

陽明一國志

陽明一國志



# CONTENTS

---

## I INTRODUCTION

1.1 Background 1-1

1.2 Objectives 1-1

1.3 Content 1-1

1.4 Benefits 1-2

1.5 Process 1-5

## II ORGANIZATION AND WORKSCOPE OF THE YANGMING-SHAN NATIONAL PARK LEAD LANDSCAPE CONSULTANT GROUP

1.1 Consultant Group Personnel Structure 2-1

1.2 Role Description and Operation Method 2-4

1.3 2005-2006 Public Construction Consultant Examination 2-4

1.4 Policy Recommendations on Significant Development Projects 2-5

1.5 Assessments and Recommendations on Recreational Areas and Ecological  
Conservation Zones 2-5

1.6 Improvement Recommendations and Regulation Composition on Public Facilities 2-5

1.7 Compose Visitor Quantity Control Strategies 2-6

1.8 Holding the Overall Environment Experience and Future Outlook Meeting 2-6

## III YANGMINGSHAN NATIONAL PARK DEVELOPMENT STRATE 3-1

## IV OVERALL ENVIRONMENTAL REVIEW AND RECOMMENDATION

4.1 Rezoning Recommendation 4-1

4.2 Ecological Conservation Zone 4-3

4.3 Recreational Area **4-5**

4.4 Others **4-15**

## **V REVIEW OF NATIONAL PARK'S SIGNIFICANT DEVELOPMENT PROJECTS**

5.1 Local Organization Development Participation and Beitou Line Cable Car

Construction Management and Land Development Plan Recommendation Outline **5-1**

5.2 Public Participation in the Yangming Villa and Chungshanlou Development and

Management Plan Recommendation Outline **5-6**

5.3 Yangmingshan National Park Matsao Recreational Area National Park Business In

vestment and Management Plan Recommendation Outline **5-10**

5.4 Yangmingshan National Park Shuangxi Recreational Area National Park Business I

nvestment and Management Plan Recommendation Outline **5-13**

5.5 Xiaoguangyinshan Antenna Tower Relocate and Development Plan Recommendation

Outline **5-15**

## **VI PUBLIC FACILITY CONDITION REVIEW**

6.1 Administrative Service Facilities **6-1**

6.2 Public Service Facilities **6-3**

6.3 Traffic Facilities **6-6**

6.4 Landscape Recess Features **6-8**

6.5 Signage System **6-10**

6.6 Emergency Rescue Features **6-11**

6.7 Disaster Prevention Features **6-12**

## **VII THE IMPORTANT WORKING OF THE FUTURE**

7.1 Establish Tianxiyuan Environment Ecology School **7-1**

7.2 Cultural Resource Preservation **7-4**

7.3 Establish Chulzuhu Sustainable Community **7-7**

7.4 Water Resource Management **7-12**

7.5 Visitor Quantity Control **7-21**

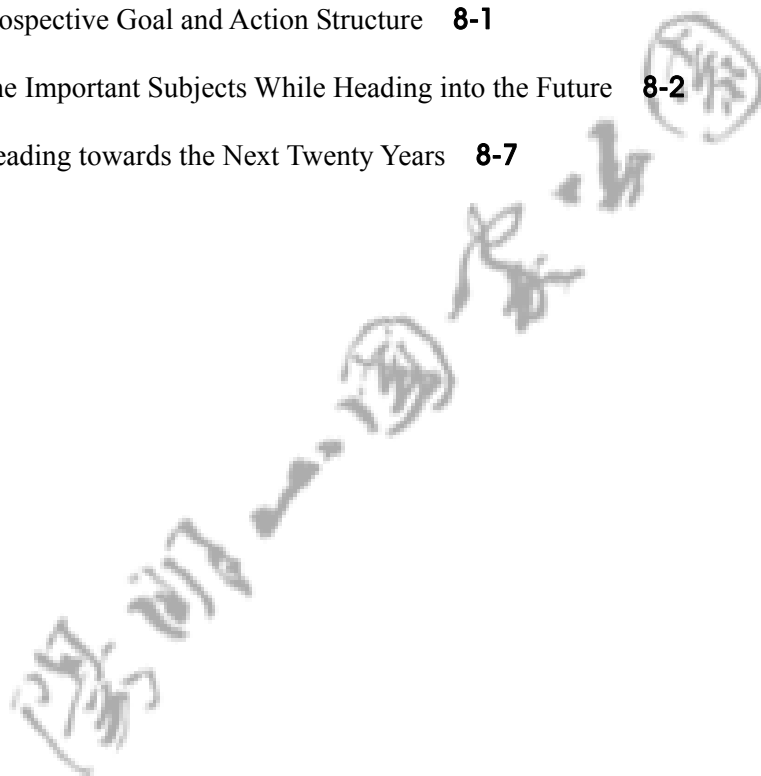
## **VIII HEADING TOWARDS THE NEXT TWENTY YEARS**

8.1 Future Development Prospect **8-1**

8.2 Prospective Goal and Action Structure **8-1**

8.3 The Important Subjects While Heading into the Future **8-2**

8.4 Heading towards the Next Twenty Years **8-7**



# LIST OF ILLUSTRATIONS

---

Fig.1-1 Yangmingshan National Park **1-4**

Fig.1.2 Plan Flow Chart **1-5**

Fig.2-1 Yangmingshan National Park Lead Landscape Consultant Group Professional Background Consideration Chart **2-1**

Fig 2-2 Yangmingshan Environmental Landscape Consultant Group Structure Chart **2-2**

Fig.2-3 Chingtienkang Meadow **2-7**

Fig.4-1 Yangmingshan National Park Recreational Area Rezoning Recommendation Map **4-2**

Fig.4-2 Yangmingshan National Park Ecological Conservation Zone Location and Boundary Map **4-3**

Fig.4-3 Lujiaokeng **4-4**

Fig.4-4 Taiwan Quillwort **4-4**

Fig.4-5 Menghuan Pond **4-4**

Fig.4-6 Yangmingshan National Park Recreational Area Distribution and Boundary Map **4-5**

Fig.4-7 Matsao Recreational Area **4-6**

Fig.4-8 Erziping Recreational Area **4-7**

Fig.4-9 Tatun Nature Park **4-7**

Fig.4-10 Yangming Park **4-8**

Fig.4-11 Yangmingshan National Park Central Area Design Concept **4-8**

Fig.4-12 Yangming Park **4-9**

Fig.4-13 Yangming Park Design Plan **4-10**

Fig.4-14 Erziping Recreational Area **4-11**

Fig.4-15 Scout Campground **4-11**

Fig.4-16 Jingshan Campground **4-12**

Fig.4-17 Shuangxi Recreational Area **4-13**

Fig.4-18 Sulfur Valley & Longfeng Valley Recreational Area **4-13**

Fig.4-19 Lengshuikeng Recreational Area **4-14**

Fig.4-20 Hsiaoyukeng Recreational Area **4-14**

Fig.4-21 Yangmingshan National Park Chingtienkang Meadow, Tianxiyuan and Chulzuhu

Distribution and Boundary Map **4-15**

Fig.4-22 Chingtienkang Meadow Special Landscape Area **4-16**

Fig.4-23 Tianxiyuan **4-17**

Fig.4-24 Chulzuhu **4-18**

Fig.4-25 Chulzuhu's river **4-20**

Fig.5-1 Local Organization Development Participation and Beitou Line Cable Car Construction

Management and Land Development Plan Recommendation Outline **5-1**

Fig.5-2 Beitou Line Cable Car Onsite Environmental Inventory **5-2**

Fig.5-3 Beitou Line Cable Car Onsite Environmental Inventory **5-3**

Fig.5-4 Beitou Line Cable Car Onsite Environmental Inventory **5-4**

Fig.5-5 Public Participation in the Yangming Villa and Chungshanlou Development and

Management Plan **5-6**

Fig.5-6 Yangming Villa and Chungshanlou **5-7**

Fig.5-7 Chungshanlou Park Area Planning Plan **5-7**

Fig.5-8 Aichi EXPO Activity Photo by Yoshiki Toda **5-8**

Fig.5-9 It will be a great thing if visitors can have a picnic on the lawn under cherry trees **5-9**

Fig.5-10 Provided by Yoshiki Toda **5-9**

Fig.5-11 Matsao Recreational Area National Park Business Investment and Management Plan **5-10**

Fig.5-12 Matsao Recreational Area Plan **5-11**

Fig.5-13 Matsao Recreational Area **5-11**

Fig.5-14 Landscape of Matsao Recreational Area **5-12**

Fig.5-15 Yangmingshan **5-13**

Fig.5-16 Yangmingshan National Park Shuangxi Recreational Area **5-13**

Fig.5-17 Landscape of Yangmingshan **5-14**

Fig.5-18 Xiaoguanyinshan Antenna Tower Relocate and Development Plan **5-15**

Fig.5-19 Xiaoguan Yinshan Antenna Tower Relocate and Development Plan **5-15**

Fig.5-20 Xiaoguan Yinshan Antenna Tower **5-15**

Fig.7-1 Ecology Education **7-1**

Fig.7-2 Establish Tianxiyuan Environment Ecology School **7-2**

Fig.7-3 School Tianxiyuan's Future Outlook **7-3**

Fig.7-4 Building Restoration and Preservation **7-4**

Fig.7-5 Cultural Resource Preservation **7-5**

Fig.7-6 Establish Chulzuhu Sustainable Community **7-7**

Fig.7-7 Eco-tourism and Organic Agriculture **7-10**

Fig.7-8 Sustainable Community **7-11**

Fig.7-9 Sustainable Community Development Outlook **7-11**

Fig.7-10 Yangmingshan National Park River Distribution Map **7-12**

Fig.7-11 Yangmingshan National Park Lake and Pond Distribution Map **7-13**

# LIST OF TABLES

---

Table.1-1 Annual Schedule for the Lead Consulting Group   **1-6**

Table.2-1 Consultant List and Area of Expertise   **2-3**

Table.4-1 Yangmingshan National Park Ecological Conservation Zone Main  
Protecting Subjects Chart   **4-4**

Table.7-1 Japanese Hot Spring Building Reuse Method Chart   **7-6**

Table.7-2 Sustainable Indicators and Composition Element Chart   **7-7**

Table.7-3 Chulzuhu Area SWOT Current Condition Analysis Table   **7-9**

Table.7-4 Chulzuhu Area SWOT Tactic Matrix   **7-9**

陽明一國志



# I INTRODUCTION



Photo By/Hong-Ming Chen

陽明一國志

# I

## INTRODUCTION

---

### 1.1 BACKGROUND

According to the conclusion made in the Council for Economic Planning and Development meeting on June 15<sup>th</sup>, 2004, the National Park is to learn from the experience of inter- national landscape consultants, and promote the facility's quality and the maintenance of natural resources to reach international standard.

This Plan is to engage outstanding inter- national and domestic consultant groups that have experiences in planning and managing National Park landscape to do a full assessment on Yangmingshan National Park, and provide professional consultant and master planning, in order to bring Yangmingshan National Park to reach international standard.

With the progressive environmental improvements and the completion and opening of the recreational areas in Yangmingshan National Park, the amount of people that comes to visit has grown very quickly in recent years. According to their calculation, the visitor amount has reached more than 12 million per year. The large amount of people easily created recreation pressure and impacts on the ecological environment. Moreover, with the beginning of the five day week policy started in 2001, even more visitors were drawn into the park and this has become a new management challenge to the Administrative Bureau. Yangmingshan National Park has gone through two decades of development history, and now it is facing a turning point to reposition and transform itself. Although the existing conservation environment and recreation area in previous years has already formed a basic shape, we still have to work on finding new ways of doing things, develop Yangmingshan's future vision, and create a National Park that brings even more ecological beauty to welcome the 21 century.

For this reason, besides emphasizing on ecological conservation and landscape maintenance, this planning should also base on ecological theory to develop a more profound and practical objective and technique that integrates with the development of the projects in each level, and further connect with the sustainable development around the world.

## 1.2 OBJECTIVES

- Provide objective, professional and practical recommendations through referencing present National Park management experiences in other countries.
- Define Yangmingshan National Park's position and the direction of future development for Park Administrators to refer to.
- Achieve the National Park's goal of conservation, education and recreation through exchanging domestic and international experiences, and promote tourist services and landscape environment to reach international standard.

## 1.3 CONTENT

- Collect domestic and international National Park management theories.
- Collect domestic and international National Park case studies.
- Thoroughly understand Yangmingshan National Park's management policy in the past three years.
- Review the overall development policy and significant special plans and provide objective, professional and practical recommendations.
- Define Yangmingshan National Park's position and future development direction.
- Build a topography model of Yangmingshan National Park for reference.
- Propose recommendations on visitor capacity controlling or total quantity controlling strategy.
- Provide objective, professional and practical recommendations on each public development plan and assist in the examination process.
- Do onsite environmental inventories and an annual product report.

- Hold workshops with domestic and international specialists to train the correlated personnel.
- Provide an annual consultation report when the contract is fulfilled.
- Produce the Yangmingshan National Park Facility Criterion.
- Coordinate this Plan's need to establish a webpage.
- Assist the Administrative Bureau in explaining the content of this Plan to others.

## **1.4 BENEFITS**

### **1.4.1 Policy Aspect**

- Connect with Government's sustainable development policy and evaluation, and define Yangmingshan National Park's development position.
- Coordinate with the National Park Law and the National Park Planning Overall Assessment to establish key demonstration projects.
- To make sure that the National Park's priority goal is conservation, and also supported with development and tourism.
- Develop a National Park management strategy for ecological conservation areas and recreational areas that best suit their local settings.

### **1.4.2 Administration Aspect**

- Establish the integration between each unit horizontally and vertically within the Administrative Bureau.
- Establish a smooth communication channel between the Administrative Bureau and Construction and Planning Agency or other institution units.
- Create a list of well rated manufacturers and specialists in different fields for the Administrative Bureau to refer to.
- Integrate human and knowledge resources.
- Integrate local NGO's organization power.

### **1.4.3 Spatial Planning Aspect**

- Establish a practical design concept that goes with the topography and

natural aesthetic of the place, and is ecological sustainable and adapts the “Green Building” concept.

- Consider planning buffer zones to maintain the conservation goal in ecological conservation zones.
- Consider adding public participation and residence co-management in the planning process.

#### **1.4.4 Ecological Conservation Aspect**

- Proceed with environmental monitoring system on habitat restoration of significant species.
- Aggressively proceed with restoration experiments and breeding plans on in-danger creatures or vegetations.
- Establish long term and continuous ecological research system and monitoring plan.

#### **1.4.5 Facility Regulation Aspect**

- Attempt to establish planning principles and design regulations for all types of public facilities.
- Establish and adapt certifications for “Green Building” constructions, materials, and techniques.
- Establish examination and research methods on evaluating visitor’s satisfaction and recreational behavior.

#### **1.4.6 Management Aspect**

- Promote ecotourism certificate program and connect it with the International Ecotourism Certificate Program.
- Establish a public participating management system that is localized and integrated into the community.
- Promote National Park ecotourism and interpretation education in order to give back to the community and help transforming the local industry.
- Establish a more defined and effective visitor quantity control plan.



Fig. 1-1 Yangmingshan National Park Photo By/Peggy Wang

## 1.5 PROCESS

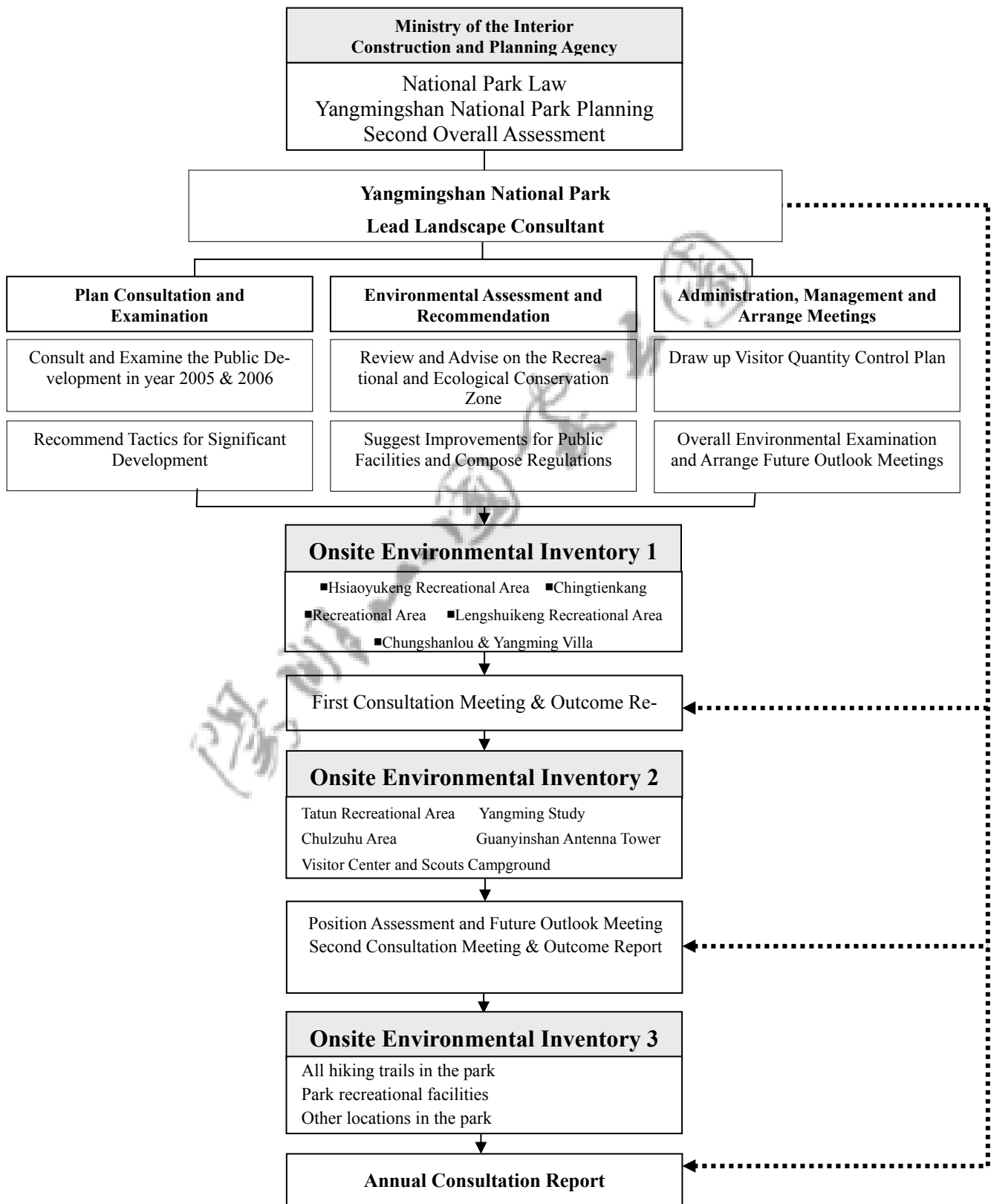


Fig.1.1 Plan Flow Chart  
Designed by Research Team

This plan started from August, 2005 to July, 2006 for a total of 12 months. The following is a detailed schedule:

Table 1-1 Annual Schedule for the Lead Consulting Group

Date	Time	Location	Agenda
<b>August, 2005</b>			
8/21-30			● Signing the Contract, drafting up schedule
8/31	15 : 00	EPDC Planning Room	● Internal team meeting
<b>September, 2005 - 1st Onsite Environmental Inventory</b>			
9/4-11			● “Kick-off” preparation, contact consultants
9/12	15 : 30	Yangmingshan Administrative Bureau	● Initial work discussion meeting
9/14	13 : 20	Yangmingshan National Park	● Onsite Inventory for Significant Development Plans: Chungshanlou, Matsao Recreational Area, Chulzuhu
9/16~9/17		Yangmingshan National Park	● Yangmingshan National Park Administrative Bureau’s 20th Anniversary Celebration
9/21	09 : 00	Beitou- Yangmingshan	● Beitou cable car route onsite inventory
9/28	14 : 00	Yangmingshan Administrative Bureau Conference Room	● First progress meeting
<b>October, 2005 – 1st Consultation Meeting and Outcome Report, 2ed Onsite Environmental Inventory</b>			
10/3	08 : 30	PCCU Hsiao-Feng Memorial Library	● Invite Sweden Environmental Color experts to hold a workshop
10/4~21			● Collect and organize results for the first phase
10/24	09 : 00	Yangmingshan Administrative Bureau Conference Room	● Second progress meeting
	13 : 00	Yangmingshan National Park	● Onsite inventory for Chungshanlou, Yangming Study, Dayukeng Recreational Area and Chulzuhu
	18 : 00	EPDC Planning Room	● Internal discussion meeting
10/25	09 : 00	Yangmingshan Park Area	● Onsite inventory for Beitou cable car route and key recreational area
10/26	09 : 00	Yangmingshan Administrative Bureau Conference Room	● First Consultation Meeting and Outcome Report



(Continue)

Date	Time	Location	Agenda
<b>November, 2005</b>			
11/3~18		EPDC Planning Room	• Build a model of the Matsao area
11/6~22			• Collect and organize results for the second phase
11/23	14 : 00	PCCU Dept. of Landscape Architecture	• Yangmingshan Hutian Elementary School surrounding landscape discussion meeting
11/23-		EPDC Planning Room	• Build a model of the Beitou cable car route and Chungshanlou surroundings
11/30	09 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the initial report on the “Yangmingshan Office Building Accessible Facility and Police Building Rooftop Improvement Construction Project”
<b>December, 2005 – 2ed Consultation Meeting and Outcome Report</b>			
12/1	09 : 30	Yangmingshan National Park	• Onsite Inventory: Menghuan Pond Conservation Zone & Guanyinshan Antenna Tower
12/2-			• Collect and organize results for the second phase
12/6	09 : 30	Yangmingshan Park Area	• Overall onsite inventory photo records of park facilities
12/8			• Assist in examining the “Beitou Hot Spring Design Demonstration Project”, provide written opinions
12/12~12/14	09 : 30	Yangmingshan Park Area	• Overall onsite inventory photo records of park facilities
12/19	09 : 30	Yangmingshan Park Area	• Onsite Inventory: Shuangxi Recreational Area, Tianxiyuan & Wuzhishan
	13 : 30	Yangmingshan Park Area	• Onsite Inventory: Menghuan Pond Conservation Zone & antenna tower area
	18 : 30	EPDC Planning Room	• Internal discussion meeting
12/20	09 : 00	Yangmingshan Park Area	• Onsite Inventory: Chingtienkang → Erziping hiking trail
	13 : 30	Yangmingshan Administrative Bureau Conference Room	• International case study introduction by Mr. Toda
	15 : 00	Yangmingshan Administrative Bureau Conference Room	• Park facility review (photo discussion)

Date	Time	Location	Agenda
<b>December, 2005 – 2ed Consultation Meeting and Outcome Report</b>			
12/21	09 : 30	Yangmingshan Administrative Bureau Conference Room	• Second Consultation Meeting and Outcome Report
12/26	19 : 30	EPDC Planning Room	• Beitou cable car discussion meeting
12/31	09 : 00	EPDC Planning Room	• Beitou cable car pre-examine meeting
	10 : 00	Yangmingshan Caoshanfang	• Yangmingshan US Military Housing discussion meeting
1/12	09:30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the midterm report on the “Yangmingshan Office Building Accessible Facility and Police Building Rooftop Improvement Construction Project”
<b>January, 2006</b>			
1/18	13 : 00	Yangmingshan Park Area	• Onsite Inventory: Lengshuikeng hiking trail, Chungchengshan hiking trail, Hsiaoyukeng hiking trail
1/19	13 : 00	Yangmingshan Park Area	• Onsite Inventory: Tatunshan hiking trail, Erziping hiking trail
1/24	14 : 00	Yangmingshan Administrative Bureau Conference Room	• Yangmingshan National Park environmental restoration and renovation related division discussion meeting
1/26	09 : 00	Taipei City Hall	• Beitou Line Cable Car BOT Project “Construction Management and Land Development Plan” examination meeting
<b>February, 2006</b>			
2/13	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the final report on the “Yangmingshan Office Building Accessible Facility and Police Building Rooftop Improvement Construction Project”
2/14	09 : 30	Yangmingshan Park Area	• Onsite inventory on Yangming Park and Grass Mountain Chateau
2/15	13 : 30	Yangmingshan Park Area	• Shanghuang River, Baian
	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the initial report on the authorized fundamental and detail design of the “Mt. Chungcheng and Mt. Shamo Hiking Trail and Public Facilities Renovation Project”
2/20	14 : 00	Yangmingshan Park Area	• Onsite inventory for the Pruning Workshop location at Yangming Study
2/22	13 : 30	Yangmingshan Park Area	• Onsite inventory for the Pruning Workshop location at Chungshanlou and Bank of Taiwan Training Center
2/23	09 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the initial report on the “2006 Public Facility Renovation Project within Each Recreational Area Jurisdiction”
	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the initial report on the “Yangming Study and ChungHsing Guest House Fire Sprinkler System Renovation Project”

(Continue)

Date	Time	Location	Agenda
<b>March, 2006</b>			
3/08	09 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the midterm report on the authorized fundamental and detail design of the “Mt. Chungcheng and Mt. Shamo Hiking Trail and Public Facilities Renovation Project”
3/10	14 : 00	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the midterm report on the “Yangming Study and ChungHsing Guest House Fire Sprinkler System Renovation Project”
3/21	09 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the midterm report on the “2006 Public Facility Renovation Project within Each Recreational Area Jurisdiction”
3/24	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the final report on the authorized fundamental and detail design of the “Mt. Chungcheng and Mt. Shamo Hiking Trail and Public Facilities Renovation Project”
3/27	09 : 00	Yangmingshan Park Area	• Onsite inventory for the International Garden Maintenance Experience Exchange Workshop location
3/28	10 : 00	Chulzuhu	• Chulzuhu River Ditch Renovation Consultation
<b>March, 2006</b>			
3/29	09 : 00	PCCU Da-En Hall	• International Garden Maintenance Experience Exchange Workshop indoor activity
3/30	09 : 00	Yangming Study, Yangming Park	• International Garden Maintenance Experience Exchange Workshop outdoor operation
3/31	09 : 00	Linsen Park, 228 Memorial Park	• Taipei City Park Planting and Lawn Maintenance Workshop
<b>April, 2006</b>			
4/6	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the final report on the “Yangming Study and ChungHsing Guest House Fire Sprinkler System Renovation Project”
4/11	09 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the final report on the “2006 Public Facility Renovation Project within Each Recreational Area Jurisdiction”
4/14	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the initial report on the “Mt. Tatun Area Public Facility Improvement Project”
4/17-		EPDC Planning Room	• Result production on the International Garden Maintenance Experience Exchange Workshop
<b>May, 2006 – 3rd Onsite Environmental Inventory</b>			
5/08	09 : 30	Yangmingshan Park Area	• Onsite inventory on the hiking trail from Lengshuikeng to Chixing Park
	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the midterm report on the “Mt. Tatun Area Public Facility Improvement Project”
5/09	09 : 30	Yangmingshan Park Area	• Onsite inventory on Silk Waterfall hiking trail
5/10	09 : 30	Yangmingshan Park Area	• Onsite inventory and facility survey on Stone Steps Mountain Ridge hiking trail
5/19	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the second midterm report on the “Mt. Tatun Area Public Facility Improvement Project”

Date	Time	Location	Agenda
<b>June, 2006 - Future Outlook Meeting</b>			
6/05	14 : 30	Yangmingshan Administrative Bureau Conference Room	• Assist in examining the final report on the “Mt. Tatun Area Public Facility Improvement Project”
6/08	09 : 30	Yangmingshan Park Area	• Onsite Inventory: Tatun Bridge Construction, Erziping Public Facility Improvement Project, Japanese Housing Unit
6/09	08 : 30	PCCU Bo-Ai Campus Da-Hsin Hall	• Yangmingshan National Park Prospective development Discussion Meeting
6/23	15 : 00	Yangmingshan Park Area	• Onsite Inventory: Sulfur Valley, Longfeng Valley Area
<b>July, 2006</b>			
7/01~		EPDC Planning Room	• Organize annual project data, edit Park Facility Regulation
7/26		Yangmingshan Administrative Bureau Conference Room	• Hand in Annual Consultation Report

## II ORGANIZATION AND WORKSCOPE OF THE YANGMINGSHAN NATIONAL PARK LEAD LANDSCAPE CONSULTANT GROUP



Photo By/Hong-Ming Chen

陽明一國志

## II

# ORGANIZATION AND WORKSCOPE OF THE YANGMINGSHAN NATIONAL PARK LEAD LANDSCAPE CONSULTANT GROUP

---

### 1.1 CONSULTANT GROUP PERSONNEL STRUCTURE

**“Yangmingshan National Park International and Domestic Landscape Consultant Group”** is a professional environmental consultant group that is combined with 12 international and domestic specialists specialized in Ecology, Landscape Architecture, Recreation, and Architectural Engineering (Fig. 2-1, Table 2-1).



Fig. 2-1 Yangmingshan National Park Lead Landscape Consultant Group Professional Background Consideration Chart

Designed by Research Team

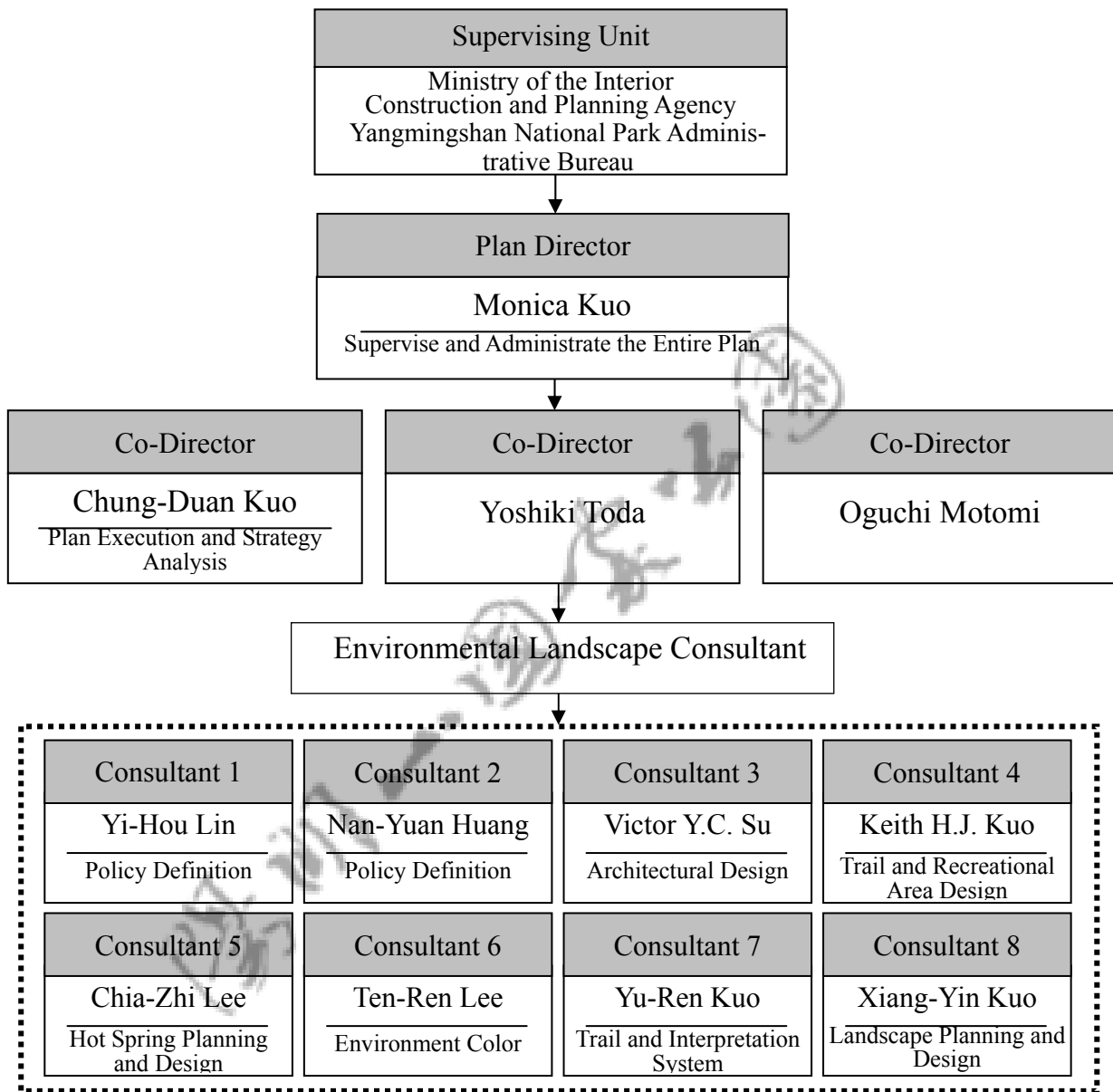


Fig 2-2 Yangmingshan Environmental Landscape Consultant Group Structure Chart



Table 2-1 Consultant List and Area of Expertise

	Name	Title	Company / Institute	Expertise
Yangmingshan National Park International and Domestic Landscape Consultant Group	Monica Kuo	Professor	Honorable Board of Chinese Institute of Landscape Architects in Taiwan Chair of the Department and Graduate School of Landscape Architecture, Chinese Culture University	National Park Strategy Planning Ecology Planning
	Chung-Duan Kuo	Principal	Laboratory for Environment & Form	Landscape Planning and Design Ecotechnology
	Yoshiki Toda	Professor	Lecturer of the Department of Communication Education, Kyoto University of Art and Design Member of the Japanese Institute of Landscape Architecture	Nature Park Planning Environmental Education & Interpretation
	Oguchi Motomi	Mr.	Japanese Garden Historiographer Member of the Japanese Institute of Landscape Architecture	Japanese Garden Construction Japanese Garden History
	Yi-Hou Lin	Professor	Associate Professor of the Department of Landscape Architecture, Chinese Culture University	Policy Definition
	Nan-Yuan Huang	Former Agency Director	Former Director of the Construction and Planning Agency	Policy Definition
	Keith H.J. Kuo	Principal	Principal of E.D.G. International Design Group and Keith. H.J. Kuo Architects & Associates	Trail & Recreational Area Planning and Design
	Chia-Zhi Lee	Principal	Principal of DNF Environment Consulting	Hot Spring Area Planning and Design
	Ten-Ren Lee	Principal	President of Color Association of Taiwan Principal of Chinese Culture University	Environmental Color
	Yu-Ren Kuo	Professor	Lecturer of the Department of Landscape Architecture, Chinese Culture University	Interpretation System Environmental Resource Interpretation
	Victor Y.C. Su	Principal	Principal of Stonehenge Architects International	Architectural Design
	Xiang-Yin Kuo	Professor	Lecturer of the Department of Landscape Architecture, Chinese Culture University	Landscape Planning and Design
Special Consultant	Ito Hiroya	Mr.	Second Level Landscape Construction Management Technician Entry Level Environmental Restoration Doctor	Japanese Garden Construction
	Berit Bergstrom	Ms.	Head of the Education Department at the International Colour Association (AIC) Principal of the Scandinavia Colour School	Environmental Color Study
	De-Yi Tasi	Professor	Lecturer of the Department of Landscape Architecture, Chinese Culture University	Landscape Planning and Design
	Ming-De Chou	Technician	Fire Prevention Technician of E.D.G. International Design Group	Fire Safety Expert

Note: Specialists with necessary backgrounds will be added as needed for each plan and settings.

## **1.2 ROLE DESCRIPTION AND OPERATION METHOD**

### **1.2.1 Role Description**

- Serve as a committee member to help the Administrative Bureau examining the periodical environmental plans.
- Serve as a professional consultant on the National Park plan tactics.
- Establish a communication channel between the Administrative Bureau and the Construction and Planning Agency or other related departments.
- Serve as a research platform between domestic and foreign National Park related institutes.
- Provide research information and academic resource, and become the National Park's long term partner.

### **1.2.2 Operation Method**

- Examine the overall development position and policy operation method.
- Consult on plans and examine tasks.
- Examine the overall environment and provide recommendations.
- Compose facility regulations and management strategies.

## **1.3 2005-2006 PUBLIC CONSTRUCTION CONSULTANT EXAMINATION**

- Provide plan content and direction recommendations.
- Pre-examine the plan.
- Assist in recommending and selecting outstanding manufacturers
- Provide work scope recommendations on the planning and design phase, construction phase, and maintaining phase of a project.

## **1.4 POLICY RECOMMENDATIONS ON SIGNIFICANT DEVELOPMENT PROJECTS**

- Local Organization Development Participation and Beitou Line Cable Car Construction Management and Land Development Plan
- Public Participation in the Yangming Villa and Chungshanlou Development and Management Plan
- Yangmingshan National Park Matsao Recreational Area National Park Business Investment and Management Plan
- Yangmingshan National Park Shuangxi Recreational Area National Park Business Investment and Management Plan

## **1.5 ASSESSMENTS AND RECOMMENDATIONS ON RECREATIONAL AREAS AND ECOLOGICAL CONSERVATION ZONES**

- Recreational Areas: Hsiaoyukeng, Dayukeng, Sulfur Valley Longfeng Valley, Yangming Park, Tatun Nature Park, Erziping, Lengshuikeng, Shuangxi Waterfall Area, Matsao Chigu Hot Spring Region, Scout Campground and Jingshan Campground, a total of 11 locations.
- Ecological Conservation Zones: Menghuan Pond, Lujiaokeng, Huangzuishan Ecological Conservation Zone.

## **1.6 IMPROVEMENT RECOMMENDATIONS AND REGULATION COMPOSITION ON PUBLIC FACILITIES**

- Keep the concept of “Nature and human as one”, “people, quality, sustainability” in mind when building facilities for people.
- Maintain an attitude of respecting life, retaining ecological balance and preserving nature.
- Fully consider a facility’s cost on its construction, maintenance, and operation phase.

## 1.7 COMPOSE VISITOR QUANTITY CONTROL STRATEGIES

- **Traffic Control:** Evaluate the possibility of increasing the amount of restricted roads and passenger capacity control around the Yangmingshan area and its feasibility, method, and supporting measures.
- **Charging Entry Fee:** Compare the charging method of each National Park and scenic area and evaluate the details such as possibility, method, rate..., etc. for Yangmingshan National Park.
- **Acceptance Survey on the Visitor Quantity Control Plan:** Use a survey to find out people's acceptability on a Visitor Quantity Control Plan and utilize the results to come up with the best solution.

## 1.8 HOLDING THE OVERALL ENVIRONMENT EXPERIENCE AND FUTURE OUTLOOK MEETING

### 1.8.1 Meeting Goal

- *Concept Integration*
- *Common Goal Coherence*
- *Gather International Experience*
- *Define Domestic Position*

### 1.8.2 Subject Outline

- ***Overall Development Prospect*** – Review and Vision of Yangmingshan National Park's Overall Future Development Plan (Monica Kuo, Chair of Department and Graduate School of Landscape Architecture at Chinese Culture University)
- ***Cultural Landscape Prospect*** – Preservation and Restoration of Yangmingshan's Historical Japanese Style Hot Spring Bath House (Chung-Duan Kuo, Principal of Laboratory for Environment & Form)
- ***Recreational Area Develop Prospect*** – Yangmingshan National Park's Central Facility Concept (Yoshiki Toda, Lecturer of Kyoto University of Art and Design, Lead Landscape Planner of EXPO 2005 Aichi, Japan)

- ***Ecotourism Development Prospect*** – Connecting the Yangmingshan Hiking Trail (Historical Trail) System (Zong-Sheng Lin, Head of Taiwan Mountain Nature Science Library, Head of Taiwan Mountain Climbing Research Center)
- ***Ecological Landscape Conservation*** – Yangmingshan National Park's Future Outlook: Using Tianxiyuan as an Example (Chen-Meng Kuo, Associate Professor of Institute of Ecology and Evolutionary Biology at National Taiwan University, President of Taiwan Ecotourism Association)
- ***Chulzuhu Area Future Develop Prospect*** – The Possibility of a Sustainable Community (Yong-Zhan Lee, Vice Mayor of Taoyuan City, President of Taiwan Environmental Information Center)
- ***Environmental Education Development*** – Environmental Education Development Prospect at Yangmingshan National Park (Ju Chou, Professor of Graduate Institute of Environmental Education at National Taiwan Normal University)



Fig. 2-3 Chingtienkang Meadow Photo By/Monica Kuo

陽明一國志



### III YANGMINGSHAN NATIONAL PARK DEVELOPMENT STRATE



Photo By/Monica Kuo

陽明一國志



# III

## YANGMINGSHAN NATIONAL PARK DEVELOPMENT STRATE

---

### Strategy 1: Compose Landscape Implement Plan and Outcome Assessment

- Compose a specified “**White Book of National Park Landscape Policy**”
- Establish “**Landscape Improvement**” assessment and evaluation system.

### Strategy 2: Establish an Ideal Coordination and Supervision System

- Achieve the periodic mission of the “**Environmental Landscape Consultant System**”.
- Integrate communication horizontally between the central units.
- Establish a vertical connection between central and local units.
- Adjust organization tasks according to the international trend.

### Strategy 3: Create Research and Development Standards for Forestry Eco-Engineering, Localized Ecotechnology, and Material Design Principles

- Develop engineering methods that cohere with the **Green Building Concept** to minimize the impact on the environment.
- Provide the National Park area a related “**Facility Planning and Design Standard**” in order to improve its landscape quality.

## Strategy 4: Diverse Sustainable Management

- Introduce the “**Business Management**” concept while drawing up the Yangmingshan National Park Diversification Management Strategy, in order to reach the goal of sustainable financing.
- Future administration of Yangmingshan National Park shall include multi-directional development such as landscape preservation and leisure activity, in order to achieve the goal of sustainable recreation.
- Carry out policies such as zoned administration, distinctive species and natural resources preservation, in order to reach the goal of sustainable eco-system.

## Strategy 5: Draw up Talent Training Programs

- “Seed Instructor” training and teaching materials editing.
- The necessity of “Outdoor Training Courses”.

## Strategy 6: Promotion and Advertising

- Hold Emulation Seminars regularly for promotion.
- Use Internet Technology to instantly broadcast policy result.

## Strategy 7: Encourage Local and International Communication

- Combine local NGO (Non-Government Organization), NPO (Non-Profit Organization) and local business to work together.
- Participate actively in international affairs and related meetings, and communicate with the National Parks in other countries.

## Strategy 8: Connect with Government's Main Policies and Establish "Key Demonstration Projects"

- Connect with Government's main policies that they are currently promoting: "**Land Resource Group**" Action Plan of National Council for Sustainable Development and "**Challenge 2008 – National Key Development Plan**".
- Circle out "**Key Landscape Areas**" within the park and draw up related planning and design principles in order to carry them out.
- Set up annual "**Key Demonstration Projects**" to be as guidance for future projects.

## Strategy 9: The Importance of Preserving Fundamental Environmental Resources and Establishing Database

- Analyze and categorize natural and cultural resources.
- It is necessary to monitor **environmental sensitive areas** extensively.
- Establish online Geographic Information System database (**Digital Park**).
- Compose a preservation plan for the "**Ecological Resource Database**" (**Biotechnology**).

## Strategy 10: Theme Creation and Marketing for Each Recreational Area

- Create a distinctive style for the facility and activity of each area base on its unique environmental landscape resources
- Combine public marketing skills and professional sustainable management concept to promote the unique environmental resources at Yangmingshan.

陽明一國志

## IV OVERALL ENVIRONMENTAL REVIEW AND RECOMMENDATION



Photo By/Monica Kuo

陽明一國志

# IV

## OVERALL ENVIRONMENTAL REVIEW AND RECOMMENDATION

---

### 4.1 REZONING RECOMMENDATION

To make Yangmingshan National Park's future development more systematic, it is recommended to rezone the existing areas into three regions:

- 1. Preservation Region:** This includes animal and vegetation preservation and environmental education, and should be a place for those who are interested to participate in.
- 2. Central Region:** This includes areas that the future cable car will reach and the neighborhood around Yangming Park and Chungshanlou. This area is more similar to a city park style and level; its character also relates more to a city park.
- 3. Middle Region:** These are areas that are between Preservation Region and Central Region. This includes accommodation, participating agricultural activities, or recreation activities that is not the 2 to 3 hours city park activities, but ones that can be scheduled for a whole day or stay overnight. The following four types are included in Middle Region:

Type 1: **Natural Landscape** ► Erziping, Tatun

Type 2: **Hot Spring Geology** ► Hsiaoyukeng, Dayukeng, Lengshui-keng

Type 3: **Control Area** ► Yangming Park (Recommend dividing it into 2 recreational areas as Yangming Study and Yangming Park), Scout Campground, Chungshanlou (Originally not a recreational area), Jingshan Campground

Type 4: **Others** ► Matsao, Longfeng Valley, Shuangxi (Independent because of their isolated location)



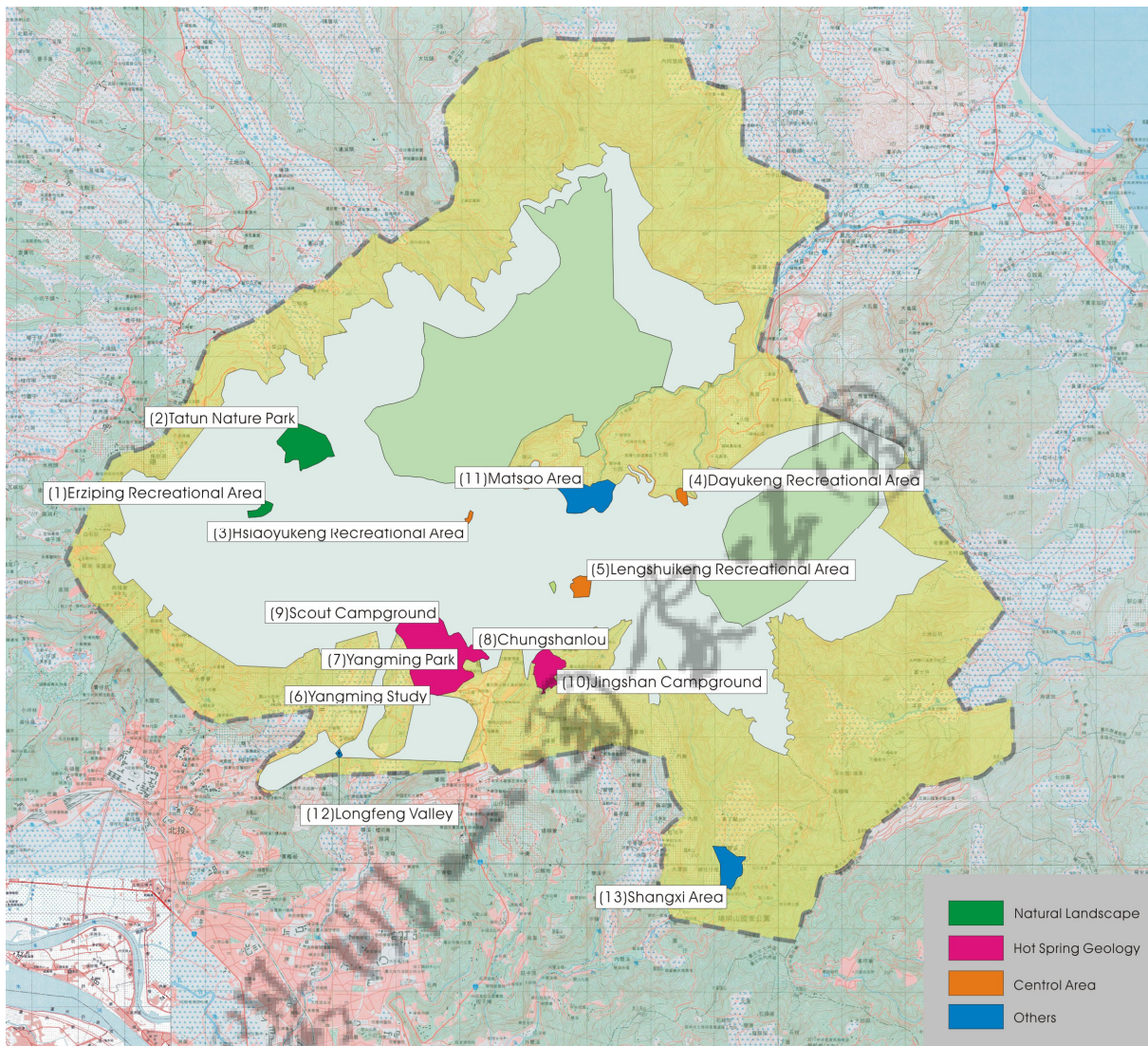


Fig. 4-1 Yangmingshan National Park Recreational Area Rezoning Recommendation Map Resource: Drawn by Research Team 2003

- |                                   |                          |
|-----------------------------------|--------------------------|
| (1) Erziping Recreational Area    | (8) Chungshanlou         |
| (2) Tatun Nature Park             | (9) Scout Campground     |
| (3) Hsiaoyukeng Recreational Area | (10) Jingshan Campground |
| (4) Dayukeng Recreational Area    | (11) Matsao Area         |
| (5) Lengshukeng Recreational Area | (12) Longfeng Valley     |
| (6) Yangming Study                | (13) Shuangxi Waterfall  |
| (7) Yangming Park                 |                          |



## 4.2 ECOLOGICAL CONSERVATION ZONE

The three Ecological Conservation Zone located in Yangmingshan National Park are Lujiaokeng Ecological Conservation Zone, Huangzuishan Ecological Conservation Zone and Menghuan Pond Ecological Conservation Zone. Each of their location and boundary is indicated on the map below.

In order to protect the habitat not to be disturbed, visitors who would like to enter the Ecological Conservation Zone not only have to apply for permission before hand, but also have to follow the rules of operation time, limited visitor bearing capacity, travel route, and all other recreation related regulations.

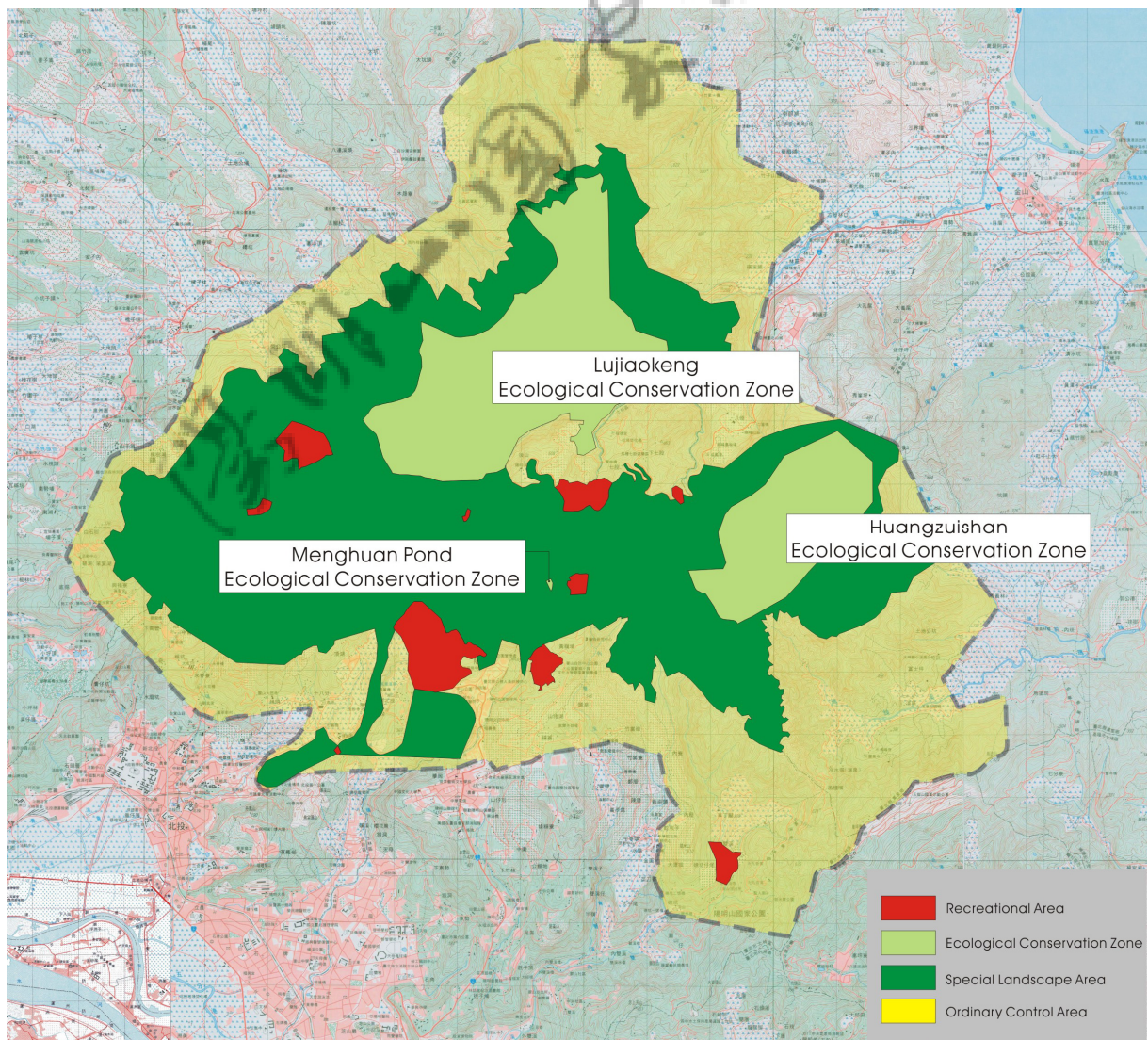


Fig. 4-2 Yangmingshan National Park Ecological Conservation Zone Location and Boundary Map

Resource: Drawn by Research Team

Table 4-1 Yangmingshan National Park Ecological Conservation Zone Main Protecting Subjects Chart

Ecological Conservation Zone	Main Protecting Subject
Bio (1) Lujiaokeng Ecological Conservation Zone	Original Broadleaf Forest & endangered plants such as Flowering Dogwood
Bio (2) Huangzuishan Ecological Conservation Zone	Volcanic Cone, Volcanic Lake & endangered plants such as <i>Dysosma versipellis</i>
Bio (3) Menghuan Pond Ecological Conservation Zone	Taiwan Isoetes

### Lujiaokeng Ecological Conservation Zone Recommendations

- Keep the existing administration policy
- Enhance environmental ecology research projects

### Huangzuishan Ecological Conservation Zone Recommendations

- Keep the existing administration policy
- Enhance environmental ecology research projects

### Menghuan Pond Ecological Conservation Zone Recommendations

- Recommend creating an artificial wetland and introduce Taiwan Quillwort into the new wetland for education and interpretation purposes to protect the natural wetlands, and turn Menghuan Pond into a research wetland.
- Menghuan Pond is drying up severely and the Chinese Cedar around the pond can be cleared to solve this problem for now. Although by the National Park's law no action that will affect any environmental resources is allowed in Ecological Conservation Zones, but should be able to come to an agreement for necessary procedures.
- It will be a big construction to fix the leaking problem at Monghuan Pond area, and a construction this scale is not suitable for an Ecological Conservation Zone.
- Monghuan Pond is going to change with the natural process; therefore, it is not suitable for tourism use. It is recommended that this area should only be used by professionals for research or education purposes.



Fig.4-3 Lujiaokeng  
Photo By/Ming-ming Chen



Fig. 4-4 Taiwan Quillwort  
Photo By/Monica Kuo



Fig. 4-5 Menghuan Pond  
Photo By/Hon-Min Chen



### 4.3 RECREATIONAL AREA

Recreation Area is an area that has good development qualities such as an ideal location, picturesque landscape and large space for developing outdoor activities. There are 11 recreational areas in Yangmingshan National Park, and they are: Matsao Chigu Hot Spring Region, Erziping Recreational Area, Tatun Nature Park, Yangming Park, Scout Campground, Jingshan Campground, Shuangxi Waterfall Area, Sulfur Valley Longfeng Valley Recreational Area, Lengshuikeng Recreational Area, Hsiaoyukeng Recreational Area and Dayukeng Recreational Area .Their location is indicated in the map below.

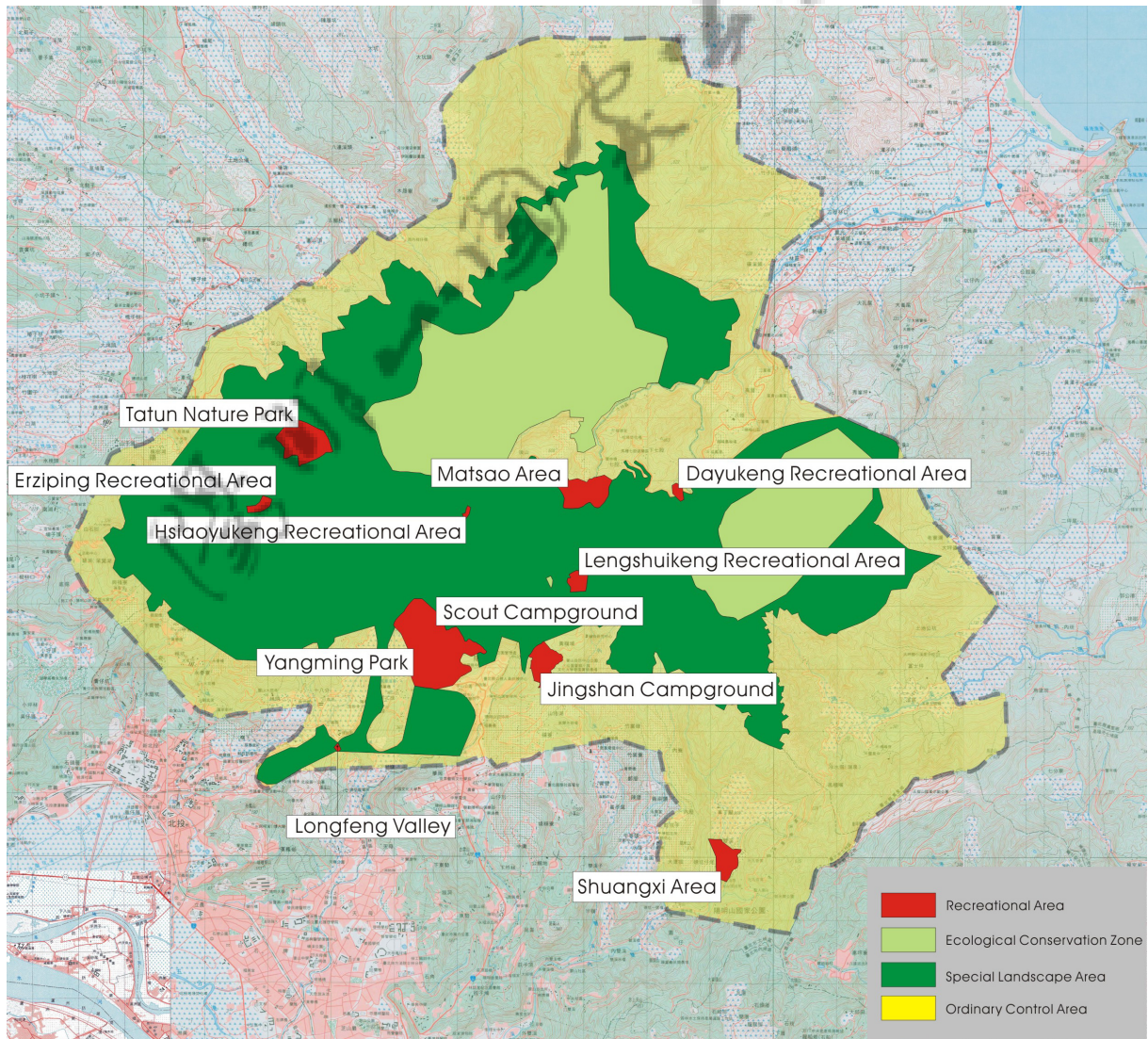


Fig. 4-6 Yangmingshan National Park Recreational Area Distribution and Boundary Map 2003  
Resource: Drawn by Research Team

## Matsao Recreational Area Recommendations

- The landscape design for east Matsao area should integrate its surrounding, and try to avoid using geometric shapes such as circle, square, straight line, etc.; use a softer design style instead, and adequately add in local characteristics.
- Reduce hard pavement and avoid large structures as much as possible; building structure should be separated to reduce the building mass, and do not put up walls that are too long.
- Outdoor hot springs are located outside of the site boundary and do not have user permit, therefore, they needed to be included into the site. Natural water source should be designed with a natural style so that it can be used flexibly.
- The entry sign design should be compatible with the surroundings, and the entry ramp should be a gentle slope with a road that is wide enough.
- Do not use fluorescent light system; consider using white lights instead to avoid attracting bugs.
- Attention is need on the view seen from the road around west Matsao; large board leaf shade trees can be used to cover the buildings and keep the balance with nature.
- Use existing trees into the landscape plan, and also consider the amount of rainfall in this area to design a landscape that is compatible with nature.
- The colors used on Matsao Bridge should match with the colors found in nature, and use brighter tones to create a floating feeling. It is recommended that darker tones should be used on structures below the bridge and lighter tones on top structures to make the overall composition feel lighter. Every facility in the National Park should blend in with the nature. Because there is a lot of rain and fog in the Yangmingshan area, there will be a potential danger if the color of the bridge is too dark. The following are color suggestions for Matsao Bridge:
  - The arch, support walls and side walls should use two different colors.
  - Use gray as base tone and mix in some green.
  - Use lighter color on the top bridge structures and darker color on the arch.
  - Use the same color on the railing and the top bridge structure.



Fig. 4-7 Matsao Recreational Area  
Photo By/Hon-Min Chen



## Erziping Recreational Area Recommendations



Fig.4-8 Erzipping Recreational Area  
Photo By/Hon-Min Chen



Fig. 4-9 Tatun Nature Park  
Photo By/Hon-Min Chen

- The shade trees around the existing Butterfly Corridor is overgrown and created too much shade for the flowering plants below. The flowering plants eventually died because of lacking sunlight and consequently making the butterfly disappearing. It is recommended that shade trees needed to be pruned and controlled in the future and fill in more flowering plants to restore the Butterfly Corridor.
- The ponds in this area all have concrete protection edges. It is suggested that they can be rebuilt into artificial wetlands in the future and become a place for ecological environmental education.
- A lot of the pathway and surfaces in this area is still non-permeable hard pavement. In order to not disturb the existing ecological balance, no budget needs to be planned for removing them. It is recommended that they can be gradually replaced by using ecotechnology when doing repair and maintenance.

## Tatun Nature Park Recommendations

- Under Tatun Nature Park Administrative Bureau's careful management, special themes can be assigned to the different trails in this area. For example, the design for features placed along a certain trail that leads to a famous waterfall will be different then the other trails such as a flower trail or butterfly trail.
- The ecological resource is very rich in this area. Currently, a visitor center and a parking lot are already in plan. Visitors will increase dramatically in the future; therefore, attention will be needed on trash and sewage treatment that comes along.

## Yangming Park & Yangming Study Recommendations

### *Yangmingshan National Park Visitor Center Region*

- Yangming Park will be a very important stop for the future Beitou Cable Car route; therefore, large amount of visitors will affect Yangmingshan National Park's activity form. Most of the visitors will be getting on and off at this spot. How to accommodate the visitor capacity and connect the movements will be very important subjects. One of the bigger zones nearby is in the Chungshanlou region, and the other one is Yangming Park and Yangming Study.

- Although currently there is a separate vehicle and pedestrian traffic system around Yangming Park, some driveways are too close to the sidewalks and it is still dangerous for pedestrians. New pathways should be placed to connect the two regions (refer to the dotted red line on Yangmingshan National Park Central Area Design Concept above). Circular route is the ideal route for recreation and tourism. Therefore, future visitors can follow the new pathway to Chung-shanlou from the cable car stop, and return by following the existing pathway. Even though there are cars driving on the driveway entering Yangming Park (yellow line), safety is not a issue because there are not a lot of cars and the speed limit is low, and it connects to the new pathway. For these reasons, it is strongly recommended that the Yangmingshan National Park Administrative Bureau should put in the new red pathway on the plan.



Fig. 4-10 Yangming Park  
Photo By/Hon-Min Chen

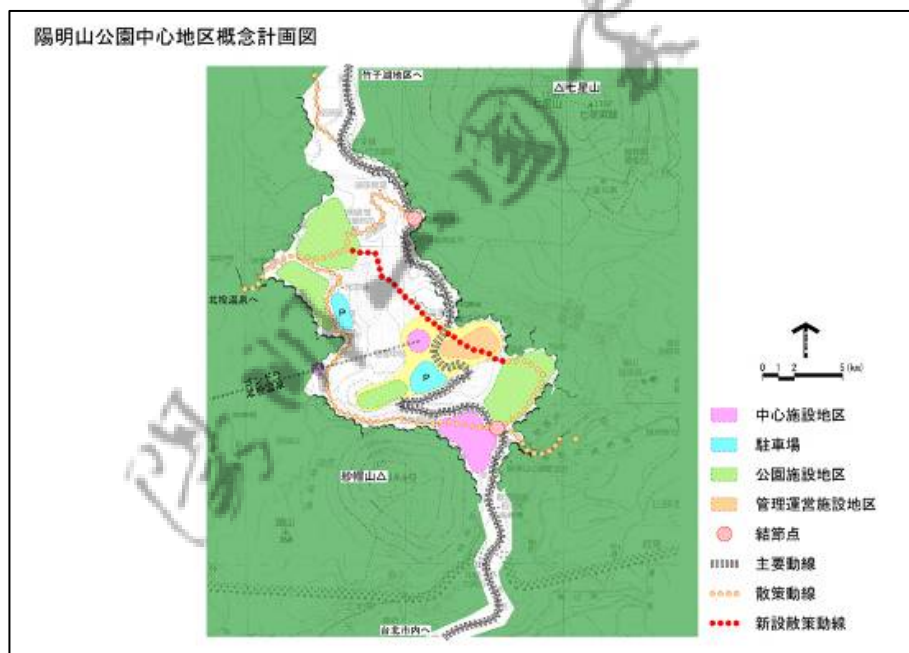


Fig. 4-11 Yangmingshan National Park Central Area Design Concept  
Drawn by Yoshiki Toda

### ***Yangming Park Region***

- This place was mainly for natural preservation in the past, but now it should also consider adding recreational activities for people. It is most important to find a balance between natural environment and people activity.
- There is a driveway connecting Yang-Chin Highway from Yangming Park to Yangming Study. If it could be connected to the new pathway mentioned above, it will become a trail that is very suitable for



Fig. 4-12 Yangming Park  
Photo By/Hon-Min Chen

recreation. Right now visitors walk on the driveway, and it is not only a longer distance to walk but also creates safety issues. If a shortcut is created cutting through the winding road, it will be more suitable for the visitors to use. Lilies and Hydrangeas can be planted along the pathway for pedestrians to enjoy while walking. To create a better leisure quality, select appropriate trees and keep the space organized.

- The landscape around Yangming Park's parking lot is not very nice, and the design and general space is also not sufficient. It should be redesigned and set aside some plaza space, and also add greenery to beautify and hide it a little bit.
- Yangming Park is a design from the pervious generation. It currently lacks an obvious object that attracts visitors, and is also short of a place to rest and sight seeing. The only landscape attraction in this area is the floral clock for visitors to take photos; therefore, it needs to create other visual focal points and visitor attractions. Due to Yangmingshan's high rainfall level, shelters or greenhouses can be built here for visitors to use in rainy days and make them become the other focal points.
- The pond by Guangfulou has been rearranged by Mr. Oguchi Motomi, Mr. Ito Hiroya, and many others on March, 2006. It is now a very beautiful Japanese Garden style landscape with ponds, streams, waterfalls, islands and rock combinations that has historic value and aesthetic feeling. The pond is not totally restored yet and it should be restored with every effort in the near future to make it an even better place for the visitors.
- Yangming Park should take advantage of its weather and setting to use more flowering plants here for the visitors to enjoy, and also consider creating recreation facilities that the younger generation will prefer.
- Create tourist resource that fits the four seasons so visitors can enjoy themselves to the fullest. Also establish buildings with high qualities for visitors to take a break, drink tea, and buy souvenirs.
- Set up high quality dinning facilities to raise the park's value.
- Enhance visitor service stations and gift shops, and provide products that are meaningful (agricultural products or crafts).



- There are many spaces in the park that still need improvements; for example, more seating and sight seeing features should be added at the deck area.
- If there will be cable car service at Yangming Park in the future, the overall development plan should be looked over at a whole new angle to define development position and direction, and discuss future management plans with Taipei City Department of Public Works Parks and Street Lights Office. The cable car development, including the design style and vocabulary, should be thought in a new state of mind, and its terminal station should have both viewing and leisure functions.



Fig. 4-13 Yangming Park Design Plan Drawn by Yoshiki Toda

### ***Yangming Study***

- Right now visitors have to make an appointment before hand to visit Yangming Study, and this is an appropriate system because this is a place that has a significant historic meaning, and the overall environment is very peaceful and beautiful. Visitors should come with respect while visiting.
- Consider putting Yangming Park and Yangming Study in the same zone and make a clear commute plan. There is a big elevation difference between the 2 places so consider providing a shuttle bus for those who have limit mobility and also create a scenic recreation opportunity.





Fig. 4-14 Erziping Recreational Area  
Photo By/Hon-Min Chen

- Create a pathway network between Yangming Study and the park for visitors to take a walk.
- Clearly define Yangming Study's boundary and set up signs or monument to emphasis the existence of the Study.
- Renovate the pathway between Yangming Park and set up features such as seating areas or telescopes that will acknowledge people's existence.
- Yangming Study currently functions as an archive center, and leisure facilities should be added for people to stay around longer, so that visitors can physically experience this historic space and not just use it as a display area. From the historic preservation point of view, consider developing this place to a research base for international experience exchange, or renovate the courtyard for intellectual activities.
- Yangming Study's courtyard looks very neat and organized after cleaning. The plants here are very important, and the rock combination (turtle rock) is especially meaningful. When entering Yangming Study's main door the turtle rock is on the right and the crane rock is on the left. It has a special meaning to set them up this way and this is a Japanese and Chinese technique. Overall it is top design.
- Different activities that go with each season's characteristics can be held in the courtyard.
- The Study should consider publishing booklets or souvenirs that can let visitors understand its history.

### Scout Campground Recommendations

- The structures at the Scout Campground are too harsh; it should include the surrounded landscape elements.
- The facilities such as walls and planters at Scout Campground should use materials or patterns that are natural like. RC concrete post structures with brick face are not suitable, and should use materials that have matted surfaces.
- Plant more tall trees in front of the walls to improve visual qualities.
- If wood is used on the surface, other sturdier materials should be used on the base to prevent humidity. Because it is very humid in the park area, it is not easy to maintain wood structures. The technique Japanese use is to use stone under the wood.



Fig.4-15 Scout Campground  
Photo By/Hon-Min Chen

- Many of the benches in this area are too urbanized.
- It is very important to set up overall and individual interpretive signs in the campground. Same image can be used on shared signs, and each zone should have its own characterized signs. Use image to explain is better than using words.

### Jingshan Campground Recommendations

- The concrete wall of the public restroom should be softened to reduce its impact on the landscape environment and remove the dominating feeling from the visitors using the public pool, and further improve recreation quality.
- Fill in shade trees along both sides of the connection road at Lane 101 Jingshan Road and Xinyuan Street to improve the landscape impact.
- The concrete stairs at the outdoor public pool area blocks the view from the indoor pool. It is suggested to remove the existing structure and replace it with a hollow one that is made out of steel and wood and also widen the stairs. The hand rail where users hold on to should be covered with solid wood, and the steps should be covered with slip resistance wood or recycled wood.
- Reduce the height of the concrete wall at the outdoor pool so that it won't block the view from the indoor pool, and its form should interact with Mt. Samou.
- Because this project is located on the hillside and in a high rainfall area, the connecting features between each service facilities should be placed with the consideration of visitor's convenience and comfort in mind.
- More Taiwan Cherry should be planted on site to enhance the feeling of a cherry flower hot spring resort, and use layers of native plants and native Rhododendron that fits the local weather and landscape to develop self-identity of the environment.
- Improve the exposed ground at the camping area with vegetation. The area around the existing restrooms and mechanical facilities should have landscape buffer and beautified.
- The roof of the front building is too high and affects the courtyard's visual access. More plants should be added in the courtyard to reduce the visual impact, and it would be better if the roof can be recon-



Fig.4-16 Jingshan Campground  
Photo By/Hon-Min Chen

structed with frames that allow some light to come through.

- The hill facing Mt. Chising should be reshaped in a gentler slope and planted with grass or wild flowers to create an open space that's visually connect with Mt. Chising.

### Shuangxi Recreational Area Recommendations

- The water runs very fast in this area and no water activities should be allowed here. "No Swimming" warning signs should be placed visibly by the water edge.
- Trees should be nicely pruned and set up overlooks to provide a good spot for enjoying the view of the stream and waterfall.
- This area should not have large scale development plans. It could be reconsidered after the Central Region is successfully developed in 10 years. Development can happen anytime, but once the environment is destroyed it can never be recovered.



Fig. 4-17 Shuangxi Recreational Area  
Photo By/Hon-Min Chen



Fig.4-18 Sulfur Valley & Longfeng  
Valley Recreational Area  
Photo By/Hon-Min Chen

### Sulfur Valley& Longfeng Valley Recreational Area Recommendations

- If the future Beitou Cable Car passes this area, it will be a big visual impact to the landscape, therefore, future designs for this area should consider its visual impact.
- This area originally has very rich geographical landscape characteristics but it has been disturbed. No more large scale service facilities should be developed here in the future. The existing facilities are sufficient for this area.
- The hot spring water source has decreased dramatically because local businesses connect their own pipe to the hot spring source without permission. It is suggested to call a meeting and communicate with the hot spring business owners, and come up with a water control method, let the users pay a fee to limit the water usage, and prevent destroying the river's natural balance.

### Lengshuikeng Recreational Area Recommendations

- The facilities and environmental planning in this area are very mature, and is a very important recreational spot for the visitors. The only improvement is that the content of the ecological interpretation and exhibits at the visitor center can be enhanced.



- The parking lot at Lengshuikeng is very big, and more landscaping should be done to its surrounding, such as adding more greenery and shades.

### Hsiaoyukeng Recreational Area Recommendations

- This is an unstable area and landslide happens every year. The slopes should be treated to control the collapsing area in order to avoid any danger.
- The parking lot outside of the visitor center should be enhanced with more greenery and a better design.
- Due to the increasing landslide area, it is recommended not to put in any more facilities and just maintain its existing condition.

### Dayukeng Recreational Area Recommendations

- The environment in Dayukeng is very fragile and traffic is not very convenient, therefore, it is recommended not to build any service facilities. If recreation activity is needed, put in only walking trails.



Fig. 4-19 Lengshuikeng Recreational Area Photo By/Hon-Min Chen

Fig. 4-20 Hsiaoyukeng Recreational Area Photo By/Hon-Min Chen



## 4.4 OTHERS

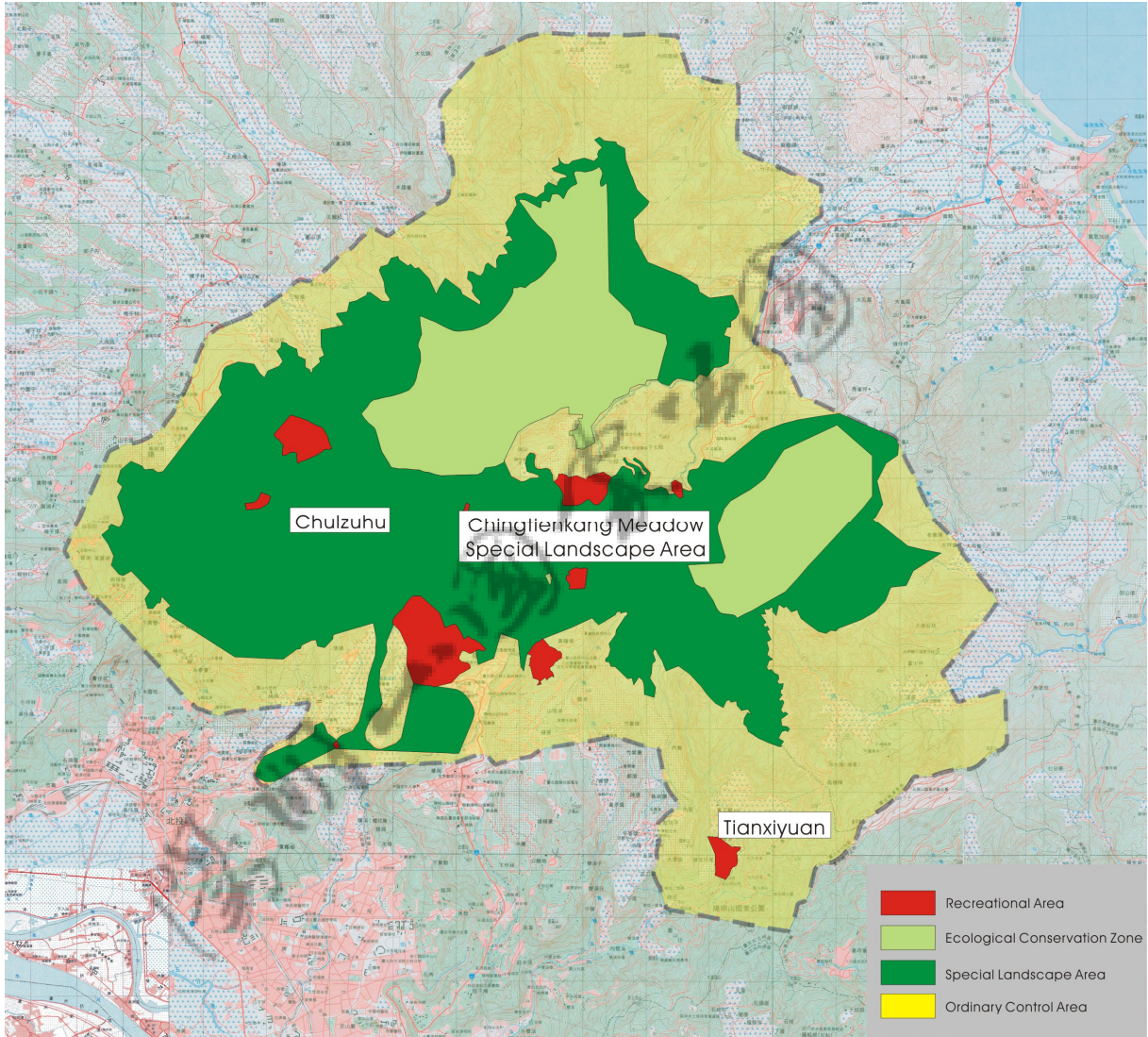


Fig.4-21 Yangmingshan National Park Chingtienkang Meadow, Tianxiyuan and Chulzuhu Distribution and Boundary Map  
Resource: Drawn by Research Team

### Chingtienkang Meadow Special Landscape Area Recommendations

- An attacking accident has happened in the past here in Chingtienkang due to a visitor disturbing the cattle, but the opportunity for other visitors to enjoy seeing the cattle on the meadow should not be taken away just because one person did not follow the rules. This kind of incident should be prevented to happen again. Besides, people can be educated through public medias and their opinion can be

collected through questionnaires, and regulation should be set up according to the survey result so that the users can participate in the rule making process.

- Regulations of this area should be stated clearly and enforced by volunteers.
- This type of meadow ecosystem does not happen naturally in the subtropical climate of Taiwan. If the cattle are removed, the meadow will be gradually replaced with Silvergrass through natural evolution, the meadow will turn into a forest, and we will lose the meadow forever in the future.
- The cattle themselves are a disturbance element to create Chingtienkang's short grass meadow; therefore, a research can be conducted here to figure out the relationship between cattle and meadow evolution.
- It is recommended that potential danger should be clearly stated to the visitors, and an interpretive system should be used to explain the entire ecological evolution process. One should take upon his own mistake and others should not be punished by it.
- Stray dog is another big problem in this area. Not only does it cause problems to people, it also causes trouble to wild animals. Stray dogs may hunt for the wild animals in Chingtienkang and endanger them. Therefore, stray dogs may be a bigger problem than the cattle. They should be captured and kept together.
- More volunteers can be added at Chingtienkang in the future to provide interpretation service. Future management should focus on the design of the facilities.
- The walking trail in Chingtienkang should be paved with rough sand or crushed stones to increase the recreational quality of the space, and allow visitor being closer to nature.



Fig. 4-22 Chingtienkang Meadow Special Landscape Area  
Photo By/Hon-Min Chen

### Tianxiyuan Recommendations

- Tianxiyuan is already working with National Taiwan University on a plan together and is recommended to form a Non Profit Organization (NPO) as soon as possible to manage this place, set up a spot for environmental learning projects, and provide local resident or student and teachers to participate in environmental learning activities.



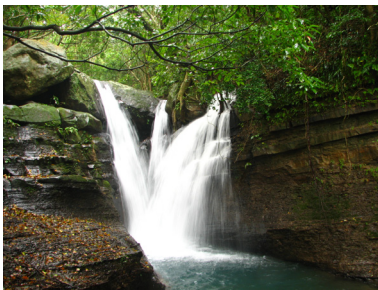


Fig.4-23 Tianxiyuan  
Photo By/Hon-Min Chen

- NPO can be asked to operate and manage this place. An entry fee can be charged and at the same time, the National Park Administrative Bureau can also finance this place.
- Let elementary students to elderly enjoy visiting Tianxiyuan, and make it become a place for people to understand Yangmingshan's natural environment.
- It is suggested to have adequate control measures (such as closed on certain days) or limited visitors to preserve a naturally balanced landscape environment. Visitors can be divided into groups and accompanied with an interpreter in order to respond quickly if any unexpected incident happens.
- A monitor system that suits the location should be in place to preserve the valuable ecological environment.
- Ecology concept should be introduced in the management of this place and establish a guiding system to achieve the purpose of environmental education.
- Tianxiyuan has a lot of potential, especially in these nine years as the Administrative Bureau cut back on the opened days to restore the environment and made it beautiful. If Tianxiyuan is opened to the public, visitors at Shuangxi and Shengren Waterfalls can be partially transferred to this area.
- Tianxiyuan has beautiful waterfalls and an excellent garden form. This area can be divided into 2 parts, one is the garden area at the entry, and the other is the pathway that leads inside. These areas should be opened to the public freely, but safety issue should be specially considered.

### Chulzuhu Recommendations

- The development of Chulzuhu should use Japan's "Satoyama" as goal. "Satoyama" means "mountain of home". Satoyama has the scenery of one's origin; people from the city miss their origin, and the best place to cure it is Chulzuhu. A lot of development in Taiwan only sees the economy benefit, but environmental conservation should be more emphasized.
- There are a lot of management units in the Chulzuhu area. They should all come to a common ground on the management aspect and organize the regulations, evaluate from all the angles and carry out an overall plan, attract local residence and local resource, maintain

the natural leisure and environmental education function of the place.

- Taipei City Hall did many land use zoning control following its urban plan's reward provision. Chulzuhu area can also use this to negotiate with the property owners as a way to rezone their property, and make Satoyama landscape as the development goal of this area.
- Chulzuhu is a beautiful Arcadia and is suitable for a farming lifestyle. But right now there is too much development here and this created an unorganized overall landscape. The design for Chulzuhu should not be limited to a partial, but should emphasize on a whole and the potential in the future. The develop plans in the past might have cost a lot, but unfortunately it's just like the design that belongs in a city and is a failure design.
- The Department of Economy Development's building roof color and facilities destroyed all the natural interest in the Chulzuhu area. If the rice paddies can be restored, then the local characteristic will represent itself. Chulzuhu should break from the typical agricultural tourism and create its own style.
- Chulzuhu can be divided into two areas, one is the agricultural land that has less building, and the other is the area that has more buildings and greenhouses. Future development for these two areas will be very different. On site investigation found that the wind here is very strong, there is a windbreak in the middle, and the terrace field is well preserved. Chulzuhu can have a similar development as the Satoyama project, and it is recommended that the building amount in this area should not increase anymore, and make it into a place for agricultural learning.
- Organize existing buildings, provide dinning, resting, guesthouses, or utilize hot spring and related facilities in the Chulzuhu area. The latest planning report should provide guidelines for the building and facilities in this area.
- It is very easy to put urban elements in a country environment if there is not a well thought development direction before doing the design. Take example of the design for the retaining wall, it should make the cut surface gentler, more natural, and more permeable, and not to be all covered up with concrete. Although the Chulzuhu area has not been recognized currently, after introducing traffic facilities, the importance of this area will stand out.

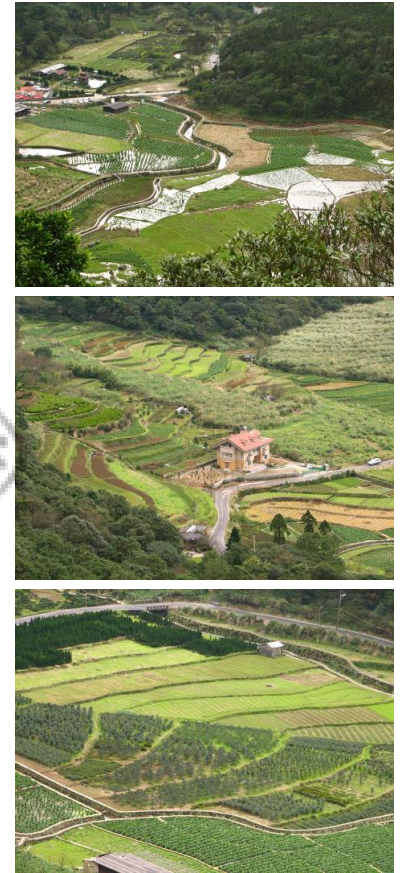


Fig. 4-24 Chulzuhu  
Photo By/Hon-Min Chen



- Although Chulzuhu is currently not included in the recreation area, it is very important for the overall development, and it has a lot of potential. The plan in place right now focuses more on one spot; it is recommended to design the overall planning base on how visitor will use the park area, and develop it into a complete master plan.
- Chulzuhu area should be developed into the Arcadia of the Taipei City. Use simple, plain designs or even planning styles to make it like no one lives there to keep the existing unique environment.
- Future industry development of this area should combine agriculture and service. However, they should not be making money by just selling the agricultural products they plant, but turn the technique of teaching visitors how to grow the crops into a business opportunity.
- The network between each spot in the whole area and inside itself is both very important. The network should be thoroughly reviewed by all three levels of spot, line and plane. Besides reviewing the spot, line and plane of the central network, the three levels of network for the whole region should also be reviewed.
- Chulzuhu area is currently zoned as regular restricted area and not as recreational area; therefore, restaurants and other commercial behavior here are all illegal. Businesses are managed with low budget and as a result have low quality. The topography at Chulzuhu is flat, therefore, it is recommended to change its zoning to recreational area. Provide good quality restaurants or lodging, and turn it into a place for terrace field restoration, nature education, and agricultural experience.
- The development of Chulzuhu should be combined with the overall development of the National Park, and generate creative and practical plans to reflect the restoration of the actual environment.
- Chulzuhu could follow Japan's case if it would like to operate restaurants and be government sponsored but privately operated, and gather business owners through the cooperation of the Administrative Bureau, Taipei City Hall and local residence. It will be very meaningful if children from the city can take agricultural lessons in Chulzuhu, live here and experience a country lifestyle.
- The scenery in the Chulzuhu area is very important. The Yangmingshan Administrative Bureau should work with local residence to protect this beautiful environment.

## Chulzuhu's River Channel Renovation Recommendations

- The artificial water channel built by Taipei City Hall in Chulzuhu has a great impact to the environment. It cuts off the entire natural water source, does not follow ecotechnology, and has affected the entire vegetation. Taipei City Hall uses concrete on water channel constructions and this will cause a problem on the water cycle, which will have a great impact on the environment. Chulzuhu's water channel system and agricultural system is one body and this should not just be water and soil engineering project.
- Considering from the ecology and landscape point of view, the technique used on river channel renovation should be natural and high permeable designs such as using rocks or other ecotechnology on the bed's surface instead of using massive reinforced concrete.
- Although andesite rocks are used on the river edges, the foundation is still concrete, and it still has a great affect on the river's ecology. It is a threat to the river, the creatures' habitat, and vegetation growth. Plus, using concrete to fill in the gaps between the rocks does not help the inhabitation of insects and animals, and does not count as ecotechnology. It is recommended to use compacted soil as base, increase the thickness of the andesite stacks, reduce the slope on the river's edge, and avoid using too much concrete.
- The marble inserts on bridge railings does not match Yangmingshan National Park's natural image. The inserts should be andesite with nice shapes.
- The water edge overlook and stairs are not really practical since it rains a lot and is really humid in Chulzuhu, therefore, the chance for visitors to rest and play in the water here is really low. It is suggested to put stacks of andesite along the contour lines and fill in the gaps with soil for plants to grow and avoid being too artificial.



Fig. 4-25 Chulzuhu's river  
Photo By/Hon-Min Chen

# V REVIEW OF NATIONAL PARK'S SIGNIFICANT DEVELOPMENT PROJECTS



Photo By/Monica Kuo

陽明一國志



# V

## REVIEW OF NATIONAL PARK'S SIGNIFICANT DEVELOPMENT PROJECTS

### 5.1 LOCAL ORGANIZATION DEVELOPMENT PARTICIPATION AND BEITOU LINE CABLE CAR CONSTRUCTION MANAGEMENT AND LAND DEVELOPMENT PLAN RECOMMENDATION OUTLINE

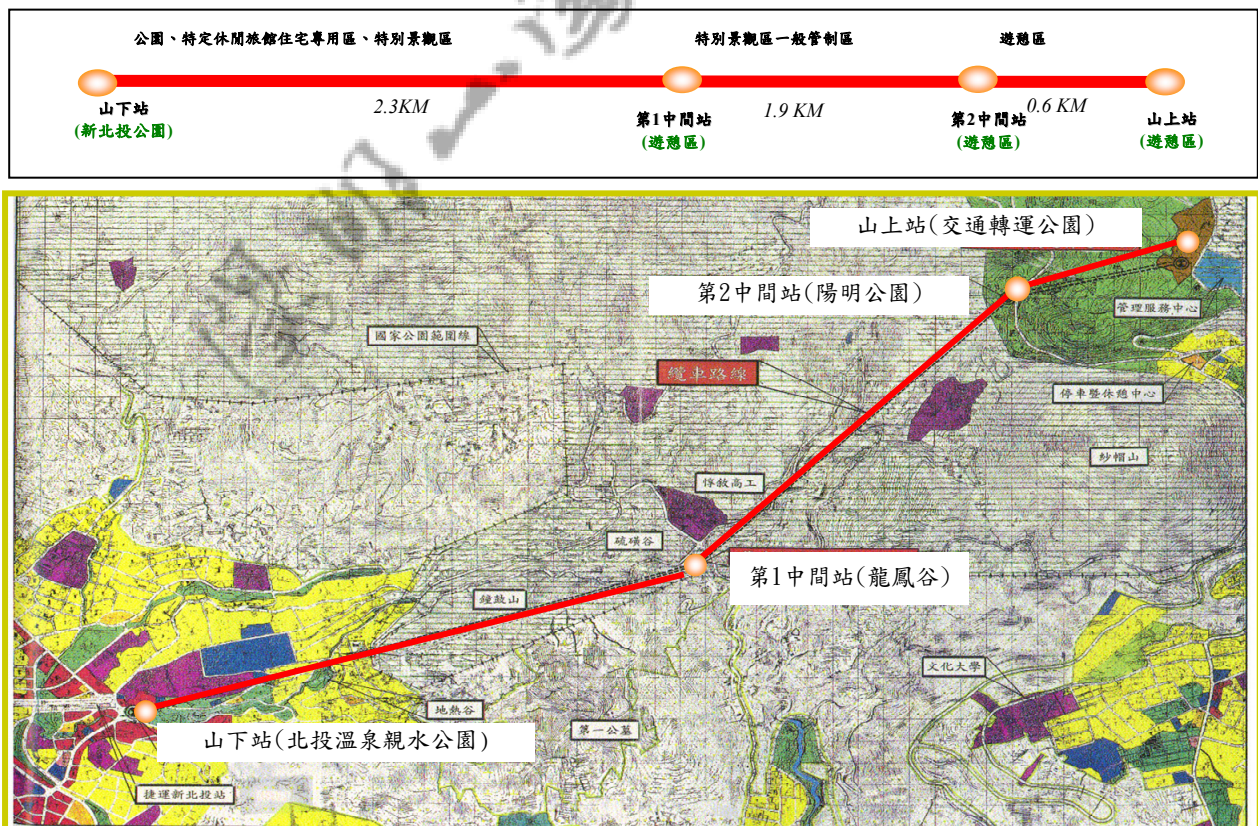


Fig. 5-1 Local Organization Development Participation and Beitou Line Cable Car Construction Management and Land Development Plan Recommendation Outline Resource: Drawn by Research Team 2003

***(The plan is currently on hold)***

***Spacial Structure Planning Aspect:***

- The current design has too many buildings and they are all too big. This urban design style is not suitable for Yangmingshan National Park, and should rather use forest or more natural design skills to let visitors feel like they are entering a National Park or forest when they are traveling from the city. Therefore, current design is not suitable for Yangmingshan National Park.
- The current building design is more of a western, European style. Its square structure is more for people's use, but did not consider the natural landscape. The overall environment in Yangmingshan is more natural and soft, and a building that can blend in with nature is a better design.
- The greenbelt buffer between related building and the main road (Yang-Chin Highway) should be more than 15 meters.
- Any facility structure (buffer structure such as a wall) should be 80% hollow and ecologically afforested and planted with layers of plant materials.
- Please review the application used between the building gaps and the method used to buffer space; the development density should also be reviewed, and the space between two buildings within the development area should not be less than 1:2.
- In order to maintain the quality of the facility, the overall landscape and recreation experience in this area, all structures such as roofs and walls should use plants to divide spaces or broken apart, and the building should not been seen from Yang-Chin Highway or any corner of the park.
- Special attention should be paid on the color of the cable car, the noise pollution, and the visual and landscape impact of the cable car supports. The view is nice on the cable car route, and an interpretive system should be set up in the future.
- To accomendate the large amount of visitors at the cable car terminal station, it is suggested to first consider how to design public spaces and plazas that will contain the large amount of visitors instead of building lots of facilities. Visitors gather around cable car stations, therefore, its design should show case the surrounding landscape and also provide viewing opportunities. Also, provide a



Fig. 5-2 Beitou Line Cable Car Onsite Environmental Inventory

Photo By/Hon-Min Chen





Fig. 5-3 Beitou Line Cable Car Onsite Environmental Inventory

Photo By/Hon-Min Chen

large plaza for visitors to rest and wait for people.

- If a lodging facility is placed by the station, it is suggested to clearly define the space to avoid disturbing each other and create chaos, such as the privacy of the hotel.
- The colors used on the post have to be NCS system and a simulation has to be done on the environment color system.
- Planning unit should review the building height according to the law, and make sure it is under a certain height. The impact of the structure is an important key on the landscape.
- Because the station's surrounding is very natural, it is not adequate to build a pool on the ridge line. The building should fit the image of Mt. Chising.

#### ***Travel Route Planning Aspect:***

- System configuration and instruction for all the public facility on site should be discussed. This includes: grading system, drainage system, pedestrian trail system, and service system (fire fighting, delivery, waste, and emergency evacuate route).
- All the service route and facility should all be placed at appropriate locations within the site and should not create an impact on the environment outside.
- The outdoor space of the buildings should coordinate with visitor center's travel route and function.
- The cable car terminal station is where visitors begin experiencing the park; therefore, how to handle the travel route connection and pedestrian / vehicular traffic when visitors enter the park should be considered. It is also suggested that electric cars or gas and electric combination buses that produce lower pollution should be used as the shuttle bus in the park.

#### ***Architectural Vocabulary Aspect:***

- Yangmingshan / Beitou cable car is one system. Facilities and buildings for each station should be considered as a whole and have the same design style. The design besides having to be suitable for the location, should not have too much urban commercial awareness, and must use the concept of a facility that is in a forest when handling the relationship between the building and the site.

- Each station's material and color plans should be systematic, and should be examined at the detail design stage.
- The main building structure is wider than 90 meters and has a big visual impact on the landscape. It should be modified to enhance the image of "a building in the forest".
- Although wind, fire, mountain, and forest concept captured the impression, there is not enough similarity between each station and lacks a continuous vocabulary. It could be toned down a little bit more.

#### ***Vegetation Aforestry Aspect:***

- The planting plan for each Beitou cable car station should coordinate with its surroundings and provided with necessary beatification and ecological planting. The plants used in the National Park should be locally adopted plants, and has a continuous and unify look with the plants in the Yangmingshan National Park Administrative Bureau area.

#### ***Entry Plaza Design:***

- This area should make a good impression by using the concept of a park and separating pedestrian and vehicular traffic. Consider the amenity and safety of the pedestrian traffic.
- There should be an obvious division between the learning area and the entry of the public area.
- The entry plaza only considered the traffic use right now, and should consider human use and the balance with the natural environment.
- It is very important to add greenery to the entry plaza. Besides, the interaction between the plaza and Yangmingshan National Park Visitor Center is not enough. The design should reflect the need to connect the travel routes.

#### ***Connecting with the Trail System Outside of the Park Area:***

- The project goal should still be providing visitors of the National Park a high service quality. Each facility's trail system in the park area should still be connected to the visitor's travel route from the cable car and the hiking trail system outside of the National Park.
- Strengthen the connection between the plaza and National Park's trail system.



Fig. 5-4 Beitou Line Cable Car Onsite Environmental Inventory

Photo By/Hon-Min Chen



- Visitors using public transportations and the quality of public spaces and the travel routes are not taken care of and should be improved.

***Overall Operation Aspect:***

- From the operation opportunity stand point, consider establishing a branch line from parking lot no.1 to Chinese Culture University, and also build a branch line to Tianmu; this should have an obvious outcome for the longterm.
- The planning unit should put in the effort on research and study to promote carrying out the actual plan, and think how to let the role of ecological learning stand out in the plan.
- Many cable cars in other countries put service as the main focus instead of showcasing the station building. Therefore, human friendly service, visitor safety management, emergency evacuation and getting in and out are all very important.
- To accommodate the large amount of visitors gathering, safety and disaster prevention method, such as disaster relief facilities like an aircraft apron, should be considered thoroughly to handle accidents.
- Security for night time activities is also a very important for keeping visitors safe.
- A facility design standard for Yangmingshan cable car system should be established quickly and strengthen the co-examination method with Taipei City Hall.
- The developer should be asked to provide a regulation review chart and detailed development plan including each facility, area chart, building coverage ratio, and floor space ratio.
- Developer should come up with a related reward plan, for example, a rental discount for conservation groups or schools to rent a learning space, or other ways to give back to the community.
- The main goal of all the national parks in the world is ecological preservation and environmental education. Public benefit and personal benefit should be regulated on a BOT development plan that stands on national park's land. When visitors begin using public transportation to come up to the mountains in the future, positively speaking, it reduces Yangmingshan National Park's traffic capacity; on the other hand, because there are 183 rooms at Shanshang station, and this will cause a great impact to the traffic. Therefore, it is nec-

essary for the planning unit to review the environmental evaluation and traffic impact analysis again to make sure the future impact is reduced to the minimum.

## 5.2 Public Participation in the Yangming Villa and Chungshanlou Development and Management Plan Recommendation Outline



Fig. 5-5 Public Participation in the Yangming Villa and Chungshanlou Development and Management Plan  
Photo By/Hon-Min Chen

*(The plan is currently on hold)*

- Currently the entire Chungshanlou BOT Project is directed by the Public Construction Commission, but the land belongs to Ministry of National Defense and Ministry of Education, and the motive and goal of this BOT project is really not apparent. Besides, after being evaluated by the experts of the Landscape Consultant Group, this area does not have BOT benefit. Therefore, it is suggested that the Yangmingshan National Park Administrative Bureau needs to remove its “class”, stick to the operation and management policy on its cultural landscape and historic buildings, in accordance to the policy, and finish an environmental policy and feasibility evaluation before anything happens.



Fig. 5-6 Yangming Villa and Chungshanlou Photo By/Hon-Min Chen



Fig. 5-7 Chungshanlou Park Area Planning Plan Drawn by Yoshiki Toda



- The National Park Administrative Bureau should hire professionals to do a more objective and systematic research on the many historic building and monuments in the park area, the many political construction footprints during the Yangmingshan Management Bureau period, and its role and meaning during Republic of China's recent political development process, and make it as the objective scientific foundation for the Chungshanlou BOT Project and other related BOT projects in the future.

- Chungshanlou is a national facility, therefore, it should be administrated and lead by the government instead of carrying out as a BOT project. The Chungshanlou building and its magnificent surrounding landscape should not be changed in any reason. The Administrative Bureau should deliberate and discuss Chungshanlou's issues such as its position and whom should it be opened to, and consider its national representation status. Therefore, this area is not suitable for private operation and should be managed by the government forever, and treated like a national treasure.

- After the Beitou Cable Car is opened in the future, there will be a lot of people visiting the Chungshanlou area, and it will be a pity if only a small part of Chungshanlou is opened to the public for those who made an effort to come visit. Take the photos from Aichi EXPO as an example, the plaza in front of Chungshanlou can be transformed into a big lawn area and use annuals to create a landscaped public space; or maybe plant cherry trees or utilized the changing seasons to create characteristic to attract people.

- Chungshanlou's picturesque landscape has recreational potentials. The space in the front is very suitable for citizens to do leisure activities. Therefore, most of it should be a lawn plaza for people to rest freely and use flexibly.

- There are a lot of buildings in the park currently, and they should be reused if possible to avoid building new ones. This does not mean keeping all the buildings but rather go through planning and keep the ones that are needed and take down the ones that are not needed. An open lawn area should be placed outdoor if possible to let people enjoy casually. There are many dormitories and research centers on site right now but ideally should all be opened to the public, and transform them into little shops and seating areas for visitors to use.

- All the existing large parking lots should be sized down or removed, and add plum trees and cherry trees for visitors to enjoy. People who



Fig. 5-8 Aichi EXPO Activity  
Photo by Yoshiki Toda



Fig. 5-9 It will be a great thing if visitors can have a picnic on the lawn under cherry trees. Provided by Yoshiki Toda



Fig. 5-10 Provided by Yoshiki Toda

take the cable car will like to have a destination to stay and Chungshanlou will be a great place to visit. Regular tourists besides hikers and mountain climbers will like to visit Chungshanlou.

- In a democracy country, the space in front of a representative building should be a public space for everyone to enjoy and share. Therefore, no hotel facilities should be built in this area, or it will limit visitor's choice.
- In Chungshanlou's configuration, it is suggested to make the hot spring pool as the center and develop it into a public space. Do not remove all the facilities even if developing it into a plaza, instead, thoroughly review all the facilities and make sure which ones should be preserved for future use. Hot spring fountain or flower beds can be used to improve the landscape and provide recreation needs for the people. The small creek that runs through Chungshanlou area can also provide a good recreational opportunity and should be well planned.
- The entire Chungshanlou's environment, as shown on the map, has bridges, creeks, small buildings with characteristics, and lawn area. When visitors take a walk here, they can feel very relaxed. The walls can be in a fence style to create a see through feeling, and it will also be spatially and visually pleasing. This will also be a nice space to match the traditional style buildings with a modern style swimming pool.
- There is fewer visitors other than spring, therefore, review and make plans for the other seasons.
- It is suggested to have flowering plants in every season to make this place become a representative recreation area that attracts a certain amount of visitors throughout the whole year. The color of the cherry flowers here in Yangmingshan is darker than the ones in Japan. It is suggested to have experts select different species of cherry trees to plant in this area. Cherry has a shorter flowering season and plum has a longer one, they can be seen from December to March and their flower can be red, white, or light yellow. Therefore, if they are planted with cherry trees, there will be at least 3 to 4 different color changes, and with other flowers in place, there will be blossoms to see in every season. It will be a great feeling to have a forest like this with lawn underneath for visitors to relax.
- How to get from Beitou cable car station to Chungshanlou should be thoroughly discussed and planned.



### 5.3 Yangmingshan National Park Matsao Recreational Area National Park Business Investment and Management Plan Recommendation Outline

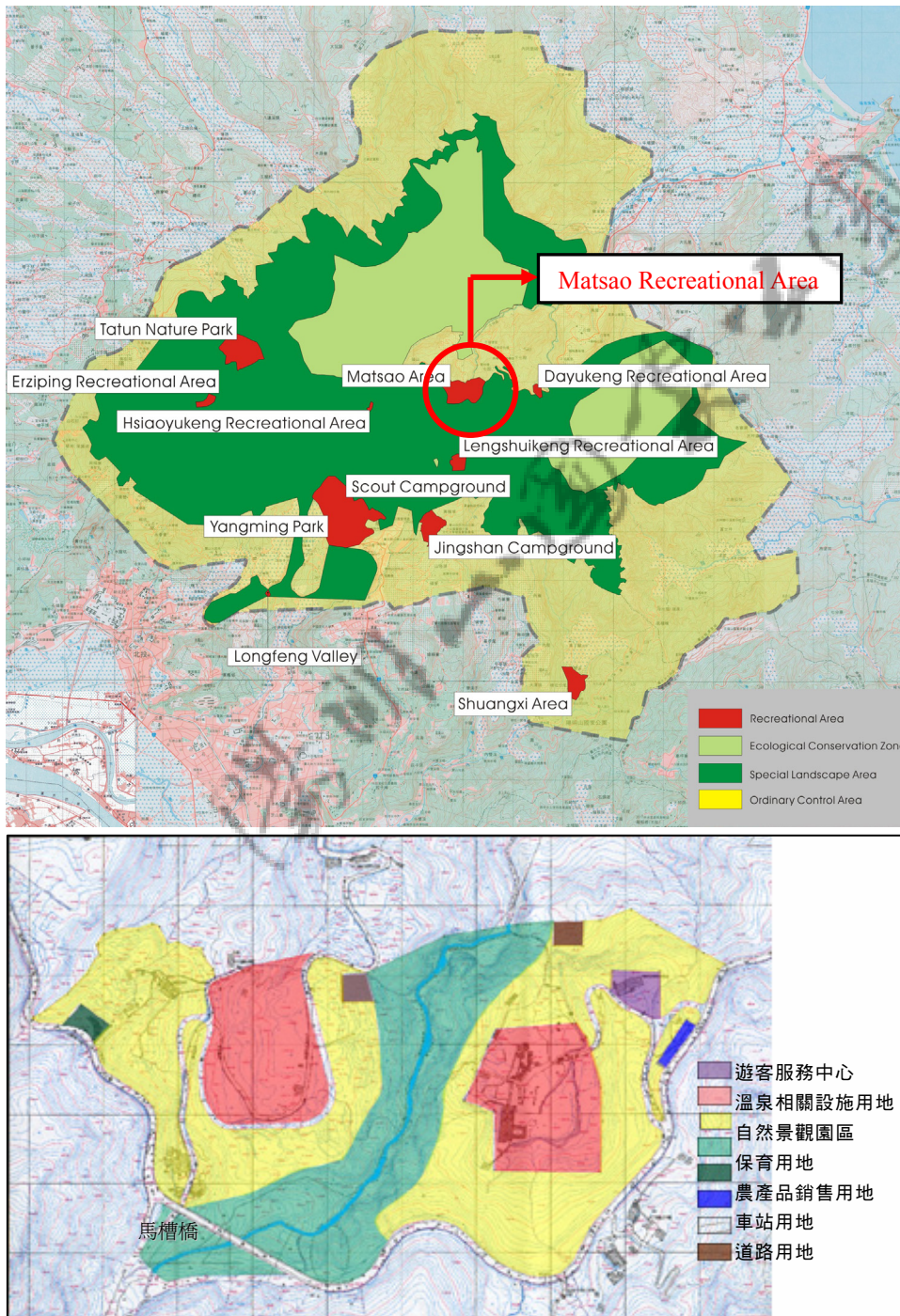


Fig. 5-11 Matsao Recreational Area National Park Business Investment and Management Plan  
Resource: Drawn by Research Team

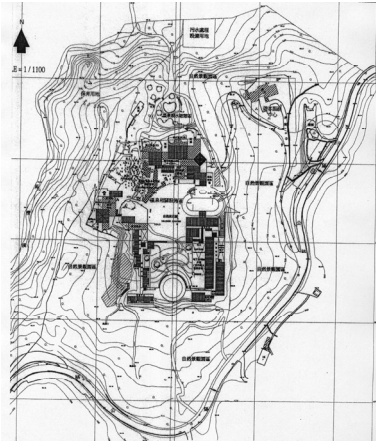


Fig. 5-12 Matsao Recreational Area Plan  
Resource: Drawn by Research Team



Fig. 5-13 Matsao Recreational Area  
Photo By/Hon-Min Chen

- Although Matsao is not a BOT project, the law that it complies to and the way it is developed are related to private investment and co-development of large public land. A decision has been made on this project in the National Park Planning Committee meeting on October, 2005 to do an environmental evaluation first, but the development process of this project can also allow the National Park Administrative Bureau to review the ownership and control method of private develop projects again, and there shouldn't be any uncertainty on the policy that will induce the developer's hope.
- The outdoor hot spring should not be placed outside of the hot spring facility area at east Matsao Recreational Area.
- At east Matsao, the design of large, straight lines with a circle in the center looks very artificial. Matsao's surroundings are all natural and soft lines, but such stiff design in the center looks very unbalanced.
- Large amount of mass should be avoided in Matsao area; although they have been broken up to small buildings, the outer area wall is still too long and this should be avoided. It is suggested to reduce the building sizes and scatter them in the space, and let the river run from south to north for a natural look. If the buildings can be placed following the topography, it will create a nice characteristic.
- From the landscape point of view, building facilities should be placed according to the topography and avoid geometric patterns. The topography in Matsao is higher on the edges and water will naturally collect at the lower spot; this water collecting character should be coordinated into the landscape design.
- From the arrangement point of view, the road should be gentler; besides, some signs can be placed at the road's entry and slightly widen the road to make it less dangerous.
- The areas located in the valley can not be seen from the outer roads; therefore, it is necessary to set up directional signs for people to know that there is such facility in the valley.
- The design of the signs should have good taste to bring out the design quality.
- The entire Matsao Recreational Area is located in a natural area surrounded by mountains and lighting will be a issue at night. Avoid using lights that attracts insects, and select low heat lights to avoid



creating light pollution.

- West Matsao is a more visible place and should have good planting design to avoid any structure standing out after development. The building coverage ratio and green coverage ratio of this area should be strictly regulated.
- The buildings should be stepped following the topography instead of developing them in one large area.
- Matsao Bridge's overall structure is very beautiful because the topography and height on both sides are the same and look balanced. But its color should be a light grey or light green, and the railings should match with the overall color tone but just a little darker.



Fig. 5-14 Landscape of Matsao Recreational Area Photo By/Hon-Min Chen



## 5.4 Yangmingshan National Park Shuangxi Recreational Area National Park Business Investment and Management Plan Recommendation Outline



Fig. 5-15 Yangmingshan  
Photo By/Hon-Min Chen

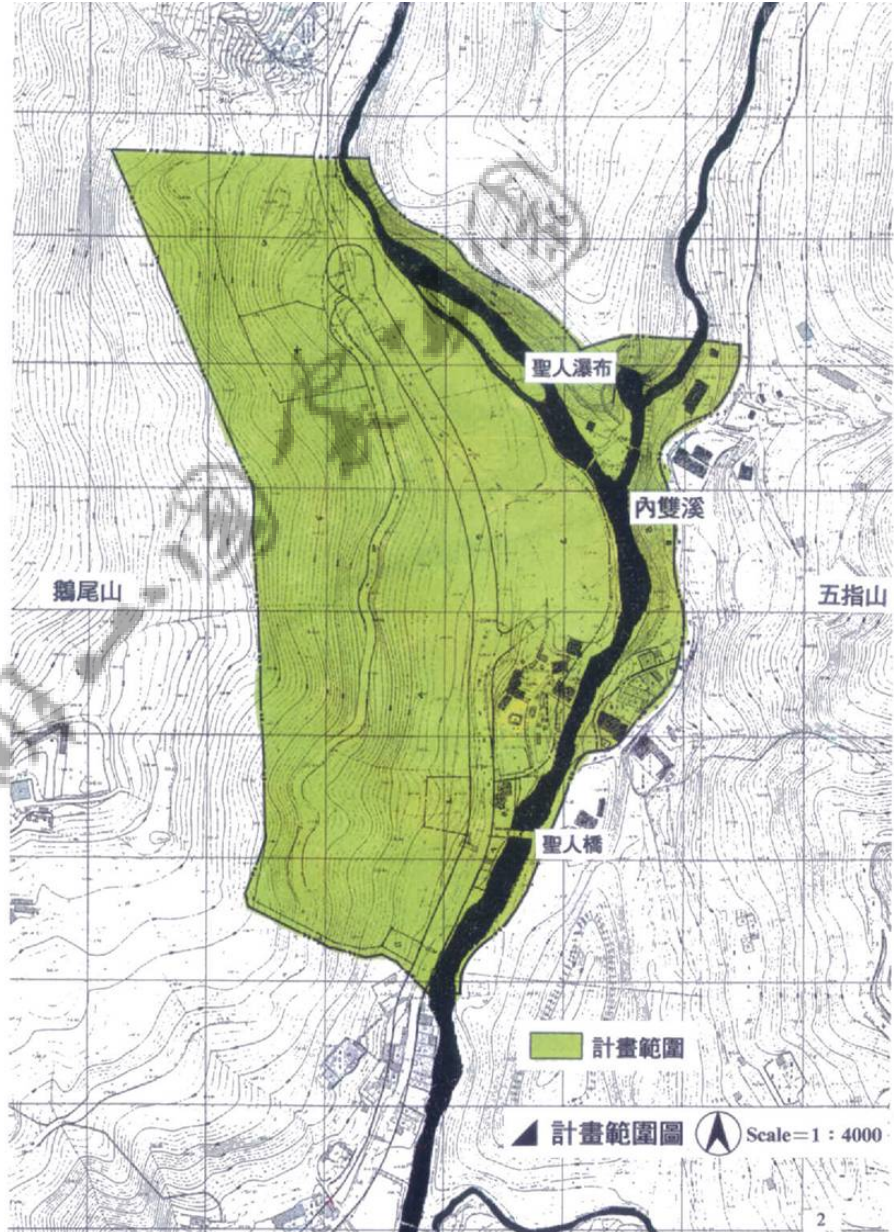


Fig. 5-16 Yangmingshan National Park Shuangxi Recreational Area  
Resource: Drawn by Research Team



- Shuangxi River runs very fast and the rocks are slippery; therefore, it will be very dangerous to open this place for water activities. It is recommended not to open it for any water activities and should set up clear signs to advise the visitors.
- Trees should be pruned and an overlook should be set up in this area to create a good spot for viewing the river and waterfall.
- Clear signs should be set up to warn visitors that there is potential danger to enter a natural or a metropolitan river valley, and they should learn how to respond to the different environment, and be responsible to their own behavior.
- There is a planning plan going on for this area right now and there will be many facilities set up here in the future; visitors might enter it without caution and accidents will happen easily. Shuangxi is located on the east side of the entire national park and is not at the center region. It is recommended to focus on the development at the central region and reconsider developing other areas before the central region nearly reaches its carrying capacity. It is every easy to develop a place, but it is difficult to go back once a mis-development has happen.
- Yangmingshan National Park Administrative Bureau did a great job in recent years on Tianxiyuan's renovation and restoration, land acquisition, and cleaning up the structures on the land and should be commended for it.
- Beside Tianxiyuan, spatial resource system should be renewed to review the ecological education, landscape restoration, and eco-tourism policy at the Neishangxi corridor, and should fully cooperate with Taipei City Hall.
- Restoration on the river edge ecosystem along Zhishan Road and improvement on the non-permeable retaining wall on its left side should be the first things to do, so that the ecological restoration can start at this point and evolve to the entire watershed.
- Because Shuangxi Waterfall's water is very strong and the riverbed is dangerous, visitors should not be allowed to play in the water. Future development plans should focus on the Shanshang cable car station area and should only be considered after Shanshang station is finished.

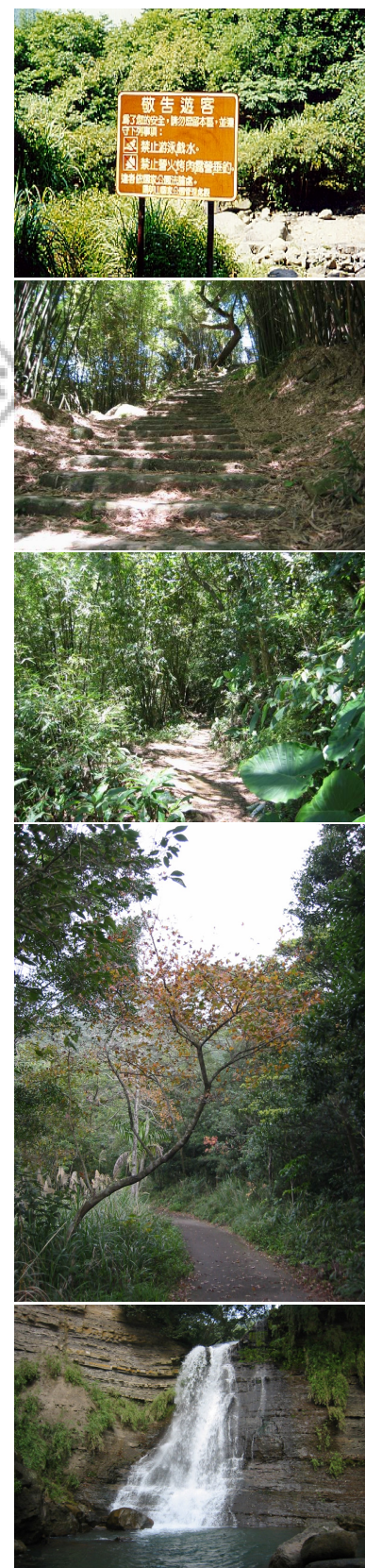


Fig. 5-17 Landscape of Yangmingshan  
Photo By/Hon-Min Chen

## 5.5 Xiaoguanyinshan Antenna Tower Relocate and Development Plan Recommendation Outline

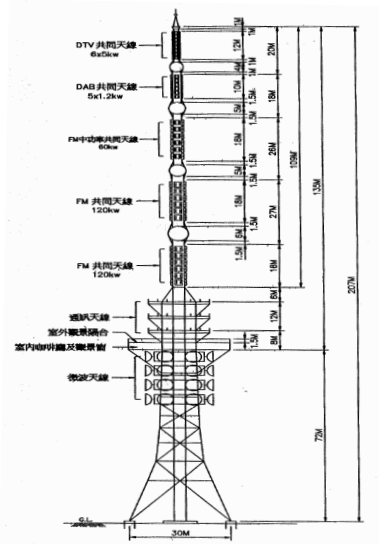


Fig. 5-18 Xiaoguanyinshan Antenna Tower Relocate and Development Plan

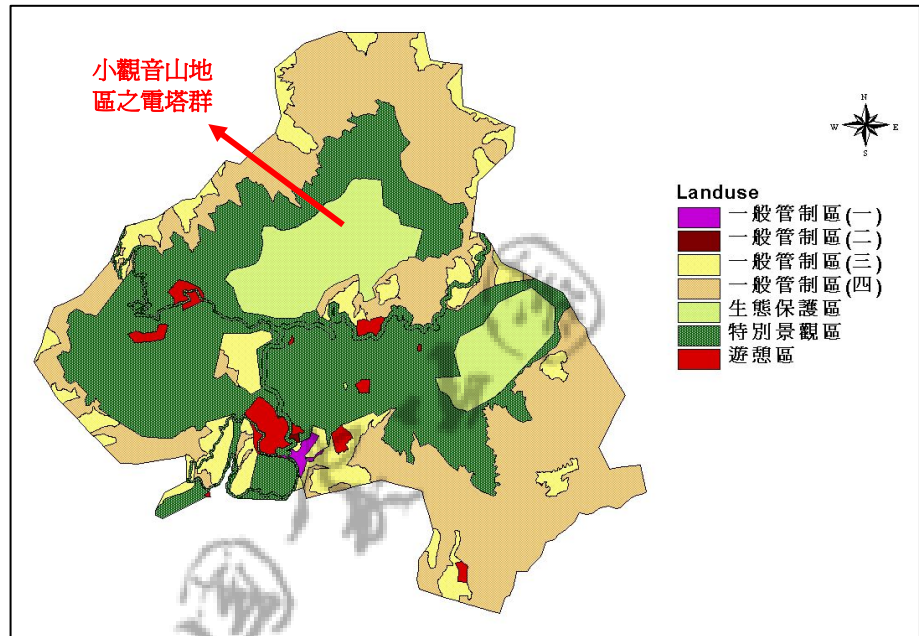


Fig. 5-19 Xiaoguanyinshan Antenna Tower Relocate and Development Plan  
Resource: Drawn by Research Team

Relocating the 27 television / transmission antenna towers along Xiaoguanyinshan's ridge line will defiantly help to restore the National Park's topography landscape. Landscape restoration plan should be carried out at Xiaoguanyinshan after the towers are removed (this includes demolition and removal of the concrete structure). Native vegetation should be re-established and consider providing educational environment interpretation for future visitors and hikers when opened to the public.

- A new combination tower will be built on Mt. Wuzhi, and the visual impact that its form and mass (207M) will bring to Taipei City's east edge should be carefully evaluated. It is recommended that the government should finance and reduce the mass as much as possible to avoid transferring the visual impact that was originally in the National Park to Taipei City /County.
- The combination tower is 207 meters in height and can be seen clearly from Taipei City. Therefore, it should be considered from the angle standpoint. Regular towers usually are square, but in the hope of reducing the area viewed from Taipei City, maybe it can be in the shape of a short and flat rectangle.



Fig. 5-20 Xiaoguanyinshan Antenna Tower  
Photo By/Hon-Min Chen

陽明一國志



## VI PUBLIC FACILITY CONDITION REVIEW



Photo By/Hong-Ming Chen



陽明一國志

# VI

## PUBLIC FACILITY CONDITION REVIEW

---

### 6.1 ADMINISTRATIVE SERVICE FACILITIES

#### 6.1.1 Visitor Center

##### *Inadequacy Review and Recommendations*

- The scale of the building is too big and created too much wasted space which is not cost effective.
- Building structures such as beams and posts are too large and bulky; they can be more compacted and lighter.
- There is too much pavement at the plaza around the Visitor Center and does not apply to Ecotechnology; plus there are not enough shade trees at the plaza, therefore, decreases the utility rate of this area.
- The Visitor Center is not positioned correctly, and is also not related well with the pedestrian and vehicle traffic, as a result minimizes its accessibility.
- The Visitor Center does not harmonize with the surroundings. It is not compatible with the topography and weather condition, nor does it match the local architectural style.
- Most of the pathways between the buildings are not covered, and the rainy weather in Yangmingshan minimizes its utility rate.
- Yangmingshan National Park Visitor Center is close to a main road (Yang-Chin Highway). It is very easy to access and there are a lot of parking spaces. If the plantings around and traffic movement is rearranged and coordinated with the future cable car circulation while planning, visitors will be more willing to use the Visitor Center, and they will have a better service experience.
- The weather at Yangmingshan area is rainy and wet. It is

recommended to cover the pathway between each building with overhead shelters. Slip resistance surfaces shall be used at all handicap ramps.

- The artificial pavement around the Visitor Center should all be permeable pavers and filled in with sand. Building surrounding and plaza should have an overall planting design, and put in new shade trees, ornamental shrubs and groundcovers to beautify the landscape environment.
- Yangmingshan National Park is located at the middle to high precipitation area; therefore, a Rainfall Retaining System can be use to save water, and the intercepted rain can be used to irrigate plants.
- The Green Building Standard should be applied here as much as possible.
- The roof color of the building is too bright and needs to match and reflect the surrounding colors.

### **6.1.2 Service Station**

#### ***Inadequacy Review and Recommendations***

- The color and style of each Service Station has became Yangmingshan National Park's unique characteristic. The only set back is that the structure appearance feels too heavy and bulky. It is suggested that the heavy structural appearance should be reduced as much as possible for future Service Stations.
- Yangmingshan National Park is located at the middle to high precipitation area; therefore, a Rainfall Retaining System shall be use to save water.
- Utilize weather conditions such as natural light and natural ventilation to save energy.
- Each Service Station should renew and expand their exhibition content regularly. The shows that broadcast at the auditorium should be more diverse and well themed.
- The exhibits should use real samples if possible, such as animal specimen, rocks...etc.
- Create more interactive exhibits such as actual operative equipment to make the exhibit more interesting and motivate visitors to make use of the place.

- The Green Building Standard should be applied here.

### **6.1.3 Maintenance Building**

#### ***Inadequacy Review and Recommendations***

- The color and type of the material used for each Maintenance Building should match the surrounding as much as possible. Do a visual simulation before construction to make sure the building becomes a part of the landscape, and avoid using too much metal as material because it relatively stands out more in the environment.
- Simplify the structural forms and avoid over decorating.
- Evaluate the possibility to reuse the vacant buildings within the park area, and consider remodeling or expanding existing buildings for maintenance use.
- Organize nearby environment and keep the Maintenance Building clean.

## **6.2 PUBLIC SERVICE FACILITIES**

### **6.2.1 Public Restroom**

#### ***Inadequacy Review and Recommendations***

- Most of the congregation spots such as parking lots and recreational areas in Yangmingshan National Park already have public restrooms. Right now the focus should be maintaining and managing the existing facilities.
- Special attention should be paid on the water line and it should be maintained regularly to keep the environment clean. Rainfall Retaining System may be used to collect rain for flushing the toilets.
- Provide clear and simple signage; the symbol for man and women's restrooms should comply with international standard and can be read easily.
- Misuse of materials will create slippery surfaces or will be uneasy to clean and reduces the quality of the space.
- Sewage should be collected to one place and treated to avoid leaking into the river or infiltrate into the soil.

- Special attention should be paid on ventilation and keeping the space dry and clean to avoid a dirty environment.
- A fee may be charged so that visitors would learn to appreciate the environmental resource.
- The overall appearance of the restroom building should reflect local architectural style.
- The restroom location should be private but not too isolated to avoid any safety issue.
- Restroom signage should be clear and straight forward.
- Old restrooms should be renovated to avoid sewage infiltration.
- Restrooms should have facilities that are suitable for children use.

### **6.2.2 Trash Receptacle**

#### ***Inadequacy Review and Recommendations***

- There are a variety of trash receptacles in the park. The ones that is not suitable for the National Park should be coordinated and improved by each administrative unit.
- The exterior of the trash receptacles should be cleaned so that it won't effect the overall environment.
- Drainage issue should be paid attention to the uncovered trash receptacles so when the cleaning plan does not carry through, it won't cause bugs to grow and reduce the quality of the environment.
- Strongly promote trash classification.
- Consider using recycled materials such as recycled wood.
- Covered trash receptacles should be used at the natural areas that have less activity to avoid animals getting into the trash.
- Use dark or earth tone colors to make them less obvious.

### **6.2.3 Light Fixture**

#### ***Inadequacy Review and Recommendations***

- Some of the materials and forms used on the light fixtures in the park are too urbanized and looked out of place in the natural setting. Avoid



using too many different types of light fixtures and keep them unified.

- Shorter light fixtures are recommended, and avoid using dispersed light source.
- The amount of light fixtures at extremely natural areas should be minimized or removed to avoid disturbing the natural habitat of the animals and plants.
- Low wattage light fixtures should be used in the park area with a timer system to keep the lights off during the evening, so that it could save energy and also minimize the effect to nocturnal animals and insects.
- Solar panels can be used to control road lights.

#### **6.2.4 Railing**

##### ***Inadequacy Review and Recommendations***

- Railings that imitate wood and bamboo give negative landscape impression easily if they are not constructed nicely, and they often need repainting and repairing which increases the maintenance cost.
- Railing that lacks of considering human proportion and is designed to an unreasonable scale minimizes people to use it.
- Using complicated wood joints creates difficulty for maintenance.
- Metal Railings are less comfortable when using outdoors due to the changing temperature; therefore, it is not suitable to use them in natural environment.
- Too urbanized and artificially decorated materials and forms not only are not harmonized with the natural setting but also increase the maintenance difficulties and cost.
- Each feature details such as the finish of wood corners and metal screws should be well thought out to avoid injuring the users.
- The reason of setting up railings should be well considered with the surroundings, or it will created unfriendly designs such as railing that blocks the view or railing that serves no purpose at all.
- Use soft or less obvious railings at low hazardous areas to blend in with the environment.
- Avoid setting up railings at areas that are not hazardous to maintain landscape quality.

- No decorative railings should be used in the National Park to avoid unnecessary cost.
- Use traditional engineering techniques on the railings to present local characteristics.

## 6.3 TRAFFIC FACILITIES

### 6.3.1 Driveway

#### *Inadequacy Review and Recommendations*

- Grass shoulders can be placed at natural area where there is less traffic to increase green spaces.
- Concrete drainage channels along the roads can be replaced with grass ditches.
- Warning signs should be placed at animal routes, and guardrails should be set up along bio-corridors. The height and spacing of the guardrail should fit the animals' characteristics.
- The lights should just light up the road surface for the ones that pass through natural areas.
- Unorganized directional signs are difficult for drivers to follow and should be improved.
- Only set up light fixtures along main roads; no light fixtures are needed along low nighttime usage or secondary road sections.
- Driveway and its related features should remain simple; do not use bright colors that strongly contrast with the environment, instead use the material's original colors or less saturated colors.
- There are too many different types of lining stones and guardrails, creating an unorganized landscape.
- The annual rainfall at Yangmingshan National Park is very high, therefore, drainage problem should be looked at carefully to avoid water accumulating on the road surface and create a risk for accident.

### **6.3.2 Pathway**

#### ***Inadequacy Review and Recommendations***

- Permeable pavers should be use on all pathways in the National Park.
- Try to avoid using large areas of solid base under the pavers which will decrease the soil's water capacity.
- Nighttime lighting is not a necessary element. Shorter light fixtures or lighting that combines with seating and railing should be used in highly developed areas to minimize visual disturbance.
- Highly natural areas or secondary pathways should use colors that have a similar feeling to the surroundings.
- Pathway with grid pavers traps water easily and needs regular maintenance.
- Special attention regarding safety problems caused by moss and rot is needed on wood surface.
- Pathways that have non-permeable or uneven surface should be considered in the budget and rebuilt.

### **6.3.3 Parking Lot**

#### ***Inadequacy Review and Recommendations***

- The parking spaces in the National Park should all be pavers that can allow grass to grow through. Some of the highly used parking lot driveways can be asphalt, but still have to be permeable.
- Greenery should be added in each parking lot by adding shade trees.
- Many of the parking lot's demands are miscalculated and ended up to be too big, causing a waste of space.
- Set up signage that is clear and straight forward.

## 6.4 LANDSCAPE RECESS FEATURES

### 6.4.1 Deck

#### *Inadequacy Review and Recommendations*

- The design of the decks in the National Park should be simple and does not stand out from the surroundings.
- High-rise decks should be extended out to create a shadow that will disguise the height, and also use plants to cover the support structures.
- An overlook tower can be placed in the dense woods for observation purposes.
- Berms and short walls can be used at areas that have strong wind and are cold to create protection, and surrounding plantings can also be used to block the wind.
- The seating decks that are highly used in the recreational areas should be accessible; replace stairs with ramps and connect them with the accessible routes to increase the accessible areas in the National Park.
- New seating deck and its surrounding features (pathways, signs, railings, etc.) should all be designed together.
- Take great attention on the details when using artificial materials. Rough structures not only discourage people to use them, but also will create safety hazard.
- The humidity and sulfur gas in Yangmingshan National Park should be considered when designing decks; materials used here should be rot resistant, corrosion resistant, and moss resistant.

### 6.4.2 Benches and Tables

#### *Inadequacy Review and Recommendations*

- When using natural materials, the benches or tables should keep the material's original color, and avoid using materials and forms that are too urbanized and artificially decorated.
- Many of the design did not consider human proportion and as a result minimized their utility rates.
- Many of the old and unutilized benches need to be removed and replaced.

- Bench details especially need to be looked at to avoid sharp corners or cracks that will injure the users.
- Different materials, forms, and colors visually create an unorganized landscape feeling.
- Broken seats that are not repaired are a potential hazard.
- Natural elements such as rocks and trees should be combined with the design to create a seating area that goes with the environment.
- Create benches that have simple forms and materials and are easily maintained.

#### **6.4.3 Gazebo**

##### ***Inadequacy Review and Recommendations***

- The material, form and color of the associated features such as pathways, signs, railings and trash receptacles do not go with the gazebo and lacks coordination.
- The gazebos are lack of regular maintenance; for instance, metal parts is rusted because of lacking rust resistance paint, or plants on arbors died or overgrown because they are not well taken care of.
- Designs done in early stage such as the Chinese style RC gazebo are all similar, and are lack of self-recognition for each area.

#### **6.4.4 Planters**

##### ***Inadequacy Review and Recommendations***

- Planter's color and material does not go with the environment and affects the landscape quality.
- Planter sizes are miscalculated; many big trees are growing in planters that are too small and as a result are not grown well.
- Some planters do not have good drainage design and collect waters.
- Planters need maintenance; regularly prune the plants or remove dead ones.



### 6.4.5 Hot Spring Facility

#### *Inadequacy Review and Recommendations*

- Public hot spring facilities do not have regular maintenance staff.
- Direction of use should be placed at public hot spring facilities to maintain the correct use of the place and keep them clean.
- There is no wastewater treatment system and the runoff pollutes the water source.

### 6.4.6 Campground

#### *Inadequacy Review and Recommendations*

- Campground and surrounded facilities does not accommodate each other and minimizes the utility rate at this area.
- The campground lacks maintenance and the environment is messy.

## 6.5 SIGNAGE SYSTEM

### 6.5.1 Interpretive Sign

#### *Inadequacy Review and Recommendations*

- Use both Chinese and English on the signs where possible to accommodate the international traveling trend.
- The original signs are not organized and affect the landscape quality.
- The signs in the whole area, including their material, type, and size, should be planned together, minimizing unnecessary differences.
- Combined the signs with railings or fences where possible to minimize the complexity of the structure and material.
- Keep a short distance or set up barriers between the signage and rare landscapes or objects to minimize damages.
- The design for standard interpretive signs should be more exquisite and detailed.
- There are too many types of plant interpretive signs and should be unified.

### 6.5.2 Directional Sign

#### *Inadequacy Review and Recommendations*

- Contrast colors can be used on directional and announcement signs that needs to stand out, but their background color should still match their surroundings.
- The original signs are not organized and affect the landscape quality.
- The form and color of the directional signs at Chingtienkang (see image No. 24 above) are harmonized with the environment, and is recommended to use in other natural areas.
- The environment and plant materials around the signs need to be maintained and pruned.
- The signs should be unified and avoid individually characterized.

### 6.5.3 Bulletin Board

#### *Inadequacy Review and Recommendations*

- There are too many types of bulletin boards. They should be divided visibly by their contents such as danger, attention and instruction, etc.
- Damaged and old bulletin boards need to be removed.
- The content of the bulletin board should be expressed graphically and avoid having too many descriptions.

## 6.6 EMERGENCY RESCUE FEATURES

#### *Inadequacy Review and Recommendations*

- Long poles should be placed near large and deep ponds.
- Life preserver should be maintained regularly.
- Regularly check and renew the items in the first-aid kit.
- Life buoy that are hanged carelessly or set on the ground will create utilize problems.

## 6.7 DISASTER PREVENTION FEATURES

### 6.7.1 Fire-Fighting Equipment

#### *Inadequacy Review and Recommendations*

- Regularly check the expiration date on the fire extinguishers.

### 6.7.2 Slope Treatment for Water and Soil Conservation

#### *Inadequacy Review and Recommendations*

- Large area of concrete treatment is visually unpleasant.
- Too much artificial treatment increases the maintenance cost and does not go with the natural environment.
- Except for those areas that are mainly exposed rocks, vegetation should be used in all other slope stabilization treatment in the National Park.
- The engineering technique used in Yangmingshan National Park should take ecological preservation as primary consideration.
- The drainage ditch along roads in the mountain area should not be covered RC channels, instead, keep as the original stone channel or soil ditch.
- Yang-Chin Highway is Yangmingshan National Park's special landscape area. Using covered RC channels will affect the drainage function of that area and endanger residence living below. It will also affect the overall visual landscape quality.
- Covered drainage channels can be placed considerately at turning locations, but if they are placed along straight roads, people will attempt to park on top of the cover area and create traffic disorder.
- Potential danger will occur if the drainage pipe is blocked; therefore, it needs to be maintained regularly.

## VII DEVELOPMENT OUTLOOK



Photo By/Hong-Ming Chen

陽明一國志



# VII

## THE IMPORTANT WORKING OF THE FUTURE

---

### 7.1 Establish Tianxiyuan Environment Ecology School

#### 7.1.1 The Concept of Ecology School

##### *Goal*

- Education      ■ Research      ■ Preservation
- Culture      ■ Recreation

##### *Function*

- To stimulate learner's concern to the environment, establish their knowledge of the entire environment, and make them care about the environment, support and participate in environmental preservation actions through their personal experience with the environment.
- Learn how to interact with others and the disciplines of living with a group through the experience of living outdoors and doing activities together.
- Satisfy the needs and belief of personal spirit and establish a positive enterprising outlook on life through the experience and challenges of living and learning in a natural environment.

##### *Characteristic*

- An ecology school that trains professionals.
- An ecological school that is community based.
- An ecological school that has classes which suit the local condition.
- An ecological school that carries a master and apprentice system.



Fig. 7-1 Ecology Education  
Photo By/Monica Kuo

- An ecological school that emphasizes both learning and practical training.
- An ecological school that moves toward a licensing system.

### 7.1.2 The Advantages of Making Yangmingshan National Park as a Place for Ecology Education

- Yangmingshan National Park is the National Park that is closest to a metropolitan area, and it has a great meaning to the Taipei Metropolitan area.
- The concept of ecology preservation has become a part of the people in Taipei, and most of them are willing to be close to nature and understand nature.
- Being close to nature is a very important part of the nine-year compulsory education, and the needs are very urgent for elementary and middle school teachers to have ecology education.
- As the leader in preservation, National Park has the responsibility and obligation to assist in the process of ecology education.



### 7.1.3 The Conditions of Tianxiyuan Nature Education Park

- A more natural area will have higher biodiversity.
- Close to Taipei, very convenient.
- The trail system in the park is very complete.
- Suitable for doing nature exploring activities.



### 7.1.4 Tianxiyuan's Operation and Management Plan

- To release recreation pressure and effectively protect the balance of nature.
- Use appropriate control and monitor system.
- Promote ecology education concept to every visitor.



### 7.1.5 Tianxiyuan's Future Outlook

- Establish Yangmingshan National Park's goal and outlook for environmental education, clarify policy direction, set up environmental education promotion tactics, build an overall development plan for environmental education, and actually put it into practice every year.

Fig. 7-2 Establish Tianxiyuan Environment Ecology School  
Photo By/Monica Kuo



Fig. 7-3 School Tianxiyuan's Future Outlook Photo By/Monica Kuo

- Let the entire Yangmingshan National Park be a rich and fun place for lifelong learning (a complete environment learning system). Make Tianxiyuan a part of the practice field, and plan courses that subject on Tianxiyuan.
- Actively progress with the nature center construction plan, set up operation model, and establish ecology school's diverse "special classrooms" (environment learning center, nature center) using the existing buildings in Yangmingshan National Park, and not focus on building the classroom hardware, but renovate them with safety as the priority and do not add in any equipment just for comfort.
- Systematic course designs, list all the reference courses for each subject, and integrate related human resource, including professional teachers or personnel from each of Yangmingshan National Park's department and experts with great techniques, to enrich the relationship of environmental education's manpower, resource and partners, strengthen the growth in the staff's professional ability.
- Actively establish an environmental education planning system, provide visitors with different ages the opportunity, space, facility, and activity to "learn enjoying, enjoy learning". Plan the ecology education courses to fit different needs, including the needs of regular level, children and teen level, in-depth travel, and research level.
- Select creative partners, and create a fair and meaningful learning and growth opportunity for all the people (especially those who lives in the near by cities and communities) and schools.
- Design a licensing system, and carry out a licensing and classification standard.
- Passion, passion, and more passion, put in unlimited passion to establish the ecology school.



## 7.2 Cultural Resource Preservation

### 7.2.1 The Important Topics of Yangmingshan's Cultural Resource Preservation

*National Park Administrative Bureau currently has difficulty to manage the cultural resources*

Most of the Japanese style hot spring buildings do not belong to the National Park; therefore, the National Park has limited control over the utilization and management of these buildings.

#### *Building Restoration and Preservation*

Yangmingshan's humid climate and the affect of termite and sulfur gas greatly damage the wood structured Japanese style hot spring buildings. The conditions of ones that are currently occupied are still well due to regular maintenance, but the ones that are empty are degrading quickly and disappearing among the grasses and become a lost to the historic resource.

#### *Assigning the Historic Values to the Building*

These Japanese style hot spring buildings have great epoch meanings not only on the architecture itself but also its related historic background; therefore, these valuable buildings should be assigned as historic monuments or historic buildings and be preserved as soon as possible.

### 7.2.2 The Preservation of Buildings and Building Blocks

#### *Suggestions on the method to preserve Yangmingshan's cultural resource and buildings*

The method used to preserve Yangmingshan's Japanese style buildings should vary from their type and condition, and should not be regulated by one method. It should accommodate the condition and the users of the building and be considered flexibly.

It is suggested to preserve and manage the buildings in two different systems. One focuses on the building itself, and follows the direction of Cultural Resource Preservation Regulation, and should be managed by Taipei City Hall Department of Cultural Affairs. Also, assign those buildings that have higher preservation values as historic monuments and assign others as historic buildings. The other focuses on the gardens and natural landscape, and follows the direction of National Park Law to manage usage control and design methods, and assist with building management tactics.



Fig. 7-4 Building Restoration and Preservation Photo By/Hong-Ming Chen

### *Suggestions on the method to preserve Yangmingshan's cultural resource and buildings*

- Hold preservation assigning evaluation meetings
- The use of Japanese style hot spring buildings
  - **Building Ownership:** Needs to negotiate with the building owners and see if they would agree on the National Park to borrow or rent the buildings from them. There will be some restrictions on their usage.
  - **Damage Repair:** Most of the buildings are in bad condition and will need to be repaired before any use. This will lead to the problem of historic building assigning and will be limited by the related restrictions when renovating.
  - **Maintenance and Management Cost:** This will involve personnel organization and maintenance cost subjects, and the National Park will need to revise the personnel organization and increase the annual budget.
- Suggestions on the reuse methods

Japanese hot spring building is a valuable cultural resource of the National Park. It can be included into the cultural resource interpretive education system and provide visitors more detailed information using one of the buildings as an interpretive station, and let visitors personally experience the space and garden of a Japanese hot spring building.

- Reuse methods on the Japanese style hot spring buildings

The following chart is a list of related research on some concepts to reuse the Japanese hot spring building in the future.



Fig. 7-5 Cultural Resource Preservation Photo By/Monica Kuo





Table 7-1 Japanese Hot Spring Building Reuse Method Chart

Item	Description
Private Owned Buildings	Continue keeping their original characteristics and be partially opened to the public with interpretations for people to understand the building's charming history. Paved paths, interpretive facilities, and handouts can be used at the buildings that are already renovated to show their characters.
Leftover Ruins	
Valuable Buildings	The more valuable buildings can be charged for a fee when entering and is opened only for reserved visits.
Unused Buildings	The unused old buildings can be renovated to provide the visitors charged accommodation.
Building Image Preservation	Record the building using video, article, image, old photos, old stories, and measurements, etc.
Maintain and Preserve	Future renovation on historic buildings should be more careful, and should provide as much time and budget as possible.

### 7.2.3 Work to be Continued

- Detailed measurements, research and examination: Overall measurement examination, piece by piece examination, structural examination, garden examination.
- Emergency repair or maintenance of the building

## 7.3 Establish Chulzuhu Sustainable Community

### 7.3.1 The Meaning of Sustainable Community

#### *The Meaning of Sustainable Community*

Sustainable Community should be a common goal for all those who are involved: central and local government, public department, private department, local groups, and local residence. Satisfy the different needs of current and future residence, their children and other users, promote living quality, and provide opportunities and choices. The residence uses methods such as effectively utilize natural resource, improve environment quality, promote a sense of community and community development, and strengthen the economy to create a sustainable community.

#### *The Composition Elements of Sustainable Community*

In order to plan, operate, and manage a sustainable community, it must satisfy the four dynamic elements of ecology, life, production, and system. The composition of the four dynamic elements is shown on the following chart:



Fig. 7-6 Establish Chulzuhu Sustainable Community

Photo By/Monica Kuo

Table 7-2 Sustainable Indicators and Composition Element Chart

Ecology (Environment)	
Ecology Preservation	Protect and improve natural resource and biodiversity.
	Effectively utilize current resources and sufficiently utilize artificial environment and the providing of each service in the future.
Environment Protection	Live a life that minimizes the negative environmental impact and increases the positive affects.
Energy Utilization	The efficient use of energy is usually defined as reducing the usage of energy or resource, but many communities have carried out Green Building Plan and assisted planners / architects / developers in finding an architectural design or construction that saves energy. Some communities won't even issue a building permit unless the building meets the Green Building Standard.
Actual Environment	Effectively utilize current and future resources on the building environment and service providing (such as energy efficiency, land, water, flood control, waste reduction, etc.).

(Continue)

<b>Life (Social Culture)</b>	
Population Composition	Community identification and attribution. Tolerant, respect, and join the people with different culture, background, and religion. Have kind, cooperative and beneficial behaviors in the neighborhood. Have low crime rate, low antisocial behavior rate and use an obvious, effective, and community friendly security method.
Education Culture	Have culture, leisure, community, sports and other activity opportunity.
Social Welfare	Everyone can be forgiven in the society and has similar living opportunity.
<b>Production (Economy)</b>	
Productivity	Active work and business creation. A strong commercial group that connects to a bigger economy body.
Community Economy	Informal working opportunity.
<b>System</b>	
Community Participation and Administration	Local groups are responsible for carrying out the sustainability. The administrative system has to be strategic, has an outlook, and representative; these systems strengthen the tolerance, activeness, and effectiveness of personal and organization participation. Have a powerful, instructional, and effective leader and partner relationship. Have a powerful and tolerant community department and volunteer department (such as resident organization, neighborhood watch, etc.) Have citizen value, responsibility, and self respect. Constantly improving through each level's effective practice, supervision, and reward.

### ***The Principles of Sustainable Community***

When envisioning sustainable community, Beatley (1998) described sustainable community should have the following principles:

- Minimize the degree of exposing people and their property under natural disasters; sustainable community is a community that has the ability to resist disasters. (A Safe Community)
- Understand ecology's fundamental restrictions, and seek to protect and raise the wellness of the ecosystem. (An Environmental Community)
- Establish a tighter connection with nature and try understanding it more. (An Environmental Community)
- In search of reducing the use of land and resource. (An Environmental Community)
- Understand that the society, economy and environment goal are all

connected to each other. (A Co-existing Community)

- Support a synthesized and organized strategy. (A Common Goal Community)
- Need a new ethic. (An Ethical Community)
- In search of a fair distribution between resource, opportunity, and environmental risk. (A Fair Community)

By following these principles, one can discover that a community should respect the environment, and have the three fundamental concepts of life, production, and ecology, and steadily grow under the system of the growth management concept.

### 7.3.2 SWOT Analysis for the Chulzuhu Area

#### *SWOT Current Condition Analysis Table*

Table 7-3 Chulzuhu Area SWOT Current Condition Analysis Table

SWOT		Current Condition Analysis
S: Strengths	Natural	1. The wind is milder in the Chulzuhu area than the other areas in Yangmingshan. 2. Have many different types of animals and plants. 3. Have many natural landscape resources.
	Artificial	1. Good living environment 2. Commercial industry development
W: Weaknesses	Natural	1. Hot and humid in summer and cold in winter, and the temperature difference is very obvious. 2. Rains a lot, and the humidity is relatively high. 3. Short daytime.
	Artificial	1. The roads on site are narrow. 2. Not easy to build or do construction.
O: Opportunities	Natural	Ecology preservation (animals, plants), maintain biodiversity.
	Artificial	1. Develop agricultural tourism. 2. Develop bed and breakfast guest houses. 3. Develop dinning business.
T: Threats	Natural	1. Natural disaster (landslides, rain storms)
	Artificial	1. Development restrictions (capacity, building coverage restrictions) 2. Waste and sewage treatment 3. Traffic problem.

Table 7-4 Chulzuhu Area SWOT Tactic Matrix

	S: Strengths	W: Weaknesses
O: Opportunities	Eco-community planning, establish bio-green net, and ecological preservation.	Overall unit development planning
T: Threats	Use eco-technology to reduce the damage on the environment.	Capacity control, reduce the cars entering Chulzuhu to reduce traffic problem and producing waste.

### 7.3.3 Execution Methods of Sustainable Development

#### *Eco-tourism*

- Must use lodging and leisure activities that have low environmental impact.
- Must control the visitor amount (including the size or the amount of groups) that enters this area.
- Must support local natural resource and cultural preservation works.
- Must use service and transportation provided by local residence if possible.
- Must provide visitors a trip that emphasizes on experiencing nature.
- Must hire interpreters that understand local nature and culture.
- Must make sure that wild animals and plants are not disturbed and the environment not destroyed.
- Must respect local residence's traditional and privacy.



Fig. 7-7 Eco-tourism and Organic Agriculture Photo By/Monica Kuo

#### *Controlled Development*

- Impact management
- Promotion education

#### *Organic Agriculture*

On the agricultural development of the Chulzuhu area, the environment friendly eco-farm management should be used to minimize the damage made to the land. In the future, Chulzuhu will become a natural and environmental friendly large scale eco-farm.

#### *Participating Management*

Yangmingshan Chulzuhu area should set up a co-management group with Yangmingshan National Park Administrative Bureau and Taipei City Hall, and make a develop plan for the community together through regular meetings and partnership.

Chulzuhu's future ecological participation method should be divided into two phases. The first phase is to establish a work team that is responsible for evaluating resource, negotiate with local people, hold discussion forums, and set up participation model and content. The second phase is to hold public meetings, decide on the participation model's system, regulation, and content,



and establish a public organization to carry out the work.

To let local residence playing both the decision maker and participant in the participation model not only can insure the local residence's position in their own preservation area, but also provided an operation direction for future “self-governing”.



Fig. 7-8 Sustainable Community Photo By/Monica Kuo



Fig. 7-9 Sustainable Community Development Outlook Drawn By/Hong-Ming Chen



## 7.4 Water Resource Management

### 7.4.1 Yangmingshan's Hydrology Environment

Because Yangmingshan area is affected by the northeast wind, it is very windy and rainy. The annual rainfall around the mountains at Chulzuhu is the most, with an average of more than 4,000 mm; the other areas also will reach 2,000 to 2,500 mm, therefore, it is very important to manage the water resource within this area, and maintaining a good water quality becomes a very important subject.

#### Rivers

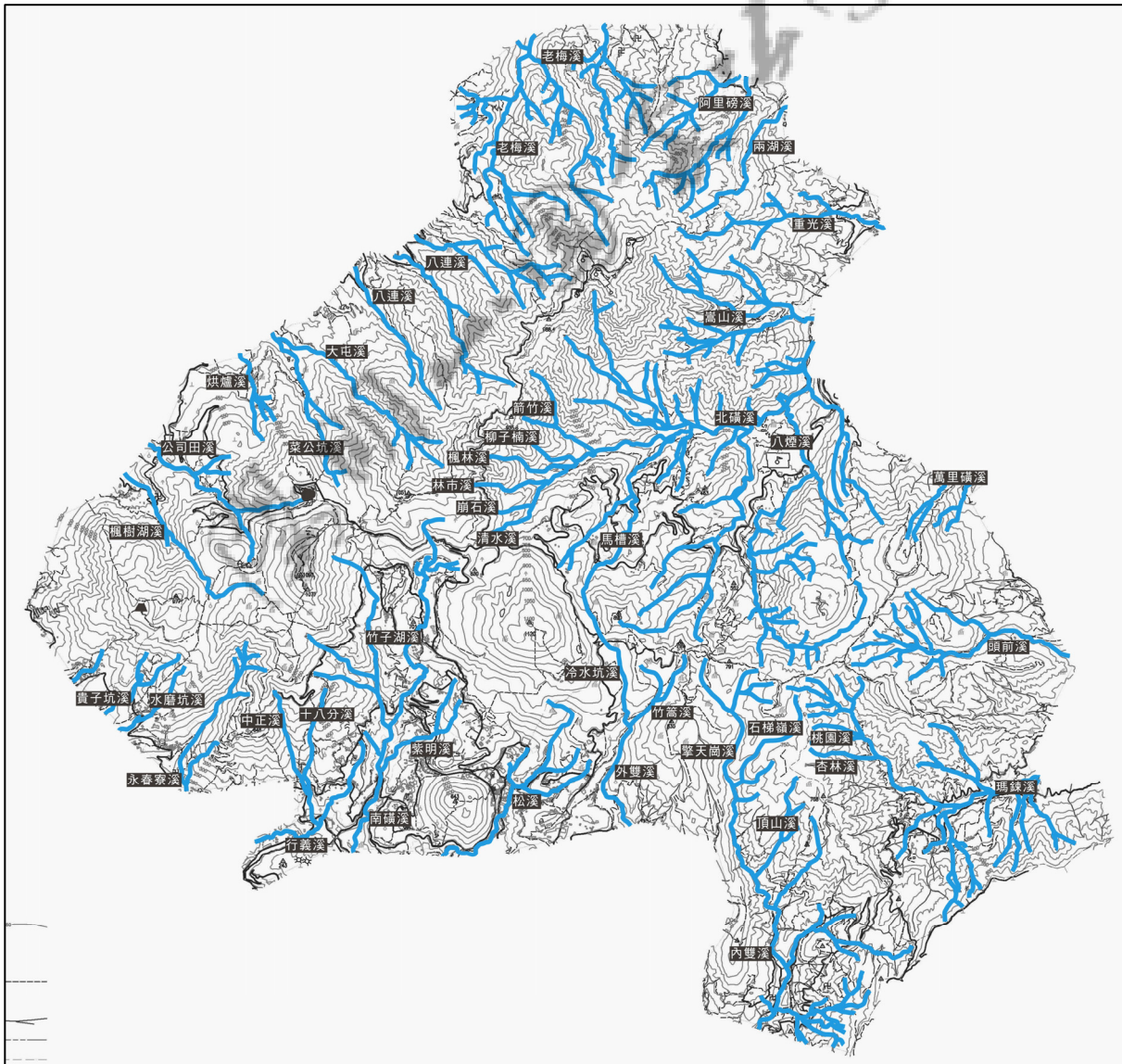


Figure 7-10 Yangmingshan National Park River Distribution Map Drawn by Research Team

The water resource in Yangmingshan National Park includes rivers, lakes, waterfalls, hot springs, etc., and the rivers are in a radiate water system, with most of them go directly into the sea. The 10 major river basins are Bei-Huang River, Nan-Huang River, Shuangxi River, Ma-La River, Guan-Du River, Gongsitien River, Tatun River, Ba-Lian River, Lao-Mei River, and Alibang River

### *Waterfalls, Lakes and Ponds*

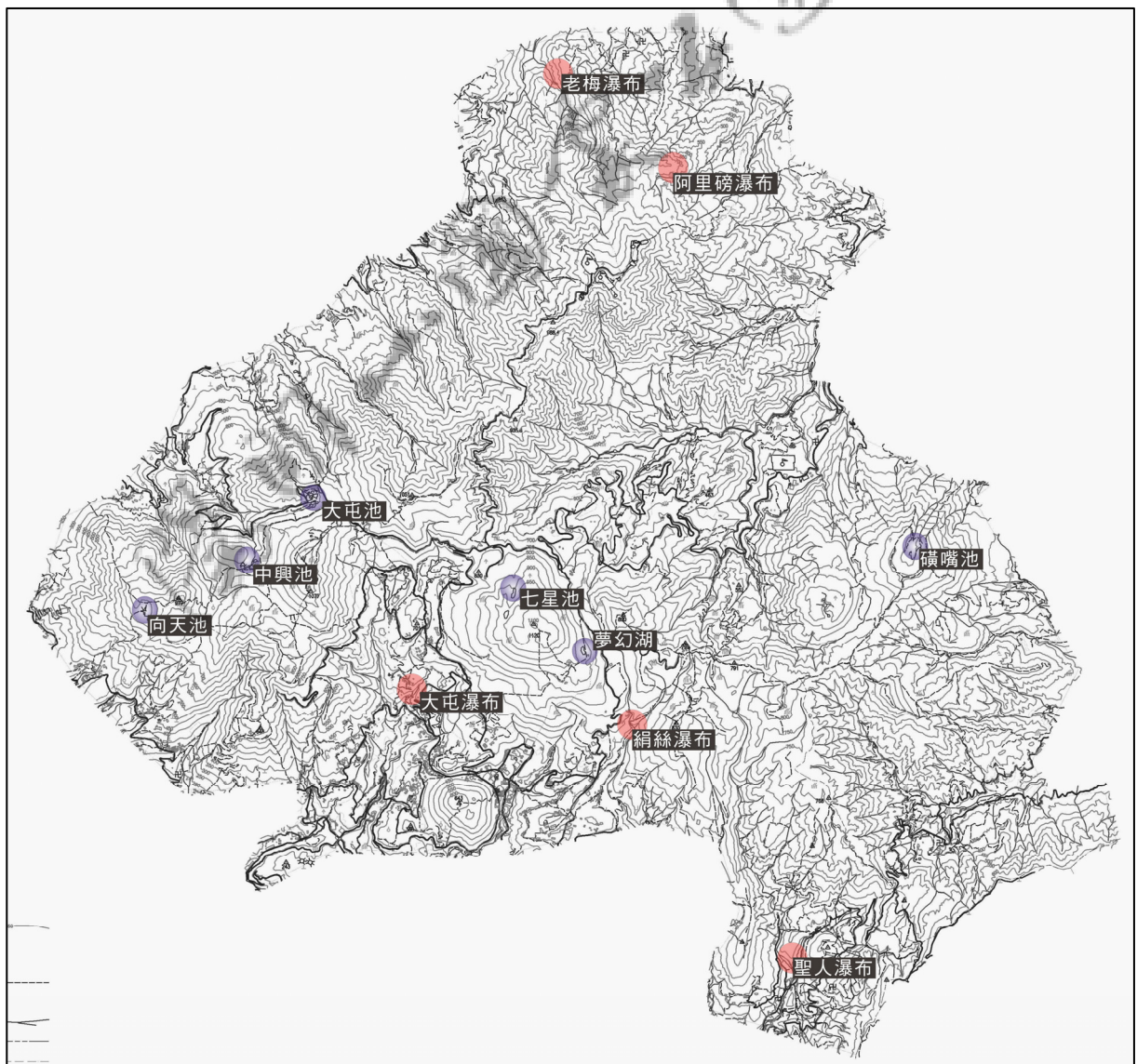


Figure 7-11 Yangmingshan National Park Lake and Pond Distribution Map Drawn by Research Team

Because Yangmingshan National Park is influenced by Tatun Volcano, it has very special topography and geology. The raise and fall of the topography and the 10 river basins created a large amount of waterfalls, lakes and ponds. There are close to a hundred waterfalls that are taller than 4 meters, including the 5 that are most famous and large: Lao-Mei Waterfall, Alibang Waterfall, Tatun Waterfall, Silk Waterfall, and Shengren Waterfall. Besides, there are also a lot of lakes and ponds, and the most famous one is Menghuan Pond, which has the unique Taiwan Isoetes.

### ***Hot Springs***

The Tatun volcanic complex in the park has the highest hot spring density in Taiwan. Most of them are sulphate springs, and the next are sulphate chloride springs and neutral hydrogencarbonate springs. Hot springs have mid to high temperatures and special healing effects, therefore, they have become one of Yangmingshan National Park's important recreational resources.

Hot spring resource is managed by Water Resources Agency, Ministry of Economic Affairs, and Sulfur Valley hot spring is under Taipei Water Department's jurisdiction, but Matsao and Longfeng Valley hot spring are seriously abused by private business owners using the hot spring without permission..

#### **7.4.2 Current Subjects on Yangmingshan's Water Resource**

Yangmingshan National Park's recreation population has grown dramatically in recent years, and as a result created increasing needs of water resource and pollution to the water basin area. Current problems that Yangmingshan's water resource management is facing included:

- Hillside grading, bridge and road construction, and the development of orchards and farms will cause silt to flush downstream and create silt buildup during the rain season or storms, and as a result affected the flood release function of the water channels.
- The agricultural operation such as orchard and vegetable farm in the park and on the hillside may pollute the water at the basin due to using chemicals like fertilizers and pesticides.
- Popular tourist spots such as Yangming Park and Lengshuikeng have large amount of visitors; human activity may pollute the water, and water pollution will affect the availability and supply of the water resource indirectly.
- The agricultural tourism development at Chulzuhu and the dinning

businesses in the surrounding area has created large amount of sewage, but is lacked of a systematic sewage treatment facility.

- Many hot springs in the park area has been used by private owners and as a result created difficulty to manage and control the resource.

#### **7.4.3 Sustainable Management of Yangmingshan National Park's Water Resource**

##### ***The Use of Outcome Management***

- Combine the spirit and need of planning management, land use management, engineering management, resource management, environmental quality management and special aesthetic management.
- Monitor and control regularly to maintain the quality and function of water basin.

##### ***Regularly Examine the River's Quality (Leopold, 1978)***

- River's physical characters
  - The silt up of a river will affect its temperature and clarity, and indirectly affect the photosynthesis of the creatures in the water and the food chain cycle and balance.
  - Use eco-technology when doing flood control and water and soil conservation projects to reduce the erosion and drainage amount upstream.
- River's chemical characters
  - Agricultural and recreational behaviors produce water pollution and sewage.
  - The trash and waste pilling at water activity areas.
  - No sewage treatment facility is set at people congregation area.
- River's bio-system
  - The release of pesticides and fertilizers from agricultural production business. The use of concrete on riverbeds and bank revetment destroyed the river's bio-system (damages habitats of river bottom creatures, fish, and birds)
- River's health and aesthetic



- The preservation of the basin's natural channel, water quality, and healthy habitat.
- The protection of the natural and original water basin quality.

### ***Water Resource Management***

- The Administrative Bureau should gather the responsible units in the Ministry of Economic Affairs Water Resources Agency and Taipei Water Department to come up with an overall water resource operation and management plan.
- Establish a river basin environment database including complete environment information on its hydrology, climate, ecology, geology, landscape aesthetic, water resource use and related hydrology facilities, and do a detailed review.
- Examine the land use form around the basin, consider land bearing capacity, the protection of eco-system, and maintaining landscape resource.
- Each of the recreation development projects within the basin, such as Shuangxi and Matsao recreation development plans, should go through environmental impact evaluation, market need investigation, financial analysis to prevent over or incompatible development.
- If the hillside is well covered with vegetation, it can average out the river flow during its high and low seasons. Also, the woods can help filter the water and purify the water quality.
- Establish sewage drainage and treatment system at communities or recreation areas that has dense populations and the water must reach discharge standard before releasing back into the river.

### ***Hot Spring Water Resource Management***

#### **The Problems that Hot Spring Resource is facing**

Although hot spring is renewable resource, some of them have a low re-new rate. If hot spring is not developed and used collectly, it might get polluted or dried out. Therefore, based on the principle of a sustanable hot spring resource, the development, operation, and management of Yang-mingshan's hotspring should be taken with more care and used resonably. After understanding Yangmingshan National Park's hot spring over a long period of time, this plan discovered that the following complecated problems ofter occurs during a hot spring's development process and use:

- **Lack of information:** There is very limited information on the hot springs, information such as hot spring's water level, water quality, water quantity, temperature, geology condition, and usage are seriously lacking, and is in need of establishing a hot spring resource database.
- **Missing an overall development plan:** Most of Yangmingshan's hot spring development are at their carrying capacity, but there is not an overall development plan, and as a result these areas are unorganized and lack of control, and the hot spring areas may be in jeopardy.
- **The damage on hot spring outcrop:** Many hot spring business owners damage and develop hot spring outcrop to increase the water amount, and this affects the natural landscape and function. It is stated by the sixth regulation of the Hot Spring Law that hot spring outcrop should not be developed in a certain distance to protect it from being damaged.
- **Not enough hot spring water:** The business owners fought for extracting hot spring water and made the water level drop dramatically, and this lead to not enough water is being extracted, and finally dried up the hot spring..
- **Polluted hot spring source:** Hot spring is also a kind of underground water, once the source is polluted, the hot spring will be polluted. Before a hot spring water quality examination system is established, the risk is relatively high.
- **The water right is not registered:** Some developer unlimitedly extract hot spring water without registering their water rights and pay the fee.
- **Waste water creating environmental pollution:** Currently, many hot spring business owners in Yangmingshan National Park did not treat the used hot spring water before releasing it, and this will lead to the pollution of nearby rivers and soil, and damage the eco-environment.

### **Hot Spring Development Principles in Yangmingshan National Park**

- Should make conservation as central value, and development as additional value.
- Should have a detailed survey, evaluation, planning and monitor plan.
- Should have an overall development direction and development plan.
- Development plan should be practice.
- Increase the value of hot spring water resource.
- Hot spring outcrops should be protected and restricted from any development.
- Establish a unique hot spring image.
- Conduct water right registration.
- Actually carry out the pay-to-use principles.
- Establish a total amount control system.

### **Hot Spring Resource Usage Procedures in Yangmingshan National Park**

#### ■ Information Gathering

To utilize and manage hot spring effectively depends on correct and adequate information. Therefore, the gathering of information is the priority for hot spring operation and management. Information gathering includes the following items:

- General Hydrology Examination: Including groundwater, surface water, and rainfall, etc.
- Hydrological Geology Examination: 1. The structure and distribution of aquifer. 2. The aquifer geological invariable examination. 3. Auifer specific yield rate, specific retaintion rate. 4. Hot spring water basin.
- Hot Spring Water Level Examination: 1. Well information. 2. Regional hot spring utilization information. 3. Demanded water and surface water usage examination.

- **Hot Spring Water Quality Examination:** 1. The examination and monitor of hot spring water quality. 2. Track the hot spring pollution source.

#### ■ Hot Spring Hydrology Analysis

Hot spring hydrology analysis can be defined by its goal, principle, usable information, analysis scope, and desired accuracy. This type of analysis can be divided as two parts:

- **Hydrology Analysis:** This includes the prediction for demanded water, estimate of groundwater availability, and estimate of groundwater resupply, etc.
- **Hot Spring Water Analysis:** This includes the prediction for demanded water and water availability, aquifer's water transfer ability and water storage volume analysis, and the relationship between hot spring water quality and pumped water amount, etc.

#### ■ Hot Spring Management Measures and Methods

After setting up a hot spring management goal, it can be reach by using any kind of methods and measures. Generally speaking, the methods that are used to manage hot spring water source are engineering method and non-engineering method. The engineering method is more direct, but it is a very big investment; although the non-engineering method is not a big investment, a regulation has to be set up and strictly followed though. Both methods are described in the following:

- **Engineering Method:** 1. Make artificial repairs. 2. Drill a new well. 3. Relocate a well. 4. Abandon and close the original well.
- **Non-engineering Method:** 1. Adjusting the pumping type and time . 2. Pumping limit and reduce pumping amount. 3. Collect water right fee. 4. Add restriction on the qualification of well boring personnels.

#### ■ The following preservation and utilization strategies are made for current hot spring areas in Taiwan:

- **Protect Water Source:** Protect and maintain the original landscape at the hot spring source.
- **Promote Hot Spring Quality:** Build sediment pond, add height to the spring container to prevent polluted water drain through.
- **Maintain Hot Spring Quantity:** Repair old spring container to prevent

leaking, reinforce the control on key spring containers, reinforce hot spring water lines, and prohibit illegal pipe connections.

- **Water Right Management:** Enhance water right management and inspection in the hot spring area, and implement water right registration.
- **Usage Management:** Hot spring usage periodical monitor, control and manage strictly to maintain the sustainability of the hot spring resource.
- **Establish Hot Spring Resource Fundamental Database:** Examine pipeline information of the hot spring users comprehensively, establish user pipeline map, and establish spring container location and number them.
- **Establish a pay-to-use system and promote it intensively.**
- **Hot Spring Pipeline Management:** Old hot spring pipelines should be replaced with new ones.

### **Hot Spring Land Development Principles in Yangmingshan National Park**

#### **■ Define Hot Spring Resource's Characteristic**

Emphasize hot spring's local characteristic, avoid similar development style, and integrate surrounding environment and nearby landscape resource and make an overall planning, and showcase local hot spring resource features.

#### **■ Enhance the Cultural, Ecological, and Educational Quality of a Hot Spring Tourist Environment**

Utilize Yangmingshan's special ecological environment to undergo hot spring tourist development, and at the same time enhance local cultural characters, and make visitors care about local resource and promote the concept of ecological conservation through interpretive system and environmental education system.

#### **■ Integrate with Local Communities**

Hot spring leisure development can integrate with Yangmingshan's nearby community resources and take care of both the needs of the residents and visitors, and gain local residents' recognition and support through this process. Besides having a complete leisure management plan, this will also increase local job opportunities and tax income, and with a good profit reward



system, the funding can be placed toward environmental protection and ecological conservation.

## 7.5 Visitor Quantity Control

### 7.5.1 Visitor Quantity Prediction

#### *Multivariate Statistical Analysis:*

When predicting visitor quantity, univariate time series analysis is usually used and it relays on a single variation when analyzing. But besides the time factor, there are other factors that influence the National Park's visitor amount; therefore, a multivariate system should be used to predict visitor quantities.

#### *The necessity for modifying prediction system:*

Because visitor quantity varies through time, and Yangmingshan National Park's time series also changes through time, new information should be added to find new patterns and parameter to make sure the prediction is accurate.

#### *Visitor quantity adjustment when significant emergency incident happens:*

When significant emergency incident such as earthquake, typhoon happens, it is also very important to know how to effectively adjust future visitor quantity prediction and how to accurately evaluate its extended effective time to increase the accuracy and practicability on predicting Yangmingshan National Park's visitor quantity.

### 7.5.2 Visitor Quantity Control

Yangmingshan National Park's future visitor quantity control strategy should be as the following:

- Increase recreation space
- Increase the use of efficient areas, centralize visitor's usage
- Control visitor's usage
- Reduce the recreation usage impact
- Increase the durability of the resources
- Visitor environmental education and promotion
- Make users pay a fee
- Make long-term and regular monitor plan

陽明一國志

## VIII HEADING TOWARDS THE NEXT TWENTY YEARS



Photo By/Hong-Ming Chen

陽明一國志

# VIII

## HEADING TOWARDS THE NEXT TWENTY YEARS

---

### 8.1 FUTURE DEVELOPMENT PROSPECT

- Play a center role at biodiversity conservation.
- Manage and preserve sustainable bio resources.
- Build a friendly relationship between human utilization and Yangmingshan National Park.
- Make local residence's everyday living and production coexist with biodiversity conservation.

### 8.2 PROSPECTIVE GOAL AND ACTION STRUCTURE

#### 1. Ten Year Outlook:

To accomplish ecological sustainable development prospect, fulfill National Park's goal of sustainable management, and preserve the last paradise in northern Taiwan.

#### 2. Four Year Goal:

- *Global Vision*
- *Keep the Root Locally*
- *Consider both Conservation and Recreation*
- *Expend Depth through Education*
- *Focus on Management rather than Building*
- *Replace Division with Integration*



## 8.3 The Important Subjects While Heading into the Future

### **Subject 1: Support National Park's Absolute Value, and Establish Yangmingshan National Park's Position and Development**

- Overall Position: Metropolitan National Park
- Ecology Preservation Position:
  - Become north Taiwan's important ecological center.
  - Preserved a complete volcanic characters on Tatun volcanic complex.
  - A dynamic trace of living culture is left here, and it is significant to preserving cultural diversity.
  - Function as the environmental ecology center in the northern region.
- Environmental Landscape Position: Apply the "Convention Concerning the Protection of the World Cultural and Natural Heritage" on the special geography landscape of Tatun volcanic complex and declare it as a world's natural heritage.
- Recreation Position:
  - Develop this area as the environmental education center of the northern region.
  - This is the most important national travel route in the northern region.
- Architectural Style and Facility Position: Create an architectural style that has volcanic characteristics and Andesite textures.

### **Subject 2: Organize the Co-opetition Relationship between the Environment Preservation and Recreation Resource within the Country, and Use Zones as Base to Improve Resource Management**

#### ***Resource Aspect***

- Co-opetition and communication between the different divisions' policy and plans within the Administrative Bureau, such as the Construction Division, Conservation Division, and Interpretation Division. (Internal Co-opetition)
- Co-opetition and communication between each National Park, including Kenting National Park, Shei-Pa National Park, Taroko National Park, Kinmen National Park, Yushan National Park. (External

Co-opetition)

### ***Domestic Cooperation Aspect***

- Establish and cooperate with Yangmingshan National Park's domestic partners, including communication between the associated units of Taipei City Government, Taipei County Government, Forestry Bureau, Tourism Bureau, North Coast and Guanyishan National Scenic Area Administrative Bureau.
- Work on research plans together with associated research centers, schools, private corporations, and organizations.
- Establish a participating system with nearby communities and residence.
- Establish a local volunteer system.

### ***Land Management Aspect***

- Establish land co-management or sub-management system, and proceed with operation management leadership by divided the land into zones instead of dividing it by its types.

### ***Cultural History Aspect***

- When developing cultural history, the interaction between land and people should be considered, and the research should be extended on the human culture aspect.
- The research on human culture should emphasize on the continuity of time of the important historic events, and discuss Yangmingshan's cultural development process through both the geography standpoint and time standpoint. This also means to showcase Yangmingshan's cultural diversity through the evolution of its history, and present the historic status of Yangmingshan National Park.

### ***Traffic Strategy Aspect***

- Build a second transportation center and strength the dynamic central transportation function of the original transportation center.
- Use the modern information technology to set up CCTV equipment at all the important entrances around the park to document the traffic flow, evaluate traffic condition, and use it as an important reference on the overall traffic management.

### **Subject 3: Break Away from Isolated Management, and Establish a Regional Protection System**

#### ***Ecological Environment Aspect***

- National Park, National Scenic Area, National Forest, and National Forest Recreation Area should be re-classified according to the IUCN standard on their resource evaluation, organized systematically, and regularly go through resource management evaluation and operation policy modification.
- The management and classification of World Heritage can be included into the management for related resources, and develop a National Heritage that is based on Taiwan's resource characters.
- Pursuit information building and monitoring based on a "Practical Ecology Investigation".
- Establish a monitoring system for long-term monitoring plan.
- Systematically organize information gathered from the past and put it into the "Geographic Information System Database".

#### ***International Cooperation Aspect***

- The National Park Administrative Bureau should actively participate in international ecology preservation meetings, join associated conservation organizations and communicate with each other.

### **Subject 4: Use Science as Foundation to Improve Resource Management, and to Accommodate the Outlook and Expectation of the Professionals**

#### ***Ordinance Aspect***

The National Park should establish an overall review and self-evaluation system.

#### ***Policy Aspect***

- Integrate the management system of each government and local non-profit organization and commercial business group to establish a partner relationship and common management goal.
- Promote talent training, resource planning, resource conservation, and develop an actual investment on resident's living and production outlook.
- Fulfill administration outcome evaluation through administrative coor-

dination and resource integration, and connect with the sustainable development policy.

- Actively improve and allow local investment participation and implement a reward system.
- Establish “Indicator Management” concept and proceed with the many construction and management outcome evaluation in Yangmingshan National Park.
- The management on the surrounded grey areas should be taken more seriously in the future.
- Should face the “human” subject more practically and actively promote feasible strategies.
- Draw up “Yangmingshan National Park Charter” and make it as the highest principle and law to follow for the development of Yangmingshan area.

#### ***Organization Aspect***

- Fight for the position as the legal and logical leading unit of the National Parks.

Establish National Park Research and Development Center.

#### ***Finance Aspect***

- Suggest fighting for a higher research budget, establishing a research fellowship system to train National Park research talents, undergo long-term systematic research plans and share research results with the public.

#### ***Personnel Aspect***

- Improve the training on volunteered interpreters, preservation staffs, and National Park guards, and establish a long-term teaching and learning system.

#### ***Management Aspect***

- Should not proceed with any commercial BOT system.

#### ***Research Aspect***

- Establish specialized research unit, organize and train researchers.
- Set up an overall research goal, and establish a general long-term eco-

logical research database.

- Undergo continuous research, and actively pursue to raise the percentage on the research budget.

### **Subject 5: Guiding the Locals to Take Local Sustainable Benefits as the Course of Direction**

#### ***Conflict Management Aspect***

- Cooperate with local associations and community organizations to add in public participation system, establish a communication system through an objective middle coordinator and communicate chronically with the local aborigines to minimized conflicts and grow together.

#### ***Education Promotion Aspect***

- Enhance research communication between the different fields internationally and domestically.
- Promote environmental education.
- Expand customer groups using divided group or small group travel styles, and move towards the direction of eco-tourism, seasonal tours, and professional tours.
- Monitor and control recreation capacity to guarantee the environment's sustainable management
- Continually building eco-tourism information websites and connect it with related websites to increase the effectiveness.
- Create a dynamic intellectual tour with local travel agencies to fulfill the tourists' needs.

## **8.4 Heading towards the Next Twenty Years**

### **8.4.1 Draw up Yangmingshan National Park Charter as soon as possible and perform evaluations to improve the operation and management outcome**

- Carry out Yangmingshan National Park Charter and a professional evaluation plan.
- Connect with other National Parks to promote establishing a "National Park Agency".
- Improve in building partnerships with local residents, organizations,



and local governments.

- Fulfill developing a sustainable environment and establishing a partnership.

#### **8.4.2. Accelerate in setting a protected area system into action**

- Create a cross-department cooperation system, and establish a protected area system with the Taipei City Government, Taipei County Government, Forestry Bureau, North Coast and Guanyishan National Scenic Area Administrative Bureau.
- Cooperate with local environmental groups, volunteer groups or academic groups to create a protected area system together.
- Assist in promoting the system planning policy on national protected area.

#### **8.4.3 Continue promoting and extend the works on preservation research**

- Improve the professional abilities in managing Yangmingshan National Park, add professional research staff and increase research budget, and actively progress with the in-service training for Administrative Bureau staffs.
- Establish an integrated long-term research plan and phased research plan.
- Establish Yangmingshan National Park Research and Development Center.
- Promote the science research, ecological monitor and environmental data collection of the protected areas.

#### **8.4.4 Establish a model for ecological recreation experience**

- The recreation activity provided in Yangmingshan National Park should be in an eco-tourism style, which has the least impact on the natural environment.
- Extend the existing National Park interpreter volunteer system to establish an eco-tourism guide licensing system.
- Establish a development principle for future recreation.
- Establish a Taipei regional recreation service network.

#### **8.4.5 Establish a new “Yangmingshan National Park Subject”**

- Study and plan an extensive “Yangmingshan National Park Subject”.
- Plan to establish the “Academy of Yangmingshan National Park”.
- Plan a series of “National Park courses”.

#### **8.4.6 Support and participate in international actions**



# Yangmingshan National Park Landscape Consultant Group

---

## Supervising Unit

Ministry of the Interior Construction and Planning Agency Yangmingshan National Park Administrative Bureau

## Researcher Fellow

### Plan Director

Monica Kuo

### Co-Director

Chung-Duan Kuo  
Yoshiki Toda  
Oguchi Motomi

### Consultant Group

Yi-Hou Lin, Keith H.J. Kuo  
Ten-Ren Lee, Nan-Yuan Huang  
Chia-Zhi Lee, Xiang-Yin Kuo  
Yu-Ren Kuo, Victor Y.C. Su

### Project Manager

Hong-Ming Chen

### English interpreter

Fong Ou, Theresa Chuo

### Art Director

Mia Hung

### Project Researchers

Charlene Tung, Solomon Chang  
Yu-Ting Wu, Peggy Wang

### Art Editor

Vergel Chen

陽明一國志

陽明一國志



陽明一國志