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Architects Society  
TLAS

# 2004 STUDENT LANDSCAPE ARCHITECTURE DESIGN COMPETITION PRIZE WINNERS

<b>FIRST PRIZE</b> <i>UNESCO Prize for Landscape Architecture</i>	<b>TITLE</b>  <b>AUTHOR(S)</b> <b>INSTITUTION</b>	<i>Celebrate the Harmony of Ecological Function and Cultural Perception: Integration of ecological water management and Chinese traditional gardening in 2008 Olympic Forest Park</i> Dong Zhang, Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst, USA
<b>SECOND PRIZE</b> <i>IFLA Zvi Miller Prize</i>	<b>TITLE</b> <b>AUTHOR(S)</b> <b>INSTITUTION</b>	<i>Project for a Nature Trail in the Apennine Mountains of Central Italy</i> Virginia Pianotti Sapienza - Università di Roma, Rome, Italy
<b>THIRD PRIZE</b> <i>Merit Award</i>	<b>TITLE</b> <b>AUTHOR(S)</b> <b>INSTITUTION</b>	<i>Shinpo Village in Northern Taiwan: Finding Lost Pondscape – Regeneration of the Unique Irrigation Pond System</i> Chih Wei Chang National Cheng Kung University, Tainan City, Taiwan

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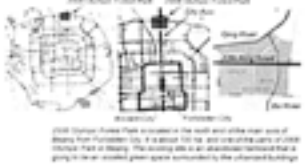
## JURY NOTES

- a very good traditional landscape approach and techniques well incorporated into a modern urban park
- well presented, in a logical manner
- the jury commended the ecological approach to water treatment, and the urban nature of the design
- the grading scheme and other technical aspects were strong
- black and white drawings, effectively presented

### Celebrate the Harmony of Ecological Function and Cultural Perceptions: 1

**Question:** Landscape design is recognized as one of the most important factors of environmental development in urban areas. On the other hand, the Chinese ecological design approach tends to give more value to culture, aesthetics and ethics considerations. It means a greater role is still taken by tradition, philosophy and its function in a contemporary context. Therefore, ecological design cannot be entirely adopted by designers and accepted by the users. The integration of ecological ecological function and culture perception is a crucial factor for such cases.

As one of the 2008 Olympic Forest Park in Beijing is a case study for this project because of its crucial status. Beijing Forest Park is present 1. The existing ecology environment includes the most and more serious damage of the groundwater in the more than 10 years around Beijing, especially in 2008, which is the first of the 50 years before. The absence of groundwater has already caused an ecological crisis in the city.

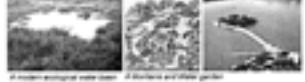


**Concept:** Green Forest Park is a site to integrate ecological water system restoration and Chinese traditional landscape perception. The design will recharge groundwater in an eco-friendly landscape perception area by using ecological water management methods. At the same time, it will provide a public recreation and ecological education park with Chinese historical and cultural landscape perception. 2008 Olympic Forest Park in Beijing is to restore Chinese cultural and landscape values for the appearance of landscape to be placed in an ecologically responsible context.

Based on the study of modern ecological design method and traditional Chinese landscape perception, we address the integration in five aspects:

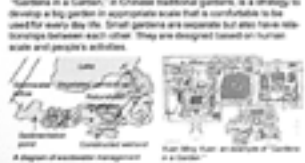
#### Idea 1: Landscape hydrology character & Mountains and Water gardening

In the past decades years, land-based hydrology situation has been gradually eroded in the great majority in Beijing. It deal with urban water wastewater, or urban runoff by grading a series of basins, ponds, streams to create wetlands. In urban areas, it is an effective ecological hydrology used to water quality improvement and groundwater recharge. In Chinese traditional gardening, digging earth to create a site and giving the earth around it to be a mountain is a basic principle in garden creation, which is called "mountains and water garden". Emphasizing the land in spatial harmony with nature, it is one of the most important Chinese traditional landscape perceptions.



#### Idea 2: Gardens as a series of wet basins and ponds & "Gardens as a Garden"

Basins and ponds are usually designed as a main element in water management in the land-based hydrology system. The dimensions of each wet basin and pond will be considered according to flow velocity and infiltration rate. The vertical dimensions (volume and depth) and permeability infiltration rate should be considered according to the local rainfall data. The purpose of them is to slow release and to absorb storm water, wastewater runoff, to improve water quality, and to allow some water to infiltrate on site prior to any release back into the natural system.

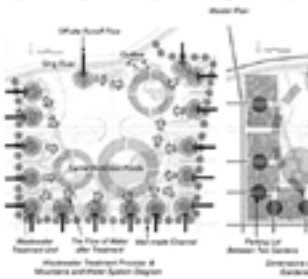


"Gardens as a Garden", in Chinese traditional gardens, is a strategy to design a big garden in appropriate scale that is comfortable to be used for every day life. Small gardens are separate but also have relationships between each other. They are designed based on human scale and garden's activities.

According to the dimensions of each wet basin and pond, we determine the scale of the small gardens. It will locate how big each small garden will be to fit the whole garden, and make an appropriate dimension for dealing with both water and people's activities.

#### Idea 3: Water treatment process & Courtyard Water system

In the series of wet basins and ponds, courtyard will have their own functions, but as one of the runoff sediment particles, or infiltration site. For example, sediment pond is a series of wet basins. It is designed to reduce the rate of flow. The sediment has to infiltrate. It is also known by the name of "backlog" because it represents underlying groundwater. Courtyard Water Regulations are the important Chinese gardening principles. The basic idea is that the watershed should be divided into separated but related parcellations. Each part will be an interrelation with different characters and forms.



#### Detail plan

We choose one of the fourteen small gardens as a model of integration water management and Chinese traditional garden creation. Idea 3: Integration of wastewater treatment process and Courtyard Water Regulations, is used as the basic principle in the space organization. Wastewater treatment, purge, sediment, filtration, reuses, and infiltration, organize the water system and area between the dimension of each space. Each space has different character and function, which is also related to the ecological garden process. Idea 4: Curved roads for flow velocity control & Terrace Terrace and Windings in Chinese garden, we use to organize the transition of each space. The winding and turning stream will work for both ecological function and Chinese traditional landscape aesthetics.

Idea 5: Ecology Functional Details & Traditional characters and symbols, will run through the whole design. We will give the form to both the artistic and ecological functions.

#### Idea 4: Curved roads for flow velocity control & Terrace Terrace and Windings in Chinese garden

The meandering water moving path will set the velocity of flow, parallel roads from runoff. It is one of the important approaches for flow velocity control in the wastewater treatment system. At the corners (sharp) curvature, and streams etc. in a Chinese traditional garden are turning and winding around of straight lines. They are designed especially for creating surprise, variety, and mystery. The integration of these two characters will create the functional moving streams with strong Chinese garden perception.

#### Idea 5: Ecology Functional Details & Traditional characters and symbols

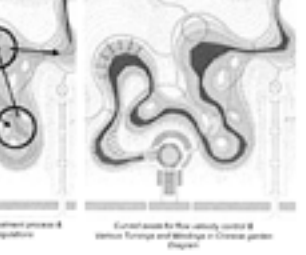
Having aesthetic value is the process of ecological landscape before use and management is significant to changing attitudes and perceptions and following the integration of natural process and the urban landscape. In the total design, we will integrate traditional landscape architecture character and symbols with ecological function.

#### Master plan

In landscape (land-based hydrology) Creation & Mountains and Water gardening, as the big idea of the master plan, 2008 Olympic Forest Park is considered as a green park for urban water management, especially for Beijing groundwater recharge. At the same time, the on-site and surrounding urban area runoff will be collected and piped to edges of the site. By grading the site, we create a series of treatment basins and ponds to deal the runoff. The clean water will be led to a big reservoir in the middle of the forest park, where the water will infiltrate and recharge the groundwater. To avoid the ponds being wet and anaerobic during dry seasons, a constant flow of water for the wet pond is necessary. Also, a rain-made channel containing trees, shrubs, Qing River and Blue River is designed around the site to provide constant flow during dry seasons.

Idea 2: Dimensions of wet basins and ponds in a Garden, is used to determine the pattern of the scheme and the scale of the gardens. The use of Gardens in a Garden's principle to design 14 small gardens along the site as the functional experience treatment. Dealing with the runoff path and both from on-site and the far surrounding urban sites.

According to the dimension of each ecological basins and ponds from 0.2 ha to the with 0.4, 1.4, and 3.0 ha, we design each basin treatment park. To fit for 2008 Olympic Forest Park will be 20 ha. Each basin is about 400m by 100m, which could further be divided in to several smaller spaces for terraces and wet ponds. Cut and fill will be followed by moving the earth and ponds and hills. The largest 'hill and lake' garden in the middle of the area works as the final reservoir basin.



### Celebrate the Harmony of Ecological Function and Cultural Perceptions: 2



#### Image 1: The Ponds and Wetlands perception



#### Image 2: The Wetlands and ponds



#### Image 3: The Wetlands and ponds



#### Image 4: Ecology Functional Details & Traditional characters and symbols



#### The Ponds

The Ponds integrate both sides of the water management. The principle is the traditional idea. They are also an important step of water management. The projects help to absorb the water, slow it down, purify it from the top in the basins, then cut out the 10% of water high turbidity to return to the bottom. The sediment will be filtered out by the bottom of the pond. The water will be filtered out by the bottom of the pond. The water will be filtered out by the bottom of the pond.

#### Image 5: The Wetlands and ponds



#### Image 6: The Wetlands and ponds



#### Image 7: The Wetlands and ponds

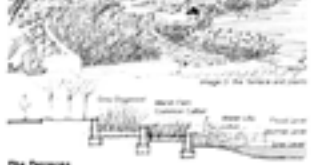


#### Image 8: The Wetlands and ponds



#### The Islands

Some different scale of small islands and islands will be placed in the water to create a variety of water circulation and to improve the water quality. The islands will be placed in the water to create a variety of water circulation and to improve the water quality. The islands will be placed in the water to create a variety of water circulation and to improve the water quality.



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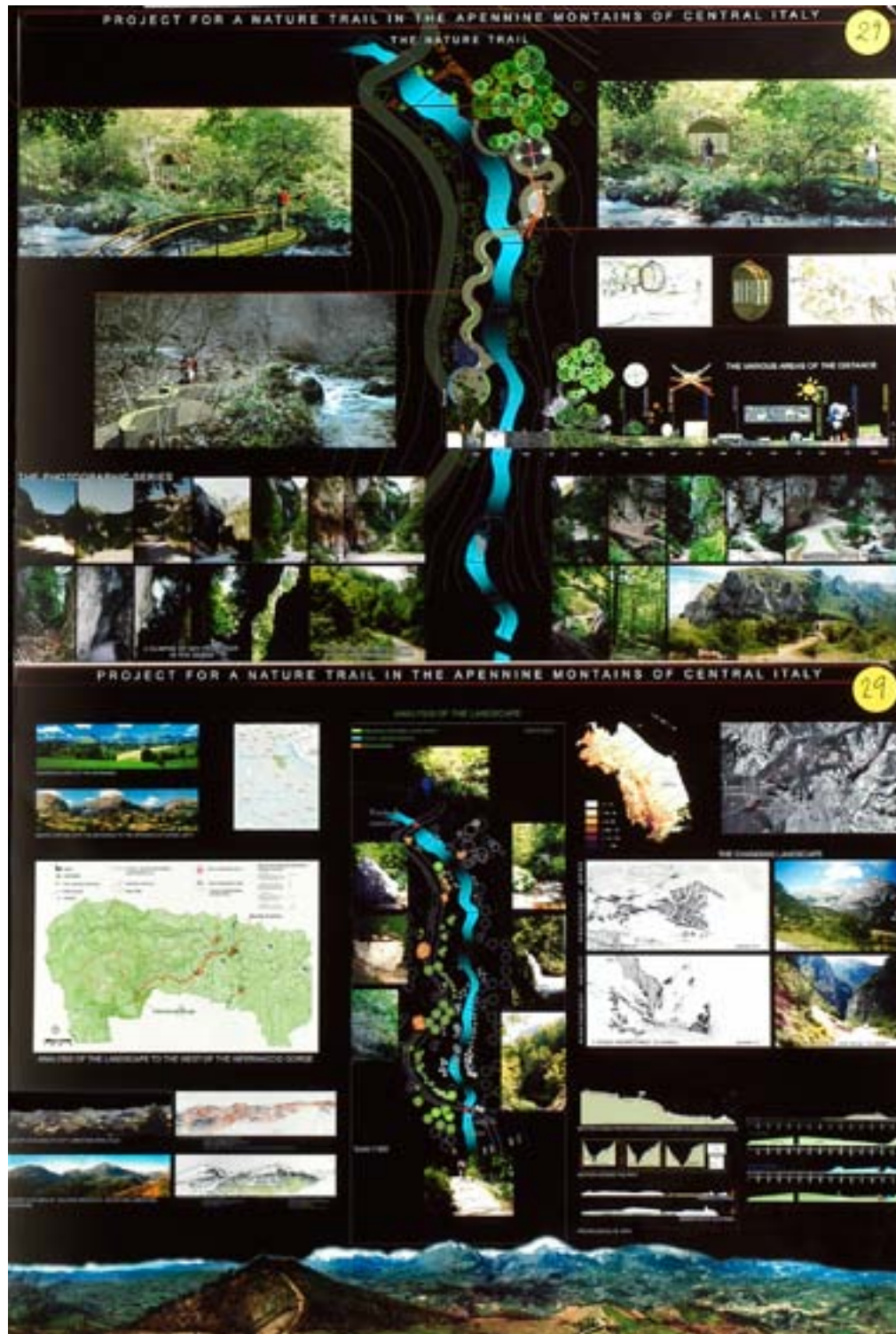
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## JURY NOTES

- very good analysis, and innovations in design
- excellent graphics, including sketches, computer simulation, sophisticated use of color, integration of photographs, and overall presentation
- the jury especially commended the way that the relationship between nature and people was presented, a difficult issue to resolve



<b>THIRD PRIZE</b> <i>Merit Award</i>	<b>TITLE</b> <b>AUTHOR(S)</b> <b>INSTITUTION</b>	<i>Shinpo Village in Northern Taiwan: Finding Lost Pondscape – Regeneration of the Unique Irrigation Pond System</i> Chih Wei Chang National Cheng Kung University, Tainan City, Taiwan
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- the jury noted the attention to both the natural and the cultural landscape
- strong graphics – good use of diagrams, sketches, models, and a well organized panel
- good site analysis, and understanding of landforms of the country
- a good landscape preservation project, and proposed the retention of agricultural land uses and housing
- water recycling was advanced in a strong way
- the jury commended how the project captured the old wisdom in the traditions to solve a modern environmental problem

**NORTHERN TAIWAN** | **TAOYUAN REGION** | **SHINPO VILLAGE**



**THE IRRIGATION POND SYSTEM (1850)**



HOW DID THE SYSTEM WORK?

>>> view 1 : Rediscovering the pondscape



>>> view 2 : historic pond park



>>> view 3 : dwellings and waterways



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# Finding Lost Pondscape

## Regeneration of the unique Irrigation Pond System

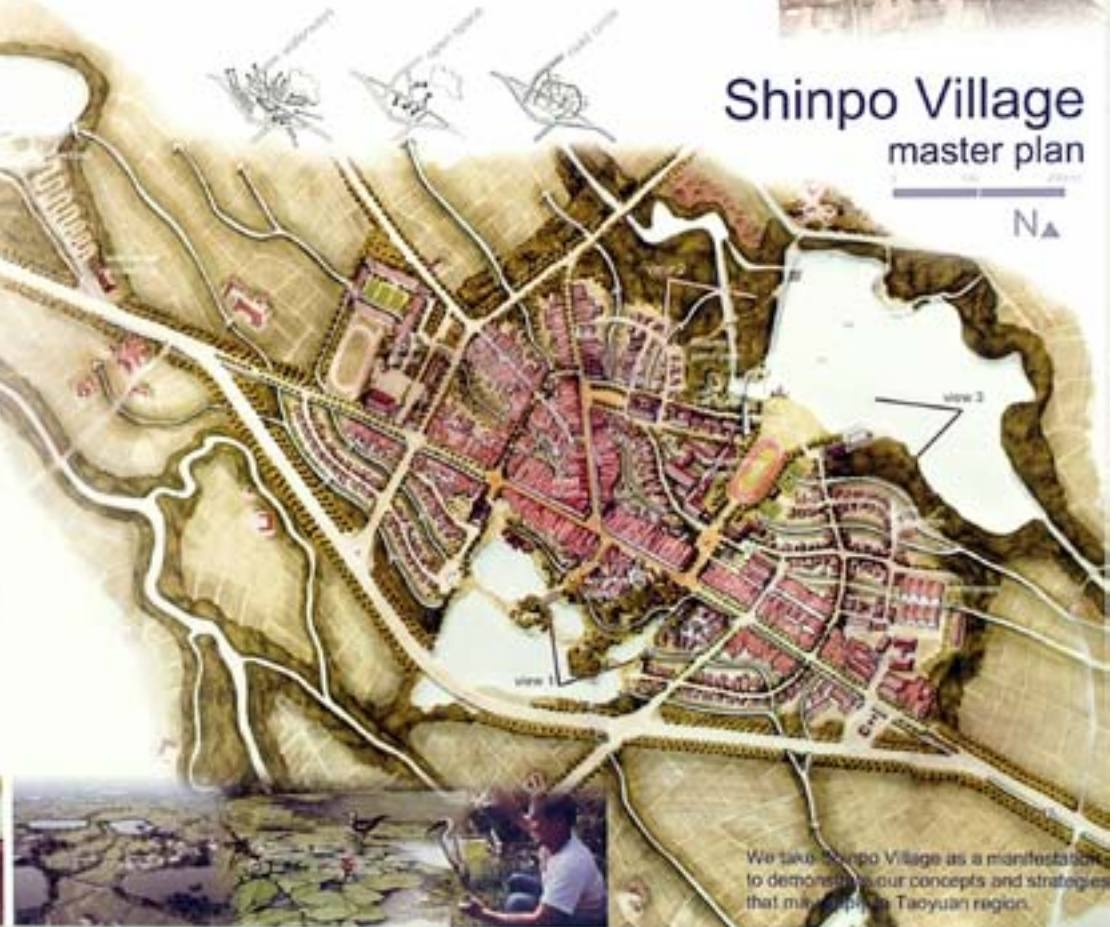
The irrigation pond system in Taoyuan region is one of the most unique cultural landscapes on Earth. It is illustrative of the evolution of cultivation over time in Taiwan, under the influence of the physical constraints and opportunities presented by natural environment and of successive social forces by agricultural society. The system also reflects specific techniques of sustainable land-use and water management.

However, the irrigation pond system has become vulnerable under the impact of modernization and industrialization. The landscape was deteriorated by urban sprawl and inappropriate planning and lost its characteristics. Many of the ponds were abandoned and the precious heritage was been forgotten.

The project aims to find the lost "pondscape" back and integrate it into future prospect. We take Shinpo Village as a manifestation to demonstrate our concepts and strategies. Maintaining the distinctive character and components while creating new meanings and functions, the strategy help reform the pond system into a more humorous habitat for both human amenity and biological diversity.



# Shinpo Village master plan



**CONCEPTS & STRATEGIES**



**THE INTEGRATED NEW HABITAT (2050)**



HOW WILL THE SYSTEM WORK?

We take Shinpo Village as a manifestation to demonstrate our concepts and strategies that may apply in Taoyuan region.