

JICA Cooperation on Forest/Nature Conservation and Nature disasters

**JICAによる森林・自然環境保全と自然災害に
対する取組み**

JICA Technical Advisor Shigeki HATA
JICA技術審議役 畑 茂樹

Agenda / 発表内容

1. JICA's cooperation on Forest and Nature conservation /

JICAの森林・自然環境保全分野協力

2 Case example / 自然災害への対応事例

i. Earthquake / 地震

ii. Typhoon / 台風

iii. Forest Fire / 森林火災



Object: Achieving Harmony – Human and Nature

目的：自然環境の維持と人間活動の調和を図る

～ Focus of activities～

～活動の3つの視点～



Forest conservation - Laos



Farmers Workshop- Kenya

Sustainable Use of Natural
Resources by

Local Communities

住民による自然資源の
持続的利用

Conservation of
Biological Diversity

生物多様性の保全

Sustainable Forest
Management

持続的森林経営

Climate **Change**
Mitigation

気候変動対策
緩和



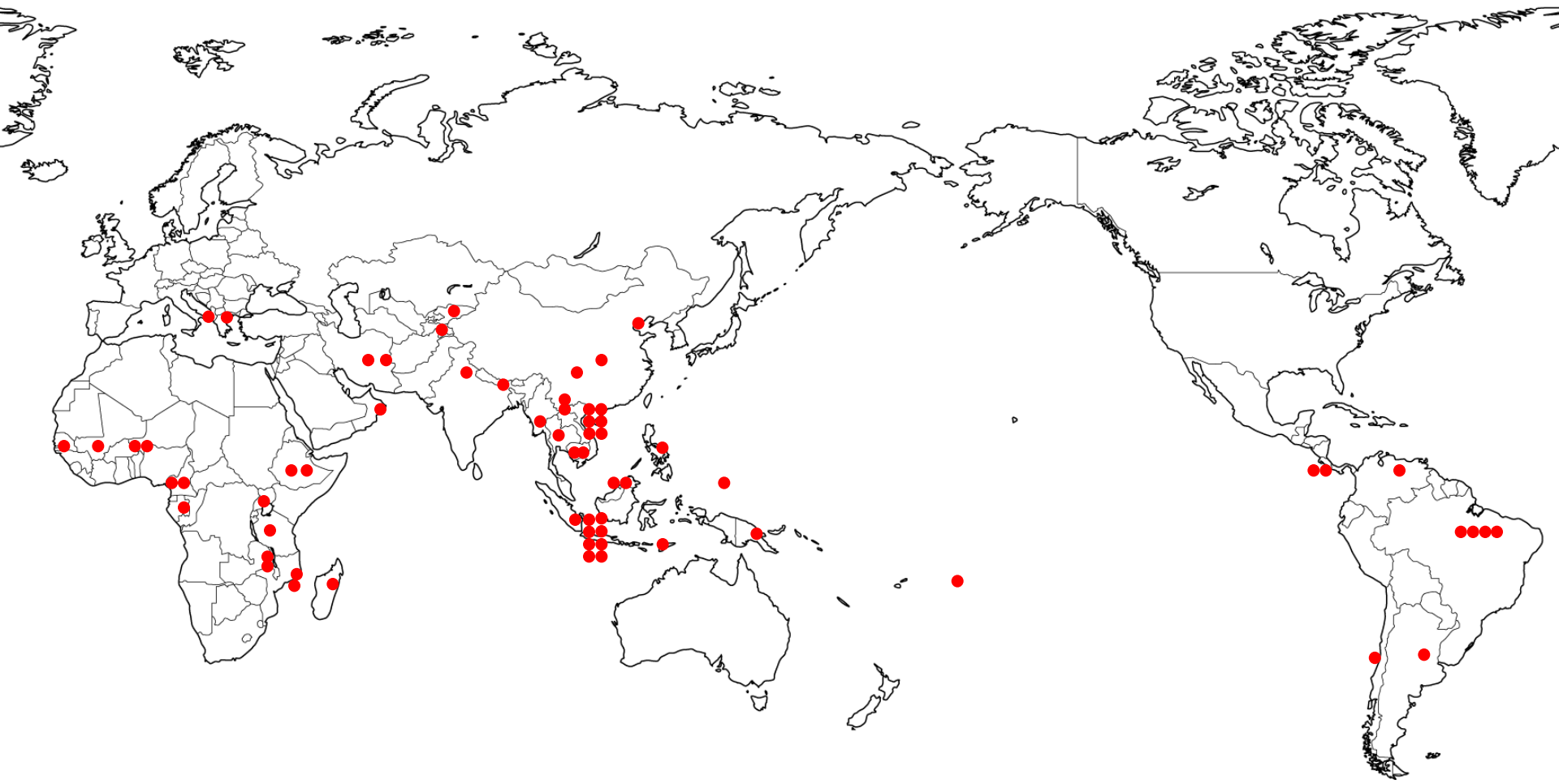
JICA-supported Fire fighting demonstration -
Jambi, Indonesia

Technical Cooperation Projects

実施・実施予定の技術協力プロジェクト

incl. all type of projects (as of January 2012)

Region	Sustainable Use of Natural Resources by Communities	Biodiversity Conservation	Sustainable Forest Management
Asia and the Pacific	6	8	21
Latin America, Caribbean	0	4	5
Africa	7	3	6
Middle East and Europe	1	3	1
Total (65)	14	18	33



Our Projects at Glance / JICAプロジェクトサイト

- JICA FNCG's activities around the world-
- 森林・自然環境保分野 - As of January 2012

● : Project Site

2 Case example / 自然災害への対応事例

i. Earthquake / 地震

Chinese- Sichuan earthquake (2008) / 中国四川省地震

ii. Typhoon / 台風

Myanmar- Cyclone Narguis (2008) / ミャンマー サイクロンナルギス
Central America Hurricane Mitch (1998) / 中米 ハリケーンミッチ

iii. Forest Fire / 森林火災

Indonesia-Forest fire / インドネシア 森林火災

2- i Earthquake / 地震

Chinese- Sichuan earthquake

May 12, 2008, Sichuan-China

Magnitude 8.0

Damages:

Over 900,000 People perished

5,807 km of line for communication,
power and water supply

329 thousand hectares of forest land

1,830 km of forest road

–Project on forest restoration after the earthquake in Sichuan Province

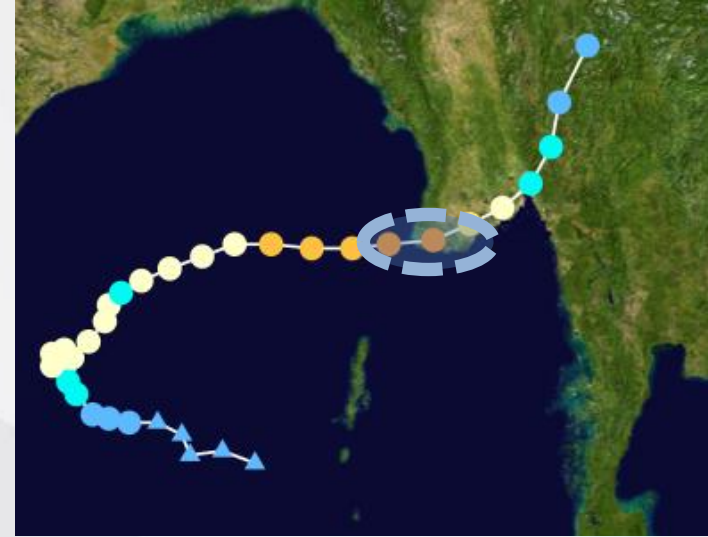


2- ii Typhoon / 台風

Myanmar- Cyclone Nargis

The cyclone made landfall in Myanmar on May 2, 2008

- Highest winds-1-minute sustained:
215 km/h (135 mph)
- Lowest pressure:962 mbar



Damages:

- 130,000 People perished
- Most damaging Area :
Yangon, **The Ayeyarwady Division**
→Project site



**Integrated Mangrove Rehabilitation and Management through
Community Participation in the Ayeyawady Delta**

2- ii Typhoon / 台風

Myanmar- Cyclone Nargis



Mangrove Reforestation
(Jul,2009)



View of Mangrove Nursery Bed Area
(Jul,2010)



Nargis Sign board

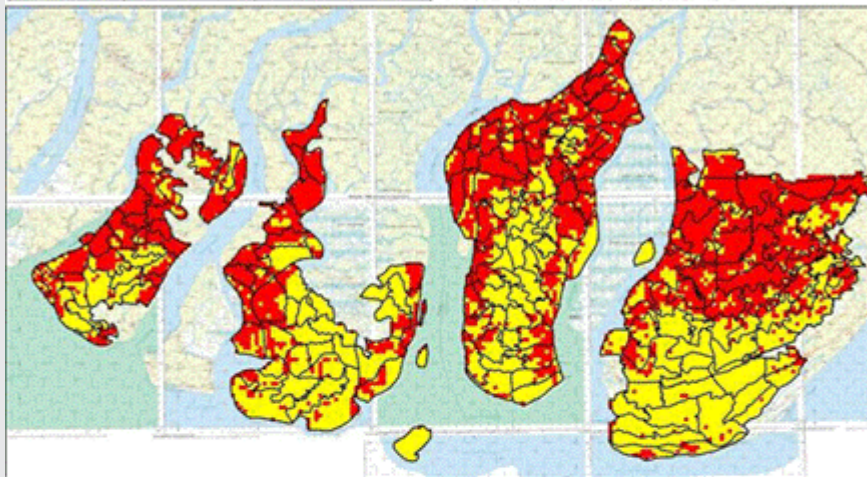
2- ii Typhoon / 台風

Myanmar- Cyclone Nargis

Hazard Map

危険度	植生率 [※]	予想死亡率 (2mの高潮の場合) [※]
危険度1	≦10%	22%
危険度2	>10%	12%

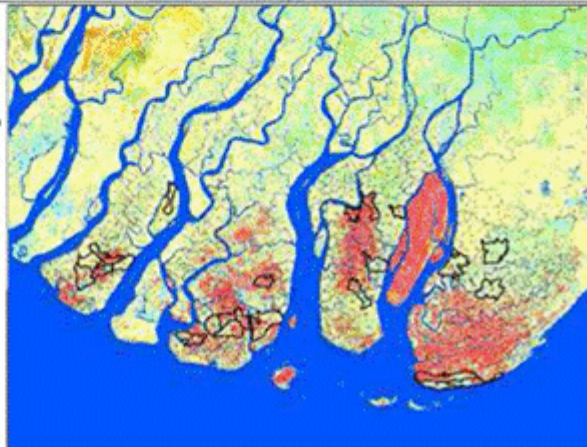
- 対象地域では、統計的に植生率10%がしきい値として確認できました。植生率10%以下の地域はより危険な地域と分析されています。
- 危険な地域は、植生率と被害2mの高潮を想定して予測しました。また、予想死亡率は、実際に調査して確認したサイクロンナルギスによる村ごとの死亡者数のデータに基づきました。



2007 マングロープ植生エリア
(マングロープエリアは赤色)

- 対象地域全体の21%がマングロープと判別されています。
- マングロープ植生エリアは、上記のハザードマップの死亡率が高い黄色の部分と重なります。

情報源: ランドサット 2007年2月



2- ii Typhoon / 台風

Central America-Hurricane Mitch

The hurricane stayed 9 days In Central America on October 1998

- Highest winds-1-minute sustained:
180 mph (285 km/h)
- Lowest pressure: 905 mbar



Damages:

- Over 200,000 People perished

- Affected Countries:

Honduras, Nicaragua, Rep. Dominica,

El Salvador, Guatemala, other Central American Countries, Flooding in Managua

Carrabin courtiers



2- ii Typhoon / 台風

Central America-Hurricane Mitch (Nicaragua)

- The Maser Plan Study on Forest Management for Disaster Prevention in the Northern Pacific Region in the Republic of Nicaragua (2000-2004)
- Project on Participatory Forest Management (2006-2011)



Agriculture on slope



Watershed in project area
-Stability of the water-

2- ii Typhoon / 台風

Central America-Hurricane Mitch (Republic of Dominica)

- The Maser Plan Study on The Sustainable Watershed Management Project in the Upper Area of the Sabana Yegua Dam in the Dominican Republic (2000-2002)
- The Sustainable Watershed Management Project in the Upper Area of the Sabana Yegua Dam in the Dominican Republic (2006-2009)



Deforestation in project area

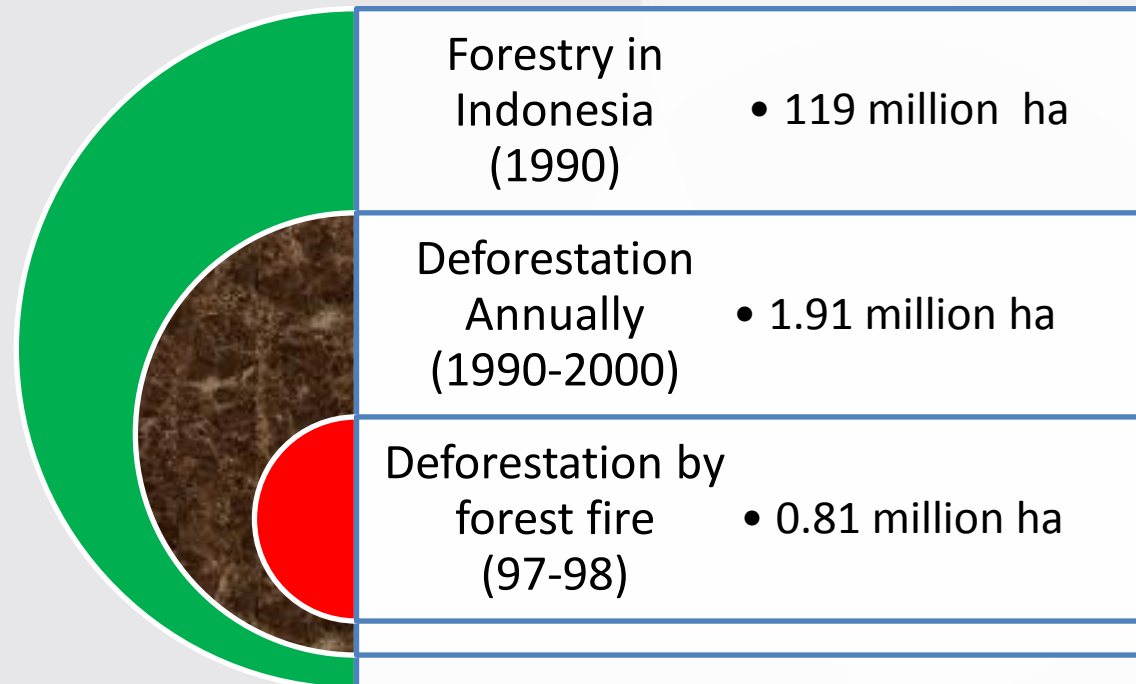


Reforestation

2- iii Forest Fire / 森林火災

Indonesia-Forest fire

- Forest fire is one of the major of the deforestation in Indonesia



Fire fighting training

2- iii Forest Fire / 森林火災

Indonesia-Forest fire

1996-2005

The Forest Fire Prevention Management Project in the Republic of Indonesia I , II

- Out put: Guide line of Forest fire prevention



2006-2009

Forest Fire Prevention Project by Initiative of people in Buffer Zone

- Out put: Capacity building of forest fire prevention for people in buffer zone



2010-2015

Program of Community Development of Fires Control in Peat Land Area

- Purpose: Capacity of organization and people concerned to prevent fire occurred at peat land of the project are is developed





More JICA Project information

JICA Knowledge Site /JICAナレッジサイト

http://gwwweb.jica.go.jp/km/km_frame.nsf

Project/ プロジェクト名	URL
Project on forest restoration after the earthquake in Sichuan Province 四川省震災後森林植生復旧計画プロジェクト	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/F50EE4EA0168FCF6492576F00079E092?OpenDocume nt&pv=VW02040104
-Integrated Mangrove Rehabilitation and Management through Community Participation in the Ayeyawady Delta ミャンマーエーヤーワディ・デルタ住民参加型マングローブ総合管理計画プロジェクト	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/B786AD8D8893F7DB492575D100355953?OpenDocu ment&pv=VW02040104
The Sustainable Watershed Management Project in the Upper Area of the Sabana Yegua Dam in the Dominican Republic サバナ・イエグア・ダム上流域の持続的流域管理計画	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/97402DE4B8311C48492575D100358F00?OpenDocum ent&pv=VW02040104
Project on Participatory Forest Management 住民による森林管理計画	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/34D8278A9DDB354E492575D100359AE6?OpenDocu ment&pv=VW02040104
The Forest Fire Prevention Management Project in the Republic of Indonesia III/ 森林火災予防計画IIプロジェクト	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/16589DBEA66A1C52492575D10035198C?OpenDocum ent&pv=VW02040104
Forest Fire Prevention Project by Initiative of people in Buffer Zone 森林地帯周辺住民イニシアティブによる森林火災予防計画プロジェクト	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/331A1D79ADE66724492575D1003525C8?OpenDocum ent&pv=VW02040104
Program of Community Development of Fires Control in Peat Land Area 泥炭湿地林周辺地域における火災予防のためのコミュニティー能力強化プロジェクト	http://gwwweb.jica.go.jp/km/ProjectView.nsf/VIEWParentSe arch/F60E778853F1897A492576F5003C28E7?OpenDocume nt&pv=VW02040104

Thank for your attention!

Hata.Shigeki@jica.go.jp



~Continue~

Post-disaster Reconstruction of Sichuan Forestry