

CSCAP MEMORANDUM NO. 23

Enhancing Water Security in the Asia Pacific



**A Memorandum from the
Council for Security Cooperation in the Asia Pacific (CSCAP)**

January 2014

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Introduction

Water security, which involves the sustainable use and protection of water systems, the protection against floods and droughts, the sustainable development of water resources, and the safeguarding access to water functions and services for humans and the environment, is increasingly becoming a global concern, not an issue of any particular region. Fast population growth, increased demand of water and agricultural production, urbanization, and climate change has impacts on water resources management. As the world's population marked 7 billion last year, more food, water and energy will be needed to sustain societies that are rapidly becoming more urbanized and prosperous. The emerging issue of water-food-energy and climate nexus will have key effect on water security. Water security is also an issue for not only states but also non-state actors, including people, communities, NGOs, and international organizations. In addressing challenges posed to water security, especially in water resources management, all the relevant stakeholders, be they states or non-states, need to engage in concerted efforts for equitable use of resources and effective and efficient management. Given its transnational nature, moreover, concerted efforts and actions may call on the stakeholders to go beyond some of the traditional state practices for managing water resources.

The Asia and Pacific is the largest and fastest growing region in the world. It has 60% of global population, 27% of global land and only 35% of available global water resources. Mainland South East Asia is still rich in water resources. The agricultural sector is the major consumer in this region, followed by industrial sector and domestic sector. However, several emerging risk factors are causing the dramatic change in the region's water situation, heightening the potential risk of inter-state competition and frictions over water resources. Regional cooperation on water security needs to be strengthened due to inadequate legal and institutional framework. International rivers in the region are also important for navigation, which has a role in connecting regional communities through increasing their trade relationship. The sharing of navigation information is essential for potential economic connectivity.

Risk Factors and Approaches to Mitigating the Risks

As demand for water resources continue to rises rapidly, poor usage and mismanagement of water resources can lead to wider regional security implications and affect the stability of the whole region. Other non-man made causes which could severely affect water security also have the potential of causing severe water security risks. The most potential threats and risks are from:

a) Man-made causes:

- Growth of irrigation and storage of river water by dams, reservoir etc. and other man-made structures without factoring in long term environment calculations.
- Increasing pollution of surface and underground water due to increasing use of fertilisers for agriculture, increasing industrialisation and untreated waste water.
- Water scarcity and changing of water pattern due to mismanagement of water storage and usage.
- Increase in water usage due to population growth and demographic changes.
- Increase in demand for energy with the accompanying hydropower development.
- Forced large scale migration due to changing environmental conditions.
- Poor regards to and maintenance of biodiversity and ecological balance.
- Ecological and environmental crimes, and terrorisms.

b) Non man-made causes:

- Climate change, including higher frequency and severity of drought, flood, and severe weather events
- Sea level rise which threaten the quality and quantity of water, adversely affecting economic growth and poverty reduction efforts.
- Earth quake and other natural disaster with potential implications on man-made structures such as dams, reservoirs.

Regional and international cooperation is the only way to address long term regional water security needs. A balance between national development and interests in relation to regional needs and sustainability needs to be met. Since water is a multidimensional and complex issue, regional water security needs to be addressed on a basis of priority and vulnerability. Stakeholders should be aware of how to make good use of and how to preserve water resources in an efficient manner. Cooperation and negotiation among these different

stakeholders are keys for the sustainable use of water resources and leadership is desperately needed

In a wider context, securing water resources is also of great importance to regional security, for disputes - based on the belief that water resources are not being exploited in sustainable and fair manners by user states - could harm friendly and cooperative relations between and among countries in the region. At the same time, effective management of, and satisfactory solutions to, these disputes could consolidate mutual confidence and trust, boost bilateral and regional cooperation, and facilitate the performance of regional mechanisms and regimes designed to promote cooperation for the sustainable development of water resources in the region.

Since water resources security is directly linked to food and human security as well as climate change, water security can have broader regional security implications. For example, as the biggest rice exporters are from the mainland Southeast Asia, crop failures in the region also means insufficiency of rice in much of Southeast Asia and elsewhere. Therefore, wider regional and inter-regional cooperation on water security is necessary to ensure the overall security environment of the whole region.

Recommendations

Governments in the Asia Pacific should take urgent steps to build up regional cooperation on water security. In doing so, the following principles need to be met:

- Governments subscribe to the principles of international law on water usage and management, such as equal sharing, freedom of navigation, and no harm to other riparians, etc.
- Governments adopt a holistic, multi-sectored and integrated approach with regards to a river basin system.
- Solutions to water security address both the “demand” side as well as the “supply” side.
- Governments adopt preventive diplomacy measures in order to prevent possible water disputes.

Possible policy directions:

Promoting Inter-regional cooperation: Since cooperation on water security in many parts of Asia- Pacific still fall behind other regions, inter-regional cooperation would help promote regional cooperation, and contribute to global efforts in tackling worldwide water security:

- Cooperation with other international mechanisms should also be promoted to advance the exchange of experience among regions and facilitate the sharing of information and best practices about water management.
- Experiences in disputes and cooperation between and among countries in the region should also be shared with other regions where similar problems related to water resources security have been detected. Inter-regional exchange of personnel should be encouraged and expanded.
- Better coordination among various donors to regional cooperation to ensure effectiveness and efficiency in resources management;

Enhancing Regulatory and Institutional Frameworks:

- Water security should be effectively addressed by regional security institutions, such as ASEAN, especially in its process of building a people-oriented Community.
- The active participation of all riparian countries in the basin wide agreements and management system, such as the Mekong River Commission, will enhance the efficient usage and management of the water. Therefore, all riparian countries should consider to become full members of such agreements and management system.
- Effectiveness and efficiency of regional institutions addressing water security issues should be enhanced, for example, if a framework for ensuring water security in the Mekong region could be constructed and implemented, this framework could be exported into other water bodies.
- All governments should consider joining the United Nations Convention on non-navigation uses of international waterways (1997).

Engaging and Empowering the People: Traditionally, governments of basin countries have been regarded as the sole actors in managing international rivers and lakes. However, participation of the people in basin countries through good governance is essential for rational management of the international water bodies. It is in particular the case in the field of environment, for people in the basin are in many cases most impacted by environmental changes, both in terms of natural and human environment. The Espoo Convention (1991), for example, requires notification by the government to people and participation of the people, in carrying out transboundary environmental impact assessment.

- Mechanisms should be established, both within countries and in the region, so that the voice of people in the basin should be properly reflected in managing international rivers and lakes.

- Allow for public participation for good water resource management. In certain cases, consider using Public-Private Partnership as a means to realize related best practices; Generate public support for national and regional water policies.
- Promotion of a regional educational network in water security.

Enhancing Transparency: Principles of exchange of information, prior consultation and prior notification, are keys to shape relations among riparian states. Sharing knowledge and information on water resource management has the utmost importance as an effort to better understand shared resources and strengthen cooperation between upstream and downstream countries. Sharing information, data and consultation help reduce misperception, mistrust and facilitate negotiations.

- The usage and management of important cross-border waterways should be made transparent to all riparian countries.
- Mechanism and frameworks for regional cooperation and data sharing with regards to the usage and management of water resources should be established.
- Enhancing technical capacity for the relevant authorities to enhance accurate and un-biased data collection and sharing;
- Affected stakeholders should be informed and engaged in decision making processes.
- Education and the role of the media should be promoted to raise public awareness.

A Code of Conduct on Water Security

- It is desirable for regional countries to work cooperatively towards a code of conduct on water resources management in international rivers. Existing institutional mechanisms such as river basin organization (e.g. Mekong River Commission) should be fully involved in this endeavor. Experiences accumulated and lessons learned by such organizations should be considered in developing the code of conduct. Compatibility with existing regulatory frameworks, like the Espoo Convention, should be maintained, so that the code of conduct should be internationally acceptable.

ABOUT CSCAP

CSCAP is a non-governmental (second track) process for dialogue on security issues in the Asia Pacific. Membership in CSCAP is on an institutional basis and consists of Member Committees. Current membership comprises Australia, Brunei Darussalam, Cambodia, Canada, China, the EU, India, Indonesia, Japan, the Democratic People's Republic of Korea, the Republic of Korea, Malaysia, Mongolia, New Zealand, the Philippines, Russia, Singapore, Thailand, Vietnam and the USA.

The functions of CSCAP are as follows:

- a. to provide an informal mechanism by which political and security issues can be discussed by scholars, officials, and others in their private capacities;
- b. to encourage the participants of such individuals from countries and territories in the Asia Pacific on the basis of the principle of inclusiveness;
- c. to organise various working groups to address security issues and challenges facing the region;
- d. to provide policy recommendations to various intergovernmental bodies on political-security issues;
- e. to convene regional and international meetings and other cooperative activities for the purpose of discussing political-security issues;
- f. to establish linkages with institutions and organisations in other parts of the world to exchange information, insights and experiences in the area of regional political-security cooperation; and
- g. to produce and disseminate publications relevant to the other purposes of the organisation.

Study Groups are the primary mechanism for CSCAP activity. As of January 2014, there were four CSCAP Study Groups. These are concerned with: (i) Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific. (ii) Principles for Good Order at Sea; (iii) Regional Security Architecture; and (iv) Preventive Diplomacy.

This memorandum was produced by the CSCAP Study Group on Water Resources Security and was approved by the out of session CSCAP Steering Committee Meeting via electronic consultation on 17 December 2013.

Further information on CSCAP can be obtained from the CSCAP website at www.cscap.org or by contacting the CSCAP Secretariat:

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CSCAP Memoranda

CSCAP Memoranda are the outcome of the work of Study Groups approved by the Steering Committee and submitted for consideration by the ASEAN Regional Forum and other bodies.

- Memorandum No.22 – Non-Proliferation of Weapons of Mass Destruction
Author: Study Group on Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific
Date published: September 2012
- Memorandum No.21 – Implications of Naval Enhancement in the Asia Pacific
Author: Study Group on Naval Enhancement in the Asia Pacific
Date published: August 2012
- Memorandum No.20 – Ensuring A Safer Cyber Security Environment
Author: Study Group on Cyber Security
Date published: May 2012
- Memorandum No.19 – Reduction and Elimination of Nuclear Weapons
Author: Study Group on Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific
Date published: February 2012
- Memorandum No.18 – Implementing the Responsibility to Protect (RtoP)
Author: Study Group on the Responsibility to Protect (RtoP)
Date published: September 2011
- Memorandum No.17 – Promoting the Peaceful Use of Nuclear Energy
Author: Study Group on Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific
Date published: June 2011
- Memorandum No.16 – Safety and Security of Offshore Oil and Gas Installations
Author: Study Group on Safety and Security of Offshore Oil and Gas Installations
Date published: January 2011
- Memorandum No.15 – The Security Implications of Climate Change
Author: Study Group on the Security Implications of Climate Change
Date published: July 2010
- Memorandum No.14 – Guidelines for Managing Trade of Strategic Goods
Author: Export Controls Experts Group (XCXG)
Date published: March 2009

- Memorandum No.13 – Guidelines for Maritime Cooperation in Enclosed and Semi-Enclosed Seas and Similar Sea Areas of the Asia Pacific
 Author: Study Group on Facilitating Maritime Security Cooperation in the Asia Pacific
 Date published: June 2008
- Memorandum No.12 – Maritime Knowledge and Awareness: Basic Foundations of Maritime Security
 Author: Study Group on Facilitating Maritime Security Cooperation in the Asia Pacific
 Date published: December 2007
- Memorandum No.11 – Human Trafficking
 Author: Study Group on Human Trafficking
 Date published: June 2007
- Memorandum No.10 – Enhancing Efforts to Address Factors Driving International Terrorism
 Author: Study Group on Enhancing the Effectiveness of the Campaign Against International Terrorism with Specific Reference to the Asia Pacific Region
 Date published: December 2005
- Memorandum No.9 – Trafficking of Firearms in the Asia Pacific Region
 Author: Working Group on Transnational Crime
 Date published: May 2004
- Memorandum No.8 – The Weakest Link? Seaborne Trade and the Maritime Regime in the Asia Pacific
 Author: Working Group on Maritime Cooperation
 Date published: April 2004
- Memorandum No.7 – The Relationship Between Terrorism and Transnational Crime
 Author: Working Group on Transnational Crime
 Date published: July 2003
- Memorandum No.6 – The Practice of the Law of the Sea in the Asia Pacific
 Author: Working Group on Maritime Cooperation
 Date published: December 2002
- Memorandum No.5 – Cooperation for Law and Order at Sea
 Author: Working Group on Maritime Cooperation
 Date published: February 2001

- Memorandum No.4 – Guidelines for Regional Maritime Cooperation
Author: Working Group on Maritime Cooperation
Date published: December 1997
- Memorandum No.3 – The Concepts of Comprehensive Security and Cooperative Security
Author: Working Group on Comprehensive and Cooperative Security
Date published: December 1995
- Memorandum No.2 – Asia Pacific Confidence and Security Building Measures
Author: Working Group on Confidence and Security Building Measures
Date published: June 1995
- Memorandum No.1 – The Security of the Asia Pacific Region
Author: CSCAP
Date published: April 1994