

第4回持続可能なアジア太平洋に関する国際フォーラム

International Forum for Sustainable Asia and the Pacific: ISAP 2012

持続可能な社会、レジリエントな未来へ: リオ+20からの新たな視点

Steering towards a sustainable and resilient future: Beyond Rio+20

震災復興を通じたレジリエントな自然共生社会 の構築

Establishing Resilient Society in Harmony with Nature through Post-Disaster Rebuilding

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日本の自然—その脅威と恵み

The Threats and Blessings of Japan's Natural Environment

- ❖ 激甚な被害により自然の大きな脅威を再認識
- ❖ 工学的技術に過度に依存した対策の根本的な見直しが必要
- ❖ 社会システムを含め、地域の「レジリエンス」を高める
- ❖ より深いところで、人間と自然の望ましい関係の再構築を考えるべき
- ❖ 安全・安心の側面をより強化した自然共生社会の構築
- ❖ The catastrophic damage caused by the disasters reminded us of the **threats of nature**
- ❖ Need to review measures which heavily depend on engineering technology
- ❖ Build greater **regional resilience**, including within social systems
- ❖ Reconsider the ideal relationship between **humans and nature at a deeper level**
- ❖ Construct a society which is in harmony with nature, while also **strengthening security**



自然の恵み(環境省提供)
Blessings of nature (by MOEJ)



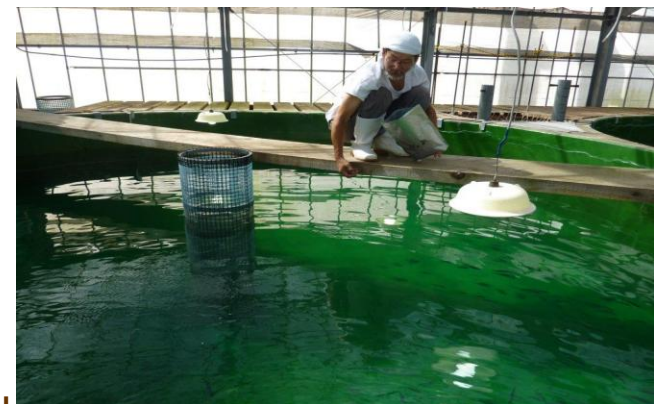
自然がもたらした災害
Damage caused by the natural disasters

Post-Disaster Rebuilding and the Revival of Agricultural, Forestry, and Fishery Industries

- ❖ 被災地には農山漁村が多く含まれ、農林水産業の復興・再生は最優先課題
- ❖ 壊滅的被害を受けた漁村は、土地利用の根本的な再検討を
- ❖ 担い手の減少や高齢化への対策も不可欠
- ❖ 震災復興を農林水産業の再生のプロセスと捉える
- ❖ 震災復興における農林水産業の再生は、国土の再生ビジョンにもつながる
- ❖ Disaster-affected areas include agricultural and fishing villages. The **recovery of agricultural, forestry, and fishery industries** is the foremost task at hand
- ❖ A fundamental **review of land** use is needed **in the fishing villages** which endured catastrophic damage
- ❖ It is essential to address issues such as the **lack of human resources** and the ageing population
- ❖ Post-disaster **rebuilding is an opportunity** to reconsider improving agriculture, forestry, and fisheries as industries
- ❖ Revival of agricultural, forestry, and fishery industries will lead to the **restructuring of the country** as a whole



手入れの行き届いた森林
Well-managed forest

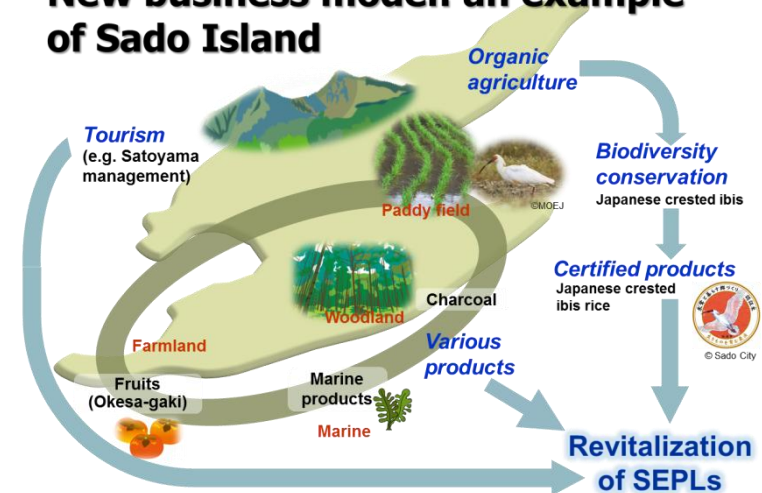


栽培漁業の展開
Development of fish farming

The New Commons and a New Business Model

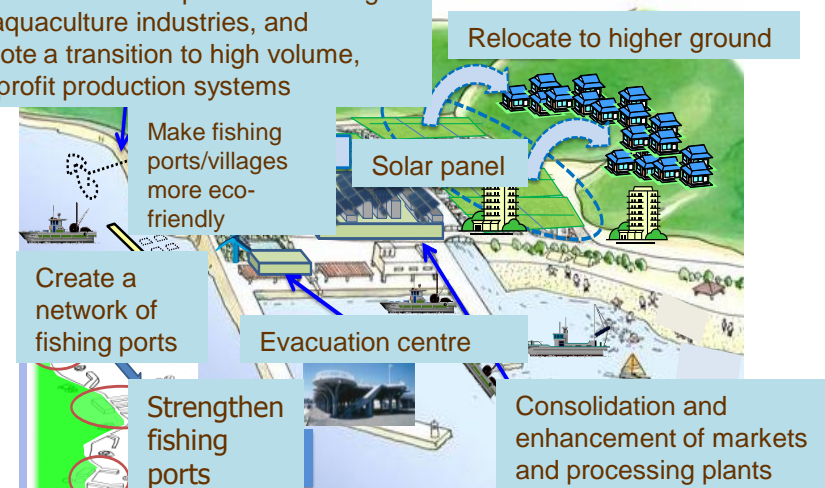
New business model: an example of Sado Island

- ❖ 貿易自由化と担い手の人口減少・高齢化の進行により第一次産業は低迷
- ❖ 単なる復旧では、第一次産業の停滞傾向は打破できない
- ❖ 資源を共同管理する新しい仕組み(新たなコモンズ)をつくりあげることが必要
- ❖ 異なるレベルの多様なステークホルダーが水平的に結びついた組織づくりが重要
- ❖ 地域に固有で付加価値の高い農林水産物の生産を目指す
- ❖ Due to industry liberalization and the decreasing and ageing population of workers, **primary industries are in decline**
- ❖ Decline of primary industries will only accelerate if they are merely restored
- ❖ A new form of joint resource management (a "**new commons**") is needed
- ❖ The creation of **nested institutions** composed of multiple stakeholders is needed
- ❖ Distinctive regional, high **value-added agricultural, forestry, and fishing products**



- Add high value through production systems, which sustain biodiversity
- Handle various goods collectively and establish **access to markets**
- Build **synergy** between tourism and bio-production industries

Support the re-startup costs of fishing and aquaculture industries, and promote a transition to high volume, high profit production systems

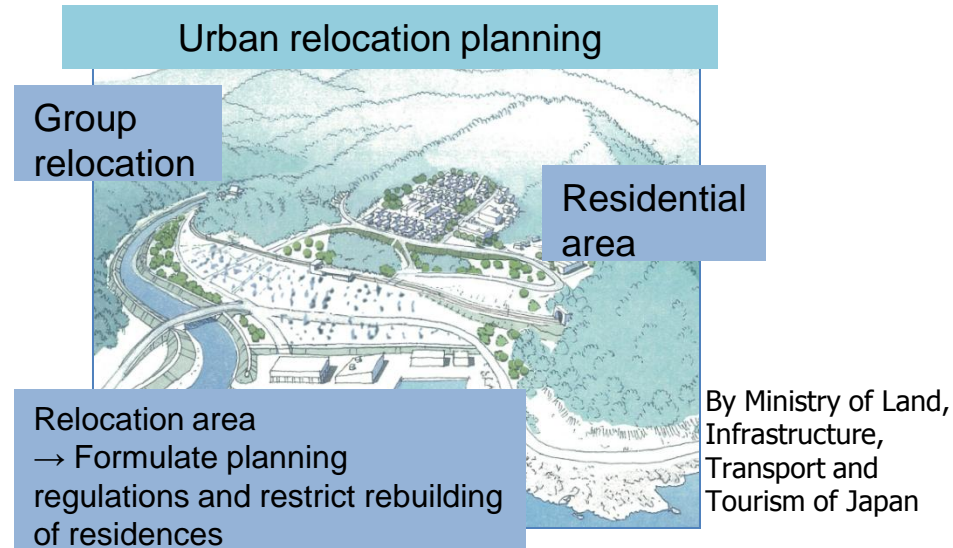


Revitalizing fishing ports

コンパクトでレジリエントな社会づくり

Building Compact and Resilient Societies

- ❖ 人口減少・高齢化の進行するなかで公共施設の適正立地や都市のコンパクトが求められる
- ❖ 津波の被害や地盤沈下が激しい地区では住居移転が必要
- ❖ 高台移転の面積は限られているため宅地開発は可能なかぎりコンパクトに
- ❖ 脆弱な土地は、農地への活用や湿地再生でレジリエンス強化につなげる
- ❖ 防災教育などを通じて社会的レジリエンスを強化することも重要
- ❖ With a decreasing and ageing population, the location of public facilities and **compactness of urban areas** need to be considered
- ❖ Urban neighborhoods **need to be relocated from tsunami-affected areas** or subsided land
- ❖ Because of limited available land, residential developments for relocation to higher ground **need to be more compact**
- ❖ Utilizing **vulnerable land for farming and restoring natural marshlands** will strengthen regional resilience
- ❖ We need to **strengthen societal resilience**, for example by conducting disaster-prevention training



Investigating the potential for reclamation of wetlands for subsided land at Karakuwa, Kesenuma City (By MOEJ)

里山と里海の連環を生かした地域再生

Regional Rebuilding on the Basis of *Satoyama* and *Satoumi* Linkages

- ❖ 被災地の多くは里山と里海の連なりからなる
- ❖ 森—川—海の連環が、物質循環を通じて自然からの恵みをもたらす
- ❖ 里山と里海の関連性を再構築する農山漁村づくり
- ❖ 安全・安心な地域づくりにも、自然環境や景観への配慮が必要
- ❖ ランドスケープ再生は、グリーン・ブルー・ツーリズムの振興にも貢献
- ❖ Much of the disaster-stricken area contains *satoyama* and *satoumi*
- ❖ Through material flow, the **linkage of forest—river—sea** provides the community with the benefits of nature
- ❖ We need to develop a **link between *satoyama* and *satoumi***
- ❖ Building a **safe and secure community** must consider the natural environment and scenery
- ❖ Contribution to **green and blue tourism**



里山と里海 Satoyama and Satoumi

New Efforts Involving *Satoyama* and *Satoumi* for Promoting Post-Disaster Rebuilding

- ❖ 里山林の仮説住宅や養殖筏への利用を通じた里山再生
- ❖ 木質の震災がれきや里山林利用によるバイオマス発電
- ❖ 集団的所有権移転による農地の集約化と耕作放棄地のメガソーラー建設
- ❖ 漁港の集約化、新しい共同管理、第6次産業化による水産業の振興
- ❖ リサイクルされた災害がれきの利用によるより安全な海岸林の建設
- ❖ Regeneration of *satoyama* through use of *satoyama* forests for temporary housing and aquaculture rafts
- ❖ Biomass power generation using wood debris from the earthquake and *satoyama* forests
- ❖ Agricultural intensification through collective transfer of ownership and mega-solar construction on abandoned cropland
- ❖ Promotion of the fishing industry through integration of fishing ports, new joint management, and transition to a "sixth-order industry"
- ❖ Construction of even safer coastal forests using recycled debris from the disaster

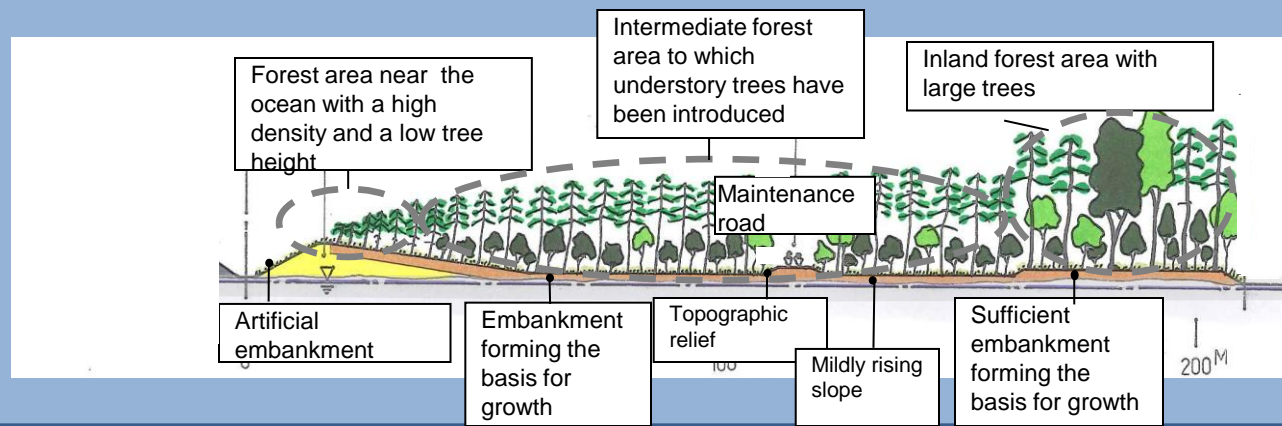


【酪農地帯の集落全体における太陽光発電の導入】 Introduction of photovoltaic power generation in entire villages in dairy regions

[酪農地帯の100戸余りの農家で太陽光発電設備を設置]

Photovoltaic installation in more than 100 farming households in dairy regions

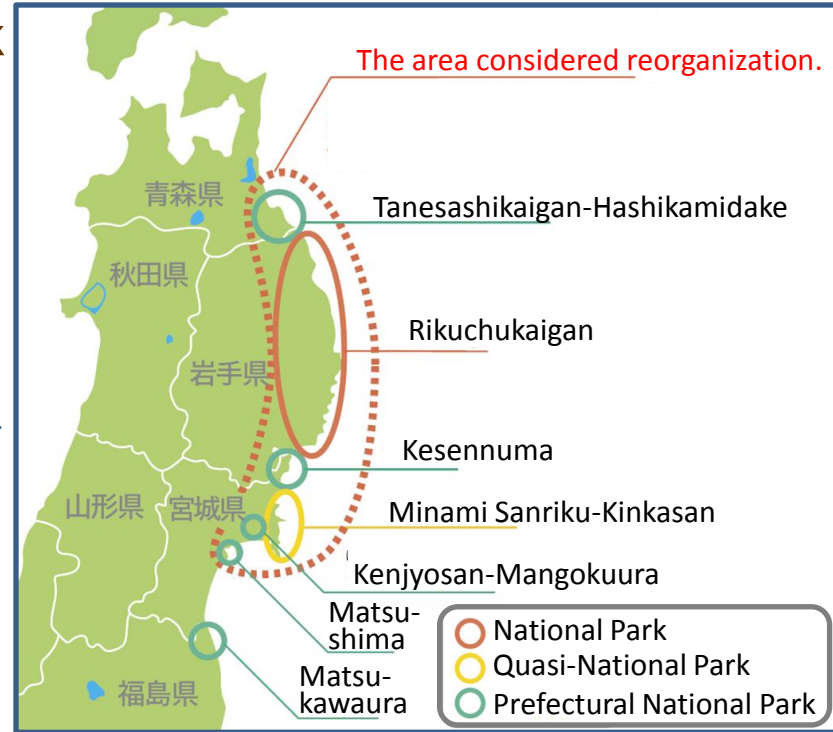
【Ocean】



【Inland】

(By MAFF)

Establishment of the New Sanriku Fukko [Reconstruction] National Park



(By MOEJ)



「津波石」
Tsunami
Memorial



- ❖ 三陸海岸は自然に恵まれ、多くが国立公園や国定公園
- ❖ 陸中海岸国立公園を拡大し、里山・里海一体の「三陸復興国立公園」に
- ❖ 自然の脅威と恵みに立脚し、人と自然の係わりをテーマに
- ❖ 大震災・津波を記憶する「三陸ジオパーク」
- ❖ 国立公園や自然保護と調和した、再生可能エネルギー（太陽光、風力、バイオマス、地熱発電等）の可能性を検討
- ❖ Sanriku coast boasts many national parks, **abundant with nature**
- ❖ Expansion of the Rikuchu Kaigan National Park, and inclusion of *satoyama* and *satoumi* for the **creation of a "Sanriku Fukko [Reconstruction] National Park"**
- ❖ Raise the issue of the **close relationship between people and nature**, based on the threats and blessings of nature
- ❖ **"Sanriku Geopark"** for education and preserving the memory of the earthquake and tsunami
- ❖ Examination of possibilities for **developing sustainable and renewable energy** including solar, wind, biomass, and geothermal, in harmony with national parks and environmental protection

震災復興の経験を世界と共有

Sharing the Experience of Post-Disaster Rebuilding with the World

- ❖ 震災復興を持続型社会構築の契機と捉える
- ❖ 震災復興を通じた自然共生社会づくりはグリーンエコノミーのモデル
- ❖ 自然資本をいかした持続型社会の構築は途上国でも重要な課題
- ❖ 震災復興の経験を世界と共有し、世界のグリーンエコノミーにも貢献
- ❖ 多様なステークホルダーのフラットな連携による取り組みの強化が重要
- ❖ Post-disaster rebuilding should be viewed as an **opportunity for building a sustainable society**
- ❖ Establishing a society in harmony with nature through post-earthquake recovery serves as a **model for a green economy**
- ❖ Establishing a sustainable society that **utilizes natural capital** is an important issue in developing countries as well
- ❖ **Sharing the experience** of post-disaster rebuilding with the world will also **contribute to a global green economy**
- ❖ It is important to strengthen efforts involving **cooperation on an equal level among various stakeholders**

