

**International Recovery Forum 2022
Redesigning Systems for Resilience through Recovery:
Assessing Progress and the Unfinished Agenda
at the Midpoint of the Sendai Framework**

**Progress and achievements in
“Build Back Better” since 2015**

2022/01/19

TAKEYA Kimio Takeya.kimio@jica.go.jp

Distinguished Technical Advisor on DRR/JICA

/Visiting Professor/International Research Institute of Disaster Science, IRIDeS, Tohoku University

Serious regret from past experience

過去の苦い経験

What happened after
Sumatra Tsunami in Aceh ?

スマトラ津波大被災地のアチェ
で何が起こったか？

- The first internet era's mega disaster, which gave the reality by the disaster and gave huge impact to people.

- ネット時代の最初の大災害
被災動画、写真などがネットに
氾濫



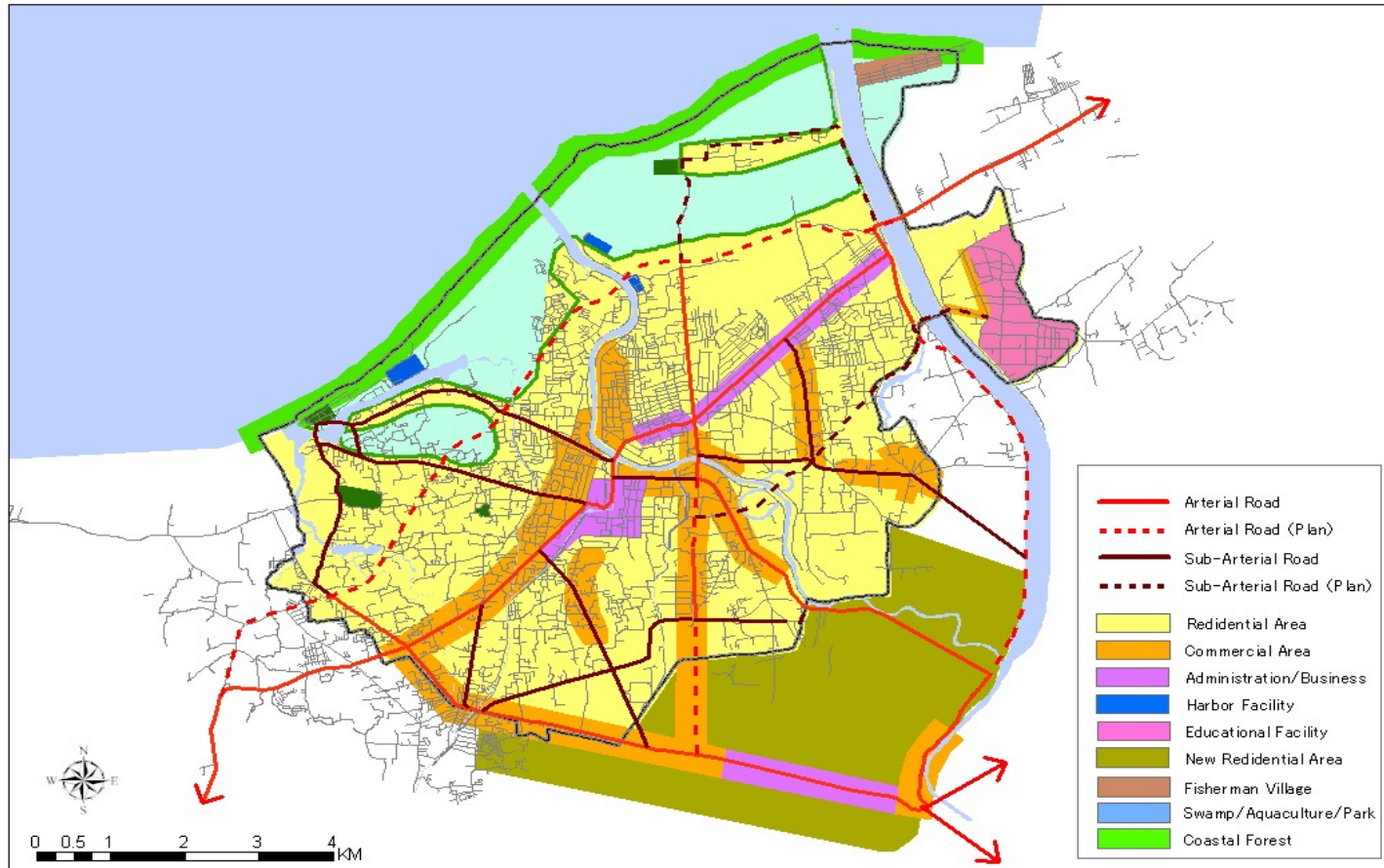
By SP Metro TV, Indonesia

Land use plan to avoid
reborn same risk again

土地利用計画による脆弱性の再現排除計画

Recovery Master Plan
proposed from JICA

JICAが提案した復興計画



URRP SPATIAL PLAN

What happened in damaged area? 被災地で何が起こったのか?



**Uncontrollable “inappropriate risk knowledge good will”
caused vulnerability reborn again in same place**

制御不能な“善意の支援”が同じ場所に著しい脆弱性の再現を起こした



After big regret of Sumatra Tsunami.
Sprout of “Build Back Better” concept,
2006, Central Java Earthquake Recovery

スマトラ津波復興の苦い経験の後、
ビルド・バック・ベター思想の萌芽と最初の成功
2006年ジャワ島中部地震の復興支援

Enforcing “Build Back Better” “

ビルド・バック・ベターを強制化

Strengthened brick house

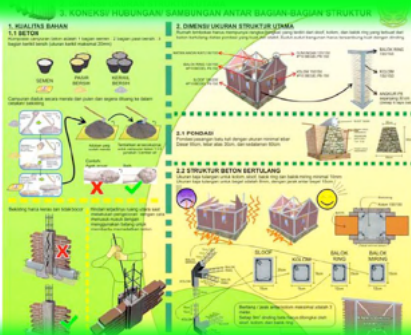
レンガ積み住宅の耐震強化再建

- JICA propose simple enforcement technique
- Deliver recovery fund only using this enforcement technique
- In order realize, established housing permission system with on site support by government more

- JICAは安価で効果的な耐震補強工法の提案
- 耐震強化工法を採用した住宅のみ再建資金を給付する制度化
- そのため、住宅申請制度や、住民を支援する政府スタッフを300人以上被災地集落ごとに配備、手厚

After the system established,
Over 100,000 strengthened houses were built
within one years, miracle achievement

制度構築後、
1年間で約10万戸の耐震性向上住宅が完成
奇跡的な成果



Concept is to prevent same vulnerability reborn
through reconstruction,
but not defined “Build Back Better” terminology

再度災害防止のコンセプトは有り
Build Back Better の概念化は未了

JICA tried to realize “Build Back Better” concept for world standard using 3rd UN World Conference on DRR in Sendai in 2015 together with other country, like Philippine

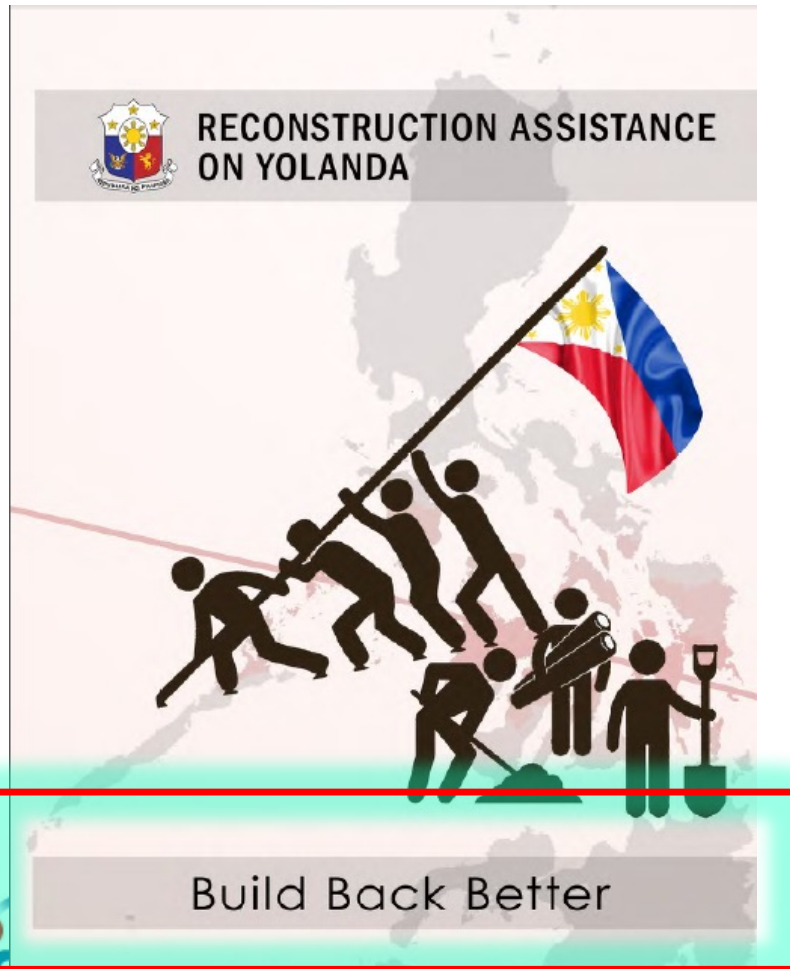
JICAはビルド・バック・ベターを第三回国連防災世界会議（於：仙台市）で世界標準にすべく活動、志を同じくしたフィリピン

2013 Typhoon Yolanda case in Philippine

2013年のフィリピン台風ヨランダの復興

Government First document for Recovery shows clearly the concept of “Build Back Better” , by JICA support

第一次復興計画の表紙にはJICAとの強い説得と政策合意で
ビルド・バック・ベターのカッチフレーズを打ち出す



JICA lauds gov't officials on Yolanda rehab efforts



20 days ago, ANC

The Japan International Cooperation Agency lauds the Philippine government's rehabilitation efforts for Yolanda survivors. At a press conference JICA's visiting senior adviser Doctor Kimio Takeya compared government's efforts with those of other countries'.

Not only protection sea wall but also for revitalization of local industry from primitive fishery to more productive & sustainable fishery

防潮堤による防御だけでなく、主要産業である漁業のより持続可能且つ高度化、高収益化により、よりレジリエントな社会構造を構築する



From production to market reconstruction and new jobs, every livelihood
養殖漁業から市場再建、新たな職までより高収益の“なりわい”をカバー

Re-establishing Local Production



Cultivation of Milkfish & Oyster (Tanauan)



Cultivation of Milkfish (Basey)

Reconstruction of Public Market (Mayorga, Mercedes, Guiuan)



(Mayorga, Mercedes, Guiuan)

Reconstruction of Processing Slaughter House (Dulag)



Slaughter House (Dulag)

Supplying raw material

Supplying raw material

Promotion of Local Products



Entire Study Area

VALUE ADDING THROUGH PROCESSING



Processing of Milkfish (Basey & Tanauan)



Production of charcoal from fallen coconut trees (Mercedes)

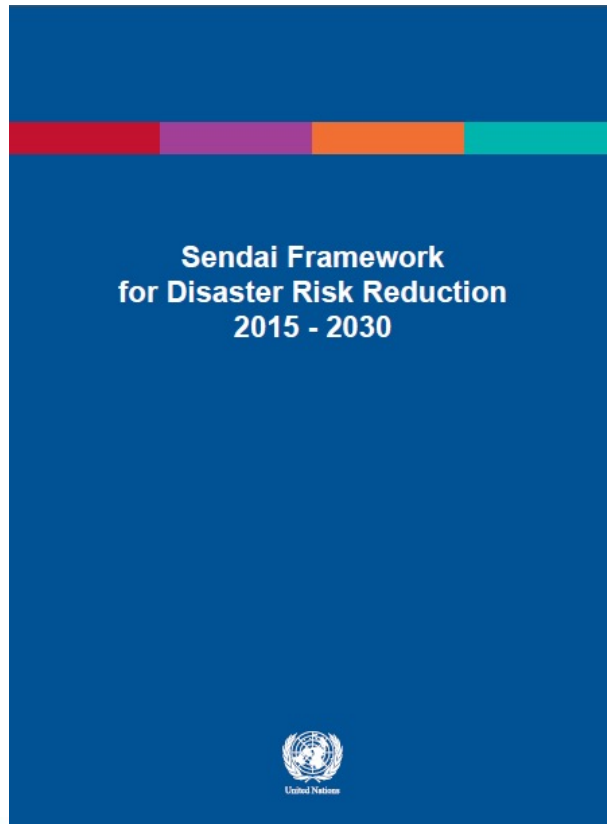


Processing of local agro-fishery products (Tolosa)

Restoration of livelihood through production and sales of local products

Build Back Better concept was proposed from Japanese government to Sendai Framework

ビルド・バック・ベターという概念は仙台枠組みに向けて日本政府から提案したものの



- Build Back Better was the common sense in Japan & JICA, but not in the world

Build Back Better は日本・JICAの常識だが世界の常識ではなかった

- Many lucky situations could lead “Build Back Better” to the world standard in Sendai Framework

多くの幸運によりビルド・バック・ベターは国連仙台枠組みにより世界標準に出来た

Made Japanese standard to the World Standard

日本の防災の常識を世界の常識に

- pre-zero draft document

叩き台として提示されたプロゼロドラフト文書構成

I. Priorities for action, National and local context

Priority 1; Understanding risk

Priority 2; Strengthening Governance

Priority 3; Standards Development

Priority 4; Preparedness for Response

Priority 5; Social, Economic and Environmental Resilience

→ not connected to Risk Reduction
→ prevention is more important than response

→ final goal and not the action

優先行動1 リスクの理解

優先行動2 ガバナンス強化

優先行動3 標準化開発

優先行動4 発災対応準備

優先行動5 社会、経済、環境のレジリエンス

→ 直接災害削減につながらない

→ 発災対応よりも事前防止がより重要

→ 最終到達目標でありアクションではない

concept of Build Back Better proposed from Japan 日本交渉団から提案したビルド・バック・ベターの定義

“Build Back Better” was the common sense of Japanese people, especially in Kobe and other damaged area and some expert in the world, but not clearly defined

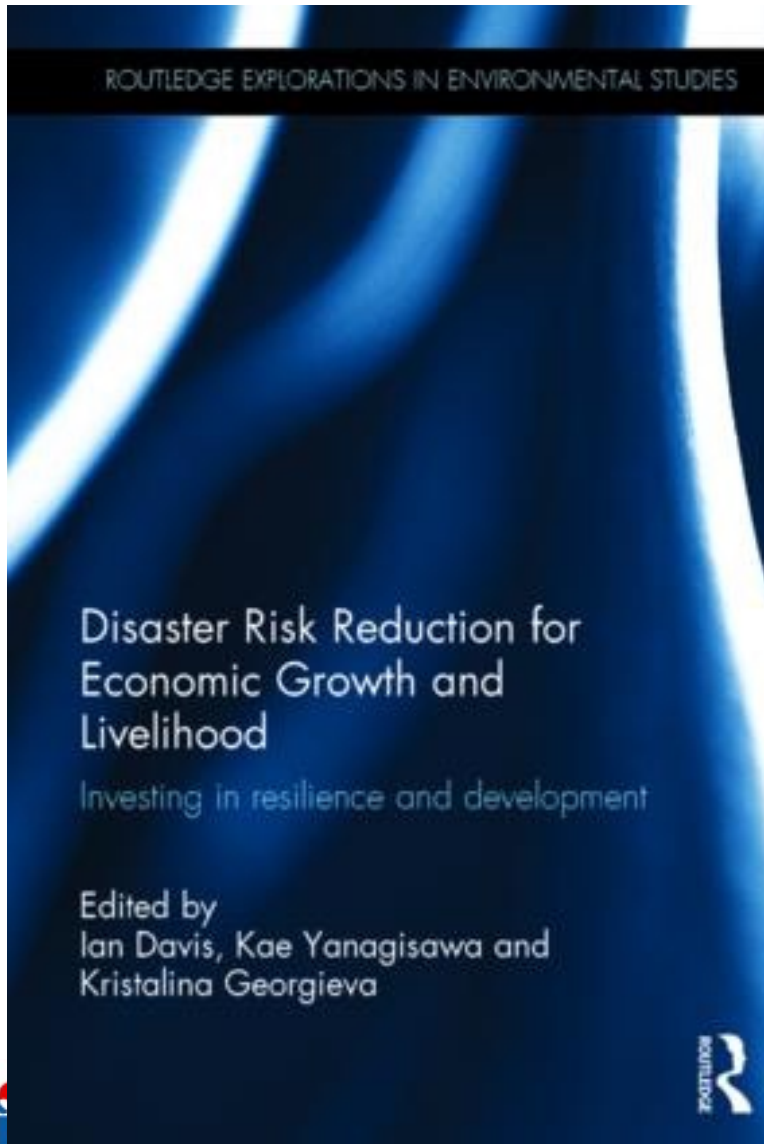
ビルド・バック・ベターはとりわけ神戸他の被災地など日本では一般的であり、世界の一部の専門家でも認識されていたが、明確に定義されていなかった。

ビルド・バック・ベターは災害を奇貨として、被災した構造物などの強化復興を含む災害を防ぐ構造物対策や非構造物対策、生活再建、地域経済や産業のより強靱な復興、地域文化や環境の再建など、バランスの取れた災害を防止する対策を行い、災害前よりも強靱な社会を目指すこと、と定義・提案した。

The “Build Back Better” concept is generally understood to utilize disasters as an opportunity to create more resilient nations and societies than before them through the implementation of well-balanced disaster risk reduction measures, including physical restoration of infrastructure, revitalization of livelihood and economy/industry, and the restoration of local culture and environment.

Original Concept prepared paper 2014 by Matsumaru & Takeya for UN Meeting, 2015

松丸・竹谷による国連会議に向けてBBBを世界で初めて定義した書籍



Contents	
Notes on contributors	ix
Foreword, Margreth Wahlström	xiv
Foreword, Akiko Tanaka	xv
Preface, Kristalina Georgieva	xvi
Introduction IAN DAVIS AND KAE YANAGISAWA	1
PART I Resilience for sustainable development in a changing environment	
1 Building resilience to disasters and climate change in the age of urbanization ARJAS JHA HENSKE BRECHT AND ZUZANA STANTON	7
2 Climate change and disaster risk reduction: adaptation to uncertainties of changing climate HIDETOMI OH AND WATARU ONO	28
3 From drought to resilience Sylvie Montembaault, Jamal Anwar, and Ekinnaar	45
PART II Building awareness for disaster risk reduction	
4 Effective planning for disaster risk reduction YUSUKE AMANO AND TACHI MINAMITANI	67
5 Economic analysis of investment in DRR measures NAOYUKI NAGATOMO, EHI OTRUKI AND JUNICHI HIRANO	83
PART III Achieving build back better in recovery and reconstruction	
7 Recovery and reconstruction: an opportunity for sustainable growth through "build back better" RYO MATSUMARU AND KIMIO TAKEYA	139
8 Lessons from promoting "build-back-better" in the post-tsunami recovery of Aceh KUNTORO MANGKUSUBROTO	161
PART IV Increasing the roles of stakeholders	
9 Community empowerment and good governance: the way forward for DRM in developing countries MUHAMMAD SAJID BAHMAN	181
10 The role of the private sector in disaster risk management following catastrophic events HITOSHI KAKA AND TOSHIFUKU SHIKANO	196
11 Disaster risk governance and the principles of good governance ANGELIKA PLANTZ	225
PART V Tools and technologies for disaster risk reduction	
12 National disaster databases: an essential foundation for disaster risk reduction policies and disaster-related sustainable development goals and targets YUTSUKI ONO AND MASAFUMI SAGASHI	241
13 Disaster intelligence: using geospatial technology to improve resilience in developing countries RYOSUKE SHIRASAKI AND SHO TAKANO	259
Summary IAN DAVIS AND KAE YANAGISAWA	271
Index	281

Made Japanese standard to the World Standard

日本の防災の常識を世界の常識にした

Priority 1
Understanding disaster risk

Priority 1; Understanding risk

Priority 2
Strengthening disaster risk governance to
manage disaster risk

governance

Priority 3
Investing in disaster risk
reduction for resilience

brand new propose from Japan

Priority 4
Enhancing disaster preparedness for
response,
and to “**Build Back Better**” in recovery,
rehabilitation and reconstruction

優先行動1
災害リスクの理解

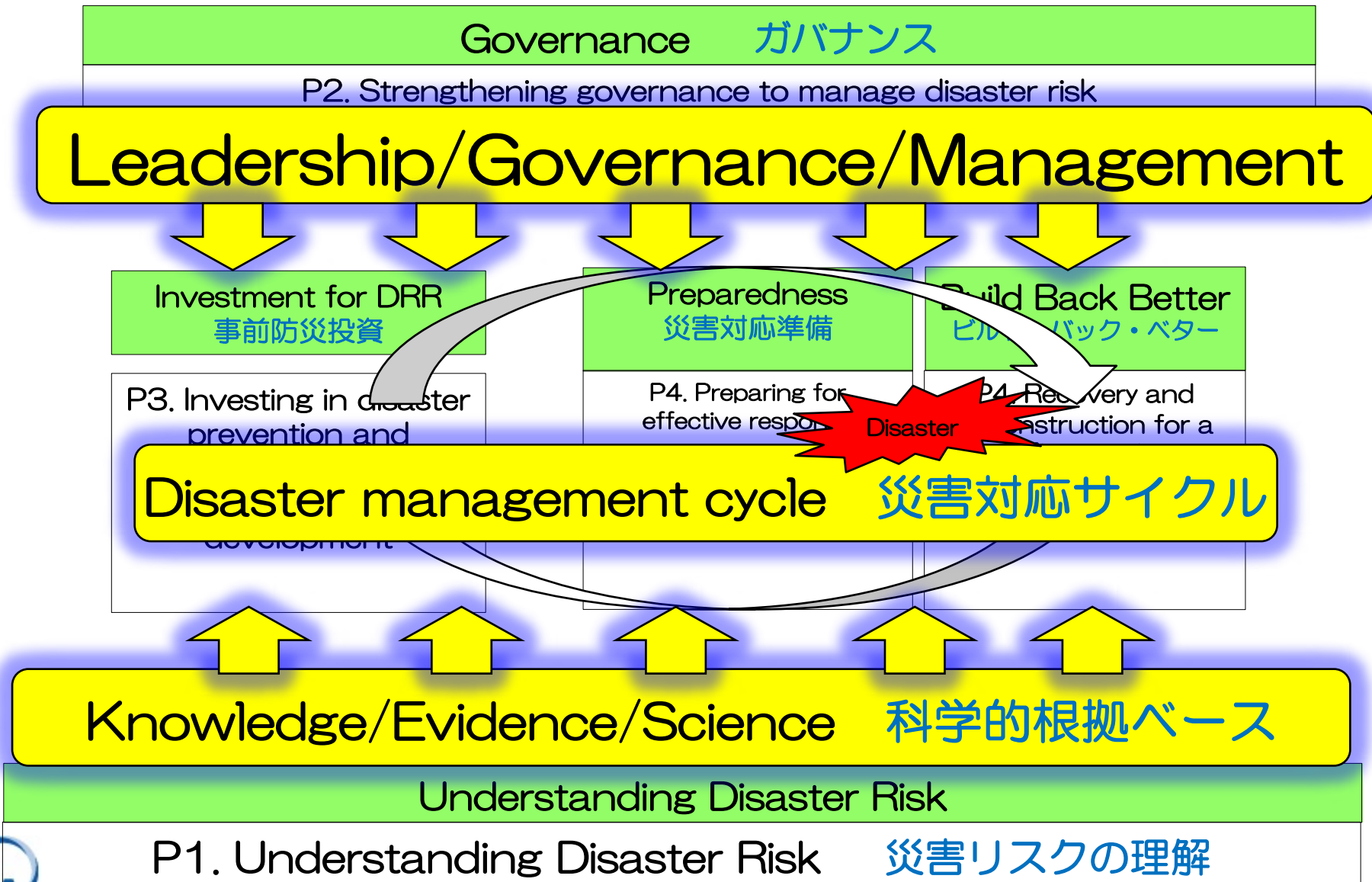
優先行動2
災害制御の為のリスクガバナ
ンスの強化

優先行動3
レジリエンスのための
災害削減への投資

優先行動4
発災対応の強化と再度被
害を防ぐ復興
“Build Back Better”

Sendai Framework, Logic of the Priority Action

国連仙台枠組み優先行動の論理的関係



After Sendai Framework for DRR agreed,
did world Reconstruction situations changed?
“Build Back Better” realized?

国連防災仙台枠組み合意後の復興は？
ビルド・バック・ベターは実現しているか？

Sendai Framework
for Disaster Risk Reduction
2015 - 2030



“Build Back Better” gives hope for
the future to the affected people

ビルド・バック・ベターは被災者に未来への希望を与えるコンセプトである

First Mega disaster after Sendai,
2015 April, Nepal Earthquake

仙台枠組み策定後最初の大災害
2015年4月ネパール大地震

Everyone respect Sendai Framework.
Discuss how to realize Build Back Better,
it was drastic change before & after Sendai

仙台枠組みは周知でビルド・バック・ベターは当然、
どうやって達成するか、がメインの議論
仙台枠組み前後で劇的な変化



In Philippine, after disaster activities enhanced by the Act

フィリピンでは大統領令でビルド・バック・ベターが前提

After disaster happened, President of Philippine publish the “Executive order” to act as Build Back Better concept and task force

フィリピンでは災害後、大統領令によりビルド・バック・ベターチームの設置が命令が出される



MALACAÑAN PALACE
MANILA

BY THE PRESIDENT OF THE PHILIPPINES

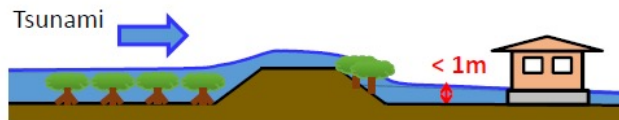
EXECUTIVE ORDER NO. 120

**STRENGTHENING REHABILITATION AND RECOVERY EFFORTS IN
TYPHOON-HIT AREAS THROUGH THE CREATION OF THE BUILD
BACK BETTER TASK FORCE**

Prevent same kind of recovery like Aceh, Indonesia government did their best with Build Back Better concept with JICA support

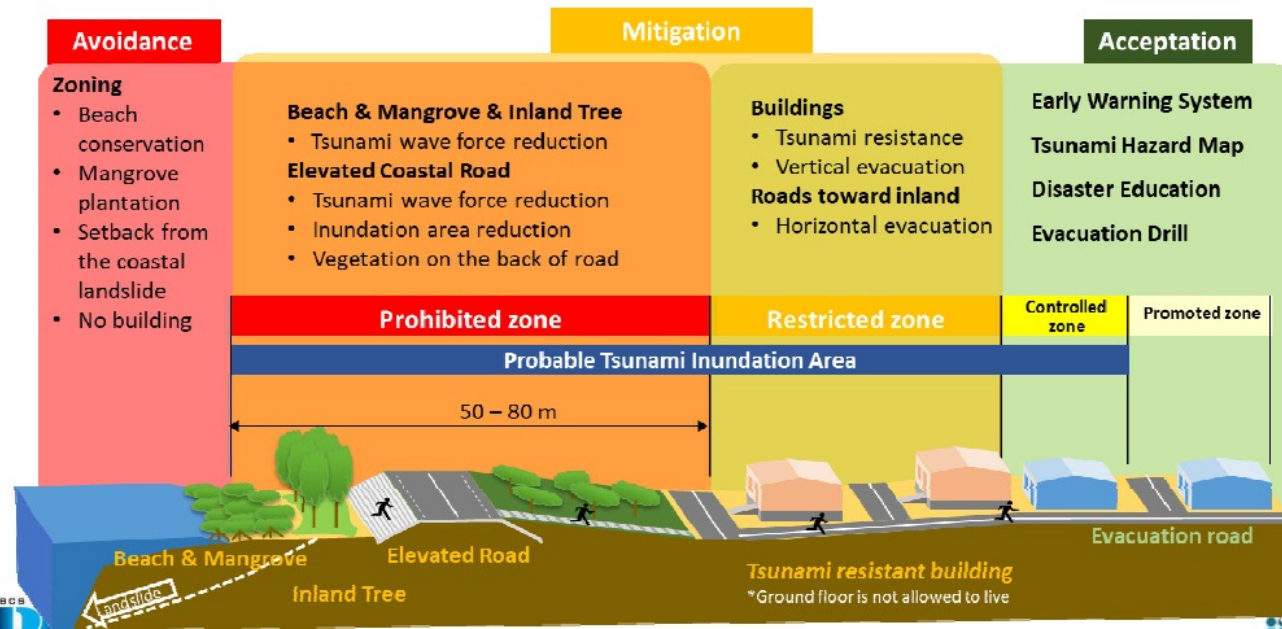
インドネシア政府はアチェの教訓も踏まえて、JICAの支援も得ながら、ビルド・バック・ベターの実現に最大限の努力を行った

Less than 1m of inundation depth can be acceptable, considering a safety behind countermeasure.



- If inundation depth can be decreased to less than 1m,
- Almost all buildings would not collapse ※
 - People can survive by evacuation to upper floor
 - There is possibility that even people outside could evacuate on foot

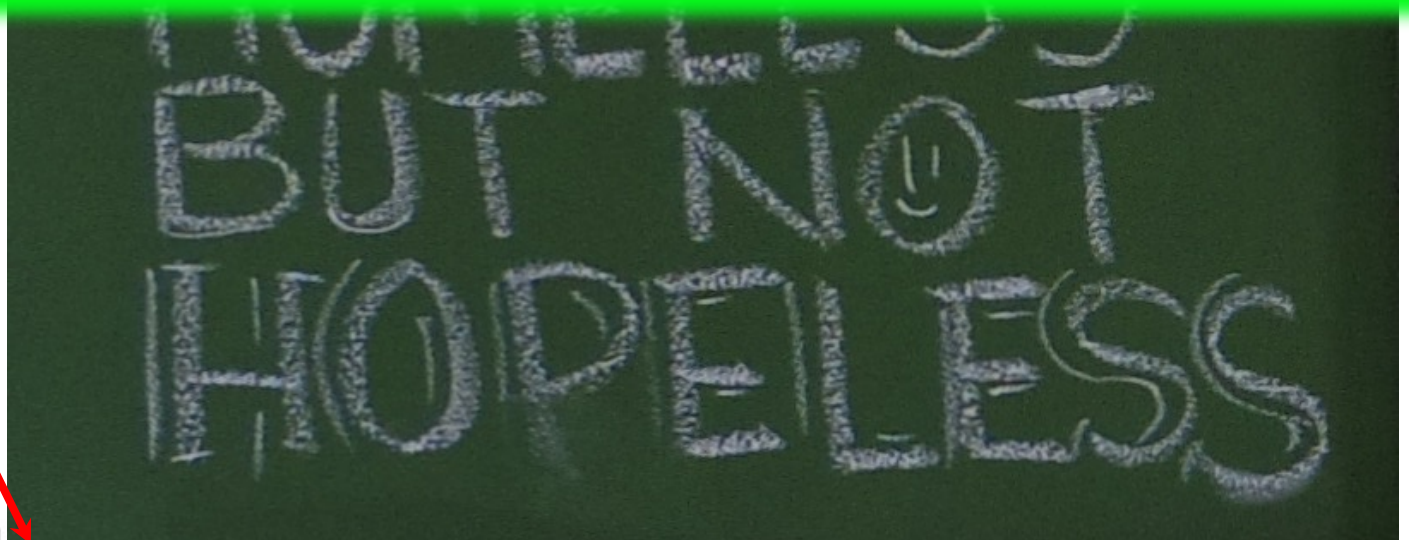
※Source : Japanese guideline and data from tsunami in 2011

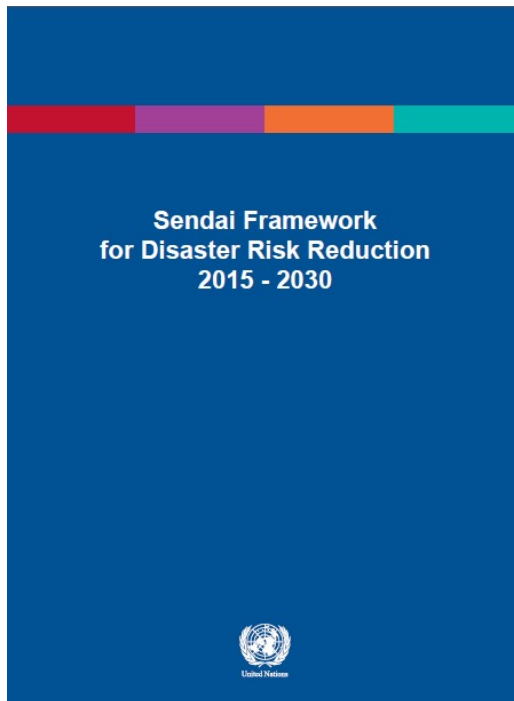


We are responsible to these spirits,
written on the board of refugee camp
我々は、被災者のこういった希望に応える責任がある

“Build Back Better” gives hope to the affected people
and connect to the future **“Disaster Risk Reduction”**
and **Sustainable Development!**

ビルド・バック・ベターは被災者に将来への希望を与え且つ、
将来の同種災害被害の削減とSDGsに直結するもの！





Today we can learn a lot of practical experiences base on Sendai Framework “Build Back Better” concept through this seminar!

今日はこのセミナーを通じて、仙台枠組みのビルド・バック・ベター思想に沿った各国の実践的な取組を学ぶことが楽しみです