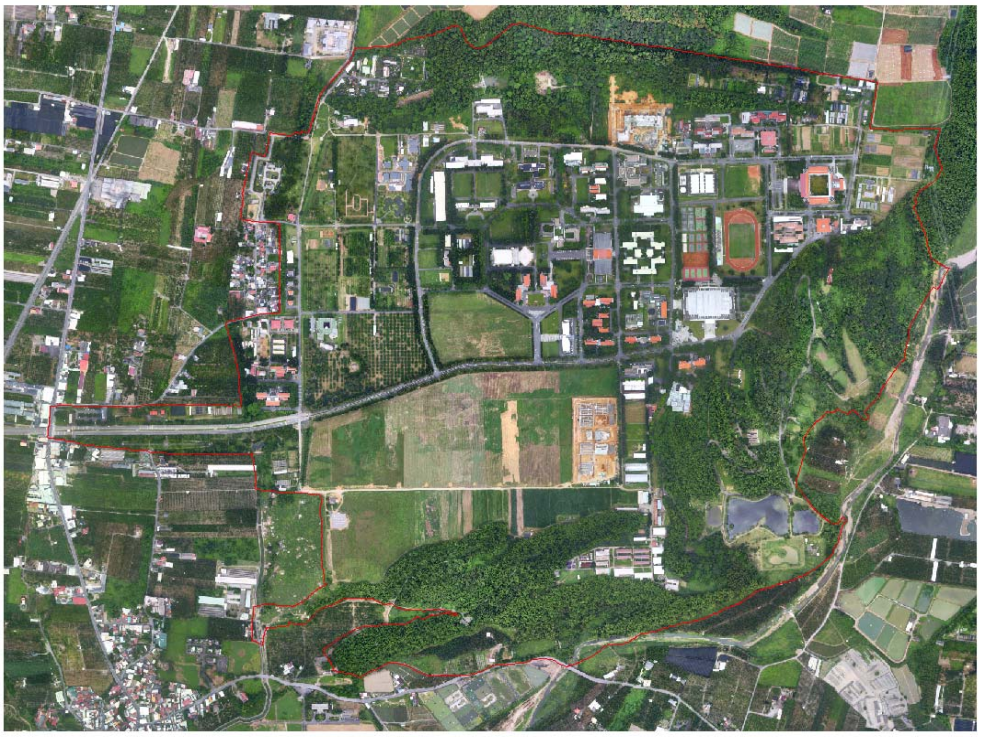
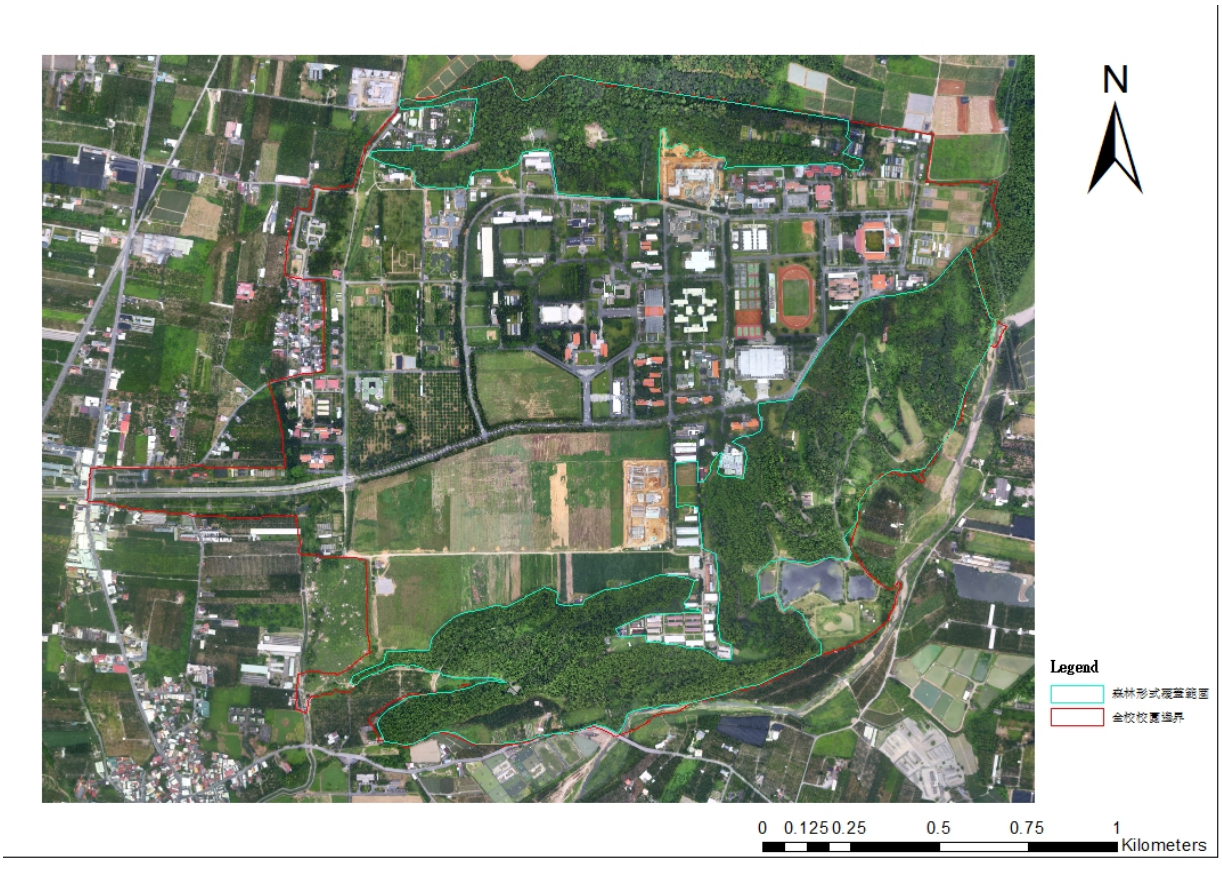
1.1 Campus Setting

*** Aerial Photo of NPUST**



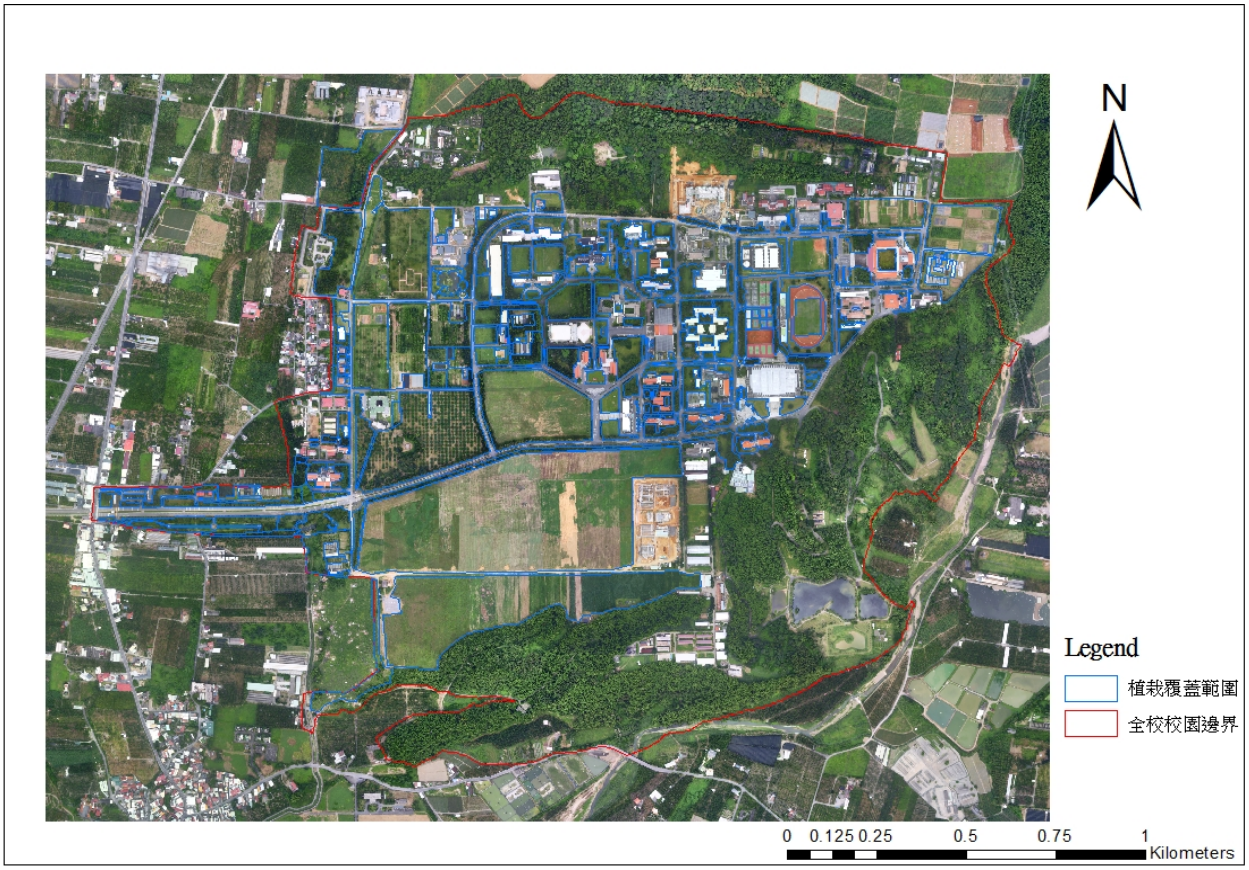
1.8 Percentage of area on campus covered in vegetation in the form of forest

*** Aerial photo of NPUST (green area)**



1.9 Percentage of area on campus covered in planted vegetation (include lawns, gardens, green roofs, internal planting)

*** Aerial Photo of NPUST (blue area)**



2.2 Renewable Energy Resources

Solar energy production capacity in fish and algae cultivation area

Solar energy production capacity in fruit and vegetable greenhouse area

Solar energy production capacity in mushroom greenhouse area

The brand named solar energy equipment has a total capacity

2.4 Energy Conservation Program

***Encourage Faculties to Reduce Energy Use on Campus**

Our goal is to help students understand:
1. To fully carry out green campus policies.
2. The benefits of water and energy conservation.
3. The benefits of trash reduction.
4. Environmental protection is not a slogan; it is a way of life and a responsibility that we all share.

(Freshmen's Life Experience and Learning Guidance)

(President Leads Energy Saving and Cutting Carbon Usage Activities)

2.4 Energy Conservation Program

*** Tips for Energy Saving in NPUST**

1. Establish energy saving promotion team.
2. Establish electricity usage supervising team.
3. Purchase timer to regulate drink dispenser electricity use.
4. Turn off computers and lights during office break-time.
5. Install electricity usage monitors in each building.
6. Replace electric water heaters with solar ones.
7. Install sensor card system for air-condition use, and create a user-pay system to avoid waste.
8. Install sun blockers outside buildings.

2.6 Climate change adaptation and mitigation program

*** Related improvement program on campus**

1. Swimming Pool Water Drainage

The swimming pool water drainage system makes use of terrain slope and an underground water reservoir to supply the orchard and seedling nursery with water; a filtration system is also used to prepare the water for use in the hydrophilic scenic pond or to water the park.

2. Aquaculture Water Drainage

In consideration of conservation efforts around the world and out of a desire to care for living things, improve the school's ecological conditions and protect the environment, the aquaculture pool has been redesigned not only to beautify the campus but also to improve the environment, serve for flood control, water storage and water drainage, and to be used for biological research purposes.

3. Practical Training Farm Waste Water

Following a solid -liquid separation process and anaerobic treatment, liquid waste is used as fertilizer for the pasture and solid waste is used as organic fertilizer. The employment of these methods contributes to pollution reduction while simultaneously improving soil quality.

4. Domestic Wastewater

Domestic wastewater first goes through a treatment process and is then used for watering trees and flowers, dust suppression, or biodiversity environmental education purposes as part of the effort to meet sustainable water resources objectives.

5. Rain Water

Rain water is recycled and supplies the toilettes in every building with water or is used to water grassy areas in order to meet water reutilization objectives.

6. Green Roofs

Green roofs, which are now an exemplary means of environmentally-sound water conservation, are used to collect rain water, which is filtered and stored to be used to supply toilettes or water the grass.

7. Promotion and Management Methods:

(1) Establish a hydro-electric maintenance group to actively seek out and reduce wasted resources.

(2) Create a webpage where people can request maintenance and quickly bring attention to areas where leaks are occurring so that they may be repaired and resources may be saved.

(3) Create water conservation posters and post them on school walls and bulletin boards to raise awareness.

(4) Check the water and electric meters regularly and investigate any unusual patterns.

(5) Make use of the school webpage, training programs, sign postings and regular announcements to educate students and staff on water conservation.

(6) Promote the concept of “full recycling & zero waste” to the different departments, committees and schools on campus

8. Results

(1) Water Conservation Results

As a result of domestic waste water recycling efforts，the amount of secondary water that is being conserved has reached approximately 292,000m^3 per year (800 m^3 per day x 365days) and represents savings of 41,853 USD per year.

(2) Recognition

2008: Local Level – Important National Wetlands

2008: Outstanding Unit Water Conservation Award

2011: Architecture and Landscape Management Awards – Public Landscape

2012: Outstanding Personal Water Conservation Award

3.1 Recycling program for university waste

* Recycling activities in NPUST

(Unused clothes are sent to the charity at the end of the semester.)

(Students hold flea market to sell second-hand clothing.)

(Students help with recycling)

(Poster announcing exchange of used batteries for eco-friendly cups and bags)

(Poster encouraging recycling of used batteries)

3.2 Toxic waste recycling

*** Toxic waste treatment process in NPUST.**

1. Temporary storage of school lab liquid waste.
2. Leakage prevention trays and floor are required in the temporary storage room.

3. The school removes toxic waste from each lab weekly.
4. Toxic waste is sent to Environmental Protection Administration approved waste management company every 3 months.

3.3 Organic waste treatment

*** Composting Process in NPUST**

(1) Sorting leaves.

(2) Sorting kitchen waste.

(3) Sorting leaves for the second time.

(4) Covering compost with leaves.

(5) Sorting plants from the ecological pool.

(6) Complete decomposting

3.4 Inorganic waste treatment

*** Method of Inorganic Waste in NPUST**

526 sorted waste disposal bins at 80 locations campus-wide

8 sorted waste disposal bins at 2 locations in the restaurant

7 second hand clothing recycling bins at 7 locations.

66 battery recycling bins at 50 drop off locations

NPUST Garbage and Recycling Removal Trucks

*** NPUST Garbage and Recycling Depots**

Waste paper recycling depot

Scrap metal and plastic recycling depot

Plastic bottle and aluminum can depot

*** Instructions For Sorting**

3.5 Sewerage Disposal

*** Sewerage Disposal in NPUST**

Domestic waste water management is about treating and reusing water resources for ecological restoration purposes and through the creation of a waterscape that includes different types of water and plant life these objectives are being met. The design not only offers a living space for plant and animal life, but also helps increase biodiversity and provides a very natural setting for ecological research, education and promotion thereof. It also gives teachers, students, local residents or visitors an area that can be use for relaxation and recreation.

*** NPUST Domestic waste water treatment and recycling**

Waste water from:
8 Student dormitories
2 Student restaurants
Other buildings
(Domestic Waste Water) →→

1. Oxidation purification
2. Artificial wetland purification →→
3. Organic purification
(Water Treatment Process)

Ying Hsia Lake
(Full Recycling) →→

1. Replenish underground water supply
2. Improve micro-climate
3. Ecological development
4. Watering
5. Flushing
(Re-use)

*** Waste water used to restore 45 types of water plant life and contribute to education**


Oxidation treatment system

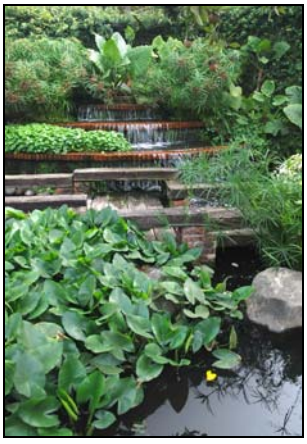

Constructed wetland system

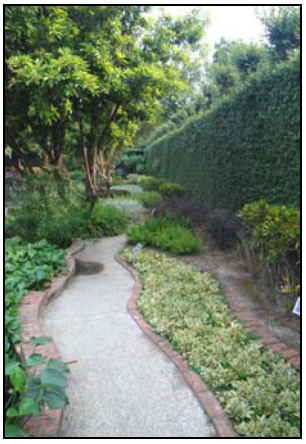

Aquatic plant treatment

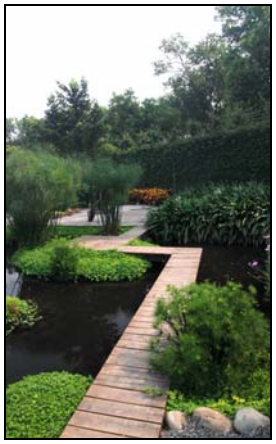
Waste water used to restore 45 types of water plant life and contribute to education

Application of domestic waste water helps restore 34 kinds of butterflies and 13 kinds of dragonflies

Ying Hsia Lake



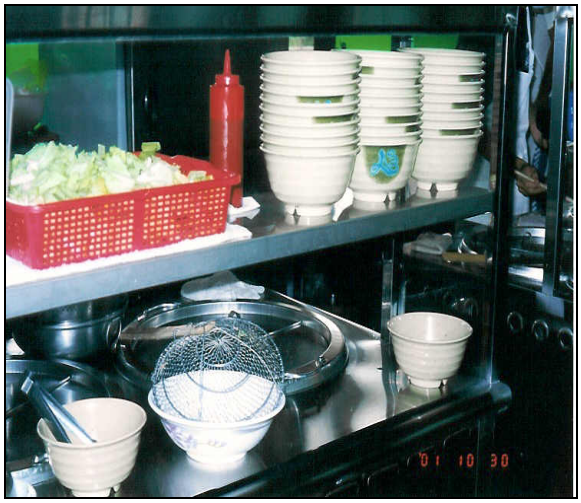




(NPUST Waste Water Treatment Area)

3.6 Policy to reduce the use of paper and plastic in campus

(1) On-campus drink sales with eco-friendly cups



(2) Suppliers must provide student cafeteria with recyclable utensils

(3) School President calls for use of eco-friendly cups

(4) Poster banning plastic cups and tableware on-campus

(5) Poster encouraging eco-friendly bags dishes

(6) Poster discouraging use of disposable

5.7 Bicycle and Pedestrian Policy on Campus

*** Pedestrian way in NPUST**

* NPUST provides bicycles. Bicycle Parking Area in NPUST

6.7 Number of scholarly events related to environment and sustainability

*** Scholarly events that was hosted or organized by NPUST related to environment and sustainability.**

1. The 18th Hydraulic Engineering Conference
2. Symposium of Sustainable Development Management
3. 2011 The International Conference on Green Technologies
4. Symposium of Tropical Forestry 2009 ~2011- Conservation and Utilization of Forest Bioresources
5. Natural Disaster Management Forum
6. International Symposium on the Asian Black Bear
7. International Symposium on Emerging Environmental Contaminants Detection Technology and Management

* Apart from these conferences, NPUST also makes use of abundant environmental infrastructure and resources to give visitors an opportunity to get an understanding of the importance of nature and the ecosystem; the campus provides an area useful for community education and eco-tourism.

1. Promote eco-tourism
2. Promote diversification of environmental education
3. Promote result-orientated and effective environmental education

a. Meet environmental protection objectives
b. Meet education objectives
c. Meet research objectives
d. Meet cultural and recreational objectives

(University students visit NPUST)

(Groups from community visit NPUST)

(Elementary school students visit NPUST)

(Kindergartners visit NPUST)

(Kindergarteners learn about waste reduction) (Carry out environmental education in elementary school)