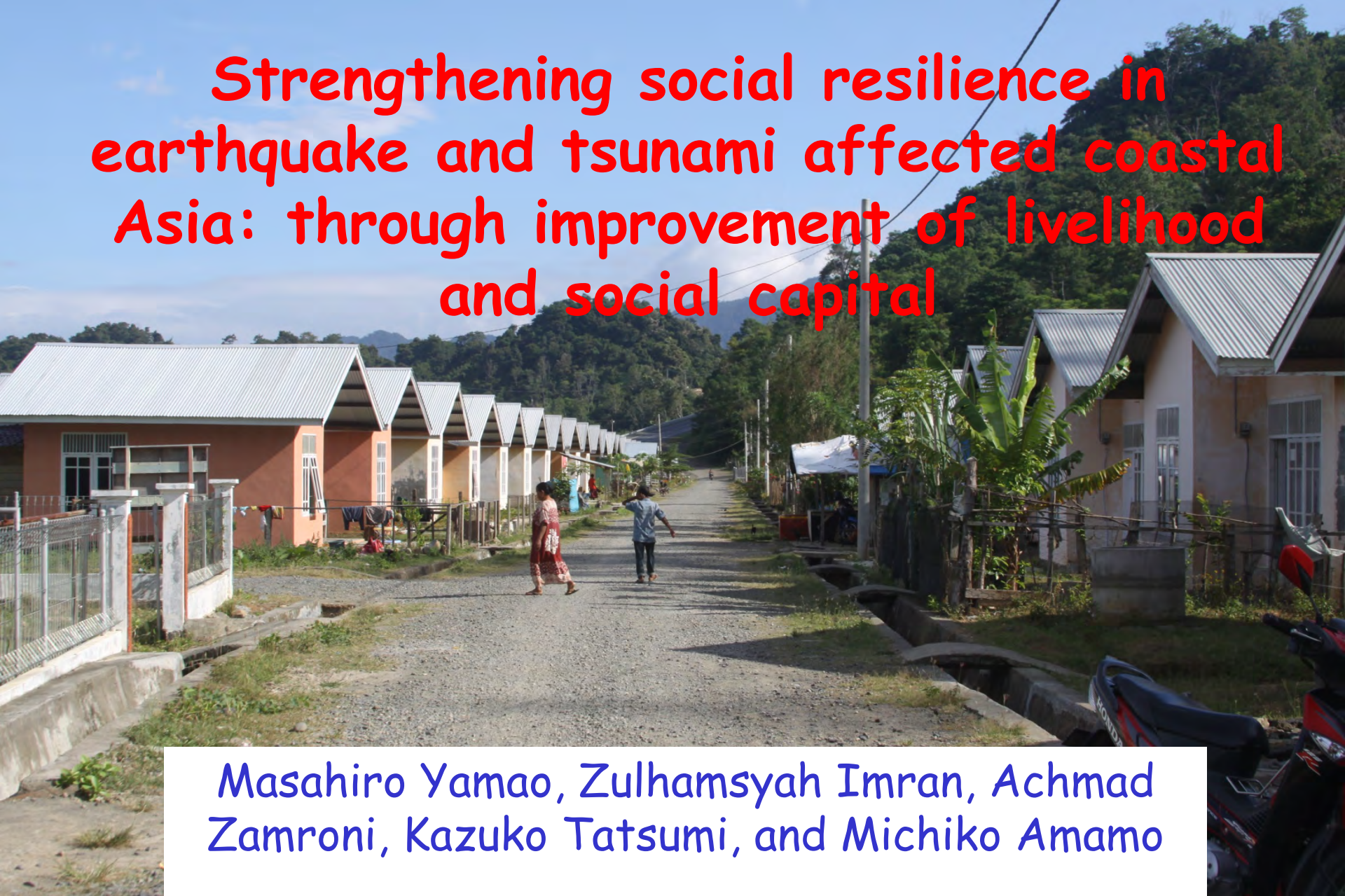


Strengthening social resilience in earthquake and tsunami affected coastal Asia: through improvement of livelihood and social capital



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ABSTRACT

- ◆ The purpose of this presentation is to focus on the way to strengthen social resilience in earthquake and tsunami affected coastal societies, in Asia.
- ◆ East Japan Great Disaster, on March 11, 2011, heavily hit a huge number of coastal societies, especially fishing communities. Northeast Pacific coastal areas, are the important pillars of food security of Japan, providing the nations with agricultural and fisheries products. Any activities designed for restoration and reconstruction should be implemented step-by-step, comprehensively, and systematically.
- ◆ According to the experiences learnt from the Sumatra earthquake and great Indian Ocean tsunami in 2004, rebuilding society is an indispensable factor to secure a re-growth of fisheries and attain a better life for those affected people.
- ◆ How to ensure sustainable livelihood recovery of re-settlers and enhance capacity building of coastal societies is a key issue. While reducing dependence on any relief and donor agencies, those affected people and society strengthen **social resilience through a development of social capital**. Community-based and community-driven approach may be very effective to achieve this.

Contents

- ◆ Introduction (purpose and objectives)
- ◆ How to obtain lessons learnt through recovery process of Sumatra Earthquake and Indian Ocean Tsunami in 2004
- ◆ Strengthening social resilience through a development of social capital in affected fisheries and coastal community
- ◆ Approach to rebuild fisheries and fishing communities in East Japan

Our questions

- ◆ In Asia, tremendous efforts and supports have been put into the rehabilitating and rebuilding of tsunami-affected coastal society.

“Building back better” is achieved?

- ◆ Rehabilitation and rebuilding programs effectively worked for those who survived in order to empower to reshape the future and redevelop their way of life ? (BRR 2009)

Damage and Loss by Sumatra Earthquake and Great Indian Ocean Tsunami



Community center for evacuation, Aceh in Sumatra

Eight years have passed!

- ◆ On 26th December 2004, a Sumatra earthquake and a series of great tsunamis heavily struck to many parts of Asian coastal communities.
- ◆ This disaster caused an unprecedented loss of life, and damaged a foundation of coastal communities.
- ◆ In the wake of disaster, an enormous number of affected people lost life, property, livelihood, society, and culture.

Coastal communities were seriously damaged

- ◆ Major parts of coastal area affected were fishing communities, and many of the victims were fishers and their families.
- ◆ Economic loss in fisheries industry was massive. Livelihood of fishing village was been destroyed.
- ◆ Sustainable resource management was lost or damaged.
- ◆ FAO (2005) declared that fishers and local people have rights to access marine resources as it was always in the past.

Damage and loss

Table 1 Lost of Life and Victims

		Unit: person
Nation	Dead	Victims
Indonesia	167,540	566,898
Sri Lanka	35,322	519,063
India	16,269	647,599
Thailand	8,212	n/a
Others (10 countries)	555	34,700
Total	227,898	1,768,260

(source) Jayasuriya, S. & McCawley, P. 2008. Reconstruction after a Major Disaster; Lessons from the Post-Tsunami Experience in Indonesia, Sri Lanka, and Thailand, ADB Institute Working Paper No.125

Confusion, Conflict and Rehabilitation

Towards Sustainable Growth of Fisheries Industries



Toward Self-reliance

- ◆ Most of tsunami-affected countries in Asia had an emergency support and a 2~5 year recovery plan. Almost all supports have already terminated.
 - First stage:* emergency support was provided.
 - Second stage:* temporary housing or reconstruction of permanent houses was started.
 - Last stage:* development of physical and social infrastructure was undertaken.
- ◆ Enormous effort to support recovery of livelihood with microfinance, technical assistance and capacity building programs. These would ensure the long-term sustainability of any program activities.

“Build back better” in tsunami-affected community

Immediately after the disaster, government and donors provided emergency support. They prepared houses, and shifted to physical and social infrastructure. While decreasing their involvement, people and society increase self-dependence.

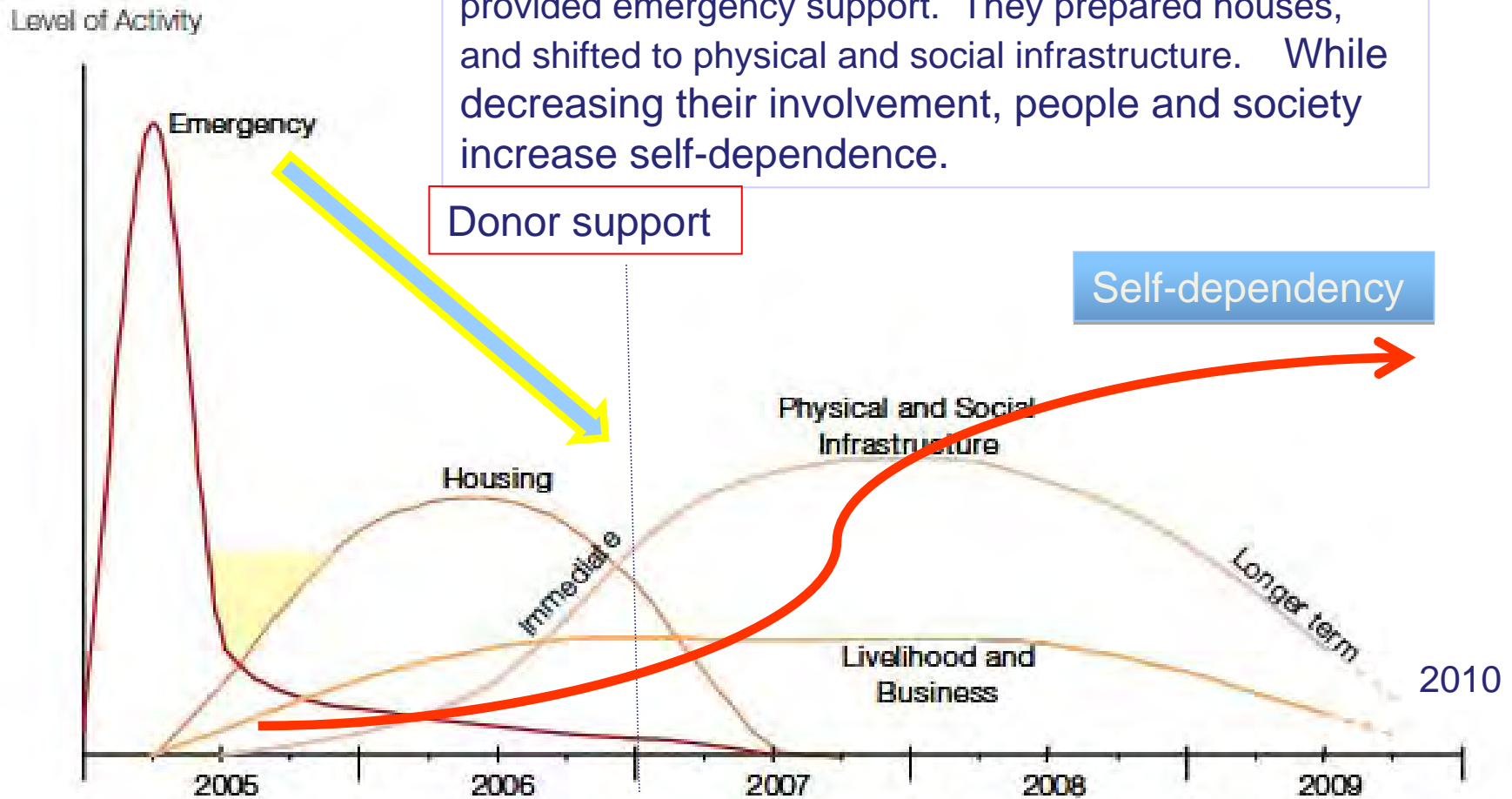


Fig. Recovery Process: Livelihood Improvement and Development of Social Capital

(Source) Author illustrated by referring to Rehabilitation and Reconstruction Agency (BRR, 2005),.

Final goal of people in affected communities

- ◆ Restoration of livelihood and its sustainability
 - Means of production such as fishing boats and gears were provided and/or reinvested with donors' support. Fisheries facilities and processing plants were also repaired and rebuilt.
- ◆ Guarantee of permanent houses was the most important for leading to stable life
 - This could not be overemphasized, although their location became a problem in connection with a zoning policy, etc.

Confusion and Conflict in Restoration and Reconstruction

- ◆ Confusion and conflict occur on the process of restoration and reconstruction. Peculiar characteristics of fishers' livelihood, fisheries industry, and tradition of fishing community.
- ◆ Research and study on fisheries industry and fishing community are much less, in comparison with agricultural sector and rural society.
- ◆ A plan for restoration and reconstruction, made with adoption of top-down approach, always became a controversial issue.

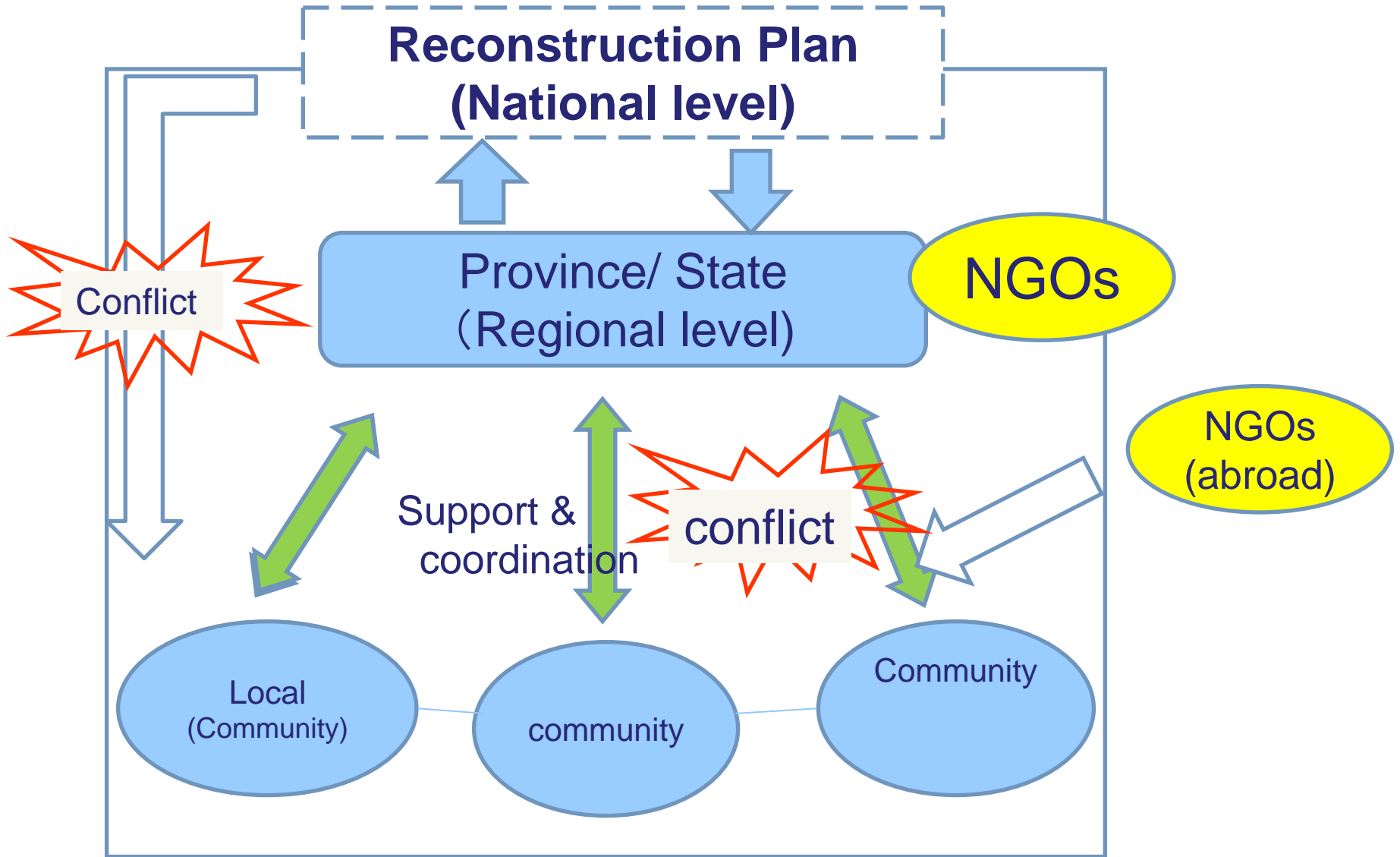


Figure Plan for Support

Zoning coastal area, relocation of communities

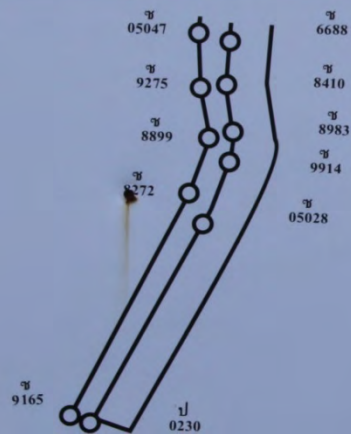
- ◆ A zoning policy on coastal areas affected by tsunami become a controversial issue.
- ◆ Many countries took enforcement measures on removing any structures including temporary houses and plants, outside a certain fixed distance from the seashore.
- ◆ Illegally building houses and plants had been regarded as a social right and custom. Introduction of the coastal zone management and enforcement of laws often caused conflicts.



เหนือ



ที่ดิน ตามหนังสือสำคัญที่หลวง



(องค์การบริหารส่วนตำบลคึกคัก)

เลขที่ พง 395

ที่ดินเลขที่ - ระวาง รูปถ่ายทางอากาศหมายเลข 4626///1464-4, 1662-1, 1462-2

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เป็นที่สำหรับ

"กระทรวงมหาดไทย (ป่าสน)"

Squid trap on beach



Right: fishers are making squid traps. Houses are 5 km far from beach. (March 2007)





Left: New settlement for fishers and others
Fishers have to move to the higher elevated area.
(Thailand)

Right: All houses were cleaned up.
Fishers are not allowed to resettle.





Fishers live in a new settlement , provided by government.



A new settlement in Aceh. (December, 2009)



A new settlement that three communities amalgamated; Aceh(December, 2009)

Ground zero in Aceh: Ulele was completely destroyed by tsunami. New houses were constructed close to the sea. Evacuation center was constructed with JICA's support.



A community-based and community-driven approach to rebuild society

- ◆ Supporting and donor agencies would avoid to adopt top-down approach which might not fit in with local reality. Communities and people would reduce over-dependence on the agencies.
- ◆ However, local government units (LGUs) did not always work effectively, due to their heavy damage. They had been expected to play an important role in emergency and recovery activities.
- ◆ Community-based and community-driven approaches were widely adopted.

How to recover livelihood: Cooperative and individual ownerships



TPI in Aceh (in 2006)

Recovery of Bagan Fisheries, in Aceh, Indonesia

- ◆ A tremendous number of bagan boats were destroyed by the tsunami. Local economy having heavily been dependent on bagan fisheries were seriously damaged.
- ◆ In the aftermath of tsunami, people requested supporting agencies to reconstruct bagan boats, instead of small-scale boats.
- ◆ They were provided with training programs on ship building of bagan boats, to increase job opportunities and income generating.

Through operation of bagan fisheries, local economy gradually accumulate capital, restore fishing technology and expand marketing and processing networks. Fishers and local community get back identity.



Layun : a bagan with cooperative ownership (donated)

How to rebuild Bagan fisheries?

- ◆ **Bagan fisheries contributes to the rehabilitation of local economy.**
- ◆ Communities gave a high priority to rebuild bagan fisheries, with support from donor agencies.
- ◆ Community-based groups were organized to possess and operate boats , instead of individual ownership.
- ◆ People joined cooperative operation of bagan boats, and shared profits.



Some fishers changed occupation into skillful boat carpenters.



Left: Boat building project in Ache. Pagan type boats were constructed.

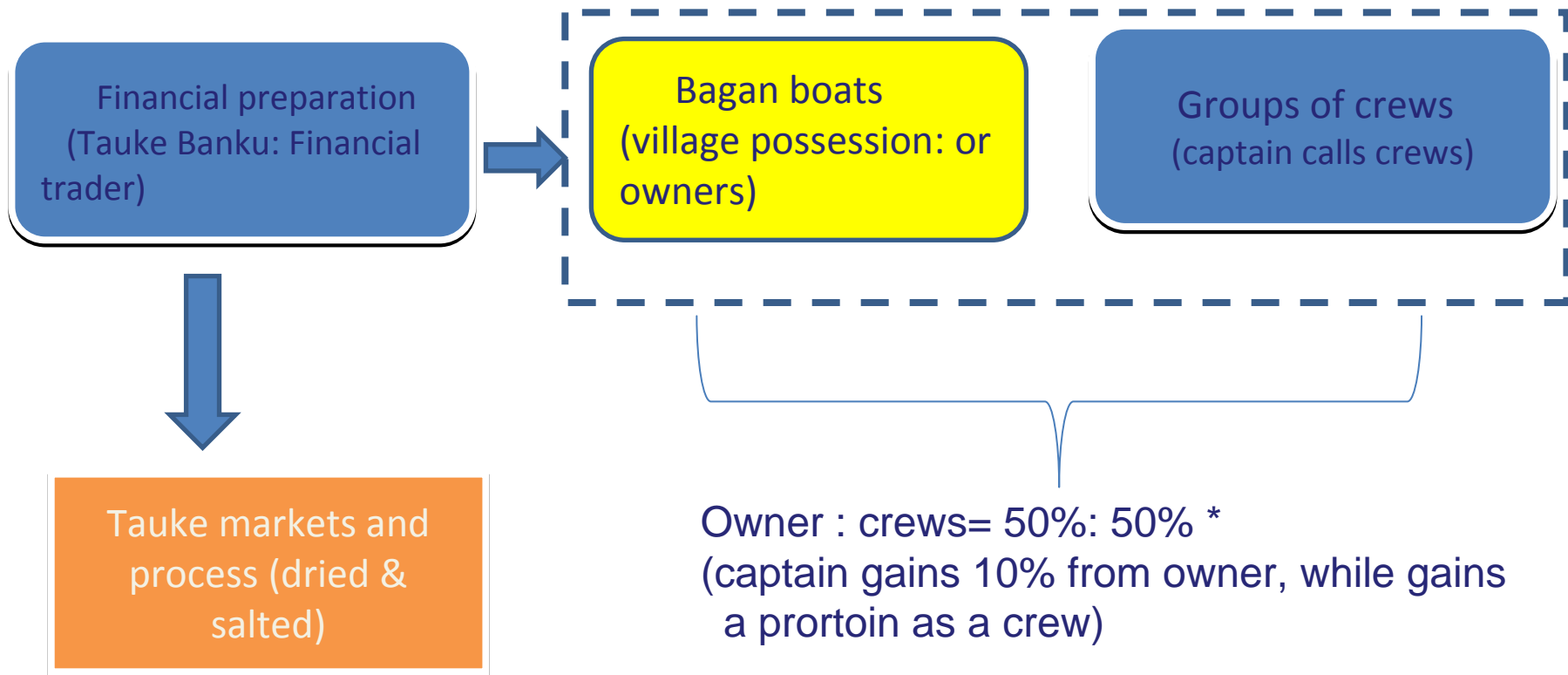


As before, people started producing dried and salted fish, but in cooperative way.



Wholesale and retail market in Medan

A Bagan Fishery needs financial and market networks



* Financial trader: responsible for providing operation funds and marketing arrangement.

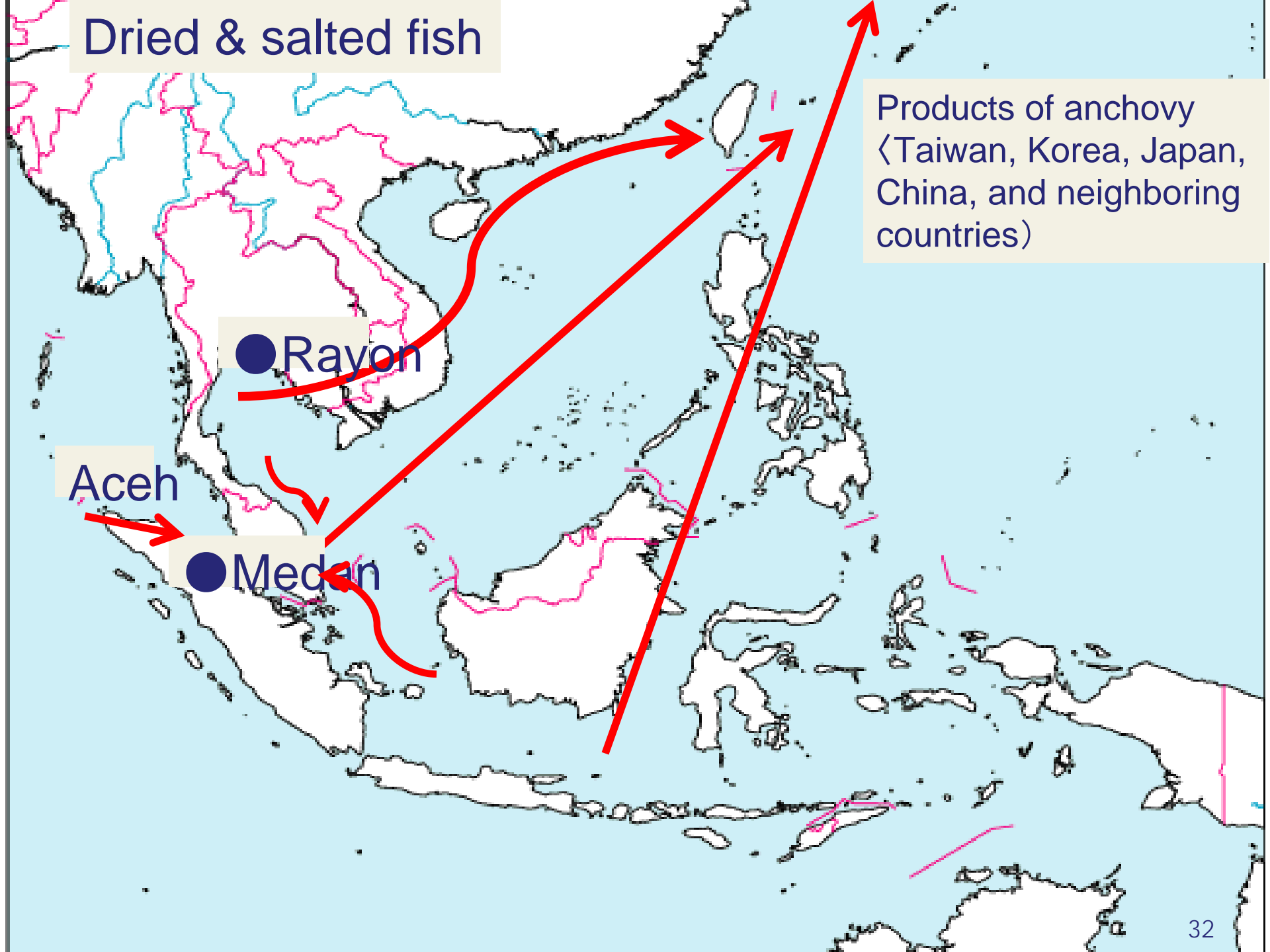
Dried & salted fish

Products of anchovy
(Taiwan, Korea, Japan,
China, and neighboring
countries)

● Rayon

Aceh

● Medan



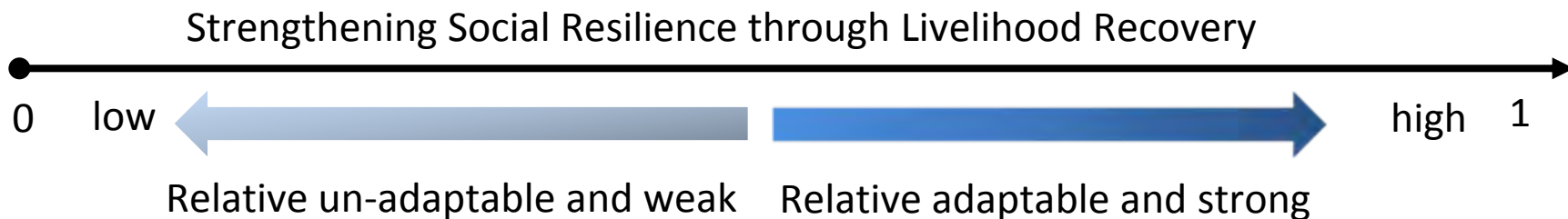
Lessons learnt from Bagan Fisheries in Ache

- ◆ Bagan fisheries catch anchovy and sardine-like small fish, which are raw materials of dried and salted products. They provide job opportunities in communities, such as crews, processors, and traders.
- ◆ Dried and salted fish are marketed through many channels, dealt as export commodity.
- ◆ Not focusing on one specific aspect, comprehensive approach effectively worked.



Why social capital important?

Social vulnerability and social resilience



(Source) Imran, 2012

Loss of social capital

- ◆ Inside and outside fishing community, fishers and people developed various forms of social networks. These networks would facilitate co-operation and mutual help. They are valuable in combating many of social disorders in societies (Putnam 1993).
- ◆ In re-settlements, fishers have to establish new relationship and networks within families, among communities and groups. They find it hard to develop social capital. Overdependence on donor agencies prevent from people's self-help recovery activity and mutual help.
- ◆ Conventional community-based activities do not effectively functions due to damaged social networks.

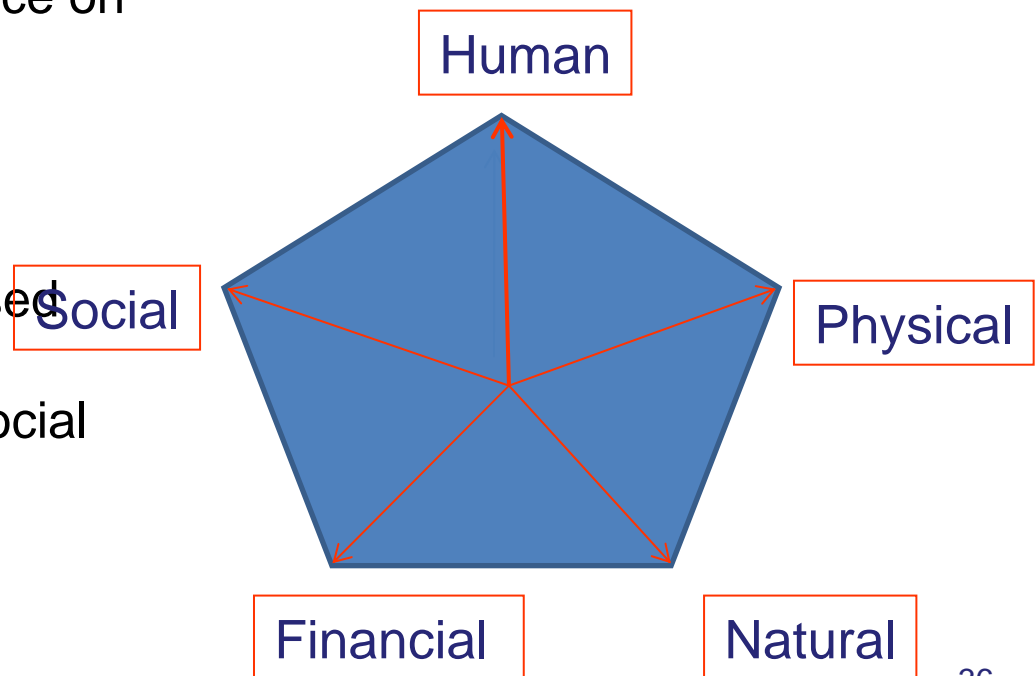
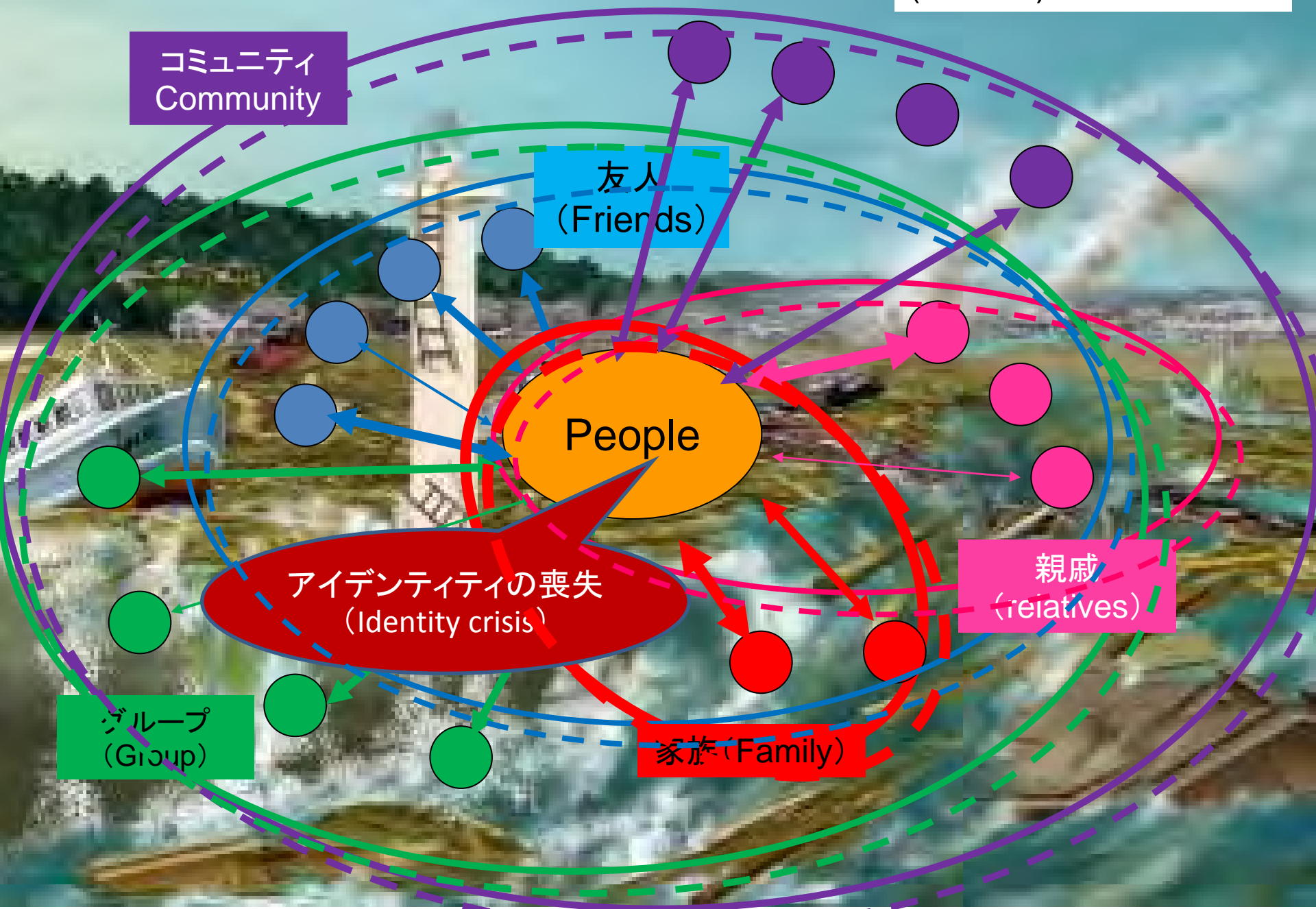


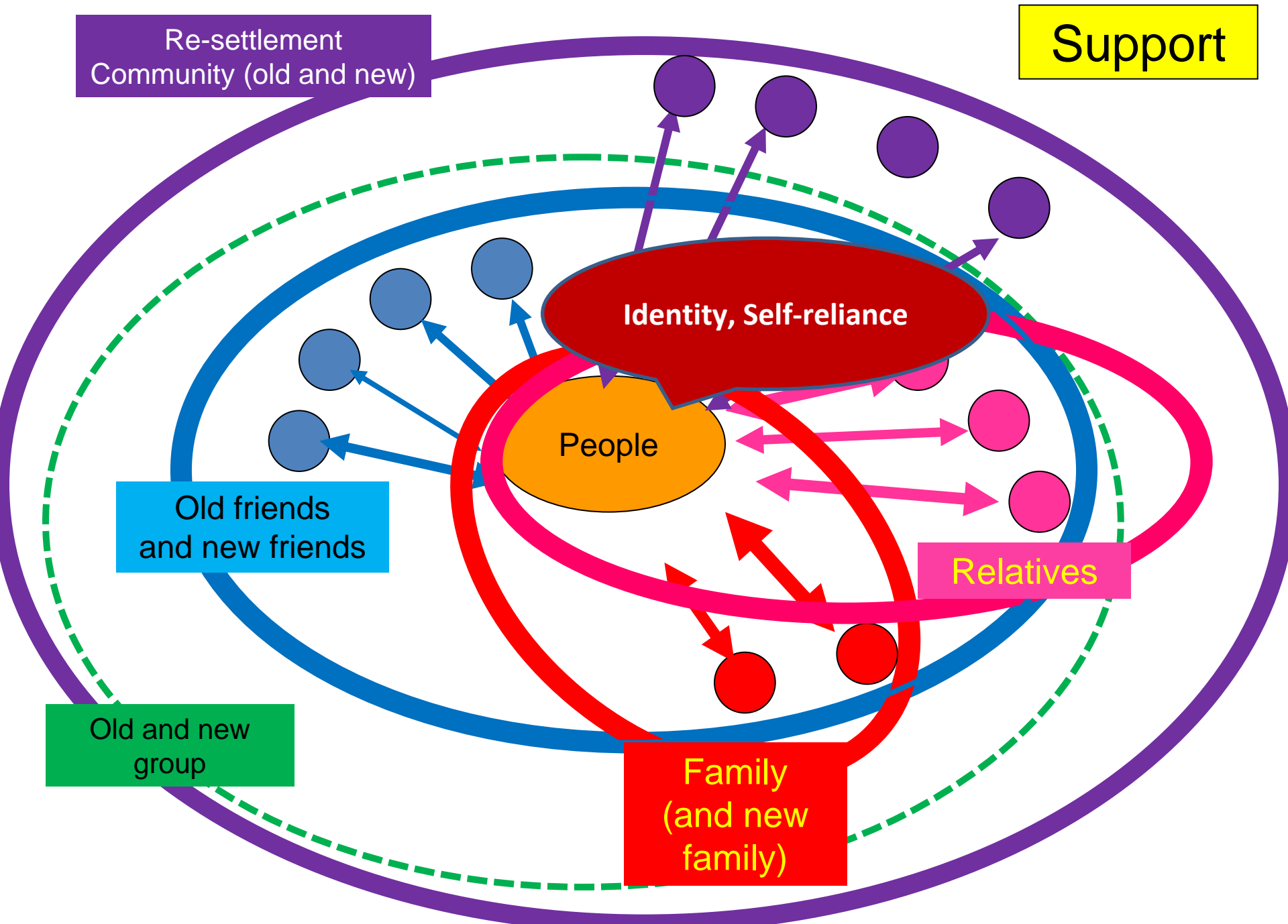
Figure Livelihood Asset Pentagon

Social capital works as before?

- ◆ **Marketing network becomes fragile.** This is an obstacle to a sound recovery of market-oriented livelihood, such as fisheries and aquaculture.
- ◆ **Technology and local knowledge are not much available as before.** People feel loss of social identity as before.
- ◆ **People had developed various forms of social networks facilitating co-operation and mutual help.** Without them, they would be vulnerable vis-à-vis social disorders and insecurity.

(Source) Tatsumi 2009





A photograph of a fishing port pier. In the foreground, there are several rows of blue storage containers stacked on a wooden pier. The containers have white text and logos, including "NO.5140" and "NLS234". The pier extends into the water, where a white boat is docked. The sky is blue with scattered white clouds. The text "Lessons Learnt through Experiences in 2004 Disaster" is overlaid in red on the image.

Lessons Learnt through Experiences in 2004 Disaster

Kesennuma Fishing Port

For comprehensive and strategic approach

Experiences and lessons learnt through the recovery process in Sumatra Earthquake and Indian Ocean tsunami may provide a profound insight:
More strategic and comprehensive



- Supporting agency tended to focus more on the rehabilitation of fishing and aquaculture, rather than infrastructure, processing and marketing.
- Processing and trading were often neglected. Small-scale fishers were mainly supported with provision of boat, gear, and equipment.
- Support to processing and marketing would have contributed more to the rehabilitation of fisheries sector, and accelerate its reconstruction.

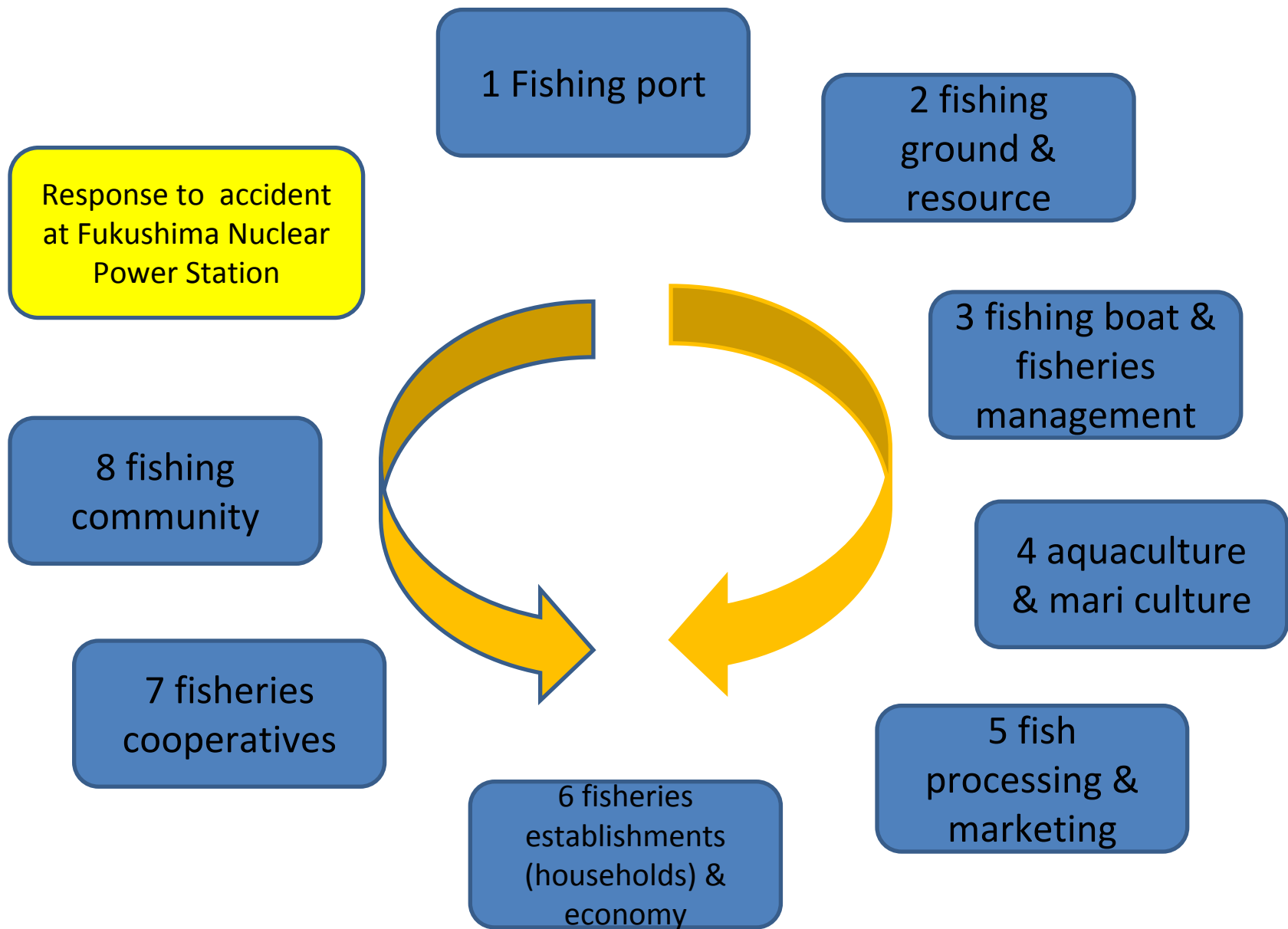


Figure Comprehensive approach adopted in Japan

(Source) Fisheries Agency (Japan)

Sustainable Use of Resources and Rehabilitation of Coastal Environment

- ◆ Support to fishers has done with compensation programs of fishing boats and gears. Some constraints to establish a workable framework of coastal resources.
- ◆ To avoid to increase catch effort, and to reestablish a workable framework of sustainable use are a heavy task. Community-based resource management and co-management are widely adopted. Integrated coastal management is increasingly concerned.
- ◆ A series of scientific survey have been planned and conducted under long-term strategy, including damage of coastal environment and rehabilitation of fishing grounds.

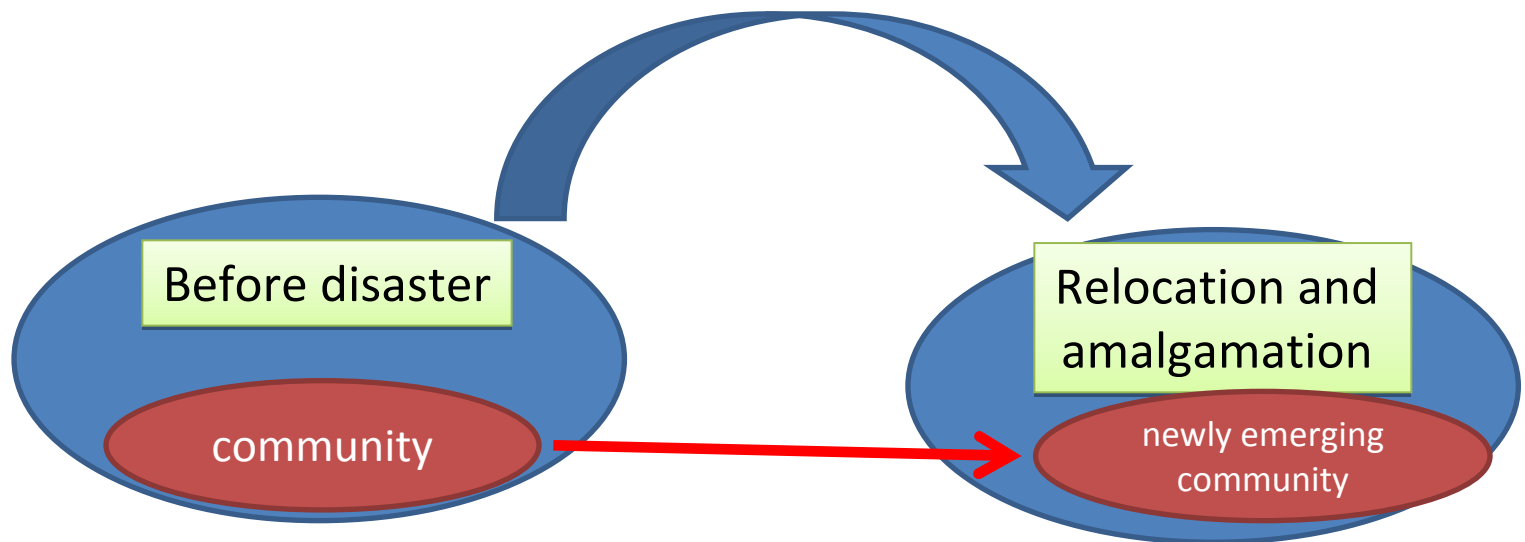


Photo: collected rubbles and garbage



Toward Community Development

- ◆ Some communities may be amalgamated each other with construction of temporary and permanent houses.



- people recognize newly emerging community as their new settlement
- they try to establish any new network for survival, and reorganize traditional institutions

People's organization and social capital

- ◆ Development of social capital facilitate community-based groups and associations.
- ◆ People's participation in the recovery process of social network and trust among community members.
- ◆ Leaders and their leadership skills are essential to create strong community networks.
- ◆ In a new settlement, fishers and people make effort to establish people's organization and strengthen social capital. This is an appropriate measure to evaluate level of restoration and reconstruction.

Considerations

- ◆ With selection and concentration of resources for recovery, some areas have become less favored areas, while some have developed rapidly.
- ◆ Supporting activity did not spread uniformly throughout the tsunami-affected areas as a whole.
- ◆ Difference in capacity and ability between supporting agencies became a factor which caused difference as regard restoration speed between affected areas.
- ◆ Yet other factors to cause disparity were priority given by local government and people. Leadership, people's cohesion into groups, and empowerment were also important.
- ◆ How to reduce disparity is the most hard task, even at present.

Thank you for your attention.



Ishinomaki