Annual Report

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2022



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Her Royal Highness Princess Srinagarindra

established the Mae Fah Luang Foundation under Royal Patronage with a private donation of \$3,098 as seed capital on 29 April 1972 to help solve the root problems of social issues, namely "Sickness, Poverty and Ignorance".

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Her Royal Highness Princess Maha Chakri Sirindhorn was appointed by His Majesty King Bhumibol Adulyadej the Great as the Honorary President in 1996. Since then, Her Royal Highness has continued to carry on the vision of the Princess Mother for the greatest benefit of the people and inspire the next generation to become responsible citizens.

Message from the Chairperson



The royal speech of His Majesty King Bhumibol Adulyadej the Great, on July 18, 1974, stated, "...If the focus of the country's development plan is solely on rapid economic growth without considering the country's situation and the well-being of the people in line with it, imbalances in various aspects will arise, which may eventually lead to difficulties and failures..." Although His Majesty granted this wisdom 49 years ago, it still reflects the current problems, especially environmental issues.

Elevating the quality of life and promoting sustainable livelihoods in harmony with nature are crucial factors to drive society towards sustainable development. They align with the development principles of the Mae Fah Luang Foundation, that focuses on a people-centric and geo-social approach.

One of the activities that reflects balanced community and environmental development is the Zero Waste to Landfill initiative at the Doi Tung Development

Project, Chiang Rai Province. This project has proved to be a success since its launch in October 2018. In 2022, the Mae Fah Luang Foundation expanded this success to three more areas, reducing the amount of waste sent to landfills by 327.63 tons. These areas include the Mae Fah Luang Art and Cultural Park in Chiang Rai Province, the Roi Jai Rak Project in Chiang Mai Province, and 11 villages in the Doi Tung area. Particularly, Ban Huay Nam Khun, Village 17, where community members collaborated to manage waste according to the village regulations, received the second runner-up award in the national-level project "Trash-Free Community" in the large community category by the Department of Environmental Quality Promotion.

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Apart from initiating model projects for various organizations and communities, the Mae Fah Luang Foundation also serves as a consultant and a knowledge center for government agencies, private sector entities, educational institutions, and numerous communities.

Upon the 50th anniversary, the Mae Fah Luang Foundation under Royal Patronage strongly believes that community development and resource management should go hand in hand without compromising the environment. It is the most essential foundation for creating sustainability for our country and the world.

Thanpuying Putrie Viravaidya

Chairperson of the Board of Directors Mae Fah Luang Foundation under Royal Patronage

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Message from the Secretary General



The Year 2022 was another significant year for the Mae Fah Luang Foundation, as the foundation has reached its 50th year of operation.

Over the past 50 years, the Mae Fah Luang Foundation has been dedicated to accumulating experiences and knowledge in "cultivating land, cultivating people" in accordance with the royal initiative of Somdej Ya - Her Royal Highness the Princess Mother. The foundation has been committed to improving the quality of life for people in remote areas, along with the conservation of forests and natural environments. These two aspects are the core of sustainable development.

In the near future, Thai society and the global community will face increasing challenges due to the ongoing climate changes and the worsening social disparity, as well as further threats from emerging diseases. The concept of sustainable development must be seriously integrated in all sectors to achieve

equitable outcomes and mitigate the impacts on the future generations' way of life. We must also be prepared to face the upcoming changes in an informed manner.

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Throughout the year 2022, the Mae Fah Luang Foundation has accelerated internal operational restructuring in various aspects. These efforts aim to strengthen the organization, enhance efficiency, and improve resilience. Additionally, the foundation has initiated new projects to support sustainable development, such as community forest carbon credit management, providing sustainability consulting to the private sector, developing new, high-value crops to create alternative livelihoods for people in remote areas, and developing new coffee varieties to advance the foundation's social enterprises.

The Mae Fah Luang Foundation remains dedicated to utilizing its 50 years of experiences and knowledge to continue collaborating with all sectors in the "cultivating land, cultivating people" mission to create benefits for the broader community.

Dr. Veerathai Santiprabhob Secretary-General Mae Fah Luang Foundation under Royal Patronage

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Board of Directors



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Board of Directors

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- 1. Thanpuying Putrie Viravaidya Chairperson
- 2. Dr. Veerathai Santiprabhob Board Member and Secretary-General
- Chairperson of Executive Board 3. Mr. Banyong Pongpanich Board Member Chairperson of the Governanace
- 4. Ms. Phawana Niemloy Board Member and Secretary

- 5. Khunying Puangroi Diskul na Ayudhaya 10. Dr. Kulpatra Sirodom Board Member
- Chairperson of Nominating Committee 6. M.L. Dispanadda Diskul Board Member
 - 7. Capt. Jitas Sornsongkram Board Member
 - 8. Mr. Thapana Sirivadhanabhakdi Board Member
 - 9. Mr. Manoon Sankunakorn Board Member Chairperson of the Remuneration Committee
- Board Member
- Chairperson of the Audit Committee 11. Mr. Pipatpong Israsena na Ayudhya
- Board Member and Treasurer 12. Ms. Buranee Rachjaibun Board Member

Advisor to the Board

Committee

- 1. Mr. Apilas Osatananda
- 2. Dr. Riksh Syamananda
- 3. Dr. Sumet Tantivejkul
- 4. General Pang Malakul na Ayudhaya
- 5. Mr. Nakorn Pongnoi
- 6. Mr. Alessandro Calvani
- 7. Mr. Boonchob Suttamanaswong
- 8. Ms. Pattama Petchriang

Advisors to the Executive Board

- 1. Mr. Abhichon Chandrasen
- 2. Mr. Abhirarm Chandrasen

Vision

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The Mae Fah Luang Foundation under Royal Patronage aims to develop communities, society, environment and cultures following the work of the Princess Mother in order to create happiness, sustainability, and stability.

Mission

To catalyse the growth of sustainable economic, social, cultural and environmental development by implementing integrated development, cooperation, consultation, and training To establish the Foundation's approach as Thailand's principal development model

Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

Milestones of the Mae Fah Luang Foundation under Royal Patronage







1972 1973 1974

1972

 Her Royal Highness Princess Srinagarindra, the Princess Mother, established the Thai Hill Crafts Foundation under the Patronage of H.R.H. Princess Mother.

1973

 Opening of the first Thai Hill Crafts store in Chiang Mai Province

1974

• Launch of the hill tribe youth training programme, allowing them an opportunity to attend school in the town of Chiang Rai, and learn about communal living and mutual support as well as leadership skills.

1985

1985

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• The Foundation changed its name to "Mae Fah Luang Foundation Under the Patronage of Her Royal Highness the Princess Mother".

1987

1988

1987

 Her Royal Highness the Princess Mother visited the 31st Watershed Conservation Unit located at Doi Tung and declared "I will reforest Doi Tung". This was the origin of the Doi Tung Development Project (DTDP) and the construction of the Doi Tung Royal Villa.

1988

 The government launched the 9,900-rai (1,584 hectares) Reforestation Project to mark the 90th birthday anniversary of Her Royal Highness the Princess Mother.



1989 1990

1989

• Founding of Navuti Co., Ltd. to mark the 90th birthday anniversary of Her Royal Highness the Princess Mother. The company aimed to plant economic forests within the Doi Tung Development Project area, with six partners namely the Crown Property Bureau, Mitsui Company (Thailand), the Siam Commercial Bank, the Bank of Asia, the Euchukiat Company, and the Sumitomo Mitsui Banking Corporation, all of which agreed not to expect any return on investments. All profits would be designated for further social and community development. It would become Thailand's first full-fledged social enterprise.

1990

 The vocational training centre for sewing and weaving was set up in Doi Tung, which is now called the "Cottage Industry Centre and Outlet".
 The first shop was opened at the Doi Tung Development Project, and is now known as "DoiTung Lifestyle".

1992

 The Mae Fah Luang Arboretum at Doi Chang Moob was created to collect and preserve rare plant species such as rhododendron and native orchids. It also provided livelihoods for communities living along the Thai-Myanmar border, a notorious drug trafficking route.

1992

• The Pha Mee Drug Rehabilitation Centre was founded to provide treatment for almost 500 drug users and to prepare them to re-enter society with dignity, with options for an honest and stable livelihood.

1993

 Their Majesties King Bhumibol Adulyadej the Great and Queen Sirikit the Queen Mother visited the Mae Fah Luang Arboretum at Doi Chang Moob. His Majesty King Bhumibol Adulyadej the Great named the viewpoint at the highest point of the Nang Non Range "Siri Lae Myanmar".

Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

1993



This product contributes to the achievement of the soutanable Development Goals by addressing and reducing illicit drug production. Communities and families that once depended on opium to make a living can now earn secure legitimate incomes by making these products. UNODC and the Doi Tung Development Project administered by the Mae Fah Luang Foundation have been partners for many years, together promoting and supporting sustainable alternative development in the Golden Triange and other parts of the world.





1994 1995 1996

1994

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• The coffee roasting and macadamia processing facilities were set up as the next stage of the economic forest.

1995

 The first Cafe DoiTung was opened at Doi Tung Development Project.

1996

 After the passing of Her Royal Highness the Princess Mother, His Majesty King Bhumibol Adulyadej the Great accepted the Mae Fah Luang Foundation under his royal patronage, and graciously appointed Her Royal Highness Princess Maha Chakri Sirindhorn as the Honorary President.

1998

 Education development began at Ban Kha Yaeng Pattana School, Doi Tung Development Project, with the introduction of Constructionism into the curriculum whereby children "learn by doing" and "learn by making".

2000

1998

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 The United Nations Educational, Scientific and Cultural Organisation (UNESCO) commemorated the centenary of the birth of Her Royal Highness the Princess Mother by recognising her as the world's "Great Personality in Public Service".

2000

 The Doi Tung Development Project achieved financial self- sustainability, with profits from its social enterprises, handicraffs, tourism, food production, and agriculture being sufficient to cover operational costs and additional development programmes in the Doi Tung area.

2002

- The Sustainable Alternative Livelihood Development Project (2002-2004) commenced in Yong Kha, Shan State, Myanmar, becoming the first international outreach project for the MFLF.
- The United Nations Office on Drugs and Crime (UNODC) awarded the DTDP a label with its logo recognising that income from DoiTung products "contributes to the achievement of a drug -free world".
- M.R. Disnadda Diskul, then Secretary General of the Mae Fah Luang Foundation under Royal Patronage, was appointed as a member of the UNODC Steering Committee on Thematic Evaluation on Alternative Development.

Milestones of the Mae Fah Luang Foundation under Royal Patronage

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2002







2003

2005

2003

- The Montessori Learning Approach was introduced for early childhood development at Ban Kha Yaeng Pattana School, Doi Tung Development Project, using a child-centred approach that builds a strong foundation for life-long learning.
- A medical training centre was set up in partnership with the Japan International Friendship and Welfare Foundation (JIFF) to develop the skills of medical personnel and provide medical equipment to the four member countries of the Greater Mekhong Subregion - Laos, Myanmar, Vietnam, and Thailand.

2005

- His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua (then His Royal Highness Crown Prince Maha Vajiralongkorn) presided at the opening of the Hall of Opium.
- Partnered with the Siam Commercial Foundation to launch a royal tribute reforestation project (Reforestation Against Poverty) at Pang Mahan Village, Thoet Thai Sub-district, Chiang Rai Province, using the Assisted Tree Regeneration method.

2006

2006

• The Balkh Livestock and Rural Enterprise Development Project (2006-2010) commenced in Balkh Province, Afghanistan.

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2008

- The Sustainable Alternative Livelihood Development Project (2006-2010) commenced in Aceh Province, Indonesia.
- Partnered with the Chaipattana Foundation to expand the reforestation project to Puna Village, Thoet Thai Sub-district, Chiang Rai Province, using the Natural Tree Regeneration method or "reforestation without planting".
- DoiTung coffee was granted the Geographical Indication (GI) tag from the Department of Intellectual Property, Ministry of Commerce.

2008

 Advocacy for Alternative Development for a Sustainable Livelihood in Thailand to be included in Resolution No. 2008/16 of the United Nations Economic and Social Council

Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

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2013

2009

2009

- M.R. Disnadda Diskul, then-Secretary General of the MFLF, was recognised by the Schwab Foundation for Social Entrepreneurship as the "Social Entrepreneur of the Year 2009" for the region of East Asia and Southeast Asia.
- Partnered with the Royal Initiative Discovery Foundation (RIDF) to implement an integrated development pilot project according to Royal Initiative in Nan province (2009- 2012), covering 21 villages in 3 districts, namely Tha Wang Pha, Song Khwae, and Chalermphrakiet.

2011

- The Sustainable Alternative Livelihood Development Project (2011-2017) commenced in Yenan Chaung Township, Magway Division, Myanmar.
- Launch of "Kladee" or "Sustainable Flood Relief Project" in 13 provinces - Phitsanulok, Phichit, Nakhon Sawan, Uthai Thani, Chai Nat, Lopburi, Sing Buri, Ang Thong, Ayutthaya, Nakhon Pathom, Nakhon Nayok, Pathum Thani and Nonthaburi. The project was aimed at aiding flood victims to recover their livelihoods.

2012

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• The Sustainable Alternative Livelihood Development Project (2012-2017) commenced in Tachileik and Mong Hsat districts, Shan State, Myanmar.

2012

 The United Nations General Assembly adopted the MFLF's SALD approach as proposed during the ICAD conference at the Doi Tung Development Project in 2011 as universal guidelines for development projects that would solve problems and needs of the communities effectively and sustainably.

2013

- Launch of the Nan Reforestation Project (2013-2017), covering 250,000 rai (40,000 hectares), building upon the livelihood development project initiated in 2009.
- The MFLF was approached by the United Nations High Commissioner for Refugees (UNHCR) to implement the "Profiling Project of Temporary Shelters along the Thai-Myanmar Border" of approximately 130,000 displaced people in 9 temporary border camps to help understand the demographics and their future livelihood preferences.

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2015

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2014

 The MFLF received the 19th Nikkei Asia Prize awarded by Nikkei Inc. media corporation of Japan as an "Outstanding Organisation for Culture and Community".

2015

- Her Royal Highness Princess Maha Chakri Sirindhorn indicated her wishes during the annual Board Meeting for the Doi Tung Development Project to implement teaching the Thai language in schools in the Mae Fah Luang district.
- Partnered with the RIDF to repair check dams, reservoirs, and pipe networks in Nan Province. The MFLF conducted training and operations for the repair of a total of 663 check dams covering 16,000 hectares of farmland throughout the province, increasing income for local farmers by \$18,587,533 per year.
- DoiTung coffee was granted the Geographical Indication (GI) tag from the European Union.

2016

- Partnered with the Office of the Basic Education Commission, Ministry of Education, to reform the school curriculum for children whose first language is not Thai in schools in Thoet Thai, Mae Salong Nok, Mae Salong Nai, and Mae Fah Luang subdistricts in the Mae Fah Luang district, Chiang Rai province. A total of 26 schools were targeted for this project which covered the period of 2017-2021.
- The water system development and management project in the Mae Fah Luang District was scaled up.
- Partnered with Deutsche Gesellschaft fur Internationale Zusammenarbeit GmbH (GIZ) under the "Global Partnership on Drug Policies and Development" (GPDPD) to provide consultancy work for countries facing issues of illicit crop cultivation and other related issues.



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2019

2017

2017
Partnered with the private sector and other development foundations in a project called "Team D". The four foundations included the MFLF, the RIDF, the Rakkaew Foundation, and the Thailand Sustainable Development Foundation; the 10 corporations included Bang Chak Corporation PCL, Charoen Pokphand Group Co., Ltd, Mitr Phol Co., Ltd, Pracharath Rak Samakkhee (Thailand) Co., Ltd, Siam Cement Group PCL, Siam Commercial Bank PCL, Tesco Lotus Co., Ltd, Thai Beverage PCL, Bank of Ayudhya PCL and Unilever Thai Trading Limited. The project was an integrated approach to area-based development for sustainability according to King Rama IX's development principles and the Mae Fah Luang Development Model.

2018

 Her Royal Highness Princess Bajrakitiyabha Narendira debyavati visited the Roi Jai Rak Project for the first time since its inception in November 2017 in Tha Ton sub-district, Mae Ai district, Chiang Mai province. • The DTDP achieved success in its Zero Waste to Landfill waste management efforts within the project area.

2019

- Participated in the Workshop to Drive the Integrated Northern Border Drug Mitigation Operation Plan (2019-2022) together with the National Command Centre for Drugs, Ministry of Justice, to ensure the effective implementation of drug mitigation plans.
- Partnered with the Republic of the Union of Myanmar to inaugurate Nam Moei Check Dam at Mong Lin, Tachileik Township, to address flood and drought issues.
- Partnered with the "Dental Unit of His Majesty the King", Faculty of Dentistry, Chulalongkorn Hospital, the RIDF, Yala Province and Yala Provincial Health Office, to organise the Royal Tribute Mobile Dental Clinic 2019 to provide dental health checkups and treatment, and disseminate knowledge on oral hygiene to the general public free of charge in Bannang Sata District, Yala Province. This was the second such event in the 3 southern border





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provinces and received the full cooperation of all sectors.

- Signed an MoU for joint innovation development with the Geo-Informatics and Space Technology Development Agency (GISTDA) on the use of aerospace technology and geo-informatics during "Thailand Space Week 2019" to support planning and monitoring of development work in the MFLF's projects.
- Doi Tung was declared as one of the 10 top cultural travel destinations in Thailand by the Ministry of Culture.
- Co-hosted the first seminar on "Developing the Thai Language Syllabus for Children whose First Language is not Thai" to exchange knowledge, processes, and skills in Thai language teaching for primary school students in order to achieve greater efficiency as shared by experienced teachers of 39 pilot schools within the DTDP area and in project extension areas.
- The Autumn/Winter 2018-2019 fashion collection from the DoiTung brand was displayed at Milan

Design Week 2019 in Milan, Italy, to showcase contemporary Thai textiles that reflect the artisanal communities of Doi Tung, combined with creative designs made from natural materials that are eco-friendly and promote a sustainable society that is recognised on the global stage.

 Fashion products from the DoiTung brand that received the DEmark Award Winner 2019 were showcased at the "Thai Textile: A Touch of Thai" exhibition in Japan organised by the Thai Ministry of Arts and Culture together with representatives from both the government and private sectors.

Annual Report 2022 Mae Fan Luang Foundation under Royal Patronage

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2021

2020

- The MFLF was certified as a participating organisation in the mitigation of greenhouse gases campaign by the Ministry of National Resources and Environment in conjunction with the Thailand Greenhouse Gas Management Organisation. This was based on the Foundation's carbon footprint programme of 2018 and the zero carbon activities at the opening ceremony of Cafe DoiTung, Rajapruek Lounge, UN ESCAP Building, Thailand, and at the 6th Colors of Doi Tung Festival.
- Won the Prime Minister's Export Award in the Best Design category. M.L. Dispanadda Diskul, the CEO of the Mae Fah Luang Foundation under Royal Patronage, received the award from Prime Minister General Prayut Chan-o-cha.
- Won 4 Design Excellence (DEmark) awards in recognition of outstanding Thai-design products by the Thailand Institute of Design and Promotion, Department of International Trade Promotion, Ministry of Commerce.
- The DTDP received the G-Green Production Award "Gold Level" from the Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment.

 Partnered with the Securities and Exchange Commission (SEC) to initiate the "You Care for Forests, We Care for You" Project in 16 community forests in Chiang Rai, Chiang Mai, Mae Hong Son, and Phayao provinces. It is expected that a total of 392,220 tons of carbon dioxide equivalent will be produced in the 20-year period.

2021

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 Participated in the "Thailand Voluntary Emission Reduction Programme" or T-VER and successfully registered 8 community forests under the T-VER, amounting to an estimated annual carbon offset of 5,500 tons of carbon dioxide equivalent.

- Signed an MoU with Chiang Mai University for joint research and innovation development of agricultural and forestry technology for sustainable greenhouse gas reduction.
- The DTDP and Thai Airways introduced "Black Silk Blend" premium drip coffee onboard. The unique extract is environmentally friendly and exclusively served to the airline passengers traveling on the







2022

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Royal First and Royal Silk classes en route to Europe, Australia, Japan, and Korea

- The Hall of Opium was handed over to the Office of the Narcotics Control Board of Thailand (ONCB) for the establishment of the International Narcotics Control College and a center of academic excellence in narcotics control of the Greater Mekong Subregion.
- The "You Care for Forests, We Care for You" Project through partnerships with the public and private sectors, as well as the general public was extended to cover 4,800 hectares of forests in 33 communities, resulting in a total project area coverage of 8,000 hectares and an increase of 49 beneficiary communities.
- The implementation of the "Youth Innovation Challenge to Tackle Air Pollution Issue" Project with the UNDP for youth aged 15-24 years old to create innovations to tackle air pollution issues within their own communities.
- The DTDP designed and produced special fabric for the World Boxing Council Muaythai champion ship belt to promote Thailand's positive image through the use of soft power.

- The DTDP signed an MoU for cooperation on the Carbon Credit from Community Forests for Sustainability Project with the Royal Forest Department, the Department of Marine and Coastal Resources, the Department of National Parks, Wildfire and Plant Conservation, Thailand Greenhouse Gas Management Organisation (TGO) under the Ministry of Natural Resources and Environment (MNEP) to advocate for registration of community forests and other forest areas to the T-VER. The MoU aims to protect Thailand's forest areas and generate income from carbon credits for local communities.
- DoiTung won 3 Design Excellence (DEmark) awards in 2022 in recognition of outstanding Thai-design products by the Thailand Institute of Design and Promotion, Department of International Trade Promotion, Ministry of Commerce.

Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

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Executive Summary Mae Fah Luang Foundation under Royal Patronage

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Currently, the MFLF is implementing seven sustainable development projects, including:

- 1. Doi Tung Development Project
- 2. Tea Oil and Other Oilseed Crops Research and Development Project
- 3. Roi Jai Rak Project
- 4. The Carbon Credit from Community Forests for Sustainability Project
- 5. Nan Economic Crop Processing Project
- 6. Thai-Myanmar Sustainable Alternative Livelihood Development Project
- 7. Mae Fah Luang Art and Cultural Park

The MFLF has achieved significant outcomes in the areas of community economy, environment, and innovation, details as follows:

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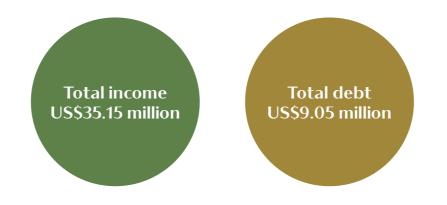


Community Economy

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The MFLF aims to promote alternative livelihoods for communities in all areas. The total income and debt of the people within the four project areas are as follows:

Project	Income	Debt
Doi Tung Development Project	US\$24,563,309	US\$7,449,846
Tea Oil and Other Oilseed Crops Research and Development Project	US\$3,256,297	US\$415,448
Roi Jai Rak Project	US\$6,430,518	US\$988,346
Thai-Myanmar Sustainable Alternative Livelihood Development Project ('based on the survey of the sample group accounting for 10% of 545 households)	US\$896,426	US\$194,730



Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

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Environment

In 2022, the MFLF set two following environmental objectives:

The first objective is to become an organization that emits zero greenhouse gas emissions in the future. This involves participating in the Thailand Voluntary Emission

Reduction Program (T-VER) since 2017. The MFLF also offset greenhouse gas emissions through carbon credits from the conservation forest in the Doi Tung Development Project and forest areas in the other projects.

The second objective is to be an organization that minimizes its impact on the environment. This is achieved through the principle of "Use Less — Release Less." It means reducing energy consumption and minimizing pollution released into the environment. This has resulted in a 36% reduction in the energy intensity per unit of income and a 45% increase in the use of renewable energy sources. At the same time, there is a continuous campaign for waste separation and the 5S principles (Sort, Set in Order, Shine, Standardize, and Sustain) to reduce greenhouse gas emissions at all levels of the organization. Within the DTDP, waste management has improved by avoiding an increase in landfill disposal by 127.55% compared to the year 2021. Additionally, 19.6 tons of waste have been recycled, and 4,751 cubic meters of water have been reused. Various environmental measures helped save energy costs, estimated to be around US\$ 56,970 in economic value.





Doi Tung Development Project		
Environment	 The amount of waste sent to landfills has decreased by 127.55%, totaling 446.38 tons. The quantity of water reused has decreased by 54.73%, amounting to 4,751 cubic meters. The environmental impact monitoring and assessment system in the production process has been certified under ISO 14001:2015 standards. Four production sites of the DTDP have received Level 3 Green Industry Certification from the Ministry of Industry. 	
GHG Emissions Reduction	 The organization released a total of 9,273 tons of carbon dioxide equivalent of greenhouse gases. Within this amount, the DTDP released 2,611.67 tons of carbon dioxide equivalent. The 8th Colors of Doi Tung Festival was carbon neutral. Environmental activities reduced the release of carbon dioxide equivalent greenhouse gases by 202.09 tons, a decrease of 25.65%. 	
Extension	 Huai Nam Khun village in the DTDP area received the 2nd runner-up award in the national competition for waste-free villages. 	
Economic Value	• Environmental management efforts resulted in a total cost savings of US\$57,213 or a decrease of 16.87%. This was achieved through the use of alternative energy sources such as solar cells, biomass energy heat pumps, and macadamia nut charcoal, as well as the recycling of water and waste separation.	

Executive Summary Mae Fah Luang Foundation under Royal Patronage

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Innovation

The MFLF aims to enhance the efficiency and effectiveness of our development work in conjunction with environmental initiatives through innovative thinking, to alleviate climate change issues. The foundation continues to develop expertise in "cultivate land, cultivate people" by focusing on the "Carbon Credit from Community Forests for Sustainability Project" to make forest conservation a sustainable livelihood for communities and contribute carbon credits to Thailand.

In 2022, the MFLF assisted in registering an additional seven community forests under the T-VER project, the Carbon Credit from Community Forests for Sustainability Project Phase 1. These forests cover an area of 1,260 hectares and are expected to generate an additional 2,298 tons of carbon credits. Combined with the initial implementation in 2021, the first year of the Carbon Credit from Community Forests for Sustainability Project, the MFLF successfully helped register 15 community forests covering a total area of 2,950 hectares, contributing approximately 7,798 tons of carbon dioxide equivalent per year. Additionally, one community forest is to be registered under the T-VER in 2023.

Currently, the Carbon Credit from Community Forests for Sustainability Project has entered its second phase, and the MFLF has successfully implemented 215 pilot plots in the T-VER project. Of these, there are 23 community forests totaling 3,126 hectares in three provinces, namely Chiang Mai, Kamphaeng Phet, and Uthai Thani, that meet the registration criteria for T-VER in 2023. It is expected to contribute approximately 9,611 tons of carbon dioxide equivalent of carbon credits per year. Furthermore, pilot plots are to be implemented in seven community forests in Krabi, which can also be registered for T-VER in 2023.

In addition, the MFLF has signed a memorandum of understanding with the Department of Forestry, the Department of Marine and Coastal Resources, the Department of National Parks, Wildlife and Plant Conservation, and the Thailand Greenhouse Gas Management Organization (TGO) under the Ministry of Natural Resources and Environment. This cooperation, as envisioned in 2021, aims to promote the registration of community forests and other forest areas to the T-VER project, while connecting the government and communities to ensure the sustainable management of Thai forests, generate income for communities through the sale of carbon credits, and benefit more than 1,100 communities, with over 160,000 hectares of forests acting as carbon sinks, totaling 300,000-500,000 tons of carbon dioxide equivalent of carbon credits per year.

Furthermore, the MFLF has established a greenhouse gas verification unit that complies with ISO 14065:2018 standards from the Ministry of Industry. The unit provides validation and verification services for the T-VER Programme at the project level for businesses.

In terms of social enterprise, the DoiTung brand won three awards in the "DEmark 2022" for Thai products with outstanding designs. The designs focus on reducing the use of new resources and upcycling residual materials into new products, reflecting the efficient use of resources, energy-saving, and cost-effective practices.



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Flagship Projects

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Flagship Projects Doi Tung Development Project

Basic Information

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Time Frame 1988 - Present

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Location

14,685 hectares (based on the permit issued by Thailand's Royal Forest Department) 29 villages on the Nang Non mountain range, Chiang Rai Province

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Beneficiaries 1,721 households of 11,493 people

Background

Doi Tung Development Project (DTDP) was established in 1988 by Her Royal Highness Princess Srinagarindra, the Princess Mother, as a result of her resolution, "I will reforest Doi Tung" to help improve the quality of life and revive the national resources there. Doi Tung is located in the Golden Triangle, at that time the world's largest drug producing region.

At the start of the project, the forests were found to have been totally razed and left barren, local communities were living in a state of abject poverty, with no access to education or basic healthcare. The villagers were mostly stateless and the area was controlled by militia, giving the people no choice but to resort to illegal practices such as slash and burn farming, opium poppy cultivation, drug and human trafficking.

Her Royal Highness Princess Srinagarindra, the Princess Mother, realized that the root causes of these problems was "poverty and the lack of opportunity", so she addressed the basic

Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

issues of "sickness, poverty and ignorance" in a holistic manner through a people-centric approach. Economic gains had to be balanced with social stability and environmental abundance. This was done through developing the basic infrastructure, creating livelihoods that suited the geo-social conditions of the area, developing knowledge and skills that covered the entire value chain, restoring the natural environment and improving education for the youth. The mechanism used to create a stable income for the community was the social enterprise under the DoiTung brand, which emphasized an eco-friendly manufacturing process that goes hand in hand with folk wisdom and craftsmanship. There are five business units: handicrafts, horticulture, processed food, cafe, and tourism.

The success of DTDP in the past has gained international recognition. This Sustainable Alternative Livelihood Development Model has been replicated in communities in many countries such as the Republic of the Union of Myanmar, the Islamic Republic of Afghanistan and the Republic of Indonesia.

Fundamental Problems



mountains as a result of e deforestation and shifting a cultivation

Lack of infrastructure, extreme poverty (\$116 average annual per capita income)

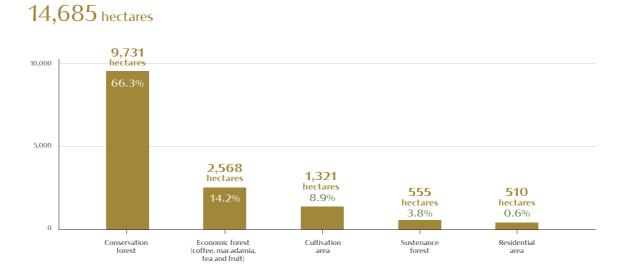
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Controlled by armed militia

Drug cultivation, addiction and trafficking, as well as human trafficking

Development Outcome: What Do the People Get?

Environmental Impact: Land Usage of Project Area



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Total area

Flagship Projects Doi Tung Development Project

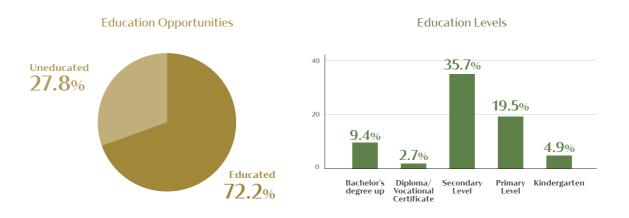
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17,424 17,422 20,000 14,946 14,348 10,000 5,696 5,576 4.794 5,684 5,392 5,155 4,235 4,352 4,334 3,548 3,699 3,499 2,696 2,659 2,782 2,357 2,152 1.532 1,028 580 0 1993 2013 2010 2020 2021 2021 ,9⁹³ 2019 2020 2021 202 1993 2019 2020 2022 2022 ,99³ 2020 2021 2022 2013 2013 2012 2019 Savings Debt Income Expenses

$\label{eq:conomic lmpact: Comparison of Income, Expenses, Debt and Savings (US\$/household/year)$

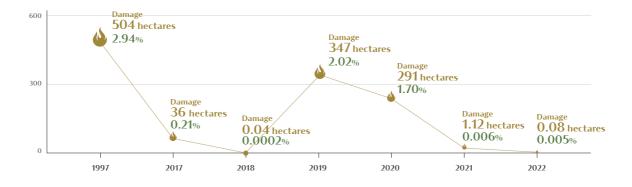
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From the fundamental issue of poverty where villagers earned an income of US\$114/person/year, Doi Tung Development Project was able raise the income to US\$ 2,833/person/year or US\$ 14,348/household/year by 2022.



Social Impact: Education Opportunities

Comparison of Wildfires



Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

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Key Achievements in 2022



DoiTung Brand

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Sustainable Design



DoiTung Brand Won 3 Design Excellence Awards (DEmark) 2022 for Promotion of Zero Waste Concept

Innovative products of DoiTung won 3 Design Excellence or "DEmark" awards in 2022. The prestigious awards are given in recognition of outstanding Thai-design products by Thailand's Institute of Design and Promotion, Department of International Trade Promotion, Ministry of Commerce. The winning products are:



'DRIP KIT: DOITUNG x THINKK Studio' A Zero-Waste Drip Coffee Kit to Meet Every Need

This DIY coffee kit is the result of a collaboration between the minimalist design of THINKK Studio and the skilled local craftsmanship of DoiTung. This coffee kit at home won the DEmark Award 2022 in the Lifestyle category fot its sleek design and multipurpose functionality that can be used as an office desk tool to store name cards and stationery, or even a flower vase.



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'ATHLEISURE WEAR' - Innovation that transcends all limitations

Athleisure Wear: Industrial Craft/PET(1)Post PLASTIC BOTTLE collection by DoiTung is a mixture between activewear, and exclusive businesswear. It aims to suit both fitness and everyday wear. This type of clothing responds to the modern-day lifestyle where we are caught between work and social activities. Athleisure Wear won the DEmark Award 2022 in the the Creative & Innovative Fashion Apparel category.





We incorporated our signature Tweeds design while introducing new materials into the core structures. Recycled fiber from plastic bottles (RE-PET) is the main protagonist of this piece. It is also reinforced by the use of Lycra in order to enhance its flexibility.

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Another creation by DoiTung that won the DEmark Award 2022 in the Creative & Innovative Fashion Apparel category is the WASTE END: Vest collection. For this collection, our designers upcycled fabric waste from previous production into innovative apparel using a modular pattern and traditional hand-sewing technique unique to DoiTung, resulting in energysaving and eco-friendly WASTE END: Vest



that maximizes the value of fabric waste. This also allows each piece of apparel to have its own unique fabric pattern.

At DoiTung, we support the circular economy by maximizing the use of resources. Although fabrics from natural fibers can often be broken down into particles and go through a recycling technology, the cost and energy used in the procedure would not always justify the outcome. The DoiTung designers thus saw an alternative in directly utilizing fabric scraps without creating an environmental impact.

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DoiTung Joined Bangkok Design Week 2022

From 5-13 February 2022, DoiTung partnered with Bangkok Design Week 2022 to open up space at the MFLF's Bangkok office into one of the six main venues within Bangkok to showcase ceramics under the "AGRITECTURE" concept by 12 potters such as Whattadish, Prempracha's Collection, Pim Sudhikam, Aor-Pornpun Sutthiprapa, THINKK Studio, Benjametha Ceramic, Sumphat Gallery, Ken Yutdanai, Lamun Lamai craft studio, Daynin, Even More floral design studio, and DoiTung designers. DoiTung's raw materials were incorporated to create contemporary local crafts and ceramics works that reflected contemporary local traditions.

DoiTung and Thai Airways launched Black Silk Blend Premium Drip Coffee onboard

The Doi Tung Development Project and Thai Airways introduced "Black Silk Blend" premium drip coffee onboard. The coffee beans are produced in Doi Tung at over 1,200 meters above sea level and finely selected before entering the roasting process. Specially blended for Thai Airways, the unique extract is exclusively served to the airline passengers traveling on the Royal First and Royal Silk classes en route to European, Australian, Japanese, and Korean destinations.



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Eco-Friendly Production

Peore Circular Economy Re-Material

The DTDP constantly monitors and evaluates the environmental impact to make the production process truly sustainable. This monitoring system has been certified under the ISO 14001:2015 standard.

The four production facilities include the Cottage Industry Centre and Outlet, the tissue culture laboratory, the agricultural product packing center, and the macadamia

nut and drinking water factory, which have received the Level 3 Green Industry Certification from Thailand's Ministry of Industry. With consideration of the environmental impact and the community's way of life, DoiTung thus prioritizes effective waste reduction throughout the production process under the principle of the circular economy. Our DoiTung Carpet SEA Whale Shark and paper packaging from coffee cup

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products are made from upcycled waste and have been certified as part of the Circular Economy program by Thailand's Department of Environmental Quality Promotion.

Product Design

• Material waste such as fabric and thread was upcycled into new products, reducing greenhouse gas emissions from landfill by 0.11 tons of carbon dioxide equivalent.

Mulberry Paper Factory

• The mulberry paper factory recycled corrugated paper pulp, grey board, and coarse mulberry paper pulp, which reduced greenhouse gas emissions from landfill by 249 tons of carbon dioxide equivalent.

Renewable Energy

- The renewable energy consumed by the MFLF accounted for 9.41%, including solar cells, heat pumps, and biomass energy to reduce the air conditioning required in the water treatment system, resulting in a cost savings of US\$51,515.
- Segregation of 179,941 kilograms of waste prevented it from being sent to landfill, reducing greenhouse gas emissions by 196.92 tons of carbon dioxide equivalent. The waste was also reused for making compost from worm castings, incinerating for electricity, and recycling.
- 17 tons of macadamia nut shells were used throughout the year, or an average of 1.42 tons per month, saving energy costs from cooking gas by US\$ 4,849 per year or US\$404 per month.
- 2.09% of the treated water was recycled for reuse, reducing water consumption by approximately 4,751 cubic meters per year or US\$849 and reducing greenhouse gas emissions by 2.57 tons of carbon dioxide equivalent per year.

Macadamia

• The thickness of macadamia package was reduced from 50 grams. The sticker on the package was replaced with screen printing.

Café DoiTung

• All branches of Café DoiTung have implemented the 5S guideline (Sort, Set in Order, Shine, Standardize, Sustain) to maintain the cleanliness and safety of the premises.

Waste Management

- The waste management center managed 160.67 tons of waste or 89% of all the waste according to the circular economy principles (excluding hazardous waste, energy waste, and bathroom waste), which partially reduced waste management costs.
- 14 training sessions on waste management were conducted for 288 DTDP staff, villagers, and students.
- Moo 17 of Ban Huay Nam Khun participated in the national competition for waste-free villages and won the second runner-up award.
- A low-emission waste incinerator, a waste washing machine, a spinner machine, a heat press machine, a plastic shredder, and a glass shredder were purchased for waste management and value-adding for the waste management center of 24 villages in Doi Tung.
- 11 local villages interested in waste management managed to reduce 88.75 tons of waste to landfill.

Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

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Social Enterprise

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Community Entrepreneurs

Improving the Quality of Coffee

In 2022, the DTDP continued to strengthen the potential of coffee farmers in Doi Tung and other projects by the MFLF with a focus on appropriate provision of coffee cultivation and production tools and equipment, such as fertilizer, microbial pesticide, and training on coffee plot maintenance for farmers in the DTDP. The 2021/2022 (from October 2021 to March 2022) harvest season brought a total income of US\$ 121,212 for the farmers in the DTDP and US\$33,333 for the farmers in Nan province.

In addition, the DTDP expanded the research and development work to introduce two coffee cultivars to two coffee farmers with a total land area of 0.96 hectares in the DTDP, and to 98 coffee farmers with a total land area of 34 hectares in the Nan project area, resulting in 500 kilograms of coffee cherry in the DTDP and 54 tons of coffee cherry in Nan province.

The DTDP continued to employ a new method of coffee processing to uplift the quality and competitiveness of DoiTung coffee for the second year. The unique flavor that stands out from other competitors could potentially bring higher income for the coffee farmers. The Foundation also did a market test on an auction of these special batches of green beans.







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Social Enterprise Leaders

Black Pigs

The DTDP worked with Bo.Lan and Sloane's Aharn Farang Co., Ltd. to develop products from local black pigs and ingredients to generate a source of sustainable income for the community. The products were sold through various channels including retail shops and online channels of Bo.Lan and Sloane's Aharn Farang Co., Ltd., DoiTung product exhibitions, and networks of Tops Supermarket and Central Food Hall, generating a total income of US\$15,995 and US\$10,159 for the DTDP local community.





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High Value Economic Crops Project

The MFLF initiated the High Value Economic Crops Project to study new types of economic crops that have the potential for value-addition and can be sold at a high price. With the same amount of cultivation and product management resources, the high value economic crops can generate higher yield and income per unit of cultivation plot. In 2022, the DTDP continued the study of vanilla through many experiments, including cultivation plot management and primary processing. Data from the experiments were collected by technology to ensure the most accurate data analysis. Lessons learned from the experiments were compiled and developed into a manual on cultivation plots and product management for farmers participating in the future.



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3 Cultivating a New Generation of Leaders Formal Education

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Montessori Method

The MFLF conducted a training program on the application of Montessori teaching assessment tools, namely the Incorporation of Developmental Environmental Rating Scale (DERS) and Teacher Appraisal Instrument (TAI), for kindergarten teachers. A video manual on DERS was also provided to strengthen the teachers' understanding of the assessment application and allow them to effectively reflect on their performance based on the assessment results. The tool could help the teachers to improve not only their teaching but also their classroom environment and their students' learning process.

The spread of coronavirus (COVID-19) and the transfer of schools' directors and teachers posed a challenge to teaching quality improvement. However, there was an improvement in the overall Montessori learning that indicated a satisfactory level of learning achievement, or an increase in DERS from 70% to 73%. The assessment results showed that the teachers improved their observation of their students' learning and encouraged the students to use more Thai language in listening, speaking, reading, and writing.



Project-Based Learning (PBL)

The MFLF encouraged the Project-Based Learning (PBL) approach to develop student capacity in 7 skills of research, communication, analytical thinking, planning, teamwork, and problem-solving. In 2022, the MFLF continued to build the PBL teaching capacity of the teachers. However, due to the spread of coronavirus (COVID-19), teacher training, classroom supervision, and knowledge exchange seminars between schools in the DTDP were conducted online.

In this academic year, transfers and replacements of teachers were frequent. Therefore, the MFLF's experts and leader teachers in the DTDP conducted training on PBL teaching for new teachers. The leader teachers, the Management, and the teachers of schools in the DTDP also provided a manual on PBL teaching to the new teachers. The teachers used the manual in their classroom and provided feedback for further improvement of the manual.



Flagship Projects Doi Tung Development Project

Thai Language Syllabus Development for Children in Prathom 1-3 Level whose First Language is not Thai in the DTDP and Mae Fah Luang District

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The MFLF and the Chiang Rai Primary Education Service Area Office 3 continued to strengthen the capacity of Prathom 1-3 level teachers in their Thai language teaching, taking into account the differences in students' abilities through the differentiated instruction approach. The focus was on designing tasks based on students' capability levels, which were divided into high, medium, and low, to help students achieve learning objectives and enjoy learning. Sixty newly appointed Thai language teachers developed their basic knowledge and skills in the Task-Based Learning (TBL) approach through self-study using the handbook "Thai Language Teaching Development through Task-Based Learning" They also received guidance from the leader teachers in each center and gained practical experience through on-the-job training.

The National Test (NT) Quality Assessment of the local students in the 2022 academic year found that those who had completed Prathom 3 level and went through the TBL approach had increased their average Thai language proficiency score by 10% compared to the previous academic year. This indicates that the TBL approach can promote the reading, writing, listening, and speaking skills.

Skill Training in Reading and Writing of the Thai Language for Prathom 4-6 Level

Skill training in reading and writing of the Thai language for Prathom 4-6 level based on the approach of the Sirindhorn Thai Language Institute of Chulalongkorn University started in 2020 with 18 pilot schools and expanded to 39 schools in the DTDP. The program included additional courses added to the curriculum, with 40 learning hours per year. The MFLF and the Sirindhorn Thai Language Institute worked together to enhance the capacity of teachers with the training program on "Creating Supplementary Reading Lessons for Upper Primary School Students." The program enabled teachers to provide reading exercises and questions that were suitable for students in the area. The pre-and post-learning assessments were also improved by adding questions to assess students' reading comprehension skills.



Vocational Skill Development

The MFLF continued to develop vocational skills for high school students in three schools in the DTDP. In 2022, the purpose of product development to generate income was changed to reduce household expenses. In addition, the curriculum content was developed based on agricultural activities and integrated with the profession of technicians and food service workers using the PBL approach. The DTDP also collaborated with the Prince Chakraband Pensiri Center for Plant Development to train staff, management, and teachers to gain an understanding of safe food production, technical skills required for agricultural activities, and agricultural product processing activities that each school organized for their students.



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Extracurricular Activities

Creative Learning Space for Children and Youth

Faidee Center was established as a space for nurturing good citizens to ensure the sustainable good life quality in the DTDP. The center provides vocational courses and creative leisure activities which match youth's interests with their potential. This is to build a solid foundation that prevents youth from straying off the straight and narrow. The courses and activities also serve as their leadership and management skill training.

The center also provides 8 vocational courses based on the geosocial characteristics and youth's interests: Caterer, Craftsmen, Young Farmer, Environmentalist, DoiTung Artisans, Online Merchant, Dessert Chef, and Dressmaker. Additionally, 8 clubs have been set up: Dancing, Music, Tour Guide, Café, Crafts, Football, Badminton, and E-sport. The number of club members totaled 91. The members received regular skill training throughout the year and practiced their field training in the Colors of Doi Tung Festival and other competitions in Chiang Rai province.

At present, the center has 1,481 members, of which 8% or 116 members are regular users.





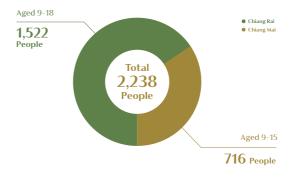
Scholarships

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In the academic year 2022, a total of 17 scholarship students completed their studies. The MFLF selected and granted scholarships to 19 students who had demonstrated their potential as follows: eight for Rajabhat Chiang Rai University, four for Mae Jo University, four for University of Phayao University, two for Mae Fah Luang University, and one for Chiang Mai Rajabhat University.

Children and Youth Development for Drug Prevention Project

The project organized camps to build immunity and raise awareness of the consequences of drug abuse for the target children and youth groups. In 2022, there were a total of 2,238 participants, from which 1,522 were children and youth aged 9-18 from Chiang Rai province who participated in 25 short-term camps, and 716 were children and youth aged 9-15 in the Roi Jai Rak project area in Chiang Mai province.



Flagship Projects Doi Tung Development Project

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Flagship Projects

Mae Fah Luang Art and Cultural Park

Basic Information

Time Frame 1973 – Present

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Location

313 Moo 7, Pa Ngew Village, Mueang Chiang Rai District, Chiang Rai Province Area 24 hectares

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Beneficiaries 502 youths 4,091 tourists

Background

Originally known as Mae Fah Luang Plantation, the Mae Fah Luang Art and Cultural Park started first as the office of the Thai Hill Crafts Foundation (the original name of MFLF). It was a place to "cultivate people" since it was a 'home' to ethnic youths who had received scholarships to study in a town school. It was later developed into a center for Lanna arts and culture, a knowledge center with a collection of ancient Buddhist artefacts, Lanna architecture, teakwood artefacts and antiques dating back over a century. Rotating exhibitions are held regularly by various artists. Highlights in the park include the Princess Mother Monument Courtyard and various pavilions including Haw Kham Luang, Haw Kham Noi, Sala Kaew and Haw Kaew. It is set in a large landscaped garden with mature trees and a lake, making it a popular tourist destination in the north, and a chosen venue to welcome state visitors.

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Key Achievements in 2022



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Mae Fah Luang Flower Festival

On 18 July 2022, the Mae Fah Luang Foundation under Royal Patronage, together with the Chiang Rai municipal government, organized the Mae Fah Luang Flower Festival to commemorate and pay tribute to Her Royal Highness Princess Srinagarindra to mark the 27th year of her passing. The festival was attended by representatives of the government and private sectors, including the general public, with strict enforcement of COVID-19 safety measures.

Traditional Ethnic Textiles Exhibition

The Mae Fah Luang Art and Cultural Park ran the "Traditional Ethnic Textiles" exhibition to promote understanding of indigenous handicrafts and to preserve local art amidst the changing social, economic, and cultural scene influenced by the Western world. The exhibition narrated the history of traditional handicrafts used in everyday life by various ethnic groups from ancient times to the present, reflecting the culture, creativity, and wisdom of different ethnic communities.



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Domestic Projects

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Domestic Projects Roi Jai Rak Project

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Basic Information

Time Frame:

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2018-2029

O Location

4 villages in the Huay Muang Ngam River Basin, namely Ban Muang Ngam Neua, Ban Huay San, Ban Hua Muang Ngam, and Ban Muang Ngam Tai, including 20 villages in Tha Ton Subdistrict. Mae Ai District, Chiang Mai Province Area 5,939 hectares

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Beneficiaries 1,159 households of 4,709 people

Background

The Roi Jai Rak Project was initiated to support the government's drug mitigation policies and measures, and create national stability through capacity-building activities for local communities. Today, narcotic drugs have become an urban problem, with rampant production, trade, and trafficking, particularly in the north of Thailand. The Roi Jai Rak Project has therefore adapted alternative development principles into the urban context, creating immunity for the target group who once earned an income from illicit activities, and providing them with honest livelihoods.

The long-term area-based alternative development principles that have been adopted include "Survival, Sufficiency, and Sustainability" in all dimensions-economic, social, and environmental; capacity building for the community in terms of agriculture, animal husbandry, irrigation, handicrafts, processing of agricultural produce to create value-addition, tourism, and natural resource management, eventually allowing the community to carry on the development work on their own.

Key Achievements in 2022

In 2022, the comprehensive area-based development activities were carried on to promote understanding, reach all sectors, and strengthen the potential of the community. The project team carried out the quality and quantity of agricultural products, animal revolving funds, and cared for animal health to reduce losses from death. At the same time, the project also focused on product processing and value addition to local agricultural products, especially B-grade products. The project area continued to be developed into a tourist destination to attract tourists of all walks of life. We promoted natural resource management with the community, especially in forest areas, which have the potential to generate long-term income for the community. The results of the project's implementation are as follows: (\bullet)

Agriculture

The project studied native plants and new potential plants using precision agriculture and organized agricultural activities to transfer knowledge to local farmers, including promoting rice cultivation for 54 farmers on an area of 61.08 hectares, with a total yield of 384,631 kilograms, averaging 6,297 kilograms per hectare, an increase of 3% from the previous year. The project also promoted rice cultivation for 38 farmers on an area of 22.7 hectares, with a total yield of 41,559.3 kilograms, averaging 1,832 kilograms per hectare, an increase of 0.4% from the previous year. In addition, the project promoted other post-harvest and short-term crops such as Japanese pumpkins, mini pumpkins, toad pumpkins, animal feed corn, chrysanthemum, passion fruit, sweet corn, cape gooseberry, and mushroom, which generated a total income of US\$ 503,266. Assam tea seedlings were provided to 39 farmers on an area of 25 hectares, and bamboo grass to 50 farmers on 16 hectares of land. Furthermore, the project also monitored the long-term crops that had been provided earlier. Fertilizer and pest and disease control substances were provided to 512 villagers. Additionally, the project also supported vegetable seeds for 1,045 households to create food security at the household level, reducing household expenses by a total of US\$ 108,178.

Animal Husbandry

The project organized a chicken raising activity for students to promote basic knowledge in animal husbandry in their households. The goal was for the participating students to reduce chicken mortality rate to less than 20%. Out of a total of 100 students, 99 students met the standard. Additionally, a revolving fund was established to support the community by providing pigs, black-bone chickens, Muscovy ducks, and egg ducks to 341 locals, as well as supporting the breeding of tilapia and frogs for 82 locals and beef cattle to 20 locals. Local development volunteers also gave monthly veterinary services that helped reduce animal mortality rate with a value of US\$ 12,207 compared to before the project. In addition, the project produced animal feed from fermented banana and Napier grass, which was sold to local people at affordable prices. Overall, the animal husbandry activities helped reduce expenses for the local community by US\$ 19,402.

Handicrafts

The project provided skill training for 13 members of the Huay San women's handicraft group. In 2022, the group developed 10 different designs to increase product diversity. Additionally, they were able to produce 30,030 pieces of products for DoiTung brand and 7,716 pieces of local products, generating a total income of US\$ 11,599.

Tourism

The project developed tourism activities as an alternative livelihood for the community and as a distribution channel for community products. The annual festival was organized, generating a total income of US\$ 124,297 from 29,887 tourists. Together with the Roi Jai Rak market which is open on Tuesdays and Saturdays, the number of visitors throughout the year totaled 56,721.

The Roi Jai Rak Garden was open to the public from November 2021 - April 2022, generating a total income of US\$ 55,298, out of which US\$46,466 came from the entrance fee and US\$ 8,832 from local vendor shops in the garden. The garden had a total of 36,899 visitors or an average of 204 visitors per day.

Value-Added Processing

The project built a community rice mill as a center for purchasing unhusked rice from farmers at a fair price. The project purchased a total of 274.35 tons of unhusked rice at US\$ 0.34 per kilogram, higher than market price by US\$ 0.06 per kilogram, resulting in an additional income of US\$ 7,576 for farmers or an average of US\$ 48 per person. Additionally, the project sold milled rice to local villagers at a price lower than the market by an average of US\$ 0.06 per kilogram, to reduce the expenses of locals by US\$ 2,485. A community enterprise plan was established for the community to run the rice mill sustainably and promote additional income for the community through dividend payouts and a welfare fund. Currently, the welfare fund has 177 members.

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Furthermore, the project upgraded the processing facility following the industry standards, and obtained a registration number from the Food and Drug Administration. In the fiscal year 2022, the project generated a revenue of US\$ 8,218 from processing and selling products.

Education

The project provided Montessori teaching method trainings to teachers in the schools in the project area. The project staff also regularly assessed and monitored the teaching. In addition, the project constructed 8 toilets for kindergarten students at the Ban Sukhrathai School and provided books for children and youth in 3 schools.

Public Health

The project continued to monitor the "Volunteer for Good" group, with 130 out of 146 volunteers being tracked. Drug relapse was found in 32 volunteers or 25%. However, 77% of the volunteers had jobs, with an average income of US\$1,633 per year. The steering committee for the "Drug-Free Village" initiative and the project team also conducted assessments in 11 villages. 82% or 9 of them passed the assessment.

Furthermore, the project set up 5 water dispensers to provide clean drinking water to reduce household expenses. The project also supported additional common medicines for health volunteer representatives in all 24 villages to use in basic healthcare work and promoted the cultivation of medicinal herbs in 24 plots in 19 communities, benefiting a total of 883 villagers.

Land Usage Management

The project team conducted a survey and laid out pegs to demarcate the project area of 1,739 plots. There was also a plan to issue a certificate of land occupancy and utilization within the project area. The certificate could reduce community problems and concerns regarding their land rights. In addition, preventive measures for future encroachments were put in place to promote sustainable coexistence between people and forests. Furthermore, a donation of US\$ 6,431 was provided to the community as the non-wildfire fund as there was no wildfire in the area.

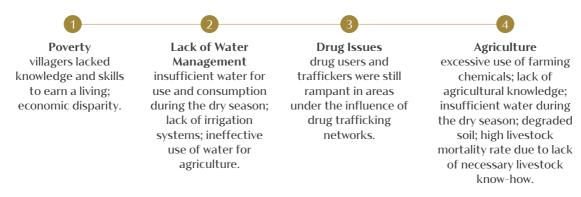
Other Activities

The annual census conducted to assess the economic and social growth of the target 24 villages found that the population of 4,709 had a total income of US\$ 7,727,575, decreased by 8% from the previous year due to the impact of African Swine Fever (ASF). This led to a decrease in income from livestock and an increase in household consumption of animals. The average income per household was US\$ 5,548, a decrease of 3% from the previous year. The census also found that household savings increased from 76% to 91% or an average of US\$1,551 per household, but the average outstanding debt per household decreased by 35% from the previous year to US\$ 853. However, 487 households had incomes below the poverty line of Chiang Mai province, accounting for 42% of all households, or an increase of 10% from the previous year. The urgent issues that the community needs assistance with were basic infrastructure development, agricultural and livestock knowledge, and water system development.

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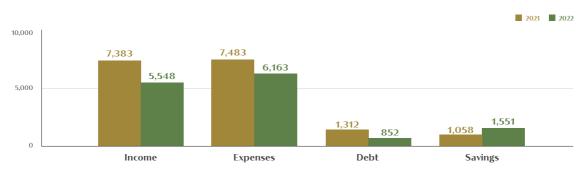
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Fundamental Problems



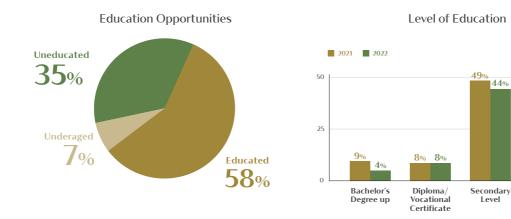
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Development Outcome: What Do the People Get?



Economic Impact: Comparison of Income, Expenses, Debt and Savings (US\$/household/year)

Social Impact: Education Opportunities of the Community



Environmental Impact: Decrease of Wildfires



Annual Report 2022 Mae Fah Luang Foundation under Royal Patronage

44%

44%

Primary Level

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Domestic Projects

The Carbon Credit from Community Forests for Sustainability Project

Basic Information

 Image: Time Frame

 Phase 1

 2020-2025

 Phase 2

 2021-2026

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Location

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1. Phase 1 Covering 3,138 hectares in 16 village
in Phayao, Chiang Rai, Chiang Mai, and
Mae Hong Son provinces

2. Phase 2 Covering 4,359 hectares (based on the Community Forest Act B.E. 2562) in 30 villages in Chiang Mai, Kamphaeng Phet, Uthai Thani, and Krabi provinces

Beneficiaries

Phase 1: 2,954 households of 8,609 people Phase 2: 7,805 households of 21,516 people

Background

The Carbon Credit from Community Forests for Sustainability Project aims to establish a system to manage carbon credit in community forests through a public-private partnership where local communities are encouraged to be the caretakers of their forests. The project's goal is to achieve a sustainable balance of local people's way of life. The project is implementable under the Community Forest Act B.E.2562 which allows communities to utilize natural resources sustainably in community forests. The private sector can be incentivized by tax deductions from its funding to the project. The project will serve as a preparation of carbon credit from the forests for the limitation of corporate GHG emissions in the future when corporates will need carbon credit to offset their carbon footprint of organization (CFO).

Carbon credit could serve as a secure and sustainable source of income for the communities. This model as a sustainable livelihood that can be replicated across the country to address social and environmental issues such as climate change and global warming, post-COVID-19 labor migration, drought, food security, and PM2.5 pollution.

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Key Achievements in 2022

Phase 1

The MFLF and the community forest representatives successfully set up demonstration plots and registered 15 community forests covering an area of 2,950 hectares under the Thailand Voluntary Emission Reduction Program (T-VER), amounting to an estimated carbon offset of 7,798 tons of carbon dioxide equivalent per year. A community forest in Ban Huay Bon, Chiang Mai province is pending verification in 2023.

In 2022, the private sector supported US\$178,281 or US\$57 per hectare to the community fund of 16 participating villages.

63% of the financial support was allocated to the forest management fund for activities such as constructing firebreaks, monitoring wildfires, building check dams, and reforestation. In 2022, 195 hectares, or 6.23% of the total area were affected by wildfires, compared to 368 hectares or 11.73% of the total area in 2021. The rest 12 out of the 15 community forests were wildfire-free.

The other 37% of the financial support was allocated o the community development fund for resources management and life quality development. The support was dedicated to community capacity development activities such as study visits to sufficiency economy model villages, constructing a vocational training center, implementing a mountain irrigation project, and developing the community livelihood groups: leaf plate makers, craftsmen, gardeners, medicinal herb farmers, broom makers, honey product producers, cattle farmers, and fish bank farmers.





Phase 2

The MFLF partnered with the Royal Forest Department and Thai Beverage Plc. to host training courses and study visits at the DTDP for 152 representatives from the community forest groups of Chiang Mai, Kamphaeng Phet, and Uthai Thani province. The training courses and study visits covered the topics of the establishment of carbon credit study plots in forests and sustainable development of the community. In November 2022, representatives from Krabi community forest groups also participated in the training and study visit.

From December 2021 to August 2022, the MFLF and the community forest representatives successfully set up 215 T-VER demonstration plots. Furthermore, 23 community forests in 3

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provinces are pending verification in early 2023: Ban Jomkiri, Ban Pa Bong, Ban Mae Ka, Ban Mae O Nai, Ban Sop O, Ban Mae Ya, Ban Hua Toong, Ban Huay Pao, Ban Muang Khong, Ban Mae Na, Ban Huay Jo, Ban Sop Kab, Ban Kaeng Pun Tao, Ban Pang Ma O, Ban Mae Sai, Ban Mae Mae, Chiang Mai province; Ban Khlong Somboon, Ban Tha Krabak, Ban Mai Wong Khao Thong, Kamphaeng Phet province; and Ban Khao Khiao, Ban Tha Manaw, Ban Pong Makha, Ban Phai Ngam, Uthai Thani province. From 3,311 hectares of community forests as specified in the Community Forest Act, 3,126 hectares met the T-VER requirements, resulting in an estimated carbon offset of 9,611 tons of carbon dioxide equivalent per year. Other 7 community forests in Krabi province are in the process of personnel training and establishing demonstration plots, with the goal of being certified under the project in 2023.

In 2022, the private sector supported a total of US\$ 237,137 or US\$ 57 per hectare to the community fund of 30 participating villages.

84% of the financial support was allocated to the forest management fund for activities such as constructing firebreaks, monitoring wildfires, purchasing wildfire firefighting equipment, building check dams, and reforestation. In 2022, 13 hectares, or 0.3% of the total area were affected by wildfires. However, 28 out of the 30 community forests were wildfire-free, or a decrease from the average 5-year ratio of 2017-2021, during which 915 hectares or 21.43% of the total area were affected by wildfires.

The other 16% of the financial support was allocated to the community development fund for resources management and life quality development. The support was dedicated to community capacity development activities such as study visits to sufficiency economy villages, constructing a vocational training center, and developing community livelihood groups: handicrafts, bamboo, salted eggs, tea processing, medicinal herbs, seedlings, and rafting service.

Memorandum of Understanding (MoU) of the Carbon Credit from Community Forests for Sustainability Project

The MFLF signed the MoU for cooperation on the Carbon Credit from Community Forests for Sustainability Project with the Royal Forest Department, the Department of Marine and Coastal Resources, the Department of National Parks, Wildfire and Plant Conservation, Thailand Greenhouse Gas Management Organisation (TGO) under the Ministry of Natural Resources and Environment (MNEP) to advocate for registration of community forests and other forest areas managed by the MNEP to the T-VER.

The MoU aims to promote the conservation of natural resources within over 160,000 hectares of forest areas managed by the three government agencies. The forest areas will serve as carbon sinks that benefit over 1,100 local communities and generate carbon credit totaling 300,000-500,000 tons of carbon dioxide equivalent per year. The project aims to achieve sustainable forest development and create communities that can coexist with the forest and have sustainable livelihoods.



Domestic Projects The Carbon Credit from Community Forests for Sustainability Project

Domestic Projects

Tea Oil and Other Oilseed Crops Research and Development Project

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Basic Information

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Time Frame 2005 - Present

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Location Pang Mahan and Puna villages, Mae Fah Luang District, Chiang Rai Province Area 1. Pang Mahan Village: 2,726 hectares 2. Puna Village: 5,011 hectares Total area 7,737 hectares

Beneficiaries 553 households of 2,765 people

Background

The project was initiated in 2006 to address poverty issues, provide alternative livelihoods for the local community, and address environmental degradation and forest encroachment. The MFLF partnered with the Chaipattana Foundation to conduct studies and grow tea oil trees as an economic crop on the royal initiative of Her Royal Highness Princess Maha Chakri Sirindhorn who recognized the medicinal benefits of the plant and its high market price that would offer great economic stability to the local community. Land for cultivation was allocated for the villagers, and a variety of occupations were introduced, while the villagers had to participate in forest conservation efforts to allow man and forest to coexist in a sustainable way, following the royal initiative of His Majesty King Bhumibol Adulyadej the Great.



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Key Achievements in 2022

In 2022, the project promoted the maintenance of tea oil plots by grafting 21,597 shoots and pruning in 617 plots, or 95% of the total plots. The total yield of tea oil amounted to 87,542 kilograms, worth US\$ 26,528. Data on each tree are continuedly collected for effective plot management and livelihood promotion for local villagers within the project area.

In terms of life quality improvement, the project distributed 100 fattening pigs to 50 households, generating a total income of US\$ 15,152. Additional 1,430 black-boned chickens were also distributed to 7 farmers within the local network to try out the market, generating a total of US\$ 4,936 income for the farmers.

In addition to this, the DTDP provided 7 vocational training sessions to 24 members of the women's handicraft group. The group produced a total of 19,009 pieces of handicraft products and generated an income of US\$ 5,971.

The project promoted alternative crops by distributing 25,000 Assam tea saplings to 25 farmers and 10,000 banana seedlings to pig farmers. The banana seedlings can be grown and used to feed their pigs to reduce the expenses on animal feed.

Chili plants were distributed to 2 farmers as postharvest crops in an area of 0.8 hectares, which yielded a total of 5,550 kilograms of chilies and generated a total income of US\$ 1,917. The project also plans to add additional 4.8 hectares to the cultivation area in 2023.

The annual socioeconomic survey of 571 households that was conducted to prepare a livelihood promotion plan showed the project participants earned an average income of US\$ 11,868 per household per year or an increase of 308% compared to an average income of US\$ 2,904 per household per year at the start of the project.



Fundamental Problems

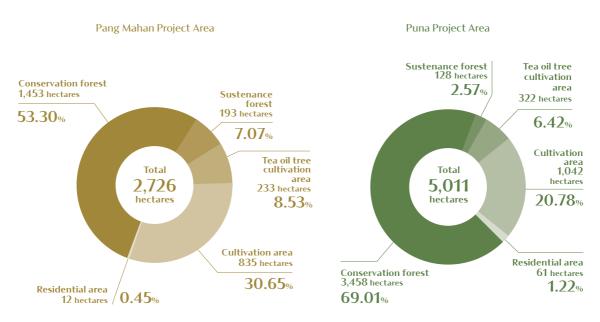
Watershed forest Lack of livelihood Community Monoculture, Drug conflict over water trafficking and lack of water encroachment knowledge and land use addiction management system, and skills insufficient rice for local consumption

Domestic Projects Tea Oil and Other Oilseed Crops Research and Development Project

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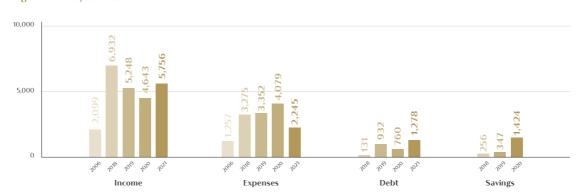
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Development Outcome: What Do the People Get?



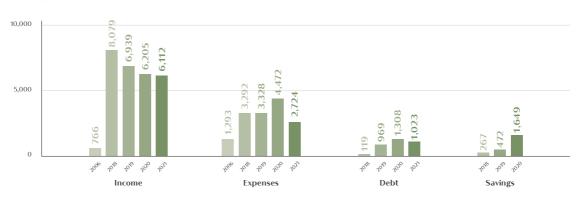
Environmental Impact: Land Usage of Project Area

Economic Impact: Comparison of Income, Expenses, Debt and Savings (US\$/household/year)









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Domestic Projects
Nan Economic Crop
Processing Project

Basic Information

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Time Frame 2013- 2019 Nan Reforestation Project 2020 - Present Nan Economic Crop Processing Project

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Location

20 villages, 4 sub-districts, 3 districts in Nan Province Area 40,000 hectares

Beneficiaries 6,042 people

Background

The Nan Economic Crop Processing Project is an extension of the Nan Reforestation Project which began in 2013. The MFLF partnered with the Royal Initiative Discovery Institute (RIDI) to implement this project to restore the natural resources in the project area and increase forest coverage while improving the quality of life of the local communities, encouraging them to coexist with forests in a sustainable manner.

The main activities included land utilization management to demarcate forests from cultivation and residential areas, appointing a committee, and setting community rules and regulations on the usage and conservation of forest resources in areas designated as forests which include conservation forests to protect watersheds and areas of biodiversity, sustenance forests as sources of fuel and food that are to be managed by the community, and economic forests that provide a main source of sustainable income, replacing monocropping. They also act as a firebreak to prevent wildfires from spreading into conservation forests and sustenance forests. The project also addressed issues of poverty and helped to improve the quality of life of the local villagers by promoting livelihoods through agricultural and livestock development, setting up seedling and livestock funds and processing, as well as improving water management systems for use, consumption, and agriculture.

Key Achievements in 2022

The MFLF has conducted research and development to improve the yield of cashew nuts and the quality of parchment coffee. The study of crops was carried out to find suitable alternatives for the local farmers and to reduce their dependence on monocrops. This also promoted community participation in wildfire management and forest conservation. The activities included:

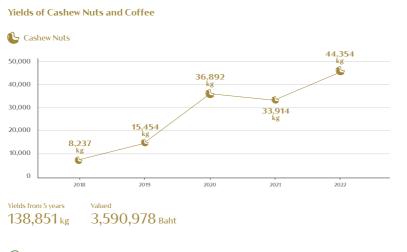
Research and Development to Improve the Yield of Cashew Nuts and Alternative Crops (Economic Forest)

In 2022, 7.2 hectares of land in 9 plots owned by 8 local farmers were set aside as demonstration plots to improve the yield improvement of cashew nuts, with a target of an average yield of 4.5 kilograms per tree. The experiment found that the demonstration plots yielded an average of 4.57 kilograms per tree, which was higher than the target. The cashew nut trees grew better and produced more fruit due to the farm management following expert guidance on reducing pests, pruning, and fertilizing the trees.

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Sourcing Markets for Economic Crops

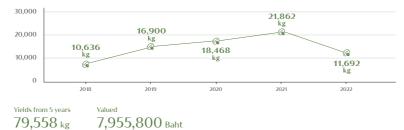
The project sourced 11.6 tons of parchment coffee worth US35,430, and 44.3 tons of cashew nuts worth US\$33,601, resulting in a total income of over US\$66,667 for the community.







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Study of Suitable Alternative Crops

The MFLF worked with the private sector to process cultivated bananas and found that the bananas grown in the project area had good potential and high market demand. Therefore, the MFLF provided 100,000 cultivated banana seedlings to farmers in the project area to grow on their land and create additional income in the future. In addition, the MFLF and the private sector studied the establishment of a banana flour processing facility to add value for bananas from the project.



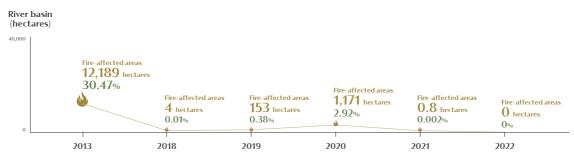
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Wildfire Management

The local community continuedly monitored and guarded against wildfires by repairing fire watchtowers and constructing firebreaks. In 2022, there were no wildfires reported in the area. The MFLF, together with the community, participated in the village committee meetings to develop a guideline on wildfire prevention, firebreak construction, and the schedule for fire watchtowers in 2023. The village committee approved the budget allocation for wildfire prevention activities to be disbursed into the wildfire fund of each village.

2018-2022 Wildfire Occurrences Compared to 2013



Handover of the Project Area to the Communities in Tha Wang Pha and Song Khwae Districts

On May 27-28 2022, the MFLF organized an event to hand over the project area to the communities in Tha Wang Pha and Song Khwae districts. There were a total of 65 participants, including representatives from government agencies such as the Royal Forest Department, the Sob Sai Watershed Management Unit, Nanthaburi National Park, and Tham Sakoen National Park, as well as local authorities and community representatives. The event included various activities, such as:

- An exhibition showcasing the Nan Reforestation Project and the Nan Economic Crop Processing Project since 2013.
- A discussion with the community for them to share their insights before and after the project, as well as the benefits that the community had received.
- A symbolic gift-giving activity, including three types of seedlings for conservation, sustenance, and economic forests, a map of forest management areas, a waterway map, and a community wildfire fund account, all given to community leaders.



 A knowledge-sharing activity, where the MFLF and community representatives exchanged knowledge and lessons learned from the project.



Piang Kor Learning Center

The learning center welcomed 27 groups of interested individuals who came to learn about environmental development and management. The visitors were representatives from various government and private organizations, including the Environmental Education Center Thailand (EEC Thailand), Japanese coffee experts, the Government Savings Bank, the RIDI, Chaloem Phra Kiat District Agricultural Center, public health authorities from Nan province, and local communities.

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Fundamental Problems



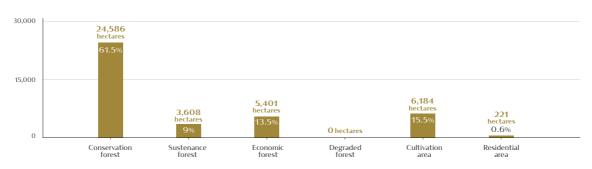
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Development Outcome

	What the People Get	Areas for Improvement
Economic Impact	 Sustainable agriculture with mixed cropping appropriate to the area Diverse livelihoods created to provide income for the local communities Community enterprise groups purchasing local to sell in markets outside the community Improved community economy, reduced debts, and increased investment for livelihoods. 	 Promoting local crops Studying processing techniques to increase the value of local products Seeking online marketing channels
Social Impact	 Legal rights to use the land Access to clean water throughout the year, leading to an improved quality of life for the community Community members see the benefits of working together and feel a sense of ownership in the area. The emergence of young community wisemen More young people are returning to work in the area. Decrease in drug abuse and theft 	 Engaging youth to sustain community activities in all dimensions Studying the establishment of clean water production facilities in the community Expanding development efforts to other villages outside the project
Environmental Impact	 No more forest encroachment, clear land management The communities collaborate to develop wildfire prevention measures, resulting in a 99% reduction in wildfires compared to the baseline year of 2013 Less smog due to reduced wildfires Reduced use of agricultural chemicals 	 Preserving water sources Advocating for development on ONLB land area in nearby areas Registering community forests Managing wildfire funds efficiently

Land Usage of Project Area in 2022

Total Area 40,000 hectares



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International Projects

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International Projects

Thai-Myanmar Sustainable Alternative Livelihood Development Project

Basic Information

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Time Frame

2018-2026 Scaled up from the original project in Tachileik and Mong Hsat districts, the Republic of the Union of Myanmar, from 2012-2017

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Location

- 1. Naungtayar Subtownship (southern Shan State), an area of 54,714 hectares covering 4 village clusters of 99 villages
- 2. Tachileik District (eastern Shan State), an area of 17,090 hectares covering 3 village clusters of 30 villages

80 Beneficiaries

- 1. Naungtayar Subtownship project area: 5,764 households of 26,953 people
- 2. Tachileik District project area: 1,445 households of 7,462 people

Background

The project aims to address opium poppy cultivation as well as trafficking in the target area through legitimate livelihood options that would provide a sufficient and stable income for the community, reducing poverty and enhancing stability along the Thai-Myanmar border. It also served to create a model for holistic area-based development through a participatory approach that the government of Myanmar could replicate in other regions of the country.

Key Achievements in 2022

In the fiscal year 2022, the MFLF aimed to scale up to cover a broader target area. This included the development of irrigation systems and animal husbandry, providing knowledge and agricultural production tools and facilities, alternative high-value crop cultivation, as well as increasing market value of locally produced tea. These efforts helped minimize the risk of the community's involvement with narcotics and illegal substances.

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Naungtayar Subtownship, Pinlaung Township, Southern Shan State

Economic and Social Census

The project conducted the annual economic and social census of 545 households in 99 villages to plan development activities that correspond to the problems and needs of the community. The survey showed that the majority of the villagers are farmers with an average household income of US\$1,645 per year, whereas the average household expenses remain at US\$1,520 per year. 20.2% of the households are above the international poverty line of US\$645 per person per year, which accounts for an increase of 7% in comparison to the previous year. 99.8 of the households had a year-round food supply or an increase of 3.7% in comparison to the previous year. Most of the households still rely on rainwater, whereas 0.6% of the households face water shortage for farming, accounting for a 97% decrease from the previous year. The duration of the water shortage decreased by an average of 1.7 months.

Fever and malaria were the main health issues, which decreased by 1.3% in comparison to the previous year. Dental health issues decrease by 14.5% from the previous year. The most pressing issues as specified by the community were access to healthcare, agricultural knowledge, and education.

Water

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The project scaled up the irrigation system development to address water shortage in 17 villages through the support of materials and know-how. This included 1 dam, 10 pipe systems of 24,632 meters, and 6 water tanks with a total capacity of 120 cubic meters, benefitting 6,895 villagers. A water fund was also set up and run by the community for the sustainable use and conservation of water resources.



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Agriculture

The project installed 4 large-sized maize millers and 58 small-sized maize shellers for a community of 7 villages to maximize their post-harvest handling capacity. The project team joined hands with Charoen Pokphand Produce Co., Ltd. (CPP) to follow up on the harvest of maize crops for animal feed. The yield was 5,344 kilograms per hectare, which was 5,000 kilograms per hectare higher than projected, or a decrease of 21% from the previous year due to diseases and heavy rains in the harvest. The total profit was US\$887,400 or an annual average of US\$731 per hectare, accounting for an increase from the previous year by 35%. The project also distributed means of production to 1,361 participating farmers in the fiscal year 2022, covering an area of 1,214 hectares. This was an increase of 33% in the number of farmers participating in the project and a 2.4-time increase in area coverage.

The project also promoted the cultivation of high-quality coffee as an alternative high-value crop for the long-term and secure income of the community. There were a total of 114 coffee plots on a total of 35 hectares of land. The project provided coffee saplings, chemicals, and knowledge transfer to local farmers who adopted the project's standards for cultivation.

30 tea leaves drying fields were built for household clusters in 11 villages, benefitting 30 households. Training workshops on tea pruning and new tea leaf roasting techniques were provided to 109 interested farmers. The workshop participants could later sell their tea leaves at an average of 119 baht per kilogram, which was 1.7 times higher than the original price. The tea leaves were rated as moderate quality by tea experts in Pinlaung township.

Livestock

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The project partnered with the Livestock Breeding and Veterinary Department (LBVD) of Pinlaung township to organize training workshops on veterinary care for the community. The project provided veterinary care services to a total of 1,133 animals and organized 2 mobile veterinary units for livestock vaccination, resulting in a total of 3,013 animals vaccinated. A revolving livestock fund was established to provide 45 cows and 94 buffaloes as a means of livelihood to gain extra income for impoverished farmers. In addition to the first group of beneficiary farmers, the revolving fund would allow a wider group of farmers to benefit from livestock distribution in the future. 50,750 napier grass saplings were also distributed as highly nutritious feed for the livestock.



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2 North Tachileik District, Eastern Shan State

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Water

The project provided materials and know-how to repair the community's agricultural check dam to its full capacity, with labor from local villagers. The check dam could help alleviate seasonal floods in the project area. A pipe system with a combined length of 1,400 meters. The water system benefits a total of 298 people and 17.6 hectares of farmland.





Agriculture

The project provided materials and know-how for building the community's drying patio for local produce. The patio covered 0.0255 hectares of land and benefits 72 households. 150 sets of chemical fertiliser were provided to farmers for 24 hectares of land to increase produce yield and reduce household expenses.

Livestock

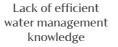
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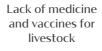
The project provided veterinary care services to a total of 1,133 animals and 8 medical kits to the community. Beef cattle and pig raising were promoted as a means to earn extra income. A revolving fund was established to provide 40 beef cattle to 20 households and 55 pigs to 50 households. The project also provided the local veterinary authority with a motorbike to commute when giving veterinary services to the community.



Fundamental Problems

Narcotic crop cultivation, trafficking, and trade





Lack of agricultural knowledge, processing to create value-addition, and market access

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Special Events and Activities

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Merit-Making Ceremony to Commemorate the 121st Birthday Anniversary of the Princess Mother

The MFLF held a merit-making ceremony to mark the 121st birthday anniversary of Her Royal Highness Princess Srinagarindra on 21 October 2021 at Doi Tung Royal Villa, Chiang Rai Province. The ceremony is a tradition to pay great respect and gratitude to the Princess Mother for her dedication to improving the life quality of Thai people throughout her life and her initiative in founding the MFLF in 1972.

24th "Remembering the Late Princess Mother" Exhibition

On the occasion of Her Royal Highness Princess Srinagarindra's birthday anniversary, the MFLF in collaboration with Siam Piwat Public Co., Ltd., and Thai Beverage PLC organized the 24th "Remembering the Late Princess Mother" virtual exhibition to portray the royal biography, the royal duties, and the royal virtues of the Princess Mother. The exhibition was available online on www.kidtungsomdetya.com.





8th Colors of Doi Tung Festival under the Theme "Forward to Nature"

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The MFLF in collaboration with Thai Beverage PLC organized the 8th Colors of Doi Tung Festival under the theme "Forward to Nature." From 3 December 2021 — 30 January 2022, visitors were brought into the embrace of the mountains to experience the cool breeze and tribal cultures at the DTDP, Chiang Rai Province, and took home with them good memories of their trip through Augmented Reality (AR) technology. The festival was supported by the Siam Commercial Bank Public Company Limited, the SCG Foundation, and Bangkok Dusit Medical Services Public Company Limited.

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Her Royal Highness Princess Bajarakitiyabha Narendiradebyavati Visited the Roi Jai Rak Project

On 5 January 2022, Her Royal Highness Princess Bajrakitiyabha Narendiradebyavati visited the Roi Jai Rak Project in Tha Ton Sub-district, Mai Ai District, Chiang Mai Province, where she met with villagers within the project area.

The Roi Jai Rak Project is an integrated project conducted jointly by local government offices, the Office of the Narcotics Control Board (ONCB), and the MFLF, to implement sustainable alternative livelihood development to combat narcotic issues in the area. The project serves to offer opportunities and alternative legitimate livelihoods to the local communities.



Her Royal Highness Princess Maha Chakri Sirindhorn Visited Sustainable Alternative Livelihood Development Projects

On 17 February 2022, Her Royal Highness Princess Maha Chakri Sirindhorn, as the MFLF's honorary president, visited the MFLF's sustainable alternative livelihood development projects to monitor the previous year's achievements. The visits include the Tea Oil and Other Oilseed Crop Research and Development Project, Phya Phrai Traimitr School, the Tea Oil Crop Research and Development Project office in Pang Mahan; Ban Pa Sang Na Ngern School; and Ban Pa Sang Na Ngern Village, Mae Fah Luang Subdistrict, Mae Fah Luang District. HRH also presided over the 2021 academic year meeting of the education development project in the DTDP and other areas within the Mae Fah Luang District. On hand to welcome the Princess were Mr. Phassakorn Boonyalak, Governor of Chiang Rai Province; Thanpuying Putrie Viravaidya, Chairman of the Board of MFLF; Mr. Veerathai Santiprabhob, Secretary-General of MFLF; Khunying Puangroi Diskul na Ayudhaya, Board Member of MFLF; and M.L. Dispanadda Diskul, CEO of MFLF.



Online Series "Embrace Forests, Embrace Seas" Visits MFLF Project Sites

Alex Rendell and Jarinporn Joonkiat, two talented actors set out to learn about environmental issues in various areas of Thailand to pass on the inspiration to take care of the environment. Both of them joined hands to find answers to the question "Why Cultivate People to Cultivate Land?" in Nan province following MFLF's principles. Watch "Embrace Forests, Embrace Seas Season 2," Part 2 on https://youtu.be/7VwyhAaDvug.

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Merit-Making Ceremony to Commemorate the 27th Passing Anniversary of the Princess Mother

Chiang Rai Province, in conjunction with the MFLF, held a merit-making ceremony to mark the 27th anniversary of the passing of Her Royal Highness Princess Srinagarindra on 18 July 2022 at Wat Phra Kaeo, Mueang Chiang Rai District, and the Mae Fah Luang Art and Cultural Park, Chiang Rai Province.

UNODC's Visit to the Doi Tung Development Project

On 31 March 2022, the first female Director-General of the United Nations Office on Drugs and Crime (UNODC), Ms. Ghada Waly, visited the DTDP in Chiang Rai province as a successful model of alternative development to address sustainable solutions for opium cultivation and poverty reduction.





Merit-Making Ceremony for and the Princess Mother on the occasion of MFLF's 50th Anniversary

On 26 April 2022, the MFLF's Board of Directors held a merit-making ceremony for His Majesty King Bhumibol Adulyadej The Great and Her Royal Highness Princess Srinagarindra on the occasion of the MFLF's 50th Anniversary of the founding at the main hall of Wat Bowonniwet Vihara. The ceremony was presided over by Thanpuying Putrie Viravaidya, Chairman of the Board of the MFLF.

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Living University

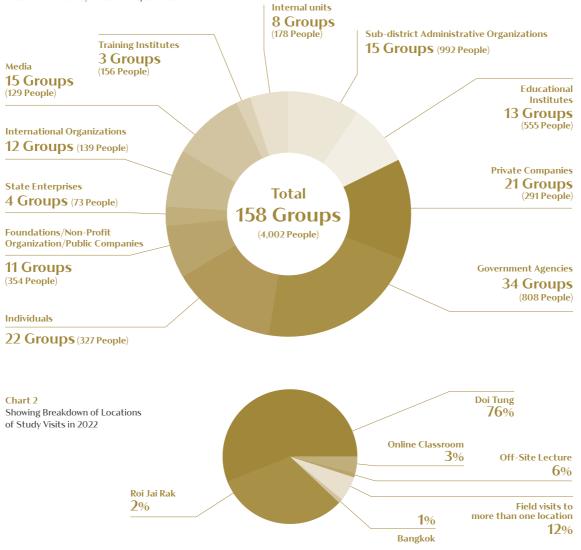
In 2022, the Living University division held training workshops and study visits within the MFLF's project sites, and also partnered with other organizations to hold training workshops off-site to disseminate the Mae Fah Luang Development Model to a wider audience. There were 158 groups or 4,002 visitors in total — 146 groups in Thailand and 12 overseas groups, as follows:

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Chart 1

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Breakdown of Study Visits to Project Areas in 2022



Due to the spread of coronavirus (COVID-19), the division changed the workshop and study visits to online and off-site formats. During the last quarter of the fiscal year 2022, as the COVID-19 situation began to ease, the interest to do field visits increased.

In 2022, the sustainable development, social enterprise, and environmental conservation courses were updated to align with the demand of the private sector. Furthermore, courses for company outings such as team building, relationship building activities, and CSR packages were added to provide a diverse range of products that met the target group's needs. The courses also offered exposure to tourism experiences, nature activities, and local lifestyles, such as Coffee Trip, Tea Journey, Art Day, and Green Route. Additionally, the website and the online learning system were developed and developed to support future online study visits.



1. The division hosted an online briefing for students from the Faculty of Humanities and Social Sciences, Rambhai Barni Rajabhat University on 21 November 2021.



6. The management from Thailand's leading private companies attended the 2morrow Scaler course to learn the SALD work at the Doi Tung

Development Project on 26 March 2022.



2. H.E. Mr. Rachmat Budiman, Ambassador of the Republic of Indonesia to Thailand, and the group visited the development activities in the Doi Tung Development Project and attended the briefing on the Foundation's

Sustainable Alternative Livelihood Development (SALD) initiatives abroad, including the project in Aceh province, Indonesia on 8-9 December 2021.



7. Ms. Ghada Waly, the UNODC Executive Director, and the group visited the SALD works at the Doi Tung Development Project and the Roi Jai Rak Project to discuss the cooperation with Thailand in the area of alternative

development in the CND. The visit took place on 30 March — 1 April 2022.



3. A tour company visited the Doi Tung Development Project to study the area as preparation for the Green Route trip on 1-3 February 2022



8. Professors of Rambhai Barni Rajabhat University visited the Doi Tung Development Project on 19-21 April 2022. The objective of the visit was to learn about the SALD work that could be applied to the community works run by





4. Varawut Silpa-archa, Minister of Natural Resources and Environment of Thailand, and the group attended the project briefings at the Doi Tung Development Project and the Roi

Jai Rak Project in Chiang Mai on 5-6 February 2022.



5. Nationwide Directors of the Community Hospital Network under the Patronage of the Debaratana Vejanukula Foundation visited the SALD work at the Doi Tung Development Project on 12-14 February 2022.

The objective of the visit was for the personnel to apply the knowledge and lessons learned from development work to their hospital operations.



 9. The top management of Mitr Phol Group visited the Doi Tung Development Project on 25-27 July 2022 to learn about the SALD work and gain an understanding of the strategic

learning approach to create change agents at the organizational and community level. The group also applied the key success factors of the DTDP in their work to create sustainability in their organizational operations.



10. The speaker from the MFLF's Center of Environmental and Energy Management gave briefings on waste management to 6 batches of participants from the municipality of Mae Kham,

Mae Chan district, Chiang Rai province.



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Policy Advocacy and Other International Conferences

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Virtual Expert Group Meeting on Alternative Development (EGM on AD)

The Expert Group Meeting on Alternative Development (EGM on AD) is an annual meeting hosted by the MFLF, Thailand's Narcotics Control Board, Thailand's Ministry of Foreign Affairs, the German Agency for International Cooperation (GIZ) through the Global Partnership on Drug Policies and Development (GPDPD), the Government of the Republic of Peru, and the United Nations Office on Drugs and Crime (UNODC) since 2013.

In 2022, the virtual meeting was conducted on the topic of "Promoting Sustainability in Alternative Development" from 26-27 March 2022. A total of 96 accounts from 15 countries in Asia, Africa, Latin America, and Europe, including government representatives, alternative development experts, development practitioners, civil society organizations, and private sector attended the meeting. The meeting discussed the linkage between environmental conservation and alternative development projects. Thailand presented an example of

using carbon credits market mechanisms as an incentive for sustainable co-existence between man and nature by generating income for the communities that conserve their forests. The potential linkage between climate change and alternative development was also discussed as an option for future funding. The conference room paper with discussions and proposals from the meeting was presented to the 65th Session of the Commission on Narcotic Drugs (CND) convened in March 2022.



The 65th Session of the Commission on Narcotic Drugs (CND)

The MFLF's Chief Executive Officer virtually joined the Thai government delegation at the 64th Session of the Commission on Narcotic Drugs (CND) during 14-18 March 2022 to advocate for alternative development to promote cooperation between the government, private sector, and relevant stakeholders, particularly in the area of the linkage between alternative development and environmental conservation, including the application of carbon credits, and payment for ecosystem services (PES) in alternative development projects.

The draft resolution was voted on and supported by the following 13 member countries: Andorra, Colombia, France (representing the European Union), Guatemala, Honduras, Japan, Mexico, Norway, Paraguay, the Philippines, Singapore, the United States of America, and Uruguay.

The MFLF's representative also served as a speaker in the two side events: "Promoting Sustainability in Alternative Development" hosted by the governments of Germany, Peru, and the UNODC, attended by 65 online accounts; and "Alternative Development and the Environment" hosted by the governments of France, Germany, and the UNODC, attended by 88 online accounts.



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Visits from the UNODC's Director-General to the MFLF's Alternative Development Projects

The Director-General of the United Nations Office on Drugs and Crime (UNODC), Ms. Ghada Waly, along with a delegation from the Regional Office for Southeast Asia and the Pacific (UNODC-ROSEAP), visited the Doi Tung Development Project in Chiang Rai province as a successful model of alternative development to address sustainable solutions for opium cultivation and poverty reduction, and the Roi Jai Rak Project in Chiang Mai province during 30-31 March 2022.

During the visit, the MFLF and the UNODC discussed the application of this successful alternative development model in other countries by taking into account local contexts. At the Roi Jai Rak Project, Ms. Ghada Waly praised the collaborative efforts of various stakeholders, particularly in the areas of security and development efforts for the local community. The UNODC-ROSEAP plans to further promote alternative development initiatives in collaboration with the MFLF at the regional level, including knowledge exchange and project implementation in Myanmar, the establishment of a learning center for alternative development in Southeast Asia, and the promotion for products from alternative development projects, such as coffee from Thailand and Myanmar.



Alternative Development Cooperation between Thailand and Colombia

Thailand International Cooperation Agency (TICA) had requested the MFLF to provide online training on sustainable alternative livelihood development to 26 personnel from the Colombian Agency for Renewal of the Territory (ART), an organization responsible for planning and implementing alternative development projects in Colombia. The training that took



place from 10-12 May 2022 included sessions for sharing knowledge from real-life experiences and discussing the context of alternative development in Colombia. The Colombian participants also had the opportunity to exchange different work approaches with Thai development practitioners.

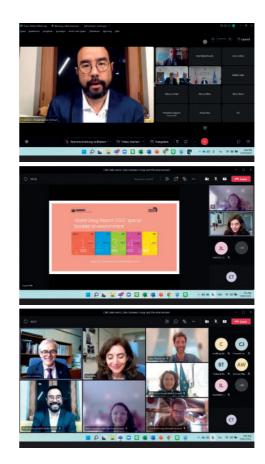
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Thematic Discussion for the 66th Session of the CND

On 21 September 2022, the UNODC as the Secretariat to the CND invited representatives from the MFLF to participate in the thematic discussion for the 66th Session of the CND under the topic "Responses not in Conformity with the Three International Drug Control Conventions and not in Conformity with Applicable International Human Rights Obligations Pose a Challenge to the Implementation of Joint Commitments based on the Principle of Common and Shared Responsibility." The MFLF presented case studies of the DTDP and the Roi Jai Rak Project as examples from Thailand which employ a people-centric approach and integrated development to address drug addiction problems. The thematic discussion is an annual event to exchange views and prepare for the upcoming CND session, which takes place in March of the following year.



Partnership with the German Agency for International Cooperation (GIZ)

The MFLF and the GIZ are partners in the Global Partnership on Drug Policies and Development (GPDPD) project to exchange policy guidelines on alternative development for countries facing narcotic crop cultivation issues. The first phase of cooperation began in 2016, and the second phase was from November 2020 to May 2022. However, the COVID-19 pandemic has resulted in international travel restrictions. Site visits and consultation activities were therefore conducted online. Therefore, on 24 March 2022, the MFLF provided online consultations to 12 government officials from Colombia on the implementation of alternative development projects. From 26-28 April 2022, an in-depth online course was organized for 17 government officials and community members working in the field in Colombia.

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Policy Advocacy and Other International Conferences

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Special Report Production of Greenhouse Gases

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Goal and Indicators of Greenhouse Gas Mitigation related to Business Operations, Global Warming Management, and Climate Change

The MFLF has been continuously collecting data on the Carbon Footprint of the Organization (CFO), which includes the amount of greenhouse gas emissions and removals from the organization's operations and production processes, such as electricity usage, fuel consumption, and transportation, to assess environmental impacts. The measurements are in units of carbon dioxide equivalent (tCO2e). The data disclosure aims to demonstrate our continuous commitment to reducing greenhouse gas emissions. In 2022, the MFLF released a total of 9,271.72 tons of carbon dioxide equivalent

Location	Scope 1 Fuel Combustion	Scope 2 Electricity Usage	Scope 3 Other sources such as the use of fertilizers and paper	Direct GHG Emissions	Total GHG Emissions (Scopes 1-3)
Bangkok Office	140.40	235.69			376.09
Doi Tung Development Project	1,870.51	741.16		11.63	835.14
Nan Economic Crop Processing Project	18.93	6.92			25.84
Roi Jai Rak Project	307.35	114.76			422.11
Cottage Industry Centre and Outlet	1,541.90	313.03	3,693.48	93.46	5,548.42
Mae Fah Luang Art and Cultural Park	15.04	19.79			34.83
DoiTung Lifestyle and Café DoiTung branches	1.35	135.30			136.65
Other Projects	7.46	108.65			116.11
Total	3,902.94	1,675.30	3,693.48	105.10	9,271.72

The MFLF s GHG Emissions in 2022 (tCO2e)

Furthermore, the MFLF also offset the carbon footprint by supporting carbon credits from organizations that reduce their greenhouse gas emissions, and by organizing the Colors of Doi Tung Festival as a carbon neutral event.

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Internal Greenhouse Gas Mitigation Efforts

The MFLF is committed to minimizing our environmental impact. We operate on the principles of 'Use Less' or reducing the use of fossil fuel energy, which is finite and cannot be replaced, and 'Release Less' or reducing the release of pollutants into the environment. In 2022, the energy intensity, or the proportion of energy used per income, decreased by 36% compared to the base year of 2014, and renewable energy use increased by 45% compared to the base year of 2018.

In addition, the MFLF also emphasized reducing greenhouse gas emissions through various activities, such as providing waste separation training for all employees, which encouraged employees at all levels to participate in waste reduction and landfill diversion. The foundation also promoted the adoption of the 5S principles, which are Sort, Set in Order, Shine, Standardize, and Sustain, to create a clean and efficient working environment that reduces energy consumption from fossil fuels. Furthermore, the foundation produced video content that promoted environmentally-friendly production practices to disseminate knowledge within the organization.

Reduction and Offsetting of Greenhouse Gas Emissions of the Organization through Participation in the Thailand Voluntary Emission Reduction Programme (T-VER)

The MFLF participated in the Thailand Voluntary Emission Reduction Program (T-VER), initiated by the Thailand Greenhouse Gas Management Organization (TGO), to become a net-zero emission organization in the future. This will be achieved by offsetting greenhouse gas emissions from the organization with carbon credits obtained from forests in the DTDP and other projects of the MFLF.

Greenhouse Gas Verification Unit under the Mae Fah Luang Foundation under Royal Patronage

The MFLF has established a greenhouse gas verification unit and has been certified for its operational capabilities of the Certification Body (CB) according to ISO 14065:2018 standard from the Thai Industrial Standards Institute (TISI). The unit provides validation and verification services for the T-VER Programme at the project level for businesses. These services are conducted by experts in various fields such as energy conservation, renewable energy, wastewater treatment, waste management, agriculture, and forestry.

In addition, the unit also provides knowledge and consultation on the assessment of greenhouse gas emissions and removals, as well as preparing organizational greenhouse gas emission reports. This allows service recipients to measure their greenhouse gas emissions systematically and understand the environmental impact of their operations, leading to targeted improvements and developments, ultimately achieving carbon neutrality.

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Statements of Financial Position

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Statements of Financial Position

	For the years ended 30 September	
	2022	2021
		(in Baht)
Assets		
Current assets		
Cash and cash equivalents	39,607,550	61,853,046
Cash and cash at banks for specific purpose funds	1,547,032	1,540,868
Current investments	1,171,124,766	1,176,876,965
Investments in securities	57,692,153	51,214,160
Trade accounts receivable	1,631,619	67,114,718
Other receivables	207,272,380	239,146,433
Inventories	4,486,186	5,672,942
Interest receivable	20,495,845	13,353,105
Total current assets	1,503,857,531	1,616,772,237
Non-current assets		
Investment in subsidiaries	16,532,000	16,532,000
Other long-term investments	-	_
Property, plant and equipment	247,076,885	251,455,719
Intangible asset	4,645,755	7,250,936
Leasehold right	-	-
Other non-current assets	12,035,721	11,809,149
Total non-current assets	280,290,361	287,047,804
Total assets	1,784,147,892	1,903,820,041

For the years ended
30 September

(in Baht)

2022

Liabilities and fund balances

Current liabilities		
Trade accounts payable and other payables	28,064,932	49,484,348
Unearned income	4,192,311	3,211,479
Accrued expenses	22,814,196	14,089,442
Other current liabilities	3,872,424	7,077,307
Total current liabilities	58,943,863	73,862,576
Total liabilities	58,943,863	73,862,576
Specific purpose funds	139,764,317	135,519,546
Fund balances		
Fund balances	1,400,136,121	1,509,134,328
Reserve for project support	185,303,591	185,303,591
Unrealized gains on revaluation of investments	-	-
Total fund balances	1,585,439,712	1,694,437,919
Total liabilities and fund balances	1,784,147,892	1,903,820,041

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Statements of Financial Position

	For the years ended 30 September		
	2022	2021	
	(1	in Baht)	
Statement of revenues and expenses			
Revenues			
Revenue from sale of goods and rendering of services	386,991,654	325,474,345	
Revenue from donations	349,988,219	338,195,205	
Investment income	22,881,425	26,996,936	
Insurance reimbursement	-	715,019	
Gains from investment	-	75,986,390	
Other income	25,485,756	20,078,104	
Total revenues	785,347,054	787,445,999	
Expenses			
Cost of sale of goods and rendering of services	213,138,155	185,011,280	
Selling and service expenses	164,576,799	144,294,803	
Administrative expenses	488,850,461	534,355,693	
Loss from investment	27,779,846	-	
Total expenses	894,345,261	863,661,776	
Expenses over revenues	(108,998,207)	(76,215,777)	



Annual Report 2022

This Annual Report summarises the activities of Mae Fah Luang Foundation under Royal Patronage from 1 October 2021 - 30 September 2022.

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Sustaining Land, Empowering Peopl le

Mae Fah Luang Foundation under Royal Patronage

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