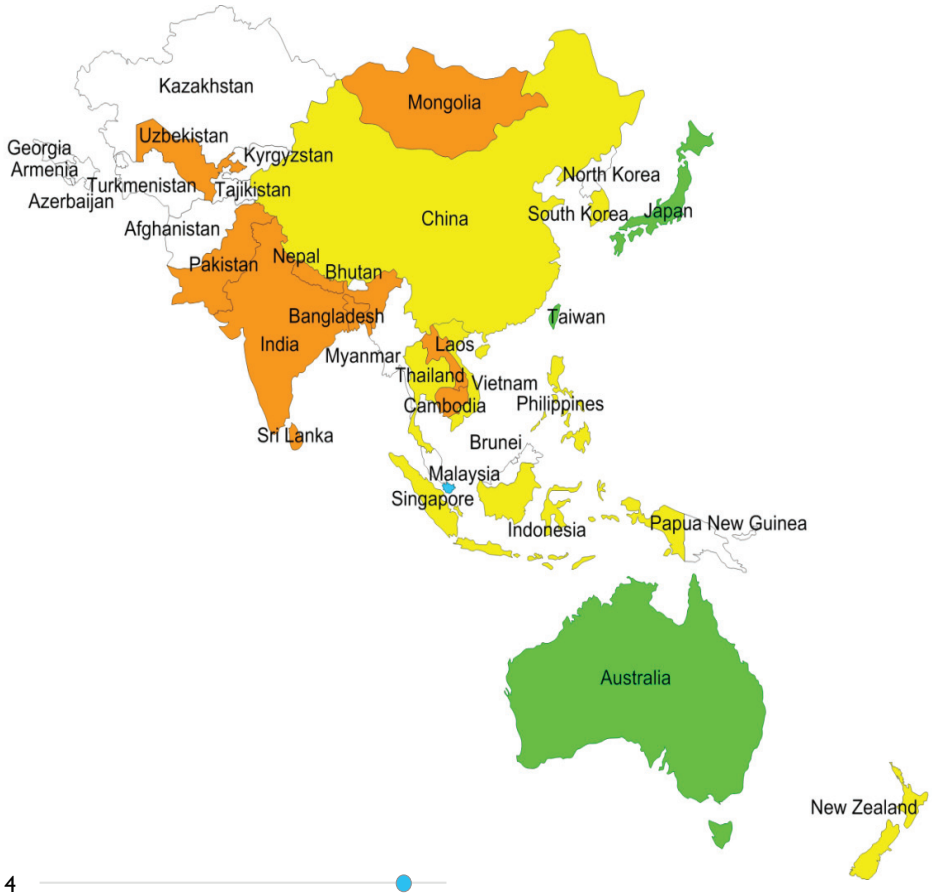
ASIA WATER GOVERNANCE INDEX

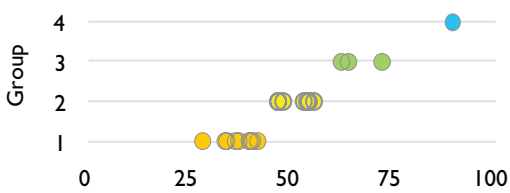
By Eduardo Araral and David Yu

INTRODUCTION

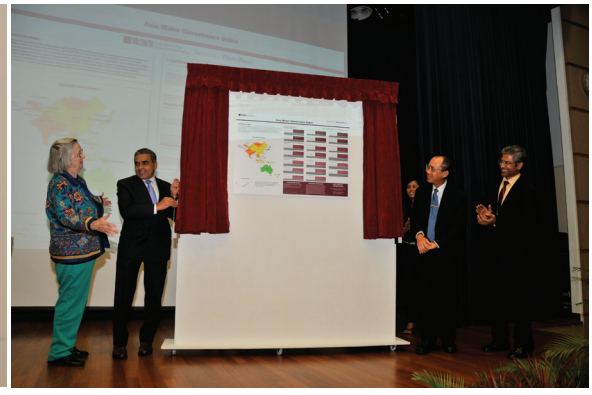
The Asia Water Governance Index (AWGI) aims to help water policy makers from Asia learn from one another in terms of water laws, policies and administration. Building on the work of Saleth and Dinar (2004), it is based on a survey of 102 water experts from 20 countries / states in Asia Pacific using 20 governance indicators. Launched by Elinor Ostrom, 2009 Nobel Laureate in Economics, AWGI was one of the 3 finalists in the 2010 Suez International Water Prize.

Overall Governance Index





The overall index is constructed by weighting and aggregating 20 components comprising legal, policy, and administrative dimensions. The index is based on a scale of 0 to 100, 100 being water governance "best practices".

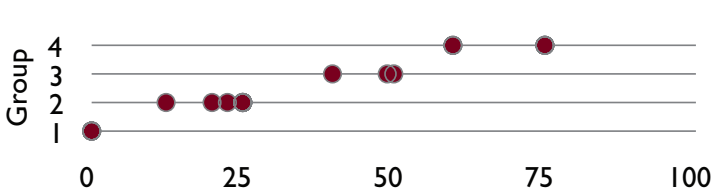


The Asia Water Governance Index was launched by 2009 Nobel Laureate in Economic Sciences Elinor Ostrom at the Lee Kuan Yew School of Public Policy, National University of Singapore.

LEGAL DIMENSION

** Take caution in interpreting the scores of zero or 100 as they maybe outliers.*
** The countries with missing data or under N/A condition are set to the score of zero by default*

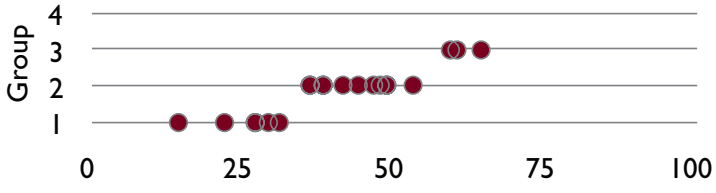
LEGAL DISTINCTION OF DIFFERENT WATER SOURCES



Group 4	India, Japan, China-PR, Vietnam, Mongolia
Group 3	Australia, Philippines, Uzbekistan
Group 2	Bangladesh, Indonesia, Lao-PDR, Nepal, Pakistan, Sri Lanka, Thailand, Taiwan
Group 1	Pakistan

This represents the degree to which varying water sources treated alike or differently by water laws (i.e., surface water, ground water). It is on a scale of 0 to 100, 100 being "Very Different", 0 being "Alike" (For reference, 25=Surface and groundwater are treated differently; 50=Laws discriminate between water development and use by public and private parties; 75=Law distinguishes water development and use across sectors such as irrigation, domestic, and industrial uses; 100=There is differential priority and treatment of consumptive and non-consumptive uses).

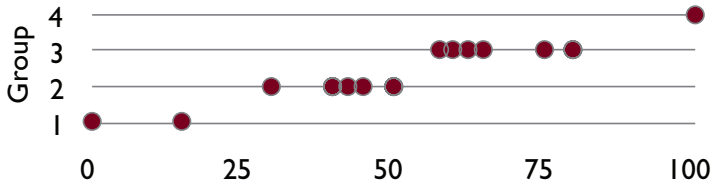
FORMAT OF SURFACE WATER RIGHTS



Group 3	Japan, New Zealand, Singapore
Group 2	Australia, Cambodia, Indonesia, Korea, Lao-PDR, Nepal, Pakistan, Philippines, China-PR, Vietnam, Taiwan
Group 1	Bangladesh, India, Sri Lanka, Thailand, Uzbekistan, Mongolia

This indicates the basis of general rights in surface water. The scores center around the following criteria: none=0, not clear=15, common or state property=30, multiple rights=45, riparian system=60, appropriative system=70, correlative system (equal or proportional sharing)=90, and license / permits=100.

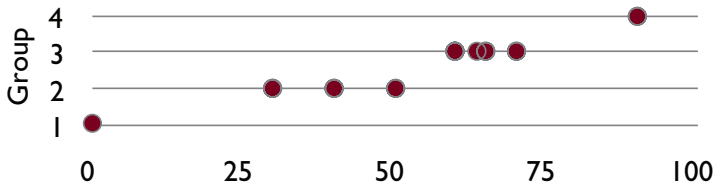
LEGAL ACCOUNTABILITY OF WATER SECTOR OFFICIALS



Group 4	Singapore
Group 3	Australia, Cambodia, Indonesia, New Zealand, China-PR, Vietnam, Taiwan
Group 2	Bangladesh, Japan, Korea, Lao-PDR, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Uzbekistan
Group 1	India, Mongolia

This represents the effectiveness of accountability provisions by water laws for water officials. It is on a scale of 0 to 100, 100 being "Highly Accountable", 0 being "No Accountability".

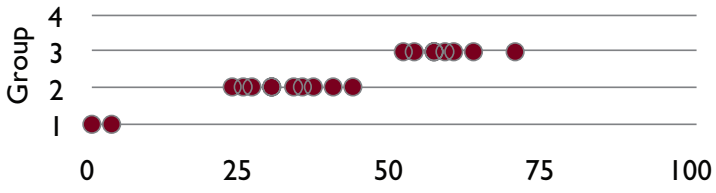
CENTRALIZATION / DECENTRALIZATION TENDENCY WITHIN WATER LAW



Group 4	Singapore, Mongolia
Group 3	Australia, India, Japan, Korea, Lao-PDR, Pakistan, Philippines, China-PR, Vietnam
Group 2	Bangladesh, Cambodia, Indonesia, Nepal, New Zealand, Sri Lanka, Uzbekistan, Taiwan
Group 1	Thailand

This illustrates whether or not present laws contribute to centralization and the strength of the tendency of present laws towards centralization. It is on a scale of 0 to 100, 10 being "Highly Centralized", 0 being "Highly Decentralized".

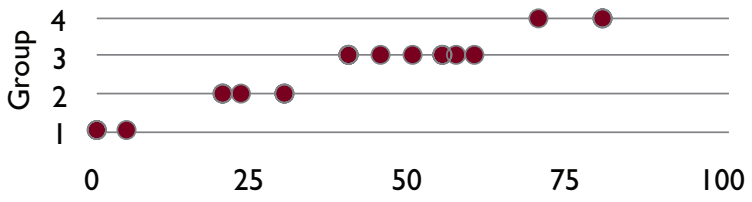
LEGAL SCOPE FOR PRIVATE AND USER PARTICIPATION



Group 3	Australia, Cambodia, Indonesia, Nepal, New Zealand, Philippines, Sri Lanka, Thailand
Group 2	Bangladesh, India, Japan, Korea, Lao-PDR, Pakistan, China-PR, Uzbekistan, Vietnam, Taiwan
Group 1	Singapore, Mongolia

This represents how favorable the legal provisions for private sector, nongovernmental organization (NGO) and community participation in water development/management are. It is on a scale of 0 to 100, 100 being "Very Favorable", 0 being "Unfavorable".

LEGAL FRAMEWORK FOR INTEGRATED TREATMENT OF WATER SOURCES



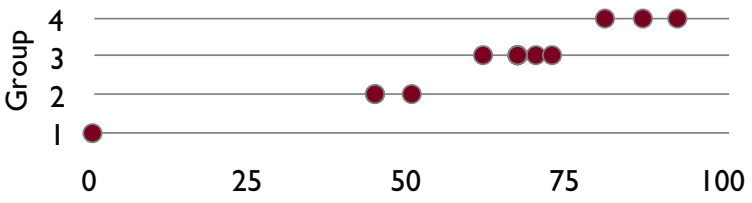
Group 4	Cambodia, New Zealand, Singapore
Group 3	Australia, Bangladesh, Indonesia, Lao-PDR, Nepal, Philippines, China-PR, Vietnam, Taiwan
Group 2	India, Japan, Sri Lanka, Thailand, Uzbekistan
Group 1	Korea, Pakistan, Mongolia

This indicates the integration level of water laws with other laws on land, forest, and environment. It is on a scale of 0 to 100, 100 being "Highly Integrated", 0 being "fragmented".

POLICY DIMENSION

** Countries with missing data or under N/A condition are not shown in the charts and tables below*

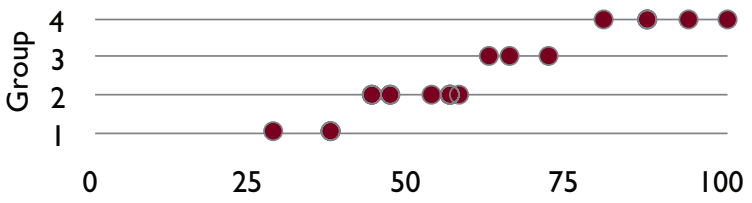
PROJECT SELECTION CRITERIA



Group 4	Cambodia, Indonesia, China-PR
Group 3	Bangladesh, India, Japan, Korea, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Uzbekistan, Vietnam, Mongolia
Group 2	Australia, Lao-PDR, Thailand, Taiwan
Group 1	New Zealand

This indicates the criteria used in water project selection and how extensively they are applied in irrigation, urban and multi-purpose projects. The scores center around the following criteria: no response=0, political dictates=15, equity factors=30, ecological factors=50, benefit-cost ratio=70, internal rate of return=80, and multiple criteria=100.

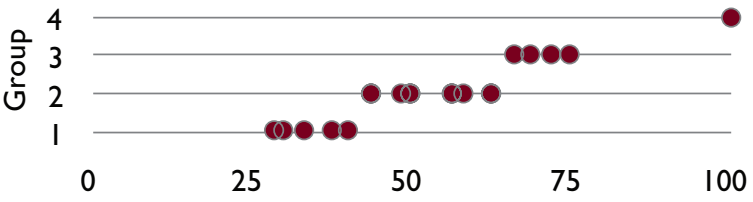
FINANCE AVAILABLE FOR WATER INVESTMENTS



Group 4	Australia, Japan, Korea, New Zealand, Singapore
Group 3	Philippines, China-PR, Taiwan
Group 2	Bangladesh, Cambodia, India, Indonesia, Lao-PDR, Pakistan, Thailand, Uzbekistan, Mongolia
Group 1	Nepal, Sri Lanka, Vietnam

This indicates how adequate is the funding available for the current/future water investments. It is on a scale of 0 to 100, 100 being "Highly Adequate", 0 being "Inadequate". The scores are averaged across utilities (new Infrastructure), utilities (repair, O&M), irrigation, and water resources management.

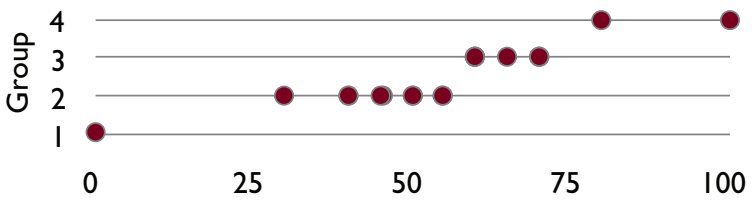
PRICING POLICY



Group 4	Singapore
Group 3	Australia, Japan, Lao-PDR, New Zealand
Group 2	Bangladesh, Cambodia, India, Indonesia, Korea, Philippines, China-PR, Uzbekistan, Vietnam, Taiwan
Group 1	Nepal, Pakistan, Sri Lanka, Thailand, Mongolia

This represents the extent of cost recovery by tariffs. It is on a scale of 0 to 100, 100 being "Full Cost Recovery", 0 being "Full Subsidy". The average of domestic, industrial, and irrigation pricing policies is derived

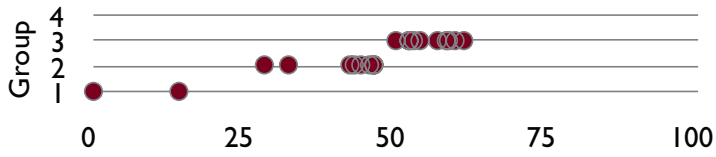
LINKAGE BETWEEN WATER LAW AND WATER POLICY



Group 4	Australia, Singapore
Group 3	Indonesia, Lao-PDR, Philippines, China-PR, Thailand, Vietnam, Taiwan, Mongolia
Group 2	Bangladesh, Cambodia, India, Japan, Korea, Nepal, Pakistan, Sri Lanka, Uzbekistan
Group 1	New Zealand

This represents the extent of the linkages between water law and water policy. It is on a scale of 0 to 100, 100 being "Tightly Linked", 0 being "No Linkage".

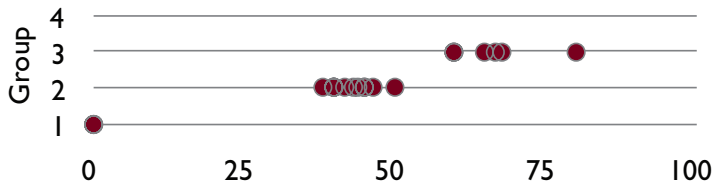
LINKAGES WITH OTHER POLICIES



Group 3	Australia, Cambodia, India, Japan, Lao-PDR, Pakistan, Philippines, China-PR, Sri Lanka, Vietnam
Group 2	Bangladesh, Indonesia, Korea, Nepal, Singapore, Thailand, Uzbekistan, Taiwan
Group 1	New Zealand, Mongolia

This represents the extent of the influence of other policies on water policy. It is on a scale of 0 to 100, 100 being "Highly Influential", 0 being "No Influence". The linked policies include agricultural policies, energy and power policies, soil conservation policies, pollution control and environmental policies, fiscal policies (structural adjustment), credit and investment policies, and foreign investment and aid policies.

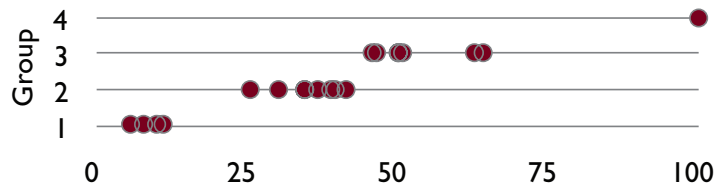
ATTENTION TO POVERTY AND WATER



Group 3	Australia, Cambodia, Indonesia, Japan, Korea, China-PR
Group 2	Bangladesh, India, Lao-PDR, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Uzbekistan, Vietnam, Taiwan
Group 1	New Zealand, Singapore, Mongolia

This represents how well the concerns of the poor are reflected by water policy. It aggregates two components - the existence of such policies and their effectiveness and extent. It is on a scale of 0 to 100, 100 being "Very Attentive", 0 being "Not attentive".

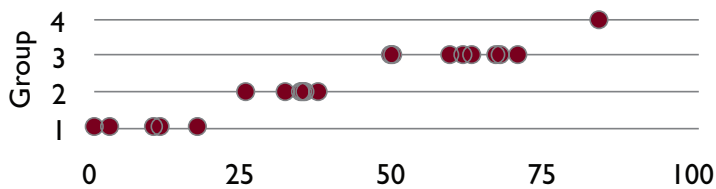
PRIVATE SECTOR PARTICIPATION



Group 4	New Zealand
Group 3	Australia, Cambodia, Korea, Philippines, Vietnam, Taiwan, Mongolia
Group 2	Bangladesh, India, Indonesia, Lao-PDR, Nepal, Pakistan, China-PR, Thailand
Group 1	Japan, Singapore, Sri Lanka, Uzbekistan

This corresponds to the extent to which water policy promotes private sector participation. It aggregates two components – how favorable the policy is and how extensive private sector participation is. It is on a scale of 0 to 100, 100 being "Very Favorable and Extensive Participation", 0 being "Unfavorable and Low Participation". The scores are averaged across the domains of irrigation, urban domestic use, rural domestic use, and industrial and commercial use.

USER PARTICIPATION



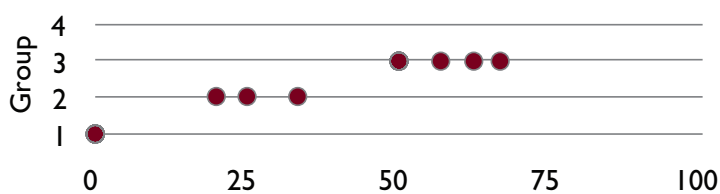
Group 4	Mongolia
Group 3	Cambodia, Indonesia, Lao-PDR, Nepal, Philippines, Sri Lanka, Thailand, Taiwan
Group 2	Australia, India, New Zealand, Pakistan, China-PR, Vietnam
Group 1	Bangladesh, Japan, Korea, Singapore, Uzbekistan

This explains the level of promotion by water policy on user participation and decentralization. It aggregates two components – how favorable water policy is and how extensive user participation is. It is on a scale of 0 to 100, 100 being "Very Favorable and Extensive Participation", 0 being "Unfavorable and Low Participation". The scores are averaged across the domains of irrigation, urban domestic use, rural domestic use, and industrial and commercial use in the stages of planning & development and operation & maintenance.

ADMINISTRATION DIMENSION

** Take caution in interpreting the scores of zero or 100 as they maybe outliers.*
** The countries with missing data or under N/A condition are set to the score of zero by default*

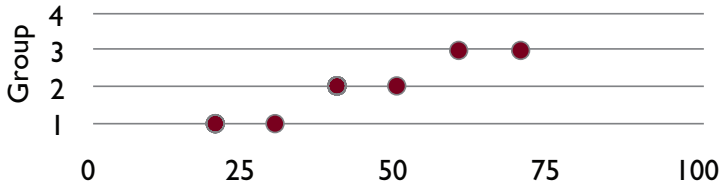
EXISTENCE OF INDEPENDENT WATER PRICING BODY



Group 3	Australia, Bangladesh, Cambodia, Lao-PDR, Nepal, Pakistan, Philippines, China-PR
Group 2	Indonesia, Japan, Vietnam
Group 1	India, Korea, New Zealand, Singapore, Sri Lanka, Thailand, Uzbekistan, Taiwan, Mongolia

This represents the existence of independent bodies for determining water price. It is on a scale of 0 to 100, 100 being "Highly Existent", 0 being "Non-existent".

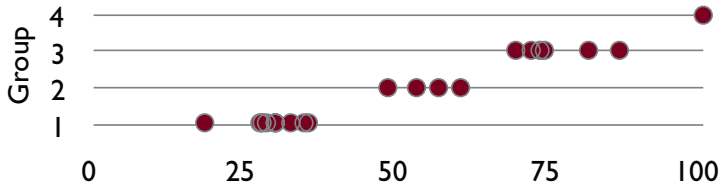
ORGANIZATIONAL BASIS



Group 3	Indonesia, New Zealand
Group 2	Australia, Bangladesh, Cambodia, Japan, Korea, Lao-PDR, Pakistan, Philippines, China-PR, Singapore, Sri Lanka, Thailand, Vietnam, Taiwan
Group 1	India, Nepal, Uzbekistan, Mongolia

This shows the basis on which water administration is organized. The scores center around the following criteria: on administrative division (geographical basis)=25, on hydro-geological regions=75, on river basins=100, and mixture of all=50.

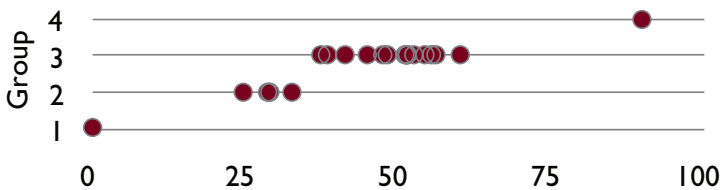
FUNCTIONAL CAPACITY AND BALANCE



Group 4	Taiwan
Group 3	Australia, Japan, Korea, New Zealand, China-PR Singapore
Group 2	Cambodia, Indonesia, Lao-PDR, Thailand
Group 1	Bangladesh, India, Nepal, Pakistan, Philippines, Sri Lanka, Uzbekistan, Vietnam, Mongolia

This indicates whether or not functional specialization within water administration is balanced. It is on a scale of 0 to 100, 100 being "Highly Capable and Balanced", 0 being "Incapable and Unbalanced". The tested functions are -- Planning and design, Implementation , Financial management , Operation and maintenance, Rehabilitation and resettlement , Environmental monitoring , Research, training, and extension , Interagency or departmental relationships.

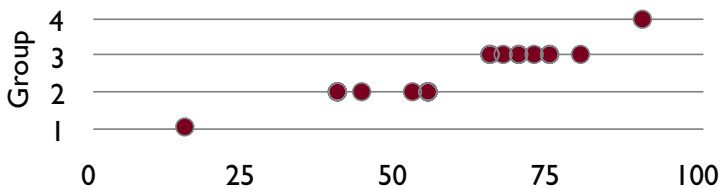
ACCOUNTABILITY AND REGULATORY MECHANISMS



Group 4	Singapore
Group 3	Australia, Cambodia, Indonesia, Japan, Korea, Lao-PDR, Pakistan, Philippines, China-PR, Sri Lanka, Thailand, Uzbekistan, Vietnam, Taiwan
Group 2	Bangladesh, India, Nepal, Mongolia
Group 1	New Zealand

This represents the effectiveness of accountability and regulatory arrangements imposed on water administration. It is on a scale of 0 to 100, 100 being "Highly Effective", 0 being "Ineffective".

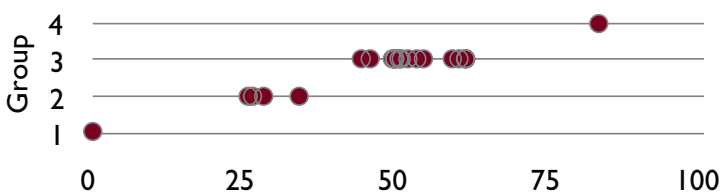
VALIDITY OF WATER DATA FOR PLANNING



Group 4	Singapore
Group 3	Australia, Bangladesh, Japan, Korea, Lao-PDR, New Zealand, China-PR, Thailand, Taiwan
Group 2	Cambodia, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka, Uzbekistan, Vietnam
Group 1	Mongolia

This represents the adequacy and reliability of water data for planning purposes. It is on a scale of 0 to 100, 100 being "Highly reliable", 0 being "Highly unreliable".

SCIENCE AND TECHNOLOGY APPLICATION



Group 4	Singapore
Group 3	Australia, Bangladesh, Cambodia, Indonesia, Japan, Korea, Nepal, Philippines, China-PR, Thailand, Uzbekistan, Vietnam, Taiwan, Mongolia
Group 2	India, Lao-PDR, Pakistan, Sri Lanka
Group 1	New Zealand

This indicates the extent to which the following science and technology components are used within water administration: computers, remote sensing and satellite, research and experimental information, modern accounting and auditing techniques, management information systems, geographic information systems, wireless communication, water-measuring technology, computerized dynamic regulation of canals and water delivery networks. The aggregate score is on a scale of 0 to 100, 100 being "Very Extensive", 0 being "Very Low". The scores are averaged across the technologies specified above.

WATER EXPERTS SURVEYED *

Reiichi Abe. CTI Engineering Co.. Ltd.. Tokyo. Japan.
Terence Abeysekara. Economist, World Bank Mission. Colombo, Sri Lanka.
Angel A. Alejandrino. National Hydraulic Research Center. Quezon City. Philippines.
Jonathan Baldry. Department of Economics. University of New England, Amidale, Australia.
Tissa Bandaragoda. International Water Management Institute (IWMI), Pakistan Office, Lahore. Pakistan.
Banduratne, Deputy Director. National Planning Department. Colombo. Sri Lanka.
George Bawtree, Manager, Competition and Pricing. Sydney Waters, Sydney. Australia.
Alfred Birch. Water Resources Secretariat, International Irrigation Management Institute, Colombo. Sri Lanka.
Dongcheng I3eidajie Choyangmen. District Manager. Beijing. China.
Eduardo P. Corsiga, Quezon City. Philippines.
Marca A. Cruz. Metropolitan Waterworks and Sewerage System, Quezon City, Philippines.
Danasuriya. Additional Director. Irrigation Management Division, Irrigation Secretariat. Colombo. Sri Lanka.
Nihal Fernando. World Bank Mission. Colombo. Sri Lanka.
Robert French. Centre for Water Policy Research (CW PR), University of New England. Armidale. Australia.
Raj (loyal. Manager. Commercial and Economic Services. Sydney Waters, Sydney, Australia.
Siripong Hungspreug. Director Project Planning Division, Royal Irrigation Department. Bangkok. Thailand,
Tatsuo Hamaguchi, Water Resources Department. Tokyo. Japan.
Gu Flao. Director General, Dept. of Water Administration / Water Resources, Ministry of Water Resources Beijing, China.
Mehmood W. Hassan, International Irrigation Management Institute, Lahore. Pakistan.
Liu Heng, Assistant Director. Nanjing Institute of Hydrology and Water Resources (NIHWR). MOWR. Nanjing. China.
A.K.M. Shawsul Hogue, Bangladesh Water Development Board. Dhaka. Bangladesh.
Ching-Kai Hsiao, National Chung-Hsing University, Taichung. Taiwan.
H. Koensatwanto Inpasihardo. Irrigation Systems Research and Investigation, Jakarta, Indonesia.
Shirazul Islam. Engineers' Institution. Bangladesh. Dhaka. Bangladesh.
Brobwen Jackman. School of Law, University of New England. Armidale. Australia.
Xu VA Kai, Engineer, NIHWR. Ministry of Water Resources, Nanjing. China.
Gian N. Kathpalia. Surya Foundation, New Delhi. India.
Ratneshwar La] Kayastha. Ministry of Water Resources, Katmandu, Nepal.
Jiang Liping. Water Resources Engineer, World Bank Mission, Beijing, China.
Changming Liu. United Research Center for Water Problems. Chinese Academy of Sciences, Beijing, China.
Zhang Hai Lun. Advisor. Nanjing Institute of Hydrology and Water Resources. MOWR. Nanjing. China.
Barka' All Luna, National Development Consultants, Lahore Pakistan.
Zhang Hai Lung. NIHWR, MOWR. Nanjing. China.
Warren Martin, Water Management Task Force. Ministry of Land and Water Conservation. GONSW. Sydney, Australia.
Warren Musgrave, Advisor. Premier's Department. Government of New South Wales (GONSW). Sydney. Australia.
Jennifer McKay, Policy and Law Group, University of South Australia. Adelaide. Australia.
Billy Mejia. Institutional Development Division. National Irrigation Administration. Quezon City. Philippines.
Kevin Melville. Senior Economist. Sydney Waters. Sydney. Australia.
Douglas Merrey. IWMI, Colombo, Sri Lanka.
Peter Millington. Peter Millington & Associates. NSW. Australia.
Khalid Mohtadullah, Water and Power Development Authority (WAPDA). Lahore. Pakistan.
M.P. Mosley, NIWA, Christchurch. New Zealand.
U. Myo Myint, Director, Irrigation Department. Yangon. Myanmar.
Mikiyasu Nakayama, Utsunomiya University, Tochigi. Japan.
Navaratne. Deputy Commissioner. Agrarian Services Department. Colombo. Sri Lanka.
Dolora Nepomuceno, Laguna Lake Development Authority (LEDA). Manila. Philippines.
John J. Pigram. Executive Director, CWPR, University of New England, Armidale. Australia.
Yu Qiyang. Engineer, DOWAWR, MOWR, Beijing. China.
Osman Quinar. World Bank Office. Islamabad, Pakistan.
Muhammad Idris Rajput, Sindh Irrigation Department. Pakistan.
K.V. Raju. Institute for Social and Economic Change. Bangalore. India.
Ranjith Ratnayake. Director. Water Resources Development, Ministry of Irrigation and Power (401P). Colombo. Sri Lanka
Akanda Abdur Razzaque. Engineers' Institution of Bangladesh, Dhaka, Bangladesh.
Collin Reid. Chief Manager, Water and Transport. Independent Pricing and Regulatory Tribunal, NSW. Sydney. Australia.
Hong Sinara, No. 23. Mao Tw Toung Road. Phnom Penh. Cambodia.
Gaylord Skogerboe, IWMI. Pakistan Office. Lahore. Pakistan.
Soenarno. Senior Water Resources Engineer, Water Resources Development. Ministry of Public Works. Indonesia.
Oudet Souvannavong, Sustainable Irrigated Agriculture Project. Lao PDR.
Yuri N. Steklov. Economic Affairs Officer. ESCAP. United Nations. Bangkok. Thailand.
N. Suryanarayan. Deputy Director General, Ministry of Water Resources. Government of India. New Delhi, India.
Kumiyoshi Takeuchi, Yamanashi University. Japan.
U. Myint Thwin. Deputy Director. Water Resources Utilization Department. Yangon, Myanmar.
Rodolfo C. Undan. Department of Agriculture. Elliptical Road. Diliman. Quezon City. Philippines.
B. George Verghese. Senior Fellow. Center for Policy Research. New Delhi. India.
Douglas Vermillion. IWMI. Colombo. Sri Lanka.
Wijayratna. International Irrigation Management Institute. Colombo. Sri Lanka.
L.T. WijeSooriya. Irrigation Department. Colombo. Sri Lanka.
Pham Xuan Su. Ministry of Agriculture and Rural Development. Hanoi. Vietnam.
Wei Yao-Rong, Legislative Affairs Commission, Beijing. China.
N. Suryanarayan, Deputy Director General, Ministry of Water Resources. Government of India. New Delhi, India.
Kumiyoshi Takeuchi, Yamanashi University. Japan.
U. Myint Thwin. Deputy Director. Water Resources Utilization Department. Yangon, Myanmar.
Dirgha N. Tiwari. Katmandu. Nepal.
Rodolfo C. Undan. NIA, Quezon City. Philippines.
B. George Verghese. Senior Fellow. Center for Policy Research. New Delhi. India.
Douglas Vermillion. IWMI, Colombo. Sri Lanka.
Wijayratna. International Irrigation Management Institute. Colombo. Sri Lanka.
L.T. WijeSooriya, Irrigation Department. Colombo. Sri Lanka.
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*** Includes respondents from Saleth and Dinar (2004). With regards to India, China, Australia, and Indonesia, the survey respondents come from the following regions. (1) For India, New Delhi, Karnataka, and Orissa; (2) for Australia, New South Wales and South Australia; (3) for China, Beijing, Nanjing, and Wuhan; and (4) for Indonesia, Jakarta, Palembang, and Solo.**

SELECTED KEY LITERATURE CITED

Saleth, R.M. and Dinar, A. (2004). The Institutional Economics of Water: A Cross Country Analysis of Institutions and Performance. Edward Elgar Publishing, Cheltenham.

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http://www.spp.nus.edu.sg/iwp/Home.htm