

# Society Benefits From Adaptation to Water-Related Risks Posed by Climate Change

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**Thank you for including the US Army Corps of Engineers in the 8th Ministers' Forum on Infrastructure Development in the Asia-Pacific Region.**

**I am honored to be here, and excited to talk with you about our goals of maintaining and improving the performance of water-related infrastructure. I know there has been a lot of activity in the Asia-Pacific region and I hope we can learn from each other.**

**The Corps recognizes that global changes, including demographic shifts, changing land use and land cover, climate change, evolving social values and economic instability. All contribute to the challenges of water resources' management in the 21st Century.**

**It is clear that global changes result in local impacts and responses, but no one nation can act alone. Close collaboration, both nationally and internationally, is necessary to develop effective, practical, comprehensive, and cost-effective measures to reduce potential vulnerabilities resulting from global changes.**



**There is no doubt that water is absolutely necessary to sustain human and ecological populations.**

**As the Ministers' Forum on Infrastructure Development in the Asia-Pacific Region has previously noted, water resources infrastructure plays a critical role in assuring sufficient quantity and quality of water to support social, economic, and environmental development, while at the same time providing resilience to natural and technological disasters.**

**The term water resources infrastructure, as used, here encompasses both structural infrastructure such as dams, dikes, and canals, as well as nonstructural infrastructure such as wetlands, floodplains, governance and social behavior. For example, laws regulating floodplain development and organizations charged with predicting, preparing and responding to natural disasters.**

**Water infrastructure matters to all nations.**

## **Water Investments Are Important**

- 1. Support socio-economic growth, especially where water availability and quality is irregular or insufficient**
- 2. Improve resilience to natural and technological disasters**
- 3. Proactive, decrease need for reactive disaster-response aid**
- 4. Water infrastructure is necessary for large scale social stability**



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Investing in the development, operation and improvement of our water resources infrastructures matter to all nations for four primary reasons.

First, it provides a foundation that supports improved expectations of clean water for drinking, sanitary, and industrial purposes. Water infrastructure can set the baseline conditions necessary for growth, and break the cycle of poverty and fatalism that can exist where water availability and quality is irregular or insufficient.

Second, societies with a great deal of water infrastructure, need additional investments to improve resilience to natural and technological disasters.

Third, water investments can bridge the gap between reactive disaster-response aid and proactive water resources management.

A fourth reason to invest is an increasing recognition of the relationship between infrastructure and large scale social stability. We must reexamine how building the infrastructure is directly related to maintaining the health of stable cultures which in turn support economic development and ecologic sustainability.

# Global Changes



In the 20<sup>th</sup> century, water investments were key to social and economic growth in the United States.

As we move into the 21<sup>st</sup> century, we are facing increasing pressures from global changes, including climate change.

These are some of the challenges to US water resources management in the 21<sup>st</sup> century that we see resulting from global changes, including climate change.

These changes affect not only water resources infrastructure in the US, but other nations in the Asia-Pacific region.

Water investments for the 21<sup>st</sup> century should help us adapt our water infrastructure to decrease risks and provide resilience to the adverse impacts of water-related change. At the same time, we can also develop management policies and procedures that influence social behavior to better respond to changing needs and balance competing needs.

# Global and Climate Change

- **Challenge the Corps to develop and implement innovative ways to fulfill our mission requirements at a time when budget are constrained**

**BUT**

- **They also provide the Corps with an opportunity to capitalize on an “open moment – a rare period in which the status quo can be ruptured and possible futures imagined\*\*”**



\* Ghani, A. and C. Lockhart (2008) Fixing Failed States: A Framework for Rebuilding a Fractured World. New York: Oxford University Press. 5

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There are many challenges posed by global and climate change. For one, we must fulfill our mission with a constrained budget. But I know we can face these challenges. Every nation can look back in history and identify moments in time when their people gathered together in the face of what seemed to be insurmountable odds.

They overcame these odds by employing creative and innovative approaches. It is known as the “open moment.”

In the United States, an example of an ‘open moment’ is by the Marshall Plan in post-World War II Europe. The Plan was an unusually designed and heavily collaborative effort aimed at fostering cooperation throughout Europe to assist in recovering from the ravages of World War II.

NOTE: The Marshall Plan operated between 1948 and 1952, and “by 1952 as the funding ended, the economy of every participant state had surpassed pre-war levels; for all Marshall plan recipients, output in 1951 was 35% higher than in 1938.” (Barry Eichengreen, *The European Economy since 1945: Coordinated Capitalism and Beyond*, (2008) p. 57).

## George Marshall

**“An essential part of any successful action ... is an understanding on the part of the people ... of the character of the problem and the remedies to be applied. Political passion and prejudice should have no part. With foresight, and a willingness on the part of our people to face up to the vast responsibility which history has clearly placed upon [us] the difficulties .....can and will be overcome.”**



The words of Secretary of State George Marshall at Harvard on June 5 1947 are just as applicable today with regard to global and climate change.

**“An essential part of any successful action...is an understanding on the part of the people...of the character of the problem and the remedies to be applied. Political passion and prejudice should have no part. With foresight, and a willingness on the part of our people to face up to the vast responsibility which history has clearly placed upon us. The difficulties can and will be overcome.”**

**We must be clear about the impacts of climate to our water infrastructure.**

**We must be clear about developing and implementing appropriate adaptation and mitigation measures to ensure the functioning of our water infrastructure and provide for stability and growth in the future.**

**We must be clear about our desire to work together to achieve these aims.**

## President Obama

**“Together we can collaborate in ways unimaginable just a few years ago.**

**Together,  
we can realize  
the future that  
none of us can  
achieve alone....**



**But only if we move forward with the  
seriousness and sense of purpose  
that this moment demands.”**



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President Barack Obama, in his remarks at the Millennium Development Goals Summit in New York in September 2010, identified the benefits of collaboration.

He said “Together we can collaborate in ways unimaginable just a few years ago. Together, we can realize the future that none of us can achieve alone.... But only if we move forward with the seriousness and sense of purpose that this moment demands.”

If we collaborate to meet the needs of the 21<sup>st</sup> century, we can capitalize on the open moment.

# Capitalize on the Open Moment

- Support in words and actions the Declaration of this 8<sup>th</sup> Ministers' Forum on Infrastructure Development in the Asia-Pacific Region
- Clarity about opportunities and challenges
- Capture public imagination
- Trust in the ingenuity of the people
- Collaborate and share



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The Declaration of this 8<sup>th</sup> Ministers' Forum on Infrastructure Development in the Asia-Pacific Region presents an opportunity for us all to capitalize on the open moment.

By supporting the Declaration before us, in words and actions that unmistakably demonstrate our intent to work together to adapt our water infrastructure to climate change, we may be able to capture the imaginations of our countries people to do the same.

If we can communicate clearly both the challenges and the opportunities facing us,

if we can convey our trust in the abilities and ingenuity of our citizens,

if we are open to their thoughts and suggestions,

and if we share knowledge and resources,

I am sure we can capitalize on this open moment to better prepare water resources infrastructure for the future.

I am optimistic. I believe in the capacity of humans to overcome great odds. True collaboration will be the key to solving the challenges of water-related climate change.

# Thank you



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