

Thailand mourns the late, great monarch, His Majesty King Bhumibol Adulyadej

His Majesty King Bhumibol Adulyadej, who was revered as the “father of the nation” among Thailand’s 67 million people, passed away 13 October, 2016.

The late Monarch was beloved among all his subjects – homes and businesses throughout the kingdom displayed His Majesty’s portrait in an honorable, prominent position, illustrating the people’s love for their king, who reigned for 70 years (1946 – 2016).

His Majesty King Bhumibol – the ninth King of the Chakri Dynasty – will be remembered as the Monarch who worked hardest to improve the livelihoods of all Thai citizens, through his comprehensive understanding of their living conditions. This earned His Majesty the well-deserved title of “father of the nation” from his people.

At His Majesty’s coronation ceremony, the monarch made the pledge that “We shall reign with righteousness for the benefit and happiness of the Siamese people”. Throughout his 70-year reign, His Majesty proved through his tireless efforts that he truly believed that it was the Crown’s duty to serve its subjects.

Following his accession to the throne, His Majesty King Bhumibol dedicated himself to visiting every part of his Kingdom. There was not a single location considered too remote for the young Monarch to travel to in order that the King could learn how his subjects lived and the struggles they endured in various rural and remote areas. His Majesty was often seen fording rivers or trekking up mountainsides in order to reach many of his subjects. The King was even known to fly by helicopter into remote areas that were inaccessible to even the sturdiest off-road vehicles. His Majesty was often accompanied on these expeditions by Her Majesty Queen Sirikit and their children. Such selfless efforts enabled Their Majesties to gain a clear understanding of all levels of Thai society.

Upon learning of the difficulties that his subjects experienced, His Majesty began researching projects and initiatives that could help alleviate their hardships and help to improve their lives. His research led to the creation of over 4,000 Royal Development Projects. Among these projects were an initiative aimed at helping hill tribe people who were engaged in unsustainable farming practices, as well as programs aimed at improving water management and reversing the effects of soil erosion. One project generated renewable energy from palm oil, while the Chaipattana Aerator received a patent and was successfully employed around the world.

As a visionary, His Majesty King Bhumibol understood that the attempt to improve the lives of the Thai people could not be a temporary effort, so to bring about real benefits to the people, projects were long-term while also aiming to sustain and protect the nation’s environment and natural resources.

The projects to help the hill tribe people were of particular importance to His Majesty, for these people were then deriving their income from growing opium in northern Thailand, in Chiangrai right in the heart of the notorious Golden Triangle. In the 1960's, His Majesty encouraged the promotion of crop substitution programs for the hill tribe people in northern Thailand, which over the years has successfully transformed the opium-growing areas into agricultural farms fully enriched with high-value products such as strawberry, coffee, macadamia, flowers and various fresh vegetables, generating stable income for tribal and rural farmers. The reduction in opium production also aided in reducing the number of drug addicted population within and outside Thailand. The clearest proof of the projects' success is that the Golden Triangle, once known to be a stronghold of drug mafia, is now a popular tourist spot in Chiangrai.

One of the main reasons for the success of the projects was the system used to manage them. His Majesty King Bhumibol did not issue simple orders or decisions. Rather, the King utilized a detailed consortium, which he had personally devised. The first step involved researching available data, then combined this with the information His Majesty gathered during his interactions with local people. Next, His Majesty would consult with academics and officials to ensure the best possibility of success for each project. Once this stage was completed, the initiative was passed on to the government for implementation.

While he worked tirelessly for the country, His Majesty King Bhumibol felt that his people would be better served if centers were created where research could be carried out for the benefit of the projects. The idea was that the variety of climates and ecological conditions found throughout the nation could be taken into consideration. With this in mind, the Royal Development Study Centers (RDSCs) were initiated. His Majesty opened six RDSCs, covering the country's major regions, from Chiang Mai and Chiang Rai in the north, where they help to advance the opium crop substitution projects, down to the southern province of Narathiwat.

Each center works closely with academics, the government and local communities on ways to apply research, along with modern agricultural techniques, to create sustainable livelihoods for people living in the areas using local resources while protecting the environment at the same time. Another unique feature of the centers is that they do not try to alter the land or disrupt local culture, but work hand-in-hand with the local people and resources available in each area.

There is no doubt that the Royal Development Projects and RDSCs greatly enhanced the quality of life for people living in Thailand's rural areas. However, His Majesty's most significant achievement was the creation of the Sufficiency Economy Philosophy (SEP), which was introduced in 1974.

The Sufficiency Economy Philosophy encourage people to live within their means and not abuse natural resources in order to enhance sustainability and create resilience to external challenges. The core principles are quite simple; live a life of moderation, applying reasonableness and self-control – this philosophy also aims to utilize a bottom-up approach. The Royal Development Projects and RDSCs has served as testbeds for various applications of the philosophy, such as the RDSC at Khao Hin Sorn, which tested practical application of the philosophy on farming and agriculture.

Over the course of more than 40 years, the philosophy has become ingrained among Thai citizens, regardless of their gender, age or economic status, and it has become part of their daily lives, particular following the hard lessons learned from the 1997 economic crisis. It has even become a key element among the business practices of large Thai corporations. The philosophy has not only taken hold throughout the kingdom, but was also adapted and applied in several other countries, such as the Democratic Republic of Timor-Leste, the Lao People's Democratic Republic and the Kingdom of Lesotho. Thailand also continues to share its positive experiences implementing the philosophy with the international community, such as the G77 countries.

His Majesty King Bhumibol's lifetime dedication to his people and his efforts to protect the environment did not go unnoticed within the international community. In 2006, His Majesty was awarded the first United Nations' Human Development Lifetime Achievement Award. The UN recognized that His Majesty's focus on helping to develop small-scale agriculture, farming technologies suitable for the country's geography and the proper management of water resources to better cope with drought and floods had in turn helped to benefit millions of His subjects living in the country's rural areas.

His Majesty was also awarded the IAUP Peace Award by the International Association of University Presidents in 1986, the UNEP Gold Medal of Distinction by the UN Environment Program in 1992, and the World Health Organization (WHO)'s Plaque in 2000, along with numerous other international awards, which all acknowledged His Majesty's dedication to his people and his country.

His Majesty's life-long devotion towards advancing and refining Thailand's agricultural sector resulted in a significant improvement in the welfare of Thai people and paved way for Thailand to become the world's number one net food exporter.

Through royal development projects, Thailand became self-sufficient through its ability to feed itself as well as the rest of the world.

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King Bhumibol Adulyadej: Thailand's International Monarch

His Majesty King Bhumibol Adulyadej, the “Father of the Nation” to the people of Thailand who passed away on 13 October 2016, led a remarkable life filled with valuable achievements. His Majesty's passing left an indelible influence not only on His people but also on the international community.

His Majesty was born in the United States in Cambridge, Massachusetts- being the only monarch born on US soil. Spending His formative years in Europe, mainly in Switzerland, His Majesty studied science and then politics before acceding to the throne in 1946. Despite growing up in the West, His Majesty was instilled by the Princess Mother, HRH Princess Srinakarindra, with the values and traditions of the Thai people. Thus, His Majesty's background was a unique convergence of Western and Eastern cultures. This was reflected in His Majesty having a wider range of interests than other Thais of His generation, ranging from the arts such as music, photography and painting, sports such as sailing- to scientific inventions and innovations. His Majesty King Bhumibol was a true “Renaissance Monarch” in every aspect.

His Majesty's grandfather, King Chulalongkorn the Great, also known as King Rama V, had guided Thailand into the modern era. The King enabled Thailand (or Siam as it was then known) to be the only country in Southeast Asia to not be struck by the wave of colonization. King Rama V achieved this by learning tactics from the West and by travelling to Europe in 1897 in order to make Siam known to the Western monarchs – to showcase them that Siam was a civilized nation and not a land of 'barbarians'.

Early in His Reign, His Majesty King Bhumibol Adulyadej followed in the footsteps of His illustrious forebear. In less than a decade, from 1959 to 1967, His Majesty, accompanied by Her Majesty Queen Sirikit, visited 27 countries. He met with important leaders of the world, reaffirmed ties forged in Europe during the time of Rama V, addressed the US Congress, and placed a small country like Thailand firmly on the international map. Apart from merely “showing the flag”, the trips were also opportunities for His Majesty to learn the best skills and practices from developed Western nations, which He would later utilize to the benefit of the Thai people.

After that period of international travel, His Majesty returned to Thailand and never travelled abroad again. When asked why, His Majesty responded that He wanted to understand Thailand better in order to help the Thai people. For the remainder of His Reign, His Majesty travelled to all the remote corners of Thailand, no matter how underdeveloped or difficult to reach, visited all of Thailand's provinces, and met with local residents from all walks of life – farmers, fishermen, merchants, local administrators – to listen to their views and needs. His Majesty provided technical advice to government agencies in forming solutions to help the common people, bringing about a synergy between local traditions and modern methods. During all of His domestic

travels, His Majesty was invariably accompanied by Her Majesty Queen Sirikit and other Members of the Royal Family. From a young age, Members of the Thai Royal Family were instilled with Thai culture and values, including the responsibilities to the Thai people. For this reason, They continue to work until this day to help support and improve the lives of Their subjects.

His Majesty consistently maintained that Thailand is inherently an agricultural country and should never abandon its roots- repeatedly emphasising that Thailand must be able to feed itself. His Majesty therefore attached a great deal of importance in helping agriculture flourish. He applied His knowledge in sciences, mainly acquired from His previous trips abroad, to create and support over 4,000 Royal Development Projects. The Projects focused on increasing the efficiency and effectiveness of farming methods, using modern techniques such as crop substitution, water management, reversing the effects of soil erosion, along with inventions and innovations such as artificial rainmaking, the Chaipattana Aerator and generating renewable energy from palm oil- many of which received patents domestically and abroad. Ultimately, this resulted in a significant improvement in the livelihood and welfare of the majority of Thailand's farmers.

In this holistic approach to sustainable development, His Majesty was a visionary far beyond His time. Almost every priority that the world now focuses on in the Sustainable Development Goals (SDGs), His Majesty had been advocating for and practicing for many decades. His Majesty first outlined the Sufficiency Economy Philosophy (SEP) in 1974, an approach that encourages people to live within their means and not abuse natural resources in order to increase sustainability and create resilience to external challenges. Its core principles, giving importance to living a life of moderation and applying discipline and self-control, are at the heart of sustainable development- a cause that the world now views as a priority agenda. Over the course of more than 40 years, His Majesty's philosophy continues to be ingrained in the minds of the Thai people, particularly following the hard lessons learned from the 1997 economic crisis. Currently Thailand continues to openly share its positive experiences and promote the philosophy with the international community.

The significance that His Majesty attached to agriculture has evolved Thailand into one of the world's leading agricultural powerhouses today. Now Thailand is not only able to feed itself; it also contributes immensely to the maintenance of global food security. Today, many of His Majesty's inventions and innovations, such as artificial rainmaking, are increasingly being applied abroad. Such remarkable achievements that have created a positive impact on a local and global scale have earned His Majesty the recognition and accolade of "Thailand's Development King" by the United Nations and the international community. This is a title well-deserved for His Majesty King Bhumibol Adulyadej in light of the incredible legacy He has left behind.

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The Royal Rainmaking

Water scarcity is one of the most pressing issues facing our world today. The United Nations estimates that more than 40 percent of the global population live in conditions where there is shortage of water. In most of the agrarian countries where agriculture represents a significant source of GDP, the need for water consumption in the sector has inflated to more than 80 percent of the overall demand.

In Thailand, farming activities take up almost 70 percent of total land use. This requires a high amount of water supply, mostly for the agro-industrial sector. The result is a sporadic dry spell throughout the country. Coupled with high levels of deforestation over decades, the lack of rainfall intensifies aridity, especially during the dry season.

Having shown interest in science and technology at a young age before enrolling in the Faculty of Science at the University of Lausanne, His Majesty King Bhumibol Adulyadej employed his knowledge based on his vision to improve the living conditions of the people, especially for disadvantaged farmers who continue to suffer from shortages of water. In 1955, during a visit to the most remote areas in Thailand's northeastern provinces, His Majesty observed how weather conditions were cloudy, yet not producing any precipitation. The incident marked the beginning of artificial rain making, acknowledged by Thais as the 'Royal Rainmaking Project'. His Majesty had realised the feasibility of this project after conducting a series of relevant research on meteorology and weather modification.

The first experiment was conducted on 1 July 1969 under the supervision of His Majesty, with Mom Rajawongse (M.R.) Debariddhi Devakula, an expert in agricultural engineering, as an assistant. With the initial result being a success, in 2003 His Majesty was granted a patent from the European Patent Office for weather modification through the Royal Rainmaking technology.

Ever since the invention was introduced, it has gone through a series of transformations, enabling transfers of technological expertise and attracting cooperation from different actors with a common hope to enhance the efficiency and effectiveness of the artificial rainmaking process. In doing so, the following steps are employed: 'agitating' to activate cloud formation by using weather modification techniques; 'fattening' to activate the accumulation of cloud droplets, and lastly 'attacking' to initiate rainfall from the cloud.

The project later evolved into the Bureau of Royal Rainmaking and Agricultural Aviation under the Ministry of Agriculture and Cooperatives. The establishment manifests the technology's success and practicality in alleviating the water resource management crisis in Thailand. In addition to this, the project serves as a basis for providing technical cooperation to countries with the same desire to combat droughts and improve water management.

The success of artificial rainmaking drew global attention and brought in requests for knowledge sharing from several Asian countries. The calling has been pronounced as far as the Middle East, where farmers suffer from arid climates and extremely long periods of dry season. Jordan, experiencing a range of 20-200 millimetres of rain annually, has so far been the only country eligible for the operation due to its uniquely disadvantaged geography and climate conditions. The operation is expected to ease the side impact of climate change suffered by the country, which causes a decrease in precipitation from 15 to 60 percent per year.

Since its birth in 1969, the Royal Rainmaking project continues to alleviate drought problem in Thailand's rural area enabling farmers to harvest without disruption. The Royal Rainmaking Project was made possible through His Majesty's persistent efforts, talent, skill and most importantly, a sincere and genuine regard for his people and country.

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