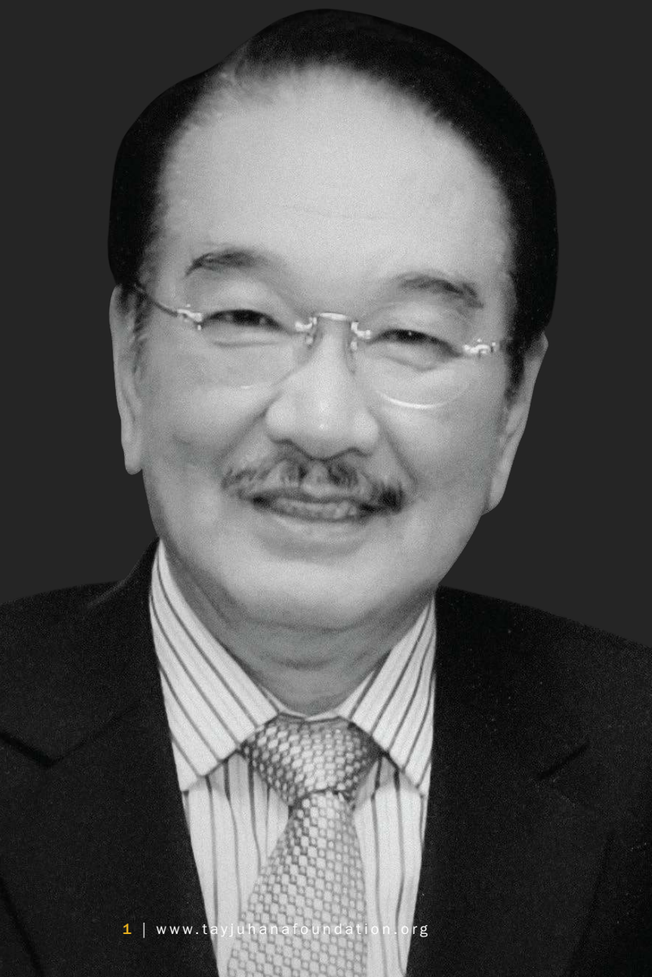
TAY JUHANA FOUNDATION

Providing Food for Humanity through Sustainable Agriculture in Suboptimal Land

OUR FOUNDER

Our foundation was named after our Founding Father, the late Mr Tay Juhana. In 1967, the Singaporean-born founder ventured to Indonesia's Jambi Province and planted his heart and soul to his work that is both innovative and socially inclusive. He later decided to adopt Indonesian citizenship and dedicated the rest of his life to his business and his people. Mr Tay always envisioned his workmanship to be holistic in all aspects and sought to build one that would simultaneously benefit farmers, business partners, customers and Mother Nature herself. With decades of tireless effort and endless perseverance, Mr. Tay turned his vision into reality one step at a time. As a result, his work has been known to consistently putting the balance of all pillars of sustainability (i.e. environmental responsibility, economic prosperity, and social justice) as its utmost priority.

Tay Juhana Foundation is not simply another legacy of Mr. Tay, it is the embodiment of the values of life that are essential to be embraced by all of us humans, in order to meet the needs of the present without compromising the ability of our future generations to meet their own needs.



> Always contribute to society.
> If you cannot contribute to society, do not be a burden to society.
>
> - Tay Juhana

ABOUT US

Tay Juhana Foundation (TJF) is a nonprofit organization dedicated to promote the advocacy on the conversion and cultivation of suboptimal lands into productive lands, through the most environmentally, economically, and socially sustainable manner.

Our approach is adaptive and philanthropic in nature, but very critical and constructive at the same time. We wish to be flexible towards both expected and unexpected changes and are always ready to face new challenges. Furthermore, we are willing to provide all resources we have for the greater good and are dedicated to utilize all available tools to achieve the greatest possible impact.

Our work is based on the premise that the prevalence of food insecurity and undernourishment still appears to be on the rise regionally and globally. This global situation is largely exacerbated by climate-related shocks, social conflict and violence, and other challenges caused by economic slowdowns.

More than **9.8 BILLION** World population in 2050

Legally established in 2013, TJF is now ready to play its role as an agent of change for the mentioned causes. We welcome any collaboration from both local and international communities. Various research, technology, and community development projects within the area of sustainable agriculture in suboptimal lands are expected to contribute in improving our food security while combatting the adverse effects of climate change and building self-sufficient communities.

We work with a sense of urgency and are committed to see problems from multiple perspectives. This motivates us to produce high quality result that can help and encourage everyone to do the same in their own capacity.

OUR VALUES

The principles that we apply throughout our work spectrum.

As the basis of our organizational drive in achieving tangible results through longstanding commitment, we have set the following core values. These core values are not mere platitudes; they are deeply instilled within all who represent our organization and responsibly manifested by them at all levels of our work.

Respect

We maintain our deep respect towards people and Mother Nature. We realize that the success of our mission depends largely on the active involvement of local people, partners, and all other stakeholders. It always becomes the utmost importance for us to demonstrate awareness and sensitivity towards local cultures, values, and traditions.

Innovation

We strongly value creative ideas and are committed to push boundaries to provide new, effective solutions to handle potential challenges coming our way. We encourage innovative experimentation with new approaches and commit to share the results to the world.

Collaboration

In resolving the global, interdisciplinary issues, we are open for collaboration with all layers of society that share mutual interest and earn the trust by being competent and constantly building rapport with them.

Evidence-based

Our work is based on the best available science and we are committed to continuously conduct the soundest scientific researches. We strive to be expert in our field and persevere to constantly be able to deliver impactful, evidence-based solutions.

Inclusiveness

We believe in the importance of the diversity of views and perspectives in our work, as well as the inclusion of diverse backgrounds, beliefs and cultures in our organization. We encourage inclusive dialogue so that everyone has the opportunity to offer their viewpoint at the table.

Sustainability

We put the balance of all sustainability pillars as our utmost priority. Our work must be implemented through the most environmentally, economically, and socially sensitive manners in order to produce tangible, long-lasting benefits for both the ecosystem and the people.

OUR VISION AND MISSION

Vision

An ensured food security for humanity and the achievement of relevant Sustainable Development Goals (SDGs) through environmentally, socially, and economically sustainable agriculture in suboptimal wetland, lowland, and flatland.

Mission

In order to achieve our vision, we are committed to:

- Catalyze research and development to advance sustainable agricultural innovation on suboptimal wetland, lowland, and flatland.
- Educate all the relevant stakeholders on effective water management system in wetland agriculture.
- Provide consultancy for independent and collaborative works on sustainable agriculture practice of suboptimal wetland, lowland, and flatland.
- Facilitate the advocacy to stimulate change towards food resilience through relevant policy recommendations.

OUR WORK

We have the legacy of over 50 years of practical experience in the field of sustainable cultivation of lowland, flatland, wetland, and peatland situated within the island of Sumatra, Indonesia.

Flatland

Flatland can be simply defined as the geographical area composed chiefly of land that varies little in elevation. It is notable for its flatness and lacks appreciable topographic relief.

Lowland

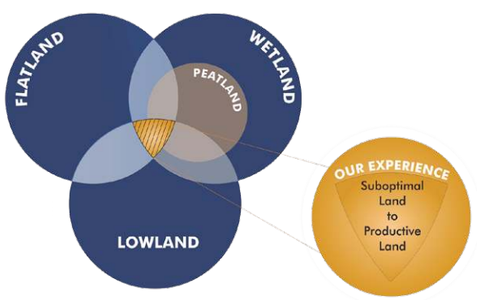
Lowland is considered as an area that is relatively lower than its surrounding and is usually not higher than 200 meters.

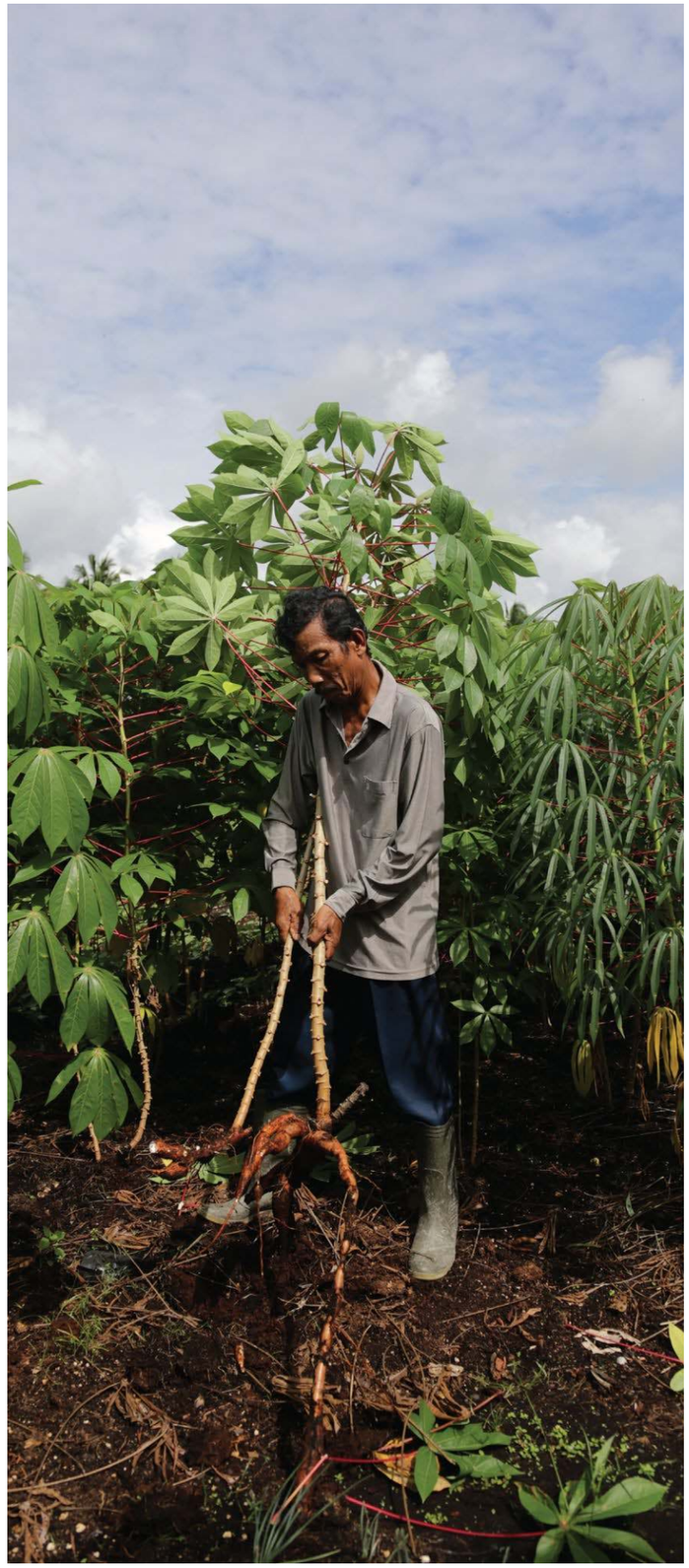
Wetland

Wetland is recognized as a land area that is saturated with water, either permanently or seasonally. This type of land was generally considered as unproductive or undesirable lands but they actually play important roles – as long-term storage of carbon dioxide (CO_2), pollutant remover, flood and erosion controller, and is home for a great variety of plant and animal species.

Peatland

Peatland, consequently, is a type of wetland terrain without forest cover that is dominated by living, peat-forming plants. It is normally in the form of a mixture of more or less decomposed plant material that has accumulated in a water-saturated environment and in the absence of oxygen.



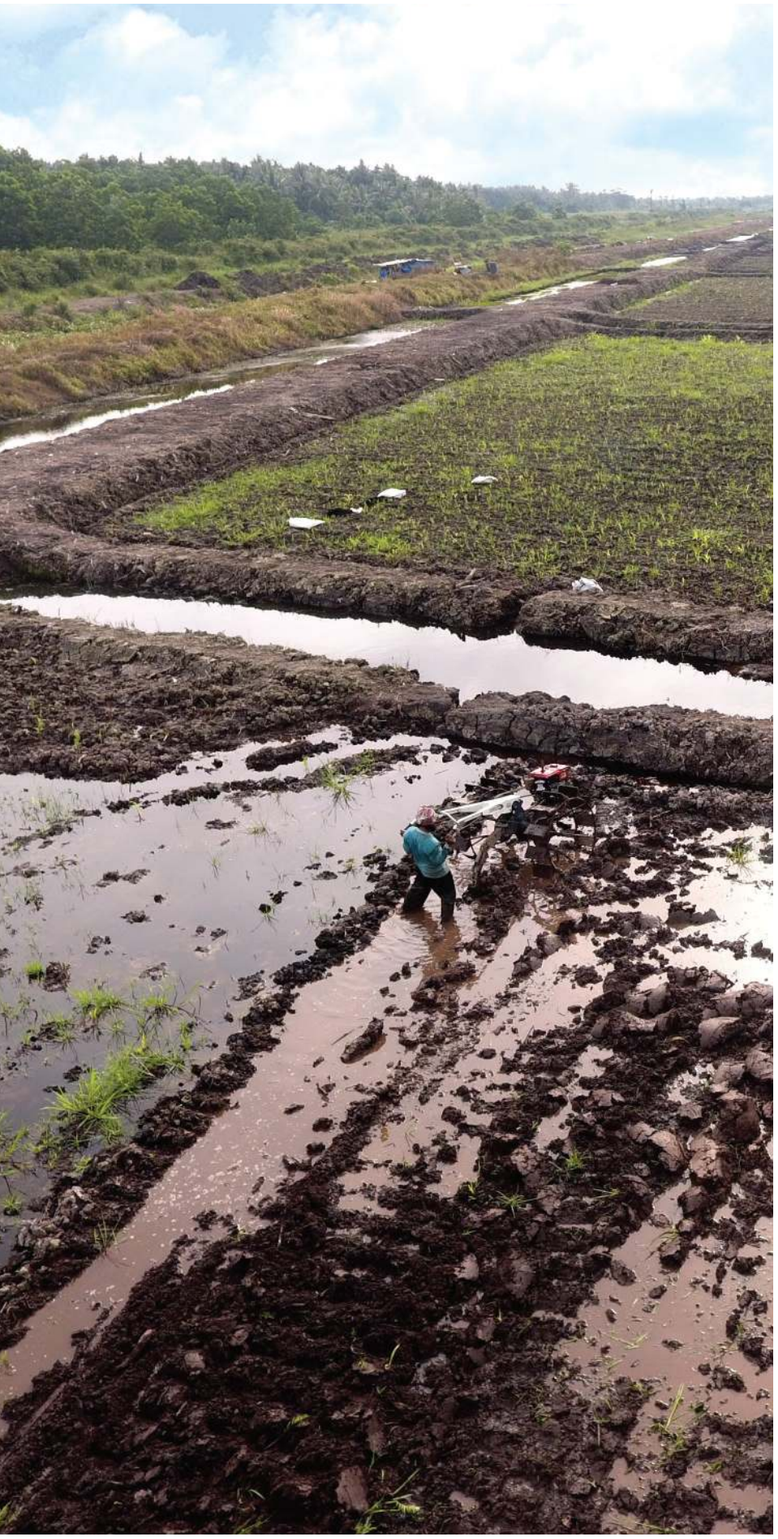


Our experience lies within the complex, intertwining point of all those types of land. **Over the last five decades, we have been committed to develop the most sustainable integrated system** to convert the relatively suboptimal lands into productive lands.

With the comprehensive plantation system and water management trinity that we have continuously studied and developed, we believe that the methodology we implement to cultivate such lands has achieved maximum economic and social impacts while the environmental deterioration level is maintained to be as minimum as possible.

By continuing to do so and with the support from all relevant stakeholders, we believe that not only we can ensure the food security for all but also contribute towards the achievement of at least eight Sustainable Development Goals (SDGs).

However, new challenges and trade-offs are definitely unavoidable and there is always room for improvement. Therefore, through this foundation, **we invite outside collaboration to improve our system and to achieve our main objective** in promoting the betterment of our food security hand in hand.



OUR APPROACH

Our strategy is to combine the experience that we have in implementing comprehensive water management system that resulted in a sustainable agricultural practice, with cutting-edge scientific studies and strategic partnerships.

Through the sound scientific knowledge, we aim to make our organization a well-trusted source of information, and through strategic collaboration with relevant external entities, we see the opportunity to leverage significant change.

Our Research Site

The main research ground of Tay Juhana Foundation located within 57,000 hectares of plantation that lies in an intertwined of flatland, lowland, wetland, and peatland in Pulau Burung sub-district of Indragiri Hilir regency in Riau province.

The plantation is maintained by Indonesian company, PT Riau Sakti United Plantations (PT RSUP), as a hybrid coconut (*Cocos nucifera*) plantation since 1985.

Situated in the tropical zone with a rainfall of over 2,500mm/year, the climate serves to be conducive for pineapples (*Ananas comosus*). Seizing this opportunity, part of the plantation has also been converted into sustainable pineapple farm since the early 1990s. The plantation is equipped with a competently staffed Research and Advisory Laboratory, whom TJF often collaborate, to support its research and development efforts in keeping the plantation highly productive through the most environmentally, economically, and socially sustainable manners.

In recent years, a patch of experimental multiple cropping project is set around the office area known as the Kilometer 9 (KM9). This area is used to study and observe the ability of other plants to survive and be cultivated in the similar type of lands.

So far, *Hylocereus spp.* (dragon fruit), Aloe vera, and *Allium cepa* (red onion) have thrived in KM9. TJF plans to facilitate further on this through research and development project on more essential Indonesian crops including rice (*Oryza sativa*), corn (*Zea mays*), and soya bean (*Glycine max*).

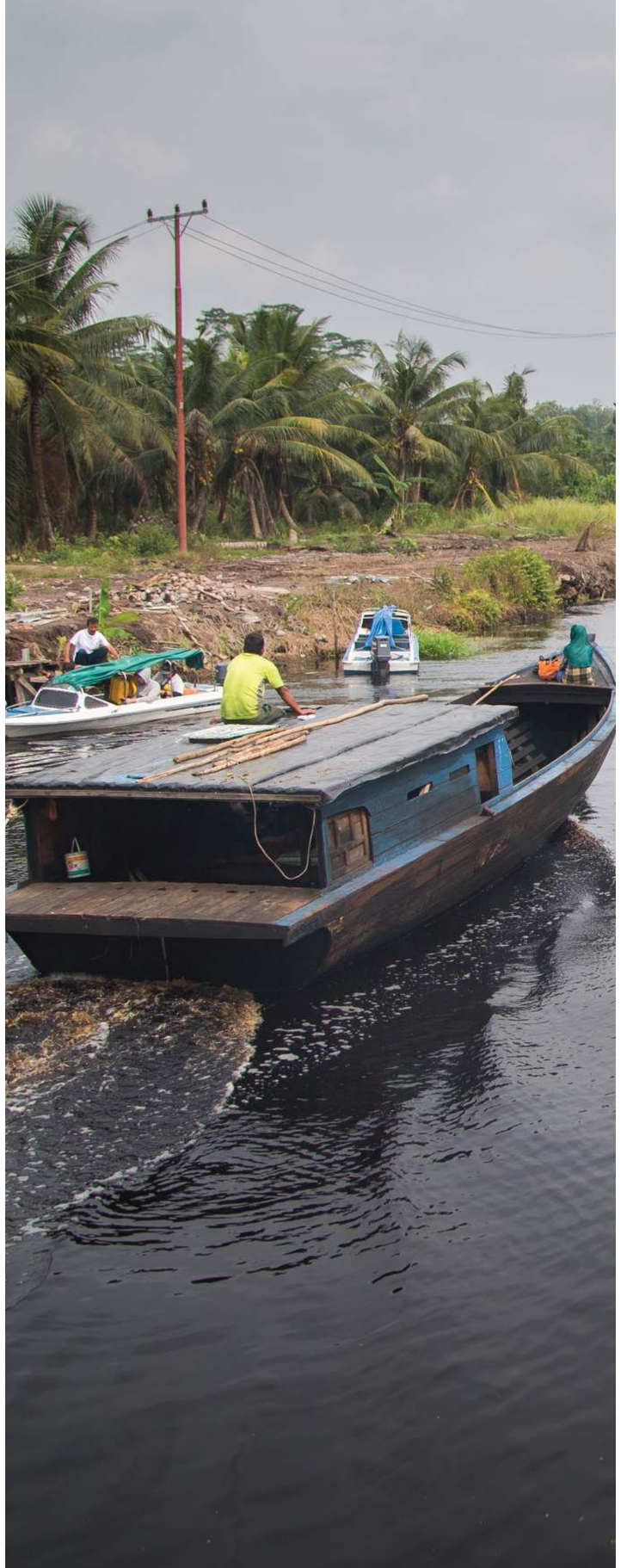
The Water Management Trinity

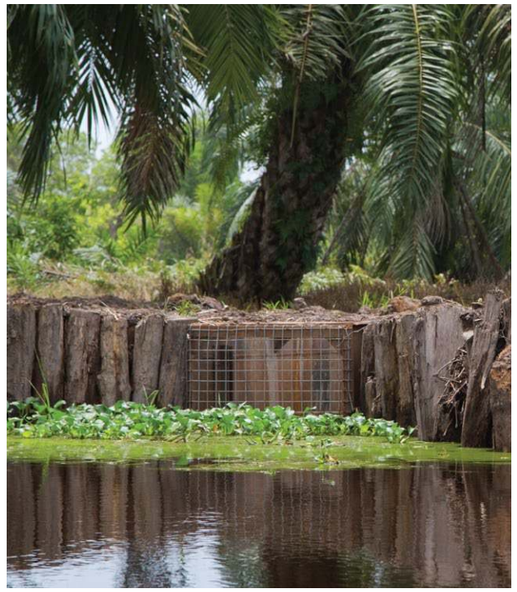
Although peat soil is fertile and suitable for coconut cultivation, it is highly porous that allows too much water seepage and excessive evaporation which become more serious during the dry seasons. During his days, Mr Tay worked on the water management system to address this challenge in Pulau Burung. It is still being used until now and has been acknowledged as first of its kind in the world.

The combination of a high annual precipitation rate, the existence of Bukit Barisan in western Sumatra, the low and flat characteristics of our lands, and partly due to the way Earth rotates, made our plantation a highly potential area to capture and store freshwater.

The water management trinity is basically capturing and keeping freshwater as a resource, instead of letting it leave back to the ocean.

The basis of our comprehensive plantation system largely lies on this inventive water management system. The system comprises of three main components (i.e. the Canals, the Dams and Water Gates, and the Dikes) and it supports three aspects of sustainability including the environmental, economic, and social aspects.





The Canals

Our man-made canals consist of the primary, secondary, and tertiary canals that add up to **more than 8,000 km in total**. It made available **more than 25 million m^3 volume of freshwater** all year round.
These canals hold four main functions:

- Water retention/reservoir
- Fire mitigation
- Freshwater supply for all purposes
- Transportation of people and the harvested crops.

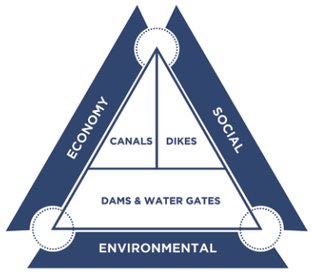
The Dikes

The dikes are maintained periodically with differing frequencies which depend on the age. Its design follows specific formulation which enables them to withstand the pressure better and last much longer. Our dikes are built all around the area where they hold important containment function to separate the seawater and freshwater and to effectively manage the water level.

The Dams and Water Gates

Their integral role is basically to act as the water level regulator as well as the locus of control of water retention. The gates control water distribution to individual areas and ensure adequate supply of water at certain levels is consistently maintained.

Environmentally, this water management system has been scientifically evident to enable our lands to be fire proof. It ensures our lands to receive the amount of water needed to keep the soil moisturized while slows down land subsidence and abrasion as the dikes and water gates minimize the rain to simply erode the top soil to the sea.



Water Management Trinity

Furthermore, this water management trinity ensures the constant provision of freshwater supply, that is a vital factor for regulating all economic activities in the vicinity, including the ones related to the agricultural development, industrial operation, and human survival. Consequently, it has managed to create direct and indirect employment opportunities. It reflects the social commitment that adds to the environmental and economic functions serves by our water management trinity. Most importantly, our water management system is proven to support the conversion of suboptimal land into productive land in the most sustainable manner. Cultivating the empty, non-arable land is more economically viable in a long run compared to expanding arable land in a habitable and/or densely-populated area.

The process may require higher initial investments such as initial treatment to make the land less acidic and the basic infrastructure to make the comprehensive system works. However, when one has successfully done it, it can produce a relatively better quality of arable land and requires less capital maintenance expenditure in the long run.

OUR WORK

Tay Juhana Foundation believes that we can pursue global food security by enabling sustainable agriculture practice in suboptimal lands using the approach that is most benefitting the environment, social, and economy dimensions for the surrounding area.

In spreading the message, TJF aims to disseminate its knowledge and technology by providing advisory service, particularly to develop, adapt, and implement the practices in other similar places. Therefore, TJF has three mission keywords which are considered as the core actions of our work:

Educating **Advocating** **Consulting**

During these initial years, TJF focuses its works on connecting and reaching out the targeted stakeholders. Besides using the online media platform, TJF has been actively participating in relevant events, strengthening its internal capacity, and building partnerships so that its work and research result can be accessible for the broader public and they can benefit from the new information and knowledge.

In the long run, TJF aims to work together with a range of relevant stakeholders to generate impacts for all. The stakeholders might include but not limited to:

Govenment **Academic Institution** **NGO**

Community **Media** **Private Sector**

Together with our stakeholders, we seek for opportunities to strategize and implement actions which are relevant to our causes.

TJF's future works might include, but not limited to several activities in the forms of:

- Research collaboration
- Book and article production
- Educational programs (e.g. campus visit, workshop, seminar, and scholarship provision)
- International events (e.g. conference, competition, and youth assembly)
- Advocacy forum and policy brief production
- Consultancy services (e.g. mentoring program, knowledge sharing, and module development).

GET INVOLVED

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