



Plant Genetic Conservation Project Under the Royal Initiative of
Her Royal Highness Princess Maha Chakri Sirindhorn (RSPG)



Background of RSPG

With realization of the importance of natural resources conservation especially the abundance of the flora, long before the wide adoption of the terms biodiversity and conservation in Thailand, His Majesty King Bhumibhol Adulyadej The Great created the first biodiversity site at Chitralada Royal Villa.

In 1960, HM King Rama IX asked the royal pages to collect resin tree seed along the road in Tha Yang subdistrict, Phetchaburi Province. He tried planting them at Phra Tamnak Piam Suk, Klai Kangwon Palace, and at an experimental plots at Chitralada Royal Villa together with civil servants, courtiers, academics and students of Kasetsart University on 28th July 1961.

King HM King Rama IX used Chitralada Royal Villa as an experimental site for his royal projects related to agriculture, biodiversity conservation where he planted the resin tree along side other plants in the experimental plots.

HM King Bhumibhol The Great, along with HRH Princess Maha Chakri Sirindhorn, presided over the opening ceremony of the tissue culture laboratory of his royal project inside Chitralada Royal Villa

Carrying on the Royal Determination in Conserving the country's resource bases

In June 1992, HRH Princess Maha Chakri Sirindhorn has carried on his father's determination by initiating the conservation of Thailand's flora by founding a seed bank. Such an initiative marked the origin of RSPG

Since its foundation, RSPG has been operated according to the five-phase-masterplan of the first to sixth year as can be further inquired by following the QR Codes



The Symbolic Plant of RSPG

HRH Princess Maha Chakri Sirindhorn graciously granted the use of Chompoo Phuka (*Bretschneidera sinensis*) as the symbolic plant of RSPG

Chompoo Phuka (*Bretschneidera sinensis*) is a rare and endangered plant, worth conserving following her royal initiative.

Scientific Name: *Bretschneidera sinensis* Hemsl.

Genus: BRETSCHNEIDERACEAE

The tree of Chompoo Phuka (*Bretschneidera sinensis*) can be up to 25 meters in height with smooth grey bark with feather like compound leaves of 30-80 centimeters long. The tree has no petiole and the leaves are lanceolate to oval shape with 2.5-6 centimeters width and 8-25 centimeters long. The base of their leaves are unequally round with pointed tips. The flowers are pink in color and bell-shape form. The tree burgeons in long bouquets with wapproximate length of 40 centimeters. Each flower has 5 broad oval shape petals rolling outward on top of a slightly serrate cup-shape base petal. Its size is approximately 1.8 – 2 centimeters. The upper petals usually bend downward with 8 spindle shape stamen pods which cracks into 12-20 millimeters seeds when mature.

Chom Poo Phuka is one of the world's endangered floral species which, in Thailand, is uniquely found at Phu Ka National Park, Nan Province with altitude of 1,980 meters above the sea level.

Mount Phuka is one of the highest peak of Luang Phra Bang Mountain Range and is believed to be one of the highest peaks of Thailand. With these unique conditions, Mount Phu Ka has a very unique hill evergreen forest ecology, tropical rain forest as well as mix deciduous and deciduous dipterocarp forests. It is also a watershed forest of the Nan River as well. Chom Poo Phuka is the most unique plan species that can only be found in the area. It is a local plat of Thailand and one of the world's rarest specie. Around thirty years ago, it was report that Chompu Phuka was also found in China's Yunnan Province which is believed that it has become extinct.

Source of information: Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment

Video Clips demonstrating the operation of RSPG following the five-phase masterplan covering 1st to 6th year



1st Five-Phase

RSPG Masterplan



2nd Five-Phase

RSPG Masterplan



3rd Five-Phase

RSPG Masterplan



4th Five-Phase

RSPG Masterplan



5th Five-Phase

RSPG Masterplan



6th Five-Phase

RSPG Masterplan



The Ultimate Goals

To develop manpower, to conserve and develop natural resources for the benefit of the Thai public

Objectives:

1. To make aware of the significance of natural resources
2. To brainstorm and pool efforts until the benefit is derived in the Thai public
3. To make available an information system that can commonly accessed throughout the country

RSPG operates with more than 200 organizations that help fulfill the initiatives of HRH Princess Maha Chakri Sirindhorn. All of these organizations are granted with the royal permission and can be categorized into ten groups depending on their missions. There are also networks that voluntarily contribute to the fulfillment of the royal initiatives as well namely School's Botanical Gardens, and members as well as local resources databases.





Implementation of RSPG's Masterplan

7th Five-Phase RSPG Masterplan
(1st October 2021-
30th September 2026)

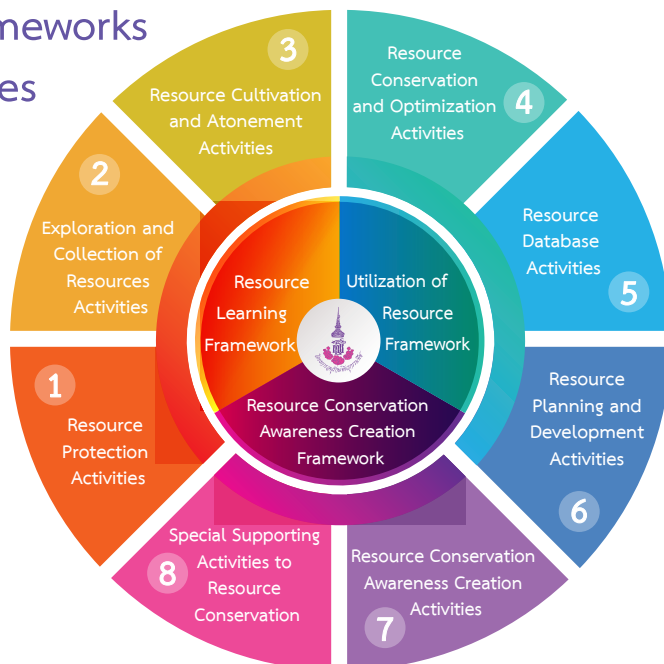


Conservation and Development of Natural Resources Databases namely Physical Resources, Biological Resources and Cultural and Local Wisdom Resources with with 3 frameworks of operation through 8 activities. Each masterplan covers the period of 5 years.

Masterplan Implementation Through 3 Frameworks and 8 Activities



7th Five-Phase RSPG
Masterplan Video





First
Framework

1 Resource Learning Framework

First Activity: 1. Resource Protection Activities

The aim of this activity is to protect the natural forest areas under the occupation of organizations that are granted with the royal permission to fulfill the royal initiatives and other organizations, both in the public and private sectors, that have natural forest land plots under their occupation and have no policy to change the land use under the conditions that such land plots must neither be under the occupation of the Department of Forestry nor the Department of National Parks, Wildlife and Plant Conservation. Besides, the land plots must not be the quarreled land with local communities.

The activities also aim at cooperation with the Department of Forestry and Department of National Parks, Wildlife and Plant conservation in converting the areas under their occupations to appropriately fulfill the royal initiatives as well as exploration of the resources within the areas in order to protect them.



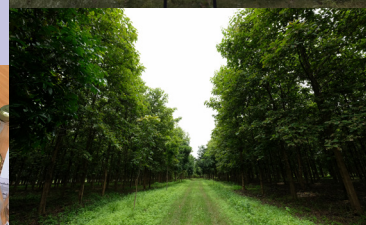
Second Activity: 2. Exploration and Collection of Resources Activities

This activity aims at exploration and collection of resources namely physical resources, biological resources, and local wisdoms within the 50 kilometers or more radius of the organizations that are granted with the royal permission to fulfill the royal initiatives under the condition that such areas must be certainly known for its transition from its original states such as transition from forest to orchards, or areas in islands that is transiting to tourists attractions, areas under accelerated development for road and other types of constructions. RSPG principally considers the readiness and potential of the main organizations in each area. They have to coordinate and seek permission to legally cooperate with local administrative authorities, the Department of Forestry, The Department of Marine and Coastal Resources, The Department of National Parks, Wildlife and Plant Conservation.



Third Activity: 3. Resource Cultivation and Atonement Activities

These activities aim to bring valuable or endangered resources that might need to be quantified by selecting those found through the first and second categories of activities to continually bring the species, biological resources to breed, cultivate or propagate ex-situ in safer areas. These activities are called resource cultivation and atonement activities by organizations granted with the royal permission to fulfill the royal initiatives such as resource genetic curative areas of RSPG's affiliated organizations that can be in the cultivation plots, in the laboratories, in breeding kennels. The resources are stored in various forms including seeds, tissues, genetic codes (DNA) in laboratories in the affiliated organizations including RSPG's own laboratory inside Chitralada Royal Villa, dedicated areas in the 6 learning and development centers derived from the royal initiatives across the country, research center and stations of Department of Agriculture, Zoological Parks Organization, local authorities, educational institutions which can be schools' botanical gardens, arboretums, or areas in community forests



The Second
Framework

2 Utilization of Resource Framework

Fourth Activity: 4. Resource Conservation and Optimization Activities

The aim of these activities is to study and apprise the potentials of the collected and curated plant and other genetics from 1st to 3rd activities or resources that have been selected by affiliated organizations or local authorities and seek means to further conserve or optimally utilize them. The resources are from the three bases namely physical resources, biological resources, and cultural resources and wisdom. There are planning and research on the potential of such resources that would result in products that benefit local communities and the country as a whole. These research projects might lead to the developments of floral, faunal and microorganismal development as well as sustainable conservation and utilization measures that would not make such resources extinct.

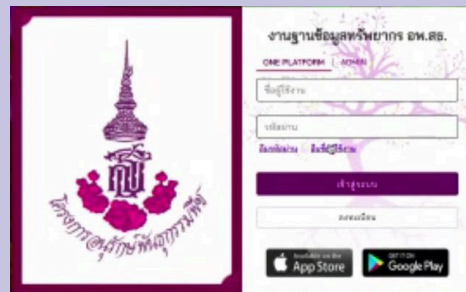




RSPG's databases serve as the bases on which resource utilization can be sustainably planned. The information in the database is also used for the development of plants and other resources as well as their respective registrations.

Fifth Activity: 5. Resource Database Activities

The aim of these activities is to make available databases of the country's resources. RSPG's owned databases at Chitralada Royal Villa together with other affiliated organizations record information of the explorations and collections. All three bases of the resources are studied and conservation is assessed such as dried plants database, research database, RSPG's resource database, marine animal database, microorganism database and other data derived from all RSPG's activities. These activities are recorded in RSPG's database through applications and is displayed on the database that connects to other databases.



Sixth Activities: 6. Resource Planning and Development Activities

The aim of these activities is to develop and improve the genetic improvement according to the needs of the local communities. RSPG is responsible for coordinate with experts in the field from its affiliated organizations and educational institutions such as plants by analyzing the information related to plant, animal and microorganism genes stored in the databases leading to the data analyses and the clone selection. The selection clones serve as the sources for plant propagation with long-term development plans. The plans are presented to HRH Princess Maha Chakri Sirindhorn to bestow to the affiliated organizations that are ready to implement. Targeted plants, animals and other living things include herbs, local plants that normally lead to an improvement plan appropriate for propagation in different geographical conditions of different parts of Thailand.





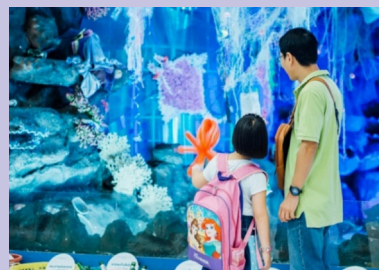
Third
Framework

3

Resource Conservation Awareness Creation Framework

Seventh Activity: 7. Resource Conservation Awareness Creation Activities

The aim of these activities is to make Thai youth understand and aware the significance and benefits of all three bases of the resources. Optimally, they should love and cherish their own national resources and know how to sustainably utilize them which would lead to managerial directions, conservation and sustainable utilization based on resources that are really available. These activities include school botanical gardens with RSPG acts as the consultant. It makes available the operation handbook with operation guidelines. RSPG also provide coordination, cooperation and supports to schools and other educational institutions. Similar supports are also provided to the museum projects of other affiliated organizations that help fulfilling the royal initiatives. These museums serve as the learning center that would lead to the creation of awareness of the importance of resource conservation.



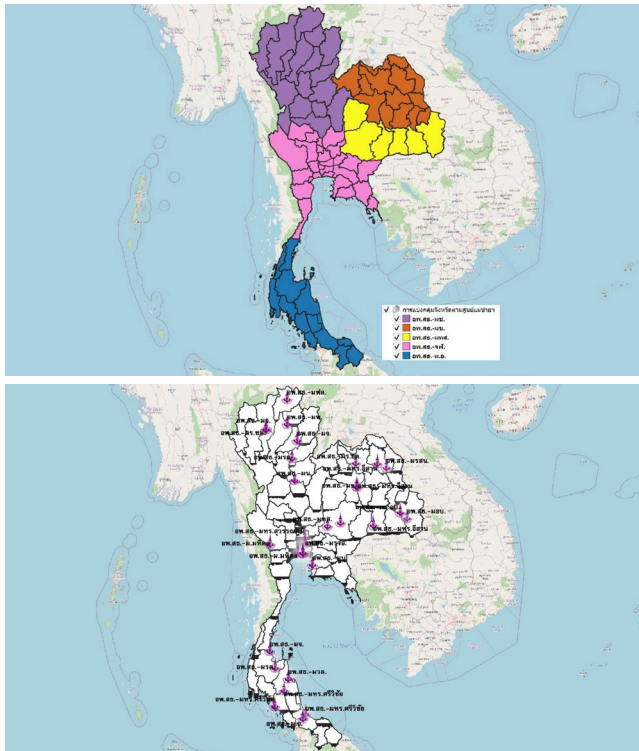
Video clip of local
resource database

Eighth Activity: 8. Special Supporting Activities to Resource Conservation

The aim of these activities is provide opportunities to both public and private organizations to support the operation of RSPG in different forms such as supporting fund for RSPG or affiliated organizations that help fulfill the royal initiatives in different RSPG masterplans. RSPG also support the administrative bodies of municipalities and districts to operate their respective local resource database. The department of local administration has a mandatory policy that all local authorities are member of local resource database as to further develop the resource database of RSPG which would further lead to concrete conservative actions.



In 2018, during the 5th phase and 6th year of RSPG masterplan implementation, HRH Princess Maha Chakri Sirindhorn deemed appropriate that the coordination hubs should be established.



Hub Coordination Universities and RSPG Coordination Hubs are created by the royal permission and act as the representative of RSPG in designated areas and coordinate with concerned parties to drive the implementation of tasks in the masterplans.

RSPG enables the universities all over the country to volunteer to become the coordination hub according to their respective readiness under the framework of the 8th activity, Special Supporting Activities to Resource Conservation. University Coordination Hubs are supervised by their respective RSPG masterplan implementation committees chaired by the presidents.

RSPG Foundation

On 30th September 2008, HRH Princess Maha Chakri Sirindhorn urged RSPG to found Plant Genetic Conservation Her Royal Highness Princess Maha Chakri Sirindhorn Foundation (RSPG Foundation) to support the goal attainment of RSPG. On 30th May 2011, The Ministry of Interior presented the registration document of RSPG foundation with the main seat located at the office of RSPG inside Chitralada Royal Villa, Suan Chitlada subdistrict, Dusit district, Bangkok



RSPG Foundation

RSPG Way: Honest Determined Develop Harmonious Conscientious

RSPG way is the concept and guidelines that are stemmed from its motto. It was inaugurated in September 2013 after 10 years of operation from the moment that HRH Princess Maha Chakri Sirindhorn has talked to the Lord Chamberlain in 1992 and RSPG has been implemented since 1993. The motto serves as both the order the guidelines for RSPG staff in terms of thought, behaviors. The motto comprises 5 principles namely **honest, determined, develop, harmonious and conscientious**. Each principle means the followings;

Honest: Be honest to oneself, to one's own responsibilities, profession, superiors, inferiors, colleagues

Determined: be faithful and determined to accomplish one's tasks for genuine benefits

Develop: develop knowledge, science, work quality, quality of life, and develop oneself to be ready for greater responsibilities and assignment, learn, study, research, knowing thoroughly, know how, know how adopt sustainable development principles, develop one's own physical and mental health to be come strong and self-sufficient.

Harmonious: be cooperative in brainstorming and carrying out to fulfill the initiatives of both the King and RSPG.

Conscientious: be responsible, honest, loyal, patient, harmonious, generous, merciful, sympathetic, observe the ethical principles. It can be seen that these principles are related one to others. The first guiding principle is honesty while being helmed by conscientiousness that direct one's thought and acts towards his/her deeper sense of responsibility. The motto is derived from the human resource development philosophy of HM King Rama IX on responsibility. According to such a principle, being responsible is knowing one's duties, being well disciplined, being punctual, be striving towards excellence, being courageous, being considerate. If one is responsible in such a sense, he/she would succeed in all endeavors. Other conscientious principle will automatically follow. Finally, by observing ethical principles according to their own faith. Any organization can urge their staff to observe the ethics according to their own faiths, such an organization would succeed and prosper as well as become a happy workplace.



RSPG

“ To love natural resources
is a part of patriotism. ”

Plant Genetic Conservation Project Under the Royal Initiative of
Her Royal Highness Princess Maha Chakri Sirindhorn (RSPG)

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