SUSTAINABILITY PERCEPTIONS AND PRACTICES OF VIETNAMESE ECOLOGICAL PRACTITIONERS

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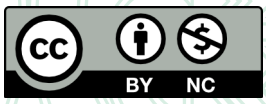
Environment / sustainability



This publication may be cited as: Dang, A. (2021). Sustainability Perceptions and Practices of Vietnamese Ecological Practitioners. In E. Papoutsaki and M. Shannon (Eds.), *Unitec Research Symposium Proceedings 2020* (pp. 108–125). Auckland, New Zealand: ePress, Unitec New Zealand.

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ISBN 978-0-473-59389-6

ePress

Unitec Institute of Technology
TE WHARE WĀNANGA O WAIRAKA

ABSTRACT

This paper analyses sustainability perceptions and practices using data from in-depth interviews of 15 Vietnamese ecological practitioners in 2020. It shows that agency, environmental and social learning and location are key factors in the formation of these perceptions and practices, which, in turn, offer validated solutions for sustainable development in Vietnam. The paper highlights the essential roles and contributions of ecological practitioners to sustainable development. It calls for more enabling support from various stakeholders in society to these practitioners in sustainability endeavours. It also discusses potential use of research results, implications for New Zealand and areas for further research.

KEYWORDS

Vietnamese ecological practitioners, sustainability perceptions, sustainability practices, sustainable development

INTRODUCTION

The detrimental impacts of the climate-change crisis on the environment and human society, and its causes, such as unsustainable modes of production, consumption and lifestyle, have been well discussed in the literature. Sustainable-development trends have emerged to cope with this crisis and involve, among others, more sustainable, renewable, low-carbon energy and better relationships between the individual, society and nature (Ripple et al., 2019).

Vietnam is experiencing the same environmental and social-degradation trends and threats as the rest of the world (Chu, 2018; Chu, 2020; Wells-Dang & Vu, 2019). Economic growth has taken priority and caused much environmental degradation in the last few decades. For example, mining, farming, factories, craft villages and hospitals have polluted the environment with toxic waste. Quality of soil and surface and ground water have declined. Forests have diminished, resulting in biodiversity loss and ecological imbalance (ADB, 2013; Chu, 2016). The climate-change crisis is demonstrated in rises in temperature and sea level, and rainfall changes. There have been extreme weather conditions such as intense heat or cold weather, heavy rain or long droughts, or high tides. In affected areas the damage has been extensive and multi-faceted and the population has suffered from health, social and economic consequences (ADB, 2013; Chu, 2016).

Vietnam is making changes to cope with the crisis (Martin & Mazzanti, 2021; Thong et al., 2017). The state has set up laws, rules, standards, regulations and enforcement systems for environmental protection, use and management of natural resources, environmental justice and social security (Chu, 2020). These measures, however, are slow and ineffective. Sanctions are too light to deter people from non-compliance. Public awareness is poor and there is a lack of commitment, capacity and resources (Chu, 2020; Nguyen, 2020; Thong et al., 2017).

Meanwhile, the civil and private sectors have made important contributions to environmental protection and social development. Non-governmental organisations have provided social services and support to the poor and disadvantaged groups (Duong, 2017). Models of sustainable, green and clean production, distribution and services have been developed in agriculture, horticulture, forestry and tourism, among other sectors (see Westphal et

al., 2015, for example). Environmental activists have campaigned for social and environmental justice (Nguyen & Datzberger, 2018).

How do ecological practitioners perceive and practice sustainability in this context? Why do they do so? What implications are there? Answers to these questions are essential for an understanding of the process in which sustainability perceptions and practices have evolved. This will offer insights into influencing factors and ecological practitioners' roles and contributions to sustainability in Vietnam, and will suggest possible interventions to foster sustainability in this country. Furthermore, the approach could be applied to other countries to gain understandings of key players' sustainability perceptions and practices.

This paper examines the findings of an inquiry into ecological activities and movements in Vietnam to find answers to the above questions. It focuses on sustainability perceptions and practices of Vietnamese ecological practitioners who participated in the study. It firstly outlines the key concepts of sustainability perceptions and practices, and the social-practice theory that illuminates the mutual relationship between perceptions and practices. It then provides a brief on research methods. This is followed by the main findings of the analysis and their implications. The conclusion summarises key points raised and identifies areas for further inquiry.

SUSTAINABILITY PERCEPTIONS AND PRACTICES, AND SOCIAL-PRACTICE THEORY

Sustainability is a complex concept. It involves interventions and/or individual behaviour changes that are maintained or developed to generate ongoing benefits for individuals or systems over time (Moore et al., 2017). Sustainability is, therefore, both a goal and a process (Barbosa et al., 2014). As a goal, it aims at "sustainable development" that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations General Assembly, 1987, p. 43). Sustainability also aims at environmental preservation, quality of life, justice and equity, and solutions to social issues such as discrimination, poverty and unemployment (Barbosa et al., 2014).

As a process, sustainability requires deep actions to change social structures and conditions to make them sustainable (Degenhardt, 2016), with more cohesive, economically efficient and ecologically viable ways of production, distribution and consumption of existing resources (Barbosa et al., 2014). This is because the current capitalist mode of production, distribution, consumption and lifestyle is inherently destructive, as demonstrated in the climate-change crisis (Wright & Nyberg, 2015). Sustainability involves multiple dimensions such as cultural, economic, environmental, social and political, among others (Bossel, 1998). What dimensions should be prioritised, how and why, remain contested by nations and groups with conflicting interests and diverse interpretations of sustainability (Barbosa et al., 2014).

Perceptions are knowledge and beliefs about the external world and are products of the perceptual experience of the subject with all involved senses (Siegel, 2016). Experience is the result of the interaction between the person, society and environment, and the cognitive process that occurs within the person. Such a process might be basic, such as "sensation, attention, and perception," or complicated, such as "memory, learning, language use, problem solving, decision making, reasoning, and intelligence" (Smith & Kelly, 2015, p. 1). Sustainability perceptions include, but are not limited to, understanding about the climate-change crisis and its causes, sustainable-development trends and models, and how individuals and society should behave so that they are in harmony with nature.

If perception is about thinking, practice is about doing. Sustainable practices connote actions, activities, lifestyles and ways of doing things in this field. Examples include renewable-energy production and use in place of fossil fuels, waste reduction, reusing and recycling, and promotion of welfare, democracy and participation (Sodiq et al., 2019).

Practice is informed by perception, particularly knowledge of theories, principles and rules (Schmidt, 2014). A person's awareness, motivation and action taking (or agency) are essential for practice development. The person is active and able to perceive responsibilities to act (Eden, 1993), the level of difficulties and their ability (Ajzen, 1991),

and control factors and constraints (Kollmuss & Agyeman, 2002). The person might calculate costs and benefits using available information, and weigh available options to make rational choices (Jackson, 2005). They rely on their thoughts, beliefs and preferences to guide their decision making (Wilson & Chatterton, 2011). They act with a belief that their action will be effective (Ballard & Ballard, 2005).

Both perception and practice are contextualised by the person in their relationship with society and the environment. The cognitive and action processes allow the person's effective engagement with the environment and its changing conditions (Archer, 2003). In this engagement, the person learns about society and the environment and how to work with them. Learning occurs for individuals, wider groups and communities (Reed et al., 2010). The person internalises social pressure, values and norms that contribute to their rational decision-making (Jackson, 2005) to take actions that either repeat or replace their old habits (Darnton, 2008). Practice can be initiated, learnt, adapted or changed as the person develops and applies their ideas, reflects on, identifies and tries ways to improve their actions to gain better results (Schmidt, 2014).

Perception and practice as actions form a continuing loop where they are mutually dependent and co-ordinate with each other intrinsically (Gibson, cited by Lobo et al., 2018). Humans learnt about and interacted with the environment to survive in pre-historical times. As they accumulated knowledge and capacity such as language, sciences and technologies, there were attempts to control and exploit the environment. The resulting capitalist system led to the climate-change crisis, and people perceived the needs and started to search for and adopt more sustainable practices for self-preservation (Scott & Vare, 2020).

Social-practice theory illuminates the ways in which perception and practice mutually evolve in different environmental and social settings. It recognises that individuals play a central role to practice; they carry, sustain and develop practice, and exercise their agency through recurrent performance of practice (Welch, 2016). Individuals also incorporate into their practice contextual factors such as norms and values, social institution, technologies, knowledge and skills (Shove et. al., 2012), the ecology, climate conditions and landscape (Wang, 2015). Practices are, therefore, constantly changing, dynamic and interconnected (Shove et al., 2012); their longevity, transformation or termination depends on these factors.

Understanding of the climate-change crisis, its causes and consequences, has underpinned Vietnam's actions for environmental protection. As previously mentioned, different players have their own measures. State measures mainly control, with issuance and implementation of relevant legislation and policies. The civil and private sectors' measures mainly provide support and supply of alternative, more sustainable practices and promote them, as in public campaigns (Nguyen & Datzberger, 2018).

This study focuses on ecological practitioners who have been involved in these actions. Social-practice theory allows an understanding of how and why they have initiated and developed sustainability perceptions and practices. It considers factors which might hinder, support or shape these practices and perceptions, and thus allows prediction of future development. Therefore, it could allow practitioners, policy-makers and stakeholders to identify measures to support and promote sustainability in this country.

METHODS

The inquiry used a qualitative approach and in-depth interviewing to collect rich and deep data on the research topic. Fifteen ecological practitioners from the Center for Development of Community Initiative and Environment (C&E) network participated in these interviews. The practitioners come from across Vietnam. Their expertise and practice spans agriculture, architecture, education, fashion design and production, forestry, handicraft, hospitality, tourism and waste treatment. Each of them has ten years or more experience in these fields.

Narrative and thematic analysis were employed. The narrative analysis focused on the development of the respondents' sustainability thoughts and actions. This attended to the continuity and process as well as to special

events that occurred across their lifespan, along with the changing contexts. Thematic analysis teased out major and sub-themes of sustainability perceptions and practices.

List of interviews

Interview	Location[1]	Interviewee's gender, expertise and current position
1	Tay Nguyen	Male, permaculture and ethnography
2	Quang Nam	Male, organic farming
3	Quang Nam	Female, forestry garden and solid-waste management
4	Quang Nam	Male, eco-tourism
5	Thua Thien Hue	Female, organic produce shops and restaurant
6	Dong Nai	Male, sustainable farming and farm-stay tourism
7	Long An	Male, traditional handicraft shops
8	Thua Thien Hue	Male, community tourism
9	Lao Cai	Female, social tourism enterprise
10	Ha Tinh	Female, human ecological practice
11	Thua Thien Hue	Male, education
12	Hanoi	Female, playground
13	Hanoi	Male, zero-waste shop
14	Hanoi	Female, fashion design
15	Quang Nam	Male, bamboo-handicraft workshop and community tourism

1 These are provinces in Vietnam.

FINDINGS

Experience of the climate-change crisis and motivation for action-taking

The practitioners experienced the climate-change crisis in the form of negative, drastic changes in society and nature that occurred in Vietnam from the 1990s. Before this, Vietnam was predominantly a close-to-nature, self-sufficient, rural society which was closely knit and community oriented. In their childhood and teenage years, some resided with their extended families. From adults in their families and communities, they learned how to grow and harvest crops and gather wildlife for food. The practitioners perceived that the environment and nature were intact, beautiful, essential for life and were treasured.

> As a child, I … helped parents growing rice, potatoes, corns, squash, gourd, beans and others …. Life in the countryside was very beautiful. While parents worked in the fields, the children play rural games such as building a hut, pretending to sell and buy things in fairs, which were very interesting. The countryside environment was nice …. There were mango, plum, grapefruit and all sorts of fruits. Wild fish, shrimp, crab and snails were abundant. (Interviewee #6)

The above version could be nostalgia, because environmental degradation was observed in Vietnam much earlier. Since the 1950s, heavy industries have been developed, followed by light industries with an export orientation and ongoing urbanisation (O'Rourke, 2002). However, the degradation between the 1950s and 1980s was minor compared to what occurred between the 1990s and now. Indeed, as the practitioners grew up and transitioned into adulthood, rapid industrialisation and modernisation took place (Asian Development Bank, 2013; Chu, 2018; Chu, 2020). Cities and industrial parks developed, expanded and attracted young labour from rural areas with perceivably better and more stable incomes (Vo, 2021; Pham et al., 2018). In rural areas, intensified farming and heavy use of chemical fertilisers and pesticides severely polluted the environment (Asian Development Bank, 2013; Chu, 2018; Chu, 2020). Interviewee #6 observed that wildlife, the source of natural food, disappeared. Fisheries and aquaculture were affected. Food was poisoned with preservatives and pesticides, which harmed people's health. The rural community was broken up. The caring and community tradition was replaced with money- and market-oriented practices.

> The canal environment was polluted with deposited herbicides and pesticides from the field. We do not see fish and crabs anymore …. Children cannot play like us in the past. There is no such connection between the villagers like that in the old days …. Durians and jackfruits were injected with chemicals. Other fruits were soaked in chemicals to make them beautiful and shiny …. People spray certain chemicals to make vegetables grow three times faster [than they usually do]. (Interviewee #6)

Social disparities and poverty grew among the disadvantaged groups such as farmers, ethnic minorities, the elderly, women, children and people with disabilities. Interviewee #10 pointed out that economic development did not solve poverty but exploited farmers. Interviewee #6 observed that farmers' income was low and unstable as the crop price was in inverse proportion to the crop yield. Farming traders, however, became richer from the profits they made. Interviewee #9 observed that land development destroyed historical and natural heritage and the livelihoods of ethnic groups. Interviewee #14 was shocked at the illiteracy rate among disadvantaged children and youth across the country, and that their only wish was to have enough food.

> I met many kids across Vietnam who were 14 years old but could neither read nor write and to me, it was a shock …. [They said that they] had no dream at all and just wanted to have enough food to eat. (Interviewee #11)

Besides the crises to their communities and society, some interviewees experienced personal crises caused by various life stressors. Interviewee #1 had stress, an accident and health failure. Interviewee #5 suffered from domestic violence. Interviewees #2 and #6 were concerned about the bad impacts of herbicides and pesticides on health. Most interviewees perceived a lack of happiness and satisfaction, and the neglect of self-cultivation, connection, relationship and collectivity in their adult life.

Overall, the crises and associated negative, sad experiences motivated the practitioners to pause, reflect and search for solutions. Interviewee #1 delayed his study and career plan as he healed from an accident. During this time, he attended to man-made environmental disasters. Interviewee #5 resigned from her old job, moved to a different city and looked for a new career that could benefit not only herself but the community. Interviewees #2 and #6 were looking for alternatives to intensive farming. Interviewee #7 revived a traditional handicraft trade, creating local jobs, caring for nature and contributing to his homeland.

> I want to take care of [nature] again and contribute to the homeland that has nurtured me since my childhood. That was the reason why I wanted to come here to develop a job for me first, then for others if possible. (Interviewee #7)

Taking actions

To deal with the crisis, practitioners engaged with the environment in a search for more sustainable practices. They then developed and tested sustainable models, dealt with resource shortages, engaged with stakeholders, developed long-term visions, planned and took step-by-step actions, and learnt to problem solve. These actions are elaborated below.

Searching for, developing and testing sustainable practices

The practitioners sought for existing sustainable practices in the locality, the nation and other countries. They formed and tested sustainable models of production, distribution and consumption in place of the current unsustainable practices. These models covered organic farming, permaculture, forestry, gardening, social tourism and hospitality, ecological education, ecological production and distribution, and waste management. Interviewee #6, for example, visited and studied existing organic farms before developing his team's organic farm. Interviewee #11 pioneered in mindfulness and social–emotional education for school children. He drew on the connection between self, others, society and nature to create specific exercises for his education programme, which teaches children to care for themselves, other people and the environment. Interviewee #4 focused on the local and national population and their littering behaviour, and organised regular waste-collection activities to educate and engage local people in behaviour change.

The search involves learning about existing sustainable practices and conditions for translation into the practitioners' settings. Interviewee #6, for example, evaluated to tease out the good practices from the existing organic farm models and applied them on his farm. Interviewee #3 replaced food crops with traditional herbs, while creating a whole system of flora to enhance soil stability and nurture the ecosystem to deal with huge shifts in sunshine and rain patterns. Interviewee #7 found that waste treatment was not a holistic solution so he considered zero-waste production and chose to revive traditional trades using local natural grass.

Solving the resource shortages

A few years were needed to fully develop a product or service and its clientele. The practitioners' capacities and resources were limited, as was external support. Major obstacles included financial constraints, human-resource issues and a lack of support from authorities and consumers/the public.

> [W]ithout money [to hire more staff] I have to [be solo at first] … most of the staff are also solo. They are on their own doing their specialised areas …. [There is] a lack of support from the authorities …. People are not well aware of clean and organic products and very few people are willing to pay for them. (Interviewee #5)

To resolve the above issues, the practitioners developed their models at small scales and shared responsibilities among involved partners. For example, in a traditional handicraft production model, groups of local handicraft masters and pupils were responsible for gathering materials and making products while the practitioner ran quality control and product delivery. This reduced dependency on external funding and support. The initiative required less than US$100 of investment from the practitioner. It promoted co-operation and ownership, and increased self-sustainability.

> I only work to my ability, capacity, experience and resources … the responsibilities are equally divided among everyone in the production chain … everyone sees themselves as a part of that production. (Interviewee #7)

The practitioners allowed flexibility within their models and incorporated diverse activities. For instance, they combined the production and distribution of organic produce with education, tourism, community development and other services. Interviewee #5 added a restaurant to her organic produce shop to attract more clients and generate more revenue. Because of this, the models were easy to replicate and had the potential to reach a large audience to initiate a positive transformation of attitudes and behaviour and pull together more resources.

> When I do my part well and share the ways I do, many people can learn and imitate. I accidentally have a lot of allies who work together with me. It will create a greater amount of resources than I do all by myself, managing staff, resources, facilities and much more. (Interviewee #7)

The practitioners connected to form a community of practice where they could access peer support and resources as and when needed. They maintained regular contacts to share information and other resources, seek and offer advice, and support and celebrate progress. They led and provided emotional and material support for people who worked with them, and empowered them.

> [W]hen I heard that a neighbouring farmer was sick in the hospital, I was very worried so I went to visit him. I also helped to water his vegetable bed when it was dry. If I do not see a farmer in his garden, I would telephone him to check if he was sick or not and to offer support and encouragement immediately. (Interviewee #2)

> Every one or two weeks, we have a group meeting for relationship building and development of our love of nature. (Interviewee #6)

When needed, they turned to spiritual sources such as Buddhism, which is commonly practised in Vietnam, as Interviewees #1 and #6 did.

Engaging with stakeholders

The practitioners involved different parties, for example, the market, the community/society and authorities. For customers, they ran marketing activities to attract and build their clientele, and educate and motivate them to change their consumption patterns. They provided education and co-operated with the authorities to mobilise their support and for policy changes. They fostered community development and collectivity, and managed relationships with both external and internal partners to ensure that efforts were well orchestrated. Interviewee #3 identified potential green, organic producers and worked with them to improve their products. Interviewee #5 networked with various ecological producers for her organic produce distribution business. Interviewee #11 co-operated with schools, teachers and students to develop lectures and lessons for his education programme. In planning for a clean model of coffee production, Interviewee #1 envisioned the need to build trust so that he could mobilise resources and support from the community and local authorities. He then designed and ran suitable activities to engage the community and local authorities. Interviewee #2 ran marketing activities to attract and build his clientele, and educate and motivate them to change their consumption patterns.

The practitioners endorsed a careful selection process in recruiting partners and participants to their initiatives to fit their purposes. Interviewee #6 explained the interest, potential and contribution criteria for his farm:

> [W]e tend to recruit new members or new residents only when they directly work with the farm …. You have to be in charge of something, or a certain stage and have a working schedule of a certain number of days per week. You should contribute to more strength [for] the farm, not simply money …. We select [tourists] …. We asked about their visit purposes and expectations. If their said purposes and expectations match ours and we can meet them, we agree for them to come. If they just came for a birthday party, a celebration, a lunch or so, we would not agree. (Interviewee # 6)

Interviewees #3, #5 and #14 reached out or planned to outreach to national and international communities. Interviewee #14 developed an international clientele for her traditional clothing enterprise as she built a reputation in the global fashion industry. This was an important survival strategy in the market competition with existing environmentally unfriendly models of production, distribution and consumption.

Long-term vision, planning and step-by-step actions

A long-term vision, planning and step-by-step actions were implemented in the practitioners' projects, given the time required, and involved tasks.

> [W]e go step by step …. The agricultural system should be the foundation and soil should be improved. Tourism is an added service …. Visitors can come to have a better understanding and spread [the news]. They could bring a little income …. We also welcome educational organisations …. For farming households who want to follow our model, we would share experiences and link to find a market for their products. More farmers are following this. (Interviewee #6)

Learning to problem solve

The practitioners acquired and applied knowledge and skills to solve arising problems in their initiatives. Business knowledge and skills, such as understanding of the relevant supply chains and their positions in the chain, or the role of quality assurance and standards, were essential for running successful businesses, enterprises and organisations. They set realistic goals and used rational thinking in planning and implementing, using existing

resources and strengths and creating initiatives based on information and feedback. Interviewee #7, for example, set his position as a supplier of handicraft products and worked with the producers and shops. He attended to the economic, ecological and social impacts and benefits of the activities and operation. His guiding questions were: *What shall I do next? How long could I maintain this activity?* Interviewee #11 incorporated environmental protection contents into mindfulness and social–emotional education when he realised this gap.

Interviewee #13 started with selling reusable straws and expanded the range of products offered in his shop to include bamboo brushes, sugarcane packages, organic foods and beauty products, based on inquiries and feedback from his customers and his networks of providers. He stressed the importance of quality products, which included good impacts on the ecosystem. As a distributor, he worked with producers towards quality goals. However, he had to sell environmentally unfriendly products so that his business could survive in the short term, while being able to introduce and build a market for environmentally friendly products.

> I have to classify which products are profitable for me to live on and which ones take time to grow [for a better lifestyle] …. If I refuse this, both will die. I have to achieve my goal … I have to choose …. Because lifestyle cannot be (formed) overnight …. I need to work for long and I still retain my value. But I survived [based on] … less-sustainable products …. There has been much self-argument when I have to choose. (Interviewee #13)

Sustainability perceptions

Practitioners hold strong beliefs in the need for sustainable practices. They view sustainability as a gradual, multi-faceted and multi-staged process which involves different layers and stakeholders in society. Balance and harmony among them are essential. Sustainable development targets equity and benefits for the disadvantaged, community development, cultural and heritage conservation. Perseverance and persistence are needed to deal with obstacles to sustainability. These beliefs and ideas are discussed in detail below.

Beliefs in the needs for sustainable practices

The practitioners strongly and firmly believe in the need to live, produce, distribute and consume in a way that is friendly to the environment and society. That means conservation of the ecosystem and the creation of a good living environment for humans.

> I conserve … the environment and the ecosystem and create a good living environment for as many people as possible …. [In ecological agriculture] we need to think a little bigger …. We acknowledge and restore the ecosystems of native trees, replant forests and do organic, safe farming. (Interviewee #10)

Sustainable development is gradual, multi-faceted and multi-staged

The move toward sustainability has been a gradual process. As life continually evolves and people need to adapt to these changing conditions, flexible interpretations, adaptation and change based on personal circumstances and preferences should be allowed.

> [I]t depends on each person. Each person has their own way of defining and their own experiences …. Individual perspectives and plans differ. And we can only examine one in its very specific contexts. (Interviewee #3)

The practitioners' initiatives were multi-faceted, with economic, social, cultural and environmental dimensions, among others. They were multi-staged and included setting up, testing, running, reviewing, improving and replicating. They were circular, and required revisiting and reinforcement of achievements in the previous stages during implementation of actions for the current stage. Unknown factors and changes had to be allowed for. To build his permaculture enterprise, Interviewee #1 worked with ethnic minority people and authorities, which had economic, cultural, environmental, ethnographical, social and political dimensions.

> [The dimensions] are unpredictable …. We have to start with small tasks which allow interactions and then issues emerge and transform …. I could not control or imagine them. I see it in a more impermanent state … our team

> expected up-and-down stages …. It continuously loops …. Internal and external issues are … closely linked. (Interviewee #1)

> One of the things that I learn from nature and the ecosystem … [is] that everything is moving and transforming. Nothing stands still …. We need to observe how they are moving. In my observation [of a phenomenon], I would identify the problem, the plants, the animals. Then I started to have a plan for adaptation and coping with them. (Interviewee #10)

Sustainable development involves different layers and stakeholders

Sustainable development is multi-layered as it spanned across micro, mezzo and macro levels. Individuals, groups, communities, consumers, markets, authorities and policymakers, to name a few, and the environment, are all part of it. International organisations have funding, scientific and policy-making roles at macro levels. Authorities have power, resources and policy-making roles, also at macro levels. Local organisations, community and enterprises are working at the mezzo and micro levels. They should work together.

> The government does a lot about general policy issues. The large organizations [like IUCN] have the resources. The approaches of the community, enterprises, and social enterprises, for example, are both very practical and specific …. Everyone needs to work together …. IUCN plays some roles in scientific development and policy influence and has funding resources. (Interviewee #3)

Interviewee #11 appreciated the roles and contribution of authorities, schools, teacher-training colleges and his team in developing a practicable, workable sustainability-promoting education programme for Vietnam.

> The team, the provincial Department of Education and Training … and the Teacher Training University … connected and created mutual support. The university is stronger in the theoretical framework. [My] team is very strong in the practice. The department is the state authority managing education. (Interviewee #11)

Balance and harmony are essential

The practitioners emphasised a balance among the individual, community/society and the environment. Individuals should have good health, proper work, income and housing, and be happy and satisfied fulfilling their purpose and contribution to society. However, they should not cause any harm, but bring benefits to nature and others in society. They should attend to, care about, understand and fit in with the environment. People who take things away from the environment should be made responsible to repay.

> [S]ocial and ecological problems are human–human relationships, how we exchange information, how we interact with each other so that we look at each other, we listen to each other, we try to understand our partners …. What they expect, hurt, stumble on, and want. Well, then I started to form [the actions] to meet each other's needs. Ecology is the same … I think that humans have to observe the natural system more … we have to nurture the soil. (Interviewee # 10)

The practitioners attach importance to happiness, responsibilities, self-satisfaction and sufficiency. Happiness goes along with self-satisfaction and responsibilities and involves the fulfilment of one's wishes. These are helpful for the environment and society. Sufficiency means having enough resources to live healthily, such as proper nutrition, clothing and shelter.

> I only want a sufficient amount of food with enough nutrition for good health …. My clothing should keep me warm, protect me against the [weather conditions] …. The accommodation should have proper ventilation and be weatherproof …. The job I do should be my favourite … I can see the plants and focus on more useful stuff. I find such a life is happy. (Interviewee #6)

Positive thinking and emotion, and sound spirituality, contribute to self-cultivation. There is a strong attachment among the practitioners to the homeland, and adherence to good values and norms for the community and society.

Interviewee #10, for example, stressed the importance of soul-nurturing with passion and the practice of giving things away. She valued all people who came to her and maintained good relationships with them so she received support from many people. Relationship development and maintenance is an important feature of Eastern culture.

> People still follow me and love me. It is all because of me. In Eastern culture interpersonal behaviour and relationship are important … I value everything that I came across in my life … all [people] have a unique … contribution to society. (Interviewee #10)

Sustainable development targets equity and benefits for the disadvantaged, community development, cultural and heritage conservation

The practitioners' sustainability initiatives targeted equity and benefits for socially disadvantaged groups. These groups included, among others, farmers, ethnic minorities/ Indigenous people, the poor, socially deviant youth, women and the elderly. In various environmental initiatives that the interviewees undertook, these groups participated and demonstrated behaviour changes, contributed labour, special skills and knowledge, and advocated for sustainable development to the public. Some poor and disadvantaged youth were trained in urban gardening. A group of women with disabilities was employed in a recycling business. Ethnic minorities became partners in sustainable education, tourism and organic-produce enterprises. Their abilities, motivation and potential to contribute to sustainability were used and recognised.

Community development was another objective of these initiatives. According to Interviewee #3, the community was diverse and included various groups such as laypeople, artists, educators, development workers and others who could gain benefits or provide resources for sustainable development. Community development entailed education, development of collectivity, and development, mobilisation and deployment of resources to meet community needs and purposes. It started with getting to know the community, engaging with them, building relations, providing support and guidance. Interviewee #1 asserted that each actor required a particular approach in engagement, motivation and relationship building to gain support. Such an approach should fit their perspectives and levels of education, and awareness and understanding of sustainability.

> Villagers are at a different level of education and ability to absorb information so I split the information and presented to them properly …. In the meantime, I became a part of the community. I started to develop activities so that the project gradually grows upwards from the lowest. (Interviewee #1)

In addition, the efforts involved cultural and heritage conservation. Interviewees #1 and #7 worked with local people to revive their traditional trades and farming. Interviewee #2 and other farmers tried to encourage and involve their children and grandchildren in the farms by building a close relationship with them and creating opportunities for them to contribute to farming so that they would take on their farming tradition and assets in the future.

The move towards sustainability included changes in the way people behaved towards and worked with each other. They demonstrated better awareness of and more humane treatments towards themselves, their society and the environment. For example, Interviewee #11 observed that in his sustainable-education programme, participants connected better. They became more mindful and internally motivated, and adopted behaviours that were friendly towards other people and nature.

> The children do stuff such as collecting rubbish or cleaning their classrooms, not because their teachers instruct them to but because they are willing to do [it] themselves …. I see the [growing] confidence of teachers …. It involves quality change. Sometimes the teachers stood, watched the students talking to them, told them that they were very good and if they could see the teachers. That was when people turned to each other and made connections. (Interviewee #11)

Perseverance and persistence to deal with obstacles in sustainable development

The move to sustainability had obstacles. For example, certain individuals or groups might be against sustainable

actions and thoughts or misinterpret them, and this should be accepted as part of the transformation process (Interviewee #1). Forces majeur such as Covid-19 brought businesses to a halt due to lockdowns, economic downturns, lower incomes and thus people's lower purchasing power. This required the leaders and followers to persevere and persist.

> In this special circumstance with the global pandemic, people might give up in two weeks or a month … but I will persevere till the end. I mean that by all means, I will reach my set goals, no matter how slow or fast I am. (Interviewee #5)

DISCUSSION AND RECOMMENDATIONS

Sustainability in learning and action

Sustainability demonstrated its complexity firstly in the increasingly sophisticated learning and cognition of the ecological practitioners (Smith & Kelly, 2015). When the practitioners first noticed and observed negative changes in their localities, they gained mostly basic, simple understanding of environmental issues and their observable impacts at personal and community levels in their localities.

With inquiry and further observation, they acquired more comprehensive understanding about unsustainability and its causes in Vietnam. The causes included the particular social structures and phenomena such as the market-oriented economy, industrial production, intensive farming, urbanisation and associated human behaviours such as increasing consumption. There was increasing awareness and understanding about alternative, more environmentally friendly options.

Later, in the deeper learning-in-doing process, the practitioners accumulated more complex knowledge and skills to set up, develop and maintain these structures and practices in their localities. They answered complicated questions such as how to operate a model successfully, how to mobilise enough resources and support in a sustainable way, and how to deal with the complex issues of an organisation or a business. Sophisticated thoughts, ideas and skills formed and learning deepened as the practitioners sought solutions to these issues.

Along with learning, the complexity of sustainability was obvious in the practitioners' actions (Moore et al., 2017). The practitioners had to select several from many sustainability targets. They also had to choose among the multiple dimensions and levels of sustainability to be the focus (Barbosa et al., 2014). Sustainable production, consumption and lifestyles received much attention, while sustainable politics and governance appeared to be absent from the ecological practitioners' agenda. This was probably because the communist regime discourages democracy and political actions in Vietnam (Nguyen & Datzberger, 2018). Their models of sustainable production and distribution attended most to the economic and environmental dimension, given the urgency of environmental degradation, while attempts were also made to cover social and other dimensions. Their actions were usually limited to individual and group level and localities. Their models were small in scale to cope with limited capacity and resource shortages.

The practitioners juggled to find a balance among competing targets of enacting and promoting sustainability, and surviving and being well in the present market- and capital-orientated society. The juggling meant the incorporation of both sustainable and unsustainable features in these models to make them workable in the current settings. This compromise was made with a hope and a plan to gradually replace the unstainable features with sustainable ones, as in the case of selling both sustainable products to change consumers' behaviour in the long term and unsustainable products to generate enough revenue to run the shop.

Agency, learning and location

The perceptions and practices have mutually evolved as the practitioners engaged in ongoing learning, creating, experimenting and improving their sustainable initiatives and reflecting on them. In this process, agency, environmental and social learning, and location were the key factors.

Agency was demonstrated by the practitioners' awareness, motivation and action-taking (Welch, 2016) to initiate and maintain sustainable changes. The practitioners were aware about environmental degradation and its causes and impacts at personal, commune and social levels. Their dissatisfaction and crisis motivated them to act to solve these issues. They realised problems, and knowledge and skill gaps, which fed into their motivation to learn and apply learning to problem-solve. Agency, therefore, was enhanced along with intensified learning and action.

Agency was also shown via the practitioners' making choices throughout their learning. They chose to act, for example, on specific sustainability issues and in particular ways based on their rationale of what would work. This, in turn, was based on their past learning and experience. They adapted and adjusted their choices depending on the outcomes of their practice trials to make them work better.

Learning consisted of social and environmental learning. Both types of learning were guided by the question of how to solve local-specific environmental issues. Environmental learning occurred as the practitioners interacted with the environment (Archer, 2003). This involved observation, experimentation, evaluation and reflection on their ecological practices and their impacts on the environment and its changing conditions.

Social learning occurred in interactions with others in society (Reed et al., 2010), including peers, team members and stakeholders. Interactions were intertwined with knowledge creation and practice development for the practitioners, other involved persons, groups and communities. Social learning explained why the sustainability perceptions and practices shared common features with global sustainability thinking and practice such as environmental protection and human rights. This, in turn, demonstrated the universality of these features.

Social learning explained the unique features of these perceptions and practices. They included, for example, ideas about sufficiency, community and human relations, or Eastern cultural practices of preserving and valuing people and relations. These features reflected the upbringing, history, qualifications and professions, personal experience and purposes of the practitioners and the Vietnamese contexts. This uniqueness contributed to the global diversity of sustainable development.

The practitioners' beliefs, ideas, knowledge and practices developed in a mutual relationship (Gibson, as cited by Lobo et al., 2018). Many practitioners had basic, simple perceptions of sustainability and a naïve intention to do something when they first engaged with sustainability. As the practitioners searched, learned from other places or people, and tried to apply some simple ideas, their sustainability perception and practices grew. The growth brought more complex questions. These consisted of, for instance, how to operate a model successfully, how to mobilise enough resources and support in a sustainable way and how to deal with the complex issues of an organisation or a business. This further engaged the practitioner in their learning-in-action. Answers to these questions helped form sophisticated perceptions and practices accordingly.

Location sets the contexts for the practitioners' agency and actions. The living environment was an essential part of life and a major source of awareness and motivation for the practitioners. Localities were the medium for them to test and refine good practices. The practitioners built up their support and learning networks from their local bases. They drew learnings that worked in their localities and contributed to the learning of their community of practice with their local perspectives. The engagement, practice performance and development were ongoing, as the settings were constantly changing.

The interaction between agency, learning and locations contributed to the hybrid, continually evolving nature of the ecological practitioners' sustainability perceptions and practices. The practitioners played the key, formative role with their motivation and efforts. They found out about, selected, tested and validated global, national and local knowledge and practices to fit the local contexts. They incorporated knowledge and skills from economics,

sociology and other fields, social norms, values and institutions, and the environmental conditions (Shove et al., 2012; Wang, 2015). They constantly reviewed, adopted and adjusted their perceptions and practices to the changing local, national and global conditions. In this way, contextual factors contributed to and shaped these perceptions and practices.

Use of findings

The findings can be useful material for future sustainability efforts. For example, a comprehensive and holistic approach, a long-term vision and planning, step-by-step actions, regular review, evaluation and reinforcement are required, along with flexibility, diversity and adaptation to allow for unknown factors and changes. A trial-and-error process with small scales is advisable in the development of a sustainable model. This is because it helps to realise widely workable and replicable models with limited capacities and resources. It shares responsibilities among involved parties and enhances ownership, reduces dependency on external funding and supports high resilience.

The identified pathways of the practitioners interviewed for this study could be streamlined and applied to the selection and training of future ecological practitioners. Their in-depth knowledge and practice in their areas of specialisation, and practice development and reflection process, provide insights into sustainability issues in Vietnam and offer effective solutions to them. Their inspiring narratives, positive thinking and emotion could be used to engage people.

As the knowledge and practices focused on micro levels, future sustainability efforts should consider outreach to the national and international communities, political actions, and working with authorities on policies, legislation and nationwide sustainable activities. Possible interventions could be to educate and encourage ecological practitioners to use existing policy channels and forums to promote their models and initiatives. They could also voice their opinions on related legislations and policies, given that these areas are still under-developed in Vietnam. Political lobbying could also be considered, along with the influence of international organisations and foreign countries with policies that support sustainability. Lessons could also be drawn from models that have reached national and international communities.

In Vietnam, the public and authorities play important roles in sustainable development but their perceptions and awareness of sustainable development are under-developed (Chu, 2020; Nguyen, 2020; Thong et al., 2017). Therefore, provision of practice examples or models, engagement, connection and education, campaigns and awareness raising are needed across sectors for policymakers, authorities and the public.

Practitioners play various roles and have great potential to contribute to sustainability, so their roles should be encouraged and facilitated. This could be done via providing resources for their activities, networking for the development of a community of practice, engaging them in sustainable development and acknowledging, celebrating and making their efforts widely known via public-awareness-raising campaigns and events.

Ecological practitioners are facing, and will continue to face, the climate-change crisis and its negative impacts at personal, community, societal and environmental levels. Crises offer challenges, opportunities and motivation for changes. For example, stress should be dealt with by stress-reduction and management strategies (Sanson et al., 2019). The global Covid-19 pandemic requires states, communities and individuals to practice social distancing and elimination of travel (Ritchie et al., 2020). Future sustainability efforts should encourage people to reflect on the causes of the crisis and sustainable development as the overall solution. In addition, they should build capacity for crisis management programmes for stakeholders.

Vietnam has much in common with New Zealand in terms of the climate-change crisis. Unsustainable economic practices in New Zealand have resulted in the country's very high greenhouse gas emissions per capita (Hopkins et al., 2015), deforestation, significant soil erosion, loss of biodiversity and poor water quality (Meister & Beechey, 2012). There are multiple social issues such as multiple inequalities across demographic groups in various sectors, poverty, homelessness, poor mental and physical health, and domestic violence (Greer & Morris, 2019). The climate-change

crisis is also posing huge risks to New Zealand with rising sea level and temperature, heat extremes and shifting patterns and amounts of rainfall (Hopkins et al., 2015).

The study findings from Vietnam have important implications for New Zealand. They suggest that ecological practitioners could and should play a key role in creating and promoting changes towards sustainability in New Zealand. Priority, therefore, could be given to supporting ecological practitioners to take more active roles. Funding could be provided to encourage development of sustainable models of production, delivery and consumption in areas that are currently short of such models, as in the case of the fashion industry (Albertson, 2020). The ecological practitioners could work with various stakeholders to promote sustainability efforts as suggested by Norton et al. (2020). For example, they could be involved in efforts to educate and share best practices with producers who are not well informed of these practices and their benefits (De Silva & Forbes, 2015).

CONCLUSION

This inquiry confirms the key roles of agency, environmental and social learning, and locations in the formation of sustainability perceptions and practices of Vietnamese practitioners. It explains the continually changing, dynamic, hybrid nature of these perceptions and practices. It draws lessons and offers recommendations for future sustainability efforts in Vietnam. Implications of the findings for New Zealand are also discussed.

The inquiry is qualitative, so findings that are time and context specific cannot be generalised for other practitioners in Vietnam in different times and contexts. Younger generations in Vietnam, for example, are living in a different time and setting. They have experienced increasing environmental degradation and social disparities associated with an industrialising society, but there are validated sustainable models and practices. Therefore, continuing observations are necessary to identify the pathways and milestones for subsequent cohorts of ecological practitioners to ensure that sustainability efforts meet their characteristics, needs and aspirations.

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ACKNOWLEDGMENTS

The study Socio-Ecological Transformation as Perceived by the Vietnamese Youth and Ecological Movement in Vietnam was undertaken by the Center for Development of Community Initiative and Environment (C&E) under the sponsorship of Rosa-Luxemburg-Stiftung Southeast Asia (RLS SEA) between February and October 2020.

The research team included Đặng Thị Ánh Nguyệt, Phạm Đức Trung, Bùi Thị Thanh Thủy, Nguyễn Thị Minh Hằng, Lê Thị Thảo, Vũ Đình Tuấn, Đỗ Thị Hương and Henning Steinbeck. Research interviewers were Phạm Đức Trung, Bùi Thị Thanh Thủy, Nguyễn Thị Minh Hằng and Lê Thị Thảo. Focus-group discussion facilitators were Trần Thị Ngọc Hà, Nguyễn Thu Hường, Vũ Đình Tuấn, Hoàng Thị Minh Nguyệt, Trương Đỗ Minh Phượng, Mai Ngọc Châu, Nguyễn Thúy Nga, Trần Thanh Thư, Hoàng Thị Phương Thảo, Nguyễn Thành Luân, Nguyễn Hoàng Tuấn, Huỳnh Kiều Tiên and Trần Hồng Điệp. Research assistants for interviews and the online survey questionnaires were Vương Hoàng Phương Trang, Nguyễn Ngọc Linh, Trần Thị Kim Hoàn and Nguyễn Việt Hòa.

There were 896 respondents to the online survey questionnaires, 150 participants in focus-group discussions and 17 participants in in-depth interviews.

The opinions in this paper belong to the author only and in no way represent RLS SEA, C&E or those of any other research team members.