What is “Living in harmony with nature?”: a new global keyword

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論座 RONZA

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科学・環境

利用と保全の調和を目指す「自然共生サイト」

国際標準となった自然との「共生」　目指すは「持続可能な寄生」

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OECM | SDGs | ユネスコ | 生物多様性 | 自然共生　2022年10月08日

ツイート　おすすめ 0　シェアする　0　コメント 0件　印刷

list

OECMのイメージ

保護地域以外にも、里地里山、水源の森、都市の自然など、様々な場所が生物多様性の保全に貢献している

2010－20年の生物多様性愛知目標の20目標　のうち、11番目では、自然保護区および「その他の効果的な地域ベースの手段（OECM）」（の合計）を17%（海域は10%）にするという数値目標が掲げられた。現在では2030年までに保護区およびOECMを陸と海でそれぞれ30%という目標が掲げられている（30by30）。OECMは愛知目標から登場した言葉と言えるが、当時は略語で特記することはなく、法的保護区に対して

The Changing Global Standard for Biodiversity

- From ecosystem services to nature's contributions to people
  - Ecosystem services are divided into Flow and Stock (United Nations University Satoyama Sea Assessment 2011)
  - Nature brings disasters as well as blessings (dis-service concept of pollinators and animal damage, JBO2, 2016)
    (Nevertheless, nature is essential for humans)
- Dasgupta Report (2021) "The Economics of Biodiversity“
  - Looking to the future in terms of inclusive wealth (stock)
    not in terms of GDP (Flow)
  - Living in harmony with nature

Millennium Ecosystem Assessment (MA) scheme

National Biodiversity Strategy of Japan

Human Well-being
- Security
- Basic material…
- Health
- Good relationship…
- Freedom of choice..

©環境省自然環境局

Indirect DFs
- Demographic
- Economic
- Sociopolitical
- Cultural & Religious
- Science & Technology

Japan NBSAP*
1. Over-use
2. Under-use
3. Disturbance
- Climate Change

Direct DFs
A) Habitat change
B) Climate change
C) Invasive species
D) Over-exploitation
E) Pollution

Ecosystem S.
- Biodiversity
- Supporting S.
- Provisioning S.
- Regulating S.
- Cultural S.

*NBSAP = National Biodiversity Strategy & Action Plan

Changes in ES under scenarios
(UN Univ. J-SSA Chap.4 2011)

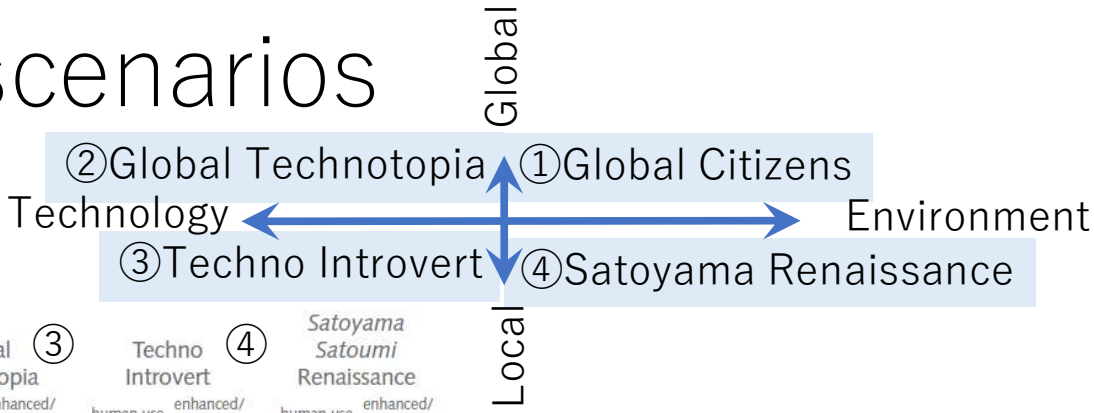
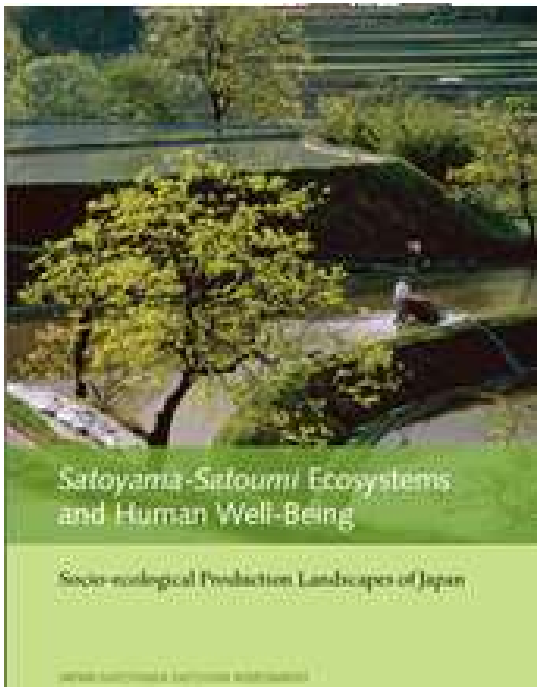
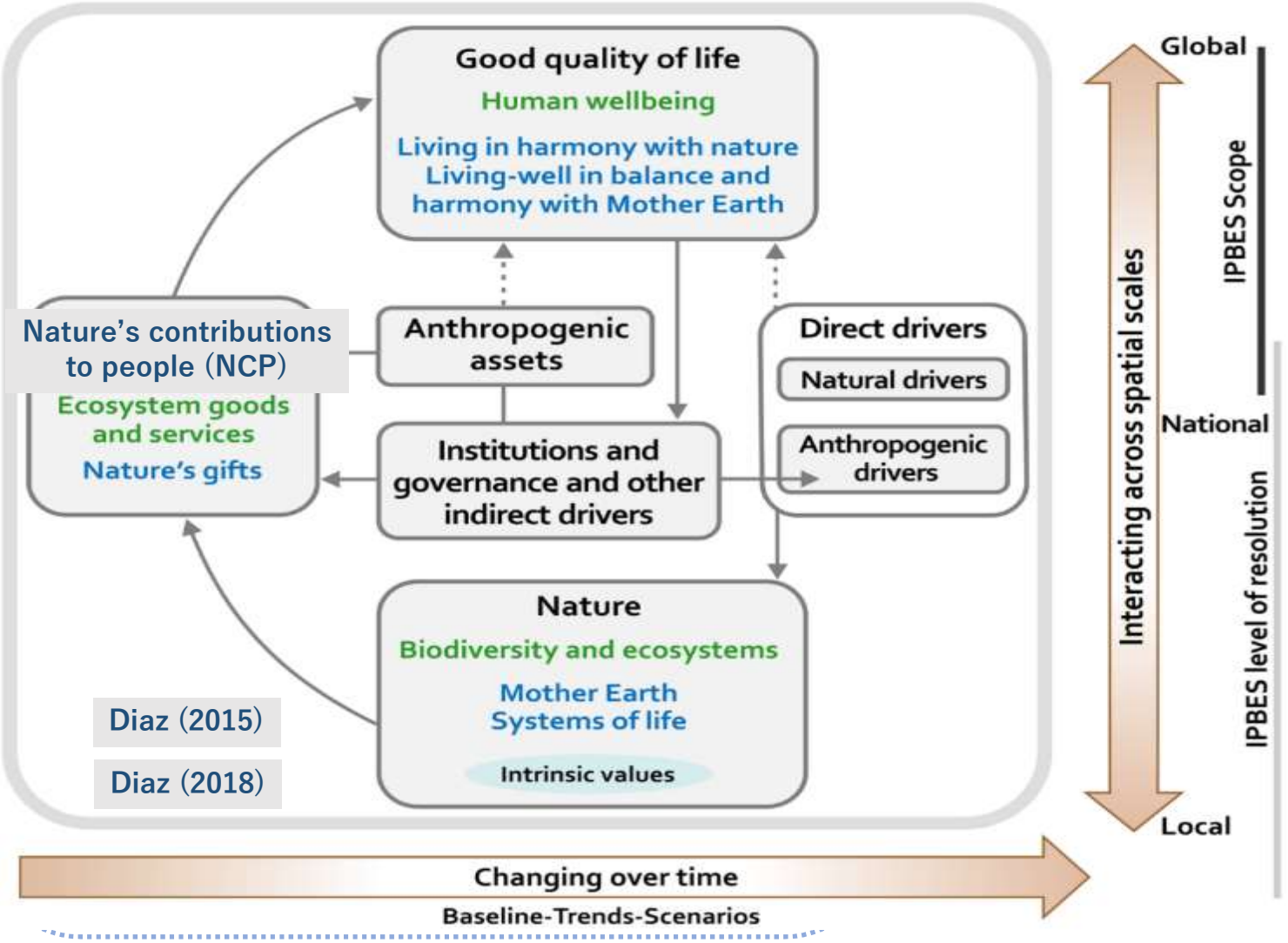


Table 3 Changes in ecosystem services under scenarios

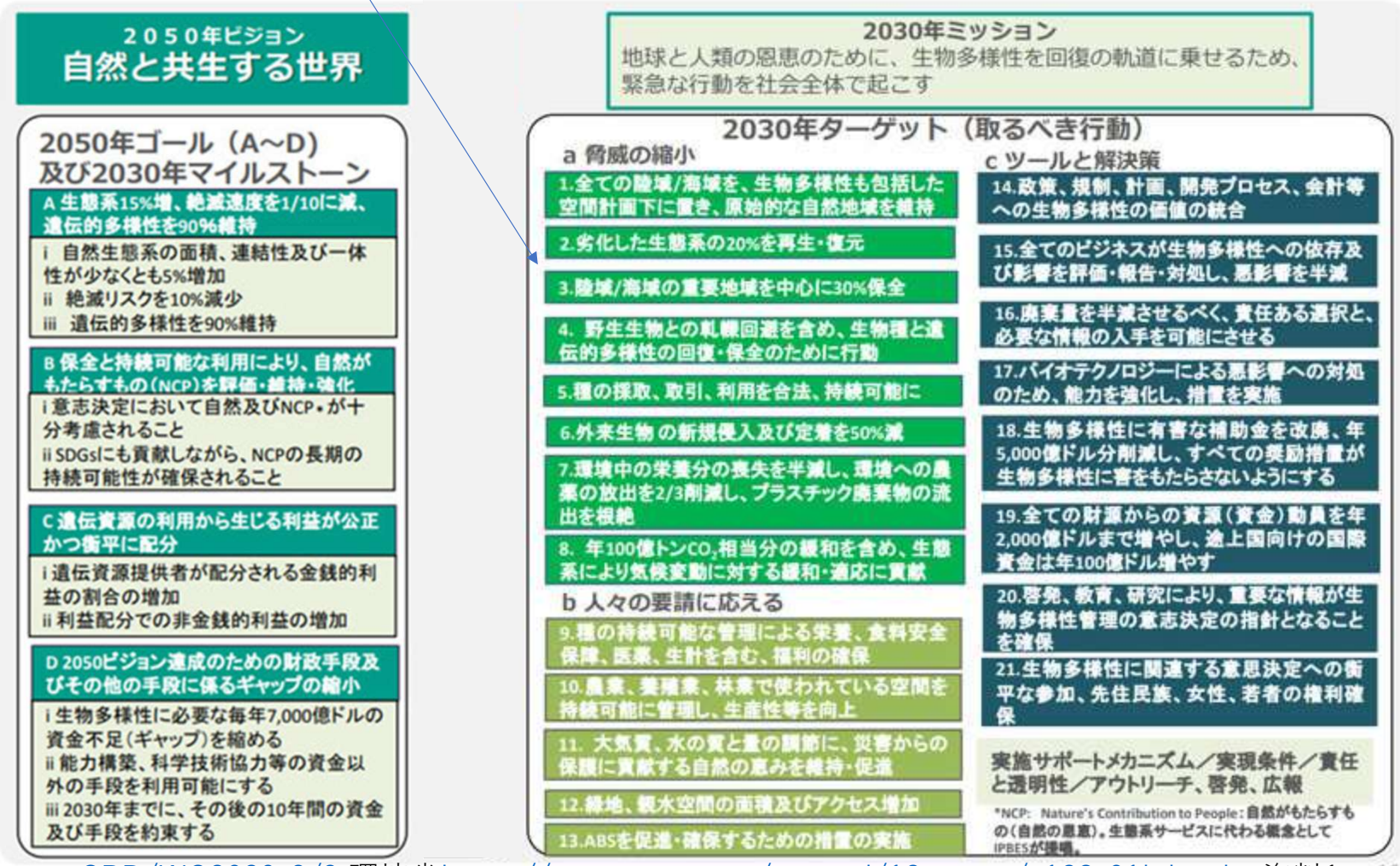
Type and Category of Ecosystem Services			①Global Environmental Citizens		②Global Technotopia		③Techno Introvert		④*Satoyama Satoumi* Renaissance	
			human use	enhanced/ degraded	human use	enhanced/ degraded	human use	enhanced/ degraded	human use	enhanced/ degraded
PROVISION-ING	energy	**fuel** (biomass, charcoal)	▲	—	▼	▲	▼	▲	▲	—
		electricity (wind, hydro)	▲	▼	▼	—	▼	—	▲	▼
	food	**fishery product**	▲	▲	▼	▲	—	▼	▲	▲
		rice	—	—	—	—	▼	▼	—	▼
		vegetable	▲	▲	—	▲	—	▲	—	▲
	fiber	**material**	▲	—	▼	▲	▼	▲	▲	—
REGULATING	**atmospheric** (climate regulation, air purification, etc)		—	—	▼	—	▼	—	▼	—
	water (flood regulation, water storage, etc)		—	▼	▼	▼	▼	▼	▼	▼
	soil (landslide, soil erosion prevention)		—	▲	▼	▼	▼	▼	▼	▲
CULTURAL	**shrines & temples, traditional knowledge**		▼	▼	▼	▼	▼	▼	—	▲
	sceneries		▲	—	▼	▼	▼	▼	—	▲
	recreation (festivals, eco-tourism, farming experience)		▲	—	▼	▼	▼	▼	—	—
	art (traditional art, etc.)		▼	▼	▼	▼	▼	▼	—	▲



Why do we conserve nature?



30 by 30 = 2030年までに陸域/海域の30％保全の構造



CBD/WG2020-3/3 環境省https://www.env.go.jp/council/12nature/y128-01b.html　資料1

30 by 30 （CBD 2020）

First Draft of the Post-2020 Global Biodiversity Framework

- The framework has 21 action-oriented targets for urgent action over the decade to 2030…
- Target 3. Ensure that at least 30 per cent globally of land areas and of sea areas, especially areas of particular importance for biodiversity and its contributions to people, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. (p.6)

www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf

Aichi Biodiversity Targets

- Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

https://www.biodic.go.jp/biodiversity/about/aichi_targets/index_03.html

Categories of Portected Areas by IUCN (N.Dudley 2008)

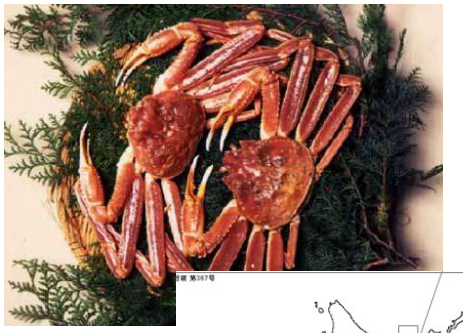
	Category of protected areas	Areas managed mainly for
Ia	Strict nature reserve	Strict protection
Ib	Wilderness area	Strict protection
II	National park	Ecosystem conservation and protection
III	Natural monument or feature	Conservation of natural features
IV	Habitat / species management area	Conservation through active management
V	Protected landscape / seascape	Landscape / seascape conservation and recreation
VI	Protected Area with sustainable use of natural resources	Sustainable use of natural resources

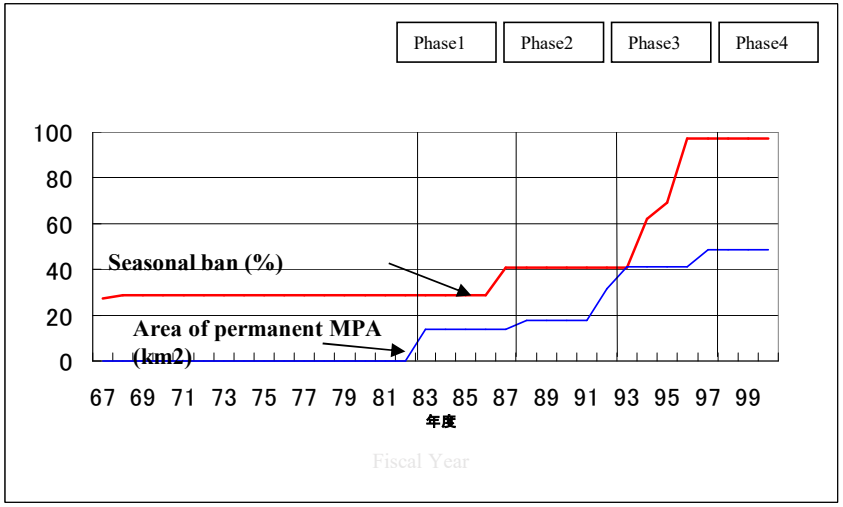
Definition of PA (Dudley 2008)

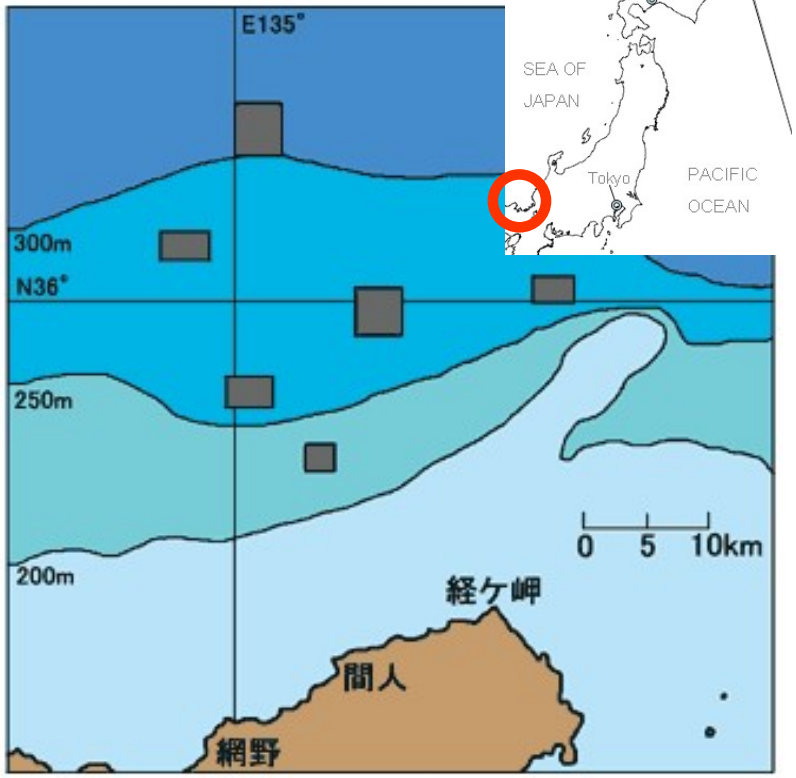
- "protected area" – An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means – and six categories:

https://portals.iucn.org/library/sites/library/files/documents/pag-021.pdf

Kyoto Prefecture's snow crab fishery persuaded the Kyoto Fisheries Experiment Station to establish a voluntary permanent no-take zone → First MSC-certified fishery in Asia







M. Makino

International Association for the Study of the Commons (Founder: E. Ostrom) chose “coastal fisheries co-management in Shiretoko World Heritage” as 1 of 6 impact stories in 2010

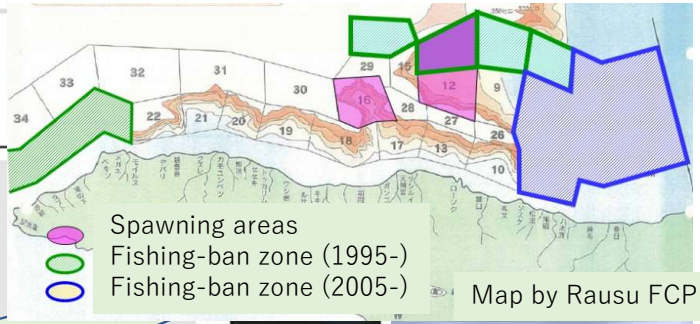
The International Association for the Study of the Commons

The leading professional association dedicated to the commons

Impact Stories http://www.iasc-commons.org/impact-stories

Co-managemnt in Japanese coastal fisheries

Marine Policy 33 (2009) 207–214



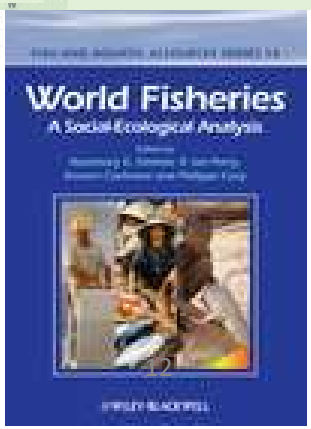
Map by Rausu FCP

Contents lists available at ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol

But it was not counted as MPA/OECM in Aichi Target



Expanding fisheries co-management to ecosystem-based management: A case in the Shiretoko World Natural Heritage area, Japan

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[c] Graduate School of Fisheries Sciences, Hokkaido University, 3-1-1, Minatomachi, Hakodate 041-8611, Japan

environment", which often means weakening their position in the coastal area.

Legal restrictions are not the only way to protect areas (Yagi et al.2010)

- Japan has 1,161 marine protected areas
- Among these, 1055 are (seasonal) no-take zones.
- >30% are not legally defined MPAs but autonomously regulated by fisheries cooperative associations.

Other Effective Conservation Measures

ARTICLE IN PRESS

Marine Policy ▮ (▮▮▮▮) ▮▮–▮▮▮

Contents lists available at ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol

Marine protected areas in Japan: Institutional background and management framework

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Recent definition of OECM

"other effective area-based conservation measure" means

- "a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the *in situ* conservation of biodiversity, with associated ecosystem functions and services and, where applicable, cultural, spiritual, socioeconomic, and other locally relevant values";

保護区の再定義が不明確

CBD/SBSTTA/22/L.2 6 July 2018

https://www.env.go.jp/press/105646.html

松田の整理

Candidates of OECM (discussed in Japan)

- It is desirable to organize marine areas where sustainable industrial activities contribute to biodiversity conservation as OECMs, referring to the findings of important marine areas (Ministry of the Environment panel*).
- OECMs in marine areas should have a mechanism for monitoring and adaptive management that reflects the evaluation results.
- (Ministry of the Environment Panel*) "It should be noted that offshore wind power plant could also be considered as an OECM if scientific monitoring and assessment is conducted after the installation of power generation facilities and the positive impacts on marine biodiversity are clarified." (Ocean Policy Society Volunteers 2022.5#)

*令和３年度第１回「民間取組等と連携した自然環 境保全（OECM）の在り方に関する検討会」資料3 海域におけるOECM 検討方針　https://www.env.go.jp/nature/oecm/r3-dai-1-kai-kentokai.html

https://www.env.go.jp/council/content/12nature03/000049585.pdf

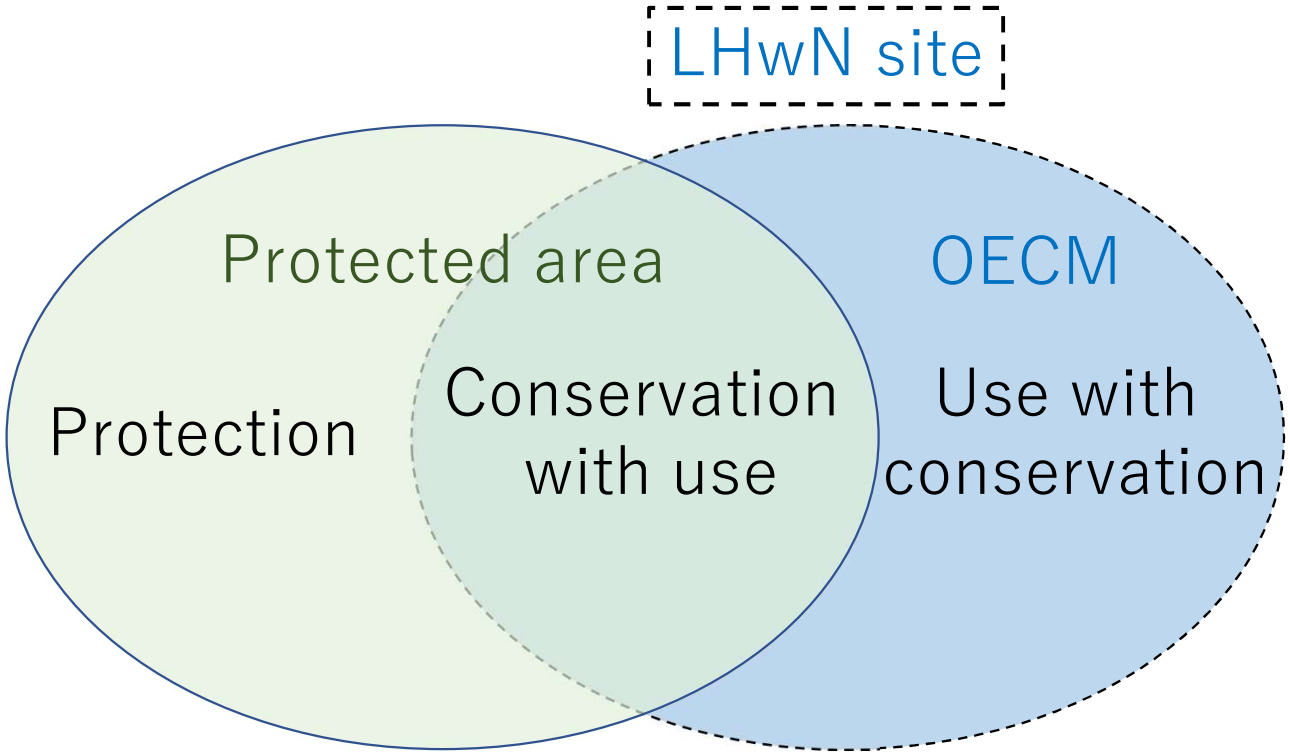
Harry Jonas & Nigel Dudley

A brief introduction to 'Other Effective Area-based Conservation Measures'

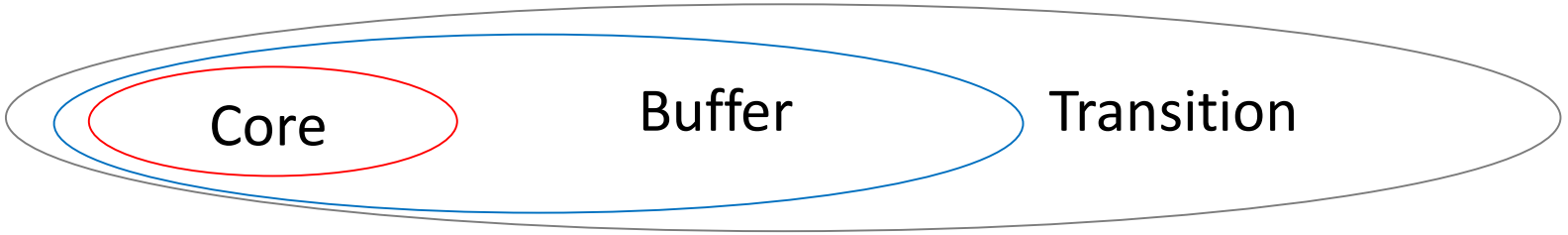
- Specifically, while protected areas should have a primary conservation objective (i.e. aim to promote the *in-situ* conservation of biodiversity), the defining criterion of an OECM is that it should deliver the effective and enduring *in-situ* conservation of biodiversity, regardless of its primary management objectives.

Blog on ICCA Consortium site: 25 October 2017

Idea on the relationship between protected area and OECM



Zoning of biosphere reserve



3 types of OECMs

1. **Ancillary conservation:** areas delivering *in-situ* conservation as a by-product of management, i.e. where biodiversity conservation is not an objective (e.g. some military training grounds).
2. **Secondary conservation**: active conservation of an area where biodiversity outcomes are a secondary management objective (e.g. some watershed management areas);
3. **Primary conservation**: areas meeting the IUCN definition of a protected area, but where the governance authority does not wish the area to be reported as a protected area. This is likely to be a relatively rare category of OECM, and would be used to avoid unintended consequences, such as in countries where government regulations forbid human occupation in a protected area [religious sanctuary]

https://www.iucn.org/sites/default/files/2022-08/01_iucn_wcpa_technical_note_series_no._1.pdf

OECM is defined by outcomes, not intentions (Naoya Furuta 2022 Biocity)

- Protected areas are "designated or regulated and managed to achieve specific objectives for conservation..." (defined and classified by their management objectives)
- OECMs are "...governed and managed in a manner that continuously achieves positive long-term outcomes for the *in situ* conservation of biodiversity" (defined by the ongoing outcomes of the management, not by its purpose or intent).
- The OECM suggests that the issue of ensuring the quality of management is more important than protected areas.

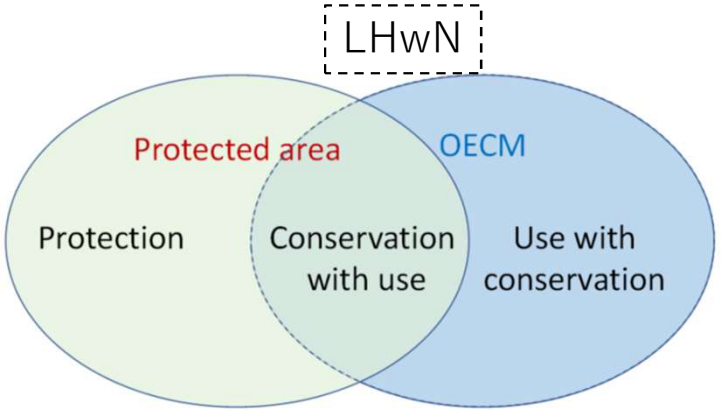
OECMs in Japan
(Makoto Tamura 2022 Biocity)

1. Private initiative areas = Areas where biodiversity conservation is being promoted through private initiatives, etc.
2. Areas managed under national systems (forests, rivers, ports, urban green spaces, etc.) that fall under the OECM category.
   - No legal restrictions even if the site is certified as a “Living in harmony with nature” site
   - In order to preserve the site as a "symbiosis with nature" site over the long term without relying on legal regulations, the "will" and "idea" of the parties involved (land owners, managers, etc.) who have been certified as applicants are very important.
   - The "Criteria for Governance and Management" and "Criteria for Conservation Effects of Management" confirm these criteria and ensure the long-term conservation of the site.

松田の整理

Ministry of the Environment's "Site for LHwN" certification project

- Areas where biodiversity is being conserved through private sector efforts, etc. (to be certified by the Ministry of the Environment starting in FY2023)
- Protected area or OECM
- Requires consent from the landowner.
- 30by30 Alliance for Biodiversity" (free of charge, individual participation is possible)



- Sites to which we ask you to provide information and other cooperation as examples of the previous year's trial and verification of the assessment process (forestry operation sites, oil refineries, nursery forests, factories, buildings, company-owned forests, natural water forests, forests with multiple thinning by self-forestation, Satoyama, cliff lines, residential forests, resort towns, coasts, coral reefs).

https://www.env.go.jp/press/111067.htmlより

Main purpose is (1) biodiversity conservation, (2) other

	想定される地域	目的	生物多様性保全への寄与	管理の内容	想定される主体
①	企業の森、ナショナルトラスト、 バードサンクチュアリ、ビオトープ、自然観察の森	生物多様性の保全	場所に応じた生物多様性保全が図られている	自然再生から極力人為を加えない管理まで 様々	民間企業、民間団体、個人、公的機関
②	里地里山 など	農林業の場、生活の場	二次的自然の形成、二次的自然に依存する生物の生息・生育の場	持続可能な資源利用、動的・モザイク的な土地利用	地域コミュニティ、個人
②	森林施業地、水源の森 など	自然資源の商業利用	森林生態系の生物多様性の維持	多様な樹種、複層の構造、生物の生息・生育環境などに配慮した施業	民間企業、個人、公的機関
②	社寺林（鎮守の森）、文化財指定・選定の地域など	信仰及び文化の対象	巨樹巨木の存在、二次的自然に依存する生物の生息・生育の場	長期的な保全	地域コミュニティ、民間団体、個人
②	企業敷地内の緑地、屋敷林、緑道、都市内の緑地 など	生活環境との調和	周辺の生態系との連結性の役割、都市及び都市近郊の生物の生息・生育の場	緑地の保全・造成	民間企業、地域コミュニティ、個人、公的機関
②	都市内の公園、ゴルフ場、スキー場など	レクリエーション	都市及び都市近郊の生物の生息・生育の場、二次的自然に依存する生物の生息・生育の場	生物の生息・生育環境の造成、多様な自然環境の維持	民間企業、公的機関
②	風致保全の樹林 など	風致景観の保全	都市及び都市近郊の生物の生息・生育の場	生物の生息・生育環境の造成	民間企業、民間団体、個人、公的機関

令和３年度第１回「民間取組等と連携した自然環 境保全（OECM）の在り方に関する検討会」資料1
「日本型」 OECMの検討状況料　https://www.env.go.jp/nature/oecm/r3-dai-1-kai-kentokai.html

Building as a candidate of the "Certified Demonstration Project for the “LHwN” sites (tentative name)

Surugadai Building" with a greening rate of over 40%.

The Surugadai Building was completed in 1984 as the headquarters of the former Taisho Kaijo. In response to local residents' requests for more greenery in the city, we utilized existing trees and constructed a rooftop garden, resulting in a building with a greenery ratio of over 40%, which was groundbreaking at the time.

Upon the completion of the new Surugadai Building in 2012, we continued the philosophy and history of the Surugadai Building, and furthermore, in order to proactively address the issue of urban biodiversity, we adopted the concept of "green space where living things and the city can coexist" and incorporated native species, trees that bear fruit and trees that produce nectar. In order to further address the issue of biodiversity in the city, we have added new green areas that incorporate native species and trees that bear fruit and produce nectar, etc. In addition, an elevator directly to the rooftop garden of the Surugadai Building and "ECOM Surugadai," a space for environmental communication with the local community, have been newly created to make the green space more open to the local community.

◆Completion：1984 ◆Laying area：17,387㎡ ◆Green area：7,090㎡

https://www.ms-ins.com/special/sustainability/greenland.html

Earthwatch Japan programs that may be relevant to OECMs

- Citizen science : Activities in which citizens participate in surveys and other activities that lead to research results as well as support for conservation activities, etc.

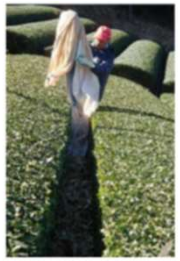
Fujinokuni Satoyama Globally Important Agricultural Heritage Systems "Tea Plantation Farming in Shizuoka

- The "tea meadow" is a semi-natural grassland for cutting grasses such as silver grass and Japanese pampas grass, which are used as organic matter in the tea plantation.

1、茶草を刈る

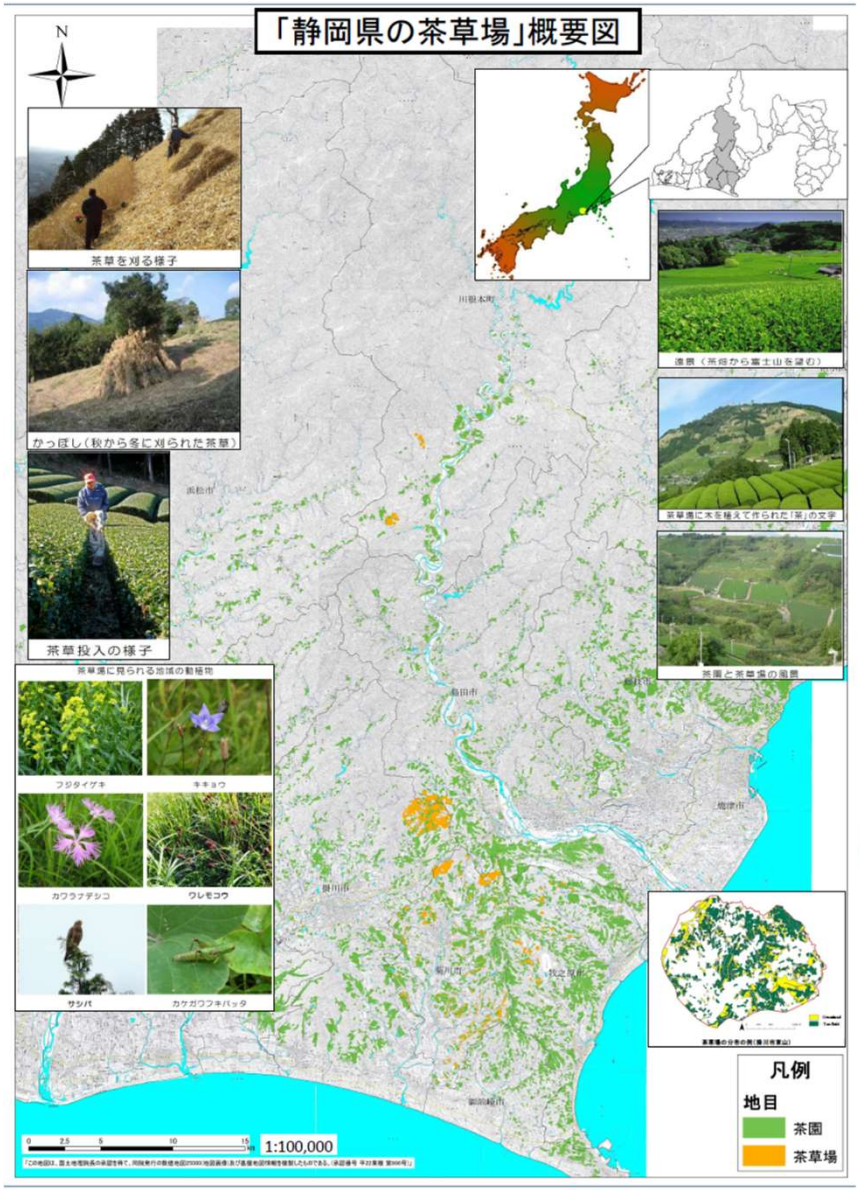
2、干す（かっぱし）

3、茶草を裁断する

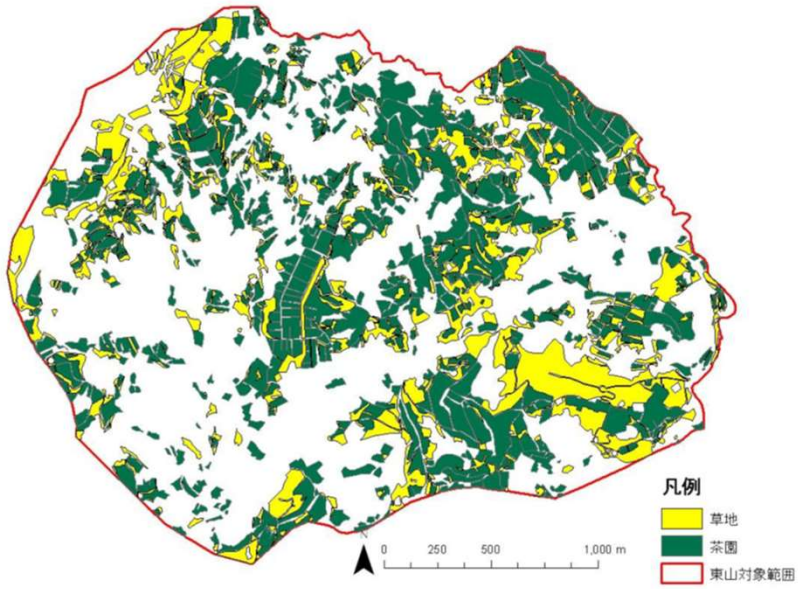


4、茶草を茶園に敷く

https://www.ocha-festival.jp/program/102



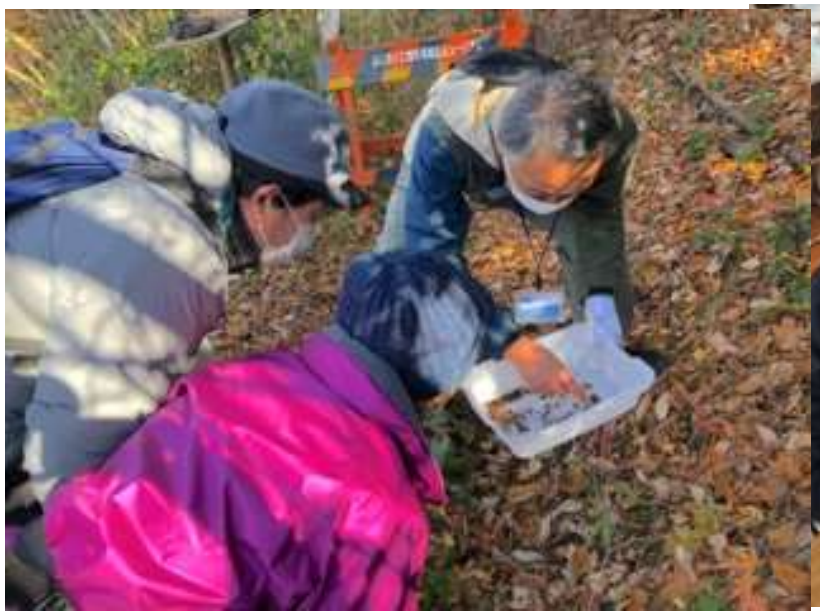
- Tea plantation area: 379 ha (242 in Kakegawa City, 83 in Kikugawa City, 38 in Shimada City, 15 in Makinohara City, and 1 in Kawane Honmachi)



https://www.city.kikugawa.shizuoka.jp/chagyoushinkou/sekainougyouis

Survey for Fujinokuni Satoyama

岸本年郎先生　早川宗志先生



Insect surveys in a wooded area in Shizuoka City, Shizuoka Prefecture, and a tea plantation in Kikugawa City, Shizuoka Prefecture

Data will be provided to the prefecture's biodiversity strategy for conservation.

https://www.earthwatch.jp/?product=fujimuseum

Kiso Horse Culture and Grassland Restoration

須賀丈先生　畑中健一郎先生　内田圭先生

Revive grassland management using Kiso horses in Kiso Town, Nagano Prefecture

Linking Kiso horse culture to the preservation of grassland biodiversity.

Kiso horse breeding area for prairie butterflies

- Kiso Kogen, Nagano Prefecture, has a history of more than 300 years as a production area for the Kiso horse, one of Japan's native horses, and as early as the middle of the 20th century, nearly 700 Kiso horses were kept in the area, and approximately 5,000 ha of semi-natural grassland was used as grazing land and pasture for the horses. However, horse keeping has since declined, and the semi-natural grassland that remains today is about 5 ha, with about 40 Kiso horses, most of which are kept through conservation and utilization projects such as the "Kiso Horse Village. EWJ Research Program Commentary 2022
The distribution records of endangered grassland butterflies tend to be found in areas where such human activities are thought to have occurred over a long period of time. This suggests that areas where semi-natural grasslands have been maintained for long periods of time may have provided valuable refugia for invading glacial steppe species." Suga, T. (2010)

Translated with DeepL

Yatsu wetland restoration program


西廣淳先生

Evaluate the function of created fallow fields in terms of organisms, rainwater storage, and water purification capacity.

Creating opportunities to think about "green infrastructure," a social infrastructure that makes the most of nature, in the field.

清水建設

企業情報 | 株主・投資家情報 | ESG経営 | 施工実績

Green infrastructure implementation at Shimizu Yatsu in Yatsubori

This is a green infrastructure project to restore a fallow rice field in Tomisato City, Chiba Prefecture as a multifunctional wetland. We aim to utilize local resources that contribute to nature positivity through collaboration among industry, government, academia, and the private sector.

We are registered as a citizen's activity in Tomisato City, Chiba Prefecture, and are engaged in restoring fallow rice fields. This is a collaborative effort with the National Institute for Environmental Studies, NPO Earthwatch Japan, and local NPOs.

谷津の再生活動

https://www.shimz.co.jp/greeninfraplus/

松田の整理

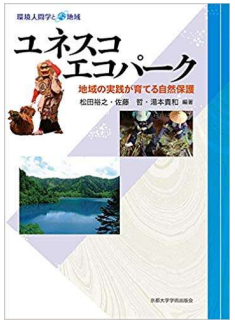
OECM encourages mainstreaming of biodiversity

- Biodiversity could be a matter of all stakeholders who are not primarily concerned with nature conservation but “care for biodiversity” by addressing the OECMs in addition to protected areas.
- Climate change has become a matter of concern for a very large number of stakeholders affected by climate change by addressing adaptation measures in addition to mitigation measures.

Dasgupta Report (2021)

"Correct economic reasoning is entangled with our values. Biodiversity does not only have instrumental value, it also has intrinsic worth – perhaps even moral worth. Each of these senses is enriched when we recognise that we are embedded in Nature. To detach Nature from economic reasoning is to imply that we consider ourselves to be external to Nature. The fault is not in economics; it lies in the way we have chosen to practise it." (P. Dasgupta, 2021)

Living in Harmony with Nature
UNESCO MAB Programme



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