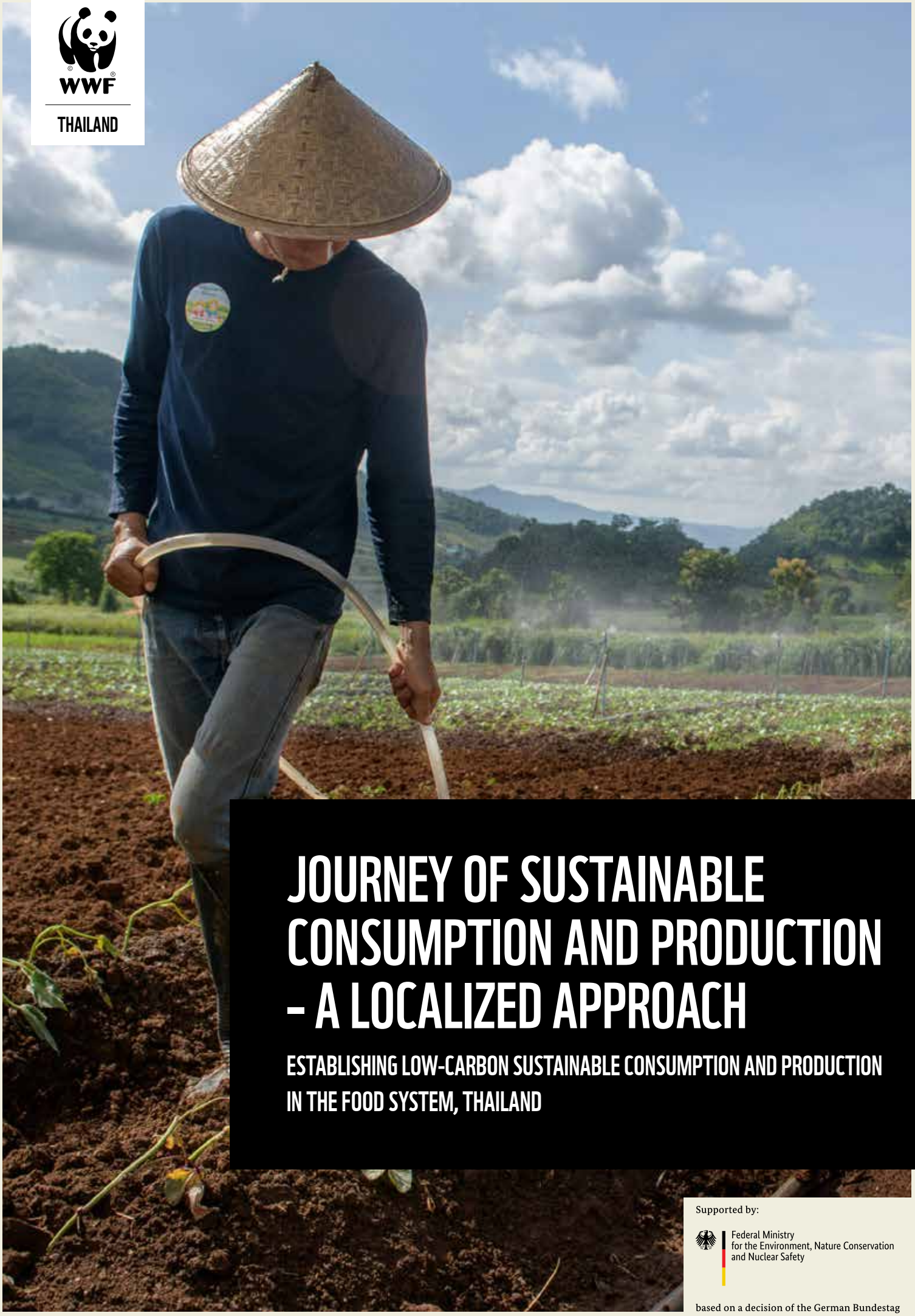
WWF

THAILAND



JOURNEY OF SUSTAINABLE CONSUMPTION AND PRODUCTION – A LOCALIZED APPROACH

ESTABLISHING LOW-CARBON SUSTAINABLE CONSUMPTION AND PRODUCTION IN THE FOOD SYSTEM, THAILAND

Supported by:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

based on a decision of the German Bundestag

TOGETHER POSSIBLE

The Sustainable Consumption and Production Project

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Development that goes against nature and our quality of life is development that is unsustainable. Hence begins our journey here in Thailand, a journey committed to making development more sustainable by restoring degraded forest landscapes and making food systems more resilient.

SCP OFFICIAL WEBSITE

Thailand's food system is now becoming more centralized and monopolized, affecting food security, food justice (rights to food) and the socio-environment.

At present, the consequential impacts of environmental degradation through food choices is still a distant issue to many consumers today. Important staple crops such as maize are cultivated using monoculture practices, where large quantities of land are reserved for its production. This kind of agricultural production is associated with deforestation, soil degradation and agrochemical pollution, and is a significant source of greenhouse gas (GHGs) emissions. Approximately 5,000,000 rai (800,000 hectares) of forest, mostly clustered in the watershed areas of northern Thailand, has been encroached upon for cash crop plantations. Given the significance and complexity of crop production, these monocrops involve a broad range of food supply chain stakeholders, such as farmers, livestock producers and traders; contributing towards higher risk across the management of processes encompassing the “farm to fork” continuum.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Implemented by WWF Thailand, the sustainable consumption and production (SCP) project is a four-year project funded by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU) as part of the International Climate Initiative (IKI), which aims to address problems associated with the food system and promote low-carbon consumption and production as a solution to climate change. Our project involves: converting degraded landscapes into sustainable agriculture production, which will contribute to ecosystem restoration and carbon sequestration as mitigation and adaptation measures for climate change, piloting a model with leading food retailers, smallholders, civil society and government agencies that will lead to reduced forest conversion and sustainable agricultural production, conducting consumer campaigns to increase the demand for sustainable products, raising awareness on the part of the Thai consumers, and helping local farmers and villagers restore their lands while ensuring better returns for their agricultural products.

The project goal is to ensure that the SCP principles will be integrated and embedded in policies or strategies of the government and business sector, and consumer behavior in order to achieve GHG emission reductions and increasing sustainable development in the agricultural sector. Our project’s reinvestment in the agricultural sector alongside local government agencies and relevant key stakeholders will help us forge a green path towards the prioritization and governance of a healthy ecosystem.

PROBLEMS THAT WE SOUGHT TO SOLVE

Food systems rely on and deplete natural resources, cause negative impacts on the environment, and affect community resilience. The project aims to collectively contribute to solve problems associated with the food system, as listed below:

UNSUSTAINABLE AGRICULTURE

An immense governmental system props up unsustainable agriculture at the expense of our communities and prevents us from rejecting the damage offered up by conventional, large-scale monoculture farming operations.

ECOSYSTEM DEGRADATION

Includes greenhouse gas emissions, habitat conversion, soil degradation and erosion, biodiversity lost, over exploitation of natural resources and pollution are key impacts from the conventional food system.

AGRIBUSINESS CONTROL

Large-scale agribusiness determines the market price, inputs, products and even influences government policies, resulting in growing inequality within the food chain of the capital market.

POLLUTION

Slash and burn, intensive use of agrochemicals, land clearing and tillage are common conventional farming methods that have impacts on our ecosystem and our health.

FAILING LOCAL FOOD

Involves the shift from traditional subsistence and sustainable farming towards conventional agricultural practices which undermines the ability of local communities to become self-reliant.

CLIMATE IMPACT ON AGRICULTURE

Climate change-induced drought is exacerbated by unsustainable agricultural practices and increases the vulnerability of smallholder farmers.

VICIOUS CYCLE OF DEBT

Leads to the crumbling of the local economy as farmers have no choice but to continue unsustainable practices in order to pay off their debt.

LACK OF POLICY MEASURES

Will allow conventional agricultural production patterns to continue which will only increase environmental challenges.

FOOD LOSS AND WASTE

On the production end, food loss is often a result of harvesting and processing, while on the consumption end, food is discarded due to quality or safety concerns.

OUR FOOD VISION

By fostering sustainability of production from a specific area, and connecting it to responsible consumption, Thailand will become a driving force for a reduced carbon footprint and environmental sustainability in Asia.

Our food vision was developed together with our partners from various sectors who share the same vision of achieving a sustainable food system. It is a vision of what the food system will look like in the future, which is what the project aims to realize. The proposed vision refers to an integrated system of responsible consumption connected to a low-carbon agroecology approach, sustainably produced local products that are processed and distributed sustainably, all resulting in a balance between the social, economic, and environmental dimensions. The applied model will make citizens aware of their role and responsibility in triggering low-carbon sustainable production, enhancing biodiversity and soil health, and ultimately contributing to human and planetary health. Unsustainable agricultural methods including deforestation, a high carbon footprint, intensive use of agrochemicals, and wasteful consumption and production will be overcome

Consumers and producers will be closely connected and join forces to work towards the same vision. The SCP model will focus on local low-carbon production from a certain area, establishing decentralized supply chains that are locally managed by cooperatives and SMEs, supported by local governments, and not controlled by large agribusinesses. Food loss and waste along the entire value chain – from farm to fork – will be minimized, and organic matter will be returned to the soil as compost. These integrated actions are all geared to minimizing the ecological footprint of agricultural practices. Citizens, by embracing the vision and its implementation, will be heralds of a culture of sustainable living, while children and youth can be equipped with the tools, turning them into multipliers.

Our SCP Journey begins with Ply Pirom, an environ-mental activist, who joined WWF Thailand in 2017.

"We are confronted with our greatest ever challenge, but climate change can be halted if we work together collectively to change our impactful practices and regenerate the Earth's arable land. So essentially my job is to encourage the business sector and encourage people to address this challenge by incorporating sustainable consumption and production principles into their everyday lives. If we can all do this, we can heal the planet and ourselves, and we can live in balance and in harmony with our natural environment."

— Ply Pirom, SCP project manager, WWF Thailand

The five key initiatives of the SCP Project

The five key initiatives of the SCP Project are establishing platforms, localizing sustainable consumption and production, developing a smart farming and traceability platform, initiating a consumer campaign, and providing policy recommendations.

FLR349

LOCALIZED SCP

To localize SCP, the project set up the FLR349 solution model, incentivizing farmers to stop deforestation and adopt sustainable farming practices.

POLICY RECOMMENDATIONS

The project provided policy recommendations based on the piloted solution model, and research outcomes in cooperation with research institutes, universities and government agencies for integrating SCP principles into national mitigation strategies.

CONSUMER CAMPAIGN

The campaign was initiated to raise awareness on the impacts of food consumption on ecosystems and concern for the sustainability of food systems, as well as to provide information on how each individual can contribute towards sustainability through the food they consume.

COLLABORATION PLATFORMS

To establish platforms, join networks and pilot partnerships with the public sector, the private sector, and with consumer groups and markets so that these various stakeholders along the value chain can establish common ground and create synergies for implementing sustainable food systems and contribute to climate change mitigation.

SMART FARMING AND TRACEABILITY PLATFORM

In developing innovative tools for SCP, the project set up an easy-to-use traceability and smart farming platform that helps farmers to manage their farms, connects consumers and retailers, and provides an interactive information tool to aid in decision-making and encourage sustainability efforts among stakeholders within the value chain.

SCP ACHIEVEMENT HIGHLIGHTS

COLLABORATION PLATFORMS

Collaborations
54
organizations

SCP activities
25
activities

Corporate engagement
6
corporates

Partnerships
4
MOUs

Network platforms for SCP
3
platforms

SUSTAINABLE PRODUCTION

LOCALIZED SCP

Project sites
2
provinces

Smallholders workshops
57
workshops

Beneficiaries
730
farmers

Organic certification (PGS)
1,210
farmers

344
Ha

Restore forest land (FLR349)
224
Ha

Halt deforestation
41.2
Ha

1,111.8
Ha

164.8
Ha

Plant trees
207,137
trees

38,646
trees

MARKET TRANSFORMATION

SMART FARMING AND TRACEABILITY PLATFORM

QR code attached to the plantation
3,500
QR code generated

Consumer information and farmers' market
CENTRAL Group
จริงใจ FARMERS' MARKET CHIANG MAI
JaiTalad

Platform for FLR and traceability

Mobile based application for smart farming

SUSTAINABLE CONSUMPTION

CONSUMER CAMPAIGN

'Eat Better' Campaign EAT BETTER

229
informative posts

5,288
SCP Advocate (page likes)

5,602
page followers

1,445
people joined workshop/events

SCP website

43
news/updates

22
blogs

19
infographics

13
videos

POLICY RECOMMENDATION

Establish an advocacy platform for SCP policy & mitigation
4
platforms

7
high-level meetings

Establish baseline information and knowledge
4
researches

Develop policies
1
policy proposal

FLR349 SOLUTION MODEL

Forest Landscape Restoration

Currently, the widespread use of conventional farming practices is damaging soil ecosystems, reducing biodiversity, and heating up the planet. Scientists agree that sustainable agriculture and forest restoration have a strong role to play in both reducing GHG emissions and storing carbon in the soil.

To reduce forest conversion, restore degraded land and help empower smallholder farmers and local communities in the watershed forests and landscapes with high biodiversity values, WWF Thailand worked with the private sector, government, NGOs, social enterprises, cooperatives, local communities and smallholder farmers to pilot a flagship model, FLR349, an agro-ecological and a nature-based climate adaptation and mitigation model that can be scaled up to watershed areas everywhere. The goals of the FLR349 are to address unsustainable practices associated with the food value chain and to collectively contribute towards increasing food security, restoring forest landscapes, improving livelihoods and ecosystems, and encouraging the transformation towards sustainable food production and consumption. Efforts were focused on the Dawna Tenasserim Landscape and the watershed of Chao Phraya river basin.

FLR349, or Forest Landscape Restoration model referring to “Three Forests, Four Benefits” based on King Bhumibol Adulyadej’s, Rama IX of Thailand, “Sufficiency Economy Philosophy” and the generation of a value chain that serves as a framework for sustainable livelihoods for farmers living in watershed areas. Its principles highlight the key roles of forests as producers of diverse, sustainable foods, conserving water, and restoring biodiversity, making high productivity throughout the year possible, and carbon sinks that mitigate climate change. Plant diversity is designed and managed to improve crop production, nutrient recycling, and soil fertility, and to reduce harmful environmental impacts. It also promotes a diversity of income sources and production modes as a sustainable strategy to secure economic needs, community livelihoods and most importantly, freedom from a fractured food supply chain.

In the past, sustainability was maintained by “local wisdom agriculture”, which centres around self-sufficiency, ecological practices, agrobiodiversity, indigenous varieties, nutrient recycling and healthy soils. With the shift to monocropping, agrobiodiversity is diminished, and soils are degraded. Farmers also became more vulnerable as they have to make high investment in farm inputs while being dependent on the market price of a single crop. As a result, many have become stuck in a cycle of debt. To address these challenges and take away the associated externalities, FLR349 provides an incentivized social financial mechanism for smallholder farmers to shift from monoculture production of maize, to sustainable farming practices.

These interventions include

- financial incentives at 390 USD/ hectare /year for five consecutive years
- tree saplings: approximately 938 tree saplings are provided for one hectare of restoration
- capacity building and training
- financial and technical supports for land adjustment and irrigation systems
- development of a value chain and marketplace for products from project sites
- provision of a digital platform for farm management and traceability.

Social Enterprises and community-based enterprises were established to represent the smallholder farmers who joined FLR349 at each of the project sites. They act as an intermediary between farmers and consumers, to help agricultural production planning, conduct quality assurance, develop an effective value chain, and secure farmers a marketplace for organic produce. A 10% portion of net profit generated by the social enterprises will be collected by FLR349 to support funding for ongoing activities.

Farmers can be confident that the outputs from their land will have buyers offering fair prices. Meanwhile the income stream from mixed crops is derived from daily income (selling of vegetables and herbs), monthly or seasonal income (from fruits), and long-term income which can come from forest trees, which are assets on their land. A digital platform for farm management and traceability was developed to link up stakeholders along the value chain, enabling them to access information and access remote sensing data regarding weather forecasts and crop & soil health, make donations to support the operation, and track progress of the reforestation efforts. The end impact is expected to contribute towards increasing sustainable landscape production, forest landscape restoration, improved livelihoods and ecosystems.

FLR349 is a flagship model that is a nature-based climate adaptation and mitigation model that can be scaled up to watershed areas everywhere. The FLR349 model collectively contributes towards reducing GHG emissions and storing carbon in the soil, increasing food security, restoring forest landscapes, improving livelihoods and ecosystems, and encouraging the transformation towards sustainable food production and consumption.

Smallholder farmer family part of the FLR349 project with their organically grown pumpkins

The northern provinces of Chiang Mai and Nan were selected as the two main sites for this project as they both hold great transformative potential in achieving the forest landscape restoration target of 50,000 rai (8,000 hectares) by 2030.

FLR349 RESEARCH FINDINGS

1. *Smallholder farmer workshop with TDRI in 2018, Chiang Mai Province*

The project worked in collaboration with the National Science and Technology Development Agency (NSTDA) and the Thailand Development Research Institute (TDRI), two leading research institutions, to assess the impact of two different agricultural practices: the conventional industrial agricultural practice and the FLR349 solution model.

Social return on investment (SROI)

The TDRI assessed the impact of the FLR349 solution model by using social return on investment (SROI), engaging directly with different stakeholders, including smallholder farmer representatives, project representatives, local administrative organizations, and other members from the FLR349 network. SROI is a tool that can be used to capture and communicate the social benefits to the community generated by a project. This is achieved by assigning financial value to the various outcomes. Some of the changes observed and used to calculate SROI include, for instance, smallholder farmers receiving increased knowledge in agriculture management, improved relationships among smallholder farmer families, as well as increased consumption of organic agricultural produce by the farmers themselves. Results from the TDRI analysis show that the SROI from this project is 8.367, i.e., every 1 Thai baht invested into the project generates social benefits of 8.367 Thai baht.

Carbon sequestration potential

The study conducted by the NTSDA titled, Area-Based Assessment of GHG Quantification: A Case Study of Mae Chaem District, Chiang Mai Province, found that maize plantations contribute to GHG emissions and the annual haze pollution problem, while the FLR349, as an agricultural mitigation model, stores significantly more carbon than it releases and provides many other more environmental benefits.

Due to the higher carbon storage potential of the different plants and the planting of perennial crops, a regenerative agricultural system is created that captures carbon in the soil and above-ground biomass (plants), reversing current trends of atmospheric accumulation of CO2 causing climate change. This regenerative agricultural system also offers increased yields, resilience to climate instability, and improves the health and vitality of farming communities. The findings suggest that FLR349 is suitable for biodiversity conservation and for long-term sustainability, can contribute to national carbon emission targets, and can be upscaled nationwide.

GHGs emission comparison

Maize plantations emitted GHGs of around 6,140.03 kg CO_2eq ha^{-1} yr^{-1}, including carbon emitted when stubble is burnt. After taking away the amount of carbon stored, maize plantations have a net GHG emission around 4,211.5 kg CO_2eq ha^{-1} yr^{-1}. The FLR349 solution model has a GHG balance of -4,370.19 CO_2eq ha^{-1} yr^{-1}.

MONOCULTURE

6,410.03 kg CO2 eq. Ha-1 yr-1

FLR349 MODEL

-4,370.19 kg CO2 eq. H-1 yr-1

THREE FORESTS, FOUR BENEFITS MODEL

FOREST FOR SHELTER

Hardwood trees to build houses and furniture, and can be maintained as future assets

FOREST FOR FOOD

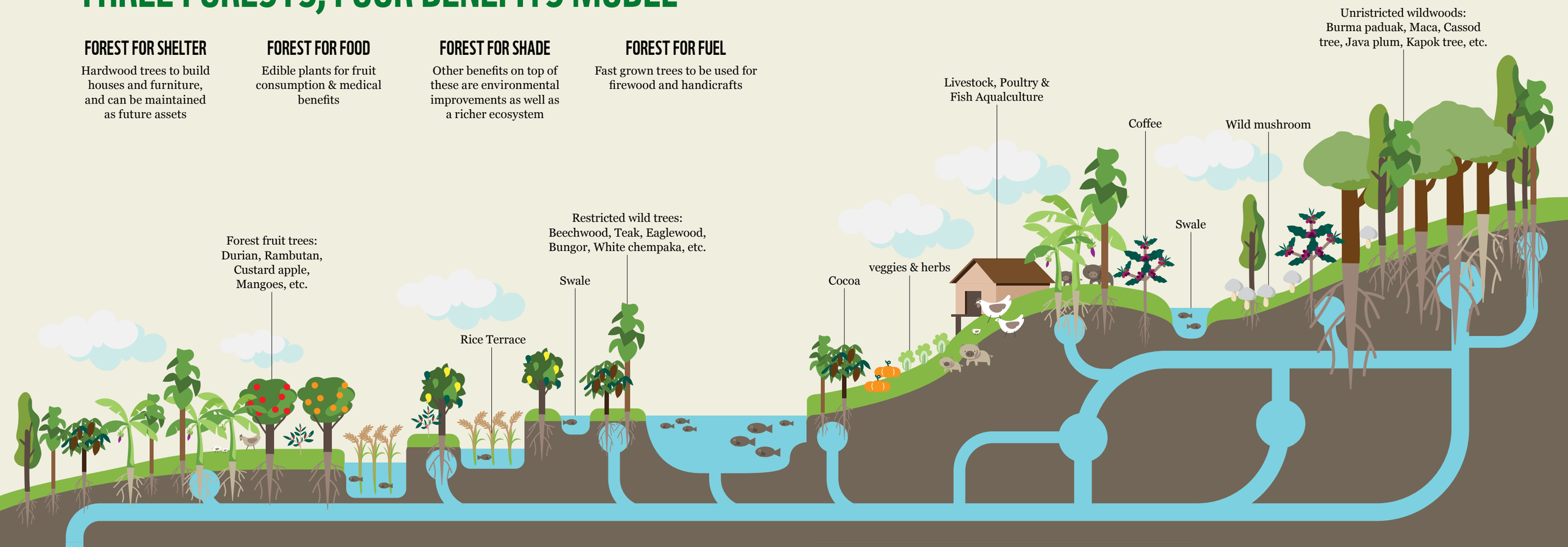
Edible plants for fruit consumption & medical benefits

FOREST FOR SHADE

Other benefits on top of these are environmental improvements as well as a richer ecosystem

FOREST FOR FUEL

Fast grown trees to be used for firewood and handicrafts



THE FLR349 PROJECT SITE

CHIANG MAI PROVINCE

Let's start by highlighting our accomplishments in Chiang Mai province.

2018

The Project together with the Thailand Organic Agriculture Innovation Foundation (TOF) and Chiang Mai Social Enterprise hosted the first farmers' union training at Baan Mae Ki Mook village, Baan Tub sub-district, Mae Chaem district where we focused on the promotion of chemical-free agriculture products and reduction of forest upstream invasion. Five Thai organizations signed an MOU signalling their collaboration on environmental conservation efforts. In September, FLR349 was launched as a solution model for the restoration and protection of degraded headwater ecosystems and in the eradication of social inequality in Mae Chaem. The initiative was piloted in Baan Mae Ki Mook village with 25 participating families, covering 135 rai (21.6 hectares) of land with a payment of 2,000 baht per rai on an annual basis to individual families for up to five years.

2019

A social enterprise established under FLR349 distributed local chemical-free agricultural produce to local schools, hospitals, markets and restaurants throughout the province. It also expanded forest plantation areas and initiated a restoration plan aimed at gathering 1,600 families for restoring up to 45,000 rai (7,200 hectares) of degraded forest land. A second MOU was signed between Ban Thap Sub-district Administrative Organization and local smallholders to commit to the FLR fund restoration model, backed by the Bank for Agriculture and Agricultural Cooperatives (BAAC).

2020

WWF Thailand, Central Group, and BAAC signed an MOU towards eliminating farmers' debt and in mitigating environmental issues. We also joined forces with the Mae Chaem Cooperative and the Kong Khaek Sub-district Administrative Organization to expand an additional 200 rai (32 hectares) of forest restoration. Along with funding from Central Group, two greenhouses were built and plans to improve the local food supply chain were developed.

2021

With continued support from Central Group, Agoda and HSBC, we had a productive year despite many activities have been hampered by the COVID-19 pandemic. At the start of the year, the FLR349 solution model and several project partners were awarded with the Climate Action Award by FeedUp@UN and AFMA and another major achievement was the opening of the first FLR349 store in Chiang Mai province. We also saw the presentation of results of the research undertaken at the project site on "Area-based assessment of GHG quantification" (see collaboration on page 9).

FLR349 Fund model launch event in 2018, Chiang Mai Province

Reforestation event with Central Group in Mae Chaem District

Mr. Wilas Wiwekwanarom showing off bananas he grew in his plot

Fresh food market Mae Chaem District

FLR349 and partners receive Climate Action Award at the 2021 FeedUP@UN event in recognition of the project's carbon sequestration, Bangkok

'There was no broad holistic understanding of the problem of planting maize, so I went directly into the community and met with the farmers and discussed with them the challenges they faced and provided them with our solution. We talked about crop diversification and regrowing the forest and we assured the farmers that their prices would be protected and that they had our support. Realizing that there is a way out of their cycle of debt created a real change in people and led to new cooperation and focus among farmers who were motivated to be part of the project. Instead of spending money on food every day, farmers would instead be generating a daily income, and if every household can do this, just imagine how enormous the impact would be if hundreds and thousands of farming families throughout the country can do the same! This is the vision I want people to see, believe in, and be inspired by, as we make our collective journey towards a healthier and more sustainable world.'

— Rattapat Srichanklad, General secretary, FLR349

NAN PROVINCE

Our journey in Nan began in November 2017 where we partnered with the Nan Organic Agricultural Network (NOAN) and Central Group to promote the production and distribution of sustainable agricultural products to local and regional retail markets.

2018

An MOU was signed between WWF Thailand, NOAN, Central Group and Tops Supermarket, to further strengthen collaboration on environmental conservation and on the protection of headwater streams. Through a three-year Plan of Action, forest landscape restoration and a transformation towards regenerative agricultural practices were promoted and local and regional food business enterprises were supported. Capacity building workshops on product packaging, marketing and distribution were held for smallholder community members.

Trainings were organized to promote Participatory Guarantee System (PGS), and farmers in Nan province were recruited to apply for and conduct this agriculture certification process. Consequently, agricultural products from an area of 660 rai (105.6 hectares) were certified as organic by PGS in 2018.

2019

The reforestation initiative commenced with the plantation of cocoa mixed with other fruit trees and other economic crops over an area of 100 rai (16 hectares), and 157 rai (25.12 hectares) of mixed native forest tress in Baan Nong Ha community in Bua Yai sub-district, Na Noi district. WWF Thailand, Central Group, NOAN and 200 volunteers and local representatives came together to participate in a tree planting activity to celebrate the progress of FLR349 in Nan. Throughout the year, products from an additional 209 plots in 884.5 rai (141.52 hectares) were certified as organic by PGS. The introduction of the PGS saw a surge in employment and economic growth within the community.

2020

Central Group provided funds for saplings of local varieties and a 'community packing house' was established for farmers of Bua Yai Organic Agriculture Community Enterprise, where farmers could process and pack their organic agricultural products, as well as develop specific value-added agricultural products that are locally suitable. The farmers came together to manage produce, create marketplaces, and prepare for survival rate tracking and replacement planting in FLR349 plots. Throughout the year, products from an additional of 607 rai (97.05 hectares) were certified as organic by PGS.

We also teamed up with the Mall Group to join the Stock Exchange of Thailand's (SET) 'Care the Wild Plant and Project' campaign in order to encourage Thai people to reduce deforestation, fight climate change, and restore degraded forests in Nan province in the north of Thailand.

2021

Saw the development of value-added products from Nan province, from the FLR349 plots. With machinery funded by Central Group, a smallholder farmers' group in Bua Yai district, was able to develop and sell pumpkin seed oil – a high value commodity – from pumpkin grown by the farmers in the network. To ensure zero waste, the farmer's group used pumpkin flesh to make desserts which were sold around the district and turned left-over seeds scraps from the oil extraction process into chicken feed.

A mobile-based smart farming platform was introduced for smallholder farmers, training was conducted for farmers to learn about traceability requirements and the technology and its applications in sustainable farming.

Smallholder farmer workshop in 2020, Nan Province

FLR349 reforestation activity with Central Group in 2019 , Nan Province

Smallholder farmer workshop in 2020, Nan Province

Pumpkin seed oil by Bua Yai Organic Agriculture Community enterprise

"Our big target was to restore the forest and improve the surrounding environment, so we started out by looking at how to use a small area of land sustainably. If that land can generate a regular income, then farmers will not have to go into other areas. There were many challenges, but the biggest challenge of all was the people in the community who saw this as something impossible to do. The second challenge was the state sector that couldn't see how it can be done.

We addressed the people problem by being realistic. So out of 100 community members, if we can just get ten people or less and take action with them then this is possible. So, we looked at short term crops that can provide a regular income so that the farmers can see the importance of planting organic on a small land area. And we motivate and encourage them, assuring the farmers that there is a market for their produce that they can sell at a higher price, so we have to let them see that this is possible. So, we will only work with and support those farmers who are serious, and those who aren't ready yet can join us when they are. Today, we have 33 farmers who are actively engaged in FLR349 and several other farmers who are interested, so right now we have about 50 farmers going forward with us."

— Thikhamphon Kongson, Community Leader, Nan

FLR349 FARM LAB

The FLR349 Farm Lab was set up at Baan Long Pong village in the Khong Khaek sub-district, Mae Chaem district, Chiang Mai province funded by Central Group and Rajamangala University of Technology Lanna.

The purpose of the FLR349 Farm Lab is to establish a learning centre to teach smallholder farmers to develop organic agriculture skills. The Farm Lab includes four smart greenhouses, and the plantation of variety forest trees and food crops on 20 rai (3.2 hectares). Our target group includes farmers from the Long Pong Organic Agriculture Cooperative, FLR349 farmers from Khong Khaek sub-district, and anybody else who is interested. Crops demonstrated at the learning center include fruits like guava, papaya and mangoes, and seasonal crops like white cabbage, beetroot and tomatoes, as well as herbs like mint and rosemary.

The smart greenhouses and the technologies provided by the greenhouses, to cope with climate change impacts, will not only help increase agricultural yield year-round, but will allow smallholder farmers to increase their income by growing higher value crops that are usually difficult to grow in the area.

ORGANIC CERTIFICATION

The advancement of integrating SCP concepts into the value chain could be achieved through the adaptation of a certification system. Smallholders who joined the project in Chiang Mai and Nan were trained on how to do sustainable agriculture, how to improve the soil, how to prepare the land, how to get organic certification, and trained on production development. The Participatory Guarantee System (PGS) has been promoted to smallholder farmers, especially in Nan, in which 1,210 farmers in 2,150 rai (344 hectares) received organic certification during 2019-2020. PGS is well accepted by the organic food market, as well as by modern retailers, where various PGS certified agricultural products are sourced from many parts of Thailand.

PARTICIPATORY GUARANTEE SYSTEM (PGS)

Created by IFOAM - Organics International, PGS is a verification system developed to ensure the quality of organic products. This system is based on the active participation of farmers, consumers, rural advisors, and local authorities who all come together to make decisions, visit farms, support each other and check that farmers are producing according to an organic standard. Consumers can better understand value and demand organic products, while farmers are in a better position to meet this increasing demand.

As a first party certification system, PGS can be managed by the farmer groups themselves. Alternatively it can also be managed by traders as a second party certification system. This makes PGS much more cost effective, less restrictive, and simpler to manage than third party certification systems, which rely on independent bodies for certification. PGS is also a more open system, thus allowing producers to learn and participate in the guarantee system.

These benefits make the PGS certification ideal for the project as it makes the organic market accessible for small scale farmers at a lower cost, while at the same time also enabling consumers to access local food/organic products at reasonable prices. Moreover, given that the majority of project sites are in sloped watershed areas, in being able to be used to certify areas without clear land title deeds, PGS is also more suitable for the project than other certification methods.

APPLICATION OF PGS IN NAN

According to Thikhamphon Kongson, the community leader in Nan, project support and funding led to the establishment of a community-level organic certification mechanism called SDGs Participatory Guarantee System (SDGs PGS) that secures a marketplace for organic produce; the system has gained nationwide recognition from government and major retailers.

Pumpkin, orange, taro, cacao, and cashew now provide Thikhamphon's community with income. Farmers who have shifted to sustainable agriculture can record positive impacts with the results, and those who haven't already shifted are now considering it. In a year, Thikhamphon was able to expand the program from one district to smallholders across the entire province. She is now in charge of five voluntary managerial positions, alongside her own farming occupation.

Smallholder farmer testing out smart farming application

SMART FARMING AND TRACEABILITY PLATFORM

WWF is partnering with Ricult, an agriculture-tech social enterprise startup, that provides the technology to support the conversion to sustainable agriculture and helps address the information gaps in the value chain. Both tree plantations and agricultural products from the restored landscape will be made traceable through the platform. The platform has two different distinguishing features:

1) A mobile-based smart farming application that assists smallholder farmers with data registration for organic certification and farm management, and micro-climate weather forecasting to help improve farming productivity and mitigate climate risk.

2) The web-based plantourfuture.world, will serve as a "crowdfunding platform with traceability," allowing individuals to donate to the project to help fund the farmers' transition to sustainable agriculture.

The platform relies on state-of-the art technology including micro-climate weather forecasting and weather analytics, satellite imaging, remote sensing, and machine learning to not only give the project better traceability and transparency, but the technologies deployed will help farmers maximize their agricultural potential. As such, the benefits of this traceability platform are three-fold:

BENEFITS TO THE TRANSFORMATION

In addition to monitoring and evaluation, data from the platform will be used in conjunction with other data collected, like growth rate and survival rate, thereby providing a clearer picture of project progress. Used properly and regularly, monitoring and evaluation provides continuous feedback on progress of project implementation and helps to identify and minimize any risks and/or constraints that may occur. The platform will help the project accurately analyse trends and project impacts, showing us which parts are succeeding and which parts need improving, increasing the chances of project success and ensuring that funds are being used appropriately.

BENEFITS TO THE FARMERS

The mobile- based farmers' application portion of the platform will help farmers track their agriculture plots, improve their yield, and increase profitability. The registration or records can be applied for organic certification, such as PGS. Ricult's hyper local weather analytics in particular will help farmers figure out when is the best time to perform different agricultural processes, such as sowing and harvesting. The platform will also allow for accurate rain forecasts and remote crop monitoring through satellite imagery.

Before planting a new crop, a farmer simply has to locate the crops s/he is planting from the list and enter in basic information like date planted and area size. Once the data is inputted onto the application, a farmer can easily get an overview of their plots, as well as details of individual crops planted, and is able to monitor the plots and crop growth via satellite imaging. Training will be provided to the farmers.

BENEFITS TO CONSUMERS

Plantourfuture.world, the web-based portion of the traceability platform, enables consumers to trace the produce they purchase back to the producer, thus increasing transparency and consumer knowledge. Creating this kind of awareness and understanding on part of the consumer is imperative for them to take on their share of responsibility within the food system. The better the information that consumers are able to access, the more likely they are to make wise consumption choices. Being able to learn about where their food comes from means that consumers can feel more confident about the food they consume. This kind of more direct relationship between producer and consumer can thus lead to more sustainability.

WWW.PLANTOURFUTURE.WORLD

TOWARDS A SUSTAINABLE FOOD PRODUCTION SYSTEM

What does a sustainable production system entail then?

ECOSYSTEM RESTORATION AND REGENERATIVE AGRICULTURE

The key revolutionary action is to shift away from agrochemical intensive monoculture practices. This shift requires an regenerative agriculture approach that values the ecological, economic, and the social, and involves all actors in the food supply chain. Food production through regenerative agriculture will help restore soil carbon and improve ecosystem services in the long run.

TRANSITION TOWARDS LOCAL FOOD SYSTEMS

As communities and community enterprises begin to organize their own "food hub", collaborative networks that integrate sustainable food production, distribution, and consumption will begin to form.

CLIMATE MITIGATION AND ADAPTATION

As climate change impacts are expected to intensify over the next couple of decades, the food production sector must be prepared to mitigate those impacts such as droughts. The agroecology approach is designed to improve crop resistance to drought and organic methods will improve soil conditions and boost soil water holding capacity.

POLICY SUPPORT FOR A SUSTAINABLE FOOD SYSTEM

A set of policy measures to be deployed include incentivizing sustainable food production, suspending debt repayment, providing green credit to farmers, coops and social enterprises at concessional rates, and price subsidies for produce. Taxes on the use of agrochemicals will be imposed and the use of agrochemicals in high biodiversity areas will be banned.

RESPONSIBLE CONSUMPTION AND PRODUCTION

As sustainable food becomes widely available consumers will have a greater variety of produce to choose from and will come to appreciate the value of food and their connection to the environment. At the same time, food literacy and concepts of responsible consumption will be taught in schools, at home and embedded in the local culture.

FOOD INDEPENDENCE AND SOVEREIGNTY

A more vibrant smallholder agriculture, with enhanced participation of women and youth in the local food chain, is key to reducing poverty and hunger. Food produced and supplied directly from smallholders or community-based enterprises will help create independence from large retailers, reducing margins paid to large agribusiness, reducing middlemen, and facilitating improvements in quality and environmental externalities.

WELL-BEING AND TECHNOLOGY

An integrated advanced application platform, using advanced remote sensing, micro-climate weather forecasting technology and machine learning will help farmers in all areas of agricultural activities.

POLICY RECOMMENDATIONS

Sustainable Consumption and Production

We have identified key policy measures towards ensuring GHG emission reduction and sustainability across the food supply chain from our research and collaboration with the Thailand Development Research Institute (TDRI).

The measures are 1) focusing on sustainable management of farming methods and proper implementation of site-specific solutions that allow farmers to produce under forest cover, and put carbon back into the soil; 2) introducing measures of debt repayment for farmers who are transitioning towards sustainable modes of farming, including the provision of green credit to farmers at lower interest rates; and 3) integrating tax deductions among farmers who use biological substances for agricultural use and entrepreneurs who support the use of sustainable agricultural products.

External sources for more details on measures to promote sustainable consumption and production at each node in the value chain are as follows

The FLR349 team preparing for a smallholder farmer workshop with TDRI in 2018, Chiang Mai Province

PROCESS FOR SUSTAINABLE AGRICULTURE

INPUT FACTORS AND NATURAL RESOURCES

LAND AND SOIL

Use legal instruments to strengthen agricultural products and implement forest sustaining agricultural production

Implement a traceability system

Legally declare areas at risk of soil erosion and degradation as “soil conservation zones”

WATER

Use economic instruments to incentivize farmers to use water in sustainable ways

LABOR

Training for older farmers on the use of new technologies to increase production efficiency on their farm.

Incentives to encourage young farmers to take part in sustainable agriculture

CAPITAL

Temporary suspension of debt repayment for farmers shifting towards sustainable agricultural production

Soft loans at concessional rates for these farmers

PRODUCTION PROCESS

LAND PREPARATION FOR FARMING

Transfer knowledge to farmers on better utilization of crop residues

Strict enforcement of laws and regulations related to open slash and burning

USE OF HAZARDOUS AGROCHEMICALS

Use economic measures to discourage the use of hazardous agrochemicals

Encourage R&D on sustainable and ‘natural’ alternatives to pesticides and hazardous agrochemicals

Reinvest tax revenues in sustainable agricultural practices

PROCESSING PROCESS

Levy stringent standards and control on the use of chemical additives

Source sustainable raw materials and crops from multiple sources to diversify risk and ensure continuity of supply

DISTRIBUTION AND LOGISTICS

Promote the use of cold-chain management and low carbon technologies during transportation to preserve produce freshness

MARKETING

Expand distribution channels by utilizing local retailers or local markets.

Purchase sustainable agricultural products from multiple sources to ensure continuity of supply and product availability

Adopt product traceability to ensure consumer confidence

CONSUMPTION

Incorporate food literacy into school curricula and utilize social campaigns to raise public awareness.

Provide information on sustainable agricultural products through the use of labelling.

KEY STRATEGIES TO SUPPORT SUSTAINABLE AGRICULTURAL SYSTEM

LAND TENURE MEASURES

Farmers should be encouraged to turn towards sustainable crop production that does not involve forest encroachment or the excessive use of chemicals.

TEMPORARY SUSPENSION OF DEBT REPAYMENT

Should be introduced to improve liquidity situation for farmers during the transition process.

SOFT LOANS

Soft loans at concessional rates offered to farmers who are committed to adopting sustainable agricultural practices.

TAXING HAZARDOUS AGROCHEMICALS

Taxes on hazardous agrochemicals to be levied to encourage alternative uses of environmentally friendly biological substances.

STRENGTHEN SUSTAINABLE AGRICULTURE PRODUCTS

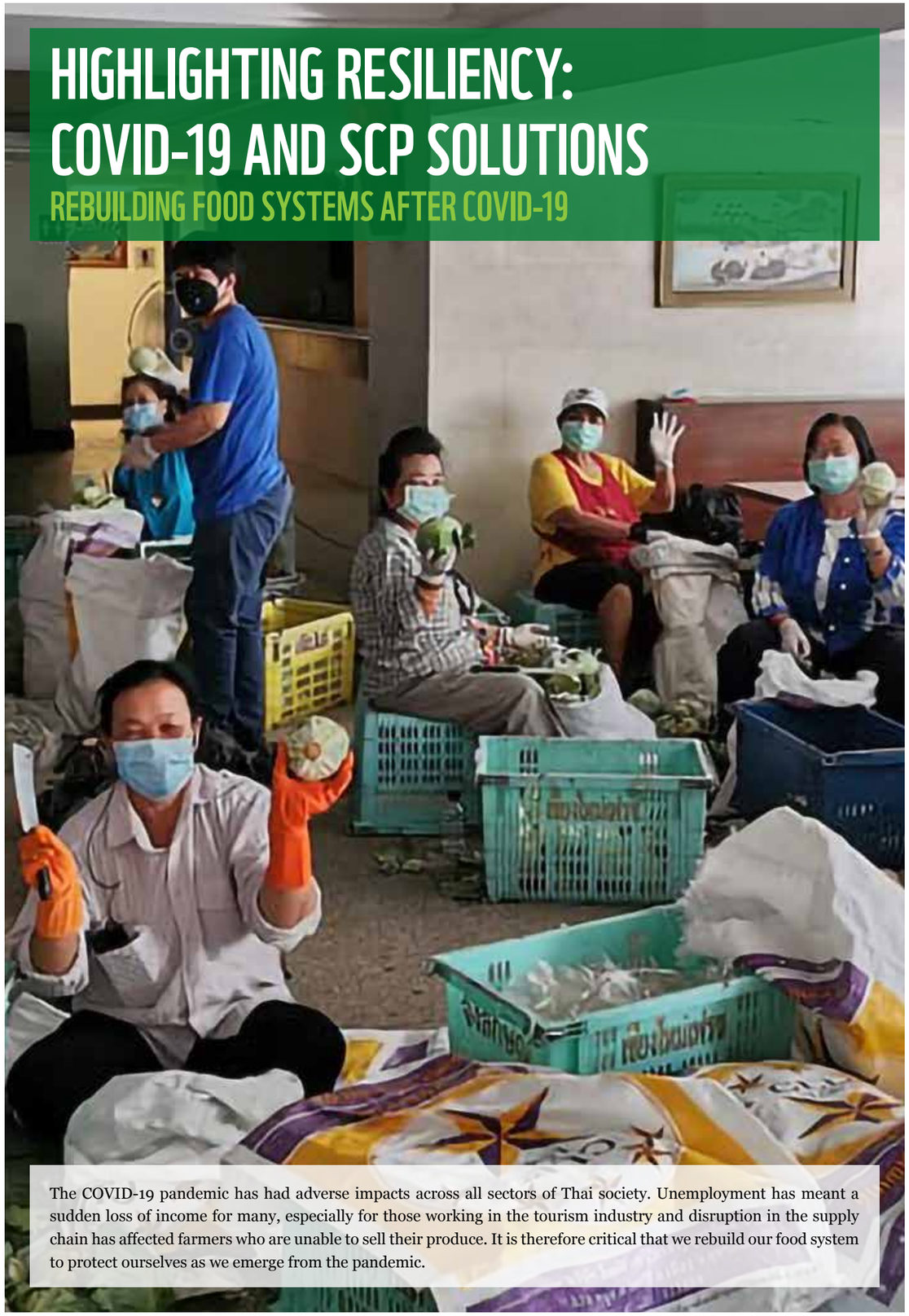
Establishments of food standards and certification scheme can help boost consumers’ confidence in the safety and quality of the sustainable agricultural products.

INCREASE DISTRIBUTION CHANNELS

Given that the wider public still has limited access to sustainable agricultural products, large wholesale markets can help source sustainable agricultural produce from diverse farmer groups, as well as provide a one-stop-shopping service for retailers and end consumers.

HIGHLIGHTING RESILIENCY: COVID-19 AND SCP SOLUTIONS

REBUILDING FOOD SYSTEMS AFTER COVID-19



The COVID-19 pandemic has had adverse impacts across all sectors of Thai society. Unemployment has meant a sudden loss of income for many, especially for those working in the tourism industry and disruption in the supply chain has affected farmers who are unable to sell their produce. It is therefore critical that we rebuild our food system to protect ourselves as we emerge from the pandemic.

Food from the project areas being packaged as part of the 'Food Sharing for Love' project to be given to marginalised communities affected by the Covid-19 pandemic

WWF Thailand along with our partners, Central Group, and Thailand Organic Agriculture Innovation Foundation (TOF), established the "Food Sharing for Love" project aimed at food donations and raising funds to source herbs, vegetables, and fruits directly from the FLR349 farmers and its local organic farmers' network, as well as distributing food to marginalized communities. But while this initiative was successful, it was a short-term solution. We must therefore recognize the need to strengthen and increase flexibility across the supply chain and the need to continually improve the relationship between farmers and financial institutions.

If we want food availability and access in a post-COVID world, we need to diversify food production, increase production of nutrition-sensitive foods, and provide farmers with access to agricultural inputs, and access to markets.

We also need to bear in mind that around 60% of human infectious diseases (like COVID-19) originate from an animal source and the risk is high whenever there is close interaction between wildlife and agriculture production, especially if there is damage to the natural ecosystem. Take the example of forest coverage in Thailand where in just fifty years, forest coverage has been reduced from 43% to just 31%. It is therefore imperative that we put a stop this destruction.

For us to come back stronger and be more prepared for future pandemics we have to

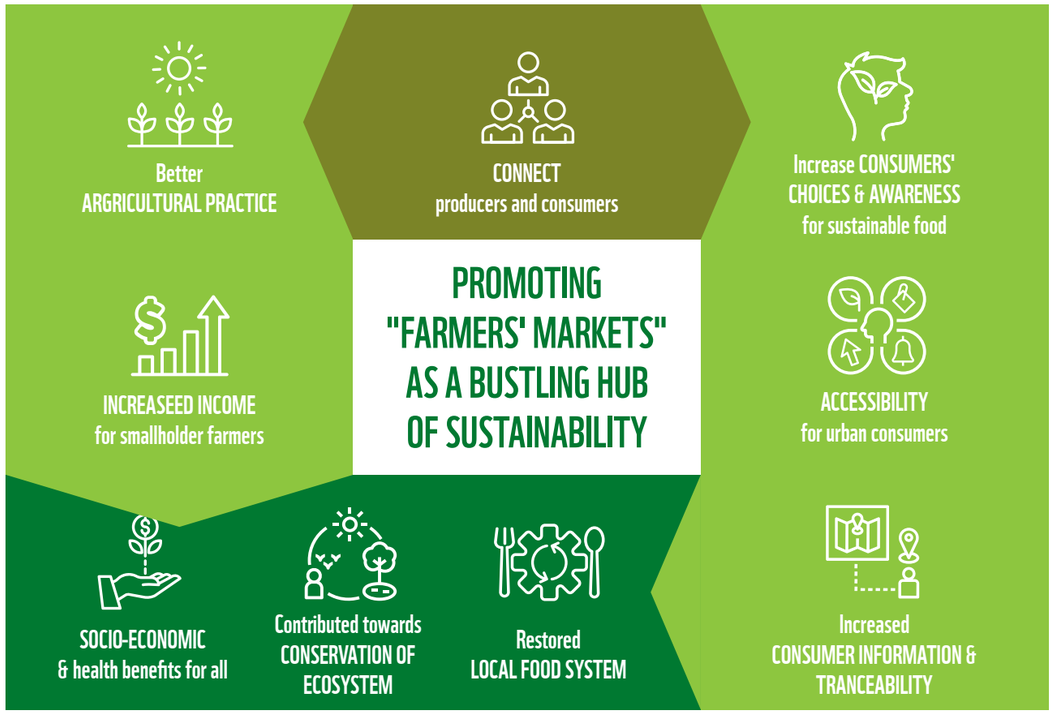
- *Halt deforestation*
- *Restore degraded ecosystems*
- *Address risks in food production and value chains, while also protecting marginalized communities that depend on them*
- *Diversify crop production*
- *Facilitate access to agricultural inputs*
- *Enhance market linkages*
- *Improve traceability*

These are all factors addressed by the FLR349 model

MARKET TRANSFORMATION

Retailers and farmers' markets

Farmers' markets can be a catalyst for food system sustainability across its three pillars (economic, social, and environmental). Farmers can improve farm profits and thus their long-term viability, while boosting the local economy by drawing in customers. They can increase community well-being, by providing access to healthy foods, particularly for low-income families but also by the nurturing of non-economic social ties. Moreover, locally produced food can achieve a lower carbon footprint through lower transportation distances but also through better agricultural practices such as organic production, integrated pest management, reduced tillage or on-site composting. And importantly, farmers' markets create awareness on part of consumers on the many benefits of growing and eating locally produced food.



In Thailand, more and more consumers are drawn to farmers' and local markets due to an increasing demand for natural, organic food and local products. According to WWF's survey in 2017 the majority of interviewed urban consumers prefer markets that sell organic food and produce and are willing to pay more, pointing to an upward trend among consumers who are concerned with not just what they eat but where their food comes from.

This is why we use the farmers' market as a tool to promote responsible consumption patterns among urban consumers. Consumers get to meet producers face-to-face which means that they can question, learn, and obtain actual information about food production directly from the producers themselves. Jai Talad (which translates to "food shopping" in Thai) is a great example of a farmers' market which we first piloted in 2018.

The farmers' market strategy has indeed gained popularity. Central Group launched the Jing Jai farmers' market in 2019 as a key part of their CSV—Creating Shared Values — strategy. Jing Jai provides an opportunity for local farmers to merchandise their agricultural outputs along with other provincial goods through the Central Group's retail outlets. This allows both consumers and farmers to meet and discuss and new ideas from those interactions can improve product development. Through these farmers' markets, high-quality food and products are supplied to consumers, and a stable income is provided for the farmers. In 2020, Jing Jai farmers' market outlets were expanded to 23 provinces, with 3,163 farmers in 517 sub-districts taking part, earning a total revenue of 250 million baht and generating on average more income for farmers. Central Group aims to expand these markets to other provinces throughout the country.

"As the country's leading retailer for more than 73 years, Central Group is committed to becoming a role model for sustainable retail through our concept of Creating Shared Values (CSV) for society. We do this by organizing activities that improve the quality of life in the community, and in society and in activities that benefit the environment. Our efforts are in alignment with the UN Sustainable Development Goals. Central Group has initiated "Central Tham" with the objective of restoring the environment, creating jobs and opportunities, and building stronger communities and improving quality of life through sustainable living.

We have been in partnership with WWF Thailand since 2017, on key collaborations which include the watershed forest restoration project, FLR349, piloting in Chiang Mai, Chiang Rai and Nan provinces, which are important areas of biodiversity. Our main contribution to the project's goal is to promote income generation for the community, promote the development of local products and support funds for the farmers and villagers, in a sustainable manner. For example, the Jing Jai Farmer's Market that offers a sales outlet for community products and produce inside Central Group's department stores, best exemplifies how the retail business can create shared value for society and for the environment.

With the sustainable consumption and production principle advocated through the WWF, we have adopted the SCP principal into our business operations as well. One such tangible action for SCP is our 'Quality at Heart' project, which aims to build trust and confidence among customers in terms of safety and quality food products. Through the establishment of a product quality traceability system, customers can scan QR codes to access product information, such as farmers' names, production location, packing facilities, product lots, certified standards, and so on. Products that are part of the Quality at Heart project, as well as FLR349 and other sustainable agricultural projects that we support, can be sold at the Jing Jai Farmer's Market, which creates opportunities for producers and consumers to meet face-to-face.

We would like to realize the goal of the forest landscape restoration of 50,000 rai (8,000 hactares) with WWF through the FLR349 solution model by 2030, and we will continue to work with diverse partners, and especially WWF Thailand, to drive the sustainability of our society, our food system, and our planet."

— Pichai Chirathivat, Executive Director of Central Group

JAI TALAD FARMERS' MARKET

Charucha Thongphinit is one of the founders of Jai Talad – an offline and online farmers' market based in Bangkok that works directly with farmers across the country. Charucha is a leading key figure and practitioner in organic agriculture and the farmers' market movement in Thailand. Before establishing Jai Talad, Charucha was looking after a 'farmers' shop' which was later closed down due to high costs. Using her connections, Charucha started to organise farmers' markets and shops and she travelled extensively around the country to meet farmers and learn from them, gaining an in-depth understanding about Thailand's agricultural outputs.

One of these shops was a pop-up farmers' shop which not only sold the produce she grew herself but functioned as a middleman of sorts between farmers and consumers. She met her future business partner, Chokchai Larbnongsaeng, here and met people who would become the future customer base for Jai Talad.

"What's great about the project's Eat Better campaign is that it raises a variety of other issues such as how to reduce our carbon footprint from eating fresh produce and reducing food waste so it's not just about eating but about changing our behaviour through knowledge. So, while Eat Better is about changing behaviour through content, the spirit of Jai Talad is action but with the right inner mindset that aligns with Eat Better's mission. We can certainly connect to WWF by working together to promote sustainable consumption through the farmer's market approach as a key strategy."

— Charucha Thongphinit, Co-founder, Jai Talad Farm & Folk Market

Jai Talad emerged from the 'Farm Concept', a project funded by the Thai Health Promotion Foundation, which was run by Chokchai. The project established a vendor and customer database and came up with the idea of using markets to promote healthy diets.

An Eat Better booth at the Jai Talad @ A La Campagne event helping raise awareness on SCP principles among market attendees, Puttaya

For Charucha and Chokchai, sustainable consumption is a two-way street since it involves change in consumer behavior as well as change in how producers farm. So how can we make food safer and change consumer behavior at the same time? 'By making the marketplace a fun and joyful experience!' says Charucha, 'This way customers will want to understand more about what they see right in front of them and when other farmers and sellers see people coming to our market, they will want to join us too so it's a win-win. What's important is to foster a healthy relationship between the market, the buyer and the seller.' Chokchai adds that, 'it's not just about fruits and vegetables but about eating less meat and so on, so the diversity of issues means that we can talk about the other connected issues around consumption as well,' and these kinds of conversations can really happen at farmers' markets.

"Jai Talad customers might understand local or seasonal fruits and vegetables but maybe not at the level we want so what we do is introduce hard to eat or unusual vegetables for example, that customers might actually find delicious, and may become interested in learning. We also need to be mindful about how we campaign so if we want to encourage people to eat less meat then we should do an activity that introduces plant-based meat which would allow us to talk about how meat affects environment and so on."

— Chokchai Larbnongsaeng, Co-founder, Jai Talad Farm & Folk Market

Chef Poom hosted a chef's table event at a Jai Talad event

Charucha Thonphinit and Chokchau Larbnongsaeng, founders of Jai Talad farmers' market, with a smallholder farmer vendor

CONSUMER CAMPAIGN

EAT BETTER

On June 30th, 2018, WWF Thailand launched “Eat Better”, an awareness-raising initiative to ramp up social momentum towards attaining a sustainable food system through the promotion of responsible consumption. Eat Better invites consumers to give thought to the value of food and how food is produced.

We believe that there are huge opportunities to produce more food in a way that works with nature, not against nature. And as consumers, we are empowered in our own actions towards achieving a sustainable food system for the planet’s health.

EAT BETTER ANIMATION VIDEOS

PART 1

PART 2

Learn more about how you can eat better at facebook.com/kindeekwa or wwf.or.th/en/scp using #EatBetter. Watch our video on Save the World Three Times a Day: Parts 1 and 2, available in English and Thai.

“This concept of eating for the environment didn’t exist in our society three years ago. What Eat Better does is effectively communicate the need for us to change the world by connecting it to what we do every day and that is through food. Having worked in this campaign from the beginning has allowed me to see the bigger picture and I see change every year. Eat Better also does market transformation and we mobilize consumers at the same time, and it all connects with our ecosystem. This greater awareness means that producers understand that they are not just involved in organic farming but know how they are positively impacting the environment and consumers understand how they are doing the same.

We can ask a lot of questions from just one fruit or vegetable. For example, pumpkin (fakthong) – where is it from? How is it grown? etc. When we took people to a farm in Bangkachao that had fresh eggs they were able to experience how much more delicious those eggs are than the ones they normally buy or we had them try organic fruits and vegetables that taste better than hydroponic ones so you don’t need to think about doing good for the planet, you can just think about eating more delicious produce.”

— Chonlathan Naratree, SCP project coordinator, WWF Thailand

HELP THE WORLD

BY CHOOSING HOW YOU EAT

CONSUMER SURVEY

The SCP project employs two key communication strategies: visualizing products to increase a sense of urgency among consumers, and direct engagement with consumers and producers through campaigns.

To assess the status quo of consumer awareness and be able to monitor project progress and effectiveness, a consumer survey was conducted in 2018 to measure purchasing and consumption behavior, consumer knowledge and perception around sustainable consumption and production. The results from the survey were used in developing the campaign on raising awareness on responsible consumption. This survey was repeated at the end of the project in 2021.

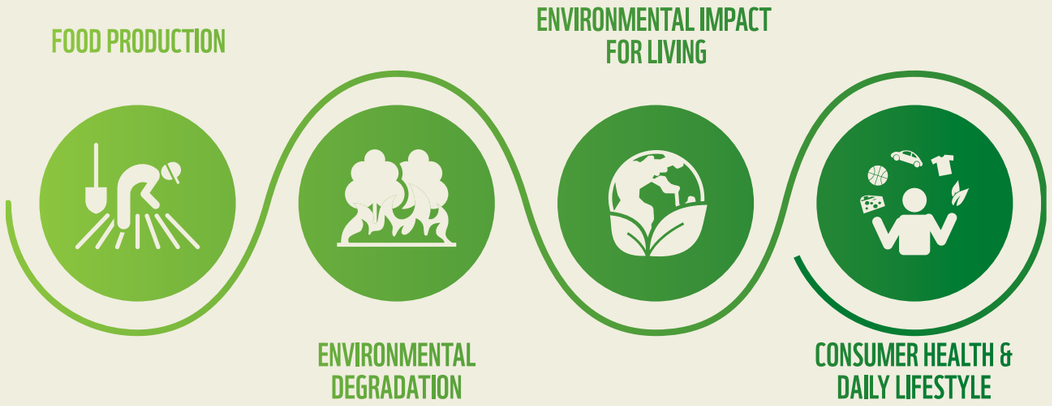
Results from the 2021 consumer survey indicates that despite an increased awareness of SCP principles among consumers, cleanliness and price still influence purchase decision more than a product's organic nature, source, and production method.

The results of the 2021 consumer survey can point us towards more effective action points. For example, when respondents (across all age groups) were asked to indicate the most important factor in buying food, an overwhelming majority (84%) chose "Cleanliness" followed by "Reasonable price" (72%). Younger generations placed more importance on "Cleanliness of the place" or "the merchant" and "Nutrition" while the older generation chose "Freshness." However, other factors like processing, sourcing, standardization, received no more than 50% of the total sample.

The second survey also measured level of awareness, and we see significant improvement in terms of awareness on deforestation (55%) compared to only 28% in the 2018 survey (with no significant difference across generations). We also measured the level of awareness on SCP topics using Social Media Listening tools to identify what consumers say online. Most of the results on SCP however is driven by brands, not by consumers, and we saw some gaps in consumer understanding, awareness and the different concepts of organic food and SCP. More consumer education may therefore be required to address this.

In spite of a higher level of awareness generally speaking, a vast majority of people still feel that they do not have sufficient information on SCP and do not feel they need to have information. 79% of the sampled population mentioned that they are not aware of the linkage between consumption and environmental degradation and 73% of the sampled population mentioned that they are not aware of proper organization or communication on this topic.

CHAIN EFFECT & WHY VALUES



Although consumers expressed having good intentions by not supporting unethical brands, their willingness to take further action remains low. Only about 46% mentioned they would be willing to pay more for sustainable food production and 53% would be willing to journey further away to get them. This means that there is a need to create a sense of urgency to drive people to action. It seems that the main barriers to consumer action lie in the influence of advertisement and communication from non-SCP manufacturers (82%) and expensive prices (80%).

Bearing in mind that the 2021 SCP survey was taken during the COVID-19 pandemic in Thailand, we found that many people have had to sacrifice certain aspects of their lives, especially when it comes to consumption. Consequently, the motivation to "take sustainable practices now" was lacking and so the willingness level is not as high (only 61%) compared to 95% in 2018.

We propose that more effective communication on 'WHY values' be conveyed through Micro and Nano influencers[1] who are closer to consumers and whom consumers listen to and believe in more than brands, and we propose continued engagement with local, small and medium-size businesses who are also closely connected with consumers.

[1]Nano influencers are online influencers with 1,000 -10,000 followers. Micro influences are online influencers with 10,000 -50,000 followers.

SCP HIGHLIGHT EVENTS

THE SUSTAINABILITY OF HOUSEHOLD COOKING

Sustainability is not some abstract concept or some hard to accomplish goal. Sustainability can start in your kitchen! If you love to cook, just think about the ingredients you are using while you are prepping them. Where is it from? How was it grown? Who planted it? When was it harvested? and so on. As a fun exercise, think about how much the dish you are making might cost if you were to sell it? Cooking is not only easy and fun but is a great way to practice mindfulness and appreciate our life-giving beautiful planet earth.

EAT BETTER TRIP RIDE, EAT, WALK, LEARN IN BANGKACHAO

WWF Thailand joins hands with Mad Club for a better society for a 'Ride, Eat, Walk, Learn Bangkachao' trip. In our aim to promote a society where everyone Eats Better, why not get together with the new generation of food activists and engage in creative and fun activities that will raise awareness among consumers about all aspects of consumption. Why eat responsibly? Why grow organically? With Ma.D Club, you will come to know and understand the source of produce and the important role that producers play in getting their fruits and vegetables to you.

WORKSHOP ON "REDESIGNING BANGNUMPUENG MARKET" AT SUSTAINABLE BRANDS 2018

We held this workshop under the Sustainable Brands Bangkok Forum in 2018 to promote knowledge and exchange dialogue on sustainable consumption and production in food systems among local communities to better connect consumers and producers. The workshop consisted of knowledge sharing sessions from UN Environment, WWF Thailand, TOPS Supermarket, Family Mart, the Sustainable Food Lab, Sookjai Farmer's Market and Bangnampueng Market.

The workshop stressed the need to promote locally produced food and products in farmers' markets as a form of sustenance for the livelihood and well-being of local communities. Widespread environmental degradation, land-use change, and deforestation are posing threats to food production, health, ecosystems, and climate change. Sustainable consumption and production (SCP) can therefore serve as a key principle in establishing sustainable and resilient food systems, and the maintenance and sustenance of local farmers' markets can contribute substantially to the local economy and local community well-being.

AGODA JOINS FORCES WITH WWF TO PLANT 6,000 TREES IN CHIANG MAI

More than 50 Agoda employees, including CEO John Brown, worked alongside the local Chiang Mai community to kick start the planting of 6,000 trees as part of its contribution to sustainable consumption and production efforts in collaboration with WWF Thailand which will reforest more than 6 hectares of degraded lands

In August 2020, Agodans, some of its hotel partners, along with local community volunteers, and students from the School of Forest Industry Organization No. 13, pitched in to plant trees. The planting site will help revitalize the local food system, provide students and the community with healthy, chemical free food, and encourage students to join the reforestation effort.

'THE AMAZING BEE TRIP: THE IMPORTANCE OF POLLINATORS' WORKSHOP AT SUSTAINABLE BRANDS 2020

In February of 2020, WWF- Thailand joined forces with Biothai, Go Organics, Heinrich Böll Stiftung Southeast Asia, Earth Net Foundation, and Thai Pesticide Alerts, to host this important workshop that promotes pollinator restoration in nature and within the value chain. The trip took us to the Agricultural Occupation Promotion and Development Center in Chanthaburi (Bee Centre Chanthaburi) in Chanthaburi province, Thailand.

INTRODUCTION TO RAFTER BEEKEEPING ONLINE WEBINAR

This wonderful introductory webinar, held in January 2021 and led by French biologist Eric Guerin, was part of the Asian Pollinator Initiatives Alliance's (APIA) work to raise public awareness on pollinator protection. The webinar was attended by experts and novices in the pollinators and beekeeping fields from more than 20 countries around the world. The hour webinar video is available on our website.

LESSONS LEARNED

WE HAVE THE ABILITY TO reverse climate change, and rebuild community resilience through SCP principles, by empowering smallholder farmers to change the way they produce food, and by reminding consumers, that we all need to work with nature, not against it.

Food can be grown and consumed in ways that build healthy soil and draw carbon out of the atmosphere (sequestering carbon).

Consumers in Thailand and around the world are more and more engaged in this issue with the food system, they want to know where their food comes from and how it was produced. If this will is expressed at the right platforms, it can push decision-makers into developing the political will to enact regulations that favors the establishment of sustainable food systems. And where there's will, there's a way!

The economic trade-off between natural capital of a healthy landscape against the production of primary food production could be mitigated through an agricultural model that values the ecological, economic and social potential, and involves all actors within a decentralized local food system. Such an agricultural production system that values biological diversity and values the services rendered by natural processes should therefore be promoted.

We have witnessed that most smallholder farmers are not prepared and are most vulnerable to climate impacts. Agrochemical industrial agriculture has been their main practice for decades, and is a key driving force of poverty, deforestation, and degraded ecosystems- affecting their resilience.

Compared to industrial counterparts, with the agroecology approach, smallholder farmers prove to be better at protecting biodiversity, are more inclusive, and are more productive per unit of land. Family farmers are powerful agents of change in achieving SDGs. Food production through agroecology with regenerative agriculture techniques of diversified local varieties and perennial crops will help restore degraded soil, biodiversity and pollinators, as well as restore the carbon back into the soil.

There is a growing importance of consumer information (product information for consumers), and this demand is increasingly made by both consumers, as well as the retailer sector, who is integrating consumer information into their marketing and sustainability strategies. And while many consumers are still lacking a full understanding of how ecosystem degradation is related to their food choices, we are seeing a real shift in consumption behaviour that points to a demand for sustainable products and produce. Farmers' markets are great venues that help create awareness about the health benefits of organically grown fruits and vegetables. At the same time, the negative social and environmental impacts of economic development have pressured businesses and governments to support sustainable products, innovations, and policies.

OUR FUTURE JOURNEY

In moving forward with the principle of Sustainable Production and Consumption, we will focus on climate mitigation and adaptation of food systems and the enhancement of multi-stakeholder processes.

We aim to strengthen sustainable low-carbon sourcing, enhance consumer information, bring consumption and production closer together, strengthen the capacity of stakeholders along the value chain, and thus reduce the ecological footprint of consumption and production. Through key activities, we expect to have achieved the outputs below, by 2026.

I. Empower urban consumers to adopt responsible consumption patterns and increase their knowledge and awareness on low-carbon consumption.

II. Promote retail and business sector engagement as key catalysts to SCP and as major contributors to a 1.5°C future.

III. Promote the concept for and practice of agroecology for sustainable low-carbon food production, resilient communities, and biodiversity conservation.

IV. Engage in international political dialogue on sustainable consumption and production (SCP) and facilitate integration of its different pillars (consumer information, sustainable food systems etc.).

Last but not least, we set out to do the following in the three main areas of sustainable consumption, market transformation, and sustainable production.

I. Sustainable consumption

- Promote "Sustainable Products from Chao Phraya Watershed Landscape", minimising the ecological footprint of consumption, including information on food waste and GHG emission impact (campaigning, engagement and scaling up of communication with consumers).
- Increase product traceability and disseminate consumer information to enable consumers to make informed consumption choices.
- Include education measures for sustainable low-carbon consumption, targeting urban youth, women and multipliers; work with influencers; possibly set up a sustainable consumption youth platform.
- Promote sustainable urban food systems (urban farming, urban agroecology) to re-connect consumers to food production (possibly connecting to education measures).

II. Market transformation

- Establish a multi-stakeholder collaboration network for the target landscape that integrates low carbon sustainable production, processing, distribution, consumption, and waste management. Offer and pave the way to capacity building, know-how transfer and exchange and integrate social initiatives (e.g. farmers' associations, social enterprises, community-based enterprises, urban food groups, women/ youth networks).
- Directly connect consumers to producers in the target region, e.g. by promoting farmers' markets as hubs for trading sustainable products from project sites
- Develop further innovative technologies and make them readily available for all, connecting all stakeholders along the value chain and addressing needs such as transparency, information, and communication.
- Trigger market transformation by empowering consumers to drive demand for sustainable low carbon while cooperating with the retail sector.

III. Sustainable production

- Switch agricultural production in the target region to sustainable production, with the agroecology approach as a key measure to climate mitigation and adaptation.
- Empower smallholders as key catalysts in strengthening local value chains, creating stronger market links, and improving livelihoods by developing sustainable food and non-food products from the target region.
- Promote exchange of experiences and know-how among farming communities, multiplying expertise through training of trainers, farmers' field schools, peer-to-peer exchange, and collaboration.
- Promote agricultural practices that increase agrobiodiversity to go hand in hand with consumer information and communication.

BY SAVING OUR PLANET WE ARE SAVING OURSELVES AND THE JOURNEY TO A TRULY SUSTAINABLE WORLD BEGINS WITH CHANGE. SO LET US ALL BE THE CHANGE WE WANT TO SEE BECAUSE TOGETHER, OUR VISION FOR 2050 IS POSSIBLE.

WWF

WWF is one of the world's largest and most experienced independent conservation organizations, with over 5 million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

Acknowledgement

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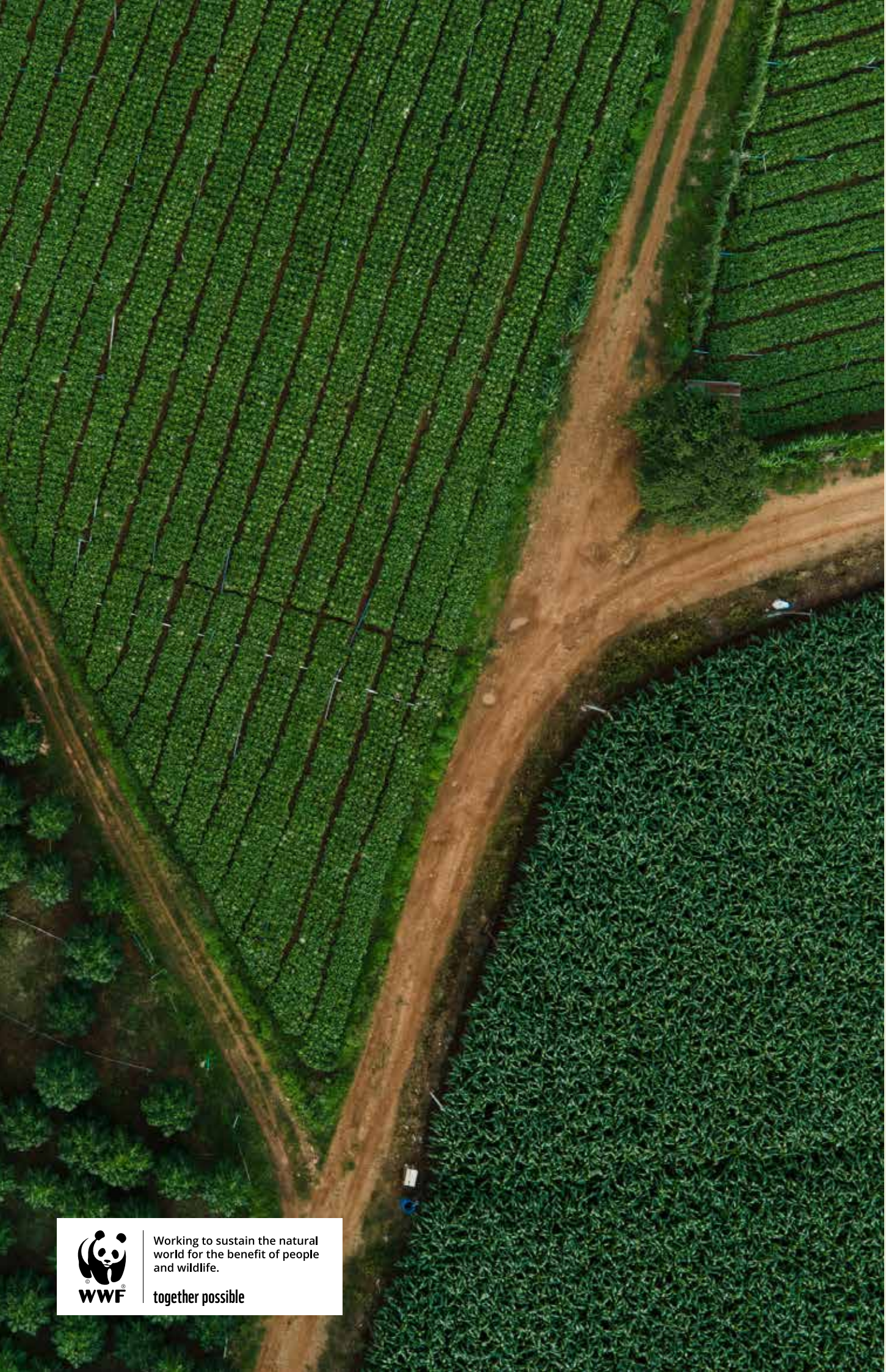

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