

YNU UNESCO Chair program and ESD

- Hiroyuki Matsuda (YNU)

<https://youtu.be/BtOicniNDQw>



UNESCO Chairs Programme,

- which involves over 850 institutions in 117 countries, promotes **international inter-university cooperation** and networking to enhance institutional capacities through knowledge sharing and collaborative work. The programme supports the establishment of UNESCO Chairs and UNITWIN Networks **in key priority areas related to UNESCO's fields of competence** – i.e. in education, the natural and social sciences, culture and communication.
- Through this network, higher education and research institutions all over the **globe pool their resources, both human and material, to address pressing challenges and contribute to the development of their societies.** In many instances, the networks and chairs serve as **thinktanks and bridgebuilders** between academia, civil society, local communities, research and policy-making. They have proven useful in informing policy decisions, establishing new teaching initiatives, generating innovation through research and contributing to **the enrichment of existing university programmes** while promoting cultural diversity. In areas lacking expertise, chairs and networks have evolved into poles of excellence and innovation at regional or sub-regional levels. They also contribute to strengthening **North-South-South cooperation.**

YNU UNESCO Chair on Education in Biosphere Reserves for Sustainable Societies

- The purpose of the Chair shall be to promote an integrated system of research, training, information and documentation on Education for Sustainable Development in Biosphere Reserves in support of the achievement of more sustainable societies. It will facilitate collaboration between high-level, internationally-recognized researchers and teaching staff of the University and other institutions in Japan, as well as elsewhere in the Asia and the Pacific region, and in other regions of the world. With a view of facilitating interdisciplinary research on sustainable development issues and to provide sound bases for the management of Biosphere Reserves and the achievement of SDGs, in Japan and in the partner countries, the specific objectives of this Chair are to:

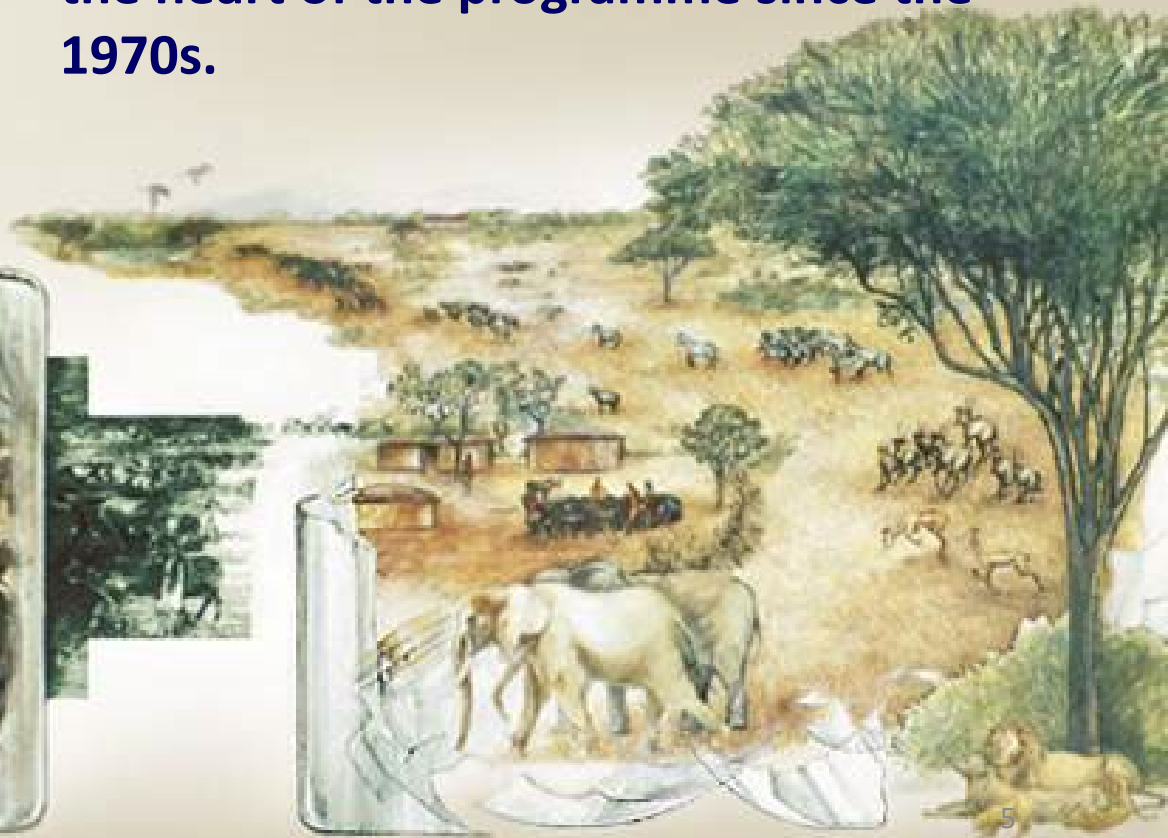
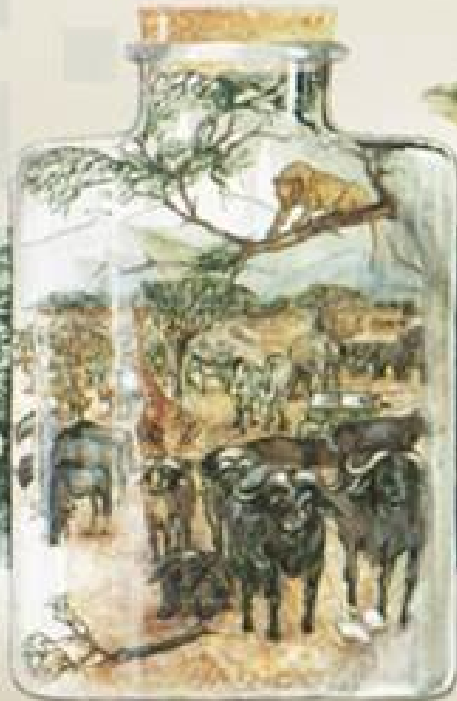
YNU UNESCO Chair on Education in Biosphere Reserves for Sustainable Societies

- the specific objectives of this Chair are to:
 - investigate the **mutually benefitting relationship between Biosphere Reserves and the interconnected urban areas** benefitting directly or indirectly from the ecosystem services they provide;
 - provide teaching materials and establish the **“Minor Education Programme for MAB/SDGs”**;
 - develop the **“International Project-Based-Learning (PBL) Training Course for MAB/SDGs”** at the Yokohama National University, **as a pilot education programme-** develop a network of learning sites within the **Japanese Biosphere Reserves Network** as well as other networks related to **partner universities in Japan and in the region**, and;
 - **cooperate closely with UNESCO and existing UNESCO Chairs** on relevant programmes and activities.



UNESCO's Man and the Biosphere (MAB) Programme

Biodiversity conservation, sustainable and equitable use for human well being are at the heart of the programme since the 1970s.



BIODIVERSITÉ

CONSERVATION

RECHERCHE

SURVEILLANCE
CONTINUE

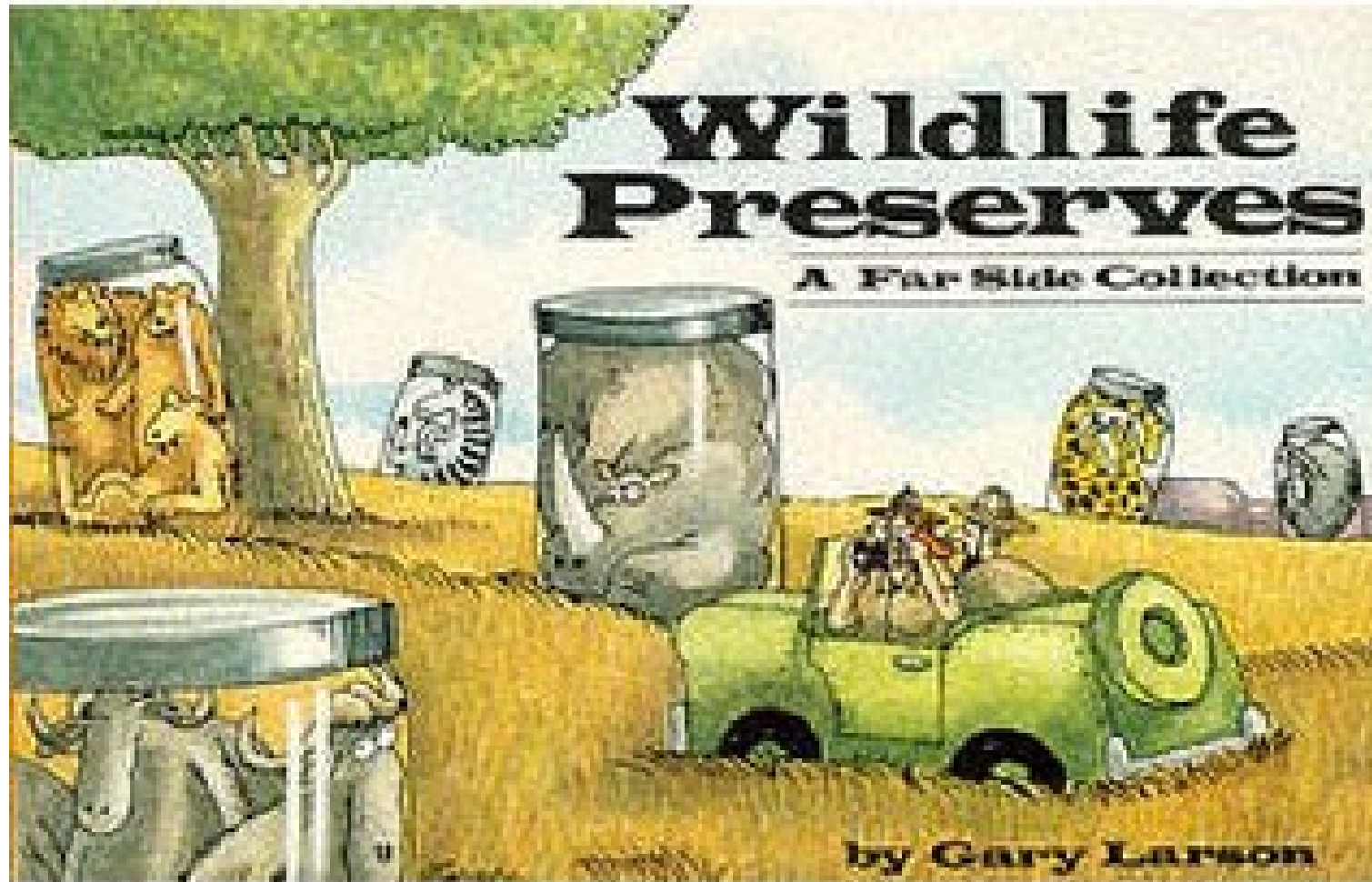
ÉDUCATION

FORMATION

DÉVELOPPEMENT
DURABLE



Preservation (Protection) vs. conservation



by Gary Larson (1989)

What is a Biosphere Reserve

Conservation area

(Function as a protected area)

- Pristine nature
- Traditional culture against the backdrop of the local nature

+

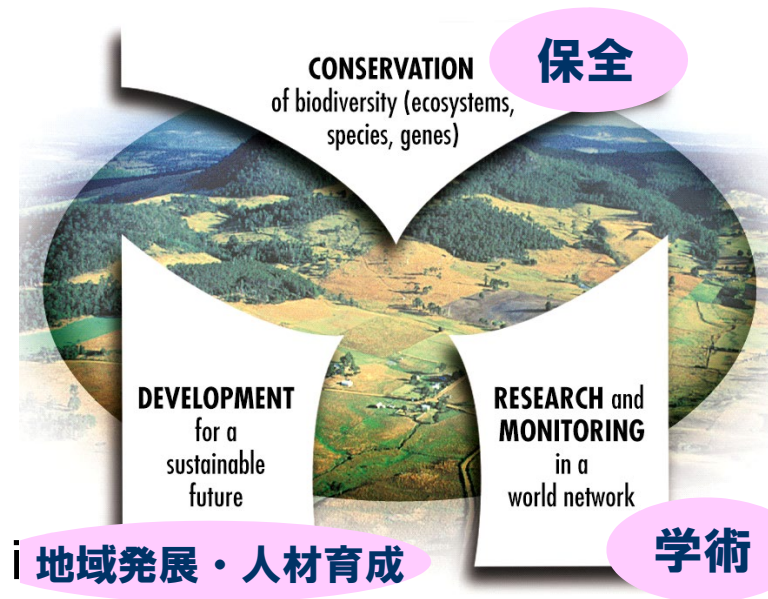
Learning Site (a place to explore “living i 地域発展・人材育成

- Social level

A place to explore and develop appropriate ways of interacting with the natural environment (social systems) and to provide information on how to apply these systems beyond the registered sites.

- Individual level

A place to learn about the natural environment, culture and how to create a sustainable society.



Biosphere reserves:

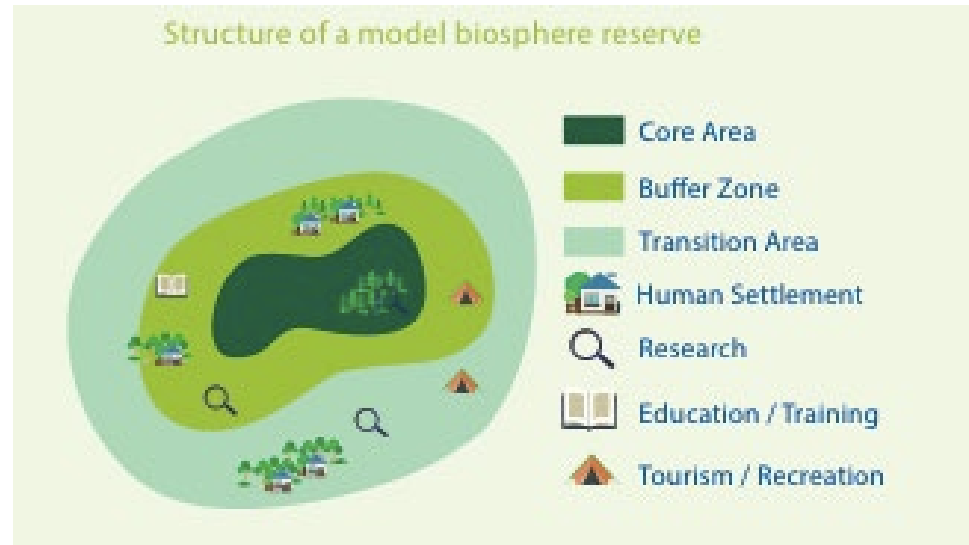
Three zones, three functions

They consist of three interrelated zones that aim to fulfil three complementary and mutually reinforcing functions:

- The **core area** comprises a strictly protected zone that contributes to the conservation of ecosystems, species and genetic variation.

- The **buffer zone** surrounds the core area. Is used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education.

- The **transition area** is where communities foster socio-culturally and ecologically sustainable economic and human activities.



BRs include core areas designated as national parks, quasi-national parks, wilderness conservation areas, nature conservation areas or forest reserves.

10 BRs in Japan



Kobushi



Shiga Highland



Mt. Hakusan



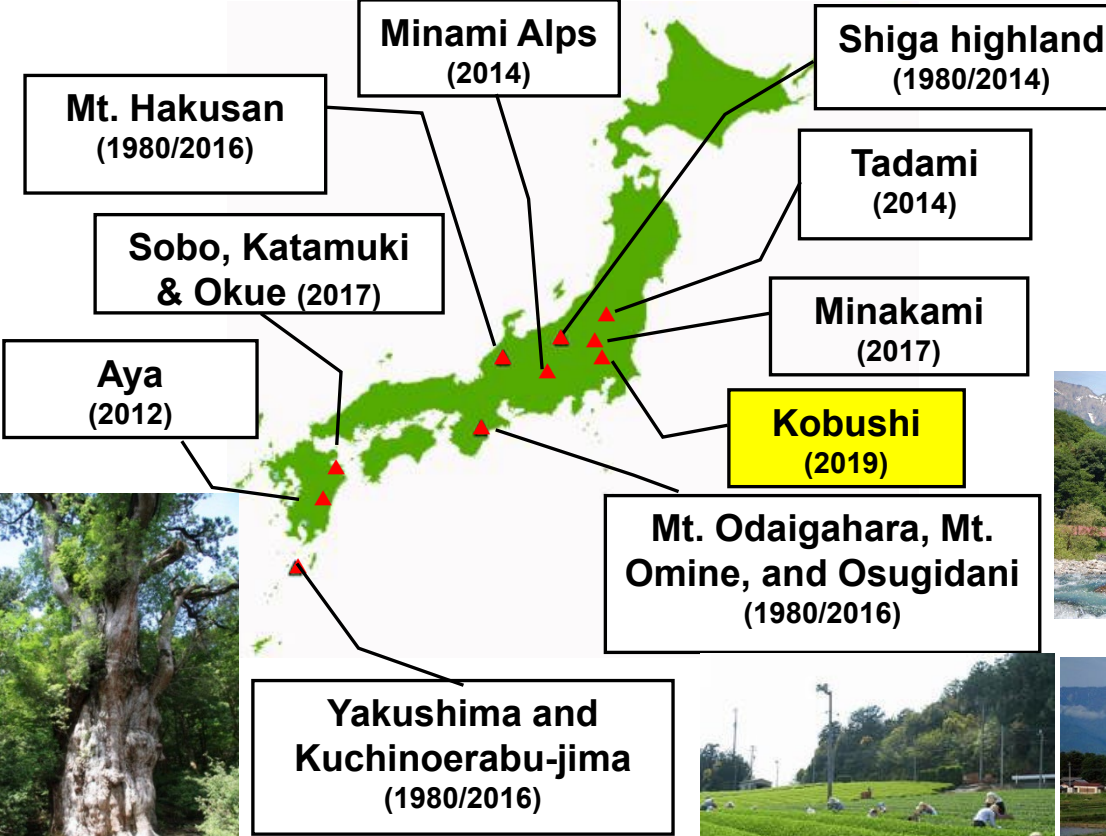
Mt. Sobo



Aya



Yakushima



Tadami



Minakami



Mt. Odaigahara, Mt. Omine and Osugidani



Minami Alps





- Japan UNESCO Ecopark Network (JBRN)
- BR is a member of the global network (mutual learning).
- Representatives from regional networks in East Asia, Southeast Asia, etc. participate every year, including the World Network of Island and Coastal BRs (WNICBR, Yakushima is invited).
- JBRN and AEON Environmental Foundation collaborated to create a video on Youtube to introduce the project → Introduced at UNESCO Headquarters MAB.

<https://en.unesco.org/mab/50years>

UNESCO

ENGLISH

MAB 50 Years | Get involved | History | Spokespeople | Biosphere Stories

Miguel Clusener Godt, Secretary of UNESCO's Man and the Biosphere (MAB) Programme and Director of UNESCO's Division of Earth and Ecological Sciences, presents an overview of the Programme and the World Network of Biosphere Reserves, including figures, curious facts and his views on both its track record and path ahead.

Holding a Masters In Biology/Ecology and PhD in Ecology, Dr Clusener Godt has been working in the Programme for the past 28 years and was designated to lead it in June 2018.

UNESCO's Man and the Biosphere Programme

Convention on Biological Diversity

Targets

- 30% protected areas
- 10% strictly protected
- 5% World Network of Biosphere Reserves

News

See all

What is our anniversary all about?

Getting together in France

Preparations for the anniversary

TOP



日本ユネスコエコパーク紹介動画（日英露）

<https://www.youtube.com/watch?v=ehkTKrWcx4Y> (Eng)

<https://www.youtube.com/watch?v=BtOicniNDQw> (Jpn)

<https://www.youtube.com/watch?v=vQdhZBdGZFU> (Rus)



▲自伐型林業研修の様子



▲木材ステーションのイメージ



▲自伐グループによる環境教育



▲町内産材で「木育」を推進

林業の六次産業化
経済の地域内循環

経済

経済面の相乗効果①
地域コミュニティの強化
雇用創出による定住促進

社会

地域に根差した教育
関係人口の増加

社会面の相乗効果①
サポーターの訪問の促進

森林資源を活用した稼ぐ力の強化と循環経済の確立

- 自伐型林業による担い手の育成
- 木材ステーションの設置と販路開拓による流通の促進
- ポイント制度による経済の地域内循環の促進



地域に根ざした特色ある教育の推進と関係人口の増加

- 「ユネスコスクール」によるESDの推進
- 暮らしに木を取り入れる「木育」の推進
- サポーター制度による関係人口の増加



森林・里山整備と木質バイオマス利用推進

- 新たな担い手による森林・里山整備の促進
- 薪ボイラー・薪ストーブの導入促進

環境面の相乗効果①
地域内への経済の還流

環境面の相乗効果②
鳥獣害の軽減、QOLの向上

経済面の相乗効果②
森林・里山整備の促進

社会面の相乗効果②
環境を保全する人材の育成



▲町内で導入された薪ボイラー

環境

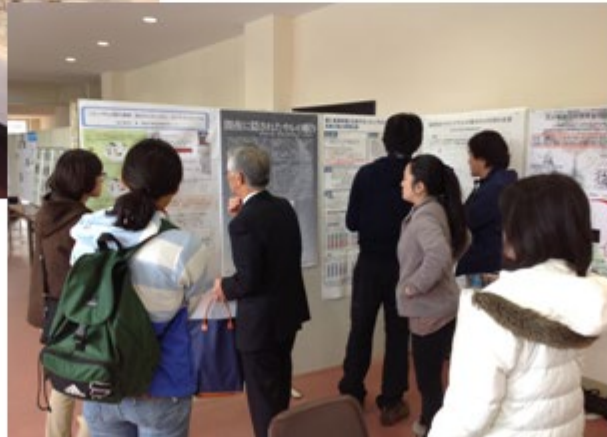
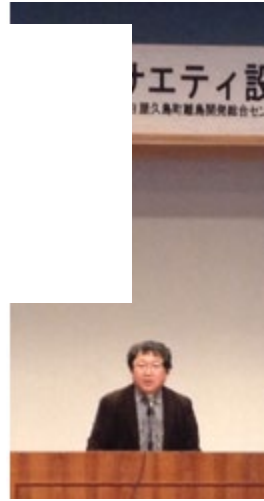
森林・里山整備
木質バイオマス利用



▲自伐グループによる森林整備

The Society of Yakushimaology established in Dec. 14-15, 2013

About 200 scientists and islanders participated in the first meeting.





MAB compiles good practices of SDGs



Man and the Biosphere



JAPAN | AYA BIOSPHERE RESERVE | THE ECOLOGICAL AGRICULTURE EFFORTS OF "AYA TOWN" CO-EXISTING WITH NATURE



The **Aya Biosphere Reserve** is the largest evergreen forest left in **Japan**, where many **Japanese** endemic species live and grow. The city of Aya has been implementing regional promotional measures that ensure co-existence between nature and people, utilizing such means as collaborations with organic agriculture. It has been cultivated for over half a century based on the "Promulgation of the Ordinance for Nature Protection in Aya Town", "Promulgation of the Ordinance concerning the Promotion of Agriculture that systems" and "Landscape Ordinance of Aya Town".

- [More information](#)
- Other related SDGs: SDG 2 Zero Hunger, SDG 3 Good Health and Well-Being, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action



UNESCO

United Nations
Educational, Scientific and
Cultural Organization

IN BRIEF

WHAT WE DO

WHERE WE WORK

PARTNERS

JOIN US

RESOURCES

"Building peace in the minds of men and women"

Home > Man and the Biosphere (MAB) Programme > Strategy and Roadmap > Good Practices

Man and the Biosphere (MAB) Programme



Good Practices

Local Actions for the Sustainable Development Goals



島嶼BRを重視するユネスコMAB

世界島嶼海岸生物圏保存地域ネットワークWNICBR



2012.2 第1回WNIBR会議（スペイン・メノルカ島）
松田が招かれ、屋久島の紹介



2013.8 第3回WNIBR会議（西エストニア）
環境省岡野氏が招かれ、屋久島の紹介

Third meeting of the Global Network of Island and Coastal Biosphere Reserves



屋久島NPO

2012.9 第2回WNIBR会議（韓国濟州島）
手塚氏が招かれ、屋久島の紹介



© UNESCO/Alison Clayson
Galapagos: sea lion couple relaxing

This is the third meeting of the Global Network of Island and Coastal Biosphere Reserves which was created at the 21st Session of the International Coordinating Council of the Man and the Biosphere Programme (MAB-ICC) in 2009 that was held in Jeju (Republic of Korea). The Global Network of Island and Coastal Biosphere Reserves aims to realize the potential of biosphere reserves in addressing climate change, particularly as places for learning about sustainable development and also for experimenting on mitigation and adaptation measures on climate change. The first meeting of the Global Network of Island and Coastal Biosphere Reserves was held in Menorca, Spain, from 13 to 15 February 2012 and the second meeting was held on Jeju Island, Republic of Korea from 12 to 13 September 2012. This is the third meeting of the Network.

第3回島嶼沿岸BR会議 (エストニア、2013年6月)

Estonia Is. BR

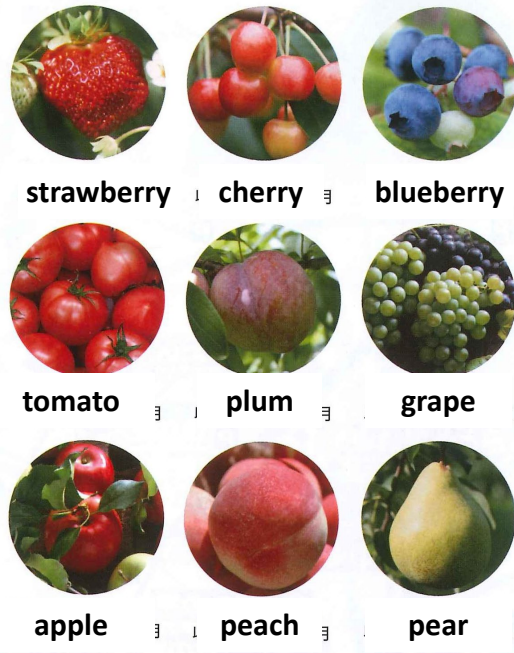


2013.10には中国長白山に綾BRが旅費付き招待

The city at the source of the Tone River

Minakami BR nurtures water sources, forests and people

- ? Learn about the nature and way of life of BR, which is different from our own. Touching, knowing and accepting what is different from ourselves is the basis of our humanity.



Partnership with private sectors (LAP/C4)

By 田中俊徳氏

Mar. 20, 2019

MAB Nat. Com.

- Collaboration with **AEON Environmental Foundation**

- Annual tree-planting event among MOU partners
(Aya Town, Miyazaki Pref., AEON EF, and Forestry Association)



BRs near cities

- Fresh vegetables and fish for city dwellers and day trips for forest therapy, excursions and hot springs.
- There are also handicrafts, local specialities and a botanical garden with seasonal flowers



The town has developed a comprehensive long-term plan to realize a sustainable development society in harmony with nature.



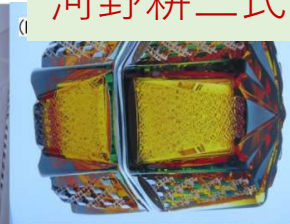
深山に入るための、つり橋



町営博物館



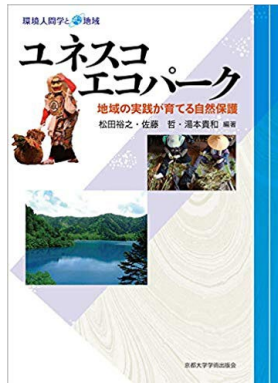
ツアーガイドの研修



木工は観光にも活用



認証ラベル制度



ESD in Shiga Highland BR (Shinshu Univ.)

The Shinshu ESD Consortium, founded mainly by the Faculty of Education, Shinshu University, has been working on ESD support at Shiga Highland BR. Dispatch teachers to ESD national conventions and workshops in other regions to exchange and exchange information



他地域のESD全国大会やワークショップに教員を派遣し、交流や情報交換を行う。

各学校で全教員を対象としたESDワークショップの実施

海外からの視察・交流の受入れ



Biosphere Reserves for Future Generations

Educating diverse human resources in Japan, Russia and Belarus

Биосферные резервы для будущих поколений

Образования для развития человеческого капитала в
Японии, России и Беларуси

Ms. Aida Mamadova: MAB
Young Scientists Award



Participants in the international forum (mainly from Kanazawa University, invited guests, Shirayama Biosphere Reserve Council, AEON Environmental Foundation, Russian program students, homestay international students, etc.) (Photo: Kanazawa University)



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Russian program student holding a certificate (Photo: Kanazawa University)

Biosphere Reserve for future generations

BSU=Belarusian State University:



Communicate with work tools 9/17 Interact in an monastery 9/17 Leaders of the movement to establish a protected area 9/17 Handmade goods placed in the museum 9/17



road clearing 9/17 Lock gates of Wilderness Reserve 9/17 In front of the BR border signboard 9/17 Freshwater fishery company workshop 9/18



Lunch with locally caught fish 9/18 Tour of wetland reserves 9/18 Introduction of Shiramine's efforts to BSU staff 9/20 BSU Biology Museum front 9/20

Site visit to Belarus and Russia

(写真: 飯田義彦)



Japan MAB Programme University Network (established in Autumn 2021 hosted by Kanazawa University)

Members in Autumn 2021

- Associate Professor Aida MAMMADOVA at Kanazawa University (Representative)
- Professor Hiroyuki Matsuda at Yokohama National University
- Deputy Director and Professor Tetsu Sato at Ehime University
- Associate Professor Yoshihiko Iida at Tsukuba University

Tadami BR's Research Grant Outcomes Presentation Meeting

- Tadami Town subsidizes research using BR, holds annual presentations of the outcomes, and publishes progress report every year.

e.g. Ms. Nishizaka (Yokohama Natl Univ.)
“Changes in phenology of leaf development with tree height in a heavily snow-covered beech forest in Tadami”

平成30年度「自然首都・只見」 学術調査研究成果発表会

日時 平成31年1月27日(日) 13:00~16:30
会場 朝日振興センター2階ホール(只見町黒谷館658)

プログラム

【第1部】平成30年度「自然首都・只見」学術調査研究助成事業

- 13:15~ 伊南川の河川攪乱がハリエンジュとヤナギ類の分布に及ぼす影響
庭野元気(新潟大学農学部生産環境科学科)、崎尾均(新潟大学農学部)
- 13:45~ 多雪地ブナ林における個体間・個体内の相対葉群高に応じた開葉日の変化;
葉形質に着目して
西坂志帆(横浜国立大学大学院 環境情報学府)、酒井暁子(横浜国立大学大学院
環境情報研究院)
- 14:20~ 北限地域におけるヤマグルマ林の群集組成と林分構造
菊地賢、須崎智応、鈴木和次郎(希少種保全研究会)
- 14:50~ 只見町の植物資源における機能性物質の探索
目黒周作、桑原隆明(茨城キリスト教大学生生活科学部 食物健康科学科)

参加費
無料

【第2部】沼ノ平総合学術調査研究事業

- 15:35~ 沼ノ平総合学術調査の途中成果報告
崎尾均 氏(新潟大学農学部附属フィールド科学教育研究センター-佐渡
ステーション 教授、沼ノ平総合学術調査団団長)



主 催：只見町 (Organized by Tadami-Machi)
お問い合わせ：地域創生課ユネスコエコパーク推進係
☎ 0241 (82) 5220
(Contact: Regional Revitalization Division, UNESCO Ecopark promotion office)



ESD utilizing BRs (Guidebook for Teachers)

Aiming for coexistence of nature and humans

Part 1 What is ESD in BRs?

1. The Importance of ESD
2. What is MAB Program and BRs?
3. Basic principles of ESD in BRs

Part 2: Overview of BRs in Japan

- Tadami, Shiga Highland, Mt. Hakusan, Minami-Alps, Odaigahara-Omineyama, Aya, Yakushima

Part 3: Characteristics and Issues of Each BR in Japan

- Nature and People's Life in Tadami BR
 1. Geographical location & social/ecological background of Tadami Town
 2. Characteristics of the natural environment in Tadami BR
 3. Relationship between nature and people's life (especially about culture)
 4. Local issues / 5. existing efforts /6. exercises



ユネスコ講座運営態勢（案）

- ユネスコチェア運営委員会（～国際戦略室運営委員会）
- **MAB/SDGs副専攻プログラム**運営委員会
- **PBL海外研修**（詳細未定）
- MAB/PES研究会（**都市とBR**=県西をBRに??）
- 国際助言委員会（詳細未定、**アジア太平洋**）
- *ESD???*（**教材作成**）
- ユネスコスクール???

(Planned) Minor Education Programs “MAB/SDGs” in YNU

All YNU Entry: Faculty of Engineering Science, Faculty of Urban Sciences, Faculty of Education, Faculty of Economics, Faculty of Business Administration

Both Undergraduate and Graduate Programs

Core MAB/ESD Subjects

+

SDGs Subjects

+

International PBL training



THE UNIVERSITY OF DANANG

in Vietnam



in Thailand

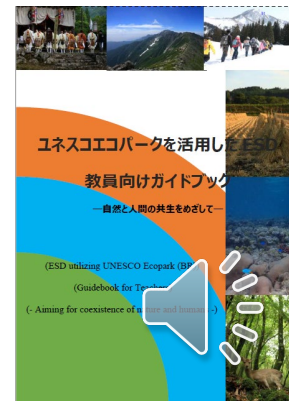


in U.S.A.



A New Lecture from 2022: UNESCO's Man and the Biosphere Programme and Sustainable Development Goals

- Purpose The UNESCO Man and the Biosphere (MAB) Programme aims to harmonize sustainable development and biosphere conservation. In addition, the SDGs aim at environmental protection and comprehensive development of human society. Students will learn about these principles, consider and discuss practical issues of their own choosing on how to develop in harmony with the environment, society, and economy, and learn what it means to be responsible for the SDGs based on the MAB plan.
1. What is the UNESCO MAB Plan (H. M.)
 2. Comparison of World Heritage Sites, BRs and UNESCO Global Geoparks (H. M.)
 3. Characteristics and challenges of biosphere reserves in each country (S.T.)
 4. Characteristics and challenges of biosphere reserve areas in each country (S.T.)
 5. **Payments for ecosystem services** (PES) and BR areas (H. M.)
 6. ESG investment and branding of BR products (H. M.)
 7. Characteristics and challenges of PES initiatives in each country and municipality (S.T.)
 8. Introduction of SDGs and BR good practices (H. M.)
 9. Issues of SDGs initiatives of each country and local government (S.T.)
 10. ESD (Education for Sustainable Development)
 11. ESD and Biosphere Reserve (H. M.)
 12. Let's make an ESD program using BR



Overseas Globalization Exercise I or II:

- **Style: Intensive Course**

- "Overseas Project-based Learning in Emerging and Developing Countries" will provide the priceless opportunities to learn basic skills how to practically implement the knowledge about technology to sustainable development, to understand the cultural and historical backgrounds in the emerging and developing countries, and to study the actual situation in local industries. It is expected that the students can improve the internationality and can enlarge their education to be a global leader to nurture a friendly relationship with foreign countries.



- The selected excellent students firstly get an initial guidance for the activities including safety and security training. They will visit an overseas partner university to join the collaborative lectures together with local students. In addition, they will visit some historical and cultural places including UNESCO world heritages. They will also visit local industries. At the last, they should make a presentation about their activities at the workshop held in the partner university.

- It requires 45 hours or more (in total, about 2 weeks) as the actual working time for PBL activities. Finally, the students should summarize their experiences as a final report and should submit it for evaluation.



Overseas Globalization Exercise I or II:

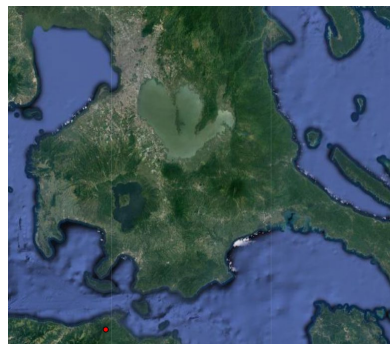
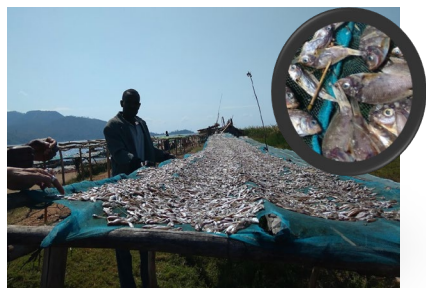
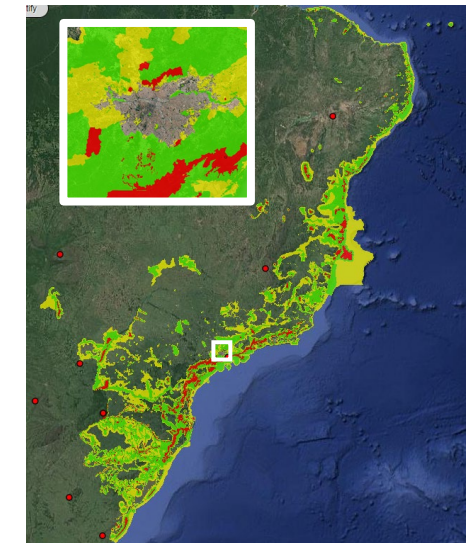
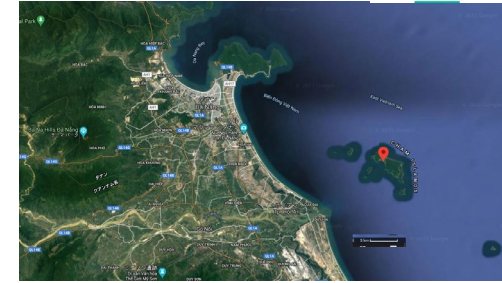
- **Schedule**

- [Before the oversea PBL, at YNU] - Initial guidance including safety and security training
- [1 st day of oversea PBL] (Sunday) - Outward journey from Japan
- [2nd day of oversea PBL] (Monday) - Opening event with partner university - Instruction for PBL activities - PBL activities (Students select a course from Material mechanics, Heat transfer, and Robotic control)
- [3rd day of oversea PBL] (Tuesday) - PBL activities (Cont' d)
- [4th day of oversea PBL] (Wednesday) - Educational trip to local industries
- [5th day of oversea PBL] (Thursday) - PBL activities (Cont'd)
- [6th day of oversea PBL] (Friday) - Preparation for workshop presentation - Joint workshop - Closing Event
- [7th day of oversea PBL] (Saturday) - Educational trip to cultural and historical places (e.g., UNESCO world heritage)
- [8th day of oversea PBL] (Sunday) - Return to Japan
- [After the oversea PBL, YNU] - Follow-up - Final report



都市部の連携大学と近隣のBR

- Danang Univ. – [Cu Lao Cham](#) – [Hoi An](#)
- Univ. of São Paulo – Mt. Atlântika
- Dalian Univ. – Snake Is. & Mt. Laotie (蛇島老鉄山)
- *Prince of Songkla Univ. – Ranong BR
- *Univ. Saskatchewan – Redberry L. BR
- Univ. of Philippines – Puerto Galera
- *Univ. of Hormozgan – Hara*
- *Univ. of Malawi – Lake Chilwa Wetland*



Tagokura Dam at Tadami BR, Japan

- Height 145.0 m
- Water surface area 995.0 ha
- Total water storage capacity 494,000,000 m³
- Year of construction start/completion: 1953/1960
- Watershed area 816.3 km²
- Power generation: 400 MW
- The village 50 families, including *matagi* (traditional hunters), opposed against the dam, but finally accepted the compensation and relocated.
- We must pass this history on.

<http://tadami-buna.sblo.jp/article/93293958.html>



Tsuginosuke Kawai Memorial Hall 



Tokyo Megalopolis depends on water source of Minakami and Kobushi BRs.



Minakami
Biosphere Reserve



- 重力式コンクリートダム
- アーチ式コンクリートダム
- ロックフィルダム
- 堰(せき)

とねがわすいけいじょうかりゅうこうりゅう
利根川水系上下流交流
 利根川が結ぶ群馬と東京

MAB/PES Study Group of YNU

- Purpose: An interdisciplinary team to study the significance and issues of water source forests in Kanagawa Prefecture from the perspective of UNESCO's Man and Biosphere (MAB) Programme and SDGs.
- Content: We aim to cooperate with local governments in terms of scientific knowledge and human resource development by integrating environmental conservation activities related to UNESCO's MAB Programme, the relationship between water sources in the BR site and urban residents who use them, activities for disaster risk reduction (DRR) and climate change mitigation and adaptation measures (CO2 reduction, carbon fixation, waste disposal, recycling, clean energy, urban engineering, etc.), with a focus on the UNESCO Chair applied for by YNU.
- Members: 11 faculties and 1 graduate student (as of Jan. 15, 2021)

We consider designation of a new "Tanzawa" BR With Kanagawa Prefecture



BRs and other regions are also dependent on interaction with the outside world, including cities.

- We can also see As the coronavirus pandemic severely restricted urban activities and human mobility, including tourism, and the relative maintenance of primary industries, the differences in impacts will be characterized by external interactions.



Many tourists and shops in 2018

Lake Malawi WH



Very few tourists in 2021



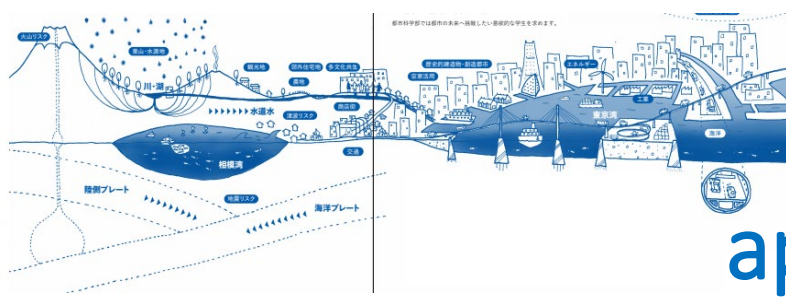
“Nature-oriented sustainable society with Biosphere Reserve and other frames”

- Graduate School of Environment & Information Sciences
- Syllabus (ca.80 students/year; master course lecture in Japanese)

8 Weeks

- 1) Outline of the system of BRs under the MAB Programme
- 2) Trends in the BR system in the world and Japan
- 3) Examples for BRs of Japan that governed by single municipalities
- 4,5) Examples for BRs of Japan that managed by multiple local governments
- 6,7) Various systems to enhance a society in harmony with nature
- 8) Utilizing the system; problems and hints for solution





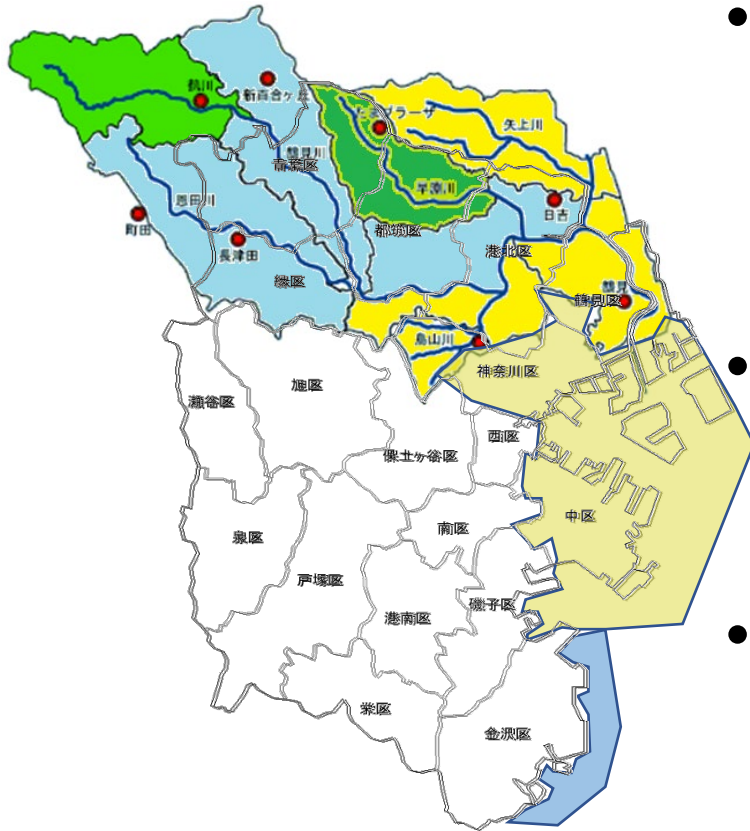
Students learn BRs, apply it to their home areas.

- Report assignment for the 1st week of lecture in “Urban Science A”: (a compulsory undergraduate course in the Faculty of Urban Sciences, a 90-min lecture in Japanese, >100/year)
- 1st week: “Natural Environment and Cities: Regional Development using BRs”
- If you were to create a new biosphere reserve in your hometown or in a region related with you, what kind of zoning or initiative would you consider? Please describe freely.

Submit as a PDF file with no limit on length.



Yokohama BR plan (Shoma Fukui) modified by H.M.



- In Yokohama City, we will focus on the biodiversity conservation in rivers (e.g., Tsurumi Riv. And Hayabuchi Riv.) and marine.
- Water pollution has once been a problem and water quality improvement was an urgent issue.
- But a risk trade-off between eutrophication measures and the marine ecosystems degradation.
- In Yokohama City, the domestic wastewater should be regulated for the purpose of sustaining life and marine ecosystem conservation.



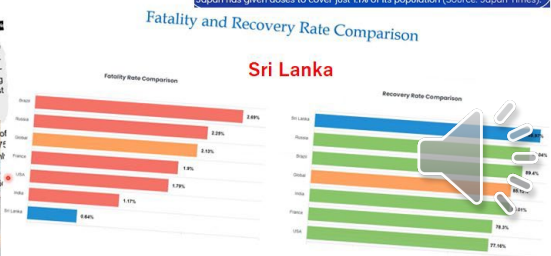
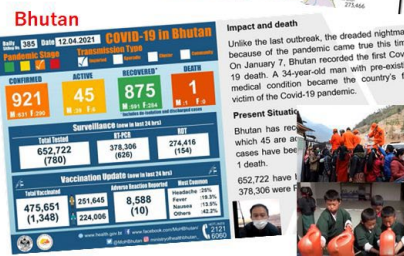
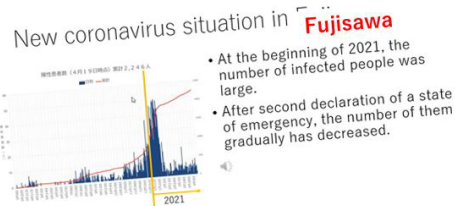
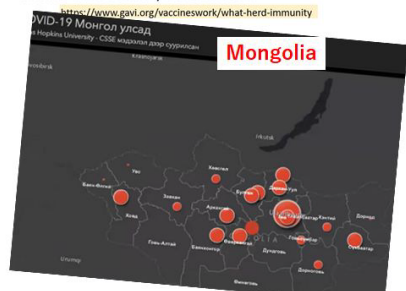
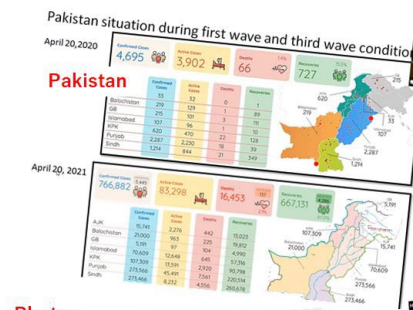
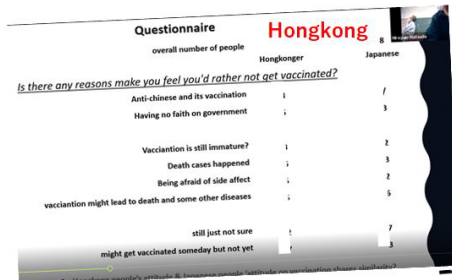
“Environmental Risk Management for Infrastructure” (in English)

- A lecture in Master Course, Infrastructure Management Program, funded by World Bank
- Students will introduce and discuss the situation in their home countries based on classroom lectures on COVID-19, climate change, BR, etc.

Herd immunity 集 Lecture



- Herd immunity is the indirect protection from a contagious infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infection.
- This means that even people who aren't vaccinated, or in whom the vaccine doesn't trigger immunity, are protected because people around them who are immune can act as buffers between them and an infected person.
- Once herd immunity has been established for a while, and the ability of the disease to spread is hindered, the disease can eventually be eliminated.



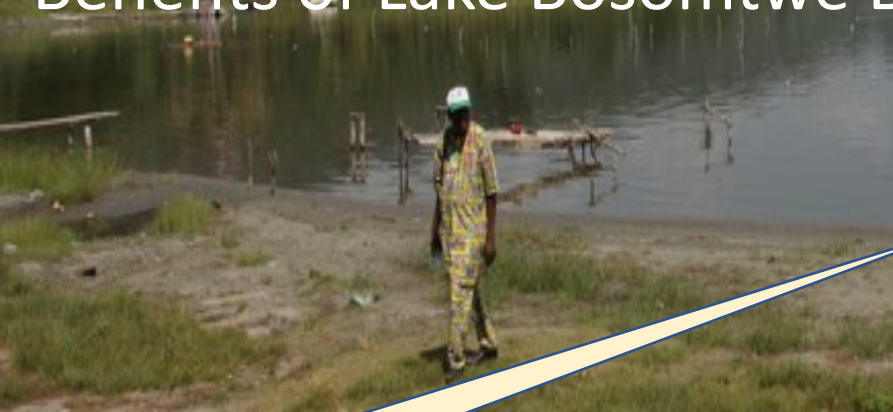
Lake Bosomtwe Biosphere Reserve (Ghana)

Lake Bosomtwe Biosphere Reserve ...

Ecological Characteristics

Socio-economic Characteristics

Benefits of Lake Bosomtwe Biosphere Reserve



自然だけでなく、
人間活動も紹介

ESD utilizing BRs (Guidebook for Teachers) Aiming for coexistence of nature and humans

Part 1 What is ESD in BRs?

1. The Importance of ESD
2. What is MAB Program and BRs?
3. Basic principles of ESD in BRs

Part 2: Overview of BRs in Japan

- Tadami, Shiga Highland, Mt. Hakusan, Minami-Alps, Odaigahara-Omineyama, Aya, Yakushima

Part 3: Characteristics and Issues of Each BR in Japan

- Nature and People's Life in Tadami BR
 1. Geographical location & social/ecological background of Tadami Town
 2. Characteristics of the natural environment in Tadami BR
 3. Relationship between nature and people's life (especially about culture)
 4. Local issues / 5. existing efforts /6. exercises



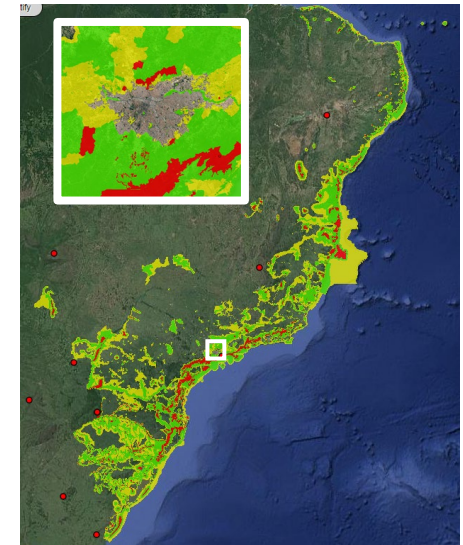
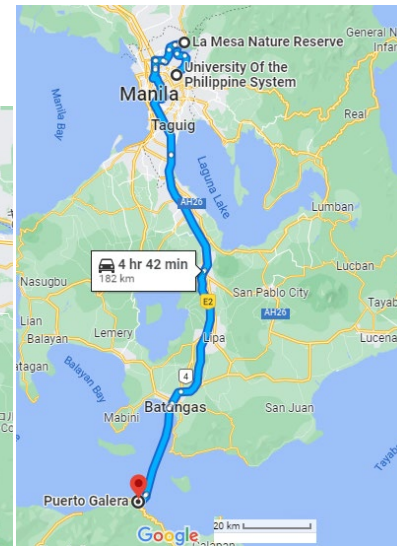
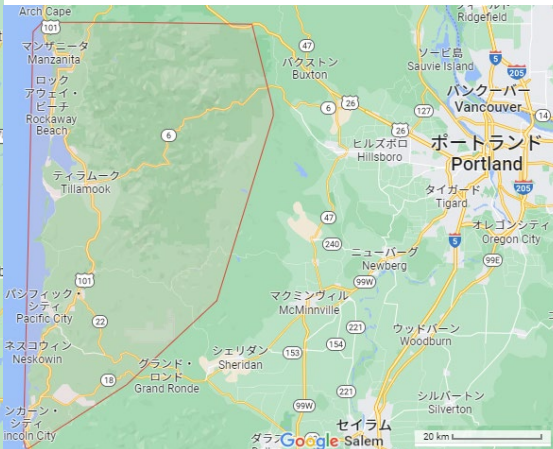
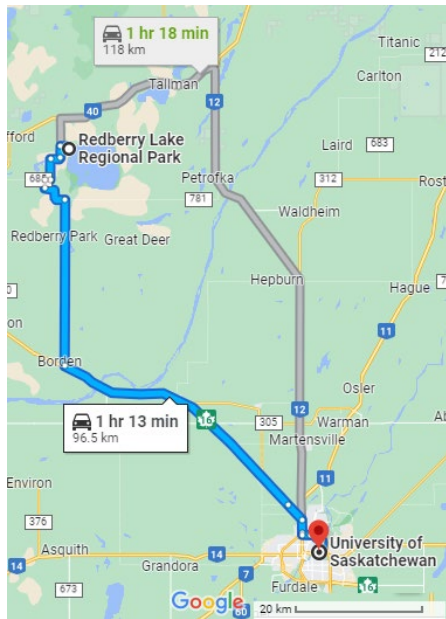
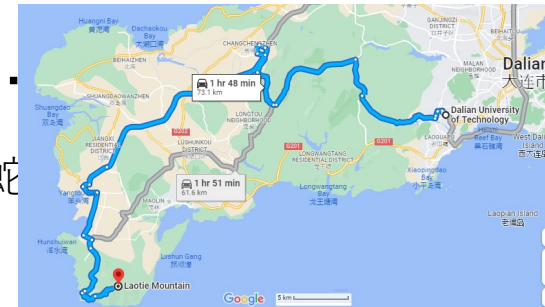
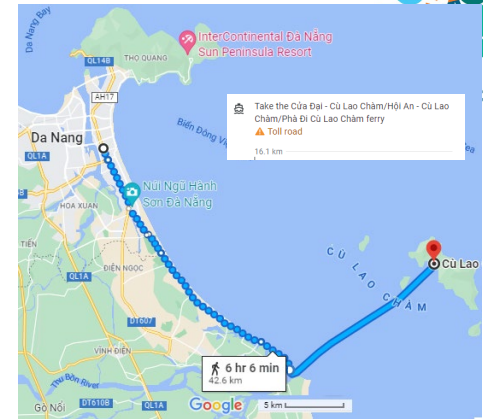
6. Exercises (for BR “X”)

- Propose specific measures and methods to solve the regional issues faced by BR “X”.
 1. List regional issues other than mentioned above for the sustainable development of BR “X”.
 2. Choose one of the issues listed above or (1), and describe your own solution through documents and interviews with residents.
 3. Form groups of people who chose the same issue, compare and discuss solutions within the group, and select the best solution.
 4. The representative of the group should present the best solution and evaluate it among the groups.
 5. Present and discuss the solution to the residents.



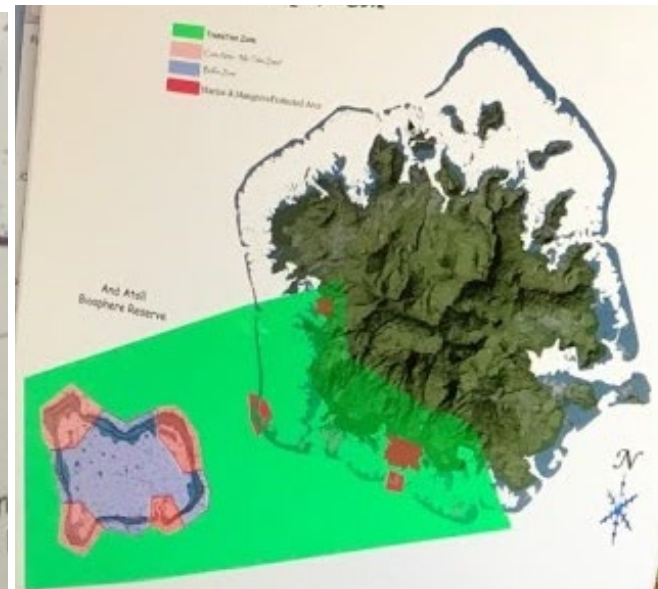
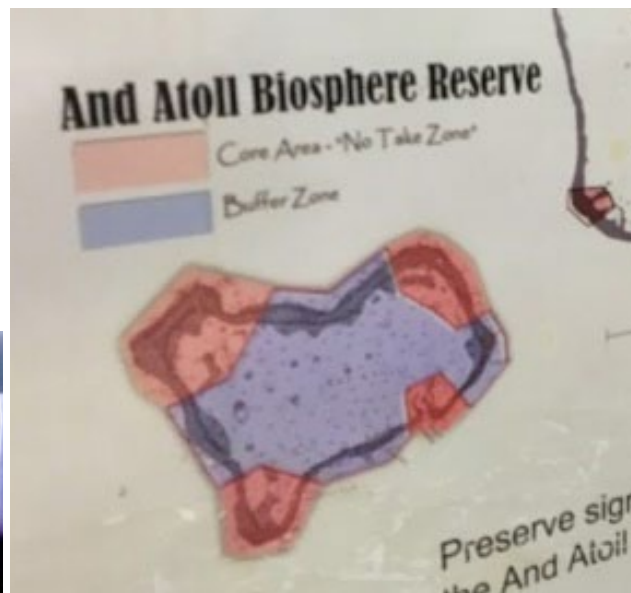
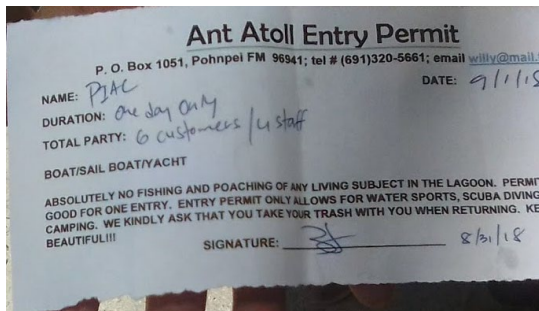
Sites candidate for short-visit

- Danang Univ. – Cu Lao Cham – Hoi An
- Prince of Songkla Univ. – Ranong BR
- Univ. Saskatchewan – Redberry L. BR
- Univ. of Philippines – Puerto Galera or..
- Dalian Univ. – Snake Is. & Mt. Laotie (蛇)
- Univ. of São Paulo – Mt. Atlântika



アッツ環礁 (And Atoll) 生物圏保存地域、 ミクロネシア連邦 2018/9

- 2018/9/1 アッツ環礁訪問 (日本人ガイドツアー)、文献調査
- 9/2 ポンペイ保護協会 (CSP) 訪問、レポート作成
- 2007年登録。約74km²の環礁域のうち、4カ所の島と周辺の小島に**核心地域**が設けられ、残り全域が**緩衝地域**で、持続可能な利用を図る**移行地域**は設けられていない (2018年現在)
- ポンペイ保護協会 (CSP) が**移行地域**の設定案を掲示
- 観光名所 (Scuba diving)。島の土地所有者が立入許可証を発行
- 密漁の監視台。日本の観光業者が密漁→立入禁止→別の島で観光業





アンツ環礁Dewenie水路のサンゴ礁

@6.7720867,157.9260187,12694m



アンツ環礁の地図 (Google Map)



その水面下の様子 (ガイド提供)

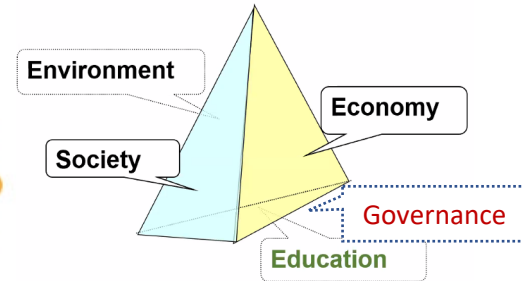


アンツ環礁の内外を結ぶ唯一の水路

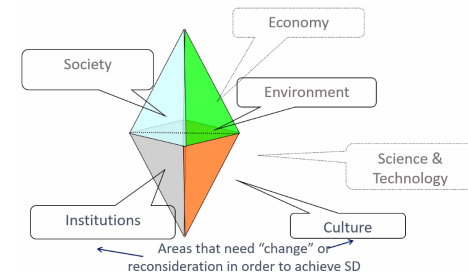
BRs farther away from cities

- City dwellers can help plant trees in the river catchment area that serves as the city's water source.
- If there is a hydroelectric or geothermal power facility, they can experience the memories of the village that was submerged when the dam was built, and experience of volcano disasters.
- They will visit contract farmers and fishers who supply the food in their daily lives, and learn about the origins of food.

past Director-General of UNESCO, Ms. Irina Bokova: “While World Heritage helps to **preserve** values, biosphere reserves are helping to **create** them” , Dresden, June 27, 2011



lecture by Prof. Michael Scoullos



関連する主な日程 Schedule

- 3/1 Clüsener-Godt 教授着任（在仏）
- 3/8 日本学術会議地球惑星部会「ユネスコ MAB計画の可能性」松田
- 4月 MAB/SDGs副専攻プログラム開始
- 9月頃18日間 JSPS-Bridgeで英国MABの M.Price教授来訪。YNU & 各地歴訪
- 秋 ブルーカーボンWebinar（予定）



M. Clüsener-Godt