 77% of respondents demonstrated sustainable behaviours in food consumption, shopping, tourism, and spatial development. For example, participants ate healthy, nutritious, local, and seasonal food. VTY also walked or biked when going shopping in their local areas. Meanwhile, VTY swapped items with their friends and considered repairing goods or purchasing second-hand products as part of the trend to recycle, reduce, and reuse materials. Around 77% of respondents participated in ecological movements with about 41% initiating and leading them. Furthermore, around one-quarter (25%) of respondents engaged with environmental organisations. VTY used the power and resources of the state to promote change and generate benefits for and improve the reputation of these institutions.⁴ These actions promoted the movement for change and spread positive messages to others⁵ who could observe, be persuaded, and take action to adopt changes.⁶

VTY led and will continue to lead these changes. Young people see the need for sustainable norms and behaviours in response to the inherent crisis in self-destructive, industrial capitalist societies.⁷ For them, the benefits of change outweigh the costs. VTY also receive status, self-esteem, and other social rewards for being agents of change from others who follow in their footsteps.⁸

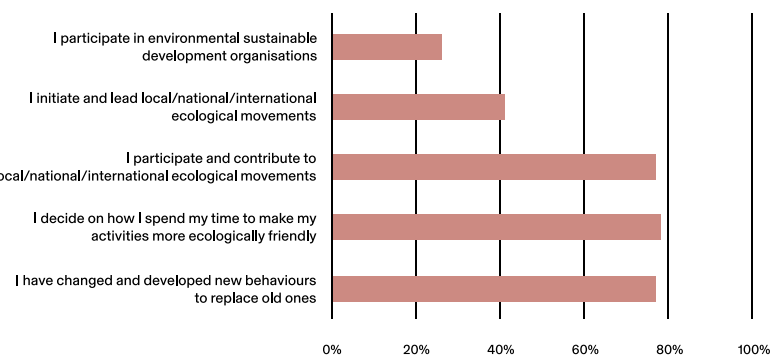


Figure 1. 2020 C&E Survey Participants and SET Actions

Research participants were diverse in terms of their gender, location, living conditions, work, income, and civic engagement. These factors had little to no correlation with their awareness and readiness scores.⁹ These demographic differences allowed agents of change to engage with and support improvements in their diverse settings. It further enabled them to work on different dimensions and at various levels of society to promote SET.

Vietnamese tertiary youth in actions

The SET actions of VTY emphasise the balance between individuals, communities/societies, and the environment. These actions highlight the importance of the environment and the fundamental human need to participate in, care for, understand, and adapt to it. They also demonstrate a vested interest in climate change as well as in sustainable lifestyles, consumption, production, and distribution.

VTY have adopted a practical, solution-oriented, evidence-based approach. This goes hand-in-hand with active policy advice to generate fundamental changes in thinking and action for SET. Examples include promoting organic farming alongside the production and distribution of ecological products. VTY also participate in campaigns such as Earth Hour and movements for the environment, climate change, and democracy in energy and ecological education. The following activities are case studies of VTY SET actions.

Eco Week—Journey to an Eco Lifestyle

Eco Week is an annual five-day event offering intensive training for VTY leaders and open activities for young people. It is run by C&E together with five regional and central universities, research institutes, NGOs, government agencies, and environmental networks. C&E mobilises resources from these partners while also coordinating and facilitating work among them to realise mutual goals and ensure that Eco Week is both effective and sustainable.¹⁰

From 2018 to 2021, Eco Week attracted two thousand student participants to its open activities and provided C&E toolkit training to 285 eco-leaders. The events enabled students, lecturers, youth leaders, policymakers, social entrepreneurs, and experts to share knowledge about the climate crisis. Participants also discussed and promoted SET models and approaches to deal with the impacts of the crisis on the natural environment, biodiversity, population health, and livelihoods in Vietnam. Particular focus was given to eco-lifestyles: emphasising connections between individuals, communities, and societies; cultural values; non-material quality of life; social justice; social rights; and positive impacts on society and the environment.

Following these events, students reported an increased understanding of environmental issues and eco-lifestyles. Their motivation for integrating ecological topics into their life was also strengthened. Likewise, leaders gained knowledge, skills, and attitudes for actions such as developing ecological project proposals.¹¹ Meanwhile, partner universities integrated Eco Week contents into their campuses to promote eco-lifestyles among their students. For instance, Eco Week inspired initiatives such as the Khanh Hoa Environment Competition, the Green Economy Club, and Green Dormitory. These project activities were documented, shared with C&E partners, and made available on social media platforms and communication channels so as to reach a wider audience.¹²

Vietnam Green Generation Network (VGGN)

VGGN consists of individuals, environmental clubs, and youth organisations—many of whom are VTY. Network members have common interests in ecological and social issues and work together to promote the role of young people in solving these issues. Starting in 2008 with voluntary environmental groups in Hanoi and Da Nang, VGGN soon spread to other regions. Today, it is the largest environmental youth network in the country.¹³

VGGN provides environmental communication, documentation, training, education, and campaigns as well as support for its members. Each year, the network sponsors 10 to 15 youth projects nationwide. It does so under the ‘Green Generation Youth Action for Climate and Sustainable Energy’ initiative, a fund that connects young people with social and ecological activities. In 2021, VGGN organised an event entitled ‘Green Generation Youth Towards COP 26’. Eight universities, eight youth club groups, and many individuals participated in this event and spread the news on social networks across three regions in Vietnam.¹⁴

VGGN is promoted and coordinated by the Live & Learn Center. This is a Vietnamese NGO that promotes the voice and participation of young people in environmental, ecological, and climate change activities with a vision “for a sustainable and equitable world free from poverty.”¹⁵

Na Na: Buy Seasonal Products

In the Hmong language, “na na” means “mum”. Khang A Tua (Tuan Khuam), a Hmong youth, gave this name to his project which aims to increase incomes and self-reliance for Hmong women. Tua set out to find his own words and preserve the traditional cultural values of the Hmong people. However, he later came to represent the voice of ethnic minorities in promoting social justice and protecting nature. Following a scholarship from Vietnam Fulbright University, he continues to seek out and participate in community activities to this end.¹⁶

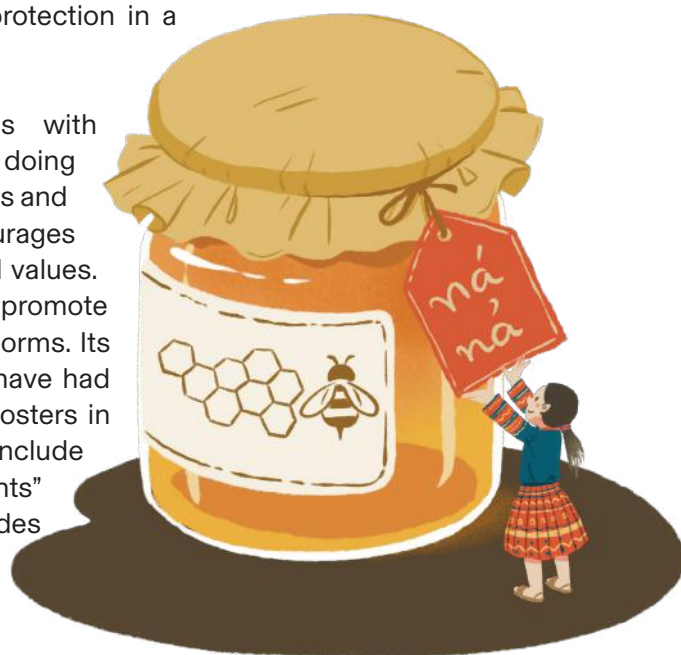
Na Na has trained Hmong people on economics, agriculture, operational capacity, and product improvement. It has also implemented livestock and farming models in partnership with people in these communities. Projects include the ‘Sustainable Model of Ancient Black-bone Chicken Breeding in Mu Cang Chai’ and the ‘Model of Ancient Upland Rice Farming with Limited Chemical Use in Na Bong, Nam Po, Dien Bien’. Since its inception, Na Na has operated a shop in Hanoi and a fan page for product distribution and promotion across the country.¹⁷

Na Na has improved the life of Hmong women, their families, and their ecosystems. It has restored native plants and breeds, revived indigenous livelihoods, and created a market for Hmong agricultural and handicraft products such as beeswax cloth, bamboo baskets, brooms, and others. It has also promoted a discourse in favour of indigenous agricultural products and handicrafts. On the project’s fan page, Tua often shares stories about the environment, the effects of natural disasters, people’s adaptation in farming, and how green products are made in harmony with nature to generate income for Na Na.¹⁸

Go Green Club

The Go Green Club was set up and run by young people—including many VTY—who shared concerns about the environment, ecology, and society. Since its establishment in Hanoi in 2018, the club has grown to become one of the most active and long-standing environmental volunteer organisations in the country. Go Green has organised and implemented diverse environmental volunteer programs. These have included the ‘Ecobag Campaign’ in 2008, the ‘Green Neighborhood Campaign’ in 2009, the ‘Greener City Series’ from 2012 to 2017, and the ‘Green Experience’ training from 2016 onwards. Go Green has also pioneered environmental publications such as the Green Lifestyle Handbook and Green Energy Booklet to promote sustainable lifestyles, thrifty living, and environmental protection in a welcoming manner.

Go Green programmes link practical activities with environmental communication and eco-social activities. In doing so, the club aims to create and promote positive awareness and behaviour change among young people. This, in turn, encourages them to protect the environment and preserve biological values. Besides gathering and empowering young people to promote change, Go Green has also moved the dial on societal norms. Its small, repetitive actions on the ecological environment have had big impacts. For example, its members put up regular posters in public places with behaviour-changing slogans. These include “Turn off motorbike or car engines when you stop at red lights” at traffic lights or “Release fish, not plastic bags” besides water where people often release fish on the 23rd of the 12th month of the lunar year.¹⁹



Youth4Climate (Y4C)

UNDP and the Vietnamese government created the Youth4Climate initiative 'Climate Promise Programme' in 2020. This initiative aims to build the capacities of young people and empower them to take action on climate change in Vietnam. Y4C worked with youth movements and NGOs to hold regional consultations in 2020 and assisted 20 young people representing all regions to develop a special report 'Youth for Climate Action in Vietnam' in 2021. This report captures the voices, commitments, visions, and challenges of Vietnamese youth in climate action. It aims to reach a wide audience of young people across and beyond Vietnam and calls for support from stakeholders in the implementation of their role as agents of change.²⁰ Based on this report, Y4C has organised roundtables on topics such as 'Climate Change and Ecosystems', 'Innovation in Energy Transition', and the 'Circular Economy'. These are designed to bring out the voices of young people on solutions to current social-ecological problems and create opportunities for dialogue with the government and policymakers.

Y4C has made significant progress in capacity building for and empowering young people, enabling them to contribute to the policymaking process and act on climate change at the national level. Moreover, Y4C helps to bridge the gap between civil society and the state in climate action, allowing them to share insights and cooperate with commitment.

Empowering youth for change

Besides those who have been active for change, in general, VTY possess what Ellickson refers to as "intelligence" and "capital" to be SET agents.²¹ Tertiary education provides subject expertise which allows them to anticipate the huge benefits of SET and its lower costs. Meanwhile, living and participating in their communities gives VTY a good understanding of the local settings and attributing factors as well as a good social network. These enable VTY to estimate which sustainable practices will gain popular support and pioneer them.

As shown in the C&E study, VTY have a 'reasonable' to 'high' level of awareness of and readiness for in-depth transformative behaviours for SET. Most respondents scored 50% or above on the absolute scores for 'awareness' and 'readiness'. Meanwhile, around 20% had 'awareness' and 'readiness' scores at or above 90% of the absolute scores. Their awareness involves understanding the climate change crisis and the need for SET as a holistic solution. VTY acknowledge the important roles of various stakeholders, institutions, and factors; the need for strong leadership from policymakers/governments; and the involvement of the whole society for SET implementation. Meanwhile, readiness includes an intention to act or to take action such as changing behaviour, becoming involved in ecological movements, or using spare time for more ecological activities. They are enthusiastic about and open to new SET ideas and are able to evaluate if these could be applied to their local contexts and how they could make a positive contribution.²²

However, knowing about and possessing resources for SET does not mean someone is a SET agent. In the C&E online survey, almost one-third (about 30%) of respondents reported never having engaged in local/national/international ecological movements. Meanwhile, common sense accounts for around half of respondents' awareness of sustainable knowledge and practise. This includes healthy, economical food consumption or respect for local cultures. The respondents lack critical awareness of the multiple processes underlying unsustainable production, consumption, and lifestyles. For example, almost half (47%) have not reduced their intake of imported food. Meanwhile, over half (57%) do not choose products with a 'fair trade' label.²³

These awareness and behaviour gaps were, firstly, due to a lack of relevant information in popular communication channels. Secondly, people buy imported goods because of their perceived high quality,

beautiful design, and fashion trends. On the other hand, consumers might have little to no confidence in domestic production. Thirdly, people might not know the environmental costs of imported goods, including their carbon footprint and social impacts on the local economy.

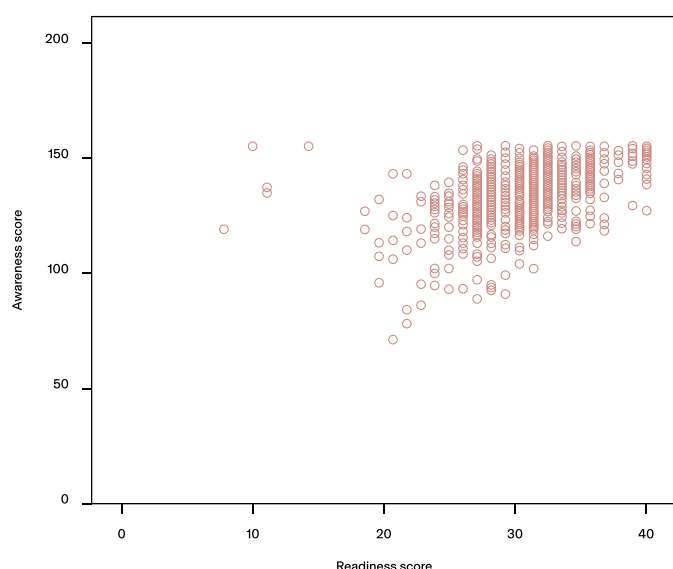


Figure 2. 2020 C&E survey participants' awareness and readiness scores²⁴

To become SET agents, VTY need to be empowered to develop a critical awareness of, become participants in, and influence SET. Critical awareness includes understanding power structures, decision-making processes, and resource mobilisation. Participation relates to action to achieve desired and shared results, i.e., democratic participation in the life of local communities via involvement in local organisations and activities.²⁵ Empowerment could cover psychological, health, social, and economic aspects and involve multiple levels. For instance, at the individual level, empowerment could enhance confidence, self-esteem, and attitudes towards sustainability. Meanwhile, at the family/household level, empowerment could target household decision-making on sustainable matters or support social activities. And, at the community and society level, empowerment could involve access to social networks, resources, and opportunities for participation.²⁶

In-depth communication, education, and support to put acquired knowledge and skills into practice would assist with developing awareness and empowering VTY. In this spirit, Dang et al. (2020) highlight the need for more localised/Vietnamese-tailored and group-specific training and education on SET for different groups of youth. Contents could include basic knowledge about SET, traditional values and beliefs, local economies, and consumer ethics alongside positive emotional/psychological and crisis-management skills for groups with low awareness. Meanwhile, visioning, motivations, models, and skills for actions would be for high-awareness, ready-to-act groups. Topics could be integrated with diverse activities such as other papers, field trips, events, and projects. Suitable training strategies and methods, such as those which focus on practical experience, should be used to maximise engagement and outcomes.²⁷

The participation of VTY in SET can be realised with the provision of opportunities and resources as shown in the case studies of Eco Week, VGGN, and Y4C. Training could equip young people with the knowledge and skills to set goals, create action plans, and solve problems to ensure their genuine and sustainable participation. In short, opportunities and resources enable full participation and contribution. Participation means empowerment: the C&E research shows that participants engaging with SET actions and movements have a greater interest in, better awareness of, and more readiness for SET actions. This is because they learn from, engage with, reflect on, and practice development for change.²⁸

Conclusion

VTY have significant potential to be SET agents. Young people are enthusiastic, resourceful, motivated, and open to new ideas. Many have demonstrated sustainable behaviours and engaged in and/or led SET actions. Actions such as Eco Week, VGGN, Na Na, Go Green, and Y4C show that they are promoting SET across all levels and dimensions in society. Each of these case studies has set, promoted, and/or reinforced

new norms. These include green/eco-lifestyles, green cities/neighbourhoods, local products, reducing waste and pollution, and actions to address climate change. However, a large proportion of VTY have yet to become SET agents given the absence of critical awareness and change behaviours. These young people need to be empowered through appropriate training, education, opportunities, and resources to participate in and contribute to SET actions. This has been the target of many current SET agents of change and their activities. This process could be facilitated through greater support and an enhancement of the interactions between SET agents, eco-practitioners/groups, national-level SET scientists, and international organisations. This would allow SET to be implemented at the grassroots level: from the bottom-up, practice-to-policy, and local-to-global. Ongoing monitoring, evaluation, and regular research are needed on this topic to provide evidence for the design and implementation of efforts to support the role of VTY as agents of change for SET.



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Breaking a Norm, Breaking a Habit

the Story of a Young
Environmental Activist

By Vu Hong Trang

Vietnam's Law on Environmental Protection 2020 came into force on 1 January 2022 with many new regulations related to the collection and categorisation of household waste. In particular, Clause 1 of Article 75 stipulates that day-to-day solid waste from households and individuals be classified as 'reusable and recyclable solid waste', 'food waste', and 'other solid waste'. Failure to do so is subject to penalties ranging from VND 15 to 20 million – equivalent to US\$ 660 to 880 – as per Clause 4, Article 20 of Decree 155/2016/NĐ-CP.

Following the implementation of this law, Pham Thanh Tri, Founder of Ecofish Vietnam (EFV), an informal group that seeks to raise public awareness of plastic waste, was beaming with excitement: "Even though there is no specification of plastic waste in the law, it is a small but significant step for our plastic-obsessed society", said 23-year-old Tri, who was looking forward to more restrictions on the use of plastic.

With members across Vietnam, EFV has run projects in eight schools in six cities: Hanoi, Ho Chi Minh City, Tra Vinh, Can Tho, Quang Ngai, and Nam Dinh. Its signature project, the 'garbage-eating goby', was selected to be shown at the first-ever Vietnam International Innovation Exhibition 2021, hosted by the Ministry of Planning and Investment. The event, which took place in January 2021 and highlighted community-based initiatives, welcomed Prime Minister Nguyen Xuan Phuc, Deputy Prime Minister Vu Duc Dam, representatives of relevant ministries and sectors, and pioneering agencies in the fields of science, technology, and innovation nationwide.

Leading by Example

Anyone who has had the chance to get to know Tri would agree that he has not trodden a traditional path in Vietnam. Not only did he withdraw from the national university entrance exam—a route taken for granted by most high-school graduates—but Tri also launched an award-winning, nationwide social initiative to mitigate the consequences of climate change in Vietnam while he himself was still in financial limbo.

The use of plastic has seen a sharp increase in Vietnam in lock-step with the country's breakneck growth over recent decades.¹ Today, Vietnam is a major exporter of plastic products, which are present in 160 countries.² The management of this plastic in Vietnam is an uphill battle. Three-quarters (75%) of the material value of recyclable plastic is lost—primarily because plastic waste is not sorted, recycled, and reused—according to a 2021 World Bank report.³ Vietnam is also one of the world's biggest dischargers of plastic waste released into the ocean.⁴ In addition, little is communicated on domestic media or in the mainstream curriculum about the link between plastic waste and climate change.

Vietnam is one of the countries most vulnerable to climate change. However, there is a critical lack of education on this issue at all levels of schooling, whether non-formal or formal.⁵ In particular, across Vietnam, waste separation is far from a widespread practice.⁶ The government has promoted education for sustainable development. However, like in many places around the world, this globalist rhetoric has failed to resonate with local needs, values and practices.⁷

"Numerous calls for the categorisation of waste have, thus far, fallen on deaf ears", said Tri. "Those who preach about the need for waste separation do not practice it themselves".

Tri said that, at home, his family tried to categorise solid waste. However, their attempts were in vain because the sanitation worker would then lump them all together.

"Our society is not physically or mentally ready for plastic waste sorting", he concluded.

Visualising environmental education

Having few local success stories to learn from, Tri decided to lead by example. Based on the ‘garbage-eating goby’ model from Da Nang in 2019, Tri hatched the idea of building models of giant marine creatures containing plastic waste in different compartments, corresponding to different waste categories. The message was simple: an eye-catching and friendly goby would rather eat the poisonous and inedible plastic waste than release it into the ocean. The image of a goby has long been a part of Vietnamese folktales and a familiar symbol in Vietnamese culture.

Also in 2019, then Prime Minister Nguyen Xuan Phuc inked Decision No. 1746/QĐ-TTg announcing the National Plan for Marine Plastic Waste Management by 2030.

After only 20 days of sorting, processing materials, and construction, the first goby was born. It was placed at the campus of Tu Nghia High School Number 1 in Quang Ngai—Tri’s alma mater. With the help of his friend—and through trial and error—this model was then replicated in Can Tho and Tra Vinh. Tri decided to target high-school and college students—those most educated and eager to learn and act. In addition, this also prompts them to connect with each other over the long term: “I choose schools, as schools are best placed to educate young people. Young people, after all, spend most of their time in their schools”, said Tri.

Tri also shared that local environmental initiatives in rural areas are usually one-off, short-term, and superficial. For example, young people are mobilised to pick up trash or clean some streets. However, these activities do not really enable them to see the big picture of environmental protection and fail to connect young people in the long run.

“It is entirely community-based, volunteer-driven, and youth-led”, said Nguyen Ngoc Hien, a social worker based in Hanoi. Hien applauded the inclusiveness of this project. In particular, as it involves different stakeholders, it will not be dogmatic as many other environmental education programs have been.

“The scalability is even challenging for NGOs, let alone an informal group with very limited human and financial resources. Without any initial budget, the project has been implemented in many schools and connected numerous students across the country”, added Hien.

According to Tri, materials are simple and readily available. Most are household items that are no longer in use and have been donated by schools or communities. However, the most difficult stage is modelling, finding bamboo, and shaping the eco-fish. This can last a few weeks, depending on the availability of volunteers. On average, a ‘fish’ takes 200 hours to build. Some schools have built other, similar models in the form of a leaf, a turtle, and so on.

Work first, study later

“Tri has fought against all odds to become an environmental advocate”, said Duong Hieu, a social worker at World Vision in Dien Bien province, who was impressed by Tri’s ambition to expand his model across the country.

Born in Quang Ngai province in the central region of Vietnam, Tri grew up with his grandmother after several family upheavals. First, Tri’s father died when he turned 14. Then his mother, under pressure from her new partner, had to abandon him. Upon completing Grade 12, Tri decided to work. He believed that only by

immersing himself in the professional world would he be able to find his own passions: “I just do not believe that going to university after finishing high school is a choice for me. I just do not want to spend four years learning about things I might not be really interested in.”

Tri did not have a plan in mind when he left home in search of work. “I did not mind trying my hand at any profession. I believed that I could learn from any decent labour anywhere”, he said.

However, Tri could not afford train tickets to go to different cities, so he chose to travel by bike. The solo travel experience allowed him to see different parts of the country. Above all, it enabled him to network with different groups of young people. This later paved the way for the expansion of his grassroots environmental activism. More importantly, Tri realised that it is possible to travel safely to other parts of the country without creating carbon emissions.

Tri first worked as a *phụ hồ* (mason). This enabled him to gain first-hand experience of what his father had done for a living before he died. The solo trip also drew his attention to the common lack of environmental consciousness among people, regardless of their education: “I was shocked to see young people take littering for granted and not feel bad about it. I do not know why people felt free to throw trash about. They put convenience above anything else.”

Through self-study, often in the evening, Tri learned about waste separation in more developed countries. Tri recalled seeing local children playing near a ditch teeming with plastic waste his trip to Vinh Chau, Soc Trang: “I was stunned to learn that it [being near a place with a lot of plastic waste] did not seem to bother the kids, since they were so accustomed to it.”

However, the circular economy—which has been proposed as a sustainable solution to plastic waste⁸—remains a concept little understood in Vietnam. “When I first started, I did not know what climate change or the circular economy were. But I knew that plastic waste was harmful yet usable”, said Tri.

This entrepreneurial spirit took him to a higher level. Tri wanted to have a project of his own—one which was simple but far-reaching: “Going from idea to action is often a long way. I just wanted to shorten it”, said Tri, who saved up to buy books and attended free training programmes online and offline to learn about plastic waste. EFV, with the motto “Feed Me, Plastic Free!” has brought Tri to even more places to engage with young people in his eco-journey.



A bumpy road ahead

The use of plastic products—including packaging plastics, household plastics, construction plastics, and high-tech plastics—has become ingrained in daily life in Vietnam, which is the seventh-largest plastic waste generator in the world.⁹ However, major actors in plastic waste recycling operate in the informal sector. More than 90% of activities are carried out by informal workers on a small scale—mostly in craft villages—where people do so to generate an income in addition to their agricultural work.¹⁰ In other words, non-professional recyclers do the job for money and not necessarily for the sake of protecting the environment.

The COVID-19 outbreak has led to a sharp increase in the use of plastic items as well as hospital waste across the world. Vietnam is no exception.¹¹ Due to travel restrictions, food deliveries have surged and the amount of plastic waste has seen an unprecedented increase as a result.

Plastic is also one of the fastest-growing industries in Vietnam. In 2020, the sector was valued at about US\$ 22 billion, representing almost 8% of GDP.¹² Looking ahead, plastic is expected to record stable growth in light of new free trade agreements which have entered into force. These include the EU-Vietnam Free Trade Agreement (EVFTA), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the Regional Comprehensive Economic Partnership (RCEP).

Unfortunately, the pandemic has brought the zero-plastic-waste activities of Tri and his peers across the country to a halt. However, as Vietnam is transitioning to low-carbon growth and aspiring for a green post-COVID recovery, their work needs to be supported. The lack of a dedicated budget hinders the growth of Tri's three-year-old project, which mainly depends on schools and informal networks for support: "It is relatively easy and affordable for schools to adopt the idea. So far, many have shown interest, so it should be the way forward", said Tri.

Nevertheless, not all schools welcomed the idea. For example, in Da Nang, some asked for fees to organise events in the hope of engaging more students. "We could only contribute our energy to make the models, not anything more", said Tri. For now, Tri has little intention of securing external funding to scale-up the initiative, citing his difficulties in writing grant proposals and the informal nature of his activities: "I do not know how to create a good application. Plus, I do not have a strong profile to shore it up. Me and my friends failed so many times that we have given up the idea of asking for funding."

In addition, sustaining students' interest in the environment, in general, is a daunting struggle. "Some friends in the mountainous regions I know are continually complaining about long droughts. Nevertheless, they are not interested in learning about why all this happened. They paid no mind when I tried to tell them that it had something to do with plastic waste. Their lives are directly affected by climate change. Yet they are reluctant to learn about it, let alone those who do not feel the immediate impact [of climate change]", said the EFV founder.

Meanwhile, a lack of human resources seems to be another impediment. "There are so few environmental experts who are also social workers", remarks Tri. "I would rather walk the walk than talk the talk."

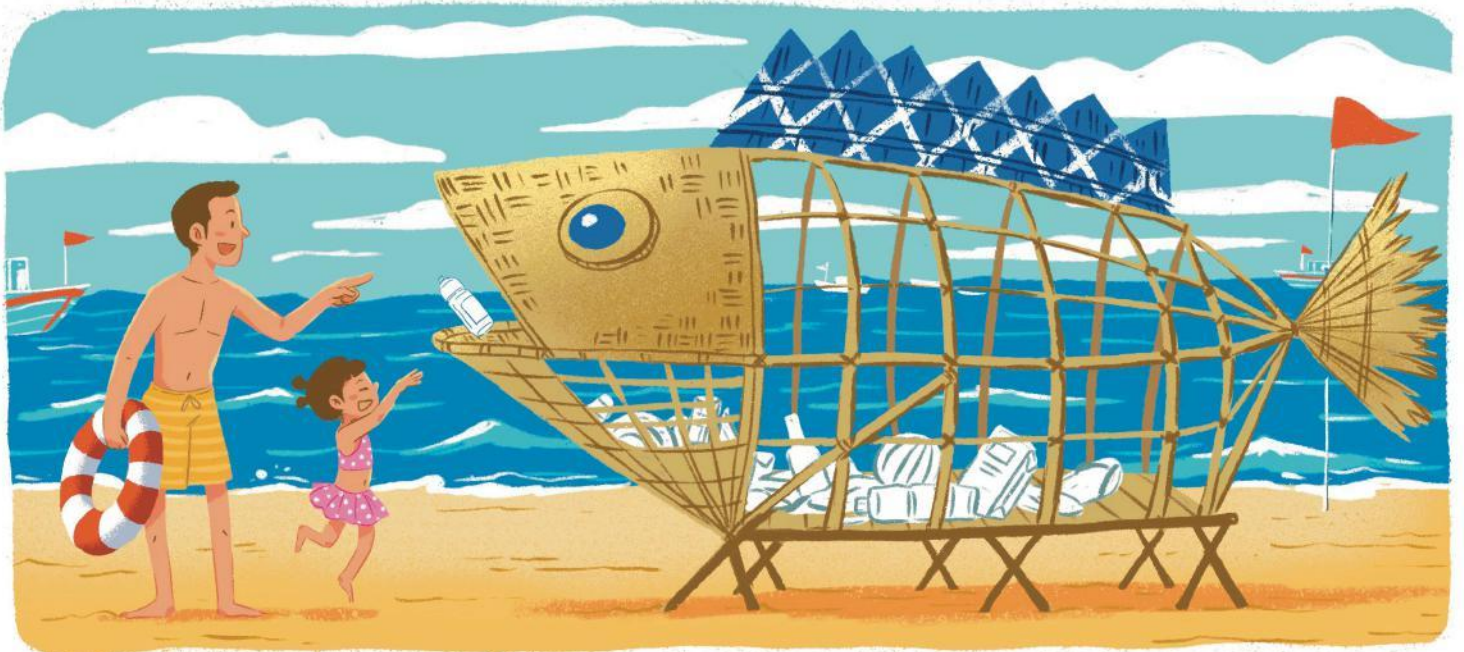
Tri has set his heart on building more 'fishes' and providing training for young people. To boost his income, he is also photographing for social events and making eco-notebooks on his own for sale: "I do not believe in the pageantry of events. I want them to see more models. At least, the environment is not what they are taught every now and then, but rather what they see every day." Tri believes that his work would be easier if there were concrete guidelines and regulations in place to reduce, reuse, and recycle plastic waste. That is his main motivation to study public policy: "I am sure to have learned things that universities might not teach."

More peers have now joined him to engage young people in conversations about plastic waste on the EFV Facebook page, which has more than 2,200 followers.

Pham Duong, a student in Can Tho province who has witnessed the introduction of the model to her university, said she was inspired by Tri's single-minded determination and dedication to his cause: "Tri is, by all means, a true leader. Although it is still a long way for students to change their behaviours [after seeing the eco-fish], I believe that the model is a great starting point. Now, everybody knows that the fish is there for a purpose."



X.LAN x RLSHanoi



Footnotes

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Vietnam's Food and Agricultural Systems at a Crossroads

Interview with Dang To Kien & Tran Thi Lanh

Food and agriculture play a critical role in some of the world's biggest challenges. Up to 17% of the greenhouse gas emissions that contribute to climate change come from agricultural and related land use activities, according to the Food and Agriculture Organisation (FAO) of the United Nations in 2018. Meanwhile, over 800 million people around the world suffer from hunger, a number that continues to rise. These challenges have been addressed in the United Nations Sustainable Development Goals (SDGs) as well as in various recent summits and multi-stakeholder initiatives. Nevertheless, these problems are growing worse. There is a wide divergence in the proposed solutions of different actors: social movements and farmer's organisations on the one hand and transnational corporations on the other.

In Vietnam, food and agricultural systems are at a crossroads. Private, industrial, and export-oriented agriculture compete with traditional systems of food production on shared land in a human-nature balance. The country has become an important player in global food exports for products like shrimp, cashews, rubber, wood, and rice. So much so that agricultural products now account for 10% of Vietnam's export revenues.

To understand these trends in greater detail, Nadja Dorschner and Hoang Hao Tra My interviewed two Vietnamese activists about their views of current developments in the country's food and agricultural systems.

Dang To Kien is Vice-Director and Programme Coordinator of the Social Policy Ecology Research Institute (SPERI). With a Master's degree in Forestry Science and Management, Kien focuses on the sustainable territorial governance of land, forests, water, ecosystem services, and biodiversity conservation as well as on landscape restoration.

Tran Thi Lanh is the Founder of SPERI. Her research interests are the relationship between tribes, colonialism, and the modern state.

SPERI prioritises grassroots strategies for empowerment and local-based sustainable development for indigenous ethnic minorities, young women, youth, and vulnerable local communities in Vietnam and Southeast Asia. SPERI tries to expand the horizontal networks of grassroots stakeholders and, at the same time, advocates in socio-political institutional structures for local-based sustainability.

What developments in the food and agricultural systems of Vietnam do you observe at the moment?

Dang To Kien: In Vietnam, the market-oriented economic model, globalisation of supply chains, and the transformation from traditional to more industrialised agriculture come with both positive and negative impacts. On one hand, the increased productivity and quality of agricultural products have accelerated export production. However, on the other hand, there is a long list of unwelcome impacts such as deforestation and land-use changes, land concession, and loss of traditional livelihoods of indigenous people and local communities.

Over the last two decades, the SPERI team has closely observed the distribution of land titles and land-rights-related issues. The reform of the Law on Land in 2013 gave wider access to numerous actors and land became more liberalised. As a result, more opportunities were taken up by corporations. Subsequently, corporate actors have transformed land uses towards promoting industrial agricultural farming models. These have implemented mono-crop farming and the application of modern technology including synthetic fertilisers, pesticides, and herbicides at an extensive scale. Land law reform, as manifested in so-called land privatisation, is hence closely linked to an increasing loss of biodiversity, a loss of traditional livelihoods, and a loss of traditional food and agricultural systems.

During these periods, the State further incentivised these developments along with the 'New Rural Development' programme. While the programme focuses on the development of rural areas and bridging the gap between urban and rural areas, there remain certain critical gaps. For example, indigenous ethnic minorities and their traditional farming and culture have often been left behind. These groups have not been

fully engaged in shaping rural development for their own local-based sustainability. Land privatisation and its various side effects have made farmers more ownership-oriented. This has gradually triggered changes in their culture of sharing and common land use towards orienting production for global market demands. Consequently, rural areas and agricultural systems have changed significantly.

Tran Thi Lanh: It is especially the human-nature balance and traditional food systems of rural communities that have changed rapidly in recent years. We observe a devaluation of the forest-based livelihoods and food systems on which sixteen million people in Vietnam depend.

“This is not only a question of social justice: given the horrendous destruction wrought by industrial plantation upon biological and cultural diversity, it is a matter of species survival. Unfortunately, the list of negative impacts is very long. Greenhouse gas emissions from agriculture are rising drastically and have become three times higher than those caused by the industrial sector in Vietnam. Deforestation causes a loss of carbon storage and the soil’s capacity to retain water. Soil fertility and biodiversity are sacrificed for high-yielding varieties and the maximisation of production.

Can you name an example in which these impacts are particularly obvious?

Tran Thi Lanh: One instance of this is the transformation of traditional slope-land farming land into industrial plantations for cassava production for biofuel. Formerly preserved forest and traditionally cultivated uplands are rapidly being converted into industrial cassava plantations. And traditional ecological upland farming systems—with their associated community solidarity-enhancing ritual practices and voluntary labour exchange arrangements—are in sharp decline.

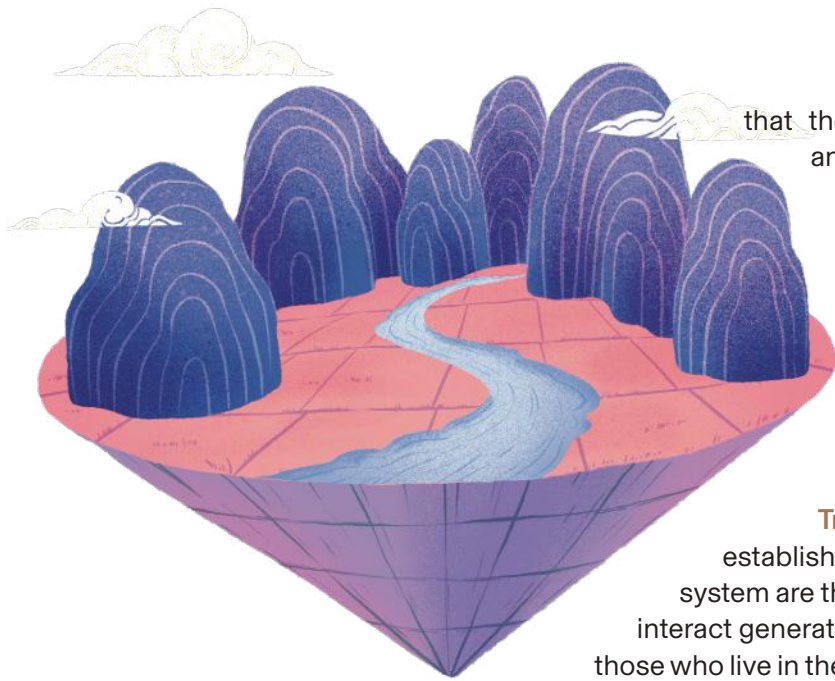
Normally, indigenous communities practise farming in the buffer zone of the forests. While the soil quality is good, the land is steep. Traditional farming involves a large variety of plants – integrating both perennial plants and annual plants, herbs, and vegetables. They move to another plot after three to five years and let the fallow plots regenerate for a while. Nowadays, due to overpopulation and deforestation, this kind of practice is changing.

Farmers are driven by rising costs and indebtedness to compete for land and labour time to grow and harvest industrial cassava and other forms of cash-crop. Exploitative local traders, acting as informal intermediaries between farmers and cassava-processing factories, entrap indigenous farmers into continuous cassava production through a system of cash and material advances. Because of these changes, the indigenous communities are in distress but caught in a vicious cycle of debt and dependency because of a perceived lack of any alternative means of earning an income.

What do you see as important milestones towards ecologically sustainable and socially just food and agricultural systems in Vietnam?

Dang To Kien: In our view, although change is part of development, traditional systems of farming need to be protected, preserved, and strengthened. Traditional farming is not only part of the local culture but also a sustainable way of agriculture.

To create ecologically sustainable and socially just food production systems in Vietnam, we recommend regulation and control of the use of chemical herbicides and fertilisers and a complete ban of Glyphosate to protect our soils and our health. Instead of mono-cultured farming, mixed-species planting and agro-forestry farming need to be incentivised and there should be more education on regenerative farming methods and permaculture. Actions and initiatives around the revitalisation of traditional farming, food, and agricultural systems should be encouraged. Furthermore, we need to ensure that land and forests are kept under community management and that land is secured for indigenous communities and practices. The implementation of these steps needs to be tracked closely and we recommend documentation and applied research about traditional ecological knowledge and practices as well as policy advocacy to support the decision-making processes of these milestones from policymakers and relevant stakeholders. It is believed



that the indigenous landscape—the primary forest and the tradition of shifting cultivation—also contribute to total carbon storage along with other ecosystems. However, this has not been carefully considered by policymakers.

Who would be important actors in establishing an ecologically sustainable and socially just food system in Vietnam?

Tran Thi Lanh: The most important actors in establishing an ecological, sustainable, and social food system are those who understand how ecology and society interact generation by generation. It is the local communities—those who live in the areas. In our work, we want to put farmers and small producers first. But we are faced with huge political constraints and need to work through the hierarchies of institutions.

Therefore, policymakers—as the people who establish and implement—also become important actors in the transformation of agriculture. So does the scientist who studies the change in climate, soil, and how to adapt to climate change. It needs collaboration from different actors. However, after a long time studying and living with ethnic minorities, we would rate indigenous communities and local smallholder farmers as the most important actors in this process.

What is your expectation towards policymakers on an international level concerning the transformation of agriculture?

Dang To Kien: First, we demand acknowledgement and recognition of the harmful consequences of industrial agriculture and the need to reflect upon how far and in what form rural Vietnam—including upland groups and their landscapes—should be engaging in industrial agriculture. It needs to be widely understood that industrial agriculture, with its input-intensive monocultures and its reliance on chemical fertilisers and pesticides, is one of the big causes of the degradation of land, water, and ecosystems worldwide. We demand applied studies and research looking into the costs and benefits of landscape transformation, transition, and recovery for traditional food and agriculture systems.

Second, we demand a global transition to agro-ecology and regenerative agriculture which expects soil health and biodiversity to play a bigger role in discussions about how to solve the global food crisis. Establishing different models of agriculture based on diversified production and landscapes will need financial and political support to flourish.

Lastly, we expect policymakers to engage with local communities and to consider their knowledge and practices for the transformation and recovery of agricultural systems that were once part of the tradition. These must not be forgotten due to globalisation and Agriculture 4.0.



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Just Adaptation to Climate Change

a Meaningful Approach to Building
the Adaptive Capacities of Local
Smallholders in Vietnam

By Ha Thi Hong Hai & Pham Phu Minh

Introduction

Vietnam is one of the countries most affected by climate change due to its long and low-lying coastline and its position downstream of trans-boundary river basins.¹ The most vulnerable groups are the poor, women, children, and ethnic minorities; and one of the most affected sectors is agriculture. The National Determined Contribution (NDC) report highlighted that, if sea levels rise by 100cm, rice productivity would decrease by up to 15% in 2030 and 30% in 2050. The reasons include losses or reductions of agricultural land, saline intrusion due to rising sea levels, domestic water shortages for agricultural production, increased crop diseases, soil degradation, biodiversity losses, and rare genetic resources. Meanwhile, total agricultural yields—including rice, maize, and soybeans—would see a dramatic fall from 2030 to 2050.² The rise in temperatures is likely to shorten the growing period, leading to lower yields and suspending sustainable agricultural growth.³

Over 15 million smallholder farmers in the Red River and Mekong Deltas, who own less than one hectare of yield, mainly make their living from one or two-fed crops per year. From a strategic perspective, there are various farming adaptations available for smallholders. These include diversifying crop varieties, changing crop patterns, income diversification, soil quality control, and water use management. However, several barriers and challenges continue to hinder small-scale adaptation. For example, these farmers have limited market access. This makes them vulnerable in the food production value chain and susceptible to market price violation. Also, they often lack information on climate change impacts, precautions and accurate weather forecasts, and adaptation techniques. These smallholders—who are already vulnerable to climate change—could then lose their livelihoods as a result of choices made based on incomplete information.

The concept of justice has been a central component of the approach to climate change adaptation—especially at the community level—in both the Global North and Global South. Adaptation may lead to unfair and unjust outcomes, considering the unequal nature of these economies and societies. Indeed, some countries and communities who have done little to cause climate change may suffer the greatest impacts and be least able to adapt. In particular, increases in water scarcity due to climate change leads to food shortages and the risk of growing hunger and poverty in agricultural regions and developing countries. In turn, without effective adaptation measures, temporary climate-related impacts may expose social conflicts in the long-run,⁴ such as accelerating violence.

More recently, two critical frameworks exploring the justice dimensions of CCA have been developed and applied. These include (1) climate justice, which investigates the equal sharing of burdens and benefits across generations and scales; and (2) environmental justice, which highlights citizen engagement in development, implementation, and decision-making among social clusters. These justice-related concepts were formed from both research subjects and a social movement alongside a consideration of different interpretations and geographies.⁵ This chapter aims to widen our lens of justice in CCA in the agricultural sector to outline a novel framework for a just adaptation. It is not intended to constitute a comprehensive analysis of the academic environmental and climate justice dimensions of CCA in Vietnam. Rather, it seeks to offer some initial suggestions of the potential of a social lens to shape CCA for agriculture through case studies.

Unpacking the just adaptation concept

Scholars devoted to the role of environmental and climate justice in CCA consider these to be fundamental theories to frame the concept of just adaptation. Indeed, the framework of a just adaptation to climate change has focused on addressing two aspects—distributive and procedural injustice—together. However, neither one is all-or-nothing.

Distributive justice: This dimension is shaped by the unequal distribution of incomes, assets, and opportunities; especially in light of the effects of climate change and the allocation of the benefits and costs of adaptive activities.⁶

Procedural justice: This aspect is formed through the lack of a community's engagement in decision-making processes to choose their own adaptation interventions to climate change due to the lack of socio-economic capital and institutional obstacles.

These two dimensions are critical and interrelated. Being marginalised groups, vulnerable communities usually suffer disadvantages in both adaptation decision-making and implementation. Therefore, local CCA action plans and policies may aggravate injustice and unfairness rather than strengthen climate change resilience. These approaches also draw attention to epistemic inclusion, self-determination, and climate governance processes.⁷ More recently, these essential propositions have included full and meaningful participation of vulnerable and affected groups, understanding of systemic injustice loops in adaptation framing, and more effective and consistent timeframes to achieve success in the implementation of just adaptation. In short, it is an urgent call for a transformational approach.⁸ This should address the drivers and underlying values of 'big-picture vulnerability' rather than taking advantage of technical solutions to treat CCA.

Case Study

Looking closer to the ground, this chapter investigates two case studies of how local communities and authorities have addressed justice issues toward a just adaptation. Instead of redistributing climate vulnerability from one group to another, a framework of just adaptation could address the causes and effects of CCA loops at multiple levels.

VACB application in Phong Dien district

Phong Dien district, located on the outskirts of Can Tho, is well-known for its floating market, rice fields, and picturesque rural canals. It is surrounded by water with massive waterways all linked to the Mekong River (*figure 1*). Most small-scale female farmers in the area have maintained traditional agricultural techniques and often grow rice as a monoculture crop. As a result, they earn less and are more vulnerable to the impacts of climate change and market price violation. With their insecure and unstable incomes, they must often search for additional work such as temporary, poorly-paid cleaning jobs. In particular, this is often the case for farmers owning less than 0.5 hectares of land. Many adult children migrate to industrial zones or big cities to seek better-paid jobs. The monthly remittances that they send home to their parents are almost equivalent to one-third of the whole family's income.

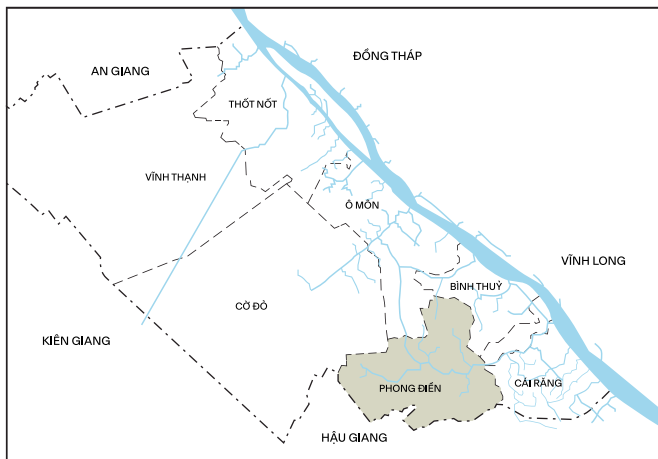


Figure 1: Map of Can Tho City and location of Phong Dien district

VACB is a poly-culture farming initiative including four elements: Orchards (V—Vuon), fishponds (A—Ao), livestock pens (C—Chuong), and biogas (B—Biogas) (Figure 2). This farmer-managed model has been introduced to increase and stabilise farmer revenues and reduce the environmental impacts of traditional intensive monoculture. Since the 2000s, six smallholder farmers have been introduced to this model and applied it in Phong Dien district⁹. Meanwhile, the number of adopters nationwide has seen rapid annual increases, from 110 in 2000 to 625 in 2012.

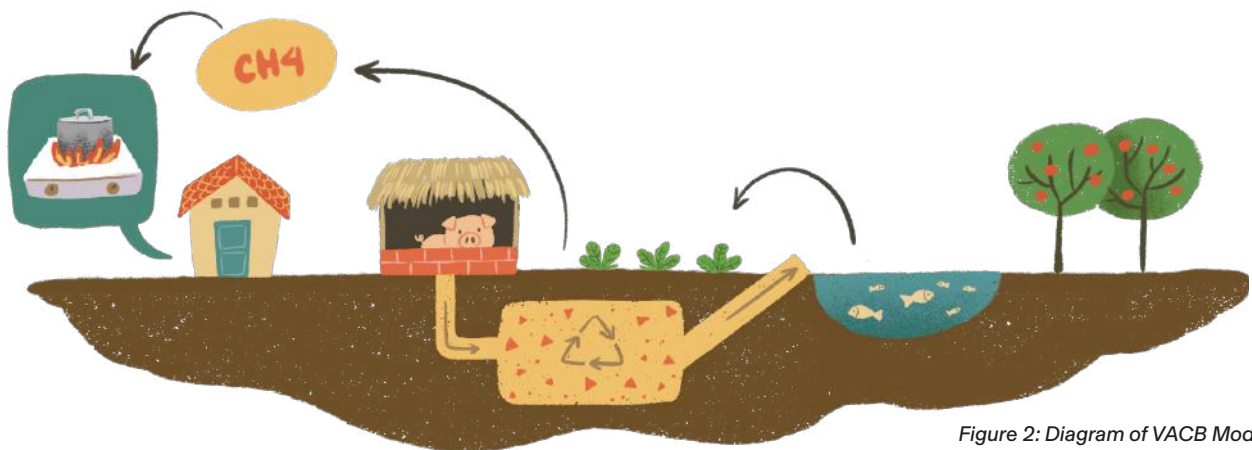


Figure 2: Diagram of VACB Model.¹¹

The VACB initiative strengthens local climate resilience by increasing incomes, reducing emissions, and creating more job opportunities. In short, it is a proactive and participatory approach. VACB adopters can work with crops or animals, smartly adjusting to changes such as unexpected climate events, leading to working time reduction. VACB farmers can “bring in nothing from outside of their farm, no pesticides, fertilisers, or antibiotics to maintain its productivity.”¹⁰ Meanwhile, storing water in their ponds (A) for irrigation means that they can minimise the risk of water scarcity in the dry season.

Most VACB farmers have managed to double their incomes and spread their risks through other subsidiary crops. These households have reduced their debts and have had fewer times where they felt forced to migrate to cities and/or for work. Moreover, VACB reduces dependency on remittances from family members working elsewhere. Many adopters are now able to send their children to higher education or vocational training. Overall, they appear to be in a stronger economic position. They are more resilient, with new choices available that would otherwise have been elusive.

Local participation in determining the objectives and priorities of a project and then the choice of intervention can have the greatest impact on the efficiency, effectiveness, and sustainability of a project.¹¹ VACB has succeeded by combining scientific knowledge and local practises to adapt to climate change. Through empowering local communities and making households the owners of interventions, they become more active and committed to the activities. Indeed, the earliest adopters have been invited to share their success stories at a series of events, workshops, and TV talk shows.

Climate-smart agriculture village in My Loi

The ‘Climate-smart Agriculture Village’ (CSAV) has been proven to lead to successful adaptation based on local capacity and demand. This initiative was first piloted in My Loi village (Ha Tinh province). The central approach of this intervention is community-based and involves the participation of stakeholders in strengthening the resilience of farmers and their adaptation to climate change. The advantage of the CSAV

model is its combination of scientific knowledge, institutional options, and the social concerns of small-scale farmers in building local adaptive agriculture. The adaptation plan of the villagers presents various initiatives and activities instead of one single solution.

In detail, monoculture techniques have been replaced by an orange-based agroforestry system. This contributes to storing carbon, reducing surface runoff, and preventing soil erosion in My Loi. The cost-benefit analysis of the CSAV model shows its positive and net-present value over the 16-year lifespan of the orange-based system to be about 1,020 million per hectare. This is higher than traditional agricultural practices. Finance has been raised through the Community Innovation Fund as a loan with reliable interest rates.

Moreover, the smallholders have been trained to build a simple meteorological station for more accurate weather prediction. This will be used as input to develop participatory farming planning. Participatory scenario planning—with the engagement of both villagers and local authorities – was promoted and applied to define climate change issues and to choose reasonable measures from the perspectives of farmers. Local involvement was strongly promoted among both young people and farmer interest groups to raise awareness of the impacts of climate change adaptation. The reasonable implementation of these activities and their funding mechanisms have been agreed by community members.

The success of CSAV in My Loi village seems like a starting point to change farmer behaviours on integrating new technical and scientific advantages alongside their own experiences into adaptive agricultural activities. In recognition of its success, the CSAV in My Loi village was selected for up-scaling and incorporation into the commune development plan, in particular the new rural development plan and other further plans for adaptive agriculture development at the provincial level. The increased diversification of crops and farming also means an increase in incomes for small-scale farmers and empowered local families. Meanwhile, the clear operation and management regulations of community funds, fines and incentives, as well as the rights and responsibilities of residents, also promotes the proactive adoption of CSAV innovations among local farmers. This, in turn, contributes to CSAV uptake nationwide while also ensuring its sustainability to adapt to climate change.

Just adaptation in case studies

Social vulnerability is the key factor to be considered in adaptive capacities and outcomes. Each community has its own difficulties, such as limited budgets for the high cost of adaptation, a lack of technical expertise, limited awareness, and imperfect information disclosure. Therefore, appropriate measures should be developed based on local perspectives of adaptation and the issues faced by small-scale farmers and vulnerable households. Furthermore, the solutions applied should consider the negative spill-over effect and avoid maladaptive interventions. For instance, vulnerability should not be redistributed between social clusters and geographical regions.

As can be seen in Phong Dien district, climate-related impacts seldom happen in isolation, as a result of existing socio-economic tensions. Because of significant income reductions and livelihood losses, the affected families suffer from financial stress and migrate to big cities. This leads to impacts across provinces and regions accounting for overwhelming pressures on infrastructure, education, housing, social and public services, and security.¹² In practice, just adaptation draws attention to specific vulnerable groups and the effects of interventions beyond their initial place or focus.

CCA interventions in both case studies highlight the importance of local participation in transforming livelihoods and adapting to climate change. Good indigenous experiences and techniques integrated with new technical and scientific evidence should be promoted and supported for scaling-up these good practices. Procedural justice is ensured through the involvement of local farmers in decision-making processes to choose their own adaptation interventions. Likewise, the engagement of technical experts, local authorities, and communities contributes to full information disclosure to all participants. Meanwhile, both men and women involved in family decisions and livelihoods can join in this business model.

Both the VACB and CSAV models have succeeded in tackling justice issues and contributed to achieving a just adaptation for small-scale farmers. Firstly, their outcomes improve quality of life not only for household leaders but also for other members. For instance, the models provide educational opportunities for children, reduce the time and pressure of work, and lessen the burden on migrants. Small-scale farmers and their families can manage climate change risks within their own supply and production chains and adapt accordingly. Secondly, the models provide not only technical support but also economic incentives and appropriate mechanisms to access capital (as in My Loi village). Shared and clear principles are essential in order for multiple stakeholders to have a common understanding of potential risks and how to facilitate adaptation solutions. This shared mechanism should be normative and differ across communities. As such, it will require public, inclusive deliberation and consider the views of all related stakeholders to get the most efficient approach for a single group.

Implications for the integration of just adaptation in CCA

Promoting a participatory approach as a key factor in CCA

Climate change is irreversible. Therefore, progressive and adaptive communities strongly depend on their own resilient capacities. In both case studies, the proactive participatory approach has been highlighted and applied to enhance both the technical and functional capacities of all stakeholders. Furthermore, the affected communities all have distinct geographic, political, social, and demographic characteristics as well as their own difficulties and priorities. As such, the engagement of local representatives in identifying their own problems and deciding on viable interventions could be a good way of integrating technical adaptive measures into unique local contexts. As demonstrated in both Phong Dien and My Loi, this entails proper and regular coordination and planning with small-scale farmers from the beginning. Sharing knowledge and technologies alongside continued interaction during the implementation phase will further build trust with farmer-learning groups and keep the model in operation to meet local needs. In doing so, new interventions shared with the public can become true local assets and help to build local confidence, self-reliance, independence, and pride in their future. This participatory approach is key to promoting the adoption of just adaptation interventions.

The government has highlighted the importance of and prioritised ecology-based adaptation, community-based adaptation, and nature-based solutions for future CCA in Vietnam. In this light, adaptive responses including the diversification of livelihoods and the empowerment of vulnerable groups, like the VACB or CSAV initiatives, should be promoted. In support of this, the government should provide a capacity-needs assessment to identify the requirements and benefits for local communities in adopting new technologies. Based on this, technical assistance programmes and resource mobilisation would provide reliable support to local capacity development. Meanwhile, a government-led awareness-raising campaign would help to enhance public knowledge of new technologies while regular monitoring and evaluation programmes provide an understanding of what motivates long-term behavioural change.

Mainstreaming and embedding just adaptation

The concept of a 'just adaptation' is not widely acknowledged or accepted in Vietnam. CCA often has a narrow focus on spatial vulnerabilities (e.g residents living in areas at risk of floods) rather than a wider understanding of their abilities to adapt to climate change and the consequent risks of distributive and procedural justice. Unpredictable effects can occur and influence vulnerable communities if an adaptation action plan is not adopted with a full understanding of local needs and priorities. Just adaptation is a 'moral

and social' approach in terms of resilience, ethics, risks, and cost efficiencies with a strong commitment at all levels, especially for widespread local adoption.

Encouraging the concept of a just adaptation to climate change in Vietnam contributes to strengthening local adaptive capacities, especially for small-scale farmers. This framework provides an approach to not only tackle climate risks with justice issues at the forefront but also to improve the resilience of affected communities. From the case studies, it is clear that social justice issues are solved through adaptation solutions as local risk and resilience issues are considered in the planning stage. This social feedback is crucial to any new intervention. It is essential to reconcile the diverse dynamics and objectives of stakeholders and to ensure the sustainability of their activities. Therefore, just adaptation should be integral to the national CCA approach. For this to happen, it needs supportive regulations and mechanisms to mainstream it into the current local policy framework.

In conclusion, farming has developed alongside Vietnam's national growth for centuries and its agriculture reflects the direct and indirect effects of climate change. Many adaptation initiatives have taken place in local communities and their success brings benefits to people. Now, it is essential to share this information with other groups, to scale-up these good practices, and to keep them in operation. For instance, the success stories of VACB and CSAV highlight the importance of local participation to the rapid adoption of CCA in agriculture and the empowerment of small-scale farmers. The idea of just adaptation should, therefore, be promoted in CCA to build the adaptive capacities of all stakeholders in the agricultural sector. Meanwhile, social justice in either planning or implementation is intertwined with the multi-level decision making as well as the institutional and collective actions of adaptation. It is important to see how communities engage with and respond to climate change policies. As such, all relevant perspectives should be collected and all actors should have a common understanding of issues and how to address them. A just adaptation also contributes to preventing potential conflicts and social security problems not just within communities but also across regions as the impacts of climate-related hazards and scarce resources do not happen in isolation.



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Introducing Dual-Use Approaches for Solar Energy and Food Production in Vietnam

By Tran Thu Thao

The world is experiencing evolutionary progress fueled by technology. This has resulted in mixed reactions from different sectors. The impact is not limited to one nation or region; instead, it captures global attention. Of particular concern in the contemporary world are clean energy and food security.

Meanwhile, the world continues to see changes and shifts due to global warming as a result of the forms of energy that people use. Global warming creates a risk to humankind as it threatens food production for human survival. The agricultural sector has suffered due to the continued use of these unclean energy sources. Therefore, natural forms of energy have been proposed as the best means to preserve the environment in the nature-nurture concept.¹

For instance, solar is a clean form of energy that keeps ecosystems free from pollutants. This is critical to the food production process that calls for inputs and implements free from contaminants to provide clean produce for humankind. In this chapter, the solar energy and food production dual-use approaches will be discussed in light of Vietnam's international experience and potential.

Solar technology is a crucial worldwide concern as it offers hope for cleaning the globe of waste. However, solar developments have received mixed reactions from farmers. The common consensus remains that clean energy is the way to go for a sustainable environment. And Vietnam's GDP is predicted to keep rising, singling it out as a promising market to watch.²

However, Vietnam continues to face challenges in solar innovation. For instance, solar energy production requires a large land area in which solar plants can be established. At the same time, the agricultural sector also stakes a competing claim for land on which to grow food products. This land thus becomes a conflicted resource between the solar energy and food produce sectors. In other words, individual farmers and cooperatives want to secure their land for agriculture rather than renewable energy. Solar is needed in Vietnam. But it has suffered from conflict with the need for land to be used for cultivation.

In fact, solar energy and the agricultural sector can operate hand-in-hand. Solar agriculture, for instance, has been operational in most continents at different scales. And agrivoltaics has proved that running agriculture alongside solar energy production is possible. Therefore, solar-powered agriculture has the potential to be a game-changer in Vietnam's future from the current trends in energy demands. According to Land Evaluation Ratios (LERs), mono-cropping is an inefficient use of available land compared to the agri-photovoltaic system.³ Having two resources coming from the same piece of land is a positive for farmers and cooperatives. Therefore, dual land use can respond to the competing claims over land in Vietnam, as well as curtail the threat of land availability and use.



To put it in perspective: if one hectare of land was used to produce 100% wheat, and solar production was introduced without a dual concept, the land should be divided in half. Afterwards, the amount of wheat produced would be cut in half as the solar production would have taken the other half. Alternatively, two hectares would be needed to produce 100% wheat and 100% solar energy. These two concerns are separate and independent from each other in space, meaning that conventional methods cannot exceed 100% productivity. This problem can be solved through dual-use resulting in double benefits from the same land.⁴

In particular, solar panels can be built above the wheat on a pedestal that allows the crop to be planted and harvested below it. As a result, one hectare of land now gives about 80% wheat and 80% solar energy.⁵ Dual-use thus offers 160% production value in 1 hectare, which would otherwise be achieved on two. In other words, this land can be used to grow produce and produce energy at the same time if dual-use is introduced in Vietnam. Furthermore, farms that produce domestic solar energy have access to independent power from the most cost-effective of sources. These returns increase as available resources are harnessed to maximize the production of both energy and food.

Can Tho shows the effectiveness of dual-use in Vietnam.⁶ With 80% of its area being agricultural land, it is also considered a 'hub' in the Mekong Delta for agriculture and agricultural science. Along with the development of farming, the demand for the energy sector in Can Tho has also grown. However, limited land resources have led to a lack of large-scale renewable energy development projects.⁷

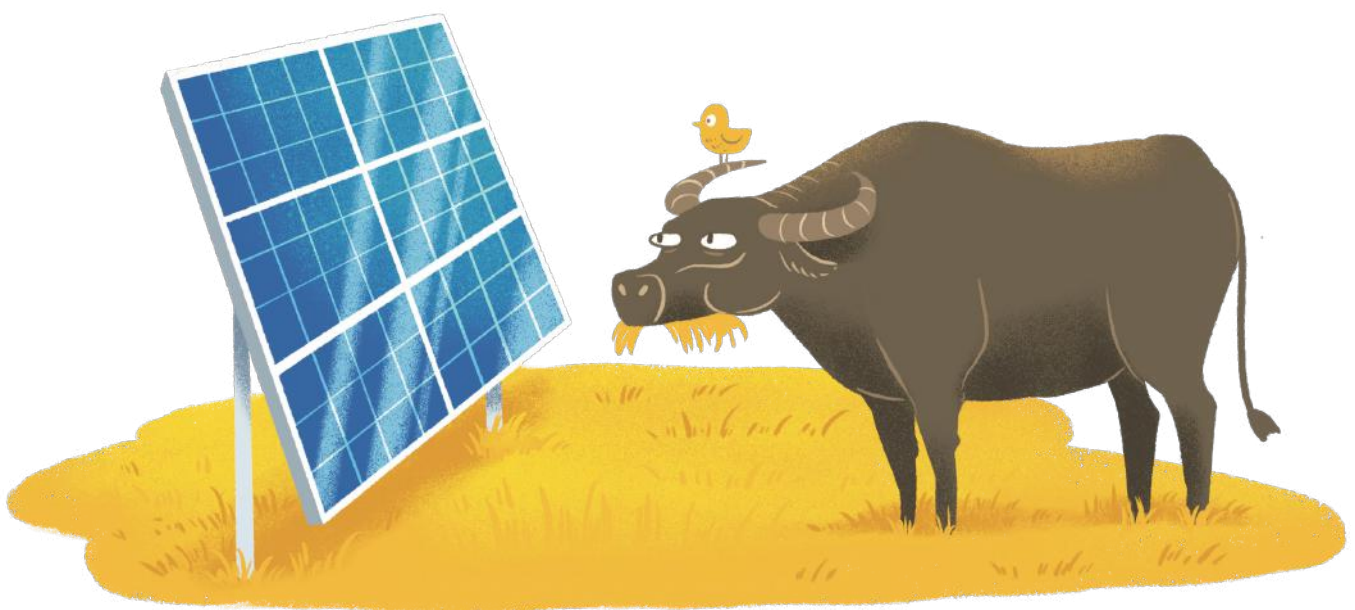
But, when dual-use is considered, the output that Can Tho could produce for the local population and its surrounding areas increases. If dual-use is used to its full potential, local demand for electricity would be met. In fact, the city is capable of producing four times its electricity demand if dual-use is embraced. The practical effect of this realistic potential is that the surrounding areas could also be transformed through the technical potential of the neighbourhoods in Can Tho that have embraced dual use.

In conclusion, given the circumstances of Vietnam in perspective, more efforts should be made to ensure dual-land use for social and ecological development. Using the available land to its full potential is the solution: as global demand for solar energy continues to rise, so too will the demand for agricultural products. The best answer is to ensure both demands are met using the land available. Making maximum use of this land would make Vietnam a hub of excellence around the world. To achieve this goal, Vietnam should mobilise and compel both farmers and corporations to embrace solar energy within their farms, not as separate or competing concepts but rather as simultaneous events.



Footnotes

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Using an Evolutionary Learning Lab as a Transformative Educational Tool

for Social-Ecological Transformation toward Climate-resilient Communities in Vietnam

By Tuan Ha¹, Huong Hoang, Huyen Khuat, Long Ha & Son Ho

Introduction

Climate change creates significant impacts on global agricultural production², inducing uncertainties in food supply systems and food security around the world.³ Small-scale farmers and rural communities in the developing world are more susceptible to the growing effects of climate change.⁴ Therefore, strategies for Climate Change Adaptation (CCA) are essential. According to the Intergovernmental Panel on Climate Change (IPCC 2007), CCA is defined as:

“Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, e.g. anticipatory and reactive, private and public, and autonomous and planned. Examples are raising river or coastal dikes, the substitution of more temperature-shock resistant plants for sensitive ones, etc.”

Vietnam is among the top-five countries most impacted by climate change.⁵ This is because the majority of its population (65.6%) resides in rural areas.⁶ The livelihoods of these rural households mainly depend on agricultural production, which is highly susceptible to climate variability. Smallholder farmers in rural poor and ethnic minority communities are among the most vulnerable due to their limited information and resources.⁷

Traditional CCA approaches in many countries—and particularly in Vietnam—have some notable limitations. These include a top-down approach in planning and implementation and more focus on ‘hard solutions’ such as infrastructure improvement projects. Meanwhile, ecosystem-based approaches and climate-smart production practices aimed at community resilience are not given adequate attention.⁸

Climate change is widely acknowledged to be a ‘complex issue’, ‘nexus issue’, and/or a ‘wicked problem’. This is because of the high level of complexity due to the interwoven relationships among various economic, social, environmental, and cultural factors. It is also a problem to which there is no clear-cut solution.⁹ A number of authors have suggested a strong need for systems thinking and systems approaches. These include decision support/modelling tools in CCA research to deal with the complexity and uncertainty in identifying the root causes of problems and decision making.¹⁰ However, to date, there has been limited research and application of systems approaches in CCA.¹¹

This chapter introduces an Evolutionary Learning Laboratory (ELLab) framework, which helps to address current limitations due to traditional linear thinking and top-down management. The steps of the ELLab process enable relevant stakeholders to have a ‘big picture’ of the current situation throughout the problem-structuring and decision-making process. This enables them to develop locally appropriate CCA strategies, taking into account the causal relationships among different socio-economic, environmental, and cultural factors.

The Evolutionary Learning Laboratory (ELLab)

The ELLab framework has been developed and successfully applied in the management of complex issues and in developing strategies toward resilience and sustainability in different areas. These include education¹², business¹³, agriculture and rural development¹⁴, sustainable development¹⁵, and integrated governance.¹⁶

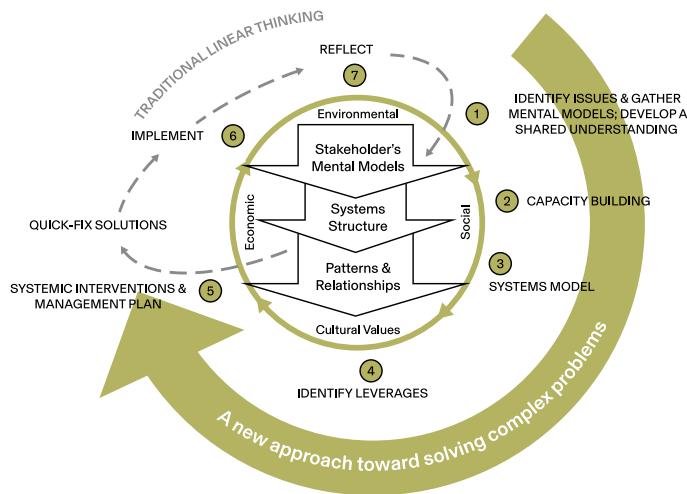


Figure 1: The Evolutionary Learning Laboratory (ELLab) for Managing Complex Issues under conditions of interwoven relationships between economic, social, environmental, and cultural factors (modified from Bosch et al., 2013).

The framework has seven steps (Figure 1). Step 1 (issue identification) aims to gather information from relevant stakeholders regarding the current situation, key challenges, and needs of the targeted beneficiaries. Step 2 (capacity building) aims to build capacity for a small group of representatives of both beneficiaries and key stakeholders in order to understand and identify patterns of causal relationships among different factors and their influence on the project goal. In Steps 3, 4, and 5, participants are engaged in the process of model building, identifying leverage points and systemic interventions, and developing an integrated management plan. These are followed by Step 6 (implementation) and Step 7 (reflection). The first five steps of ELLab were used in this study.

Results of a case study in developing CCA strategies in Thai Nguyen province

Key shortcomings in the CCA approaches of local government

Through personal interviews and workshops with representatives of the agriculture and extension networks from provincial to district levels in two districts (Dinh Hoa and Vo Nhai) and local authorities in four communes in Thai Nguyen province throughout 2019 and 2020, it became clear that local government still uses a 'top-down' and/or a non-participatory approach in the planning and implementation of their CCA efforts. In particular, their CCA solutions and plans tend to focus more on 'hard solutions'. These include upgrading infrastructure in response to climate change, supporting household relocation, and recovering infrastructure for production. However, local learning, local initiatives, and ecosystem-based solutions are not mentioned in their CCA strategies and plans. Meanwhile, there is a limited budget from both central and local governments to implement these CCA measures. The ELLab process would address these shortcomings through a more holistic and participatory approach that seeks appropriate and affordable CCA initiatives for local communities.

Using the systems-based ELLab to address limitations

Improved mindset among participants: from linear thinking to more holistic (systems) thinking in problem structuring and solving

The ELLab process has enabled participants to have a broader view and/or a 'big picture' of different factors that—together—influence the lives of the targeted smallholder farmers (Figure 2). Of these, climate change is just one among many factors that contribute to the challenges that the local farmers face. Improving household incomes and the quality of life became the main goals to be achieved. These are influenced by environmental factors such as production risks due to climate change, land quality, and topography as well as socio-economic and cultural factors such as government support policies and programs, household resources and capacity, production habits and awareness, and market demand on agricultural products.

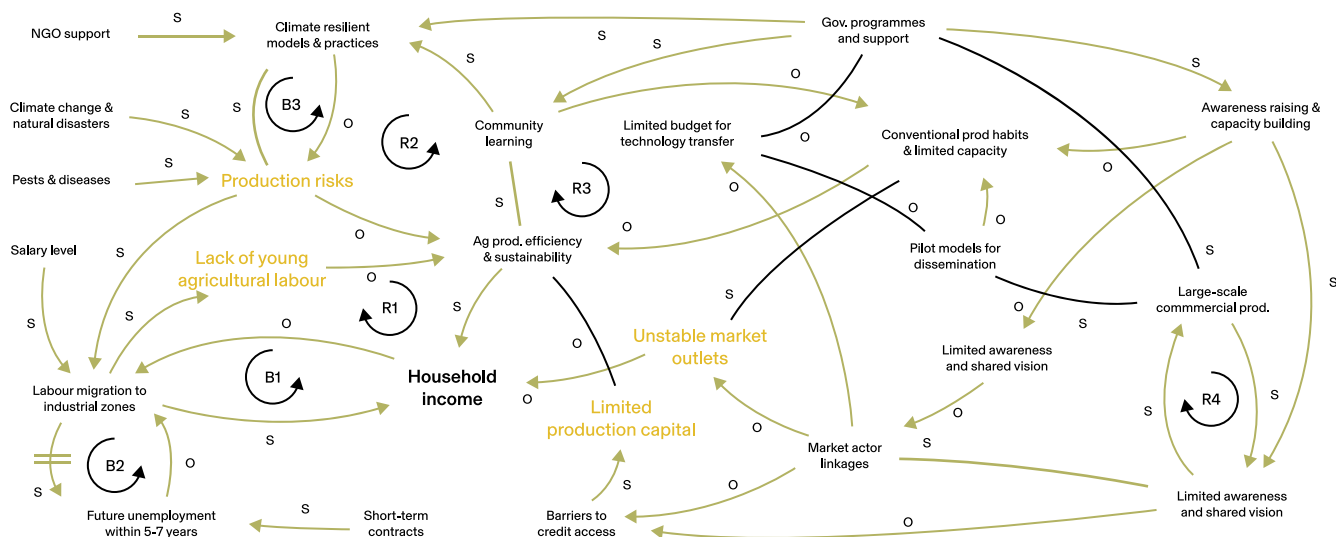


Figure 2: System dynamic model of the current situation of livelihoods of smallholder farmers in Thai Nguyen. Legend: S - same direction; O - opposite direction; R—reinforcing (loop); B—Balancing (loop). Red variables represent key challenges faced by the farmers.

Based on the above analysis, the participants were guided with structured steps to identify systemic interventions and strategies to achieve their defined goal (Figure 3). This process was supported by the decision-support tool Netica.^{TM17}

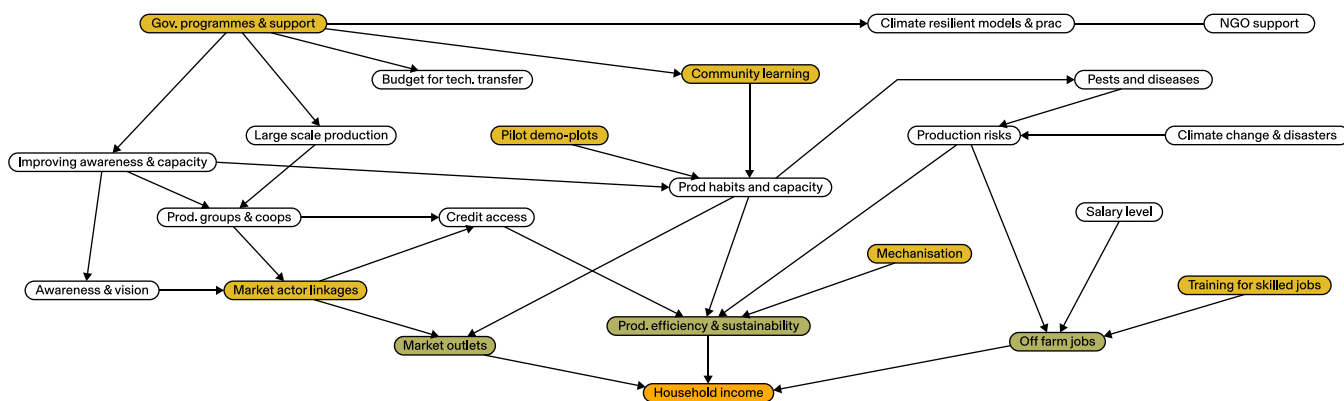


Figure 3: Bayesian network modelling to identify systemic interventions toward improved livelihoods and incomes of local farmers under the context of climate change. Note: arrows indicate causal links: Orange, green, and yellow variables represent the final goal, objectives, and systemic interventions, respectively.

'Community learning' was defined as one of the systemic interventions. This would promote mutual learning and the adoption of climate-resilient models and practices among peer farmers. This process could change traditional production habits and improve capacity for local farmers. In doing so, it could reduce production risks under the context of climate change.

Transformative learning among stakeholders toward more locally appropriate CCA solutions

Through a series of mini and plenary workshops, ELLab enabled participants to reflect and together define the most locally appropriate and affordable CCA solutions (Annex 1). Leaders of the extension networks in both districts expressed their willingness and intention to mainstream the identified climate-resilient livelihood and production practices into their annual plans. For example, a leader of the center for extension service of Vo Nhai district stated that "we will discuss and identify prioritised climate-resilient practices to integrate them into our annual plan from next year. We will also build capacity for our staff to meet the local needs and disseminate best practice".

In addition, local farmers had opportunities to discuss and identify the most affordable climate-resilient practices. They requested support from the local government to provide more practical training in accordance

with the establishment of demo-plots in their communes. Moreover, documentation of training materials and improvement of facilities at community learning centers were also requested to improve learning and wider adoption within communities.

Conclusion

This paper has presented a systems approach and relevant tools to support problem structuring and developing strategies toward climate resilience. ELLab has proven its multiple benefits as an effective tool to formulate informed strategies through a participatory process. It also serves as a transformative learning tool that reshapes the perspectives of local authorities and stakeholders from the traditional top-down approach with linear thinking to a more holistic and participatory approach that defines local challenges and needs and develops appropriate solutions.

ELLab has been proven as a generic framework that can be applied in different fields and contexts around the world to address complicated issues and develop informed strategies and systemic interventions toward sustainability. The steps of ELLab are similar to those of the Action Learning framework. Nonetheless, with its embedded user-friendly systems tools and/or problem structuring and decision support systems, ELLab can be used effectively in both research and development practice.





Annex 1: Identified climate-resilient livelihoods/production practices in Dinh Hoa and Vo Nhai districts of Thai Nguyen.

Table 1: Identified climate-resilient livelihoods/production practices in Dinh Hoa district

#	Potential production models/practice	Reasons for adoption/key benefits
1	Water-saving techniques for tea production (using sprinklers and mulching materials).	Saving irrigation water and energy; reduced labour input for weeding. Utilising agricultural by-products as mulching materials that help retain soil moisture and supplement nutrients for the plants. Thus, reduced fertiliser input.
2	System of Rice Intensification (SRI) and/or Alternate Wetting and Drying (AWD) method in rice production.	Reduced water usage and improved yield. Stronger plant growth and reduced pests and diseases.
3	Use of drought- and disease-resistant maize varieties (GM maize).	Drought tolerance and disease resistance. Improved yield.
4	Planting fruit crops on one-crop rice land areas.	Improved income while adapting to the current context of increasing water shortages and drought.
5	Animal husbandry (pig, cattle) combined with biogas digester installation.	Treating farmyard manure to become clean organic fertiliser and reduced air pollution. Utilising energy (biogas) for cooking.
6	Use of biological pad (buffer materials mixed with beneficial micro-organisms for deodorising odour and decomposing muck) in animal husbandry.	Reduced air pollution. Treating muck to become organic compost.



Table 2: Identified Climate-resilient Livelihood Models/Production Practices in Vo Nhai District

#	Potential production models/practice	Reasons for adoption/key benefits
1	Animal husbandry (pigs, cattle) combined with biogas digester installation.	Treating farmyard manure to become clean organic fertiliser (bio-slurry) and reduced air pollution. Utilising renewable energy (biogas) for cooking.
2	Intercropping between fruit crops and annual crops.	Utilising land to improve yields and income; improved soil cover and moisture; utilising green manure.
3	Use of drought- and disease-resistant maize varieties (GM maize).	Drought tolerance and disease resistance. Improved yield.
4	Change of crop patterns: planting other crops (fruit crops, legume and/or chilli pepper, etc.) on one-crop rice land areas.	Improved incomes while adapting to the current context of increasing water shortages and drought.
5	Water-saving production techniques (e.g. using sprinklers for tea and fruit crops; mulching materials for tea, fruit crops and maize, etc.)	Saving irrigation water and energy and reduced labour input for weeding. Utilising agricultural by-products as mulching materials that help retain soil moisture and supplement nutrients for the plants. Thus, reduced fertiliser input.
6	Afforestation (mainly short-cycle plants including acacia and eucalyptus).	Storing water for irrigation; good market outlets for acacia and eucalyptus.
7	Rescheduling of crop calendar.	Avoids cold spells and frost in the early spring season as well as storms and floods during the summer season.
8	Storing water for irrigation (digging ponds, building dams).	Harvesting and storing water to irrigate crops during dry seasons.
9	Use of indigenous crops (e.g. local soybean, custard apple).	Drought and cold tolerant and disease resistant; stable yields and high income.
10	Producing vermicompost for organic crop production.	Reducing air pollution and production risks due to the traditional method of applying untreated farmyard manure.

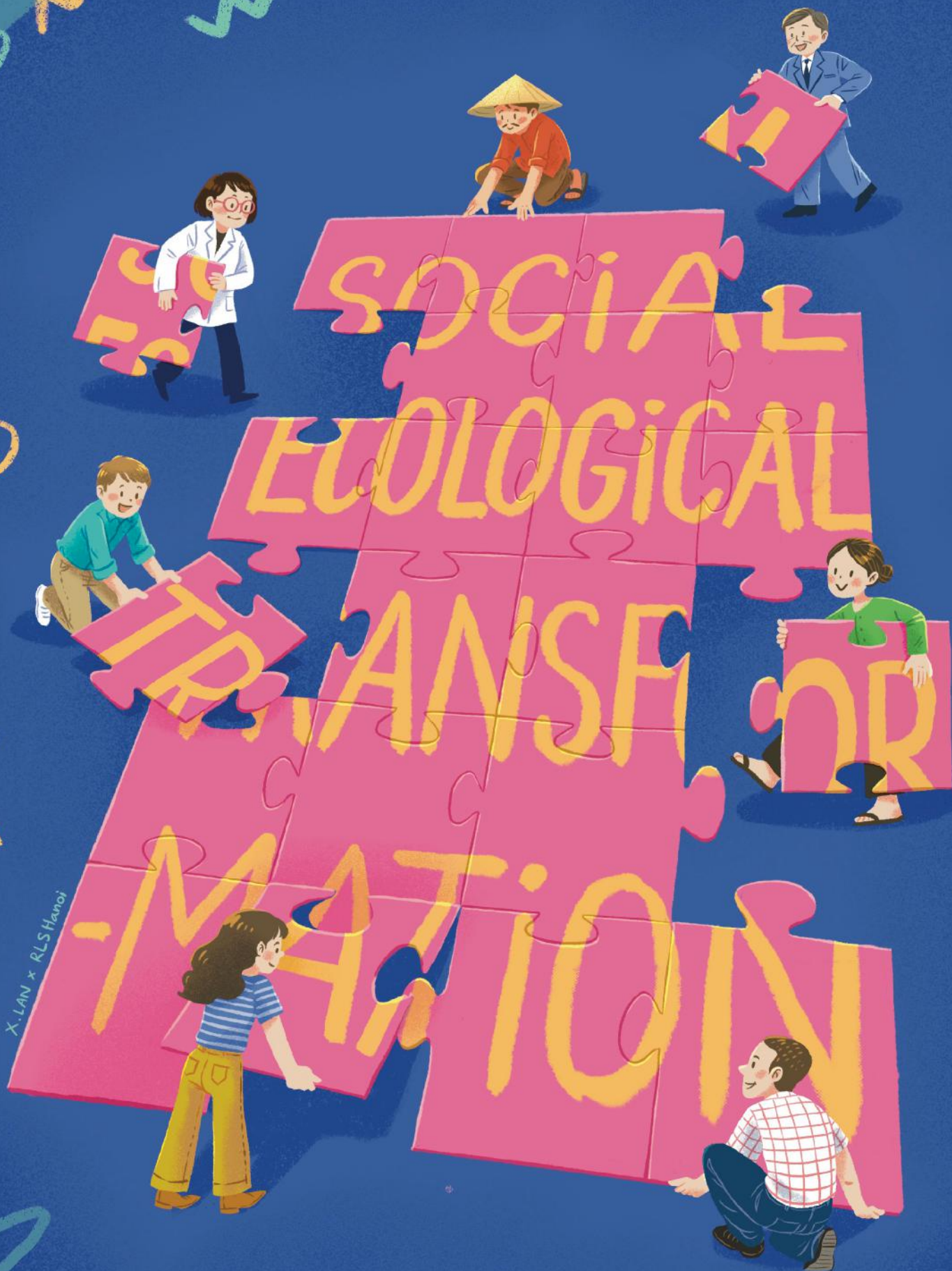
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Social and Ecological Transformation in Vietnam

Social Justice with Participatory
Knowledge Building as Tools for Change

By Francine Mestrum



X.LAN x RLS Hanoi

The state of the world

One does not have to be a pessimist to be worried about the current state of the world. In terms of climate change, time is running out. In spite of the rather modest goals of the Paris Agreement and the solemn declarations made at COP26 in Glasgow¹, the realistic chances of stabilising the increase in average temperatures to 2°C are dire. In some regions, temperatures have already risen more than 3°C. This has the potential to make life on earth impossible, meaning that there would be no future for humankind.

The prospects for biodiversity are similarly poor.² Nature and its vital contributions to people—which, together, embody biodiversity and ecosystem functions and services—are deteriorating worldwide. In 2010, almost 200 governments agreed to 20 biodiversity targets. However, none of these targets have been achieved in full. Meanwhile, fourteen categories have declined. On average, around 25% of species in assessed animal and plant groups are under threat. This suggests that around one million species face extinction. Local varieties and breeds of domesticated plants and animals are disappearing around the world. This loss of diversity—including genetic diversity—poses a serious risk to global food security by undermining the resilience of many agricultural systems to threats such as pests, pathogens, and climate change.

At the same time, social justice has taken an enormous hit during the global COVID-19 crisis. For the first time in a generation, the quest to end poverty has suffered a setback, according to the World Bank.³ Extreme global poverty rose for the first time in over two decades in 2020 as the disruption of the pandemic compounded the forces of conflict and climate change, which were already slowing the progress of poverty reduction. About 100 million more people are now living in poverty as a result of the pandemic. Meanwhile, more than four billion people still lack any kind of social protection, the ILO tells us.⁴ The impact of the pandemic on unemployment has been worse than expected. However, the distribution of this is very unequal with fragile and often diverging recovery trends.

As for inequality⁵, the numbers are both staggering and unsustainable. The richest 10% own around three-quarters (76%) of all wealth. Meanwhile, the poorest half own no more than 2% of the same assets. Inequalities within countries are now greater than those between countries. The Pandora Papers⁶ confirmed, once again, that tax avoidance and the use of tax havens are widespread among the global rich.

Taken together, these are reasons enough—alongside global citizen movements—to call for profound economic and social change. If humanity is to have a future, it will have to change course quickly.

That is easier said than done, though. Formulating objectives is one thing. Working out strategies to achieve them is another matter altogether. Particular pain-points include how to align the interests of different groups, how to make clear that the continent most affected is not to blame for climate change, and how to make rich elites understand that their survival depends on that of the large mammals and billions of poor people who are threatened by hunger.

What strategy?

Thanks to the hard work of international institutions and global citizens' movements, we have the information we need and we know what we should achieve. The question now is: how do we get there? On the one hand, most environmental pollution comes either from large multinational companies or from armed forces, over which national governments do not always have full control. On the other hand, the behavioural economy has not yet succeeded in convincing the population of rich countries to actually reduce their consumption.

It is often said that environmental justice and social justice go hand-in-hand. But what does that mean in practice? Why is it so difficult to get people in the developed world to change their behaviour? And how can we achieve the transformations we want?

One of the main reasons is that environmental measures are presented and perceived as heavy and expensive burdens that can also push down living standards, especially in rich countries. No matter how much criticism is levelled at consumption or the often decadent behaviour of the wealthiest, no one wants to take a step backwards. This remains true, even when failing to act is detrimental to the general interest. It is clear, however, that if the rest of the world claims the same rights to consumption as the global middle classes—which they have—it will not work. There is no alternative to reducing consumption in rich countries. Not unless some magic technical revolution materialises. To date, however, this is nowhere in sight. The common good should be identified with the total world population, whether or not we know them. Unfortunately, most people do not feel their future is linked to that of people on the other side of the planet. Instead, there remains an irrational belief in some inexhaustible natural resource capable of sustaining eight to ten billion humans at German or French standards of living.

Therefore, it is right to call for a 'just transition'. This means that, for each environmental measure, the vulnerable in society must be considered so that measures can be taken to compensate. In other words, poor people must not become victims. For instance, if polluting cars are banned from cities, vulnerable groups must be paid so that their freedom of movement is safeguarded. This is important, because poorer people more often drive older, more polluting cars.

But what if that reasoning is reversed? What if environmental measures can be presented not as a burden, but as a positive? Not in abstract terms such as 'greater happiness' or 'more connectedness' but in tangible, concrete progress for all? What if the proposal becomes greener cities with cleaner air and less noise? What if the proposal becomes real, democratic participation for all? This is progress that no one could oppose. To achieve this clean air, polluting cars will still have to be kept out of the centre of cities. And governments will still have to cover the cost. But citizens are being offered something positive from the outset. In other words, environmental measures should not be seen as some kind of sanction or a threat to living standards. Quite the opposite. Think of insulating homes in cold countries, or providing recreational green spaces in cities, or preserving forests and fishing waters. Following this line of reasoning, such actions offer preventive healthcare: illness can be avoided and expensive hospital care reduced. However, this requires tackling the major transnational corporations that are ruining agriculture and food production. Promoting public health means toxic residues cannot be allowed in food products. Nor can dangerous emissions from chemical industries be allowed in the air. This is not a revolutionary idea. It just implies some serious reflection on how to present environmental measures as part-and-parcel of social and often also economic progress, in order to reach a broad and welcoming audience with a message promoting economic and social change.

In short, it comes down to communicating a positive message to the entire population instead of talking about burdens and backward steps. With social justice as a starting point, promoting public health and preventive care, far-reaching environmental and economic measures can and should be taken.

In doing so, linking social and environmental justice can lead to change. It is then not a matter of promising 'more happiness', but of offering tangible material improvements that are not a burden on the shoulders of vulnerable people.

In order to develop this kind of reasoning and working, an intersectional map of different variables could be made. This could trace how social justice can lead to environmental justice, how economic progress (and even growth) can be linked to environmental protection, and how public services are not only a matter of social justice but can also improve fiscal policies. It could further highlight how urban policies are directly linked to housing as well as to recreation and mobility; how gender policies can promote growth; how climate justice may require debt justice; how more or less migration can influence social justice; and how the environment, in general, may benefit from well-thought-through policies in the economic and social sectors.

A long list of possibilities can be drafted for well-planned change for the sake of a better world. There are multiple points of contact between different sectors. Therefore, economics could be just as good a starting point as the environment or international trade. Most policies can be offered in positive terms of progress. To achieve a positive interaction, it is important to map out this intersectionality. In particular, this should emphasise those connections which not only take into account the concrete needs and interests of people, but also lead to a cleaner environment, more social justice, and an economy that cares for people and the natural world. In the end, this is what will lead to positive social change for the benefit of all.

For such an initiative to succeed, it is necessary to know people's specific needs and interests. The intention is not to work out a theoretical model. Rather, it is to work together with people in a concrete way to achieve the desired result. There are two essential conditions to this.

Participation

It sounds simple and obvious. To understand people's needs, and to design policies based on their interests, the first step is talking to them. That is called democratic participation. However, it is important to look at how this is organised. There are various methods of 'participation' that do not necessarily lead to the best result. Therefore, it is critical to determine the exact objectives in advance.

The first aim of participation is usually to collect data in order to gain knowledge. A local population can pass on information about the problems identified. This can range from facilities for the elderly or disabled to nuisance caused by chemical companies or extractive industries. Public authorities may thus propose a policy that takes account of these needs. But this is not always the case. Sometimes, data serves only to complete statistics or to build up better anthropological knowledge.

In research on poverty—such as the famous participatory research⁷ conducted by the World Bank twenty years ago—questioning often comes across as a kind of confession. Poor people have to describe who they are and how they live, as if the government will be able to provide psychological support to build 'resilience' and thus overcome their problems. Participation, then, is not meant to solve the problems of the poor. Instead, it is intended to get a better picture of how they live and how they feel, often as research on the risk they might pose for political stability.

Ideology is never absent from these kinds of investigations. Whatever people say, the conclusion of the exercise is always in the hands of the organisers. When women claim—all things considered—to be quite happy, this can lead to incorrect conclusions such as that there is no gender-based violence. Whereas, in fact, the women might only be happy because they happened not to get beaten up during the week of the survey. Likewise, the farmer who is happy because the harvest was not disappointing may not know that—with less work and better, more environmentally-friendly techniques—an even better harvest could have been obtained. In short, subjective interpretations can distort research results.

Or, in other words, subjectivity in one-sided questioning can be problematic. On its own, the acquisition of knowledge will rarely lead to fruitful results. Indeed, the greatest caution is required when it comes to research conclusions. All too often, questions are framed in terms of an answer that is implicit in the question itself or in the results the researcher wants to obtain. This is participation, but without a dialogical interaction which can also bring new knowledge to those involved.

A second distorted form of participation may be that the person being questioned should provide the solution themselves. This was clear with the proposed participation of poor women in the strategy of international financial institutions when global poverty reduction was put on the agenda. The implicit

assumption that women provide social cohesion, childcare, youth organisation, and some productive activities thanks to their micro-credits not only overburdened women but also absolved the government of the responsibility to provide material support. Their 'participation' was not seen as a help to find better support strategies, but as the strategy itself. The participation of women meant that they provided services that were no longer delivered by government within the neoliberal dogma of that time. This participation is, at the same time, a strategy that burdens women with tasks that could be provided by either the government or the market. Women's (income) poverty then—for which there were and are no statistics—served to create a social construct of the 'deserving poor': these women should be helped as long as they continued to bear the triple burden in their families, their communities, and in the labour market. Poor women, as per this definition, serve the common good and their 'participation' helps to emphasise this.

So what kind of participation can lead to results?

This participation should be both mutual and reciprocal: knowledge transfer should flow upstream as well as downstream. Building knowledge then becomes a common endeavour—the result of dialogue and mutual enrichment. In doing so, it can be ensured that the knowledge is understood and shared. This, in turn, leads to new knowledge which can form the basis for policies that fit with the strategies of both partners and can, therefore, lead to social change.

Cognitive Justice

Social justice, Boaventura de Sousa Santos argues⁸, cannot exist without cognitive justice. In the first instance, this means that in intercultural exchange the two or more cultures must be considered valid.

This mindset was developed for contact with different cultures in which Western-dominant thinking often has the upper hand and where knowledge—despite participation—is imposed on a population group in which that knowledge has no real meaning.

This can also be applied to all contacts between groups from different 'worlds'. In all cases, the government has a different mindset than grassroots movements. And here, too, the cognitive dimension will have an important role. The perspective through which each side sees the 'real' world can be at odds with each other: governments and grassroots people speak different languages.

The challenge, then, is to let these two—or more—different perspectives enter into a dialogue, with an awareness that both worlds have a claim to validity and 'truth'. It is, therefore, a matter of taking both claims seriously and of arriving at an emancipating exchange, one which is averse to any form of oppression.

Participation on this basis is never a knowledge 'about' but a knowledge 'with'. It is the construction of a new knowledge as a result of an exchange between two partners, each with their own contribution.

Herein lies an important element of change that distances itself from the old and often dominant 'development' in which local groups were expected to take in the 'higher' knowledge from governments or

international donors and institutions. It is the lack of this kind of dialogical participation that can explain the failure of many development projects which did not take into account the knowledge and experience of the social groups for which they were meant.

Such a dialogue implies an element of intercultural translation. This requires that cultures are understood as different social situations and languages and where the differences take on new meaning through dialogue.

This is not about North and South. Nor is it about modern, post-modern, or alter-modern. Instead, it is about two different worlds with different languages—government and grassroots—within one culture. Each has different experiences which lead to different knowledge. Exchanges between the two can bridge gaps and a new shared meaning can emerge. The ‘truth’ of the government is never the ‘truth’ of the street. Though both can be valid.

When both truths and realities are brought into contact with each other, a new knowledge arises within the existing framework for both. No one has to enter a new world, but the change can be handled on the basis of what already exists. In doing so, it can be avoided that new elements are introduced without a breeding ground.

This ecology of knowledge points to the necessary commonalities within difference; the awareness that knowledge can only be shared thanks to its articulation with the knowledge of other groups. The emergence of new knowledge—anchored within existing frameworks—is essential for sustainable transformation.

Change and emancipation

What this reasoning boils down to is, firstly, that social justice and environmental justice go hand-in-hand. Environmental protection can benefit from a more positive approach through social action. In the end, it amounts to people accepting new policies and implementing them with enthusiasm. Secondly, this will never happen without an honest form of participation. This should not just be aimed at acquiring knowledge. Instead, it should be about building new, shared knowledge through dialogue between parties who can make equal claims to truth. Thirdly, the result of such an approach should be real social change with better chances for environmental protection and—this is not being too dramatic—the preservation and survival of humanity.

The projects in Vietnam described earlier in this book meet these three criteria. They are a hopeful sign of a possible just transition.

According to the Asian Development Bank, climate change could cause Vietnam to lose 5% of its land, affecting 11% of its population and impacting 7% of agricultural production. Bearing in mind that agriculture represents 17% of Vietnam's GDP and 40% of the job market, the importance of strong environmental policies becomes clear. The government has developed a policy framework for adaptive agriculture with responsibilities and cooperation for all stakeholders. This focuses on distributive and procedural justice, epistemic conclusion, self-determination, and climate government processes.

In Can Tho City, Phong Dien district, most small-scale farmers are women growing rice as a monoculture. These women often own less than 0.5 hectares of land. A ‘VACB’ model was introduced here, including ‘garden/ orchard (V)’, ‘fish farming (A)’, ‘livestock farming (C)’ and ‘biogas (B)’. As a result, the number of participants grew from 110 in 2000 to 625 in 2012. This initiative allowed for incomes to increase, emissions to fall, active public participation to grow, and new career opportunities to be opened up for local communities.

Farmers decided themselves to adopt the intervention (or not) and become the owners of it, succeeding even in sending their children to higher education or vocational training. VACB has succeeded thanks to the combination of scientific knowledge and local practices. The initiative needed time to gain acceptance, since farmers had their beliefs and habits and were not that eager (at first) to change their techniques. All factors (cultural, historical, and political) needed careful consideration, since not everyone is spontaneous or open-minded in adopting new ideas. In the end, though, local agricultural capacity has been enhanced:

“The findings show that strengthening the inclusion of local environmental knowledge and the proactive and meaningful participation of the affected population in adaptation planning interventions are useful. The VACB intervention proves and highlights the importance of governance regulations and supporting policies, incentive mechanisms, and local participation to enable rapid adoption of Climate Change Adaptation (CCA) in agriculture in the Mekong Delta”.

A second initiative concerns a different sector altogether—‘Vietnamese Tertiary Youth’—and their great potential for social and ecological transformation based on an online survey of 896 participants considered ‘agents of change’. Over three-quarters (77%) of respondents engaged with ecological movements and around 41% initiated and led them. These young people continue to lead the changes because they see the need for sustainable norms and behaviour. They work in the areas of climate change, sustainable lifestyles, consumption, production, and distribution.

Meanwhile, an annual ‘Eco Week’ is organised where knowledge about ecological and social crises is shared and where models for social and ecological transformations are discussed. There is also Go Green, a club run by young people concerned about the environment, ecology, and society. They organise volunteer programmes, linking practical activities with environmental communication and eco-social activities. And last, but not least, Youth4Climate is a cooperation between the government and UNDP to promote climate justice in Vietnam. In each case, the aim is to enlarge the group of agents for change through training and creating opportunities.

An interesting case in point discussed in this book is Pham Thanh Tri, founder of Ecofish Vietnam (EFV). Instead of going to university first, this young man decided to start an initiative to raise public consciousness of plastic waste, developing projects in more than 30 cities. Vietnam is a major exporter of plastic, and it is not sorted, recycled, or reused. The country is also one of the biggest dischargers of plastic waste into the ocean. Pham Thanh Tri started to work with a goby, a popular symbol in Vietnamese culture, made from different plastic materials. The message was that this fish would rather eat the poisonous waste instead of releasing it into the ocean. The eco-fish was built in many schools and seen by countless high-school and college students – those most educated and eager to learn. And since Tri could not afford train tickets, he travelled across Vietnam on a bike, showing that sustainable, carbon-free travel is possible.

The interesting element in this initiative is that this young man balanced survival, self-study, and social engagement. He noticed that most recycling was done in the informal sector, not for the sake of environmental protection but in order to generate income. Having started from one individual, this initiative is at pains to grow and receive funding. But the awareness-raising has worked and Tri is now preparing to shift from the ‘university of life’ to a real university education.

This initiative is, in a sense, upside down. It came from the grassroots to reach people who should know but do not care. It promotes learning through the ‘show don’t tell’ method. The strong image of the fish and talking to students supports this approach. In some respects, the transition might even be faster than working top-down.

Working in local communities—starting with playgrounds and garden models—can have wonderful results as well. Today, urban areas in Vietnam suffer from a severe lack of public, green spaces. Most of those that do exist have an inflexible and stereotypical design, and lack basic functions to meet the needs of users (children, young people, women, and the elderly).

Therefore, in 2014, Think Playgrounds (TPG) began as a volunteer group with the desire to create playgrounds for children in urban areas. It soon received a lot of requests from different communities. The group used experimental models from abroad—especially Japan—and adapted them to local contexts. With the participation of communities at its heart, TPG continues to learn new and effective methods to work and communicate with local populations.

Later, TPG expanded its work to promote sustainable public spaces. These are greatly appreciated for being close to nature, using environmentally-friendly materials, and involving local communities in their operation and maintenance. Children meet in these playgrounds, as do their families and friends from different generations, all joining hands to improve quality of life. Most of the urban garden design process is focused on training and communicating with the communities on how to operate and manage the gardens, grow vegetables, and learn organic composting. Experiences are shared and cultivation plans are formed so that everyone feels part of and responsible for the garden.

The Learning Lab for developing climate-resilient strategies in Thai Nguyen province is another interesting initiative discussed in this book. Vietnam is among the top-five countries at risk of the impacts of climate change, since most people live in rural areas. ELLab aims to address the barriers to change due to traditional linear thinking, top-down management, and budget limitations. As a result, strategies have been developed for resilience and sustainability in different areas such as education, business, agriculture, rural development, and integrated governance. In particular, small-scale farmers were asked to define systemic interventions and strategies to achieve their goals of improving household incomes and changing traditional production habits to achieve a better quality of life.

Community learning was mentioned as a mechanism to promote mutual education and the adoption of climate-resilient models. This led to a collective reflection and definition of locally-appropriate and affordable solutions, with government involvement to provide practical training. This became a transformative learning tool towards a more holistic and participatory approach.

Meanwhile, in an interview with two activists, the UN Food Systems Summit of 2021 was discussed, to see how current food policies can be aligned with the Sustainable Development Goals. In Vietnam today, private, industrial, and export-oriented forms of agriculture compete with traditional methods of food production on shared land. The country is at a crossroads and will have to make choices, since the current system has both positive and negative impacts.

On the one hand, land privatisation comes with a loss of biodiversity—also mono-crop farming—while indigenous people are left behind. On the other, traditional farming involves wide varieties of plants and is more sustainable. However, farmers are faced with rising costs and indebtedness. Therefore, the systems need to be strengthened. To keep land under community management, much more education is needed.

The human-nature balance has seen rapid change, with ecology and society interacting generation after generation. What is needed now is an acknowledgement and recognition of the harmful consequences of industrial agriculture. Vietnam needs to take part in the global transition to agro-ecology and, therefore, has to engage with local communities and take into account their knowledge and practice.

In all these examples—whether they concern agriculture, young people, waste management, urban policies, or food production—the necessary environmental measures were coupled to social progress with strong participatory mechanisms which respect the traditional knowledge of farmers in particular and the population in general. The result is real and sustainable change.

Growing awareness of the needs and possibilities of communities who understand the risks of climate change is a direct route to social and ecological transformation. Empowerment covers psychological, health, social, and economic aspects as well as training to convince others of the need for change. Through a process of mutual learning, others can be persuaded of the need to take action. Sharing responsibilities with different generations—from playgrounds to ecological gardening and from growing vegetables to caring for

plastic waste—can bring people together. This, in turn, can lead to a new shared understanding and so to social transformation.

Conclusion

Social-ecological transformation requires an enormous effort from all partners. Change needs people to be open and flexible. It will never succeed unless all partners understand its importance and can fit the new elements into their existing environment.

What all these initiatives show is the great potential and the enormous wealth of possibilities to act and change, across all areas of society. It is easy to imagine other industries where these mechanisms could do wonders, such as in the social care sector. The projects presented in this book all link the social to the ecological. Furthermore, they are based on participatory and emancipatory work with grassroots communities, taking their traditional knowledge into full account. The aim, then, is not to preserve what exists. Rather, it is to drive change on the basis of what is understood and fits into traditional ways of doing. In other words, the objective is to prepare fertile ground for necessary transformations. This is very different from working with a romantic nostalgia for the past. Instead, it intends to construct a new reality together with people and their knowledge.

Of course, the outcome can never be neatly anticipated: it will be the result of different interactions. This is, inevitably, a time-consuming process. However, it is one with the greatest chance of real success. This is an exercise in participatory popular education. This requires patience and openness—it is not a transmission of knowledge but a collective co-construction of it. At the end of this process, no one will remain unchanged.

The first condition for success is, therefore, to map out intersectionality. The various points of contact between sectors that can be the impetus for change need to be highlighted, as mentioned earlier. Second, a successful change will never come out of the blue. It has to mature slowly within people's lives and communities until, eventually, it acquires a permanent place within them and is integrated with the existing but changing knowledge of the group. Successful change will always be the result of intersubjective interactions following which no one remains unchanged. In other words, successful change can never come from one-way traffic.

With common and participatory knowledge building, all initiatives aimed at emancipation can have a place in a shared project that leaves room for diversity at the local level. Here lies the major difference with development strategies of the past, where 'new' knowledge was imposed and often not 'digested' by those who should have benefited from it. This says nothing about the value of the knowledge transmitted. However, it does say something about how that knowledge was transplanted, without fertile ground, to local groups that were not open to it a priori.

Intercultural dialogue, understood here as a reciprocal dialogue between government and the grassroots, can work to build a new shared knowledge that respects the truths of all partners. Social-ecological change will, therefore, be less the result of a new technological input—although this remains possible. Instead, it will be the result of an intersubjective approach, based on multiple points of contact between policy sectors and of an interaction that makes use of existing frameworks from which new meanings can emerge.

With policies aimed at emancipation as well as environmental and social justice, this can lead both to a better environment and to overall satisfaction of needs.

Footnotes

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Add.: No. 8C, Alley 76 To Ngoc Van, Tay Ho, Hanoi
Tel.: +84-24-37185836 | Fax: +84-24-37185834
E-mail: hanoi@rosalux.org
Website: www.rosaluxhanoi.org

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