Back to Nature-Based Agriculture: Green Livelihoods Are Taking Root in the Mekong River Delta

Ngo Thi Phuong Lan\textsuperscript{1*} and Nguyen Van Kien\textsuperscript{2}

\textsuperscript{1}Associate professor, University of Social Sciences and Humanities, Vietnam National University Ho Chi Minh City, Dist. 1, Ho Chi Minh City, Vietnam
\textsuperscript{2}Doctor, Mekong Organics (Australia) Fenner School of Environment & Society, Australian National University, Canberra, Australia

**ABSTRACT**

**Background and objective:** Vietnam is prioritizing agricultural production for food export capacity in all national policies. As a result, for three decades, its agriculture has been making quite many remarkable achievements.

**Methods:** The most successful one is that the nation has become one of the world’s leading rice exporters and ensures its national food security. Through these endeavors, the Mekong River Delta (MRD), in particular, has emerged as a key region in ensuring national food security and rice export.

**Results:** The new era can now see Vietnamese agriculture turning to place special emphasis on commodity quality and the improvement of the living environment. This is evidenced, for example, by the phenomenon that the MRD, as a rice basket of the whole country, is making moves back to nature-based agriculture with attempts to restore the natural ecology, including preserving and restoring local traditional rice seeds, adopting natural farming practices and minimizing the use of chemical fertilizers and pesticides.

**Conclusion:** The case studies of nature-based farming practices in the MRD indicate that, while the national agriculture is generally developing large-scale production, the small-scale farming in the region, integrated with tourist and educational activities on-site, is meeting the demands of a highly potential domestic niche market. Moreover, this model appears to be a sustainable farming approach that defines itself as a working green livelihood for the region.

**Keywords:** eco-agriculture, organic agriculture, sustainability, traditional agriculture, Vietnam

**Introduction**

The Mekong River Delta (MRD) is the agricultural production hub of Vietnam. It comprises 12 provinces (including Long An, Dong Thap, Tien Giang, Vinh Long, Tra Vinh, Ben Tre, An Giang, Hau Giang, Soc Trang, Bac Lieu, Ca Mau and Kien Giang) and a centrally-governed city (i.e. Can Tho City). Its area is 40,547.2 km\(^2\), accounting for 12\% of the national area, of which 27.4\% is agricultural land. Its population amounts to 18 million people, which is 20\% of the national population\textsuperscript{1}. The region is located in southern Vietnam and is endowed with plenty of islands and archipelagos and a coastline of 73.2 km. The average temperature ranges from 24\(^\circ\)C to 27\(^\circ\)C and there are two distinct seasons - the rainy one from May to October with a rainfall amount accounting for 99\% of the total annual precipitation and the dry one from December to April, during which time there is no rain, thus shortage of water, leaving the local agricultural production adversely affected. The long dry season, given such a span of time, causes increased acidity and salinity in the soil, thereby posing obstacles to agricultural production (of rice, vegetables and fruit) and daily life activities.

This region has a humid tropical climate which, together
with distinctly subequatorial features, is ideal for growing tropical plants, especially those with high crop yields, a pre-condition for intensive farming. The MRD has large areas of soil yearly enriched with fertile sediments and is thus highly fertile – particularly those strips of land along the Tien River and the Hau (Bassac) River (1.2 million hectares), a very favorable condition for agricultural development, especially when it comes to growing rice and fruit trees. In addition to alluvial soil, the MRD has alkaline soil, grey soil, dune sand, brown coal, eroded soil, and so on. Furthermore, the region is endowed with a web of interlacing rivers and canals, which is an infrastructural advantage for water transportation, production and livelihood. All these natural features mean that the MRD does have significant advantages for agricultural development.

It is undoubted that the MRD plays a key role in Vietnam’s agricultural economy as it contributes to ensuring national food security and export capacity. Following a long time adopting a quantity-oriented farming approach, it is now taking a keen interest in sustainable development, the added value of products, and community health protection and environmental conservation – both now being top consumer concerns. The local agriculture features a small household-based farming model, with each cultivating one hectare of agricultural land on average.

**Research Methods**

The data for this study were collected from two field trips – one made in August 2020 to An Giang and the other in December 2020 Kien Giang province. Part of them was also the co-author’s observation as an advisor to the two farms named *Ech Op* (name of farm, literally means “frogs croaking”) and *Tu Viet* (name of founder) which have been in operation since 2017. The data collection methods included in-depth interviews and participant observation. The research employed the sustainable development-oriented design, which helps obtain insights into the reality, processes, and activities of the naturally accommodating livelihood now emerging in the MRD. While Vietnam is taking large-scale agricultural production as its primary aim, the case studies of this research showed that small-scale production, integrated with tourism-oriented and educational activities, appears to be meeting the demand of a high potential niche market and, at the same time to be capable of creating social and environmental values for the local communities. Therefore, we believe that although on a macro level, the State is attempting to develop agriculture with the orientation first of commodity production and subsequently of sustainable development, it is nature-based initiatives made individually from the local communities that define the green livelihood of the MRD.

**Results and Discussion**

**“Nature-based” agriculture and green livelihoods towards sustainability**

*Sustainability* is a key terminology in the research of sustainable rural livelihoods (Scoones, 1998). Sustainable livelihood is typically known as having the capacity to cope with crises, shocks, and recoveries. In addition, the capacity will maintain and strengthen capabilities and assets and provide sustainable survival opportunities for the next generations, thereby playing a practically helpful role in keeping other livelihoods in operation regionally and globally - both in short and long terms (Chamber and Conway, 1991). In this study, the concept of livelihood is considered from both environmental, social and cultural perspectives. The sustainable livelihood framework (SLF) has been employed in many rural livelihood and disaster risk reduction or resilient studies by the Vietnamese scholars as a framework to investigate abilities to respond or to search for livelihoods of communities based on the examination of categories of capital and resources (natural, human, social, financial and physical assets); some of the studies are Bui and Nguyen (2009), Nguyen (2015), and Nguyen (2016).
Given its scope and with great concern about environmental issues, this paper will use “nature-based agriculture” (nông nghiệp thân thiện in Vietnamese) and “green livelihood” (sinh kế xanh in Vietnamese) as lenses through which an examination can be done of livelihood practices that, in response to the global, regional and local trends, have recently emerged in the MRD in particular and around Vietnam in general. In this paper, “nature-based agriculture” refers to agricultural activities that “respect nature’s laws” and “refrain themselves from cruel interventions.”2) This term has been used in the discourse about Vietnamese agriculture since 2017, when the Vietnamese government issued Resolution 120/NQ-CP. “Nature-based agriculture” is a broad term covering both traditional agriculture in the sense of adopting age-old farming practices that are based on nature (for example, irrigating fresh water into saline land for rice-planting purposes while the salinity is still suitable to raise shrimps on the same paddies farms). Additionally, it also refers to the traditional agriculture integrated with modern farming techniques (for example, introducing biological solutions3) to farming while still respecting natural laws, i.e., keeping intact the rice fields ecology). Its equivalent terminologies are ecological agriculture (Magdoff, 2007), natural farming (mahayana natural farming = pure natural farming; hiniyana natural farming or idealistic farming = organic farming) (Fukuoka, 1985).

In reference to the two case studies conducted in the MRD, nature-based agriculture can be taken as farming based entirely on operational forces of the environment and nature of the local communities in order to produce clean agricultural products, chemical free food and using seedlings well selected and conserved by local farmers (and using no genetically-modified organism at all). Comparable terms with apparently the same denotation currently in use nowadays in Vietnam in general and in the MRD in particular are traditional agriculture, ecological agriculture, and organic agriculture (just recently). Another equivalent term is safe agriculture, which allows the use of synthetic fertilizers, pesticides, etc. while promoting the production of clean products like nature-based agriculture products. Its products will certainly need to meet applicable quality standards (e.g., those specified by Viet Global Agriculture Practice, Global GAP, SRP (sustainable rice platform), with rigorous testing of the residues of chemicals named in the list of those identified as harmful to humans, animals, and the environment4).

Regarding green livelihood, there is already an international organization called The Green Livelihoods Alliance (GLA) that promotes green livelihoods with the vision to achieve sustainability for forests. The terminology is defined by Sahoo (2012) as a process by which individuals both earn their livings and contribute proactively to the green economy, who used the term green economy is defined by the United Nations as the process of reconfiguring businesses and infrastructure to deliver better returns on natural, human, and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using less natural resources, creating less waste and reducing social disparities.

As sustainability is a broad concept incorporating many features related to the environment, economy and society on a macro level. We believe that approaching the topic from a green perspective will be perfectly suitable for the examination of green livelihoods recently emerging in the MRD. In this paper, nature-based agriculture is used to describe models of farming whereas green livelihood refers to the subjects’ ways of earning their livings. We will contrast cases where quantities (of output) are prioritized by using chemical fertilizers and pesticides inputs against those of our case studies, where the subjects place due emphasis on green livelihoods as they are more concerned with the ecological farming in harmony with natural laws. Adopting this green livelihood concept, farmers have prac-

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3) The biodynamic approach is similar to the organic one in the way that they both help to increase the vitality of the soil. Taking this approach, farmers will use the organisms available in the habitat to increase the productivity of their crops. Its core requirements are polyculture, crop rotation, manure use, and no chemical use.

4) Interview with N.V.K, specialist on organics agriculture in the Mekong Delta of Vietnam.
tically increased the number of their farming priorities, considering as well factors of culture, education and tourism acting as the foundation to support and maintain green livelihoods.

**Mekong River Delta’s ongoing environmental issues as the drivers of nature-agreeable agriculture (or green livelihood)**

The MRD’s agriculture has been experiencing stable growth over an extended period of time since the promulgation of the historic 1986 *Doi moi* policy (Renovation policy) as its farming (of plants, livestock and aquatic products) is recording remarkable development rates. The outstanding performances are first of all those of the national food security and exports that have been obtained. Practically, the productivity, quality and efficiency have been achieved in the production of a variety of categories of agricultural produce. As a result, exports have been rising with a number of agricultural products getting established, gaining distinct competitive advantages in the world markets, including those of rice, shrimps, fish, tropical fruits, to name just a few. The region’s annual proportion of the national total is 50% in terms of paddy rice; 65% - aquatic products; 70% - fruits; 95% - rice; and 60% - export fish).

The achievements have all been made possible, apart from natural advantages, thanks to increased use of synthetic fertilizers and pesticides. It is noted by Ngo et al. (2020) that the World Bank’s research indicates more than 10 million tons of fertilizers are used on a yearly basis by local farmers, of which two-thirds are for rice and a sizeable percentage (5-10%) go to corn, coffee, and rubber plants. Fertilizers make up a relatively large share of the total farming expenses and, further back, the amounts appeared to be increasing in the 1990s before slowing down in the 2000s. Vietnamese farmers’ use of fertilizers, at a rate of 180kg/ha, is 30%-200% higher than those of other Southeast Asian countries, second only to China, Malaysia, South Korea, and Japan (World Bank, 2016). It is estimated that approximately between one half and two-thirds of the quantities of fertilizers, not absorbed by plants, have been wasted. The overuse of fertilizers, together with poor water management, has left the majority of their residues either penetrating the surface soil and underground water resources alike or evaporating as nitrogen oxide.

Vietnamese farmers tend to overuse pesticides, notwithstanding the implementations of many Integrated Pests Management programs for the past years. Pesticide use has been significantly rising since the mid-2000s, apparently in order to meet the increased intensive farming needs and in response to rising pesticide resistance. However, concerns have been raised about the percentage of chemical residue in rice, tea, fruit and vegetables, while the findings of systematic and large-scale research in the issues and their implications are still pending. According to Nguyen et al. (2018), rice farmers are found to have increased fertilizers by 30% and pesticides by three times in 2015 in areas enclosed with dykes in An Giang. In contrast with Thailand and the Philippines, the two ASEAN nations with comparable development, Vietnam recorded significant rises in the expenditure on import pesticide used per hectare of agricultural land in 2000-2011. Because of this, environmental pollution in rural regions has become more and more serious, affecting the health of local inhabitants (Berg, 2002) and consumers and decreasing the competitive advantage of Vietnamese agricultural products in the domestic and overseas markets (Demont and Rutsaert, 2017).

Traditional farming coupled with chemical uses has left a critical impact on the water, soil, and aquatic resources of the MRD. It is found, for example, by Nguyen et al. (2018) that the dyke-enclosed areas in An Giang where intensive farming is deployed have seen significant decreases in the numbers of native field fish and vegetables. Likewise, Chau et al. (2015) highlighted the problem of water quality in ponds, lakes, and canals in the MRD as a result of the ongoing chemical use in intensive farming of rice there. Generally, studies of agriculture in Vietnam and in the MRD, such as OECD (2015), The Center for Information & Statistics in Science & Technology (2016), the World Bank (2016) and Summary Report for World

Bank (Cassou et al., 2017), all indicate that there has been an abuse of fertilizers, pesticides, and other chemicals over an extended period of time in Vietnam in general and in the MRD in particular, leading to soil degradation and water pollution on a large scale. This reality has raised the alarm about food security—an issue of concern for the country.

In the meantime, Vietnamese consumers have been beginning to be more aware of food safety and paying due attention to the origins of goods. In addition to the State’s attempts to steer to clean and safe agriculture that can meet national and international standards, many farmers have been practicing green livelihoods based on traditional farming knowledge, and oriented to respecting natural laws in an attempt to maintain the ecology and protect human health. These livelihoods are fueled by their own subjects’ passions about human beings’ adaptability to their own environment and surroundings.

It is in these contexts that green livelihoods have been emerging in the MRD.

Nature-based agricultural models in the Mekong River Delta

*Tu Viet lua mua* (the brand of six-month rice produced by Mr. Tu Viet): “Growing lua mua (six-month rice) to conserve the age-old local culture”

Mr. Tu Viet, an engineer from Cu La village, Chau Thanh district, Kien Giang province, once appeared crazy to many people as he nurtured a dream to restore six-month rice, local breeds of rice that are no longer in use because of their low yield. This determination is in stark contrast with everyone else’s ongoing embrace of high-yield breeds in response to the demands of the market. Mr. Tu Viet’s dream is driven by the memories of the taste of rice grains of the breeds during the harvest time and stories about golden days of the land and agricultural equipment and villagers’ activities associated with this farming method and the yesteryear cultural traditions of ancestors. Six-month rice are grown only in the rainy season, which ranges from the sixth through the twelfth month of the lunar calendar. Therefore, there is only one crop for the breeds, for they will need plenty of water to germinate, grow and become mature. Furthermore, the six-month rice variety bring forth fruit by light period, meaning the fruit-bearing takes place in the season of northeast wind (the eleventh month of the lunar calendar year) and the harvest in the twelve month.

Mr. Tu Viet is officially known by the name of Le Quoc Viet, who works at the Sub-Department of Agriculture and Rural Development of Chau Thanh District, Kien Giang province. Inherited two farming hectares, he has been taking pains to modify the soil with an aim just to conserve six-month rice varieties. These livelihood endeavors are now also carried on by other households in the community given the local authorities’ incentive schemes.

In order to restore six-month rice varieties, for which fertilizers or pesticides would not be used, Mr. Tu Viet built a local ecological niche for six-month rice by restoring native plants that used to be found with traditional farming such as co rau dua (*Ludwigia adscendens* (L.) Hara), Sesban-River Bean (*Sesbania sesban*), to name just a few and raising green lobsters and fresh water fish and ducks, which would help to kill pests. The farming work was done manually using traditional agricultural equipment all through the steps including weed clearing, plowing, soil-raking, sowing, pulling up of rice seedling, transplanting and harvesting. It took the rice as many as seven to eight months to grow mature and be ready for harvest naturally.

In order to get those native rice varieties, Mr. Tu Viet sought help from the Mekong Delta Development Institute (MID) of the University of Can Tho, whose breeding bank kept traditional six-month rice breeds. The Institute gave him several six-month rice varieties such as *ba bui, mot bui, chim roi, trang tep vang* (names of local rice varieties in Vietnamese), and 100 seeds each varieties. The early days were faced with difficulties as six-month rice varieties without fertilizers, and chemical supplements appeared to be well second to the ones presently in popular use in terms of resilience, adaptability to the elements, climate, pesticides, and soil pollution. Moreover, it has taken the *Tu Viet lua mua* breeds more than seven years to reach where they are now: They have become the pride of the villagers...
of Cu La, Chau Thanh, Kien Giang. Mr. Tu Viet is currently further refining his rice farming models and coaching local people on how to grow these six-month rice varieties – with special interest in quality assurance and risk minimization. All the advice is taken from the wealth of experience he has had that aims to build up rice brands for the whole region. By this time, a wide variety of traditional rice breeds are available on his farm including mot bùi, bò bùi, trảng tep vang, chim roi (names of local rice varieties in Vietnamese), nêp than tau (Asian taste black glutinous rice), which have all been restored from near extinction. Despite the success, Mr. Tu Viet keeps on looking for even more traditional rice breeds and developing their own ecologies. All these attempts, he believes, will help to remind the young generations of a traditional agriculture that once existed and of the old-time farmers the memories of whom have apparently been faded. Mr. Tu Viet’s special attention is being paid to breeds that are almost lost such as trảng tep trảng, trằng lun, tål ngày-en, duoi trau, and chau hang vo (names of local rice varieties in Vietnamese). At this time, he is trying to restore the Nang thom Cho Dao breed, a rice specialty of Long An.

Together with the conservation of rice breeds, Mr. Tu Viet is also very interested in bringing to play and honoring traditional values of Vietnamese agriculture. The undertakings to do so, in his vision, will revive the images of the old agriculture in the mind of young people, who could thereby be able to appreciate the hardship of farmers and enjoy tasty chemical-free rice grains. Treasuring the ambition to bring the six-month rice culture to as many people as possible, especially the youth, Mr. Tu Viet has been building his own display yards of agricultural equipment that are associated with six-month rice. He has a sizeable collection of it for tourists and students to come and see themselves, including those of farming (sickles, rice planting tools, hoes, ploughs, turning-up forks, ox carts, threshing baskets), fishing (wooden eel-catching traps, fish-catching cage) and food processing (rice-hulling mills, rice mortars and sticks, flour mills). When the harvest time comes, his farm is very busy with paddy harvesting and threshing activities, which happen in the moonlight and are filled with the laughter of farmers harvesting the crop, the banging of paddy bundles, and grinding sounds of rice-hulling mills. All this will take participants back to the past years ago when life would be simple and straightforward.

Setting his mind on developing business brands of green six-month rice products for domestic and international consumers, Mr. Tu Viet has been funded by Mekong Organics PTY LTD, an Australian company, to do research into the farming system, biodiversity, eco-manufacturing of bún gao lua mua sinh thái (ecological six-month rice vermicelli) and building rice value chain and value-added products and specialties. Their aim is to get approval for the green-organic production of six-month rice (on Australian organic standards such as NCO), paving the way for entry into the domestic and international markets. These attempts are supported by the United Kingdom Rufford Foundation⁶. Funding support has also been given to their investments in building storage warehouses that can meet the required quality by the project “Organic Farming in the MRD, Vietnam”⁷ run by Mekong Organics and the Rotary Club of Hall based in Canberra, Australia. By now, their eco-noodles have been launched and got keen interest from consumers.

**Ech Op farm (literally meaning “frogs croaking”):**
“Managing nature by nature,” and “Eco-production going hand in hand with environmental education”

Very much aware of the enormous hazards on human health and the environment of chemical use in agricultural produce, Mr. Truong Thanh Dat (called Dat) took early and strong interest to study organic farming models proposed by his lecturers, friends, and others in the field. He has been growing the interest since he was a student majoring in rural development at the An Giang University, in the MRD. Observing that the market was lacking in green agricultural produce, Mr. Dat gave up his well-paying job at a high-tech park in 2017 and returned to his hometown, where he then set up his own farm – determined to embrace the ambition to develop nature-agreeable clean agriculture. The farm, as was explained by the agricultural engineer,

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was named *Ech Op* suggests an agricultural sphere that is traditional, taking advantage of natural strengths available and relying on nature to produce, for frogs, as was explained by Mr. Dat himself, will croak only when they find themselves in a habitat that is safe and clean. The *Ech* (frog) is the nature-based solution.

The *Ech Op* is located in My Phu village, My Quy Ward, Long Xuyen City, An Giang province. Its size was only 7,000m² of field land in the beginning, but after three years in operation, it can now boast nine hectares. It also has several farming affiliates, including Cho Moi farm, My Khanh farm, and My Thoi farm around Long Xuyen city. Up to the present, the *Ech Op* has as many as 450 regular customers of its own products.

It is at the *Ech Op* that the measures are always taken to create an environment that is the most favorable for good insects and frogs, the existence of which helps to improve the natural farming conditions, diversify the local biology and maintain the ecological balance of the farm. Based on the experience from the previous generations, the *Ech Op* has been successful in making use of natural enemies killing each other and thereby growing green agricultural produce. The quality and safety of the products are also verified by rigorous scientific testing. No pesticides, no herbicides, no plant growth regulators, no genetically modified products while combining organic and inorganic fertilizers are the principles strictly applicable at the farm. The overall motto is “Use nature to manage nature,” which is constantly supported by constant research and rigorous testing, and all of these are believed to serve consumers the best meals. The farm has so far managed to produce as many as 40 types of vegetables and other agricultural produce, including husbandry-related products.

Production undergoes a wholly nature-based process at the *Ech Op*, where, for example, fertilizers are all organically sourced, from chicken manure, cow manure, and dry rice straw, etc. These fertilizers are either made on the farm or bought only from sellers with certificates of commodity origin that are clear. Throughout the early years, a reasonable combination of organic and non-organic (all tested) fertilizers was used for the soil up-gradation, yet since the third year onwards, neither chemical fertilizers nor pesticides have ever been used in any of the production stages. This is possible thanks to the insistence on enabling natural enemies to kill each other in order to protect the crops. It is for this reason that storks and cuckoos are raised on site to help kill insects, bugs and pests that are harmful to the plants.

The *Ech Op* Farm’s production is metaphorically a closed circuit as it makes use of the fact that natural enemies kill each other for the planting of vegetables of the same family such as cucumber, Chinese peas, bitter melons, and string beans. The crops are overlapping with the dual aim: (i) to ensure a non-stop supply of agricultural produce and (ii) to maintain the system of natural enemies working properly. This is because if the crops are all harvested at the same time, there would be no foods for the organisms, which would possibly lead to lean crops later on. There are always natural enemies in agriculture to make use of, and some of them are good while others are harmful – in certain ways. Taking advantage of this, the chain of supporting and killing each other turns out to be very effective on the farm. When a plant grows up, there will be some pests causing harm to it. The pests, however, will be sources of food for other organisms when they grow. One example is the *Aphis gossypii* bug. This insect is keen on eating cucumber, Chinese peas, string beans, and fruits of the same family, yet it falls prey to ladybugs. Eating the *Aphis gossypii* bug, ladybugs will turn into pupae, and then become adult ladybugs, which will be flying over to the cucumber, bitter melon, and pumpkin vines, of which they will be eating the rice, thrips and worm eggs. The ladybugs will not lay eggs on the cucumber, bitter melon or pumpkin vines. After having taken the foods, they will be copulating there before returning to the string bean vine to lay eggs. So, if the farm has a bad crop of the spring beans, an epidemic will consequently breakout on the cucumber vines.

All this is the findings of long-time studies on plants which have proved to be practically effective on the *Ech Op* Farm. The plants acting as ‘sacrifice’ agents play an important role in maintaining the balance of the ecology of the whole farm. Without them, serious consequences would be likely to happen including diseases and decreased productivity and compromised quality. Furthermore, the ecology of the farm is always kept stable and safe for frogs and toads there to live well, a condition to kill pesticides and harmful insects and protect the farm.
special attention is also paid to the fences that are made up by plants grown along the edges of the farm. To ensure the biological safety, bananas are planted in the outer as their large trunks and leaves prevent the penetration of chemicals used in neighboring fields and farms. Irrigation canals are also dug, functioning like rings, where there are plants such as cattails (Typha orientalis), water morning glory, lotus... that can filter pollutants. The water is filtered first by the aquatic plants and subsequently by the centrifugal filtering apparatus before feeding the automatic watering system in use for the entire farm. The clean water available in the irrigation canals enable aquatic organisms to live well and to prevent snails from entering the farm.

Remarkably, the pursuit of nature-agreeable agriculture is done along with educational activities about the environment. These are conducted by receiving onsite large groups of visitors, to whom and through whom these models of nature-agreeable agriculture are introduced. These have proved to work well as bids to raise people’s awareness about nature-agreeable agriculture and the due respect for natural laws.

The initial success stories have made the Ech Op farm owner be extended the invitation to speak at the First MRD Forum: Developing the Partnership Relations between Vietnam and Australia, an event taking place at the University of An Giang on January 14-15, 20198). It was through this opportunity that the Ech Op farm had become widely known. The field study presentation brought the farm to an audience of more than 200 members. Subsequently, the owner, Mr. Dat, got funded by Mekong Organics to study organic agriculture for nine months at the Asian Rural Institute (Japan) in 2021-20229). The Ech Op farm becomes the social training point of the Mekong Organics when it hosted conferences and training for local for students and farmers in the Mekong Region. Since then the Ech Op was through this trip that the Ech Op farm’s reputation had gone beyond to the border to the world community.


Green livelihood: Commitments to quality and developmental trends

Nature-based agriculture has been gaining traction in many places of the world with commitment to quality emerging as the five-star point. Those involved in such projects are typically motivated in the first place by their passion yet much more will be needed for fruitful undertakings. When businesses launch their products to the market, they will definitely need to be accountable for the transparency of their observation of quality control criteria. Up to now, most of the subjects practicing nature-based agriculture in the MRD are family-owned businesses (Tu Viet lua mua – Kien Giang, Ech Op – An Giang). They each have their own commitments, depending on their scope of business and supply while their ultimate goal is all organic agriculture. The degree of their quality commitments is variable because they differ in capital, technology and financial resource. In regard to family-owned businesses, the guarantee of the commitment is primarily their ‘heart’. They are trying their best to operate the farms according to what is agreeable to the nature. That means, their knowledge and skills thereof are accumulated from a variety of resources, i.e., training courses, textbooks, experience sharing forums, and other training opportunities made available by domestic and overseas nature-agreeable agriculture organizations and what they do is up to their own understanding and interpretation. Transparency about the quality of products is shown by “onsite experience of production processes.” The owners normally make their farms known to the public by offering visits to their sites where visitors are given hands-on experience of the farming environment that is agreeable to nature by the farm-specific standards together with advertisements on the social media and retail shops specialising in clean and safe products located in major cities. Particularly, small and medium businesses and cooperatives, thanks to the support from entities – domestic and international ones – will have applied for registration of standardization of organic production processes, retrieval of origins and brand protection, to name just a few. In this way, the more the processes of production are standardized, the farther the clean products businesses can reach markets. For this reason, it ap-
pears that the family-owned farms on which this study was done are trying to extend their network of connections and thereby to popularize their green livelihoods.

These attempts, however, seems to be facing difficulties and challenges in terms of farm management. The vision that these green or nature-based farming models aim to achieve is that of certified organic standard yet given the strict criteria of organic agriculture certification, they are by far simply the very first steps towards the target. They are yet to achieve a proper organic agriculture in the long run. Whereas large farms with large scopes of operation are predominant in the world, the green livelihood undertaken by the family-owned farms under study are evidently a dynamic way of moving forward. It will soon catch up with the new demands, helping to form green livelihood and environmental awareness and thereby creating employment for farmers to lead a green life on their own farms and pave the way for food security for the MRD.

This projection of the appropriateness of small farms with nature-based agriculture or green livelihood is agreeable with the viewpoint of the Nature law. Believing that small-scale agriculture will play a critical role in the world’s food security, the journal is calling scientists and government to concentrate on research and development in these topics. Its findings indicate that small, cultivated area still remains common globally. Of the total 570 million farmers in the world at the present, 475 million (or 83% of them in percentage terms) each have their farming land size smaller than two hectares (Lowder et al., 2014). Small-scale farmers, still according to the research, will be keener on bringing into play new methods of production that are more compatible with climate change, yet it is unfortunate that studies conducted over the past decades appear to have overlooked small-scale farmers. The implication of the study is that more due attention will need to be paid to small-scale farmers and their families.

It seems that the green livelihoods as practiced by the nature-based agriculture models described have showcased convincing testimonials for the feasibility of an agricultural approach that accommodates nature. Despite the huge amounts of efforts dedicated, the passion to restore traditional culture, which is enriched by the wealth of knowledge accumulated through generations of farmers, has been keeping the subjects of green livelihoods persistent and resilient in their efforts to make their dreams come true, thereby making more and more people convinced of green and healthy livelihoods. The models under study are all featured by the fact that tourism and education have been utilized as media of making known the message of green livelihoods to the public. They themselves are ways to conserve and enhance an agricultural approach that would otherwise have few followers by providing onsite experiences of nature-agreeable agriculture as a commitment to quality while a set of standards to be observed are yet to be available.

As nature-based agriculture uses no chemical fertilizers and no pesticides, it will take the soil some time to take a rest and restore its fertility. This time is evidently needed to restore the natural ecology that the land itself is endowed with. Time is also a must in order to get rid of all the remains left behind by the chemicals used earlier. This means, it takes the subjects patience and resilience get started their own agricultural models. They would be prone to giving up halfway as their farming that, more often than not, would entail investments of capital, time and dedication, which are all challenges as the use of chemicals could quickly resolve the issues of productivity and pesticides. As a result, it is necessary to get multiple stakeholders involved in all these endeavors of green livelihood, including the government, scientists, businesses and consumers so that radical changes in both awareness and action could accordingly happen (Ngo Thi Phuong Lan and Hoang Ngoc Minh Chau, 2020). It seems that due attention might need to be paid to developing production capacity, business activities and green livelihood for farmers in possession of small land areas.

**Conclusion**

Since the turn of the century, humankind has been witnessing and facing more and more disasters, many of which happened as a result of the overexploitation of nature. And as such, it is becoming more and more mandatory that people be back with nature, respecting its laws and operations. Meanwhile, nature-based agriculture has apparently never been uncommon to Vietnamese farmers, especially to those
in the MRD. In the old days, when chemicals did not use to be available, the then farmers would all accommodate themselves entirely to nature.

The cases practicing nature-agreeable agriculture in the MRD as an attempt to be back with nature, balancing the ecology are themselves those of green livelihoods. This is because the subjects earn their living while accommodating themselves to the nature and reducing impact on the environment by means of using no chemicals and restoring the ecological balance as it once existed naturally in the habitats. Using the frogs or the birds to control the pest within this context is the key to nature-based agriculture. Moreover, they are planning to increase their nature-based agricultural products, providing it directly to consumers, removing any nodes in the chains of values, raising farmer’s income and making sure consumers get the right foods (from farm to dining tables) and right values of the products. Looking forward to achieve the ultimate goal of organic production (as required by domestic and international criteria) while limited by the availability of conditions (knowledge, capital, human resources and managerial capability), the subjects have been adapting themselves dynamically, combining nature-agreeable agriculture with on-site experience tourism and environmental education, thanks to which they can make known to the consumers and public how much they are committed to ensuring quality and how much passionate they are about nature-based and traditional agriculture10).

With the analysis of this study being done from an environmental perspective in order to provide an understanding of the green livelihood approach, what has been achieved by the models of nature-based agriculture demonstrates a promising sustainability – both economically, culturally and societally. These green agricultural livelihoods are growing and getting established in the MRD and receiving the widespread support from individuals, young people and organizations, via the social media, entities from inside and outside the nation as well as from local departments of agriculture and rural management. The green livelihood is a gentle flow, so to speak, mixing well with the mainstream of ecological agriculture, and thereby proven to be sustainable, paving the way for the development of nature-based agriculture in the MRD in particular and in Vietnam in general. It is making its own contribution to the overall goal of sustainable development for agriculture, the environment and improvement of the life quality for farmers and their families and broadly for Vietnamese consumers.

References


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