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# Outline

1. NECTAとは
2. 自然再生の重要性（保全だけでなく）
3. CBD COP11で採択された自然再生決議の実施
4. 日本の自然再生：協議会方式（ラウンドテーブル）による効果的な協働の実現
5. 生態系サービスの評価等による成果の可視化の実現

- What is NECTA ?
- Call for nature restoration, not only preservation / conservation
- Nature Restoration system in Japan: Roundtable scheme of decision making
- CBD COP 11 decision for the promotion of nature restoration
- Needs for the benchmarking tools to enhance the restoration outcomes.

# Natural Environment Coexistence Technology Association (NECTA)

public-interest corporation

Experts' network founded to assist activities related to  
“ (2002).

Research & Development on:

- Technologies for and of nature
- technologies
- Technologies for the between man and nature
- technologies in the field of natural environment.

# Publication: “Reviving Nature’s Legacy”

\_\_\_\_\_based  
on the Research & Development.  
Whole processes of nature restoration  
from concept to realization; planning /  
design / construction / maintenance /  
monitoring / project assessment

**N E C T A**  
Natural Environment Coexistence Technology Association  
社団法人自然環境共生技術協会



よみがえれ自然(表紙)

workshops and training courses

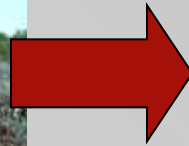


Biodiversity is essential natural capital for livelihood

# Mangrove restoration initiative in South East Asia

examples of the  
activities of  
members

What is NECTA?




-Intensive shrimp  
farming pond is not  
sustainable.

**Pollution, disease,  
acidity, salinity,,,**

-Nature oriented  
sustainable  
Silviculture + Fishery  
-Bioremediation



**By KANSO co.ltd.  
Res.Ass.Global Mangrove**

- 
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## Call for Nature Restoration



## Protected Forest Areas

### Call for Nature Restoration



1963

1963



Under Use of Forest  
Ecosystems



1997



2004

Sika deer over population  
because of declining hunting  
pressure after wolf extinction.

By Dr.T. Suganuma  
and MOE Japan

# Degradation of Sediment Transport System

## Coastal erosion

Degradation of \_\_\_\_\_ by \_\_\_\_\_  
s and excessive  
slope stabilization of  
mountain areas.



Erosion: 1/6m/year



Photos by Dr. Mukai

- ◆ Omotehama, Aichi & Shizuoka
- ◆ Sea turtles are refused to lay their eggs.

Photo: Omotehama Network





NHKブックス No.1193

森林飽和国土の変貌を考える

# 森林飽和

国土の変貌を考える

太田猛彦

*Ohta Takehiko*



**NHKBOOKS**

1193

- Forest “saturation”
- The history of 1000 years of over use of vegetation in mountains had changed in these 50 years.
- Elimination of the sediment transport system has been causing the heavy coastal erosions now.

Under Use of forest  
resources



Protected Urban Forest

Higashiyama, Kyoto

- Oak wilt disease with tree bark beetles

Biodiversity crisis by  
under use

*Abandoned Satoyama coppice forests*

Call for Nature Restoration







# Ancient Capital Cities Preservation Law

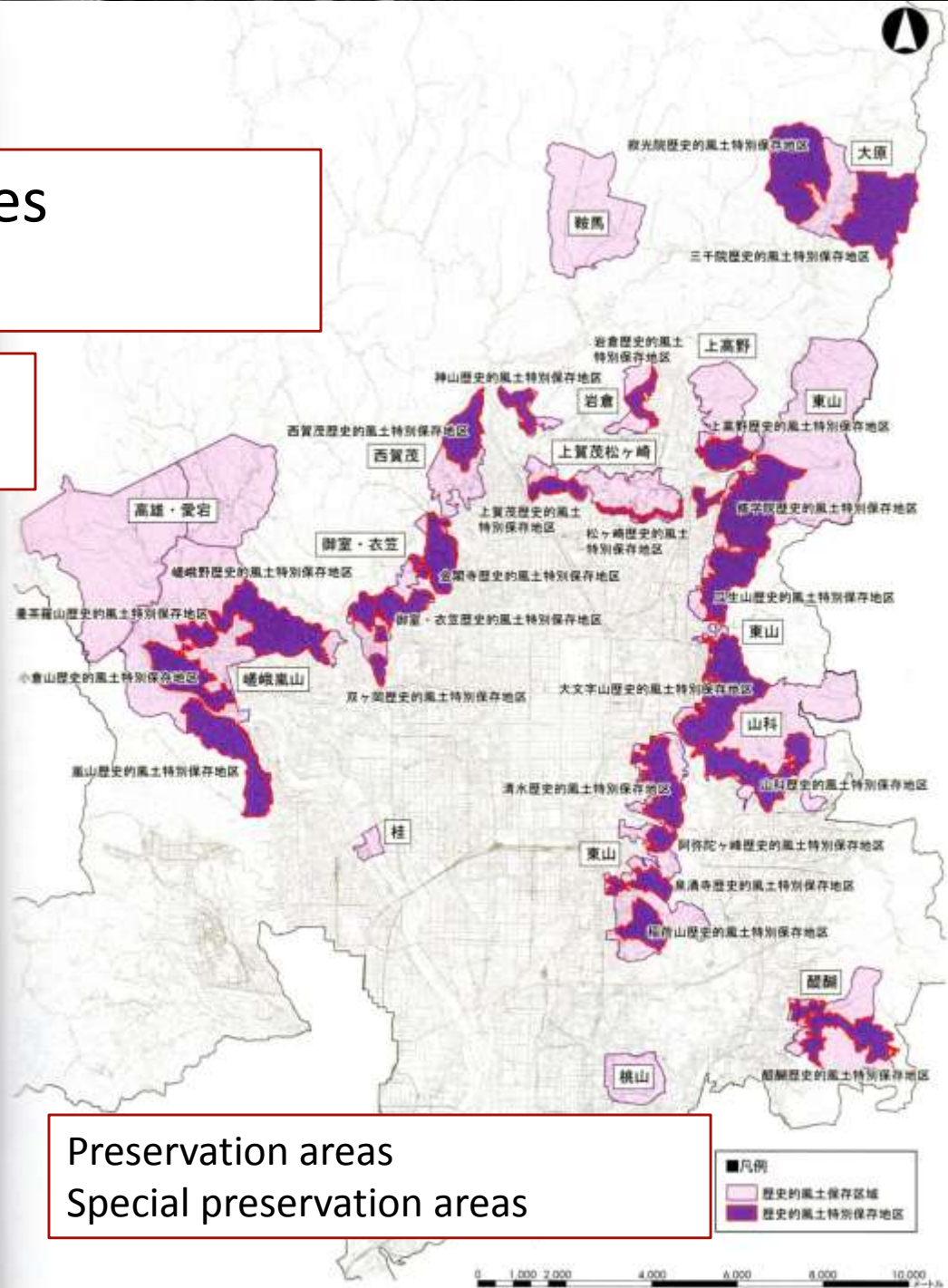
1969:  
古都保存地区

Strict preservation  
by buying-out system



左大文字を含む金閣寺特別保存地区

Kyoto City



Preservation areas  
Special preservation areas





*Pinus* for the Gion matsuri festival


Biodiversity crises by  
under use

*Sasa* for the  
Gion matsuri festival



*Asarum*  
for the Aoi-matsuri festival

フタバアオイ

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## Nature Restoration Scheme in Japan

# Definitions of Nature Restoration

- In order to recover healthy ecosystem
- Restore rivers, wetlands, tidal flats, satoyama and forests which had been damaged or destroyed due to developments.

Conservation

Restoration

Creation

Maintenance of the Current Conditions



■ Nature Restoration Kushiro Approach

Kushiro Wetland

18, 290ha

Kushiro Wetland  
National Park

26, 861ha



The first case of a nature restoration  
initiative authorized by Japanese government



# Kushiro approach for Nature Restoration

Degradation of Nature by Development

Proposals for Nature restoration(2001)

Three strategic goals:

- (1) Nature restoration,
- (2) Co-existence with Agriculture
- (3) Contribution to Regional development

Two principles:

- (1) View point of the Watershed
- (2) Start from five buffer areas

Eight key points:

- |                         |                             |
|-------------------------|-----------------------------|
| (1) Set target          | (5) Information sharing     |
| (2) Scientific approach | (6) Environmental education |
| (3) Monitoring          | (7) Sustainable development |
| (4) Cooperation         | (8) Promotion of local life |

Jpn  
Government

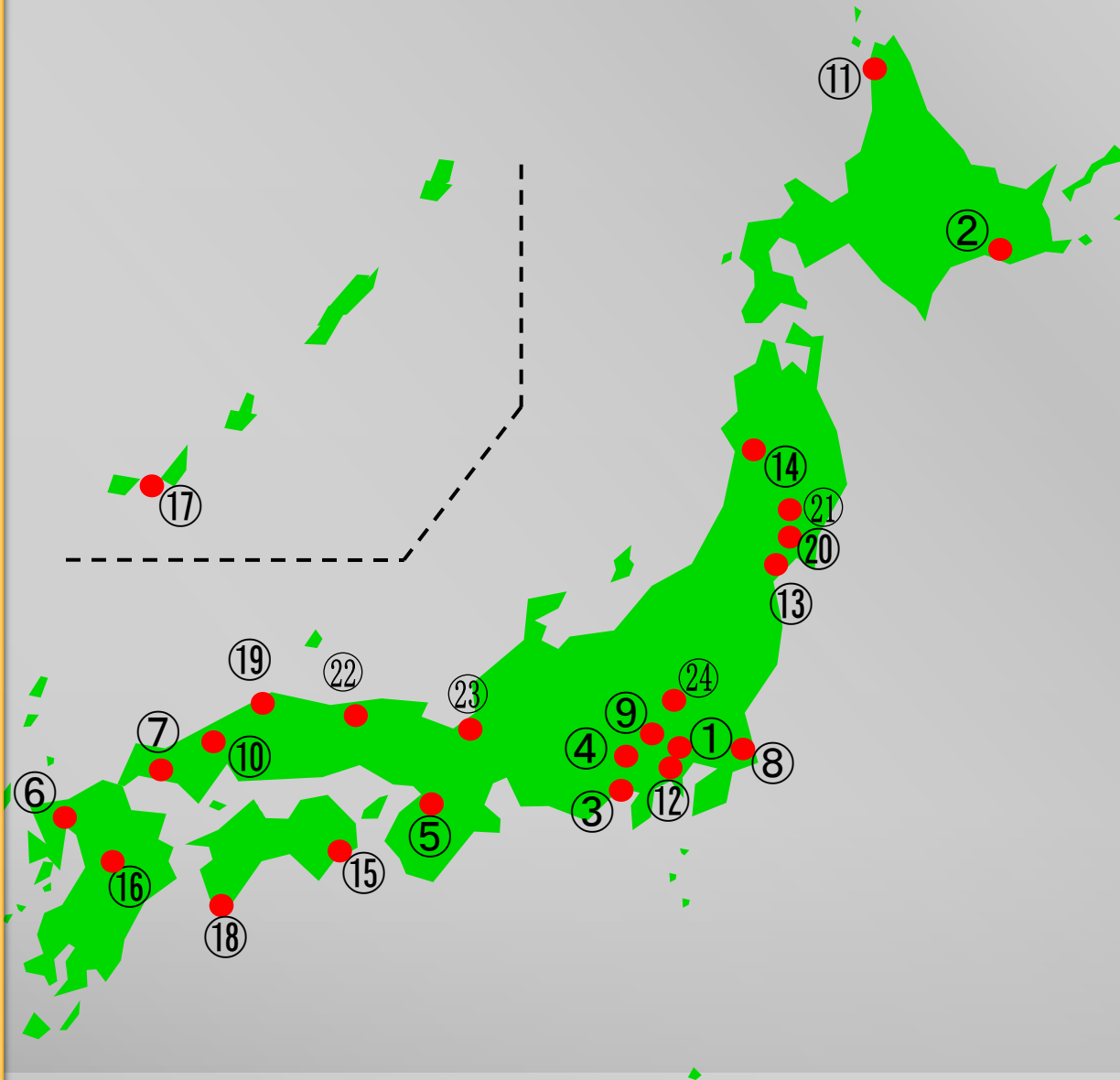
Local  
Government

NPOs

Experts

# Nature Restoration committees of Japan

Japanese restoration scheme

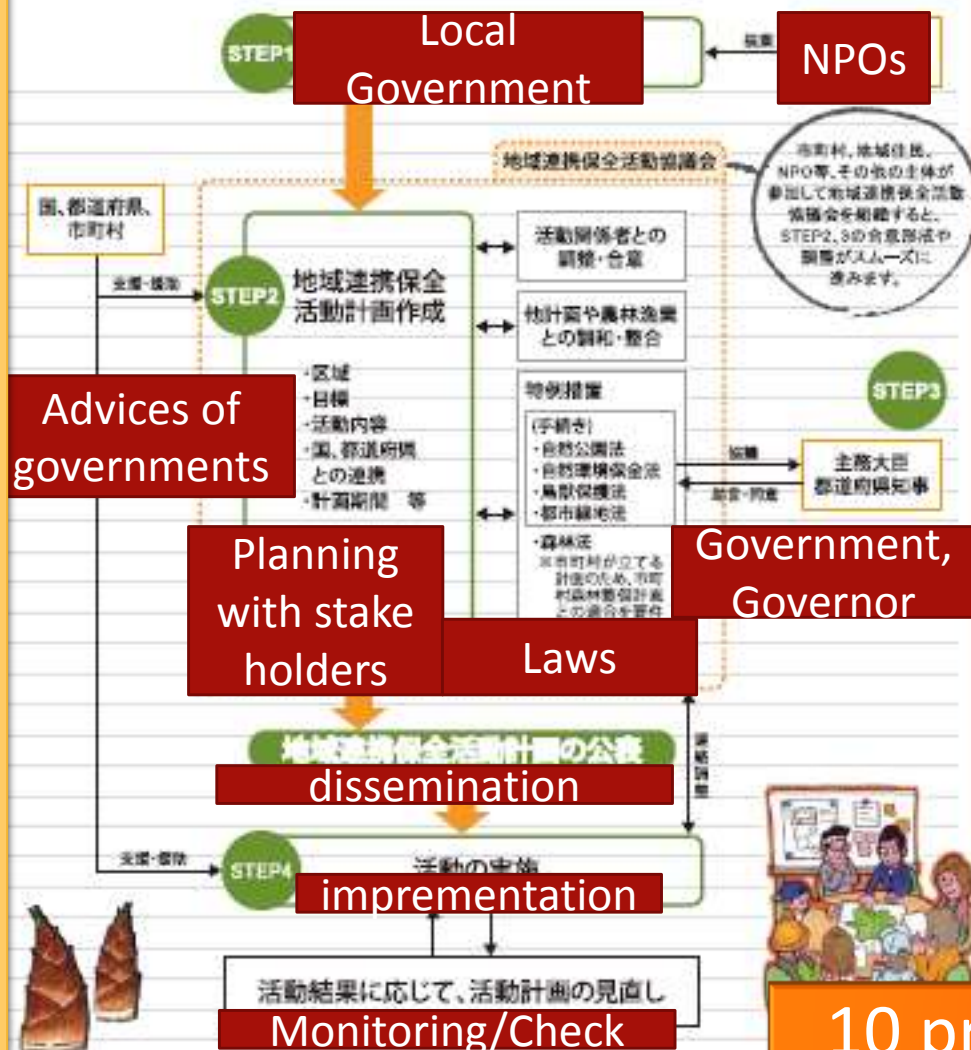


①	ARAKAWATAROUUEMON
②	KUSHIRO
③	TOMOEGAWA
④	TAMAGAWA
⑤	KOUNOYAMA
⑥	KASHIBARU
⑦	FUSHINOYAMA
⑧	KASUMIGAURA
⑨	KUNUGIYAMA
⑩	YAHATA
⑪	KAMISAROBETSU
⑫	NOKAWA
⑬	GAMOU
⑭	MORIYOSHI
⑮	TAKEGASHIMA
⑯	ASO
⑰	SEKISEI
⑱	TATSUKUSHI
⑲	NAKAUMI
⑳	IZUNUMA・UCHINUMUA
㉑	KUBOKAWA
㉒	UEYAMAKOUGEN
㉓	MIKATAGOKO
㉔	TATARANUMA・JYOUNUMA

# Promotion law for Collaboration

## Japanese restoration scheme

### 地域連携保全活動の計画から実施までの流れ



## 生物多様性

Biodiversity

地域連携促進法

Promotion of Local Collaboration

10 projects are on-going



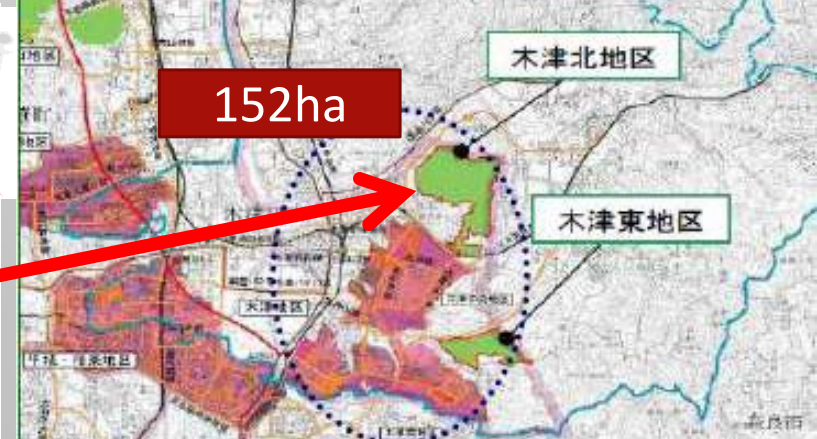


Kyoto

Osaka



Nara



152ha

木津北地区

木津東地区

Cancelled new town development plan!



goshawk

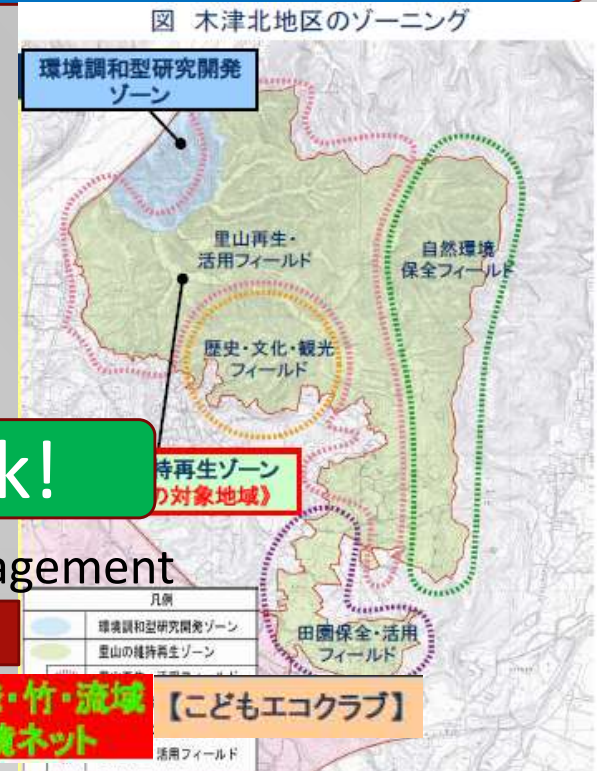


図 木津北地区のゾーニング

環境調和型研究開発ゾーン

里山再生・活用フィールド

歴史・文化・観光フィールド

待再生ゾーン(対象地域)

自然環境保全フィールド

田園保全・活用フィールド

Satoyama park!

Now, drawing up the master plan of management

NPOs, E-Education, CSR, Local Government, Experts

木津の文化財と緑を守る会

鹿背山倶楽部

鹿背山の柿を育てるネットワーク

鹿背山元気プロジェクト

京都発・竹・流域環境ネット

【こどもエコクラブ】

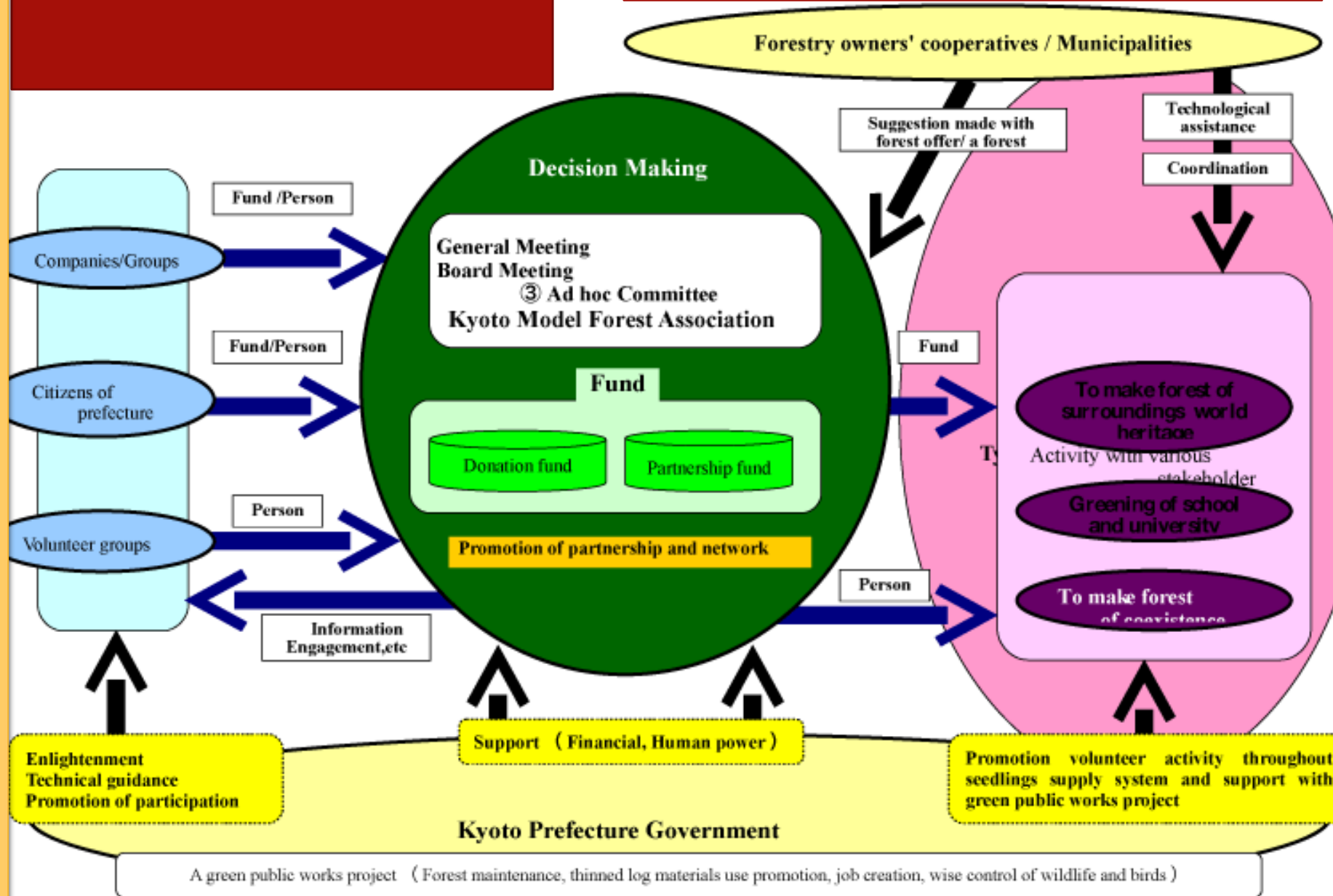
活用フィールド




# A solution by CSR & more....

International Model Forest Network:  
18 countries and 39 regions

## Japanese restoration scheme



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## International policy

7 December 2011

**XV/2. Ways and means to support ecosystem restoration**

***SBSTTA15***

2. *Requests* the Executive Secretary, subject to availability of

funding, in collaboration with relevant international organizations and other partners to initiate work to:

- (a) Compile the information on \_\_\_\_\_  
developed by government agencies, non-governmental  
organizations, private sector • • • • ◦
- (b) Consolidate the \_\_\_\_\_ to address the needs of,  
and prepare materials for different targeted end-users such as  
policymakers, implementing agencies • • • • ◦
- (c) Compile \_\_\_\_\_,  
including lessons learned (both positive and negative), and  
experiences used at different spatial scales and for specific  
ecosystems and make this information available to support:



4. (b) *Invites* Parties, other Governments, relevant intergovernmental organizations, the Society for Ecological Restoration, the International Union for Conservation of Nature, the World Resources Institute • • • • , to support countries in implementing ecosystem restoration by:
- (i) Making available tools such as e-learning programmes;
  - (ii) Compiling and disseminating \_\_\_\_\_ and information on socioeconomic aspects, and methods for assessing the success of restoration projects;
  - (iii) Facilitating \_\_\_\_\_ and supporting existing networks, subject to the domestic legislation of the Parties;
  - (iv) Supporting and/or coordinating capacity-building \_\_\_\_\_;
  - (v) Convening regional/sub-regional \_\_\_\_\_ on key themes;
  - (vi) Enhancing \_\_\_\_\_ and exchange programmes among agencies and restoration practitioners for their mutual benefit;
  - • • •

COP9 ( Oct. 2008) ドイツ・ボン (Bonn, Germany)

- ・ 決議IX/28 都市及び地方自治体の参加促進

Decision IX/28 Promoting engagement of cities and local authorities

- ▶ 生物多様性国家戦略・行動計画の実施に向けた地域行動を促進し支援  
promote and support local action for the implementation of national biodiversity strategies and action plan

COP10 ( Oct. 2010 ) 愛知県名古屋市 (Aichi-Nagoya)

- ・ 決議X/22 生物多様性のための準国家政府、都市及びその他地方自治体の行動計画

Decision X/22. Plan of Action on Subnational Governments,

Cities and Other Local Authorities for Biodiversity

- ▶ 都市のインフラ整備等に生物多様性への配慮を組み込むことの奨励  
integrate biodiversity considerations into public procurement policies and urban infrastructure investments

COP11-

Cities and Biodiversity Outlook, CBO



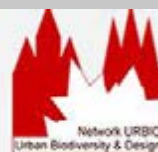
UN Habitat



ICLEI - Local Governments for Sustainability



Network of Regional Governments for Sustainable Development




Urban Biodiversity & Design

Stockholm Resilience Centre  
Research for Governance of Social-Ecological Systems

Stockholm Resilience Centre



UN Habitat

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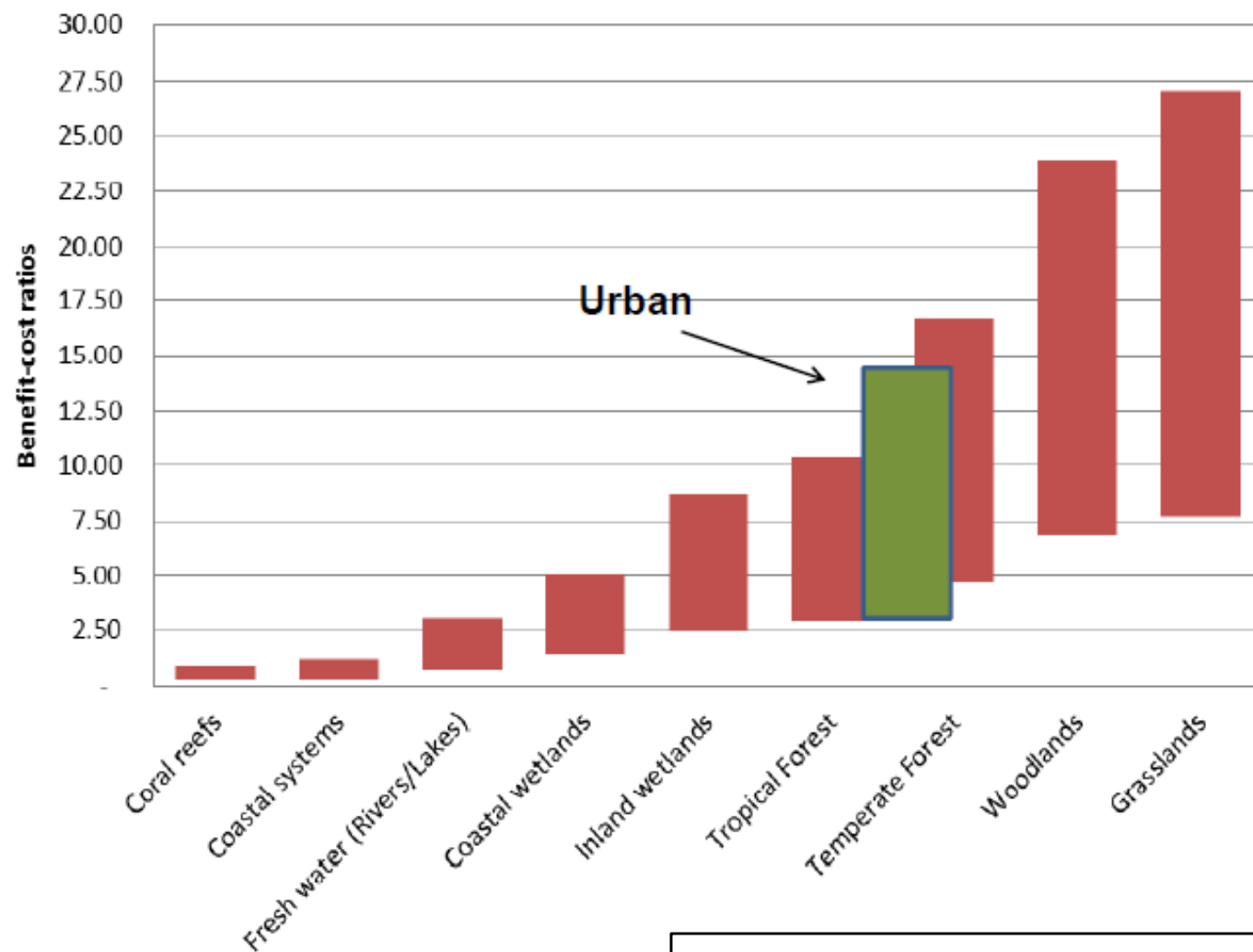
## Visualizing benefit of restoration



City	Pollution removal Kg/ha/y	C seques- tration Tons/ha/y	C storage Tons/ha/y	Storm- water reduction m <sup>3</sup> /ha/y	Energy savings kWh/ha/y	Reference
Sacramento Ca	93	20.2	663	1000	9.8	McPherson 1998, 2001 Scott et al. 1998 Xiao et al. 1998 Simpson 1998
Modesto Ca	210	18.4	-	390	16.8	McPherson et al. 1999
Washington DC	118	3.5	115	-	6.2	Nowak et al. 2006ab
Chicago Il	86	4.9	86	-		McPherson et al. 1997
Philadelphia Pa (I)	146	2.9	96	-	5.2	Nowak et al. 2007
Philadelphia Pa (II)	-	-	-	-	-	Philadelphia Parks Alliance 1998
Beijing	132	-	-	-	1.4	Jim & Chen 2009
Lanzhou	4.1	-	-	-	22.7	Jim & Chen 2009
Guangzhou	42.4	4.0	25.0	-	14.1	Jim & Chen 2009
Hangzhou	-	-	-	167	-	Jim & Chen 2009

Quantification of Urban ecosystem services (Compiled by Elmquist et al.)

## Benefit-Cost ratios



(Compiled by De Groot et al)

City Biodiversity Index  
(CBI: the "Singapore Index")  
都市の生物多様性指標  
(シンガポール指標)

City Biodiversity Index  
(Nagoya version)  
都市の生物多様性指標改善試案  
(名古屋市)



Necessity  
必要性

Simplicity  
簡便性

Applicability  
適用可能性



日本版都市の生物多様性指標(素案)

CBI Jpn version developed



都市の プロフィール <b>Profile</b>	規模（行政区域面積、都市計画区域・市街化区域面積） 人口（総人口・都市計画区域人口、人口密度） 地勢（年間平均気温、年間降水量、標高）		<b>Scale Population Geography</b>
<b>Index</b>	生態系・ ハビタットの 多様性	指標 1	緑地等の現況（都市における生物多様性確保 <b>Habitat Quality/Quantity</b>
		指標 2	法令等により確保されている緑地等の状況 <b>Secured Habitat</b> のポテンシャルを有する緑地等の割合）
		指標 3	都市におけるエコロジカルネットワークの <b>Ecological network</b>
		指標 4	動植物種の状況（都市に生息・生育する動植 <b>Native species diversity</b>
	生態系 サービス	指標 5	生態系サービスの状況 <b>Ecosystem services</b>
		指標 6	行政の生物多様性取組状況（都市の行政計画 <b>Biodiversity strategy</b>
		指標 7	行政計画への住民等の参加状況（生物多様性 <b>Public involvement</b> 民・企業等の参加の状況）
	都市の取組		

(1)  
Habitat /  
Species  
Diversity

(2)

Ecosystem  
Services

(3)

Governance/  
Practices

※指標 1・2・6・7（灰色の網掛け部分）は、既存の全国調査データや地方公共団体が他の目的で定期的に実施する調査結果を活用して算定することが可能な指標であり比較的簡便性の高い指標であることから、都市の生物多様性指標の算定に当たっては、これらの指標を優先して算定することが望ましい。

# Conclusion

- Nature \_\_\_\_\_needed to achieve the Aichi Targets in natural, rural and urban areas.
- Research & Development, compiling, disseminating the relevant information.
- Visualizing ecosystem services.
- NECTA is ready for the restoration & assessment projects.

Blignaut et al. 2008



Thank you for your attention.



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