# Library and Sustainable Environment Management Report

Proposal for IFLA Green Library Award 2020

By

Rangsit University Library, Pathumthani, Thailand



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# Rangsit University Library and Sustainable Environment Management Report



This report presents the story of Rangsit University Library pursuing an environmentally friendly organization as "Green Library& Green Office", inspired by the global sustainable development goals. Rangsit University Library (Pathumthani, Thailand) was established in 1985 at the same time with Rangsit University establishment project. Since 2016, Rangsit University Library has adopted the TLA Green Library Standards (which developed by the Thai Library Association), the National Green Office standards and UN Sustainable Development Goals (UN SDGs) as the managerial frameworks. To achieve the goals, the policy, action plans and project proposals have been developed and implemented.

Over the last few years, the Library has implemented more than 30 projects and activities to support the sustainable environment management goals. The projects and activities responded to the environmental and sustainable development goals included management review an continuous improvement; selfawareness communication; energy and resources; waste and waste water; environment and safety; green procurement; green resources; and 9 UN SDGs, namely, Goal 1 No Poverty; Goal 4 Quality Education; Goal 5 Gender Equality; Goal 8 Decent Work and Economic Growth; Goal 9 Industry, Innovation and Infrastructure; Goal 10 Reduce Inequalities; Goal 11 Sustainable Cities and Community; Goal 16 Peace, Justice and Strong Institutions, and SDG 17 Partnership for the Goals.

With the result of having global and community self-awareness, social responsibility, continuous effort of team working and managerial supports, the Library received the TLA Green Library Award in 2017; National Green Office Gold Award (Excellence) in 2019; and Carbon Neutral Library (Organization) Certification in 2019.



# Background

# **About Rangsit University**

Rangsit University is situated in Lak-Hok sub-district, on Paholyothin Road, Pathumthani Province, Thailand. The University is surrounded by a Muang-Ake Village Community. Located in excellent surroundings comprising a complete range of facilities such as a golf course, swimming pools, tennis courts etc., with pure and bracing air, the area is thus a perfect spot for the establishment of an institution of higher education.

Rangsit University is a private institution of higher education with the primary aim of creating graduates in the area of study meeting the requirements of national development by focusing mainly on science, technology, design and management including independent professions which are requisites in development of one's own career.





The notion for the establishment of Rangsit University has been conceived for a long time by Mr. Prasith Ourairat (Former Provincial Governor of several provinces, the Ex. Chairman of Expressway Rapid Transit Authority of Thailand and Former Deputy Governor of the Greater Bangkok Metropolitan) when he was still in civil service that he would summon the support of his beloved ones to develop an activity contributing fully to the benefits of the society with the aspiration that "we will work towards forging the youth and the new generation into becoming graduates or scholars fully equipped with knowledge and ethics"



The Founding Committee of Rangsit University consist of educationists, academics and specialists from various government enterprises who share the same opinion that higher education in Thailand is still insufficient to cope with the demand especially in the fields of science, technology, design and management.

To attain the above goal, Rangsit University has determined a clear direction in organizing the educational system as follows:

- Emphasis on standard of education and academic excellence, developing the curricula, study programs and areas of study so as to be in line and timely with the economic and social changes.



- Promote theoretical study in conjunction and in association with practice. Apart from training or learning directly from businesses, industries or enterprises in the area of his/her own study, further effort is made in encouraging the various faculties and departments in the University to become organs or units of operation in themselves with the aim that all the organs will become part and parcel of education and furthermore as another way of serving the community as well.

On study and teaching, the University aims at promoting the right attitude towards education i.e. encouraging the student to be bent on craving for knowledge and an enthusiasm in serious self-study, which will become an important foundation for his life. Apart from arranging the natural setting of the University so as to have atmosphere conducive to education, the University also gives due importance and make arrangements for educational media, modern teaching techniques, provision of a standard library containing books, magazines, with a mixture of various kinds of electronic media including online databases and Internet Service which the student may access for researching and studying individually, and provision of sufficient number of quality instructors on a regular basis for the purpose of instruction and taking close supervision of students.

Rangsit University has started enrollment of students since its first batch in 1986 under the name of Rangsit College and later on July 31, 1990, the institution has been categorized as a university. On November 29, 1990 Her Royal Highness Somdij Phrathep Rattanarajsuda Siam Boromarajkumari kindly presided over the University's founding ceremony which was a greatly auspicious and blessing occasion.

Rangsit University is the only private university which has been assessed on education standard quality by the Office for National Education Standards and Quality Assessment (Public Organization) and rated "Very Good". The curriculums are broadly categorized into five groups as follows:

**Faculties of Medial and Health Sciences:** College of Medicine, Faculty of Dentistry, Faculty of Pharmacy, Faculty of Medical Technology, Faculty of Nursing Science, Faculty of Physical Therapy, Faculty of Science, Faculty of Opt ology and College of Oriental Medicine.

**Faculties of Engineering and Technology:** College of Engineering, Faculty of Information Technology, College of Agricultural Innovation Food and Biotechnology and Institution of Aviation.

**Faculties of Humanities and Social Sciences:** College of Social Innovation, College of International, Institute of Diplomacy and International Studies, Faculty of Liberal Arts, Faculty of Communication Arts, Faculty of Law, Faculty of Education and Graduate School. **Faculties of Art and Design:** College of Design, Conservatory of Music, Faculty of Architecture, and Faculty of Digital Art.

**Faculties of Economics and Business Administration:** College of Government, Faculty of Business Administration, Faculty of Accounting, College of Tourism and Hospitality and Faculty of Economics.

Currently there are total of 141 programs; 94 undergraduate programs, 37 Master Degree programs, 1 Graduate Diploma and 9 Doctoral Degree programs.







# About Rangsit University Library

Rangsit University Library was established in 1985 at the same time with University Establishing Project. Two years after that, the expansion of the Library has been remarkable. The new library building was constructed in 1987 and finished in 1989. The new building occupies the total area of 9,300 square meters and can serve more than 2,000 users and contain 4,000,000 volumes approximately. At present, Library collection consists of books, periodicals, digital media and electronics databases. The materials cover the subject areas corresponding to the University's academic curriculum, divisions and centers.

### Policy of the Library:

The library has the duty to provide academic service to the users of the University in order to enhance the quality of education and efficiency in teaching and research in the University.

### **Objectives:**

1. To offer academic service to the users by supplying and developing up - to date information resources, so that they are in the quantity and quality suitable for the University's programs and possessing high efficiency in accordance with international standards.

2. To develop the sources of information of the University by gathering all types of information resources in terms of personnel and units within the University for an efficient using and thereby eradicating the problems about shortage of information resources.

3. To expand the scope of academic service to the users in order to be able to share the information resources with external units for the common interests in developing the country.





The library has 25 staffs (13 professional librarians and 12 non-professional clerks). At present, the library owns 38,282,897 pieces of information resources which 99 percent are digital. Beside the basic services, the Library provides library orientation & tour, research support service, interlibrary loan, liaison librarians, digital literacy and educational application trainings and workshops, and 24 hour co-working space.

The Library is digital library which implementing the modern library automated system in technical and user services, and subscribing the global academic online databases for example, Scopus, Science Direct, Wiley, EBSCO, IEL/IEEE, etc. Modern technology such as RSU e-Book on mobile applications, RFID technology, and smart gate system are implemented. The University Archive is part of the Library where presently consists of 8,500 historical records and archival materials. The archival document database can be accessed and downloaded via online.

Regarding the social and community responsibility, the Library provides the people in the village and neighborhoods to access the Library for free. Additionally, there are CSR events for teachers and school students around the campus, villagers, minority community, provincial prisons, woman correctional institution and juvenile observation and protection centers.

The Library serves students, faculty members, university staffs and public with the aim to provide the academic service, creative environment, life-long learning, and reading promotion and recreation. Each year there are more than 20,000 students, 2,500 faculty members and staffs and 2,000 public users visiting the Library. On the year 2019, the user access statistic was 1,326,726 and user satisfaction survey was at a very good level (4.09 out of 5.00).

# Sustainable Environment Strategic Frameworks

The environmental conservation has been focused by Rangsit University since 2004 when there was an energy crisis in Thailand. The University announced the first Energy Conservation Policy in 2004 and then following with the revised ones in 2016 and 2017 respectively. Its main indicator is to reduce at least 5 % of energy consumption.

The Library, following the University policy on the energy conservation and the awareness on the environmental sustainability, announced its Energy and Environmental Conservation Policy on September 28, 2017. Later, the second one was announced on March 20, 2019. The significances on the policy were as following:-

1. Energy and Environmental Conservation be part of library management

2. Library be green/eco-friendly organization

3. Information resource collection of ecological environment and energy conservation be built and expanded

4. Communicate for self-awareness on energy and environmental conservation

- 5. Be partner/network for the goal achievement
- 6. Greenhouse affects assessment and carbon neutral
- 7. University must support the library management in achieve the goal
- 8. Assessment for continuous management and improvement

In this regard, the Library has mainly applied these 3 frameworks in developing the strategic and action plans for sustainable environment management. They are United Nation Sustainable Development Goals (UN SDGs), TLA Green Library Standard and Nation Green Office Standard.

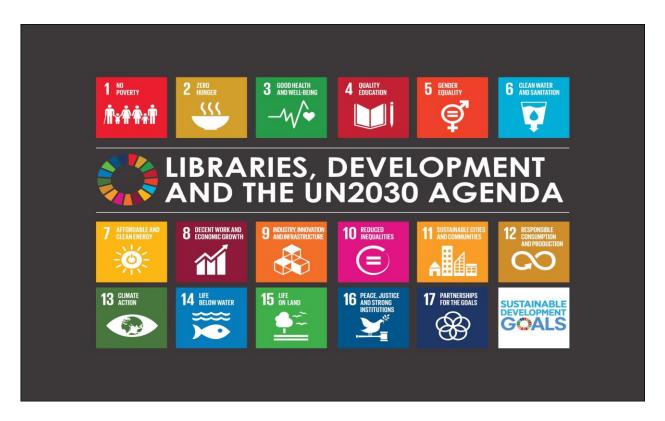
### 1. United Nation Sustainable Development Goals (UN SDGs)

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while



tackling climate change and working to preserve our oceans and forests (United Nations (2020).

As being the member of Thai Library Association, and following up with IFLA's roles and concerns with climate change and global sustainable development, the SDGs has been emphasized and promoted to every library membership in Thailand. Likewise, Rangsit University Library has considered and taken the UN SDGs as one of its development framework.



### 2. TLA Green Library Standard

Thai Library Association (TLA) has developed and announced the first Green Library Standard and its criteria on April, 30, 2016. Then in 2017, the second (and present) Green Library Standard was revised and announced. Library is a space for learning and creativity as well as a model for society in regard with energy and environment conservation. The Standards aims to develop a framework for green library development. The established standards and criteria for green library development will help the library to be able to manage energy and environment systematically with efficiency.



The standard consists of 8 criteria:-Section 1 General, defining vision, mission, strategy Section 2 Physical and environmental-friendly infrastructure Section 3 Resource and energy Section 4 Waste and pollution Section 5 Library management and service to promote energy and environment conservation Section 6 Roles of library personnel and relevant parties Section 7 Network and collaboration between libraries Section 8 Assessment of the green library quality

In 2015, Rangsit University Library joined the Thailand Green Library Network and adopted the TLA Green Library Standard to its practices. The Library has been audited and passed the Green Library Standard Criteria to become "Green Library" on December, 20, 2017

### 3. National Green Office Standard

After achieving a green library award, the Library was interested with adopting the National Green Office Standard developed by Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment. The Green Office Standard and its criteria emphasize on the good environmental management. Its criteria can be implemented in behavior changing in the office, reducing energy consuming, and initiating environmentally friendly activities.

> The standard consists of 6 criteria:-Section 1 Defining policy, mission, plan Section 2 communicating self-awareness Section 3 Resource and energy Section 4 Waste and waste water Section 5 Environment and safety Section 6 Green procurement

The Library adopted this Green Office Standards in 2018 and announced to go for green office/green organization by 2019. Finally, on September 2, 2019, the Library has been visited and evaluated by the National Green Office Auditing Committee and passed all criteria with an excellent level.



# Plans, Tasks and Activities

The Library has initiated and implemented more than 30 projects and activities in serving the goal for sustainable Environment Management. The projects and activities responded to the environmental and sustainable development goals are as following:

# Go Green Projects: Green Library and Green Office

### Task 1: Management Review

- 1.1 Steering committee and acting committee establishment
- 1.2 Go Green policy and mission development and announcement
- 1.3 Strategy and action plan development
- 1.4 Green working standards and procedures development

### Task 2: Self-awareness communication

- 2.1 Green knowledge training and sharing for library staffs
- 2.2 Knowledge sharing and workshop for users and University staffs in other related units (Craft invention from waste)
- 2.3 Go Green exhibitions (physical and online)
- 2.4 Go Green Campaigns in library building and around campus

### Task 3: Energy and resources

- 3.1 Energy and resource conservation guidelines
- 3.2 Green meeting, green exhibition and green travel guidelines
- 3.3 Energy Conservation Promotion Campaigns (Electricity, Water, Fuel, Paper)
- 3.4 Energy and Resource consumption records (Electricity, Water, Fuel, Paper)
- 3.5 Environmental friendly product usage

### Task 4: Waste and waste water

- 4.1 Waste management
- 4.2 Waste separation and measurement
- 4.3 Waste campaigns: Reduce, Reuse, Recycle
- 4.4 No plastic and no foam campaigns
- 4.5 Waste water treatment

### Task 5: Environment and safety

- 5.1 Green Landscape around the Library building
- 5.2 Air, temperature, light, and sound management inside the Library building (LED light bulb change; Light measurement in reading area and office)
- 5.3 Pollution management (Non-smoking building)
- 5.4 Safety management (Basic fire fighting and evacuation fire drill training)

### Task 6: Green procurement

- 6.1 Environmental friendly product purchasing (Green label product)
- 6.2 Environmental friendly product and services consumption (Library shirt by cool mode fabric; traveling via green transportation and green hotels/accommodations)

### Task 7: Green resources

- 7.1 Green collection development and service Information resources on environment and related fields
- 7.2 Green corner reading area

### Task 8: Greenhouse gas management

- 8.1 Library carbon footprint profile
- 8.2 Library staff carbon footprint calculation
- 8.3 Library carbon neutral/carbon offset



# Plans, Tasks and Activities (continued)

# Environmental Sustainable Organization By UN SDGs Approach

As an academic library, the missions are to serve its users in academic perspectives such as teaching-learning process, research and innovation development by promoting information and digital literacy and offering an opportunity to access to information. The library also serves as the institutional knowledge repository and communicating knowledge and innovations to community and public. Moreover, the Library realizes the importance of building network and collaborations that provide greater access to digital collections and information sharing. In this regard, Rangsit University Library supports the Sustainable Development Goals in many aspects. The activities can be concluded below each of the 9 UN SDGs as following:

### Goal 1 No Poverty

Activity 1 Literacy promotion for students and public users Activity 2 Library collection development in local prison in Thanyaburi District, Pathumthani Province

### **Goal 4 Quality Education**

Activity 1 Knowledge and information resource collection development for all academic programs of the university

- Activity 2 Research literacy training for school teacher in Pathumthani province
- Activity 3 Sisterhood library project in Pathumthani, in order to support school library in collection development and reading promotion

### **Goal 5 Gender Equality**

Activity 1 Vocational promotion for female youth at the Juvenile Observation and Protection Centre, Thanyaburi District, Pathumthani province





### **Goal 8 Decent Work and Economic Growth**

Activity 1 Training and internship venue for students in library and information science and other professional fields, both of the university and other institutions

### Goal 9 Industry, Innovation and Infrastructure

Activity 1 Knowledge databases providing for start-up entrepreneurship Activity 2 Financial literacy workshop for the University staff Activity 3 SME's Corner for students, graduates and public Activity 4 Access to Advance Research database

### Goal 10 Reduce Inequalities

Activity 1 Vocational promotion for female youth at the Juvenile Observation and Protection Centre, Thanyaburi District, Pathumthani province

- Activity 2 Online database access training for school teachers in Pathumthani community and nearby provinces
- Activity 3 Digital dissertation content project on National Knowledge Platform, Ministry of Higher Education

### Goal 11 Sustainable Cities and Community

Activity 1 Green Library

Activity 2 Green Office

- Activity 3 Local Learning Center at Saladaeng Community (minority community in Pathumthani province)
- Activity 4 Pathumthani Bibliographical Database, phase 1-2

Activity 5 University Archival Database

Activity 6 Smile Library Radio FM97.25

- Activity 7 Green knowledge sharing with the University staff and other libraries
- Activity 8 Student Workshop on craft invention from waste materials

Activity 9 Student Workshop on flower and candle basket from natural materials on Loy Kratong Festival

### Goal 16 Peace, Justice and Strong Institution

Activity 1 Information and media literacy training Activity 2 Access to information at the Library Activity 3 Anti-plagiarism software promotion Activity 4 Copyright protection and Digital Right Management



### Goal 17 Partnership for the Goals

Activity 1 International Network and Collaboration: the Library is a member of IATUL Network

Activity 2 National Library Network and Collaboration: ThaiPrivate University Library Network (ThaiPULnet), Green Library Network, Friends of Library Network, School Library Network in Pathumthani





# **Major Environmental Sustainable Activities**

# 1. Library Energy Conservation Policy 2019

This second Energy Conservation Policy was announced on March 20, 2019. The significances on the policy were as following:-

1. Energy and Environmental Conservation be part of library management

2. Library be green/eco-friendly organization

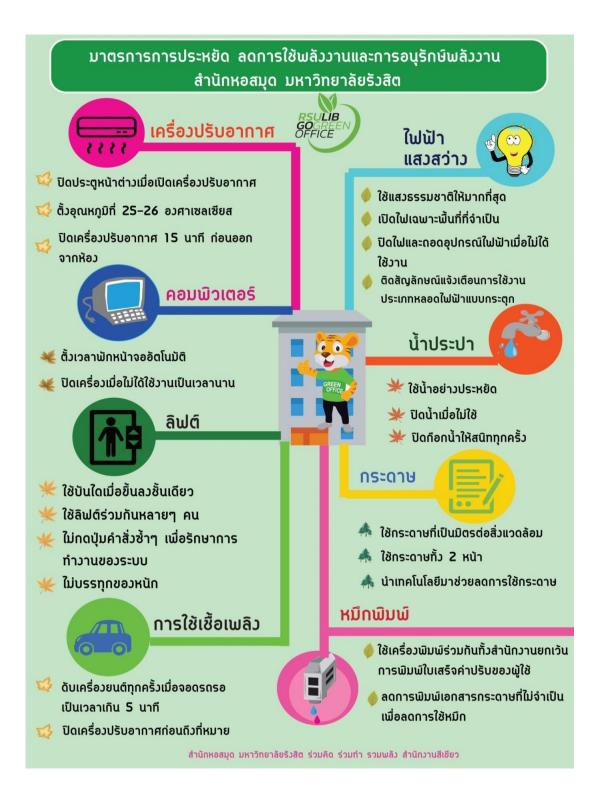
3. Information resource collection of ecological environment and energy conservation be built and expanded

4. Communicate for self-awareness on energy and environmental conservation

- 5. Be partner/network for the goal achievement
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- 7. University must support the library management in achieve the goal
- 8. Assessment for continuous management and improvement



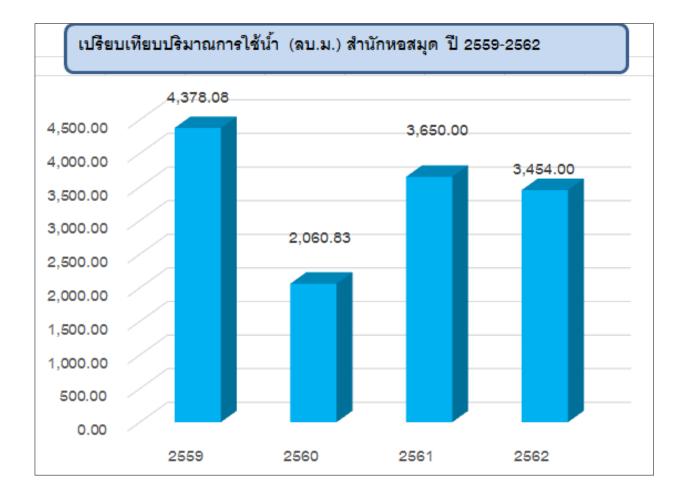
The Library Energy Conservation and Reduction Guidelines (The infographic shows 8 tasks in reducing and conserving the energy: air conditioner, computer, elevator, fuel, electricity, water, paper, and printing ink)



# 2. Energy and Resource Consumption Statistics (2016-2019)

The Library has started to collect the statistic of water, electricity and paper usages since 2016. The graphs below show the declined trends of energy and resources usages. These significantly identify the effectiveness of the plans and tasks in environment sustainable management.

### 2.1 Water Consumption Statistics (Cubic meters)



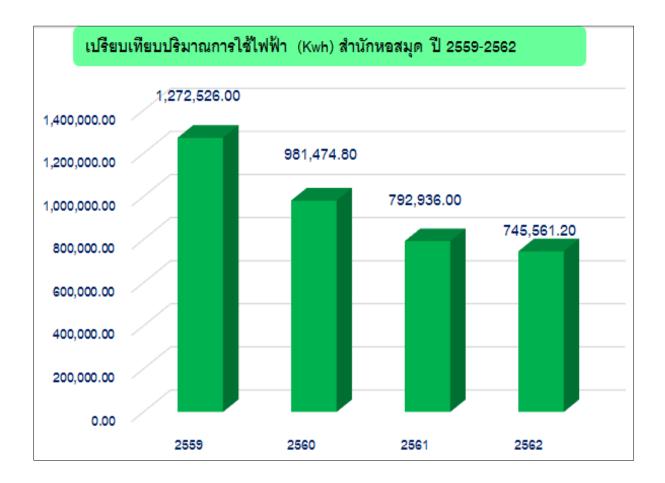
Comparative data: Year 2016-2019 (2559-2562 B.E.)





# 2.2 Electricity Consumption Statistics (Unit: Kwh)

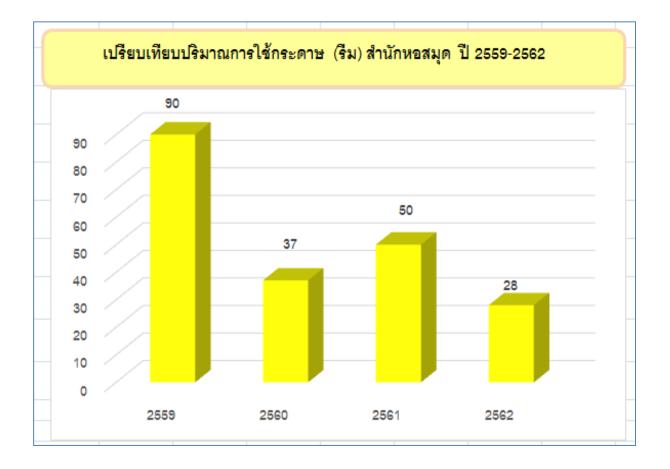
Comparative data: Year 2016-2019 (2559-2562 B.E.)







# 2.3 Paper Consumption Statistics (Unit: Ream)



Comparative data: Year 2016-2019 (2559-2562 B.E.)

Beside the reduction of paper usage, there are more tasks such as reusing and using the alternative communication channel such as an electronic office practices. In addition, the Library supports the reduction of natural degradation by purchasing and consuming **the recycled paper from UHT box**.



# 3. Waste Management

The library as a public venue has faced the garbage overflow problems. Before 2016, the garbage litter was not separated and garbage was not measured. After implementing Green Library Standard, the Library has managed to have separated litters: general waste, recycle waste and hazardous waste. There will be a process of waste separation and measurement before transferring to garbage collection point outside the building.

The recycle waste will be separated and brought back for use or for craft inventing from waste activities.





The recycle waste such as plastic bottles, food or biological waste can be transformed to some crafts or multipurpose cleaner liquid. The Library can use the waste materials for DIY workshop or Awareness creation activities.





# 4. Green Landscape

The Library has increased more green areas around the Library Building in order to filter the dust and carbon monoxide, add more purified air and sense of living library.







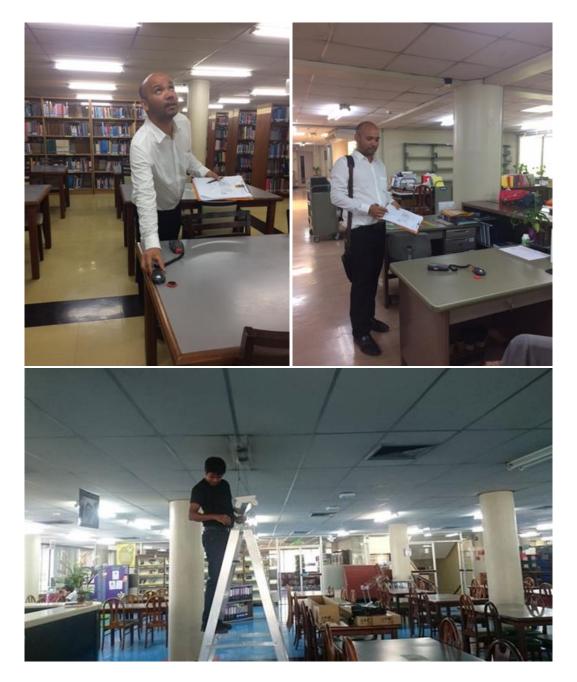








# 5. Environment Management in the Library Building



# 5.1 Light measurement at reading area and staff office

Above: Light measurement in reading area and staff office Below: LED light bulb change in whole area 28



### 5.2 Temparature

The air conditioners must be turned on 15 minutes after working time in the morning and turned off 30 minutes before closing time in the afternoon or evening and must set up at 25 degree celcius.

### 5.3 Pollution

Regarding the law, the Library building and every university building are restricted non-smoking area. The smoking point must be at least 50 metres distant from the building. The Library wth the collaboration with Health Promotion Office, has moved the smoking point afar from the building. In addition, for health protection of users and staffs, the copy printers were moved out from the reading and closed areas.

# 6. User Awareness and Communication

# 6.1 Green Campaigns

The Examples of Green campaign stickers







### **6.2** Communication Channels

Green campaigns and activities can be communicated and shared via digital and social media channels

# <page-header> And Andrews Market Market

### Library website at <a href="http://library.rsu.ac.th">http://library.rsu.ac.th</a>

### Library Facebook Fan Page

E-BOOK





# 6.3 Green Activities for Users and Community



**Exhibitions on Green Office and Green Environment** 





### Exhibition on Crafts from Waste



Fashion Design Idea from Waste Material Presented in New Year 2020 Academic Affairs Party

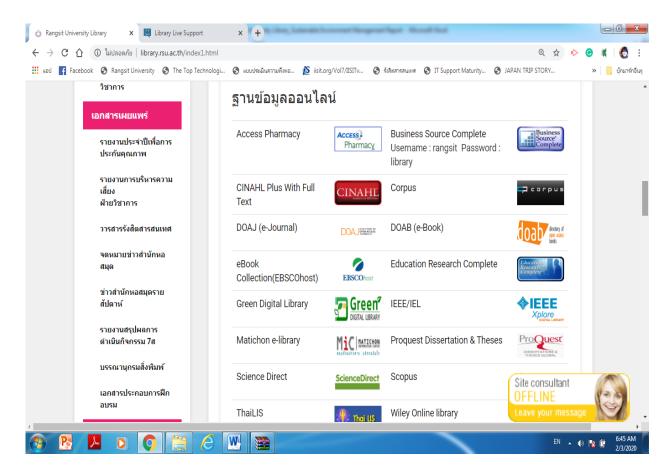


# 7. Green Information Resources

# 7.1 Collection Development on Green and Sustainable Environment

At present, there are books, journals, and articles on Green subject 652,724 title/pieces available in the Library. Users can also download some via online from Library website at <a href="http://library.rsu.ac.th">http://library.rsu.ac.th</a>

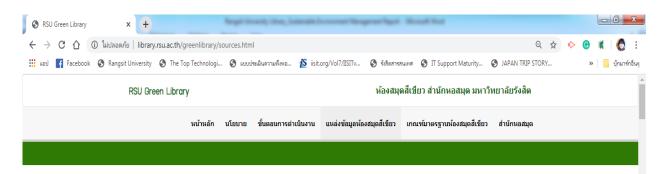
The Library provides Green Digital Library Database and collection of Green Library Resources as following:



### Green Digital Database via Online Database menu



### Green Information Resource via RSU Green Library menu



### แหล่งข้อมูลห้องสมุดสีเขียว

สำนักหอสมุด มหาวิทยาลัยรังสิต มีแผนดำเนินการจัดหาทรัพยากรสารสนเทศด้านพลังงานและสิ่งแวดล่อม ในปีการศึกษา 2559 โดยมีการจัดหาทรัพยากรสารสนเทศแบ่งเป็น

จำนวนทรัพยากรสารสนเทศด้านพลังงานและสิ่งแวดล้อมทุกประเภท	จำนวนการจัดหาทรัพยากรสารสนเทศด้านพลังงานและสิ่งแวดล้อม ปีการศึกษา 2559
652, 724 รายการ	\$าเวน 305 รายการ แบ่งเป็น -หนังสือและสื่อโสดห์ที่แล้านวน 78 รายการ รายยื่อหนังสือและสื่อโสดห์ -หนังสืออใส์กหรอนิกส์ (eBooks) 4ำนวน 129 รายการ -วารสารใต้สักหรอนิกส์ (eJournals) 4ำนวน 7 รายการ -แหล่งข้อมูลจากเว็บใช่เส้ 4ำนวน 91 รายการ

จำนวนทรัพยากรสารสนเทศด้านพลังงานและสิ่งแวดล้อม (ที่มีทั้งหมดในสำนักหอสมุด)

1. แหล่งข้อมูลหนังสือ : ทรัพยากรสารสนเทศในฐานข้อมูลทรัพยากรห้องสมุด (RSU Library Catalog--) จำนวน 1,506 รายการ

	สำดับ	แหล่งข้อมุล	สำนวน	keyword	เข้าใช้บริการ
1		Rangsit library Catalog	900	สั่งแวดล้อม	เข้าใช้บริการได้ที่
2		Rangsit library Catalog	606	environmental	เข้าใช้บริการได้ที่

ทรัพยากรสารสนเทศอิเล็กทรอนิกส์ ประเภท e-book จำนวน 276 รายการ ประกอบด้วย

2.1 EBSCO Host Collection สามอน 147 รายการ

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#### 7.2 Green Corner@Library

The Library provides an area of Green corner for user and public in order to use the collection of green environment. This comfortable area is located on the 3<sup>rd</sup> floor.







### 8. Green Community and Collaboration

In order to achieve the goals, the Library has collaborated with libraries, and other organizations

The examples of these 2 activities support the green practices and the UN SDG approaches.

#### 8.1 Friends of Library Network Event

The Library joined the friends of Library with other 12 libraries (academic, and special libraries) in information resource exchange and donation fair. The Library also took responsible on conducting a workshop of DIY craft inventing from waste materials for participants (school teachers and students, and public). This event has been annually organized for 10 years.



#### 8.2 Academic service activity

The Library had book donation and vocational promotion for female youth at the Juvenile Observation and Protection Centre, Thanyaburi District, Pathumthani province. It is an annual acitivity. Each year, the Library donates book and educational materials to school library and organizations. Along the site visit, the library staffs create an activities which included book telling, book maintenance, recreation, workshop on DIY from waste and others. These pictures show the event of



2019 which Library visited the Juvenile Observation and Protection Centre at Thanyaburi District and had opportunity to do a workshop on waste material. (You may notice that we could not take pictures of the faces directly due to their privacy protection).







# 9. Greenhouse Gas Management and Carbon Neutral

#### 9.1 Greenhouse Gas Management

The analysis of energy and resources used during 2018-2019, found that in 2019 the Library released carbon monoxide directly from fuel consumption 28.46% lower than year 2018. The indirect greenhouse gas released from electricity consumption was decreased 6 % whereas the indirect releasing from other resource such as water, paper and waste was increased dramatically from 2018. However, once compared with 2017, the greenhouse gas was still reduced 3.32%.

According to the energy conservation guideline and green practices made the Library control of greenhouse gas effectively.

#### 9.2 Carbon Neutral

In 2019, every library staffs joined the carbon neutral activity by input the individual data to the Carbon Footprint Calculator Application. The data are numbers of members in a house, numbers of electricity bulb, car owning, distance from house to workplace, etc. The application will calculate and show how much carbon monoxide they release per year.

The year 2019, the library staff released the carbon monoxide 86.23 ton. The Library had carbon offset and received the certification delivered by the Greenhouse Gas Management Organization as a carbon neutral organization on September 19, 2019.



# **Achievements and Awards**

#### **TLA Green Library Award 2017**

Rangsit University is a member of Thai Library Association (TLA). To support the UN SDGs and IFLA Global Vision, TLA has established the Green Library Standard. The Standard provides the guideline of assessment. Any library that implements this standard to its management and practices can voluntary apply for an evaluation by the Green Library Auditing Committee. Rangsit University Library passed the assessment in December 2017 and received the TLA Green Library Award from the Minister of Culture in the 2018 TLA Annual Meeting, March 2018.





#### National Green Office Gold Award (Excellent level) 2019

After having been implementing Green Office Standard for 1 year, the Library decided to apply for the National Green Office Award. On September 2, 2019, the Library was on site visited by the National Green Office Auditing Committee. The Library passed the evaluation to be the Green Office with an excellent level and received the National Green Office Gold Award 2019 delivered by the Minister of Natural Resource and Environment on December 16. 2019.







#### The Carbon Neutral Library

Rangsit University Library has a policy to conserve the energy. In order to reduce the Greenhouse gas and Carbon monoxide, the Library manages the waste, energy consumption (especially fuel) and resource usage. The statistics show the Carbon Footprint from 2017-2019 are decreased respectively. In addition, the library staffs themselves record their own data and calculate for carbon offset every year. Rangsit University Library becomes the carbon neutral library (organization) and received the Carbon Neutral Certification from the Thailand Greenhouse Gas Management Organization in September 2019.





# **Outcomes and Impacts**

### **Library Users**

1. Create self-awareness to library users especially students in environmental concern and global responsible aspect.

2. Create better library image as a global and social responsibility organization 3. Create a trust on library use. The interview with students found that 1) the students feel that the library is a safe, clean and good environmental place. 2) They understand the reason why the Library turn off the air-conditioner in reading room 30 minutes before closing time. 3) They notice the energy conservation promoting campaigns and positively agree to support in any way.



The Students were interviewed how they feel and experience with green library development (December 2019)

# **Community and Public**

 Regarding to having the activities with local community, schools and government units, the Library gains more partnership for development
Enhance a leadership role for environmental sustainable management and

becomes a helpful and supportive organization for local community and other



libraries. Gain an opportunity to share and transfer the Green environment knowledge.

3. Gain better library image as a global and social responsibility organization

4. Gain an opportunity to share and promote university knowledge and resources to community and public

# **Rangsit University**

1. Support the good and healthy university environment policy

2. Reduce the expenditure, especially on energy (electricity, water, fuel) and resources

3. Good image to the University in having the Library with green environment and sustainable development goal management



# 1. Solar-cell system on Roof Top of the Library Building

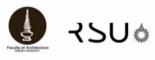
As a green library, the University would like to set up the Solar-cell system on the roof top (upper 6<sup>th</sup> floor) of the library building. This will be a pilot project for renewable energy plant. The project is under the requirement study and cost effectiveness analysis.

### 2. Eco-friendly Library Renovation

The Library building is now 30 years old. It is the right time for renovation. The rational is from the requirement of information and co-working common for students. The project is under detail design process. The complete Library building will add more than 1,000 Square meters space. Since the Library is green organization, the idea of design based on the natural light and natural material interior.



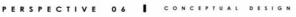




#### **RENOVATE RSU LIBRARY**

PERSPECTIVE 02 CONCEPTUAL DESIGN







1-

# Acknowledgement

Rangsit University Library would like to extend our thanks to people who are in charge with and supporting our sustainable environment management and tasks. Firstly, the Vice President for Academic Affairs, then Assistant to the President for Building and Environment. Assistant to the President for Academic Affairs, Assistant to the President for Peace and Security Management, Dean of College of Engineering, Director of Procurement Office, Director of Building and Environment, Head of Energy Management Division, Head of Maintenance Division, and Head of Household and Cleaning Division and their teams. Without their advices and supports, we won't be able to achieve our goals.

Last but not least, we are all proud of our own teams, our librarians and library staffs who have joined "hands, heads and hearts" for making our Library better and better continuously. Our goals are not only for our users but also for our community and this beautiful planet.

Thank You Very Much







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