



# 2021 국제보호지역 관리자 역량강화 워크숍

2021. 9. 29 (수) - 10. 1. (금) 15:00-17:30

## 2021 Online Thematic Seminar on Management Challenges of Internationally Designated Areas

29 Sep. - 1 Oct. 2021 15:00-17:00 (GMT+9)



발표자료집 Proceedings

## 2021 국제보호지역 관리자 역량강화 워크숍

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주제 1: 국제보호지역과 주민참여  
Theme 1: Involvement of Local Community  
in Internationally Designated Areas

기조강연  
Keynote speech

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나타라잔 이시와란

DDE센터(Deep-time Digital Earth:  
지구 지질학 시간 디지털화 센터) 이사장  
(전 유네스코 생태지구과학국장)

**Dr. Ishwaran Natarajan**

Executive Head, Deep-time Digital Earth (DDE) Centre  
(Former Director, Division of Ecological and Earth Sciences, UNESCO)



**KNCU ON LINE THEMATIC SEMINAR**



**INVOLVEMENT OF THE LOCAL COMMUNITY IN  
INTERNATIONALLY DESIGNATED AREAS (IDAs)**

*Natarajan Ishwaran*

**Management Challenges of Internationally Designated Areas  
(IDAs)**

**29 Sept – 1 Oct, 2021**

**Jeju Island, Republic of Korea (ROK)**



**INVOLVEMENT OF LOCAL COMMUNITY IN IDAs**



**This presentation will:**

- **Introduce Global Research and Training Centre for IDAs (GCIDA) as a UNESCO Category 2 Centre**
- **Provide an overview of 4 most important IDAs and their current status**
- **Present a brief overview of the evolution of local community-conservation area relations in the context of changes in international environment-development relations;**
- **Management challenges of IDAs: pre- and post COVID times; and**
- **Suggestions for a GCIDA-led International Cooperation Agenda on Research and Training on Local Community Involvement in the Management of IDAs.**



## INVOLVEMENT OF LOCAL COMMUNITY IN IDAs



### The 4 main IDAs and their current status:

- World Heritage sites (1972): 1154 in 167 countries, of which 897 are cultural, 218 natural and 39 mixed (both cultural and natural);
- Biosphere Reserves (1971): 714 in 129 countries;
- Ramsar sites (1971): 2424 in 170 countries; and
- Global Geoparks (1998): 169 in 44 countries

The (year) indicates the time of the launch of the Conventions (World Heritage & Ramsar) and Programs (Man and Biosphere (MAB) and Geoparks)

There are a few landscapes in the world that include overlapping areas of all 4 designations. Jeju Island is an example; at the 13<sup>th</sup> COP of Ramsar, 18 cities were accredited as wetland cities and one of them was Jeju.

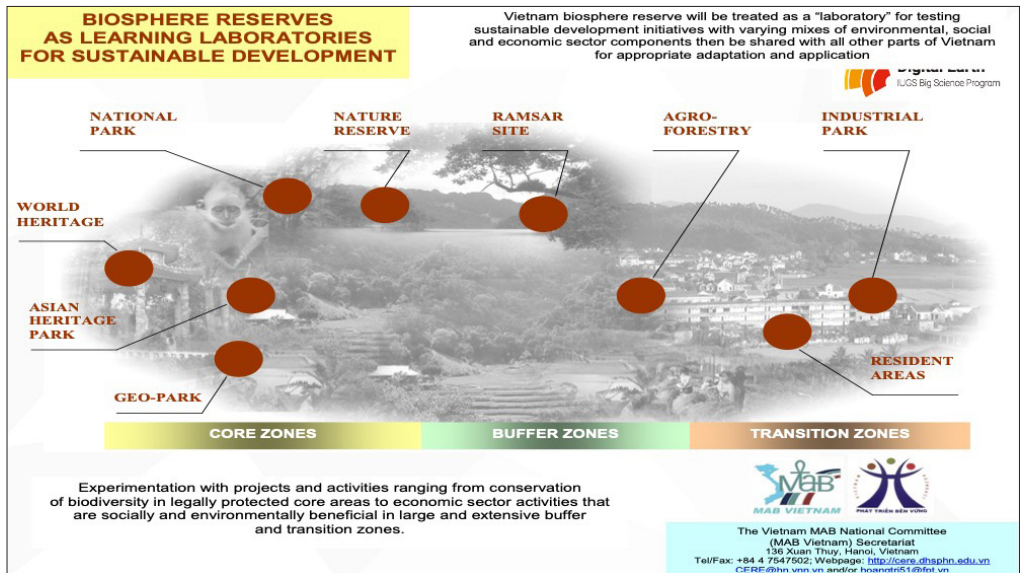
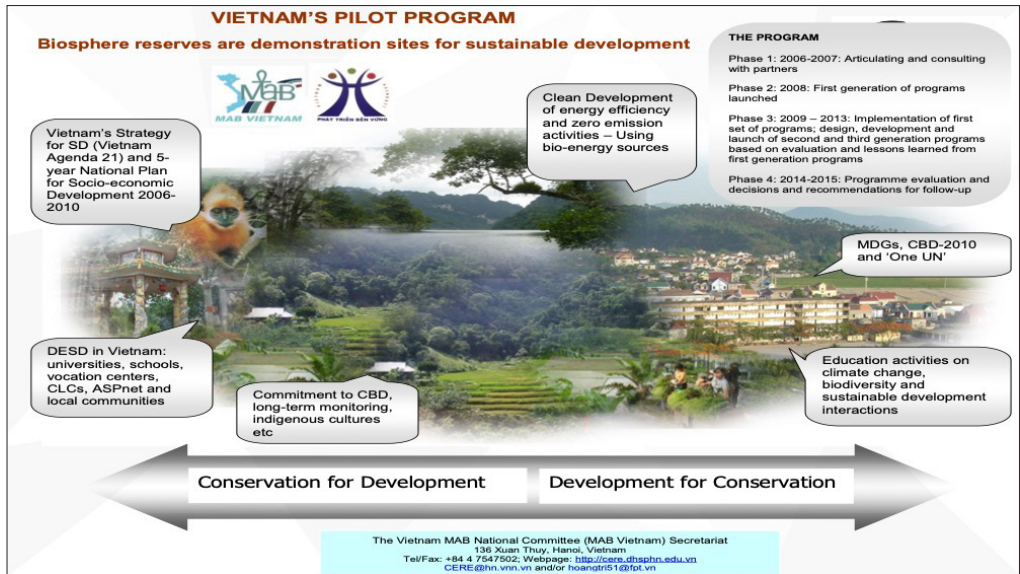


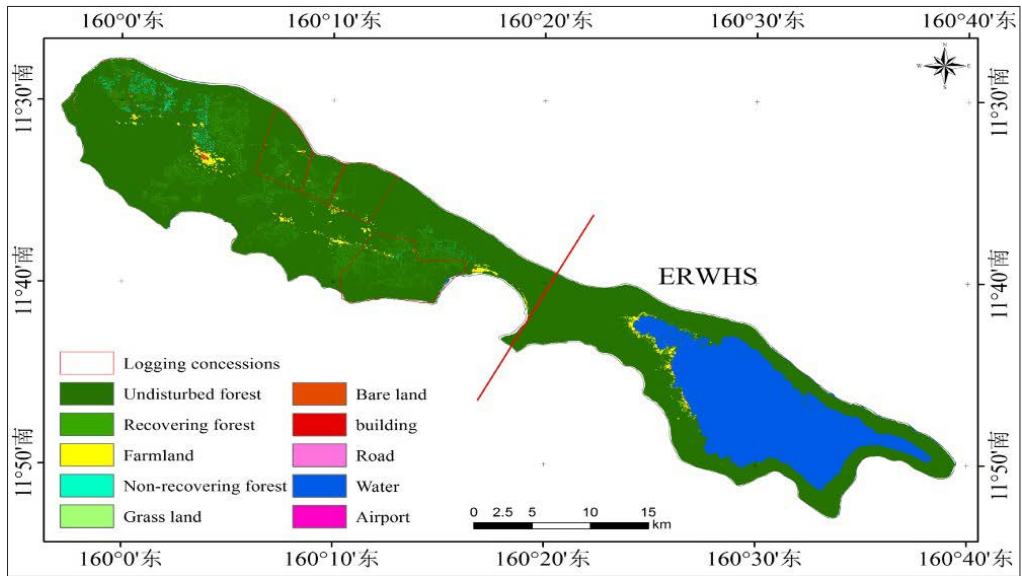
## INVOLVEMENT OF LOCAL COMMUNITY IN IDAs




### The First Earth Summit – UNCED – Rio 1992: a turning point for the IDAs

- 3 Conventions and 1 Program (Agenda) were adopted;
- The Conventions were upstream, policy oriented conventions; they were not species or place specific: Convention on Biological Diversity (CBD); UN Framework Convention on Climate Change (UNFCCC); and UN Convention to Combat Desertification (UNCCD);
- Agenda 21 – for sustainable development was also adopted.
- Climate Change related science, diplomacy, and international relations have become very prominent
- UNFCCC – first had Kyoto Protocol (1998; Annex 1 & 2 countries) and Paris Climate Agreement (2015; driven by NDCs)
- Sustainable Development; continuing 10 year summits (next in 2022); MDGs (2000; donor-recipient) to SDGs (2015: universal)





**Most prevalent threats to/impacts on World Natural Heritage (2018 data;**  
 see: <https://whc.unesco.org/archive/2018/whc18-42com-7-en.pdf>



Deep-time  
Digital Earth  
IUGG Big Science Program

Issue	%reported properties affected
Management plan/systems	61
Illegal activities	55
Mining	49
Impacts of tourism, visitors, recreation	31
Invasive alien species	27
Water infrastructure	24
Grazing, farming, domestic animals	22
Ground transport infrastructure	20
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## INVOLVEMENT OF LOCAL COMMUNITY IN IDAs




### COVID-19 (2020 January -.....) impacted international tourism

- IDAs dependent most on international tourism – east and South Africa (e.g. Victoria Falls; Serengeti); South Asian countries (Nepal, Maldives, Sri Lanka) have been significantly impacted;
- To become totally dependent only on tourism as a revenue generator during post-COVID recovery – not a smart strategy
- Land use and land use change adaptation measures against climate change – increasing climate change financing – an area with untapped potential;
- A GCIDA sponsored research and training agenda to collect data on pre-COVID/now/post-COVID trends, build a library of case studies and organize on-line, face-to-face and/or hybrid training events and consultations could be timely.

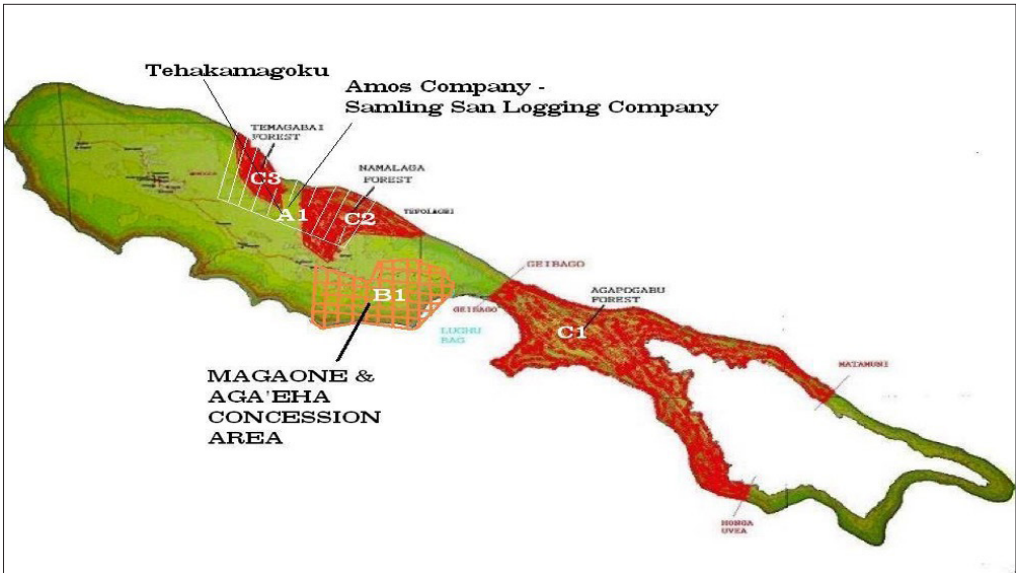


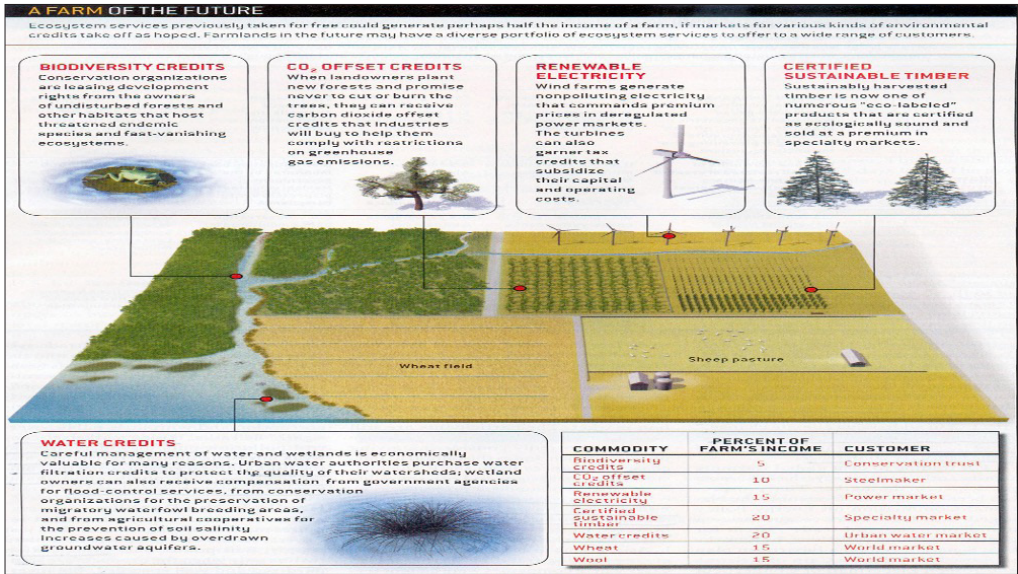
## UNESCO PROGRAM AND BUDGET FOR 2019-2020 (39 C/5) (page 126)

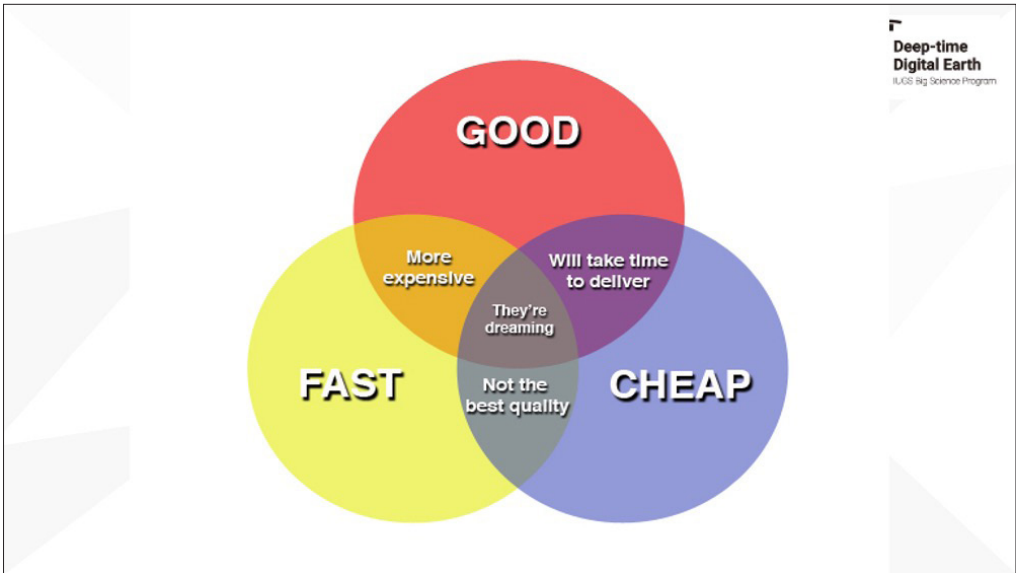
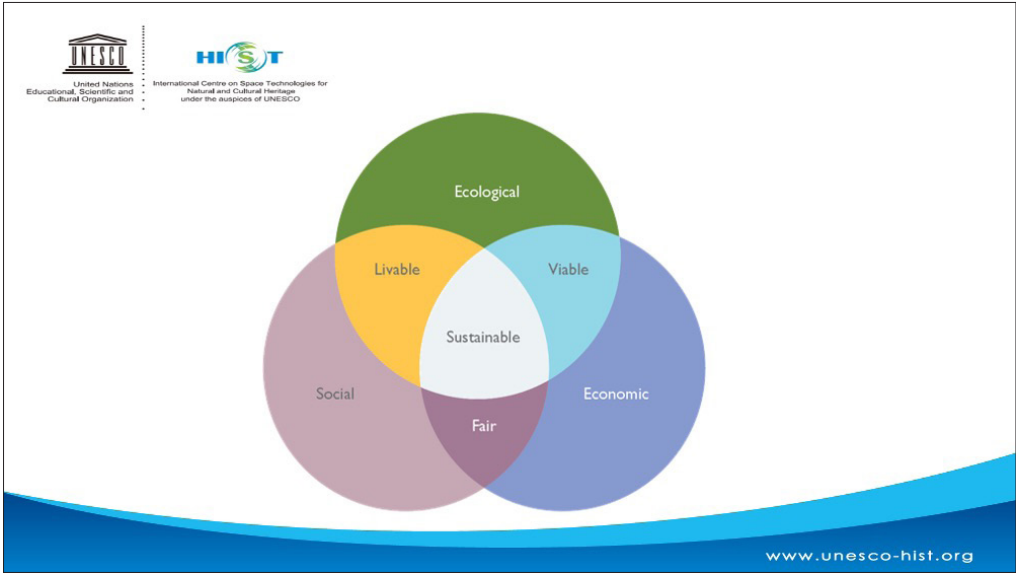



# Developing UNESCO-designated sites as learning sites for inclusive and comprehensive approaches to environmental, economic and social aspects of sustainable development












## The Trilemma Problem

- a situation in which a difficult choice has to be made between three alternatives, especially when these are equally undesirable (or desirable).
- The inescapable trilemma of the world economy: “Sometimes simple and bold ideas help us see more clearly a complex reality that requires nuanced approaches. I have an “impossibility theorem” for the global economy that is like that. It says that **democracy, national sovereignty and global economic integration** are mutually incompatible: we can combine any two of the three, but never have all three simultaneously and in full.”  
Dan Rodrik, JF Kennedy School of Government, Harvard



## INVOLVEMENT OF LOCAL COMMUNITY IN IDAs

### FT Weekend (14/15 Aug) – Lessons From Los Angeles

- **Water to LA still comes from 200 miles away (Owens Valley);**
- **LA is now suffering droughts and fires**
- **Sea-level will rise; beaches will vanish; it will affect house prices and the overall economy**
- **There are lots of measures – roof top solar panels, recycling all water for reuse etc**
- **Faber-O’Connor, Lauren, LA’s Sustainability Officer: “Yes, the city is a coastal city, and our analysis shows that sea-level rise is an issue,” but “what we’re most heavily invested in the near term is really around urban cooling and water resilience.”**





## **INVOLVEMENT OF LOCAL COMMUNITY IN IDAs**



### **A GCIDA-Led research and training agenda – what could it do?**

- **Literature search/survey to build a database on local communities and management relations in all 4 IDAs; a library of insightful case studies.**
- **Bibliometrics, altmetrics and other approaches to identify past research trends and emerging areas of research interests**
- **Training managers on links between IDAs and SDGs and providing them the necessary concepts, tools, contacts and other resources to develop projects and help them raise funds for implementation; and**
- **Action research designed in collaboration with managers and communities in choosing the (two) most important SDG focus for the near-term that is likely to attract support.**



# **END**

주제 1: 국제보호지역과 주민참여  
Theme 1: Involvement of Local Community  
in Internationally Designated Areas

사례 발표 1  
Case presentation 1

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일본 이토이가와 세계지질공원  
브라운 테오도르

Itoigawa UNESCO Global Geopark  
Japan, Mr. Theodore Brown



**糸魚川ユネスコ世界ジオパーク**  
**ITOIGAWA UNESCO GLOBAL GEOPARK**



ジオパーク学習 豊かな自然 伝統行事  
 ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る 体験学習  
 地元の... ネットワークと...



# Community Involvement in Itoigawa UNESCO Global Geopark

Engaging & Empowering Communities for Sustainable Development, Site Management and Education



Nuna

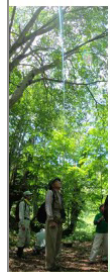
Theodore Brown, Itoigawa Geopark Council



**糸魚川ユネスコ世界ジオパーク**  
**ITOIGAWA UNESCO GLOBAL GEOPARK**



## About Itoigawa



Area	Population	Households	Merger
746.24 km <sup>2</sup>	40,822	17,270	March 2005



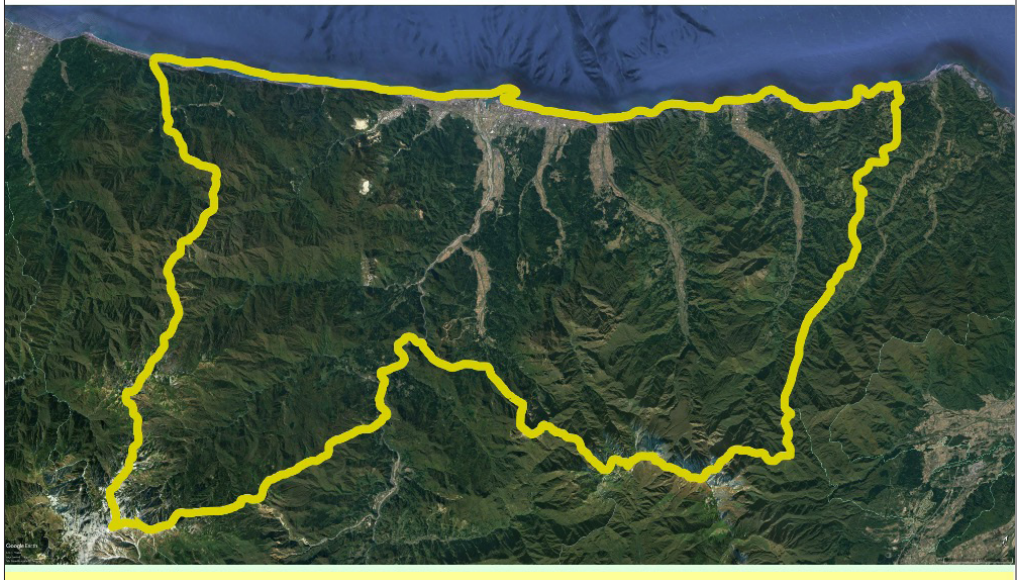
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About Itoigawa



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Over 85% of area is mountain/forest



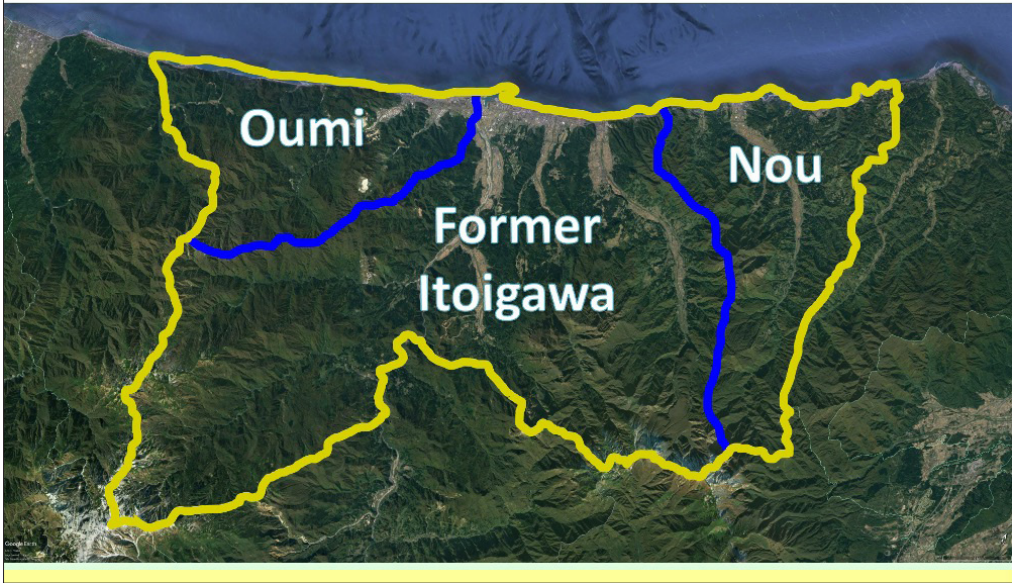




# 糸魚川ユネスコ世界ジオパーク ITOIGAWA UNESCO GLOBAL GEOPARK



Merger of One City and Two Towns (Mar 2005)



# 糸魚川ユネスコ世界ジオパーク ITOIGAWA UNESCO GLOBAL GEOPARK



Itoigawa-Shizuoka Tectonic Line and Fossa Magna







**糸魚川ユネスコ世界ジオパーク**  
**ITOIGAWA UNESCO GLOBAL GEOPARK**

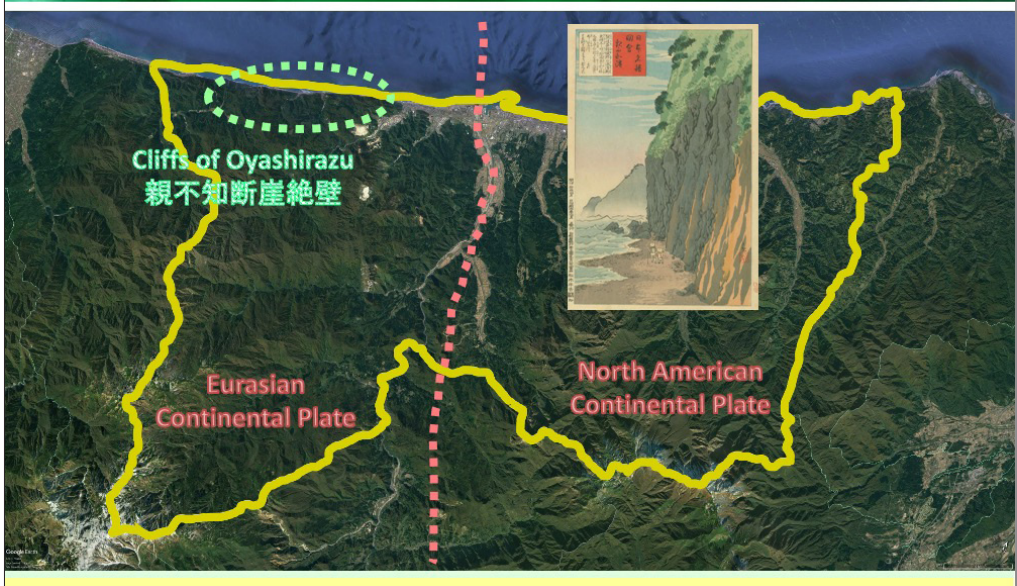

World's Oldest Jadeite Culture





**糸魚川ユネスコ世界ジオパーク**  
**ITOIGAWA UNESCO GLOBAL GEOPARK**


Border Between East and West



Brief History of Itoigawa Geopark

World's First Geopark\*

\*Unrelated to current Global Geoparks Network

1987 (Showa 62)

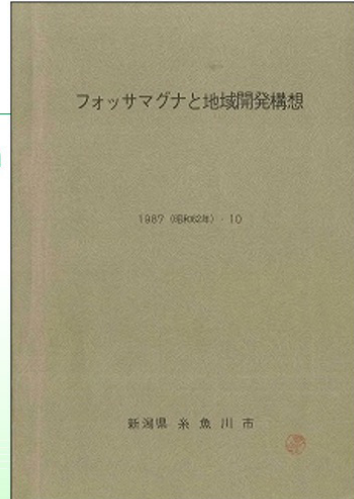
Fossa Magna Regional Development Plan

Strategic plan by local government to use local geological resources (jade, Fossa Magna, etc.) to promote regional growth and development.



Included the

GEOPARKS



Brief History of Itoigawa Geopark

1990 (Heisei 2)

Fossa Magna Park OPEN!

This park showcases an exposed section of the Itoigawa-Shizuoka Tectonic Line, a massive fault which splits the main Japanese Island in two.

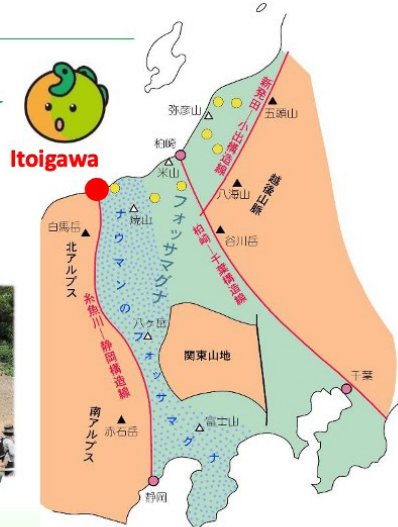
Renovated and Improved in 2018!



Before



After





unesco Global Geopark Itoigawa Geopark **糸魚川ユネスコ世界ジオパーク** SUSTAINABLE DEVELOPMENT GOALS ITOIGAWA UNESCO GLOBAL GEOPARK

## Brief History of Itoigawa Geopark

1994 (Heisei 6)

### Fossa Magna Museum

Museum using local geology to tell the story of jade and the birth of the Japanese Islands.  
Renovated in 2015 for the new Hokuriku Shinkansen



Exterior View



Fossil Valley Activity



OPEN

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## Brief History of Itoigawa Geopark

May 2007 (Heisei 19)

### Fossa Magna Unconformity Discovered




Dec 2007 (Heisei 19)

### Japanese Geoparks Liaison Council Formed



Itoigawa Geopark

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## Brief History of the Itoigawa Geopark

**世界の  
うごき** 2004 (平成16年)  
世界ジオパークネットワーク発足

2007 (Heisei 19)

**Plan for Global Geopark Announced**

Dec 2008 (Heisei 20)

**Certified as Japanese National Geopark  
Itoigawa Geopark Council Founded**

Dec 2009 (Heisei 21)

**Certified Japan's First Global Geopark  
Sistership signed with Hong Kong**



Itoigawa Geopark

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## Itoigawa Geopark History

### Why Start a Geopark?

① Protect and utilize local heritage

⇒ geology, nature, history, culture...

Protect "local treasures" and use for development

② Human resource development

⇒ Geostudies to shape new generations

③ Develop sense of unity and pride

⇒ Unite people of Nou, Oumi and Itoigawa

Nurture pride and feeling of belonging



Sustainable regional development which puts local residents first and enriches their lives for decades to come.



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## Engaging Local Communities

■ Keys to engaging the local community

- ➡ Meaningful inclusion in management structure
- ➡ Regular and multilateral communication
- ➡ Adapting existing networks and structures
- ➡ Interdisciplinary approach to Geopark Studies



Engaged & Motivated Local Communities

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ジオパーク学習 豊かな自然 伝統行事  
ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
地元の人の話を聞く みずから考える 豊かな心を育む 体験学習  
ネットワークと情報交換

## Community in Geopark Management

### Meaningful Local Involvement




Itoigawa Geopark Search

### Itoigawa Geopark Council



**[Chair]**

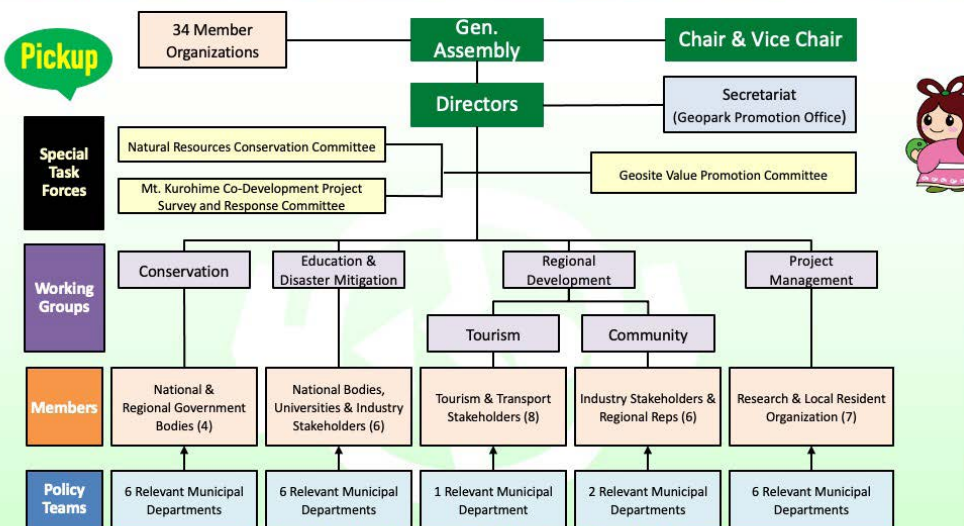
Mayor Toru Yoneda

**[Secretary-General]**

Director of Commerce  
& Tourism Div.

Advisors	2
Category	#
Gov't Bodies	6
Universities	3
Regional Representatives	3
Industry Stakeholders	7
Transport Stakeholders	5
Tourism Stakeholders	4
Local Resident Groups	4
City Gov't and City Council	2
<b>Total</b>	<b>34</b>

### Itoigawa Geopark Council Structure





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**Community Participation**

Local people take the lead in Itoigawa Geopark!




**Revalidation Mission**  
【Jonan Regional Community Center】

**Project Development**  
【Itoigawa Bonsai Association】

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**Community Participation**

Local people take the lead in Itoigawa Geopark!




**Site Management**  
【Takanami-no-Ike Pond (Kotaki District)】

**Local Tour Operation**  
【Nishiumi District】

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**糸魚川ユネスコ世界ジオパーク**  
**ITOIGAWA UNESCO GLOBAL GEOPARK**


ジオパーク学習 豊かな自然 伝統行事  
 ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
 地元の人のお話を聞く みずから考える 豊かな心を育む 体験学習  
 ネットワークと情報交換



# Communication with Community

## A Multilateral Approach



ジオパーク学習の意義  
 ジオパーク学習 豊かな自然 伝統行事  
 ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
 地元の人のお話を聞く みずから考える 豊かな心を育む ネットワークと情報交換



**糸魚川ユネスコ世界ジオパーク**  
**ITOIGAWA UNESCO GLOBAL GEOPARK**


## Communication Strategy

 Reaching a diverse audience...



**...requires a diversified strategy!**

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Global Geopark



Itoigawa Geopark

# 糸魚川ユネスコ世界ジオパーク

## ITOIGAWA UNESCO GLOBAL GEOPARK



SUSTAINABLE  
DEVELOPMENT  
GOALS

Communication Methods

### Direct Communication



**Social Media**



**Website**



**Newsletter**



**Signage**



**Mailing List**



**Press Release**

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Global Geopark



Itoigawa Geopark

# 糸魚川ユネスコ世界ジオパーク

## ITOIGAWA UNESCO GLOBAL GEOPARK



SUSTAINABLE  
DEVELOPMENT  
GOALS

Communication Methods

### Indirect Communication



**City  
Newsletter**



**Community  
Newsletters**



**School  
Newsletters**

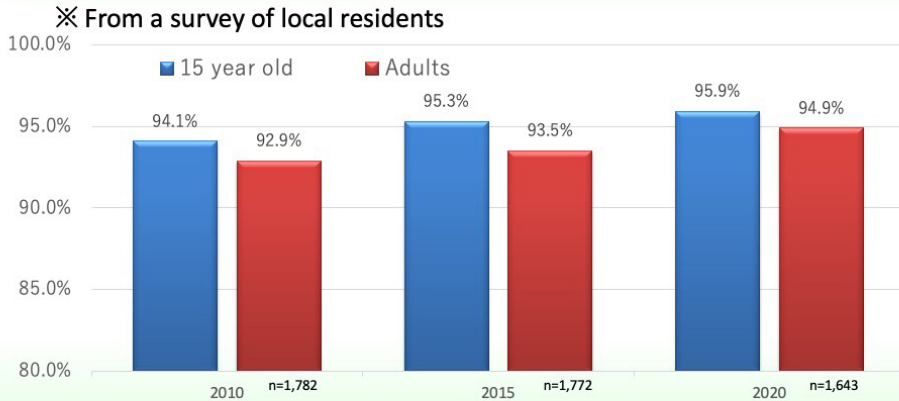
**Partner  
Organizations**

**Partner  
Signage**

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## Results of Communication Strategy

### Geopark awareness among local residents



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ジオパーク学習 豊かな自然 伝統行事  
ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
地元の人の話を聞く みずから考える 豊かな心を育む 体験学習  
ネットワークと

## Adapting Existing Networks

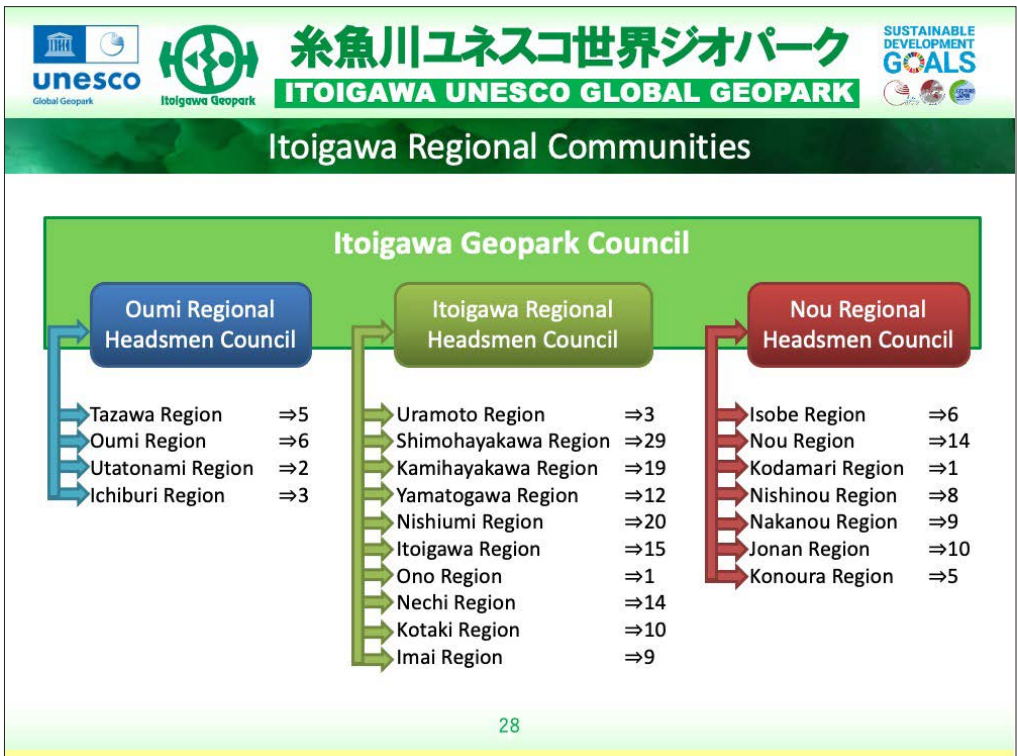
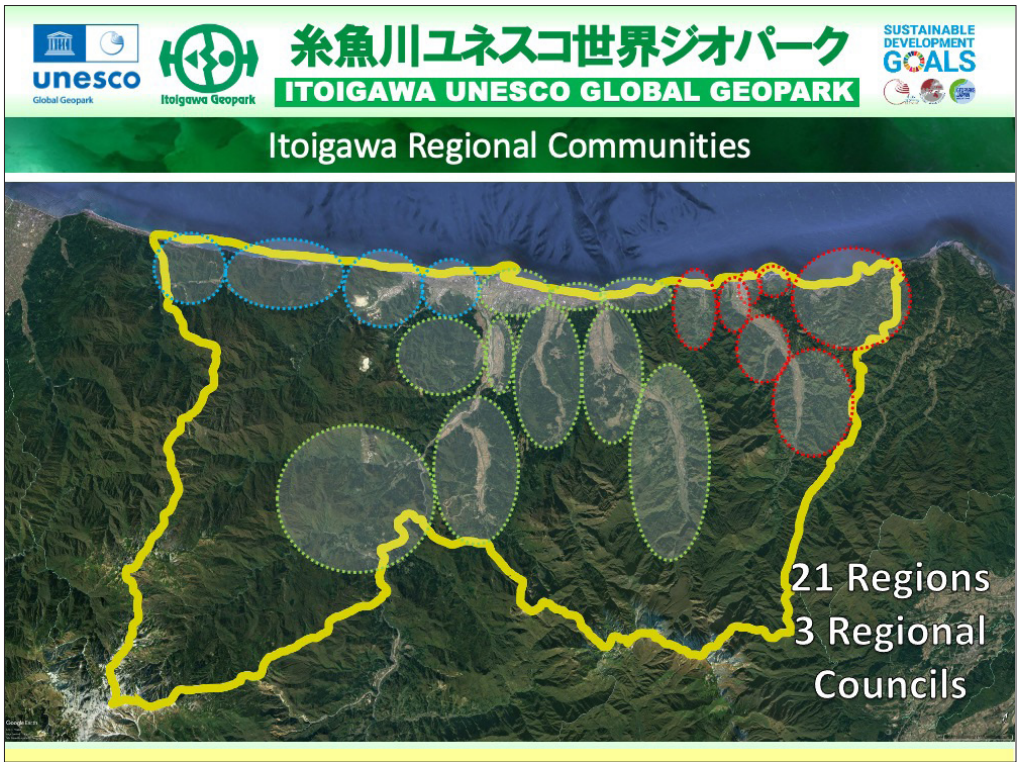
Efficient & Reliable Community Engagement



ジオパーク学習 豊かな自然 伝統行事  
ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
地元の人の話を聞く みずから考える 豊かな心を育む 体験学習  
ネットワークと

Itoigawa Geopark Search





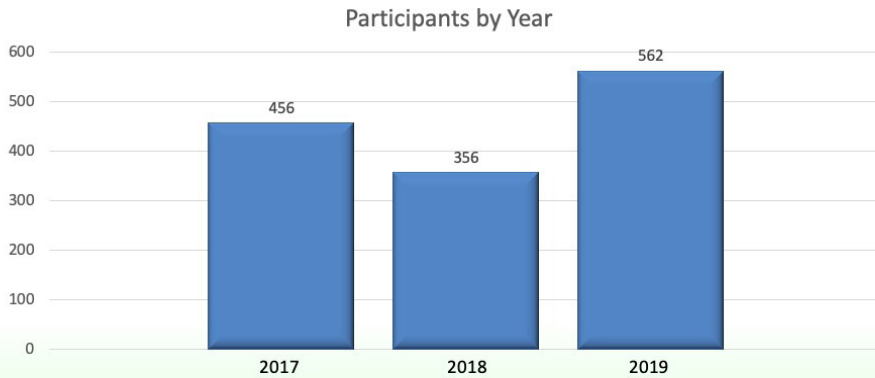


糸魚川ユネスコ世界ジオパーク  
ITOIGAWA UNESCO GLOBAL GEOPARK



## Working with Community Centers

### Regional Community Center-led Geotours



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糸魚川ユネスコ世界ジオパーク  
ITOIGAWA UNESCO GLOBAL GEOPARK



ジオパーク学習 豊かな自然 伝統行事  
ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
地元の人の話を聞く みずから考える 豊かな心を育む 体験学習  
ネットワークと



## Education for Community Engagement

### Using Geopark Studies to Reach Communities



ジオパーク学習の意義  
ジオパーク学習 豊かな自然 伝統行事  
ユネスコ正式プログラム ふるさとの文化と歴史 大地と人のかかわりを知る  
ユネスコ 豊かな心を育む ネットワークと情報交換

Itoigawa Geopark Search





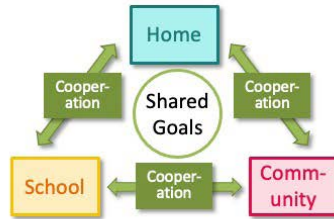
### Geopark Studies Promotion

#### Included in Education Policy

##### 【Core Education

Activities		Goal
3 pillars	Rich Hearts	Self-expression, strong values, community-driven
	Strong Bodies	Independent, health-minded
	Solid Learning	Ability to learn independently, interest in continued education
Core Education	Career Study	Self-confidence, regional pride
	GeoStudies	Love for Itoigawa through Geopark experience and study
	Special Education	Self-sufficiency, community participation with solid support

##### 【Basic Model】



##### 【Valuable Engagement Tool】

- ☞ Reaches ALL children in Itoigawa
- ☞ Reaches parents in crucial 20s - 40s demographic!



### Geopark Studies Promotion

#### Geopark Textbooks for Schools



Science Textbook



Science Textbook



Social Studies Textbook




# 糸魚川ユネスコ世界ジオパーク

## ITOIGAWA UNESCO GLOBAL GEOPARK



### Results of Geopark Studies in Geopark Engagement

**【Age 10】 Make our own Geopark Signs! (2020)**

Visiting nearby Fudoyama Castle Site

**■ Problem!**

- 👉 Road is hard to understand
- 👉 Want more people to visit

↓

**■ Made new signs!**

- 👉 Contacted landowners
- 👉 Designed and built by hand
- 👉 Translated into English




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# 糸魚川ユネスコ世界ジオパーク

## ITOIGAWA UNESCO GLOBAL GEOPARK



### Results of Geopark Studies in Geopark Engagement

**【Age 13-15】 Make our own Geopark video! (2020)**

➡

**<Ages 13-14>**

- Study
- Planning

**<Age 15>**

- Interviews
- Videography
- Editing
- Judging






Showcased on Public TV

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## Results of Geopark Studies in Geopark Engagement

### 【Age 16-18】 More advanced GeoStudies!

SUSTAINABLE  
DEVELOPMENT  
GOALS



< Itoigawa High School >

- 2019 held a special Itoigawa × SDGs event



< Itoigawa Hakurei High School >

- Started "Hakurei Disaster Forum"
- Past two years have been held online
- 5 schools across Japan participated

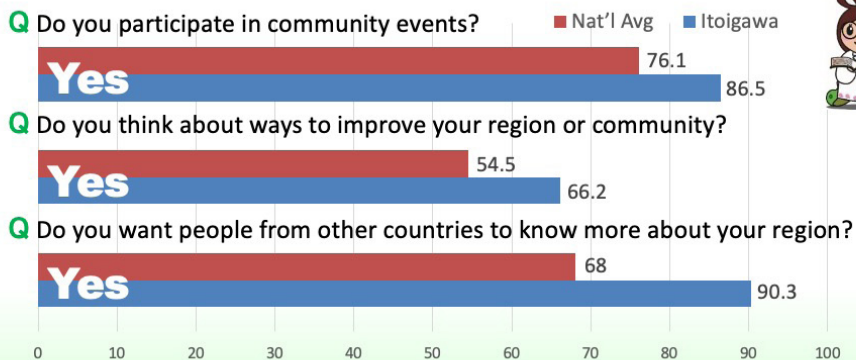
37

## Results of Geopark Studies in Child Development

### Interest in Local Community

※From a 2019 National Survey of 15 year olds

The result of over 10 years of  
Geopark Activity!



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unesco Global Geopark ITOIGAWA UNESCO GLOBAL GEOPARK SUSTAINABLE DEVELOPMENT GOALS

糸魚川ユネスコ世界ジオパーク

Connecting to Our Communities through Geopark Activities

# Meaningful Inclusion & Regular Communication through Established Networks for Active, Motivated Local Communities

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糸魚川ジオパーク 検索

**주제 1: 국제보호지역과 주민참여**  
**Theme 1: Involvement of Local Community**  
**in Internationally Designated Areas**

**사례 발표 2**  
**Case presentation 2**

---

**홍콩 세계지질공원**  
찬유 남

**Hong Kong UNESCO Global Geopark**  
China, Ms. Yu Nam Chan



## Involvement of Local Communities in Hong Kong UNESCO Global Geopark

Ms. CHAN Yu Nam  
Head of Hong Kong UNESCO Global Geopark (HKUGGp)

## Local Communities of HKUGGp



The map shows the geographical distribution of local communities within the HKUGGp. Callouts include:

- Ap Chau
- Lai Chi Wo
- Sam Mun Tsai
- Yim Tin Tsai
- Kat O
- Tung Ping Chau
- Sai Wan
- Kau Sai Village

## Local Communities of HKUGGp

- The glorious days of 1960s



Community	Population in 1960s	Population (now)
Kat O	>5,000	<30
Ap Chau	>1,000	<10
Lai Chi Wo	>1,000	<20
Kau Sai Village	>500	<10
So Lo Pun	>200	0
Mui Tsz Lam	>100	0
Kop Tong	>100	2

## Local Communities of HKUGGp

- Current State:
  - Abandoned, most villagers have moved out
  - Natural and Geological Heritages are well protected
  - Customs, culture and intangible heritages of the communities are being forgotten







## “Same Roots, Same Origins” Project – Achievements

2018:

- Ap Chau Story Room



2019:

- Ap Chau Book
- Kat O Story Room
- Kau Sai Village Story Room



2020:

- Kat O Book



2021:

- Siu Ying Story Room
- Kat O Heritage Trail
- Lai Chi Wo Story Room



## “Same Roots, Same Origins” Project – Sustainable Development of the Communities

### • Methods:

- Employing local villager as local guides and managers of visitor centres
- Training / Capacity building
- Visits between the communities

### • Benefits:

- Raise the villagers' pride and sense of belonging
- Letting the locals tell their own stories makes the stories more interesting





## Offering Help to the Local Communities

- HKUGGp offers help to the local communities in many ways as far as reasonable and practicable
- Help in the form of direct assistance or liaison with other government departments or organisations (the UNESCO label helps)
- Examples:
  - 1) after super typhoon
  - 2) other assistances on villagers' requests



## Involvement of NGOs

- Organise various education activities and promotion
- Assist capacity building for villagers
- Assist the development of sustainable tourism – trial tour package
- Association for Geoconservation, Hong Kong (AGHK) - In collaboration launched the Recommended Geopark Guide system



## Involvement of Sponsors

- Funding support, in particular for projects which require more flexibility
- Co-management of projects, offer technical advice



주제 1: 국제보호지역과 주민참여  
Theme 1: Involvement of Local Community  
in Internationally Designated Areas

사례 발표 3  
Case presentation 3

---

연천임진강 생물권보전지역  
한탄강 세계지질공원  
권미영

**Yeoncheon Imjin River Biosphere Reserve**  
**Hantangang UNESCO Global Geopark**  
Republic of Korea, Ms. Miyoung Kwon

# Involvement of Local Community in Internationally Designated Areas

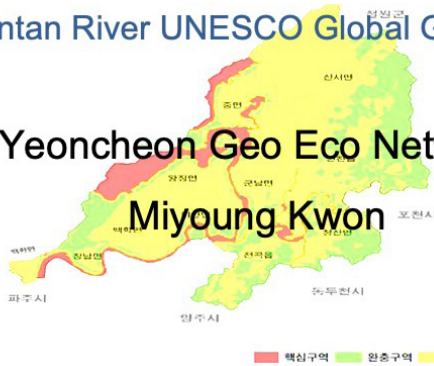


Yeoncheon Imjin River Biosphere Reserve

Hantan River UNESCO Global Geopark

Yeoncheon Geo Eco Network

Miyoung Kwon



Local food • 농촌체험 • 전통주  
**cafe 함연제**







## Yeoncheon Geo Eco Network

Website <http://www.yeoncheon.net/>

YouTube <https://youtu.be/UaDWfJLVO20>

Naver Blog [https://blog.naver.com/geo\\_rs](https://blog.naver.com/geo_rs)

Instagram [https://www.instagram.com/yeoncheon\\_geoeco](https://www.instagram.com/yeoncheon_geoeco)



## Yeoncheon Geo Eco Network





## Yeoncheon Geo Eco Network

### Members

1. Jiyeon Song: CEO of Davinci Craft Workshop, metal artist
2. Namgyu Park: Metal installation artist
3. Yongsu Park: CEO of Yeoncheon Brewery, Member of the DMZ Commission of the National Trust of Korea
4. Huisong Kim: Secretary General of the Yeoncheon-gun Socioeconomic Council
5. Sujin Lee: CEO of Today and Tomorrow Café, Hantangang River Geo Tour Guide
6. Ryang Chang: Wing Chun master, Custodian of Cultural Assets at the Cultural Heritage Administration, Member of the DMZ Commission of the National Trust of Korea
7. Suyeong Lee: Translator, Hantangang River Geo Tour Guide, Custodian of Cultural Assets at the Cultural Heritage Administration, Member of the DMZ Commission of the National Trust of Korea
8. Taeung park: Hantangang River Geo Tour Guide, Forest Tour Guide, Palace Tour Guide
9. Miyoung Kwon: CEO of Hyoyeonjae, Hantangang River Geo Tour Guide, Member of the DMZ Commission of the National Trust of Korea



## June 17, 2019, Preliminary Review

### for Accreditation of Hantangang River Geopark





### Yeoncheon Imjin River UNESCO Biosphere Reserve Seminar December 8-9, 2019



### Hantangang River Global Geopark Special Lecture November 17, 2020





## Seminar on the Sustainable Development of Hantangang River Geopark

January 21, 2020



## Seminar on the Sustainable Development of Hantangang River Geopark

January 21, 2020





### Seminar on the Sustainable Development of Hantangang River Geopark

January 21, 2020

#### \* Frog ladder installation



### Hantangang River Geopark Tour Guide On-the-Job Training

January 29, 2020





## Hantangang River Geopark Tour Guide On-the-Job Training

March 28, 2020



## Frog Ladder Installation & Monitoring

April 7, 2020

**\*Materials: coir mat, rope, stapler**







# Frog Ladder Installation & Monitoring

April 7, 2020

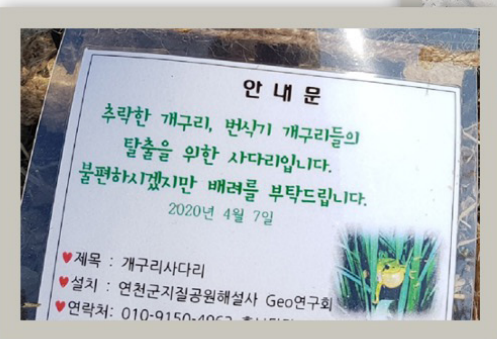
**\*Materials: coir mat, rope, stapler**



# Frog Ladder Installation & Monitoring

April 7, 2020

**\*Materials: coir mat, rope, stapler**



## Frog Ladder Installation & Monitoring

April 7, 2020

**\*Materials: coir mat, rope, stapler**





## Frog Ladder Monitoring

August 2021


**\*Frogs evacuating during an emergency**







**Frog Ladder Monitoring**  
 August 2021

**\*Frogs evacuating during an emergency**





**Seoul Frog (Endangered Species Level II)**  
**Exploration**  
 June 2020 (ongoing)



## Seoul Frog (Endangered Species Level II) Exploration

June 2020 (ongoing)



## Seoul Frog (Endangered Species Level II) Exploration

June 2020 (ongoing)







# Seoul Frog (Endangered Species Level II) Exploration

June 2020 (ongoing)



# Seoul Frog (Endangered Species Level II) Exploration

June 2020 (ongoing)





## Seoul Frog (Endangered Species Level II) Exploration

June 2020 (ongoing)



## Seoul Frog (Endangered Species Level II) Exploration



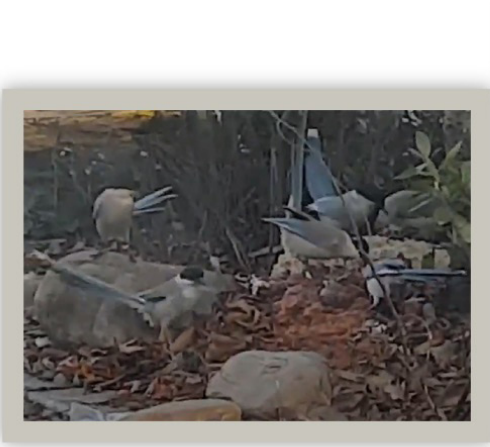




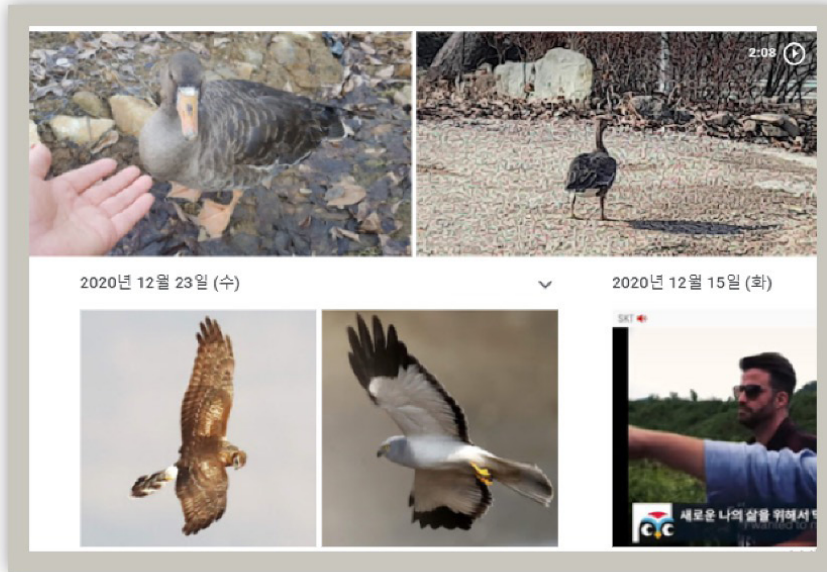
### Bird Exploration By 'Bird Korea's Yeoncheon branch June 2020



### Bird Exploration By 'Bird Korea's Yeoncheon branch June 7, 2020



## Bird Exploration By 'Bird Korea's Yeoncheon branch December 2020



## Finally! Designation of Hantangang UNESCO Global Geopark July 7, 2020






**Finally! Designation of Hantangang UNESCO Global Geopark**  
 July 7, 2020




**Seoul Waldorf School's Tour of the Geopark**  
 July 23, 2020



## Seoul Waldorf School's Tour of the Geopark

July 23, 2020



## Seoul Waldorf School's Tour of the Geopark

July 23, 2020







## Seoul Waldorf School's Tour of the Geopark July 23, 2020



## Cleaning Up Hantan River UNESCO Geopark

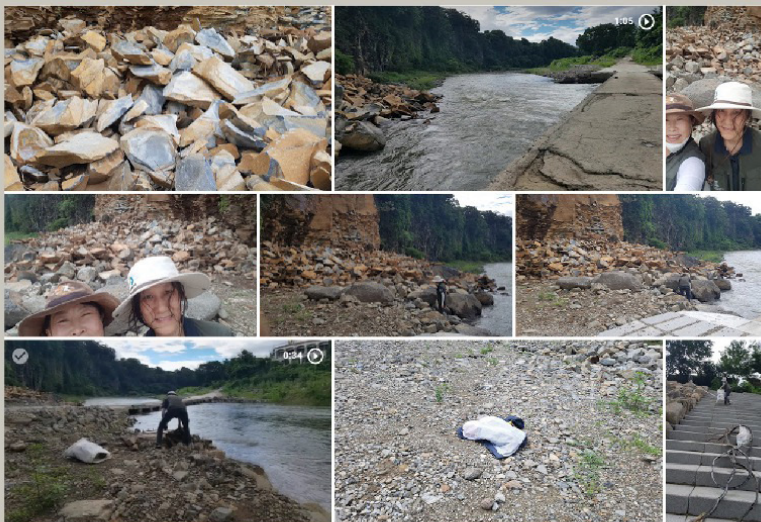




## Cleaning Up Hantan River UNESCO Geopark



## Cleaning Up Hantan River UNESCO Geopark

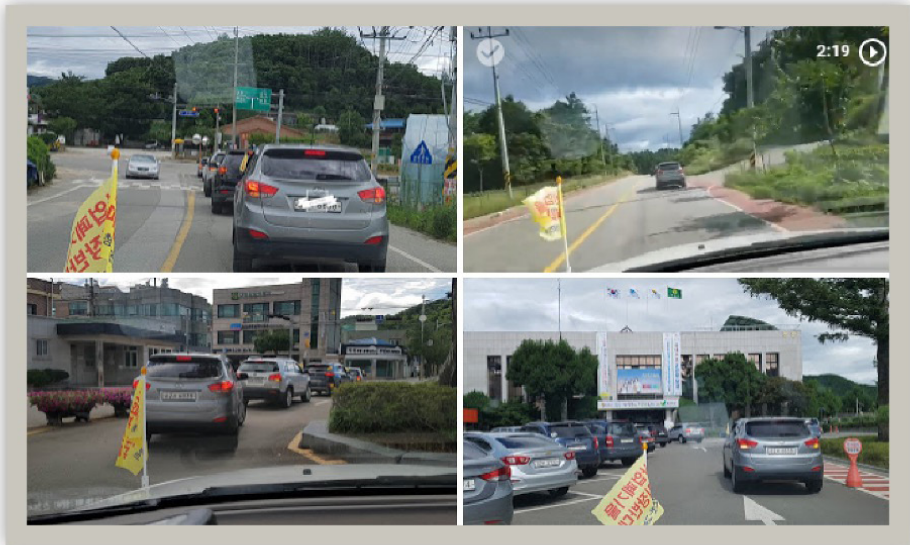




## Making Eco-friendly EM Soap



## Campaign Against Building Industrial Waste Landfills





## Promotional Video "Backpacking through Yeoncheon"



## Promotional Video "Backpacking through Yeoncheon"






**Geological Exploration of Dongmakgol Tuff**




**Biosphere Reserve Education  
– Returning Farmers and Rural Residents**



## Biosphere Reserve Education and Cleaning Up Imjin River



## Eco-pond for Protecting Biodiversity - Returning Farmers and Rural Residents







## Environmental Education on Biosphere Reserves

- Making EM Soap
- Returning Farmers and Rural Residents



## Geopark Tour

- Returning Farmers and Rural Residents





## Geological Exploration Along the Civilian Control Line (Jeokgeo-ri, Mageo-ri)



## Geological Exploration Along the Civilian Control Line (Jeokgeo-ri, Mageo-ri)





**Geological Exploration of Pillow Lava**

United Nations Educational, Scientific and Cultural Organization | UNESCO Global Geoparks | 한국강지질공원

0:23

This slide features a collage of eight photographs documenting a geological field study. The images show a wide, flat landscape covered in light-colored, rounded volcanic rocks (pillow lava) under a clear blue sky. Participants are seen in winter attire, some using tools to examine the rock formations. The surrounding environment includes sparse trees and hills in the distance.



**Simultaneous Monitoring of Winter Migratory Birds Along the River – 8<sup>th</sup> place**

Hosted by the Korea Network for River and Watershed

United Nations Educational, Scientific and Cultural Organization | UNESCO Global Geoparks | 한국강지질공원

This slide displays a collage of ten photographs from a bird monitoring activity. The images show a group of people walking along a paved path that runs parallel to a wide river. The landscape is open and flat, typical of a river valley. Participants are dressed in winter clothing, and some are holding equipment for bird observation. The background features distant hills and a clear sky.



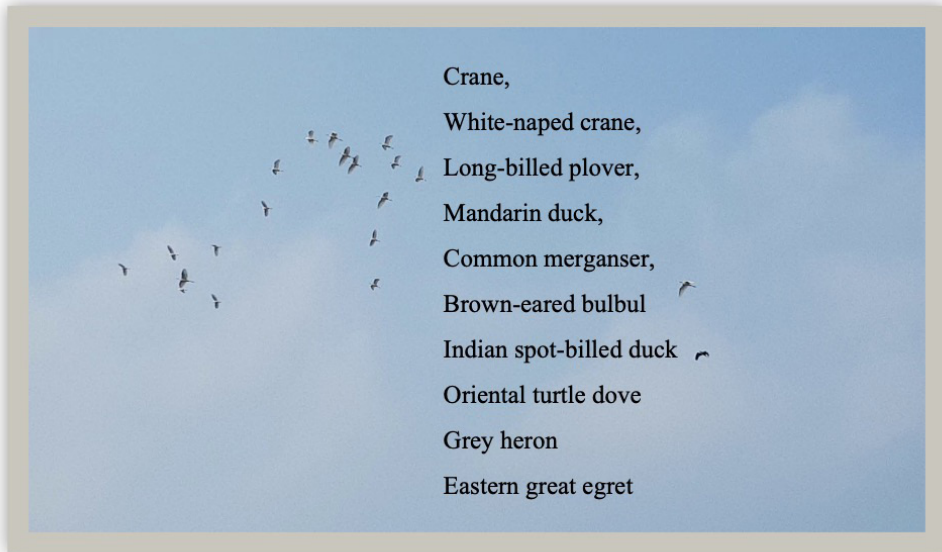


## Simultaneous Monitoring of Winter Migratory Birds Along the River – 8<sup>th</sup> place

(Prize – rubber boots)



## Simultaneous Monitoring of Winter Migratory Birds Along the River







## Winter Bird Feeding



## Citizen Heritage Adlay Planting Hosted by the National Trust of Korea



## Frog Ladder 2021

- \*Materials: honeysuckle pots, dayflower pots
- \* Monitoring result-difficult for frogs to grab onto and climb



## Frog Ladder 2021

### Frog Ladder Reinstalled Using Coir Mat







# Simultaneous Monitoring of Summer Migratory Birds Along the River

**Excellence Award (KRW 50,000, Starbucks coffee)**



# Simultaneous Monitoring of Summer Migratory Birds Along the River

**Excellence Award (KRW 50,000, Starbucks coffee)**





## Simultaneous Census of Summer Migratory Birds Along the River and Wetlands

**\*Birds species observed**

▶ 기본 정보 (조사자 메일 : niddler@hanmail.net)				
단체명	버드코리아 연천지회		단체 연락처	010-2736-1641(이수영 HP)
대표조사자	이수영	폰번호	010-2736-1641	
참여조사자	권미영, 박태웅, 송지연			
조사일	2021년 06월 26일(토)	조사시간	07시 00분 ~ 09시 15분	
하천명	연천군	옥계천	하천길이	7KM
조사구간	옥계2리 구간(지도 첨부)		조사구간 길이	왕복 2.1KM
하천의 특성	하천 폭	1M~2M	유하폭(수로폭)	3M~5M
	대락수심	30cm	결빙비율	0 %
▶ 조사 내용				
번호	발견종	확인방법	개체수	비고
1	Chinese sparrowhawk	육안	1	천연기념물323-2. 멸종위기 2급
2	Bull-headed shrike	육안	1	
3	Oriental dollarbird	육안/청음	5	
4	Common kingfisher	육안	1	낮은 위기 멸종위기 등급
5	Ruddy kingfisher	청음	2	
6	Crow	육안/청음	5	
7	Brown-eared bulbul	육안/청음	20	
8	Black-naped oriole	육안/청음	10	
9	Lesser cuckoo	청음	1	
10	Magpie	육안/청음	5	

## 2021 Simultaneous Monitoring of Summer Migratory Birds Along the River

**\*Birds species observed**

11	꿩	청음	2	
12	Oriental turtle dove	육안/청음	30	
13	Grey-headed woodpecker	육안	2	낮은 위기 멸종위기 등급
14	White-backed woodpecker	육안/청음	1	낮은 위기 멸종위기 등급
15	White wagtail	육안/청음	2	낮은 위기 멸종위기 등급
16	Grey heron	육안	3	기후변화지표종
17	Cormorant	육안	2	
18	Eastern great egret	육안/청음	10	기후변화지표종
19	Black-crowned night heron	육안	1	기후변화지표종
20	Long-tailed tit	육안	2	낮은 위기 멸종위기 등급
21	Grey-capped greenfinch	육안/청음	2	낮은 위기 멸종위기 등급
22	Daurian redstart	육안/청음	3	
23	두시빠라기	청음	5	



## 2021 Simultaneous Monitoring of Summer Migratory Birds Along the River

\*Birds species observed

27	Vinous-throated parrotbill	육안/청음	10	
28	Parus	육안/청음	10	기후변화지표종

29	Eurasian tree sparrow	육안/청음	50	
내용	<p>옥계천은 경기도 연천읍 상리에서 발원하여 군남면 선공리에서 임진강과 합류하는 지방하천이다. 하천 중·상류지역은 축산농가, 중류부에는 농경지가 분포한다. 조사구간 절반인 옥계천은 차량 통행이 많지 않은 차도와 관행논 사이에 위치했다. 나머지 절반은 옥계천 지류인 소하천이 야트막한 산골짜기로 이어지고, 주변에 친환경 논이 조금 있다. 가끔 아주 약한 비가 내렸고 기온은 19°C였다.</p>			

\* 결빙비율 : 전체 조사구역 중 결빙된 곳의 비율을 표기



## 2021 Simultaneous Monitoring of Summer Migratory Birds Along the River



## 2021 Simultaneous Monitoring of Summer Migratory Birds Along the River



지류 주변 경관: 38.120100, 127.044165      관찰 구간 끝부분: 38.120430, 127.043556

### ▶ 조류사진



종명:붉은배새매 위치:38.119512 127.044793

종명:큰오색딱따구리 위치:38.119105 127.040120

종명:중대백로 위치:38.119851 127.043314

종명:땃 위치:38.120600 127.045037

## Results of the Simultaneous Census of Summer Migratory Birds Along the River

**Excellence Award (KRW 50,000 Starbucks coffee)**

최우수팀	북부환경정의중랑천사람들	새사랑	고흥만새모임
	낙동강하구그린에코	중랑천환경센터	버드코리아 연천지회
우수팀	푸르내마을	홍제천생활화 경실처다	울산철새홍보관





## Yeoncheon Geo Eco Network's Plan for 2022

- **Red-crowned crane, winter migratory bird monitoring**
- **Adlay planting along red-crowned crane feeding grounds**
- **Participate in simultaneous monitoring of summer and winter migratory birds along the river**
- **Plant runner reed, silvergrass, bulrush seeds – preliminary survey of ecologically invasive alien plants along the river**
- **Create biosphere tour programs**

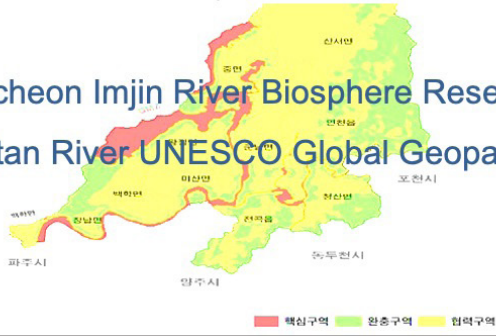


**The members of the Geo Eco Network are committed to the enduring success of biosphere reserves and global geoparks.**

# Thank You.....



Yeoncheon Imjin River Biosphere Reserve  
Hantan River UNESCO Global Geopark



주제 2: 국제보호지역의 커뮤니케이션 전략  
Theme 2: Communication Strategy  
of Internationally Designated Areas

기조강연  
Keynote speech

---

우경식

강원대학교 지질학과 명예교수  
(국제자연보전연맹 세계보호지역위원회(IUCN WCPA)  
지질유산전문가그룹 의장)

**Prof. Kyung-Sik Woo**

Emeritus Professor, Department of Geology,  
Kangwon National University  
(Chair, IUCN WCPA Geoheritage Specialist Group)



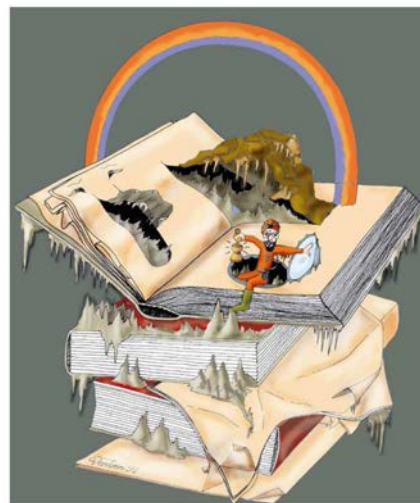
# Interactive interpretation strategy with visitors through geotourism

Dr. Kyung Sik Woo  
Dept. of Geology, Kangwon National University,  
Korea  
Chair, Geoheritage Specialist Group, IUCN  
WCPA

1

## Contents

- Geology and geoheritage
- UNESCO programs
- UNESCO global geopark and geotourism
- Interpretation panel
- Visitor center



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# Geology?



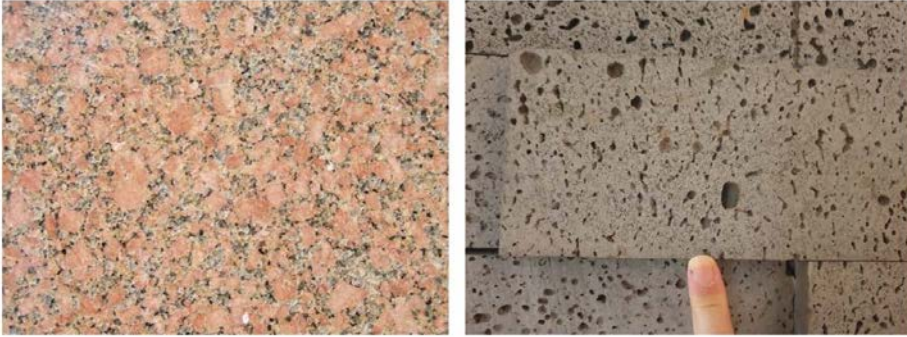
3

# Common sense



4

Very little is known  
to general public!



Granite vs. Basalt?

5

For Koreans.....



6



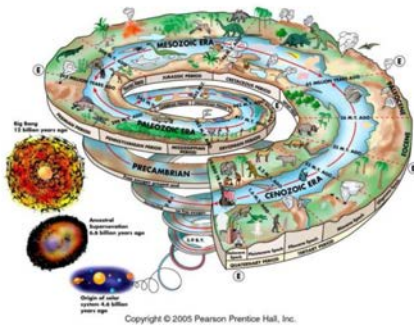
# Geology: The history of the Earth



7

# Geology and geomorphology

**Physical and historical geology**



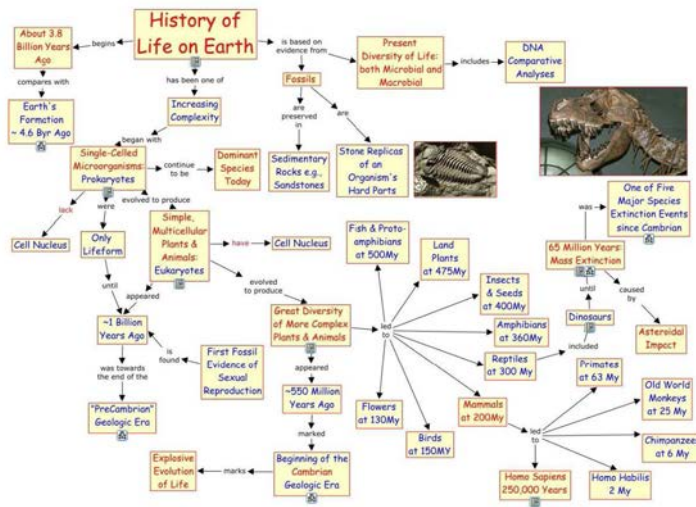
**Present landforms and landscapes and ongoing processes**



So many geological stories hidden during the past 46 billion years!

8

# Geology; Evolution of life forms!



# Geodiversity & Geoheritage

# Geodiversity

- Presence of different geological elements
- Not interconnected
- High potential education values
- **Not necessarily imply high conservation values**

Goolge

# Geoheritage

**Geoheritage** comprises the elements of the Earth's geodiversity that are considered to have **significant value** for intrinsic, scientific, educational, cultural, aesthetic and ecological reasons and therefore deserving conservation for **the benefit of future generations.**



# A large area



Gunung Mulu National Park, Borneo, Malaysia

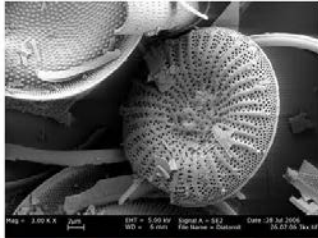
13

# Just a single boundary: K/T boundary!



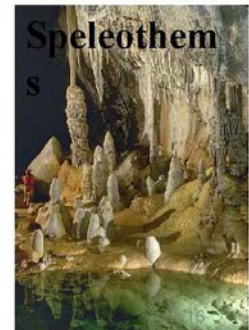
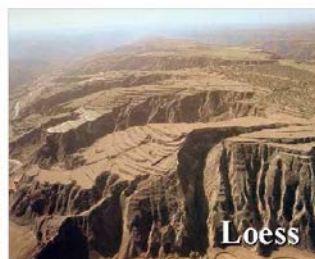
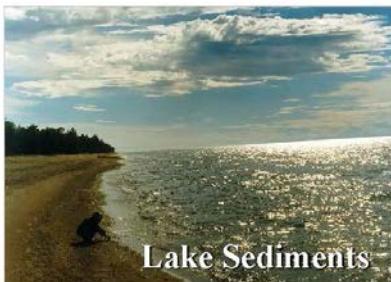
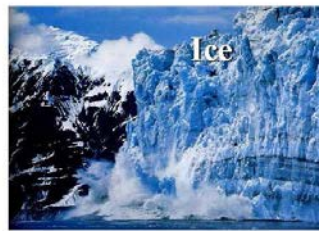
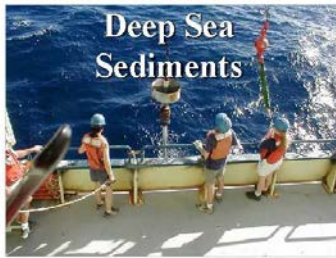
K-T boundary  
(Basque Coast Global Geopark (Basque Country)  
From Brilha

# Microfossil sites?

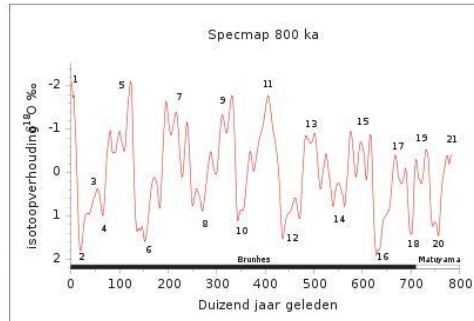


Cretaceous chalk in Europe

# Storage for climate changes in the past!



## Perfect MIS (Marine Isotope Stage) site?



Google

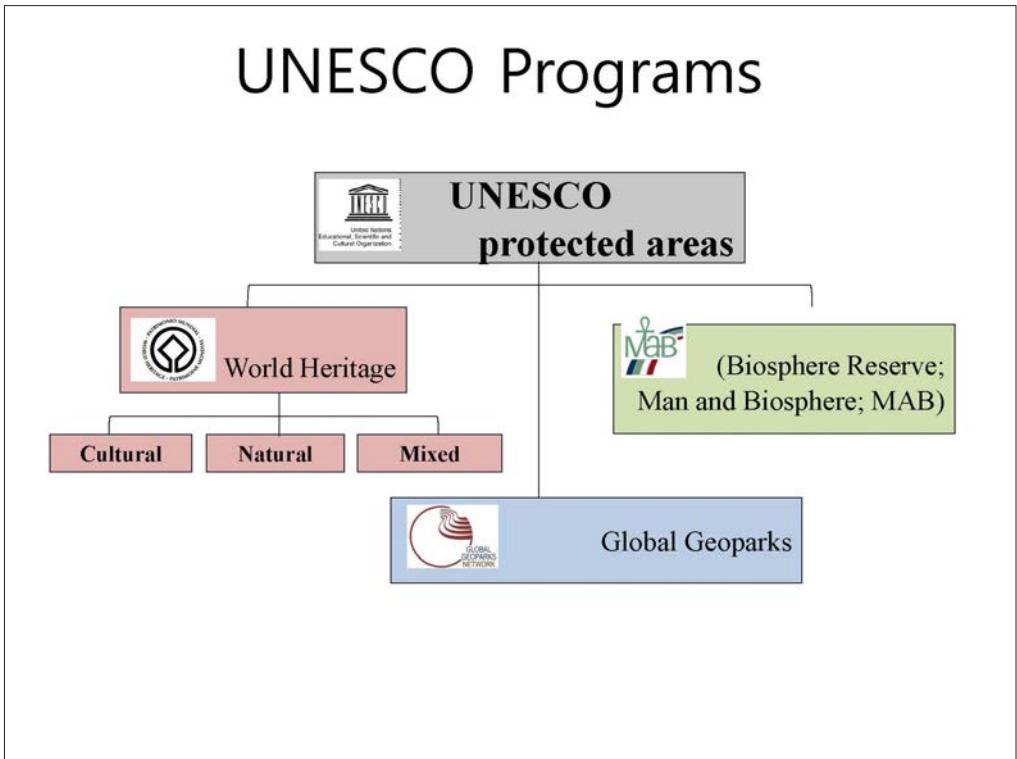
Records of glacial vs. interglacial periods

How do we protect  
significant geoheritage sites?



# Nature conservation programs and organizations

Most programs have focused mainly for biodiversity and globally threatened and endangered species.



# UNESCO programs geoheritage conservation



World Heritage



Global Geoparks

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## World Heritage Site

*Wow factor?*

- Outstanding Universal Value (OUV)
- The best of the best (or the representatives of the best)
- Integrity
- Secured management plan



*Scocjan Cave, Slovenia*

# UNESCO Global Geopark



This program is relatively very new (2015)!

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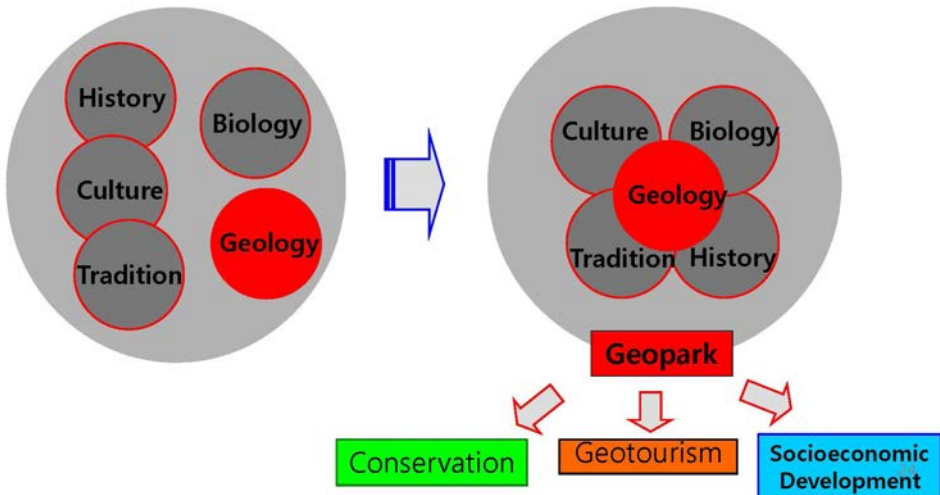
## Geopark concept

### Old concept

- Independent management
- Only for conservation

### New concept

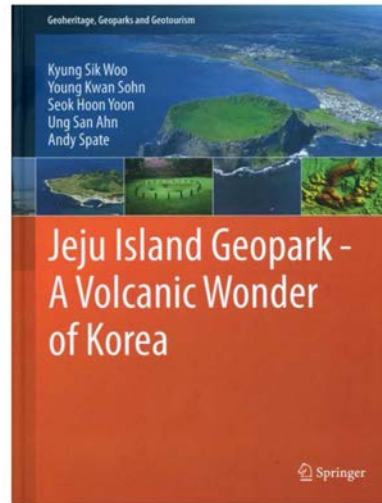
- Combined management
- No new measures for conservation





# Essential elements of UNESCO Global Geoparks

- Geosites of International Significance
- Protection of geosites (geoconservation)
- Regional socio-economic development
- Sustainable use of geosites in geopark throughout educational tourism (geotourism)



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## Geotourism

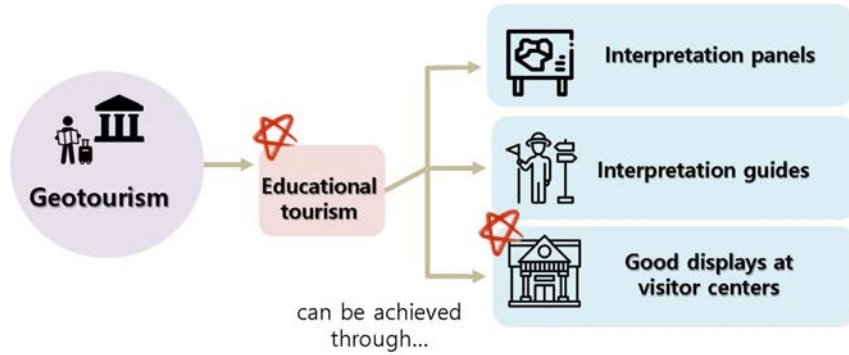
- Earth sciences (geology and geomorphology)
- Non-geological resources (archaeology, biology & ecology, history, culture, etc.)
- Educational tourism with 'edu-tainment (education + entertainment)'.



How can 'edu-tainment' be achieved?

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# Essential elements for geotourism



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# To promote geotourism...



Taishan, China

- Overcome mass tourism
- Make people curious!
- Make people interested!
- Make people understand!

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## Three types of tourism

- Guided tour
- Group tour
- Self-guided tour



- Different educational programs should be developed for each tour type.

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## Guided tour

- The most effective way for educational tourism
- Local residents can work as guides
- Make tourists to stay longer and overnight



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## Problems of guided tourism

- Sometimes educational tourism is not possible if there are too many tourists.
- Educational tourism may not be good enough if guides are not qualified.
- Constant training program for guides is necessary.



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## Group tour (or Mass tour)

- The most serious problem in some Asian countries
- In Korea a group of 300-400 students make an educational trip together for education.
- To minimize the number of students is needed for geotourism.
- For group tour, A/V information will be provided for bus.
- Education of teachers may be necessary for pre-tour education
- New type of guided system may be needed and need be considered.



# Self-guided tour

## Advantages

- Free selection of schedules and tour sites

## Disadvantages

- Difficult to achieve satisfactory education
- Mostly oriented to scenic tourist sites



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# What is 'Edu-tainment'?

- Means educate and entertain simultaneously
- It is commonly used in environmental education
- Mainly to introduce scientific issues to children



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# For Edutainment....

## What do they have to do ?

finding    discovering    testing    using the senses

measuring    weighting    touching    working

seeing    moving    cutting    drawing

listing    inventing    making    talking

35

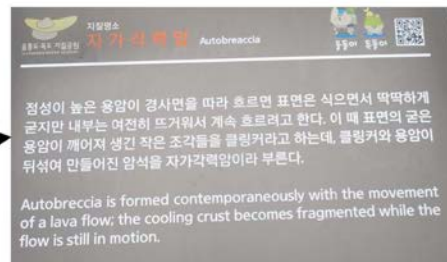




# General rules for interpretation panels

Do not show what you (stakeholders and specialists) intend to and want to show.....

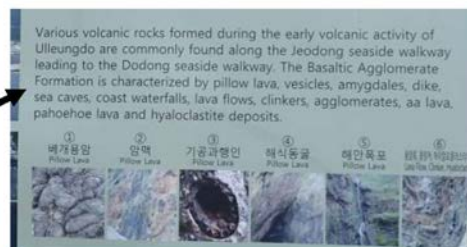
But only show what visitors want to know.



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# General rules for interpretation panels

- Is the information too much in a single panel?
- Too much amount of information in the form of the text or graphical design is probably one of the most problematic issues.
- This is definitely not a good and efficient way of delivering intended messages to tourists.



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# General rules for interpretation panels

- **The theory of KISS (Keep It Simple, Silly!)**



## Three seconds rule!

- Visitors will decide whether to read or not within 3 seconds.
- If they were not happy with the contents (too difficult, too complicated or too much) they would not read and go away.



# Who are the aimed target people to show?

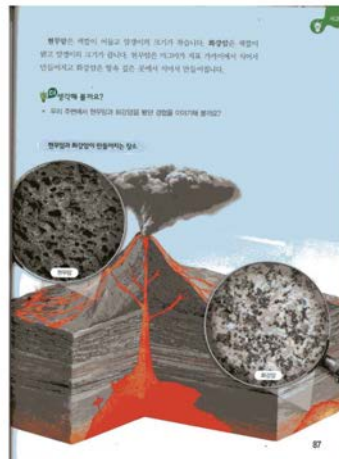
- Categories of visitors are vastly different and it is hardly possible to provide one interpretative product for everyone (Dowling, 2011).
- It is based on geoscience education level at elementary schools



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# Who are the targets to show?

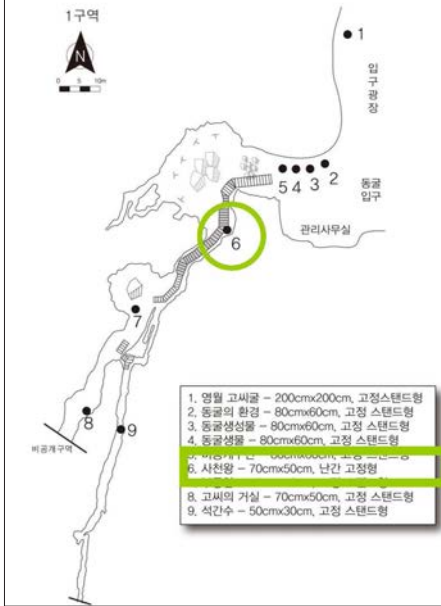
- In case for Korea the 4<sup>th</sup> grade students in elementary school are the good targets.
- You should not make the contents what you know, but should be written what should be learned considering the educational level of tourists.



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## Different levels of signboards for Koreans



### A. 국문문안 Elementary and Junior high students, and general public

주변을 둘러보자. 이곳을 제외한 주변의 벽면에는 아무 것도 없는데, 여기에만 예쁜 유석이 많이 자라고 있다. 그 이유는 무엇일까? 바로 이곳에만 벽면을 따라 물이 가끔 흘러내리기 때문이다. 동굴생성물은 물이 있는 곳에서만 자라며, 그 중에서 유석은 물이 흐르는 곳에서만 자란다. 뒷부분을 잘 살펴보면 과거에 물이 흘러나온 곳을 여러 곳 찾을 수 있다. 밖에 비가 많이 오면 이곳에서 물이 많이 나오면서 유석이 자란 것이다.

### B. 국문 High school and college students with separate handouts

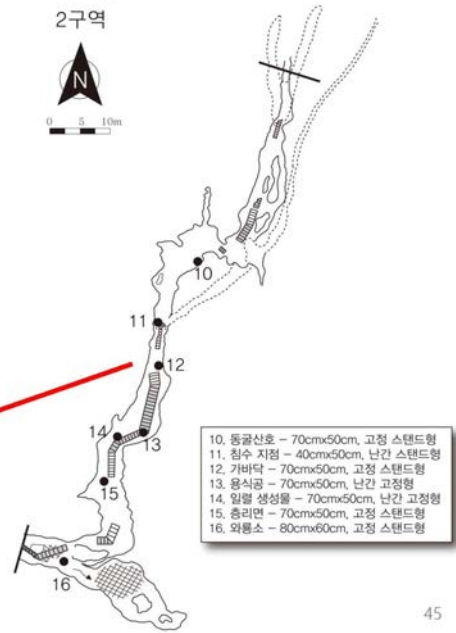
주변을 둘러보자. 이곳을 제외한 주변의 벽면에는 아무 것도 없는데, 여기에만 동굴생성물 중의 하나인 유석이 많이 자라고 있다. 그 이유는 무엇일까? 바로 이곳에만 벽면을 따라 물이 가끔 흘러내리기 때문이다. 동굴생성물은 물이 공급되는 곳에서만 자라며, 그 중에서 유석은 물이 빠르게 흐르는 바닥이나 벽면에서만 자란다. 물이 흘러내리면서 물속의 이산화탄소가 빠져나가면 흐르는 물이 탄산칼슘으로 이루어진 방해석이라는 광물에 대해 포화상태에 이르기 때문이다. 벽면의 뒷부분을 잘 살펴보면 과거에 물이 흘러나온 곳을 여러 곳 찾을 수 있다. 밖에 비가 많이 오면 이곳에서 물이 많이 나오면서 유석이 자란 것이다.

## Serious planning: An example of the Gossi Cave



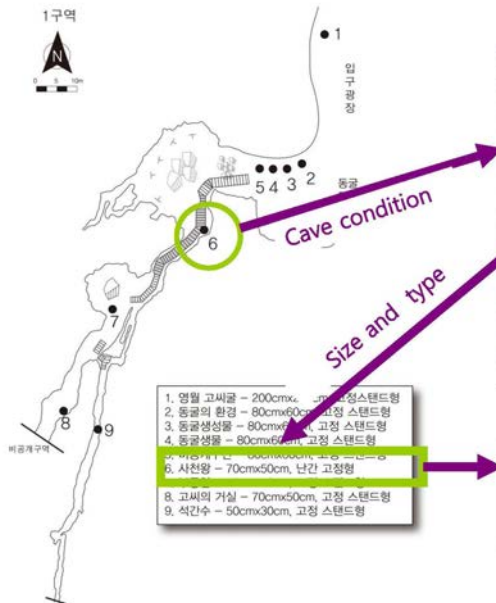
# Selection of points

- Selection of the most effective points for education considering dark and dangerous cave environments



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# Serious Consideration.....



Cave condition

Size and type

- Consider the level of interpretation!
- Difficult pathway!

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# Traditional bad signboards in most showcaves in Korea



# Different colors of speleothems



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설명표지판 - 07 (70cm X 50cm)

## 여기서 자라는 유석은 왜 색이 여러가지 일까 ?

Why do we see many different speleothem colors?

• • •



여기에는 왜 유석이 자라고 있을까?

여기에 유석이 자라는 것은 천장으로부터 이곳에 물이 떨어지고 있기 때문이다.

그런데 유석이 아주 여러 가지 색을 보인다. 자세히 보면 한 가지 색을 띠는 유석이 다른 색의 유석에 의해 덮여 있다.

이는 이 유석들이 서로 다른 때에 자랐다는 것을 알려준다. 즉, 먼저 자란 유석을 새로운 유석이 다시 덮으면서 만들어진 것이다.

이렇게 동굴생성물은 계속 자라기도 하지만 자라다가 멈춘 후에 다시 자라기도 한다.

☞ 물이 떨어지면 물이 내리오는 곳

☞ 1~2~3 유석의 유석이 덮이면서 성장



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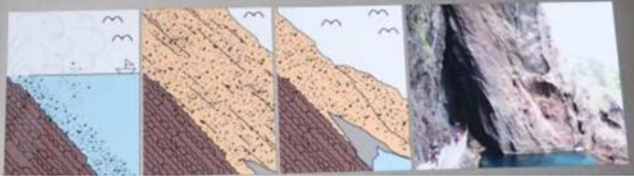
# Contents for interpretation panels

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## Contents: Are the contents too difficult?

- Information may be provided in a language which is too specialized to attract the attention of a casual visitor. Also extensive discussion of features not seen from the spot should be avoided (Migoñ, 2018).

Hyaloclastite, a hydrated tuff-like breccia rich in black volcanic glass formed during volcanic eruptions under water, reacted with hot vapor to form yellow palagonite. Since hyaloclastite deposits are much more susceptible to erosion by differential erosion.



51

## Contents: Are there enough photos or illustrations in the panel?

- Visitors must easily relate the content of the panel to the features the panel displays. Thus, simplified drawings for interpretation contents of the objects can be very useful. Other additional photos for references can be also helpful.



52

# Contents: Are there enough photos or illustrations in the panel?

- Visitors must easily relate the content of the panel to the features the panel displays. Thus, simplified drawings for interpretation contents of the objects can be very useful. **Other additional photos for references can be also helpful.**

Growth laminae in stalagmites



석순 속에는 왜 나이테 같은 것이 있지 ?  
What are these lines in these stalagmites?

• • •

석순을 잘라보면 둥근 선들이 많이 보인다. 이런 선들은 마치 나무를 잘른 면에서 볼 수 있는 나이테와 비슷하다. 이렇게 나무의 나이테처럼 보이는 둥그런 선을 성장선이라 부른다. 성장선은 석순이 자라다가 잠시 자라는 것이 멈추거나 석순을 자라게 할 수 있는 다른 성분이 포함될 때 만들어진다.

그러나 나무의 나이테처럼 1년에 한 줄씩 규칙적으로 생기는 것은 아니다. 이러한 성장선과 성장선 사이에 포함될 성분을 조사하면 과거 석순이 자라던 시기의 바람에서 일어나 기후변화를 알 수 있다.

33

# Contents: Are the contents educational?

- In most tour sites in Asia information is restricted to naming things based on their shapes only, rather than interpreting them.





## Contents: Can visitors recognize and pinpoint the site to be shown?



- In many sites the location of the target objects explained in the panel is not always clear.
- If necessary, it is better to include the photos of the objects with arrows for tourists to recognize the target objects more easily. Sometimes it is necessary to put any marks on the surface of the target objects as well.

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## Contents: Can visitors recognize and pinpoint the site to be shown?

설명표지판 - 10 (70cm X 50cm)




- In many sites the location of the target objects explained in the panel is not always clear.
- If necessary, it is better to include the photos of the objects with arrows for tourists to recognize the target objects more easily. Sometimes it is necessary to put any marks on the surface of the target objects as well.


56

# Contents: Can visitors recognize and pinpoint the site to be shown?

**왜 석순과 유석의 색이 다 다를까?**  
Why are there different colors of stalactites and stalagmites?



여기에 석순 유석과 유석은 갈색, 흰색 등 여러 가지 색을 보여준다.  
같은 동굴일 뿐이지라도 색이 아주 다르며 그 원인이 완전히 다를 것이다라고 생각할 수 있지만 사실은 그렇지 않다.  
여기에 있는 석순과 유석은 모두 거의 100% 탄산칼슘으로 이루어져 있다. 동굴생성물 속에 다른 물질의 조공만 유색도 동굴생성물의 색이 완전히 달라진다.  
이곳은 약간의 물만으로도 완벽한 습도를 유지 가지게끔 설계할 수 있는 구조를 갖추고 있다. 이렇게 제습을 유지하게 하는 성분은 동굴 벽 지표에 붙어있는 흙에서 오는 경우가 대부분이다.



**들에서 왜 물이 나올까?**  
Why does water come out from stone?



이 통로는 자연적으로 땅속에 만들어진 동굴이 아니고 사람들이 땅속을 보여주기 위해 판 것이다. 그런데도 자연동굴 속에서 발견되는 동굴생성물이 자란다.  
그 이유는 동굴 바깥에 비가 많이 오면 암석의 틈으로 빗물이 새어 나오기 때문이다.  
이곳에서 자라는 유석의 성분은 자연동굴에서 자라는 것과 같다.

☞ 물이 흘러 나오는 곳



**왜 여기에만 유석이 있을까?**

주변을 둘러보자.  
이곳을 제외한 주변의 벽면에는 아무 것도 없는데, 여기에만 예쁜 유석이 많이 자라고 있다.  
그 이유는 무엇일까?  
바로 이곳에만 벽면을 따라 물이 가끔 흘러내리기 때문이다. 동굴생성물은 물이 있는 곳에서만 자라며, 그 중에서 유석은 물이 흐르는 곳에서만 자란다.  
일부만을 잘 살펴보면 여기에 물이 흘러나온 곳을 여러 곳 찾을 수 있다. 특히 여기 많이 보면 이곳에서 물이 많이 나오면서 유석이 자란 것이다.



☞ 물이 흘러 내리는 곳



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# Contents: How many languages are shown?



- **Monitoring of international visitors** needs to be carried out before decision of the number of languages to be written.

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## Location of interpretation panels



(Sobrarbe Global Geopark, Spain)

From Jose Brilha

## Location and management



If you would like to show a target object, do not hide the object through erection of the panels. Always show the target and the interpretation panel at the same time.

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# Location and management



Always show the target and the interpretation panel at the same time.

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# Location and management

If you would like to explain any specific object, it is better not only to include the photo with the object in the panel but also to indicate the objective target in situ if possible and necessary.



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# Jumok – A wrong sign!



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## Location and management

In most places inclined panels can be more user-friendly and the contents can be read more easily while looking the sites to be explained. However, it is better to use upright panels at the entrance of the area for introduction.



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# Location and management

In most places inclined panels can be more user-friendly and the contents can be read more easily while looking the sites to be explained. **However, it is better to use upright panels at the entrance of the area for introduction.**



UNESCO Cheongsong Global Geopark, Korea



Burgess Shale, WH Site, Canada

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# Location and management

- For maintenance it is better to print the contents on a film material and paste onto permanent infrastructure.
- The best material would be stainless steel for prevent rust but it may be too costly.



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# Philosophy of signboards in caves

설명표지판 - 06 (70cm X 50cm)



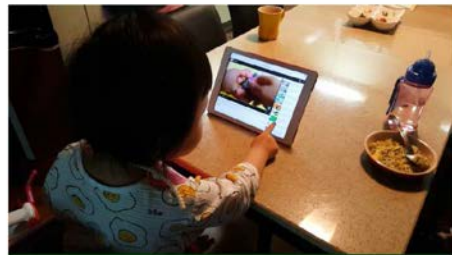
Make tourists curious! and fun to read

Make simple and easy understanding  
with photos and/or illustrations

Easy to see the target object

Friendly design & easy management

## More for signboards? - needs Wifi in caves...

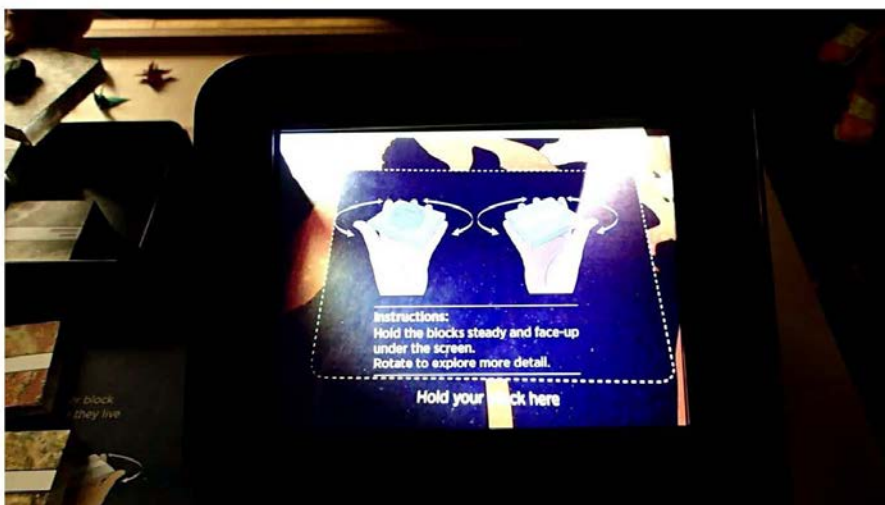


## More for signboards? - QR codes



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## Augmented reality!



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# Virtual Reality



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# Summary

- Educational tourism cannot be achieved by engineering-like system.
- It can be only achieved by thorough planning and consideration as well as proper attitudes of scientists and government people.



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**Thank you!**



UNESCO Cheongsong Global Geopark

주제 2: 국제보호지역의 커뮤니케이션 전략  
**Theme 2: Communication Strategy  
of Internationally Designated Areas**

**사례 발표 1**  
**Case presentation 1**

---

스위스 엔틀레부흐 생물권보전지역  
슈미트 호퍼 아네트

**Entlebuch Biosphere Reserve**  
Switzerland, Dr. Annette Schmid Hofer



## CONTENT



- Background information  
 region Entlebuch | UNESCO Biosphere Entlebuch
- Communication strategies: Examples  
 regional products | sustainable tourism | cultural events
- Conclusions  
 similarities | impacts










## REGION ENTLEBUCH

- 7 municipalities
- 17.000 inhabitants
- covering 394 km<sup>2</sup>
- a typical rural region:
  - 850 farms,
  - 100 music clubs,
  - 100 protected peatlands,
  - 4 mire landscapes

Genf, Bern, Basel, Luzern, Zürich

Biosphäre Entlebuch

LUZERN INCUBATEUR

UNESCO BIOSPHÄRE ENTLEBUCH LUZERN SCHWEIZ

## BIOSPHERE RESERVE



### ■ Zonation:

8 % core area, 42% buffer zone,  
50% transition area

### ■ Representativeness:

peatland and carst landscape

### ■ Organisation:

association of municipalities

### ■ Management:

13 persons



## COMMUNI- CATION STRATEGIES



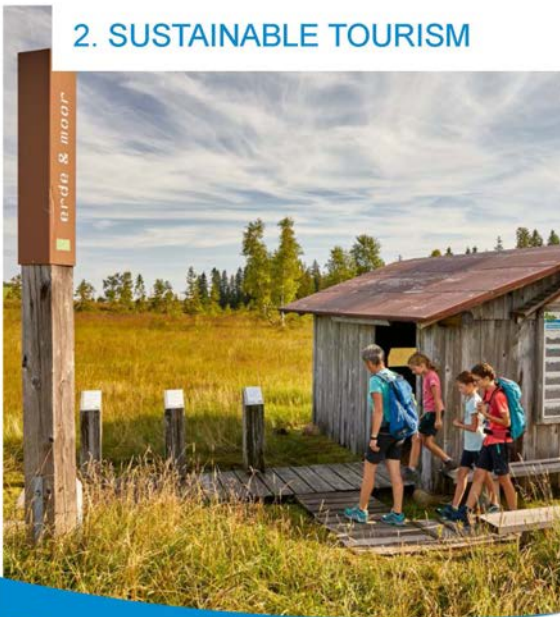
## 1. REGIONAL PRODUCTS



- **Products:** 538 “Echt-Entlebuch” Products
- **Labelling:** “Echt Entlebuch” “Truly Entlebuch”
- **Promotion / Distribution:** Biosphäre Markt AG



## 2. SUSTAINABLE TOURISM



- **Discovery hubs** with sustainable tourism offers
- **Marketingpool:** Joint tourism marketing team





## COMMUNICATION TOOLS

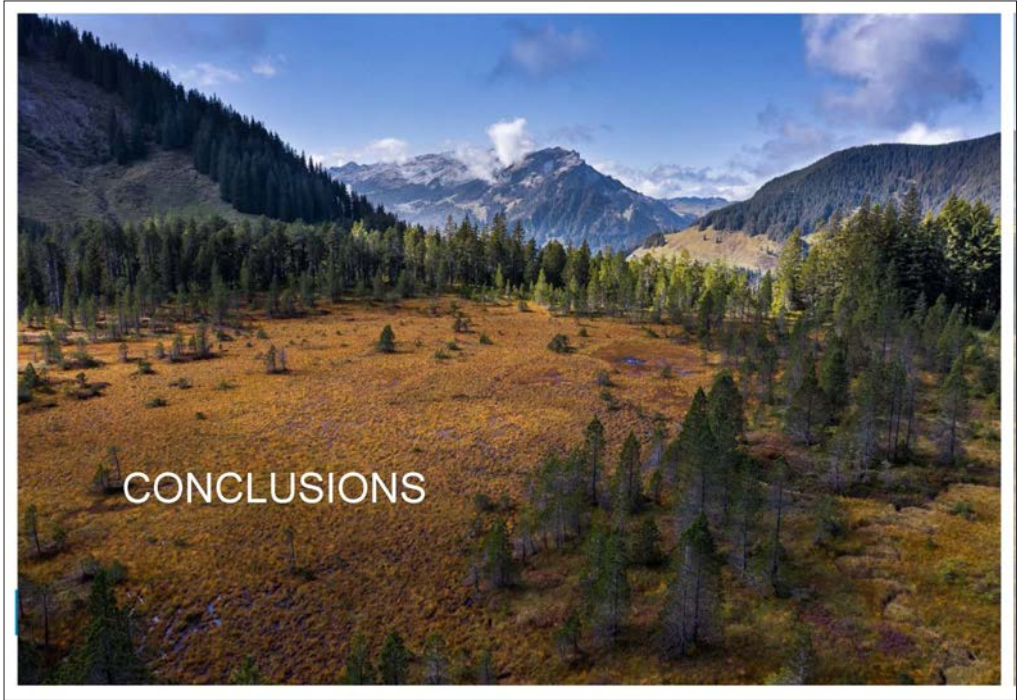


## 3. CULTURAL EVENTS



- **Alpabfahrt:** annual ceremonial Alpine cattle descent
- Combination of the strategies: culture, tourism, regional products





## AMBASSAROS: POSTER CAMPAIGN



«Ich be Biosphäre –  
Botschafter vo  
de schönschte Region!»

Ein Segen für alle.

UNESCO BIOSPHÄRE  
**ENTLEBUCH**  
LUZERN SCHWEIZ

LUZERN  
UNESCO BIOSPHÄRE

UNESCO BIOSPHÄRE  
**ENTLEBUCH**  
LUZERN SCHWEIZ

## PARTNERSHIPS




**Entlebucher Sommergenuss**

**Ein Leuchtturm mit grosser Strahlkraft**

Seit über zehn Jahren kooperiert Coop mit der UNESCO Biosphäre Entlebuch. Bei der erfolgreichen Zusammenarbeit dreht sich fast alles um Nachhaltigkeit und Genuss.








TEXT: DEAN FÜSS, FOTOS: NICOLAS ZWIERS

<p>2.45</p>  <p>100 Biofleisch Biofleisch - Wildschwein, 100 g (100 g = 1.000)</p>	<p>3.80</p>  <p>1 Biofleisch Biofleisch - Bio-Schinken, 100 g (100 g = 1.000)</p>	<p>3.95</p>  <p>1 Biofleisch Biofleisch - Bio-Schinken, 100 g (100 g = 1.000)</p>
<p>6.95</p>  <p>1 Biofleisch Biofleisch - Bio-Schinken, 100 g (100 g = 1.000)</p>	<p>5.60</p>  <p>1 Biofleisch Biofleisch - Bio-Schinken, 100 g (100 g = 1.000)</p>	<p>17.90</p>  <p>1 Biofleisch Biofleisch - Bio-Schinken, 100 g (100 g = 1.000)</p>

UNESCO BIOSPHÄRE  
**ENTLEBUCH**  
LUZERN SCHWEIZ



BRAND MANAGEMENT

IMPACT: ADDED VALUE



**Tourism**

- gross added value through BR related tourists: CHF 5.2 Mio (16% of all tourists visit the Entlebuch region because of the BR)
- jobs: 64

**Farming and Forestry**

- gross added value induced through labelled products (Echt Entlebuch): CHF 5.8 Mio.
- jobs: 70




## CLOSING WORDS



“The UNESCO Biosphere Reserve is the guarantee, that our lovely valley exists also in the future - in 50 years, in 500 years and in 500,000 years.”

주제 2: 국제보호지역의 커뮤니케이션 전략  
Theme 2: Communication Strategy  
of Internationally Designated Areas

사례 발표 2  
Case presentation 2

---

스페인 바스크해안 세계지질공원  
힐라리오 에이셔

**Basque Coast UNESCO Global Geopark**  
Spain, Dr. Asier Hilario



# BASQUE COAST UNESCO GLOBAL GEOPARK

Communication strategy  
in a UNESCO designated territory



- 1) we are tourist **destination**
- 2) we are an **Innovative** destination
- 3) We are an innovative and **sustainable** destination







**Territories that make us  
understand and connect  
With our planet Earth**

## **GEOTOURISM**

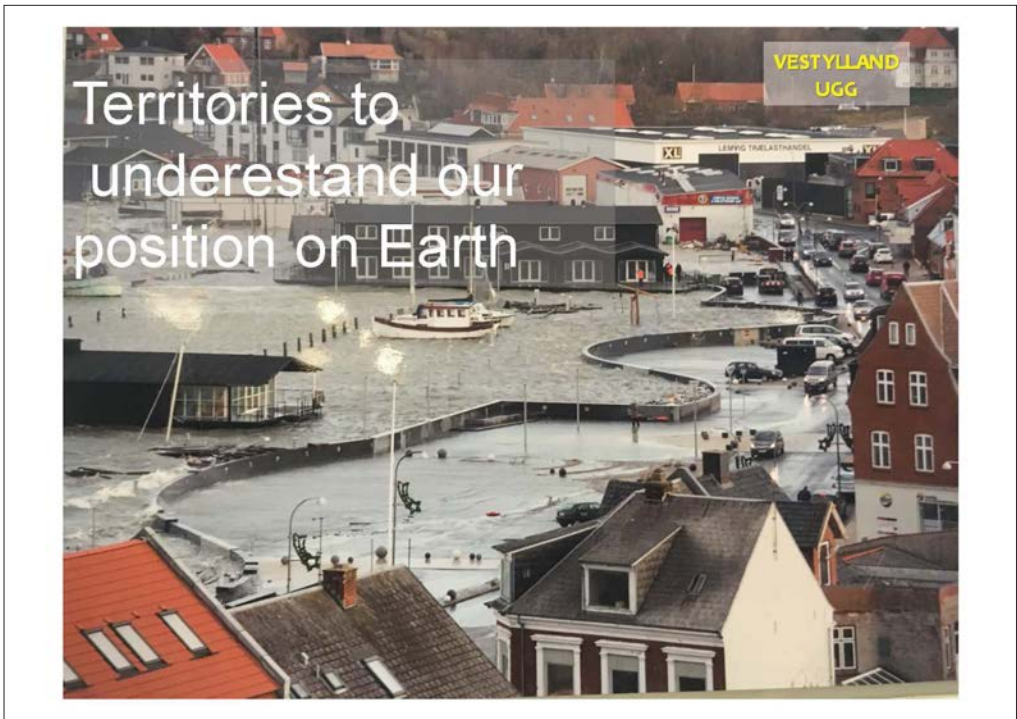
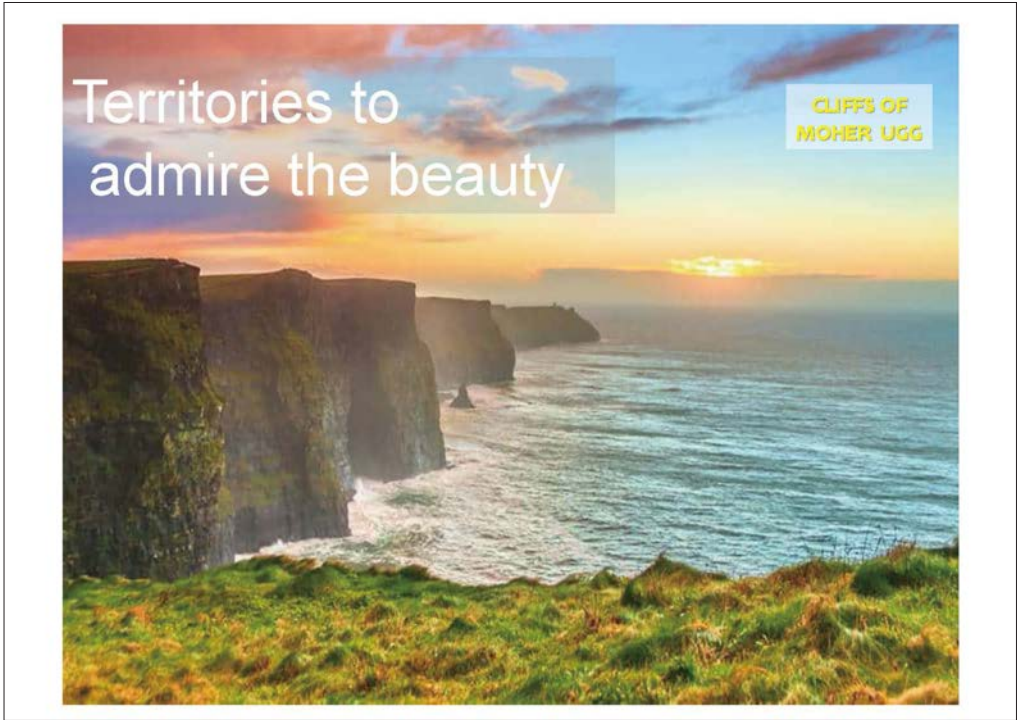
**WHAT MAKE US DIFFERENT**



**Territories to  
explore**

**KATLA UGG**

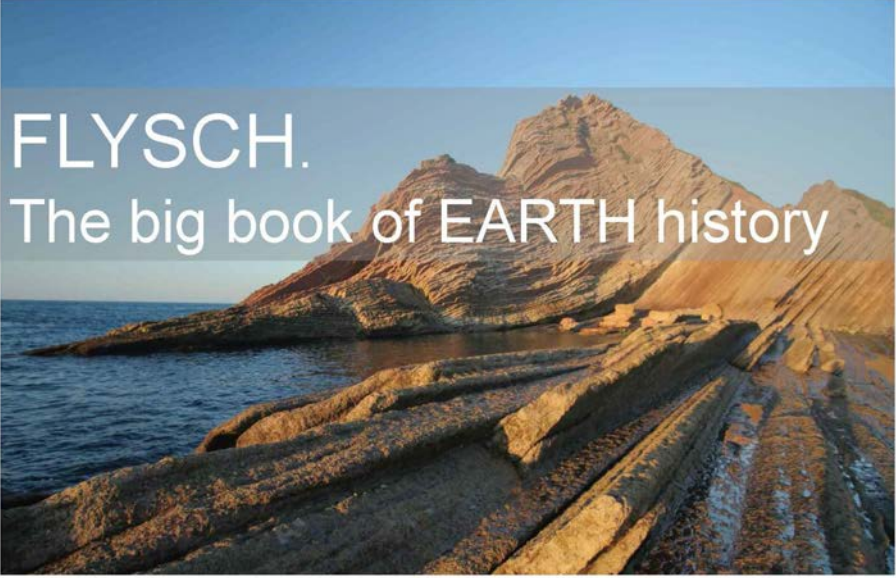






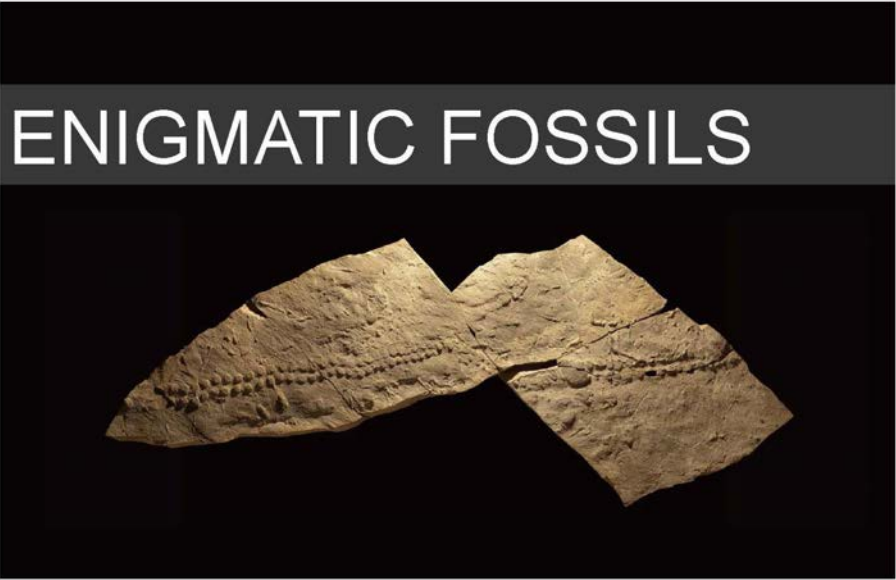
# 1.GEO-Resources

You need to know what makes you different



**FLYSCH.**  
The big book of EARTH history

Deep time / big mass extinctions / climatic evolution of the Earth



**ENIGMATIC FOSSILS**

Evolution of life in the deep sea



# EROSION

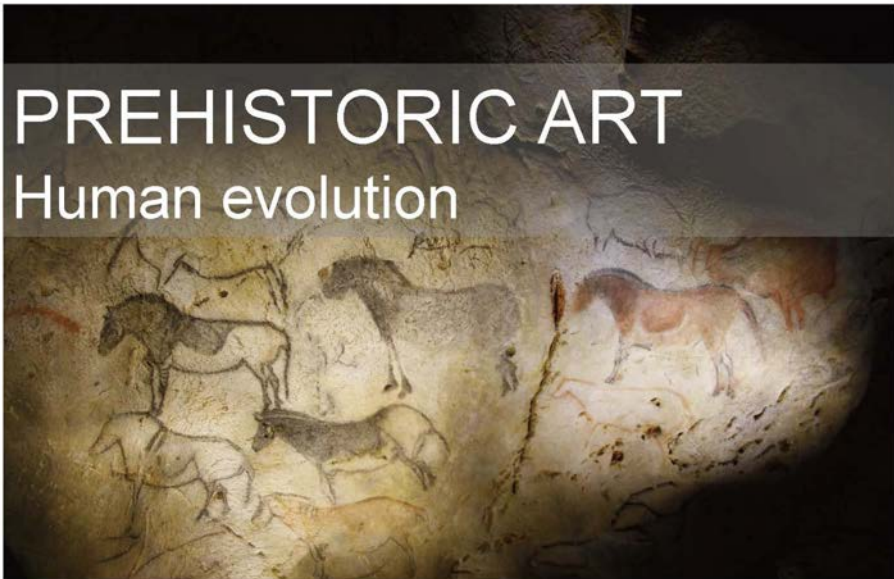
## Huge sea-cliffs



Sea level variations / changing landscape

# PREHISTORIC ART

## Human evolution



Human evolution / ¿Where do we come from?



CULTURE  
TRADITION  
IDENTITY

We are proud of who we are

## 2. COMMUNICATION

The key of our identity

## Pay attention to your visitors. How are they?

Education

- **Captive public**

- Schools, universities, teachers..... They are obliged to do this.
- The list of subject is already fixed. Formal education.



Dissemination

- **Non captive public** . Adults using their free time.

- **Type A:** General public with no specific interest about earth sciences. Not prepared to make any intellectual effort.
- **Type B:** General public with knowledge and interest or thematically related professionals. Prepared to make an intellectual effort.
- **Type C:** Scientist



**Specific materials!!**

## Infrastructures

1. Museums and info points
2. The route of the viewpoints by car
3. Geo- trails on foot







## Guided tours program



14 different tours

1.300 guided tours / year

For individuals and small groups

A fixed calendar

Online booking

## GEO-SCHOOLS. 15.000 school-children



### 3. Promotion and marketing

¿How can I sell my tourist destination?

#### Mass media

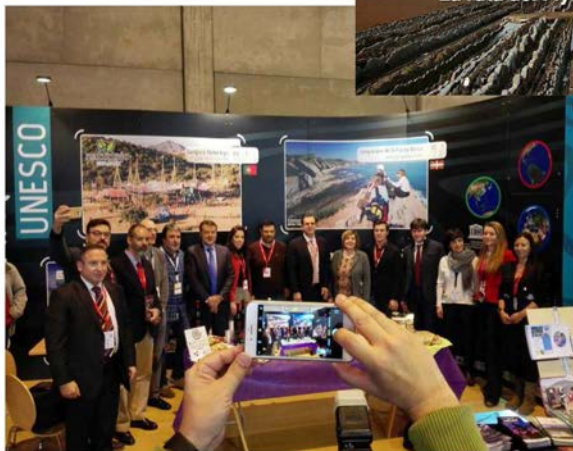




www.geoparkea.com



Collective promotion



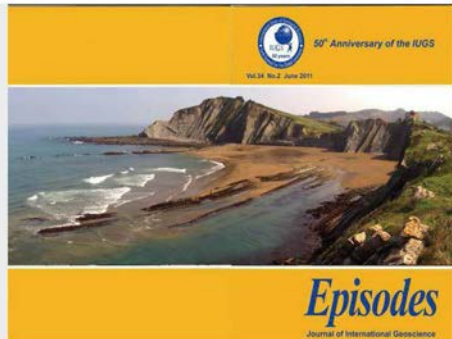
Tour operators

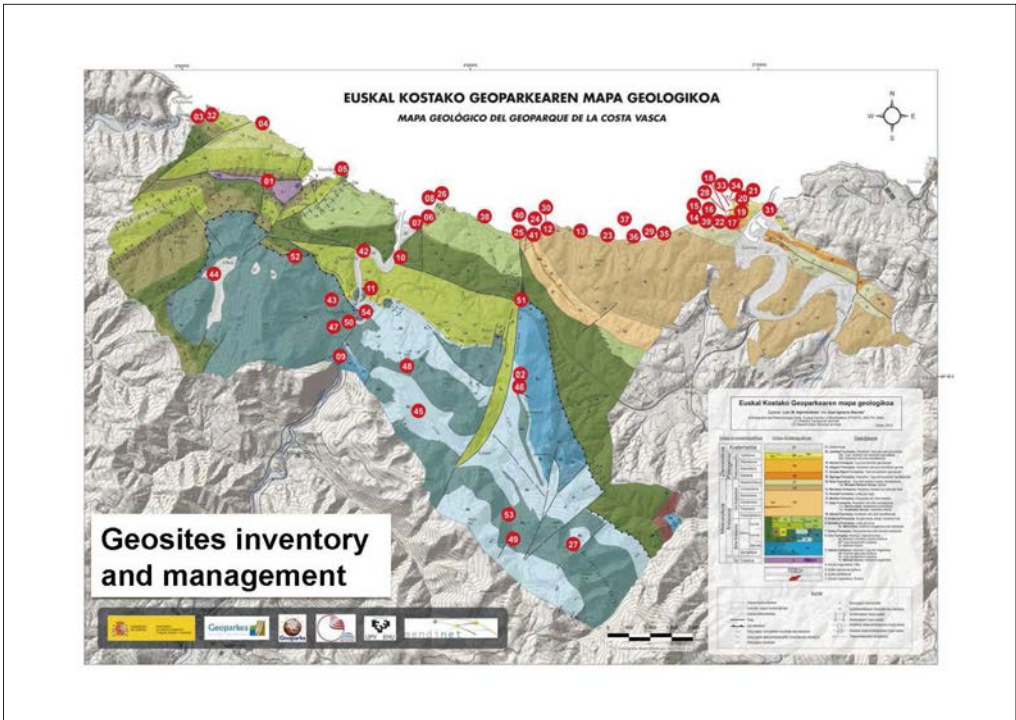


## The work behind

All the things that the visitor can not see

### Research









Thank you

Dr. Asier Hilario Orús  
Scientific director / [flysch@gipuzkoa.eus](mailto:flysch@gipuzkoa.eus)



주제 2: 국제보호지역의 커뮤니케이션 전략  
Theme 2: Communication Strategy  
of Internationally Designated Areas

사례 발표 3  
Case presentation 3

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청송 세계지질공원  
주성옥

**Cheongsong UNESCO Global Geopark**  
Republic of Korea, Ms. Seongok Ju





## Contents

- 01 Cheongsong UNESCO Global Geopark
- 02 Operative Goals
- 03 Geoeducation
- 04 Geotourism
- 05 Online Programs
- 06 Benefits of Designation



3

The basic concepts of UGGp

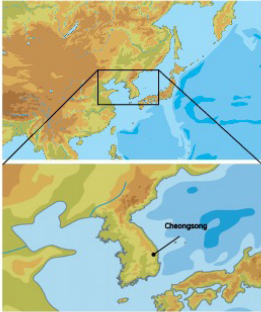
**Purpose of UNESCO Global Geoparks**

UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of **protection, education and sustainable development.**


### 01 Cheongsong UNESCO Global Geopark

4


Location of Cheongsong UGGp



Central eastern area of Republic of Korea



- **Initial designation: 2017**
- **Area : 845.71km<sup>2</sup>**
- **Geosites: 24**







*Sinseong Valley*  
**Sinseong Valley**

*Juwangsang Mountain*  
**Juwangsang Mountain**

**SEDIMENTARY ROCK**

Records of Earth's history

**TUFF**

Result of volcanic eruptions during the Mesozoic period






02 Operative Goals Address local challenges 7

### 1. To mitigate rural extinction through sustainable usage of tourism resources

Cheongsong-gun, 6th highest in the local extinction risk index among 228 municipalities




- Improve the local economy with education and tourism programs backed by the UNESCO brand
- Provide education programs for local residents
  - instill a sense of pride in Cheongsong-gun to prevent out-migration

- Low birthrate, population aging
- Rural out-migration

02 Operative Goals Address universal challenges faced by humanity 8


### 2. To take the initiative for climate action

Cheongsong is directly and indirectly affected by global warming brought about by human activities



Cheongsong Geopark SNS

▶ local products in the context of climate change



▶ Fossil sites exposed by superstorms caused by global warming

Provide visitors with information and education about climate change ▶ raising awareness of climate change



### 03 Geoeducation

Collaboration with organizations

10



#### Partners

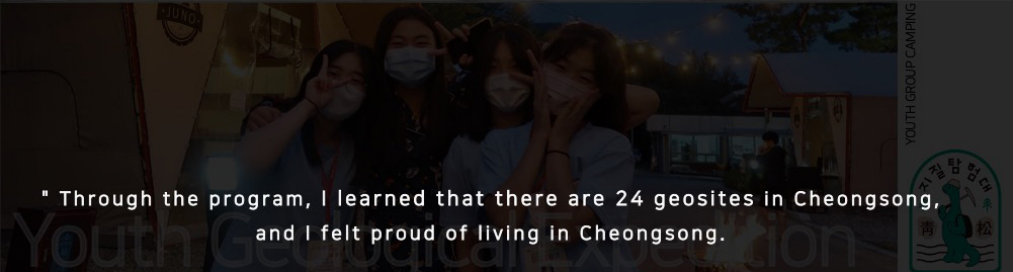
**Cheongsong-gun  
Youth Training Center**

**청소년 지질탐험대**

- ▶ Program for local middle school students
- ▶ Fun, easy approach to learning geology, ecology, and culture of Cheongsong Geopark  
- Geosite exploration, team challenges, camping, climbing, star-gazing, promotional video production, etc.
- ▶ 2020 program survey results [89.3% of respondents said they want to be a part of the geological expedition program again]

*Edutainment!*

03 Geoeducation Collaboration with organizations 11



" Through the program, I learned that there are 24 geosites in Cheongsong, and I felt proud of living in Cheongsong.

협력 기관  
**청송군청소년수련관**  
**청소년 지질탐험대**

- ▶ 관내 중학생 대상 프로그램
- ▶ 쉽고 재미있게 청송 지질공원의 지질, 생태, 문화 등을 배울 수 있는 프로그램
  - 지질명소 탐방, 조별 챌린지, 캠핑, 클라이밍, 청송의 별 관측, 지질공원 홍보 영상 만들기 등
- ▶ 2020년 프로그램 설문 결과 [지질탐험대 프로그램에 다시 참가 하고 싶다 99.38%]

**Review of the 2020 Cheongsong Geopark geological expedition**

03 Geoeducation Collaboration between local residents and organizations 12



Partners

**아동권리보장원**  
 National Center for the Rights of the Child

**Community Child Center** ▶ Participants: children from the community child center

**지오드림 GEODREAM** ▶ Support geological and environmental education programs to raise awareness and instill pride in children about the geopark, and promote healthy growth and development





### 03 Geoeducation

Collaboration between local residents and organizations

13



Upcycling: Making Geosites of Cheongsong UGGp

#### Partners

► Geological and environmental education programs operated by geopark residents

Association of Cheongsong  
Geopark Tour Guides



04 Geotourism Self-guided tour 15

### Information for self-guided tours

Make information boards and social media posts about the geological features easy to understand

#### Information Boards

▶ Refrain from using technical geological terms. Instead, use easy and interesting illustrations and photographs to make to draw interests from the general public

#### Social Media Posts

04 Geotourism Self-guided tour 16

### Tourism programs for self-guided tours

Discovering the geological features in the potholes in Baekseoktan Valley  
Those who find geological features (potholes, stratification, trace fossils, etc.) by referencing the guidebook and post on social media → will receive gifts and souvenir.

Cheongsong Geopark up-close  
Geopark promotional programs for individual tourists who visit geosites, geotrills, camping grounds, and other tourist attractions

04 Geotourism Group tour

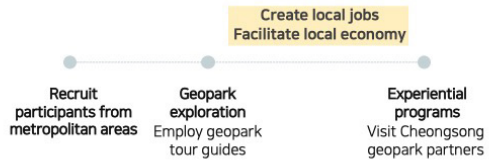
17



North Gyeongsangbuk Province  
Ecotourism Facilitation Program

Geofriends, become friends with nature

- ▶ Tourism program for senior visitors from metropolitan areas
- ▶ Collaboration with TourDaum (Kyowon KRT), a tourist agency
- ▶ Revive the local economy by encouraging local engagement
  - Employ geopark tour guides
  - Visit geopark partners



04 Geotourism Group tour

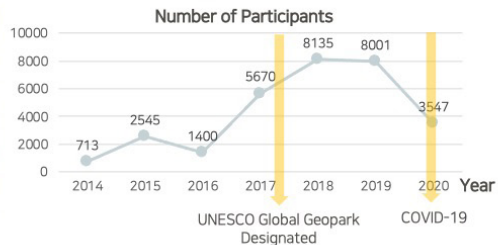
18



Cheongsong UNESCO Global Geopark

Geopark Tour Guide Program

- ▶ Geopark exploration programs led by Cheongsong geopark tour guides, reservations made via website
- ▶ Tour guide explanations catering to different age groups/communities





# ONLINE PROGRAMS



Face-to-face programs restricted due to COVID-19 and social distancing measures

(55% decline in education program participants)

➤ Provide non-face-to-face geoeducation programs, and expand social media marketing

## 05 Online Programs Visit Cheongsong UNESCO Global Geopark online

20

**Korean National Commission for UNESCO**

Raise awareness about the geopark among students and the general public by distributing lectures on the geopark through YouTube and other platforms in order to encourage people to participation in preserving geoheritage sites

2020: Korean National Commission for UNESCO

Geotourism in South Korea with UNESCO



▲ UNESCO science project

2021: collaboration between Korean National Commission for UNESCO and Cheongsong-gun


Visit Cheongsong UNESCO Global Geopark online



Create easy-to-understand video lectures on geology, nature, and culture of Cheongsong geopark


Experiment videos, online geoeducation using experiential kits

**Participant recruitment**




**Deliver geological experience kits**

- Experience the volcanic eruption that created Juwangsan Mt.
- Experience excavating dinosaur fossils



Try it out by referring to guidebooks or YouTube



Post reviews on personal social media accounts  
Promote Cheongsong UNESCO Global Geopark




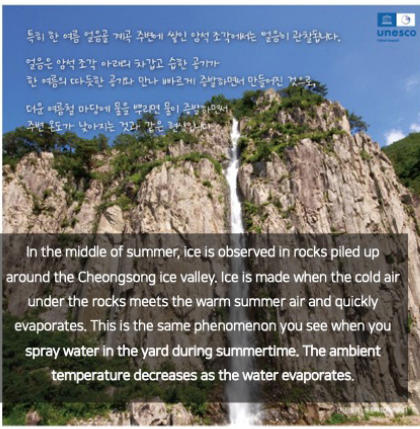
**Upload about 3 posts a week covering topics such as**  
geology (geosites, geological features, etc.), non-geological sites, landscapes, tourism, past programs, etc.

Popularize scientific knowledge

Promote Cheongsong geopark

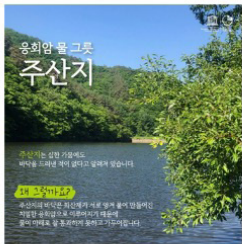
Share experiences

05 Online Programs  23



특히 한 여름 얼음을 계속 주변에 쌓인 암석 조각에서는 얼음이 관찰된다. 얼음은 암석 조각 아래의 차갑고 습한 공간과 한 여름의 따뜻한 공기와 만나 빠르게 증발하여 만들어진 것이다. 다음 여름철 마다에 물을 뿌리면 물이 주변 암석에 증발 증기가 높아지는 것과 같은 현상이다.

In the middle of summer, ice is observed in rocks piled up around the Cheongsong ice valley. Ice is made when the cold air under the rocks meets the warm summer air and quickly evaporates. This is the same phenomenon you see when you spray water in the yard during summertime. The ambient temperature decreases as the water evaporates.



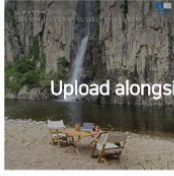
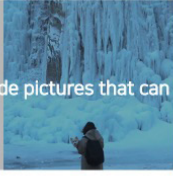

웅취암 용곡곶 주산지

주산지는 습한 기후에도 불구하고 여름에 얼음이 쌓여 있습니다. 이는 주산지의 암석 조각이 차갑고 습한 공간과 한 여름의 따뜻한 공기와 만나 빠르게 증발하여 만들어진 것입니다.


왜 여름에도 얼음이 쌓이나요?


주산지의 암석 조각은 차갑고 습한 공간과 한 여름의 따뜻한 공기와 만나 빠르게 증발하여 만들어진 것입니다. 이는 주산지의 암석 조각이 차갑고 습한 공간과 한 여름의 따뜻한 공기와 만나 빠르게 증발하여 만들어진 것입니다.

- ✓ Refrain from using difficult geological terms
- ✓ Explain geological phenomena by referencing easy-to-relate occurrences in daily life
- ✓ Capture visitors' interest by posing questions

Upload alongside pictures that can attract visitors


05 Online Programs  24



와사어산길 고향의 봄나들이 즐기

와사어산길은 문화관광 대표 향토관광지로서 봄, 여름, 가을, 겨울 4계절의 구미 향토관광지를 사색의 명소로 만들어 주고 있다. 특히 봄철에는 와사어산길의 봄나들이 명소로 알려져 있다.

봄을 와사어산길의 봄나들이 명소로 즐기. 와사어산길의 봄나들이 명소로 즐기. 와사어산길의 봄나들이 명소로 즐기.



방문하시는 귀하 친화적인 즐길 수 있는 무장애 지질탐방로

경북 청송군 주왕산면 공원길 146



Social Media Traffic

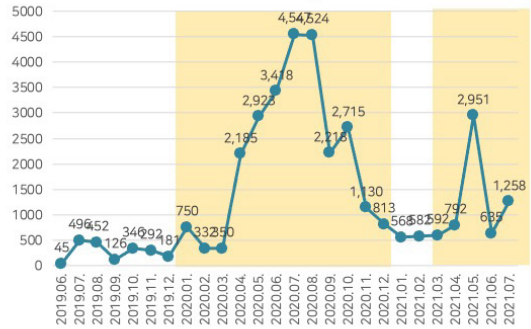
Instagram



Before  
Information delivered in  
text form rather than  
pictures/images

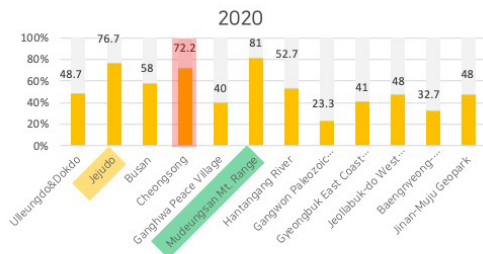
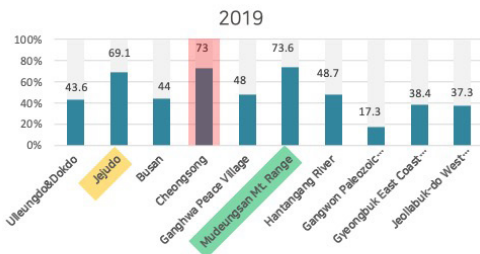
After

Blog



Geopark Awareness Survey

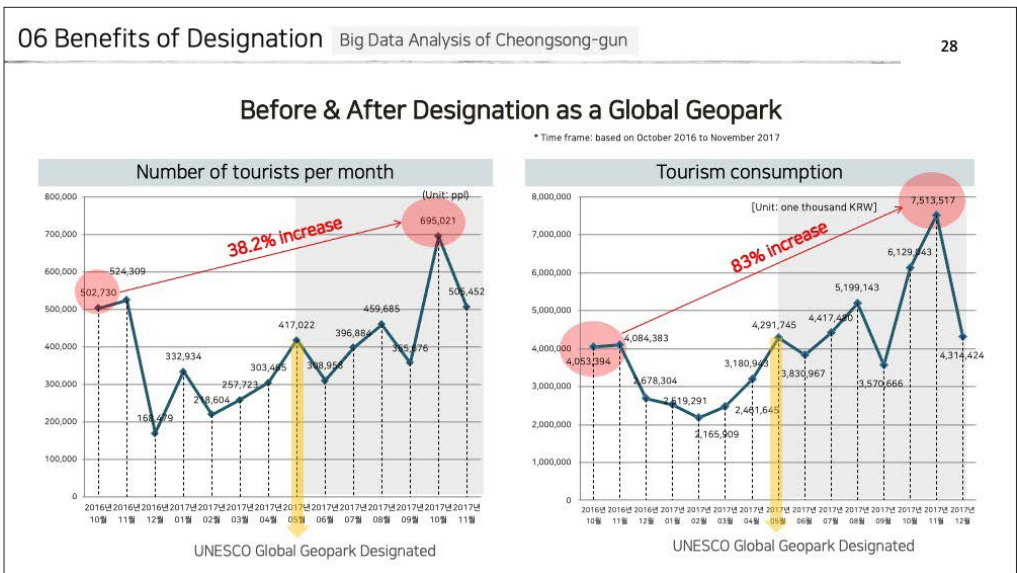
"Did you know that this place is a geopark?"



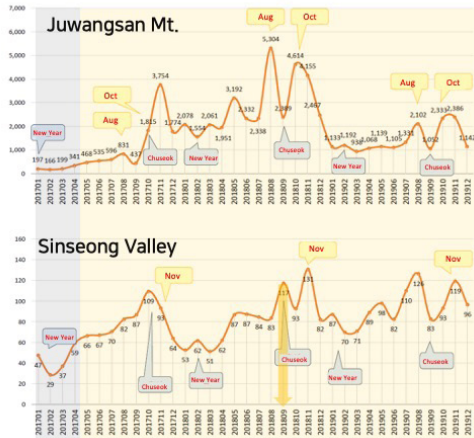
**TOURS**  
관광지식정보시스템  
Admission statistics  
to major tourist attractions

	JEJU	CHEONGSONG	MUDEUNGSA (GWANGJU)
Population	675,876	24,768	1,444,787
2019	887,350	125,444	449,487
2020	417,600	72,265	185,432

(person)

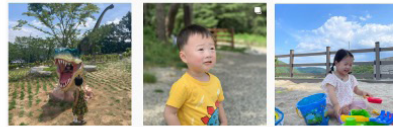


Tourism consumption of Geotrail



# Sinseong-Ri Dinosaur Footprint

11% of posts from before the park was built





주제 3: 국제보호지역의 생태관광  
Theme 3: Ecotourism  
in Internationally Designated Areas

기조강연  
Keynote speech

---

세리아로 켈리

미국 샴플레인-애디론덱 생물권보전지역 공동 의장  
(폴스미스 대학 호텔경영학 부교수)

**Prof. Kelly Cerialo**

Co-chair, UNESCO Champlain-Adirondack Biosphere Reserve  
(Associate Professor, Paul Smith's College)

# Ecotourism in Internationally Designated Areas

## 2021 Thematic Seminar on Management Challenges of Internationally Designated Areas

Dr. Kelly L. Cerialo

Associate Professor, Paul Smith's College

UNESCO Champlain-Adirondack Biosphere Reserve



### Overview of Presentation



Key Principles of Ecotourism in Internationally Designated Areas (IDAs)



Current Challenges and Opportunities for Ecotourism Management in IDAs



Monitoring Tools to Track Social, Economic, and Environmental Impacts of Tourism in IDAs



A Path Forward for Tourism Managers



## A Working Definition for Ecotourism:

---

- “Responsible travel to natural areas that *conserves the environment*, sustains the *well-being of the local people*, and involves *interpretation and education*.”  
- The International Ecotourism Society, 2015



## Key Principles of Ecotourism in Internationally Designated Areas

---

1. Contributes to *conservation of biodiversity*.
2. Sustains the *well-being of local people*.
3. Includes an *interpretation / learning experience*.
4. Involves *responsible action on the part of tourists and the tourism industry*.
5. Tourism experiences are delivered primarily to *small groups by small-scale businesses*.
6. Requires the *lowest possible consumption of non-renewable resources*.
7. Emphasizes *local participation, ownership and business opportunities, particularly for rural people*.

- *United Nations Environmental Program and The International Ecotourism Society (2002)*



Current Challenges & Opportunities for Ecotourism Management in Internationally Designated Areas



Challenge #1. Building Resilience Across the Tourism Ecosystem

**CHALLENGE:** Covid-19 pandemic

**OPPORTUNITY:** Develop a holistic approach to tourism planning, management, and monitoring

**CASE EXAMPLE:** Ledro Alps and Judicaria Biosphere Reserve / Adamello – Brenta Geopark, Italy



## Challenge #2. Social and Cultural Impacts

Challenge	Opportunity	Case Example
Mitigating the negative social and cultural impacts of tourism	Conserve and promote cultural attractions and showcase local culture through stories, food, art, music, dance, etc.	!Khwa ttu San Cultural Center, Cape West Coast Biosphere Reserve, South Africa / Cape Floral Kingdom, World Heritage Site

## Challenge #3. Environmental Impacts

Challenge	Opportunity	Case Example
Mitigating the negative environmental impacts of tourism	Reduce tourism impacts through infrastructure planning, remediation of damage, and visitor impact mitigation techniques	Bassin Arcachon, France, Ramsar Site

## Challenge #4. Wildlife protection

### Challenge

Impoverished communities can deplete wildlife for protection of themselves, property, or for profit

### Opportunity

Provide incentives through direct social and financial benefits, for communities near protected areas to safeguard wildlife

### Case Example

Okavango Delta, Botswana, Ramsar Site

## Challenge #5. Commodification vs. conservation of natural assets

### Challenge

IDAs risk becoming another 'commodity' or resource to be exploited by an industry that is profit-driven

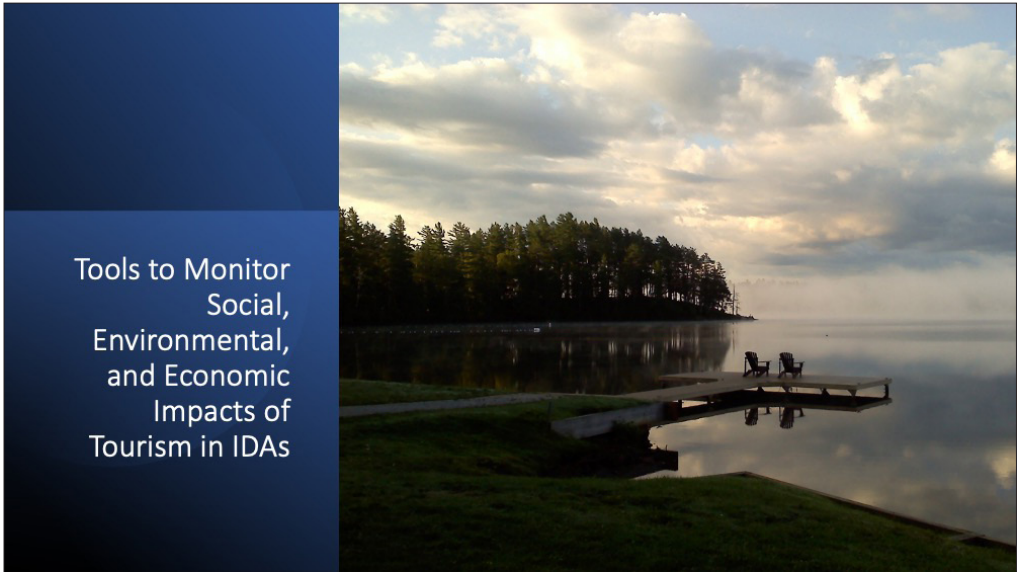
### Opportunity

Build support for the conservation of nature and culture through dynamic interpretive experiences that showcase the value of the IDAs

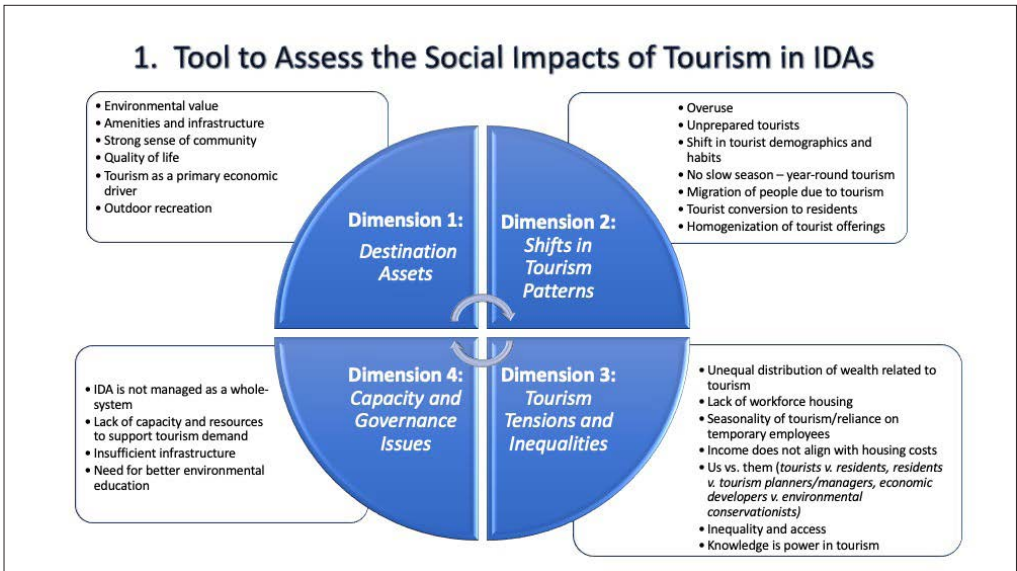
### Case Example

Adirondack High Peaks, NY (USA) Biosphere Reserve





Tools to Monitor  
Social,  
Environmental,  
and Economic  
Impacts of  
Tourism in IDAs



## 2. Tool for Environmental Monitoring: Integrated Biodiversity Assessment Tool (IBAT)

IBAT

About Us The Data Is IBAT for me? Subscriptions Country Profiles FAQs Contact Us Log in

We are the IBAT Alliance

BirdLife International CONSERVATION INTERNATIONAL IUCN UN Environment Programme WCMC

### Integrated Biodiversity Assessment Tool

The world's most authoritative biodiversity data for your world-shaping decisions

We host and maintain the three key global biodiversity datasets

IUCN Red List of Threatened Species World Database on Protected Areas World Database of Key Biodiversity Areas

## 3. Tool for Economic Analysis of Visitation

- Visitor Counting Methods
- Economic Analysis
- Reporting and Communication
- Policy Implications

unesco

BfN  
Federal Agency for Nature Conservation

### Visitors Count!

Guidance for protected areas on the economic analysis of visitation



A Path Forward  
for Tourism  
Managers in  
Internationally  
Designated  
Areas

Lessons from  
Covid-19 for  
Tourism  
Managers

1. Collaborative and integrated monitoring is essential, especially during turbulent times when communication and rapid decisions are critical.
2. The most resilient IDAs implemented robust management frameworks and monitoring with government and private sector partnerships.
3. Tourism in IDAs should promote human and ecological health in the destination communities, across the tourism ecosystem, and in the visitor experience.
4. Digitalization – Virtual reality, holograms, virtual tours, and online games can be used to support environmental education, conservation, and advanced monitoring.



# A Path Forward

Covid-19 presents an opportunity to **assess and reprioritize challenges and opportunities** in the tourism ecosystem of global IDAs.

Consider what would it take to develop a **holistic approach to ecotourism planning, management, and monitoring** that integrates government and private sector partnerships.

**Expand your realm of consideration** to address tourism challenges that are not in your immediate periphery.



## Thank You

CONTACT:

- DR. KELLY L. CERIALO
- KCERIALO@PAULSMITHS.EDU







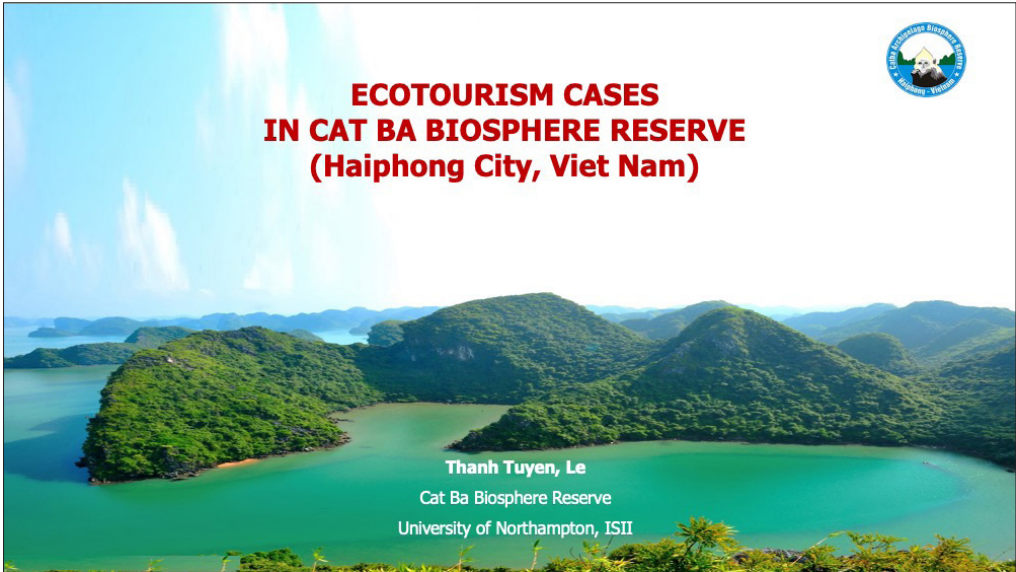

주제 3: 국제보호지역의 생태관광  
Theme 3: Ecotourism  
in Internationally Designated Areas

사례 발표 1  
Case presentation 1

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베트남 깃바 생물권보전지역  
레 탄 투옌

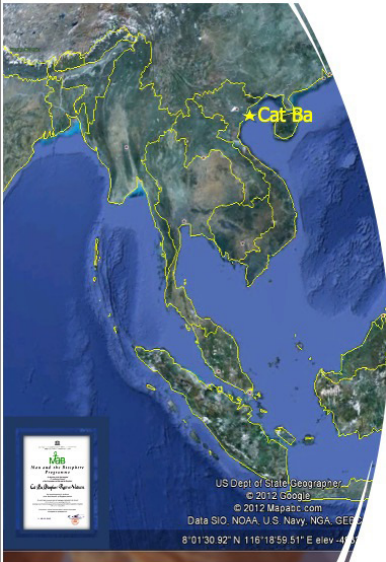
**Cat Ba Biosphere Reserve**  
Vietnam, Mr. Tuyen Thanh Le




**Contents**

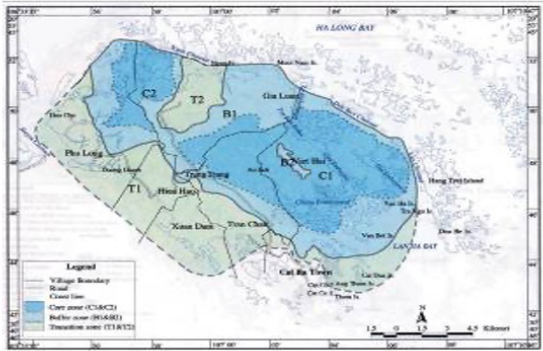
- 1. Cat Ba BR Facts
- 2. Ecotourism in Cat Ba BR
  - 2.1 Ecotours in Cat Ba National Park
  - 2.2 Nature-based Tourism outside National Park
  - 2.3 Phu Long Commune Home-stay Ecotourism
  - 2.4 Viet Hai Commune Ecotourism
  - 2.5 Eco-camping in Hien Hao Commune
- 3. Limitations and Challenges
- References
- Appendix: Ecotourism in PAs: Viet Nam perspectives





# 1. Cat Ba BR Facts





**Key Fact:** December 2004 \* 26.241 ha (17.041ha (islands) & 9.200ha (marine)) \* Core: 8.500 ha - Buffer: 7.741 ha - Transition:10.000 ha.  
CBBR Management Board under Haiphong Provincial Government



Cat Ba Archipelago Biosphere Reserve

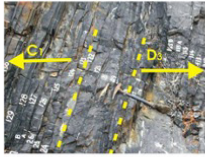
World Marine Karst Center – Paradise for Fresh water Snails



Over 150 species, with  
at least 25 endemic

4

## Geoforms values



## Traditional culture



Annual Fishing Village Festival  
*April 1st*

### Cai Beo Relics (6.000-4.200 yrs ago)



Cat Ba National Park – Core of Cat Ba Biosphere Reserve



## 2. Ecotourism in Cat Ba BR

---



### 2.1 Ecotours in Cat Ba National Park







## 2.2 Nature-based Tourism outside National Park



## 2.3 Phu Long Commune Home-stay Ecotourism



2012-2013, supported by MCD/SIDA/USAID





## 2.4 Viet Hai Commune Ecotourism

- ❖ Research models by IMER (2020)
- ❖ Hibiscus flowers by social enterprises







### 3. Limitations and Challenges

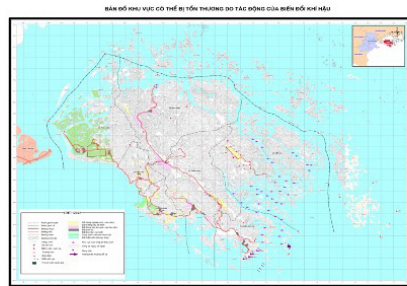




## Limitations and Challenges

- Carrying Capacity
- Wildlife protection
- Forest and water resources consumption
- Waste and Sewage
- Traditional values

## Climate Change



Thank you for your attention!



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## References

- Decision No. 24/QĐ-TTg of the Prime Minister on investment policy on development of special-use forests in the period 2011-2020
- Decree No. 48/2007/ND-CP dated March 28, 2007 of the Government on principles and method of determining the price of forests
- Ha, T. T. T., Khoa, P. Van, & Phuong, D. L. (2019). Review, develop and propose a sustainable financial investment policy for the operation of special-use and protection forests in accordance with specialized laws, budget laws and public investment laws. *Research Outcomes of the University of Forestry 2015-2019*.
- Joint Circular No. 65/2008/TTLT BNN-BTC on Implementation Guidelines Decree No. 48/2007/ND-CP dated March 28, 2007 of the Government on principles and method of determining the price of forests
- MARD (2020), Directive 1788/CT-BNN-TCLN, March 10, 2020, On the tasks and solutions in management, protection of forests and environmental lease in special-use forest and protection forest)
- National Assembly (2017) The Forestry Law
- Nguyệt, B. T. M. (2019). Research and evaluate the current situation of models as a basis for proposing policies on forest environment leasing in Vietnam. *Research Outcomes of the University of Forestry 2015-2019*.
- Nguyệt, B. T. M., Hân, D. T., & Báo, T. Q. (2019). Enhancing The Efficiency of Forest Environment Lease In National Parks In North Vietnam. *Forestry Science and Technology Journal*, 3, 183-190
- Văn, N. T. (2020). *Policy on Management and Development of Tourism in Vietnam's National Parks and Nature Reserves*. Institute for Tourism Development Research. <https://doi.org/10.1016/B978-0-323-60984-5.00062-7>
- Images from Facebook: source links are at cited the footnotes of the slides

## Appendix: Ecotourism in PAs: Viet Nam perspectives

- Legal definition: “Ecotourism is a type of tourism based on nature, associated with local cultural identity, with the participation of the local community, combined with education on environmental protection” (The Forestry Law 2017, clause 16, Article 3).
- Governmental support policy for ecotourism: “d) Invest in developing new tourism products with positive impacts on the environment, attracting the participation of the residential community; invest in the development of sea and island tourism products, eco-tourism, community-based tourism, cultural tourism and other specific tourism products. (The Forestry Law 2017, item d, Article 5).
- Support Needs: PAs have not focused on ecotourism development resources (financial, human resources, technology, etc.), poor infrastructure and lack of facilities and basic infrastructure to organize ecotourism activities, unprofessional service quality (Vân, 2020)

## Appendix: Ecotourism in PAs: Viet Nam perspectives

By March 2020, 395 special-use and protection forests, managing 6.75 million hectares of forest (MARD 2020). 164 national parks and nature reserves with a total area of 2.2 million hectares, of which 6 national parks are under the management responsibility of the Ministry of Agriculture and Rural Development, and the rest are decentralized to the provinces (Nguyễn et al., 2019, p.184).

By the end of 2017, Vietnam has 61/164 national parks and protected areas that have organized ecotourism business (Nguyễn et al., 2019; Hà et al., 2019). Those include 25/34 National Parks and 36/133 Nature Reserves, organizing ecotourism activities in 3 forms: (i) Self-organizing (56 sites); (ii) Joint venture and association (11 sites) and (iii) Environmental leasing (13 sites) (Nguyễn et al., 2019, p.184).



## Appendix: Ecotourism in PAs: Viet Nam perspectives

The rental price for forest environment lease: to be approved by the Province according to the Decision No. 24/QĐ-TTg of the Prime Minister and the Joint Circular No. 65/2008/TTLT BNN-BTC. The rental price can be in absolute value about 500,000 VND (~USD 25) /ha/year or from 1-2% of ticket sales/ business revenue, which can be paid once a year or once for the whole rental period... (Nguyễn, 2019, p.260)

The General Directorate of Forestry to "evaluate and propose solutions for activities of organizing ecotourism in special-use and protection forests nationwide, and report to the Ministry of Agriculture and Rural Development in the fourth quarter of 2020"(MARD 2020).

**주제 3: 국제보호지역의 생태관광**  
**Theme 3: Ecotourism**  
**in Internationally Designated Areas**

**사례 발표 2**  
**Case presentation 2**

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탄자니아 응고롱고로 렌가이 세계지질공원  
므완쿤다 조슈아

**Ngorongoro Lengai UNESCO Global Geopark**  
Tanzania, Mr. Joshua Mwankunda

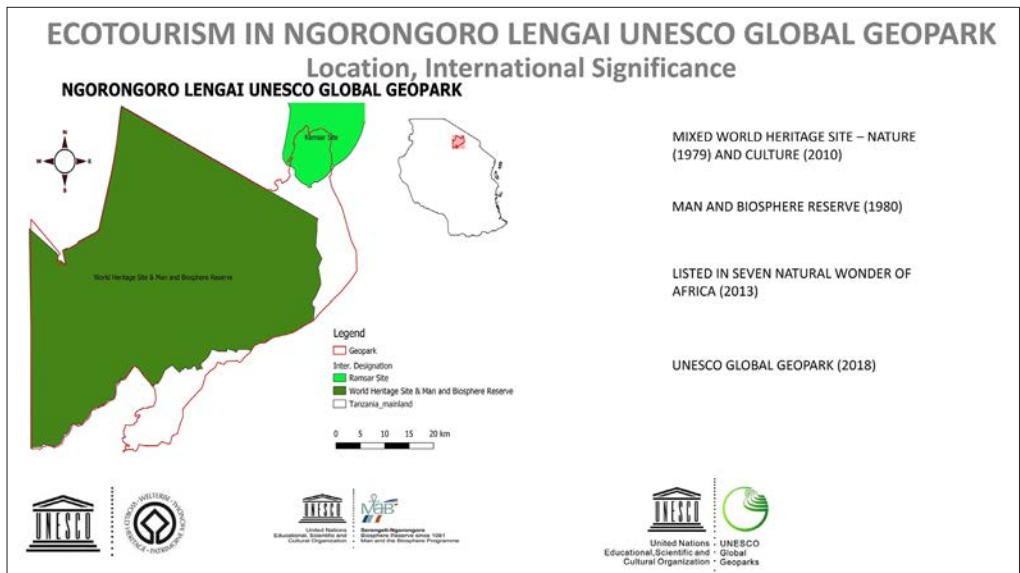
# MANAGEMENT CHALLENGES OF INTERNATIONALLY DESIGNATED AREAS (IDAS)

2021 Online Thematic Seminar

## Ecotourism in Ngorongoro Lengai UNESCO Global Geopark (UGGp) - Tanzania

Joshua Mwankunda

[www.linkedin.com/in/joshua-mwankunda-095a15175](http://www.linkedin.com/in/joshua-mwankunda-095a15175)





## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

### Definitions and concepts



*Traveling to relatively undisturbed or uncontaminated natural areas with the specific objectives of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas*

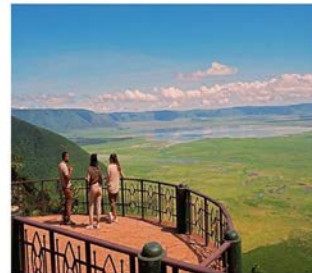
**International Ecotourism**

## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

### Attractions/activities/Experiences



**Geology – Eg. Mt. Oldoinyo Lengai – Hike or observe**  
This is the only active volcanic Mt. in the world to erupt carbonatite lava. The Mt. is the sacred place for Maasai people. They call it "Mt. of God"



**Nature (Geology, Intangible heritage and Wild Animals):**  
Ngorongoro Caldera:

- Biggest known intact Caldera formed past 1,500 yrs, great scenery
- Home to over 25,000 species of Wildlife
- Pilgrimage site for Datoga Community

### Attractions/activities/Experiences



**Walking safari:**  
Perform walking safari which takes one on foot through forests, craters, mountains and plains over routes that takes several days, may involve bush camping and guided by local Maasai, Rangers and Maasai donkeys are used to carry loads.

**Camping:**  
Live in a hotel or private or public operated campsite for wild experience

**Olduvai onsite Museum:**  
Geology, Paleoanthropology, Culture (ancient and Contemporary)

**Wildlife Experience:**  
Highest density of wildlife and close views, including the Big 5 of Africa

### ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

#### activities/Experiences



**Archaeology and Geology (Olduvai Gorge and Laetoli Hominid Footprints)**

- Human evolution – biological and Culture from 3.6 mya to date
- Start of Bipedalism and evidence that Bipedalism preceded enlarged brains

Stratigraphic Unit	Age (Ma)
Naitaded Beds	2.057±0.017 Ma
	2.155±0.012 Ma
Ogol Lavas	2.28±0.02 Ma
	2.32±0.02 Ma
Upper Unit Nkolanya Beds	2.660±0.016 Ma
Lower Unit	3.58±0.03 Ma
Yellow Marker Tuff	3.627±0.018 Ma
Tuff 6	3.631±0.018 Ma
Tuff 7	
Tuff 8	
Upper Unit Laetoli Beds	
Tuff 5	3.81±0.04 Ma
Tuff 4	
Tuff 3	3.79±0.04 Ma
Tuff 1	
	3.85±0.02 Ma
Lower Unit Laetoli Beds	
	4.36±0.10 Ma

## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

### Attractions/activities/Experiences



Culture and Traditions  
(Maasai Boma)

Traditional dances, prehistoric activities, story telling

## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

### Education, Research and partnerships



Research



Students Programs



Local partnership





## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

### Sustainable development







10% of annual gross tourism revenue aids communities by funding education, health, food subsidies, and infrastructure supporting livestock rearing.



## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK

### Challenges and Lessons Learnt

**Cultural interference**

- > Gradual loss of cultural values
- > Increased Commodification of Cultural Practice

**Heritage/Humans Conflicts.**

- > Due to increased populations of Humans, wildlife and Live stocks

**Climate Change**

- > Reduced vegetation cover
- > Reduced pastures for live stocks and wild animals
- > Extreme weather conditions with a heightened risk of geohazards

**Economical**

- > Decline of Pastoral economy and Increased poverty to local communities

**Ecotourism revenues alone do not meet all of a community's economic demands**

**Administering NCA as a Multiple Land Use Model is Failing**

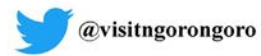


## ECOTOURISM IN NGORONGORO LENGAI UNESCO GLOBAL GEOPARK challenges and way forward

- ✓ Review and reform of multiple land use model
- ✓ Encourage local communities to live outside the conservation area
- ✓ Increase conservation education



## THANK YOU FOR YOUR ATTENTION



주제 3: 국제보호지역의 생태관광  
Theme 3: Ecotourism  
in Internationally Designated Areas

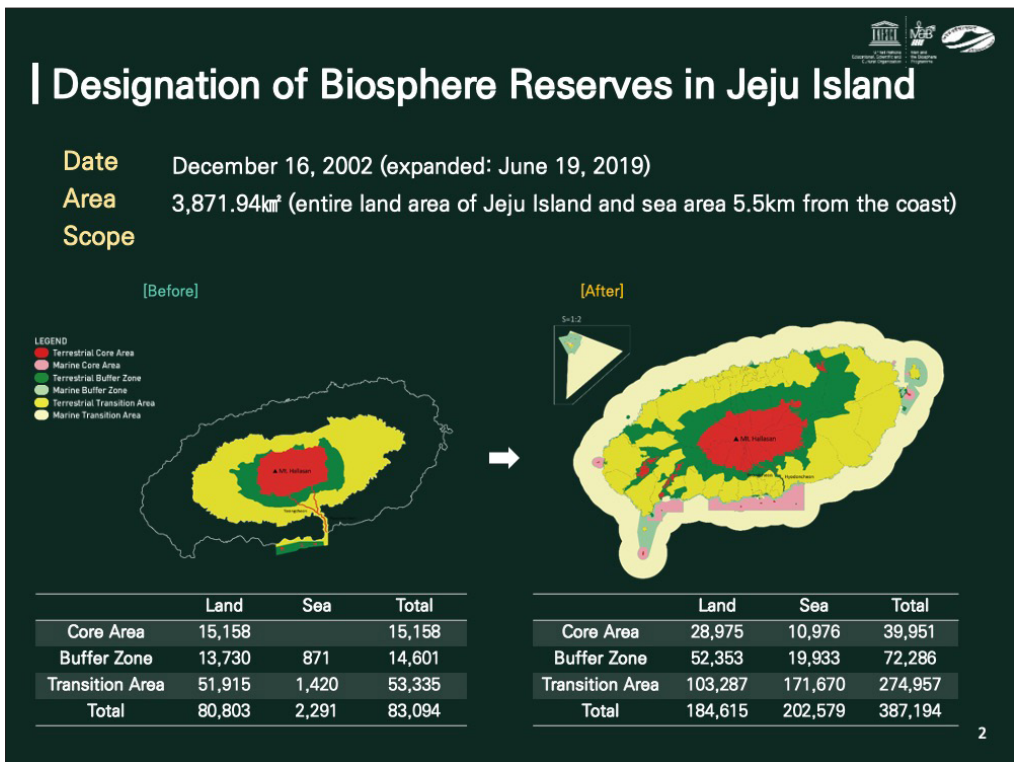
사례 발표 3  
Case presentation 3

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제주도 생물권보전지역  
김나미

Jeju Island Biosphere Reserve  
Republic of Korea, Ms. Nami Kim







## | Project Goals

- Promote leading villages in the biosphere reserve and ecotourism attractions by designating villages that can embody the ideology and values of biosphere reserves
- Create a resident-led ecotourism model spearheaded by local residents
- Promote voluntary resource preservation activities and revive local economies through ecotourism

“ Facilitate economic growth in tandem with improving the happiness and quality of life of local residents and restoring a sense of community in order to achieve sustainable development in villages ”

3

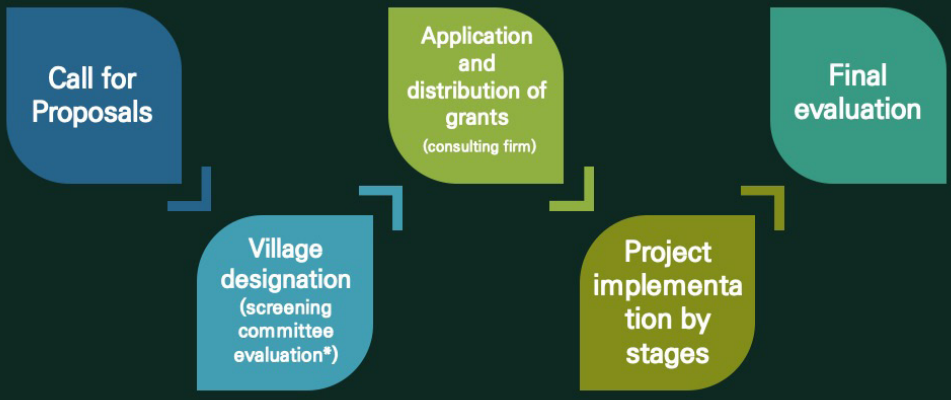


## | Project Overview

- Duration: 2014 ~ ongoing
- Target: Natural villages at the *eup*, *myeon*, *ri*, and *dong* level in Jeju Island
  - ※ Application expanded to all Jeju Island villages following the expansion of the biosphere reserve
- Details: Build resident-led ecotourism villages by leveraging the branding power of biosphere reserves
- Budget: KRW 2.5 million
  - ※ Total amount of support provided to each village over a 5-year period

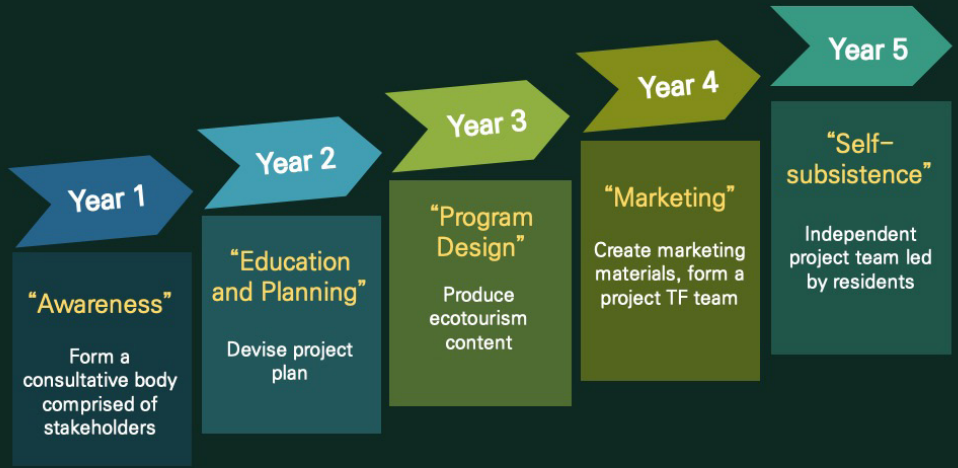
4

# | Process



\* Screening Committee: internal members + external members  
(relevant experts, academia, civil society, etc.)

# | Strategies by Project Stage



Support focused on consulting

Support building a foundation  
for self-subsistence



## | Details – Stage 1 (Awareness)



- Form a regional consultative body (Local residents, environmental groups, government, ecotourism experts, etc.)
- Discover ecotourism resources in the region
- Educate residents and tour guides
- Develop ecotourism programs/storytelling narratives
- Residential meetings and feedback review

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## | Details – Stage 2 (Education and Planning)



- Develop ecotourism contents and marketing channel (develop brand, build website, etc.)
- Pilot test ecotourism programs
- Educate residents and tour guides
- Research and monitor ecotourism resources in the region
- Residential meetings and feedback review

8

## | Details – Stage 3 (Program Design)

- **Build ecotourism infrastructure** (interpretation panels, ecotrail repairs, safety infrastructure, etc.)
- **Pilot test programs with ecotourism experts**
- **Develop community-led tourism content** (ex: ecotourism festival, ecoparty etc.)
- **Provide specialized training to residents** (acquire ecotourism design licenses, etc.)
- **Visit exemplary sites**

9

## | Details – Stages 4 & 5 (Marketing/Self-subsistence)

- **Establish a for-profit organization to build a foundation for self-subsistent operations**  
(social enterprises, co-ops, etc.)
- **Develop and commercialize experiential programs using local products**
- **Attract visitors and provide tours to promote ecotourism**

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# | Harye-ri Ecotourism Village



Ecotourism consultative meeting



Resident education



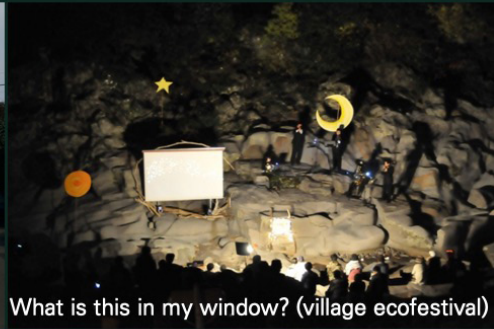
Townhall meeting



Village resource survey

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# | Harye-ri Ecotourism Village



What is this in my window? (village ecofestival)









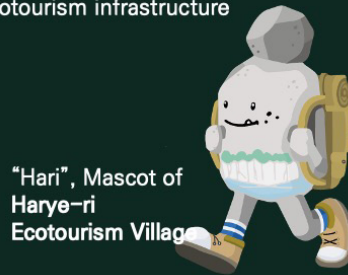
# | Harye-ri Ecotourism Village



Ecotourism map



Ecotourism infrastructure



"Hari", Mascot of Harye-ri Ecotourism Village

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# | Jeoji-ri Ecotourism Village



Ecotourism consultative body



Resident education



Townhall meeting



Village resource survey

18





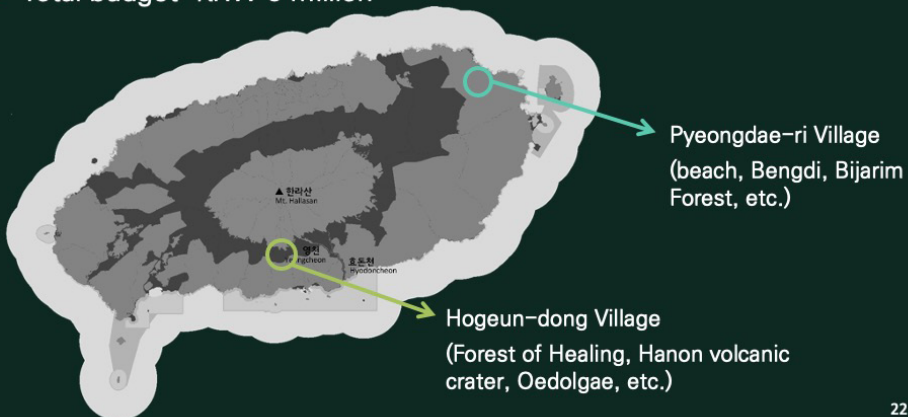
## | Pilot Test Results

- Higher awareness about the environment among residents, **voluntary engagement in resource preservation activities**
  - Stronger capabilities of residents in guiding ecotours and planning ecotourism items (picture of resident tour guide)
  - An ecotourism hub established by building Harye-ri Ecotourism Support Center
  - **Local economy revitalized** by introducing experiential programs using local products
  - **More jobs for the younger generation** in areas such as ecotourism reservation management
- ※ Harye-ri and Jeoji-ri villages designated as "Ecotourism Site" by Ministry of Environment for

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## | Jeju Island BR Ecotourism Village Support Project (2019–present)

- Target: Pyeongdae-ri, Gujwa-eup; Hogeun-dong, Seogwipo-si
- Consulting firm: Jeju Ecotourism Association
- Total budget: KRW 5 million



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# Updates on the Hogeun-dong and Pyeongdae-ri Ecotourism Village Project



- Form an ecotourism consultative body and hold regular meetings
- Research and monitor ecotourism resources in the region
- Educate residents and tour guides
- Develop ecotourism content (tour guide, ecotourism map, storytelling, etc.)
- Create a mascot that represents each ecotourism village



Pyeongdae-ri: ecotourism consultative body meeting



Pyeongdae-ri: ecotourism resource survey



Hogeun-dong: resident education/meeting



Hogeun-dong: ecotourism resource survey

## Pyeongdae-ri Ecotourism Village Mascot and Village Map (in progress)



**Pyeongguni**  
 • Character inspired by carrots, the local produce of Pyeongdae-ri



**Pyeonggrimi**  
 • Born in the Bijarim Forest  
 • Spirit of the land  
 • Guardian of Pyeongdae-ri

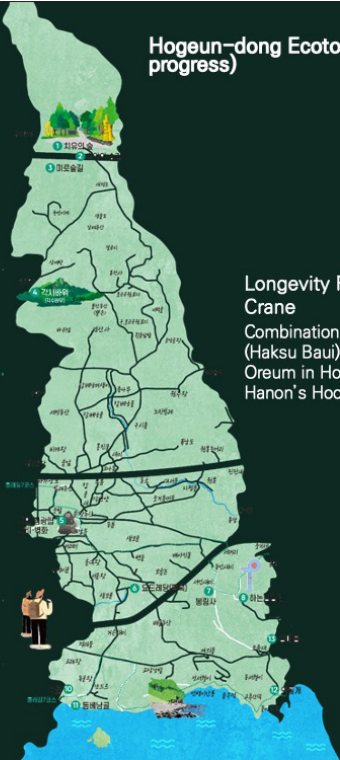


**Pyeongrangi**  
 • Spirit of the sea  
 • Guardian of Pyeongdae-ri waters







Hogeun-dong Ecotourism Village Mascot and Village Map (in progress)



Longevity Rock Hooded Crane  
Combination of Longevity Rock (Haksu Bawi), the most popular Oreum in Hogeun-dong and Hanon's Hooded Crane



Hoegeun-dong Coastal Water Suaegi (Indo-Pacific Bottlenose Dolphin)  
Suaegi (dolphin in Jeju language) that frolics in the coastal waters of Hogeun-dong



Ecotourism Map

25

## | Future Plans

- Conduct research for an analysis of the socioeconomic impacts in Ha rye-ri/Jeoji-ri villages
  - ※ Result findings will feed into future project management plans
- Thoroughly reviewing feedback after project completion to further strengthening integrity of the project
- Support efforts to build and facilitate a network among ecotourism villages

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“Thank You”

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**2021년 11월 제주특별자치도, 유네스코한국위원회, MAB한국위원회 공동 발간**

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KNCU Registration No: SC-2021-DI-2

유네스코한국위원회 간행물 등록번호: SC-2021-DI-2



