



ICT INFRASTRUCTURE RESILIENCE AGAINST NATURAL DISASTERS IN THE ASIA-PACIFIC REGION

3rd UN World Conference on Disaster Risk Reduction

March 16th, 2015

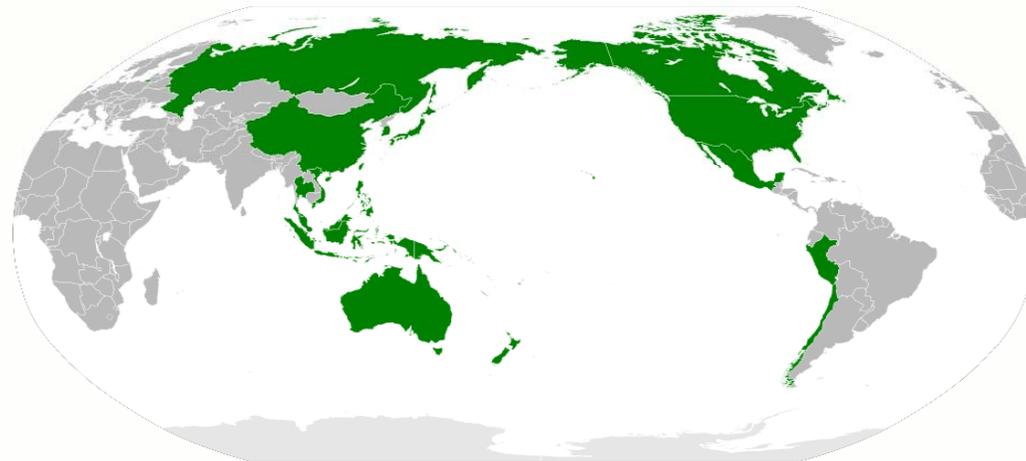
ABAC Japan

Hidetoshi KAMEZAKI

About APEC Business Advisory Council (ABAC)



- ✓ High-level business advisory group created by APEC.
- ✓ A direct channel for business input into the APEC work program.
- ✓ Present recommendations to APEC Leaders in an annual dialogue.



ABAC Activities (in the case of 2014)

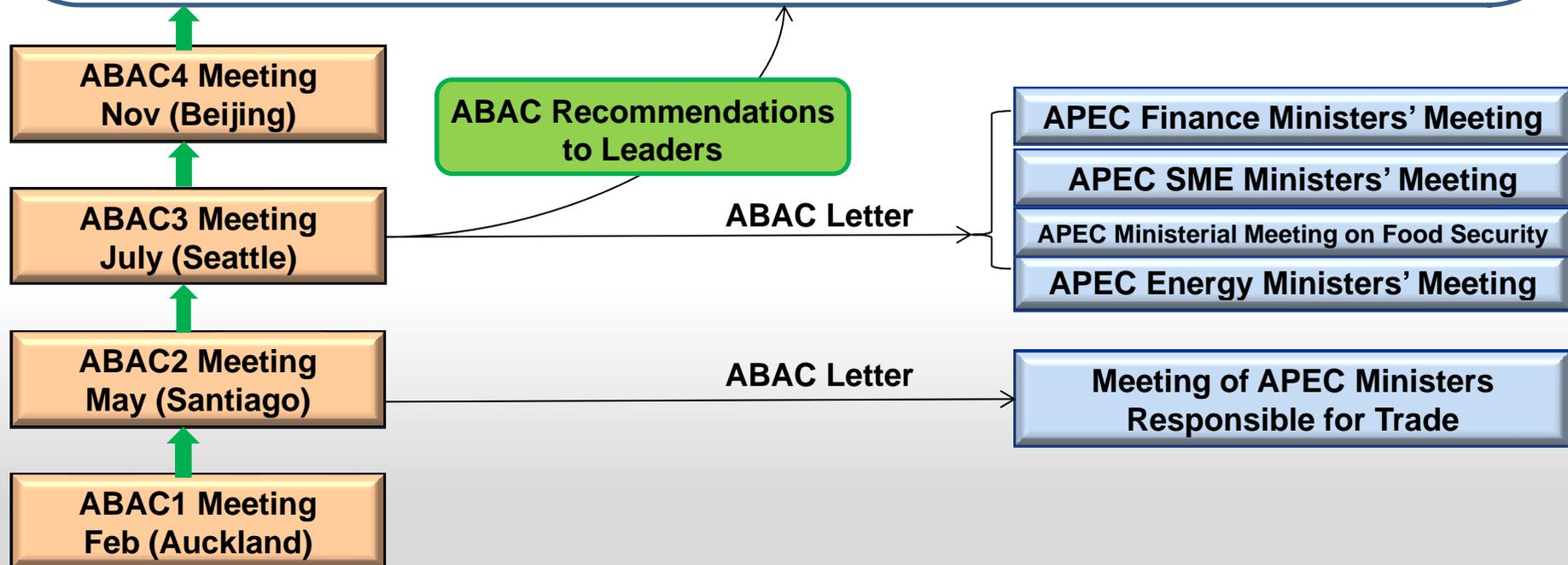


ABAC Dialogue with APEC Economic Leaders

ABAC members and APEC Leaders exchange views on key issues and recommendations.



November in Beijing



ABAC Achievements

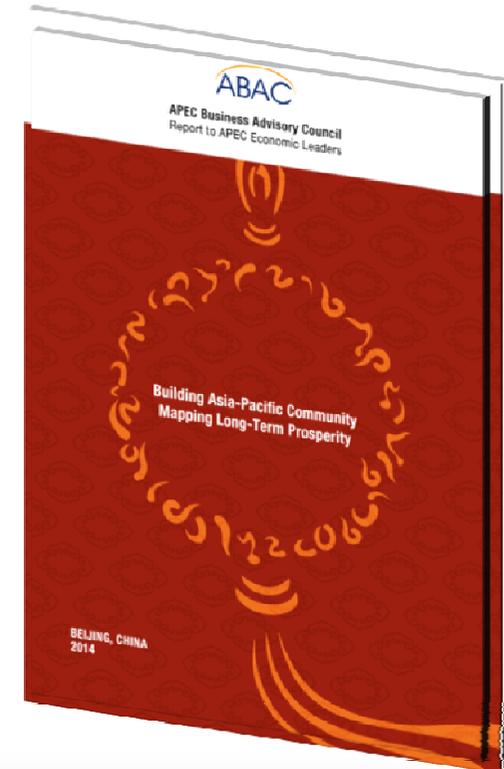


- ✓ **APEC Business Travel Card (ABTC):**
Created in response to demands from ABAC
- ✓ **Free Trade Area of the Asia-Pacific (FTAAP):**
Started out as a concept from ABAC
- ✓ **Environmental Goods Tariff Reduction Commitments:**
Agreed in response to recommendations from ABAC
- ✓ **Supply Chain Connectivity Framework:**
Created in response to developments and promotions from ABAC

ABAC Recommendations to APEC Leaders (2014)



- ✓ Accelerating trade and investment liberalization
- ✓ Enhancing supply chain connectivity
- ✓ Addressing food security
- ✓ Promoting innovative growth
- ✓ Underpinning the connectivity agenda
- ✓ **Promoting disaster resilient ICT frameworks**
- ✓ Promoting PPP and infrastructure finance
- ...



Natural Disasters in the Asia-Pacific Region



The Asia-Pacific region experiences over 70% of the world's natural disasters.

Major Natural Disasters in Recent Years

Earthquake (Chile) 2010

Tennessee Floods (USA) 2010

The Great East Earthquake (Japan) 2011

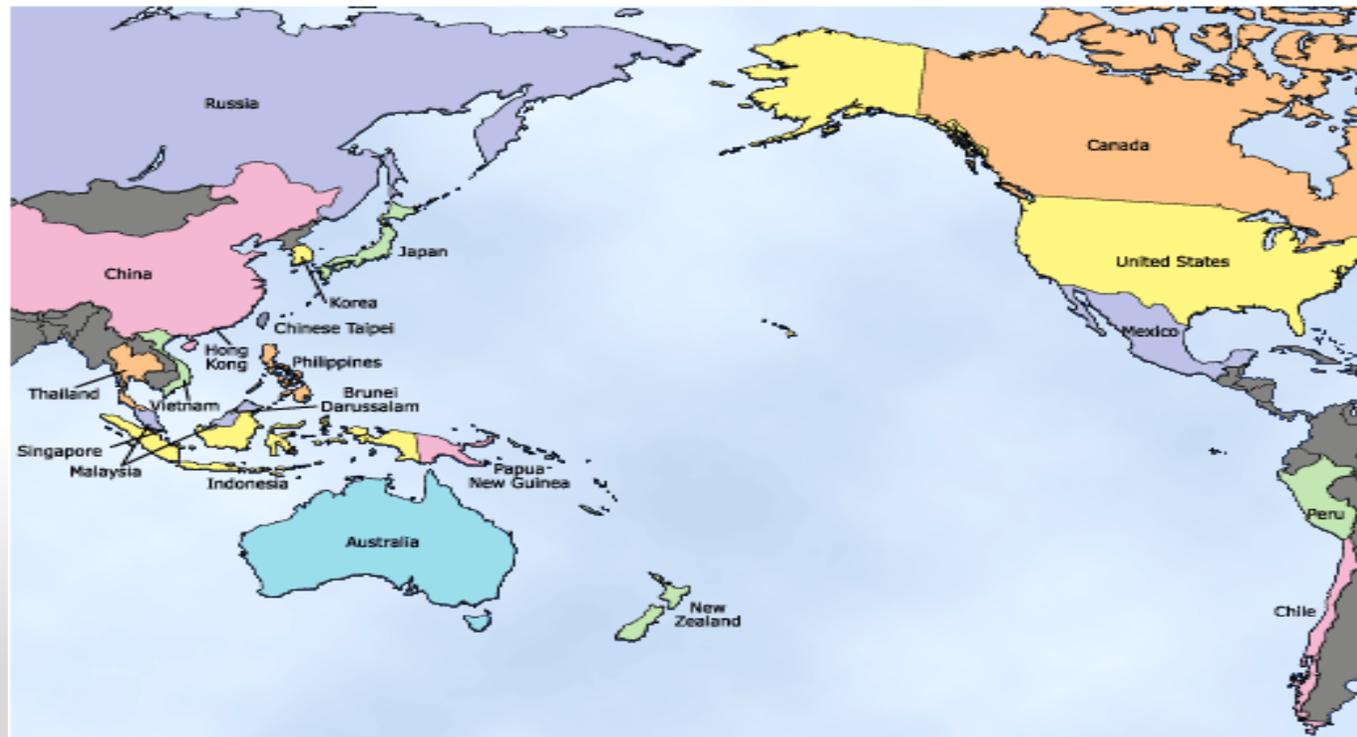
Floods (Thailand) 2011

Tornado (USA) 2011

Loreto Floods (Peru) 2012

Hurricane Sandy (USA) 2012

Typhoon Haiyan (the Philippines) 2013



Recent Natural Disasters in the Asia-Pacific Region



2011
Great East Japan Earthquake



2011
Thailand Floods



2013
Typhoon Haiyan

Looking at the initial stages of these disasters, private sectors could...

- ✓ **Learn how ICT infrastructure contributed to saving lives.**
- ✓ **Learn how ICT infrastructure could have contributed more in disaster relief and recovery.**

2011 Great East Japan Earthquake



Basic Facts

- ✓ Occurred on March 11, 2011.
- ✓ The largest earthquake in Japan, the 4th largest in the world.
- ✓ Magnitude 9.0, Tsunami up to 133ft. (40.5m).
- ✓ Over 15,000 deaths, 3,000 missing.
- ✓ US\$210 bil. economic damages and losses.

How ICT Infrastructure was Damaged

- ✓ About 1.9 mil. fixed lines were affected.
- ✓ Over 6,500 km cable was carried away.
- ✓ Over 380 telecom facilities went out of service, and over 29,000 mobile phone base stations were not working due to power outage.



2011 Thailand Floods



Basic Facts

- ✓ Occurred during Aug-Dec. 2011, lasted for 5 months in some areas.
- ✓ The worst flooding in 50 years for Thailand.
- ✓ Over 800 deaths and 13.6 million people were affected.
- ✓ Over US\$45.7 bil. economic damages and losses.
- ✓ 7 major industrial estates were heavily damaged.

How ICT Infrastructure was Damaged

- ✓ Flooding caused power outage, leaving people without power generators unable to charge their mobile phones.
- ✓ Server hubs were flooded and mail systems were malfunctioned for days.



2013 Typhoon Haiyan



Basic Facts

- ✓ Occurred in Nov. 2013.
- ✓ The deadliest typhoon in the Philippines.
- ✓ Over 6,000 deaths and 16 million people were affected.
- ✓ Over US\$14 bil. economic damages and losses.

How ICT Infrastructure was Damaged

- ✓ All communications were down except for satellite phones provided by aids such as UN and ASEAN.



How ICT Infrastructure Contributed to Saving Lives

Damage Prevention

- ✓ Urgent earthquake detection alarm system



- ✓ Earthquake early warning mobile phone alert



Rescue

- ✓ Twitter-led rescue
- ✓ Online disaster message board service



Registration

■ Status

I'm fine.

I'm on the move.

I'm at home.

I'm at school.

I'm at office.

I'm hurt.

I'm at the evacuation area.

■ Enter Message

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Communication Tool

- ✓ Mobile phone station vehicles
- ✓ Satellite phones



Reliable Information Source

- ✓ Distribution station information for evacuees
- ✓ Information sharing for volunteers



How ICT Infrastructure Could Have Contributed More in Disaster Recovery



In the Case of 2011 Great East Japan Earthquake

BCP for Sustainable Supply Chain

- ✓ Feasible back up ICT operations to execute Business Continuity Plan (BCP)



In the Case of 2013 Thailand Floods

E-mails as Visual Communication Tool

- ✓ Mail server hub location



In Conclusion



ICT infrastructure is crucial to effective disaster relief and recovery.

- ✓ **To ensure the safety of employees and loved ones.**
- ✓ **To access information promptly and stay connected.**
- ✓ **To properly execute Business Continuity Plans (BCPs).**

Vulnerability of ICT infrastructure needs to be resolved.

- ✓ **Strong framework is needed for APEC to develop an ICT infrastructure that actually operates in times of natural disasters.**

ABAC Recommendation to APEC Leaders (2014)



Promoting disaster resilient ICT frameworks

Develop collective plans/actions for disaster-resilient ICT infrastructure throughout the Asia-Pacific region drawing on the wide experiences and lessons learnt in several APEC economies.

