

Table B.7 | Scoring methodology for water indicators

INDICATOR	DESCRIPTION	WHAT IS MEASURED?	HOW IT IS SCORED
INTEGRATED WATER RESOURCES MANAGEMENT	This indicator measures legal mandates to undertake the core activities and features that comprise modern water management, including the establishment of basin-level institutions, water planning, the development of information systems, and source protection.	1. The establishment of basin institutions is provided for in the law.	A score of 1 if yes
		2. Number of basin institutions existing	A score of 1 if at least one basin institution exists
		3. A specific government agency or unit is designated by law to manage groundwater	A score of 1 if yes
		4. Basin institutions have the following remits: a. special purpose government b. advisory c. stakeholder consensus	A score of 1 if the law provides for all of the listed remits A score of 0.5 if the law provides for at least one of the listed remits A score of 0 if the law provides for none of the listed remits
		5. The internal organizational structure for basin institutions is set out in the law	A score of 1 if yes
		6. Water users must be represented in basin institutions	
		7. A national water plan is required	
		8. Individual basin plans are required	
		9. The following specific components must be included in basin plans: a. resource description and categorization b. uses c. pollution sources d. protected areas e. drought/ flood plan f. economic analysis g. long-term objectives	A score of 1 if the legal framework requires all of the listed components A score of 0.5 if at least three of the listed components are required A score of 0 if none of the listed components are required
		10. Water users must be consulted during the development of basin plans	A score of 1 if yes
		11. Basin plans must be periodically updated in accordance with a mandatory timeline provided for in the law	
		12. Number of basin plans completed	A score of 1 if at least one plan has been completed
		13. An order of priority for water allocation between different types of users is required	A score of 1 if yes
		14. A water resources monitoring plan is required, including the following components: a. criteria for monitoring locations b. criteria for monitoring frequency c. monitoring objectives d. reference test/ measurement methods	A score of 1 if the legal framework requires the development of a water resources monitoring plan and provides for each of the listed components: A score of 0.5 if the legal framework requires the development of a water resources monitoring plan and provides two of the listed components A score of 0 if the legal framework does not require the development of a water resources monitoring plan
		15. Monitoring plans must be periodically updated in accordance with a mandatory timeline provided for in the law	A score of 1 if yes
		16. Public monitoring of water resources quantity and quality is required	A score of 1 if the legal framework requires monitoring both water resources quantity and quality A score of 0.5 if the legal framework requires monitoring of only one aspect or the other (quality or quantity) A score of 0 if the legal framework does not require monitoring of water resources



INDICATOR	DESCRIPTION	WHAT IS MEASURED?	HOW IT IS SCORED
INTEGRATED WATER RESOURCES MANAGEMENT <i>(Continued)</i>		17. There is a legal obligation to make monitoring results publicly available 18. Monitoring results are publicly available in practice (online) 19. There is a legal obligation to create an inventory of water resources 20. The inventory of water resources must be periodically updated in accordance with a mandatory timeline provided for in the law 21. There is a legal obligation to make water inventory data publicly available 22. Water inventory data are publicly available in practice (online) 23. There is a legal obligation to create a registry of water users 24. There is a legal obligation to make the water users registry publicly available 25. The water users registry is publicly available in practice (online) 26. Special measures may be imposed in cases of water stress	A score of 1 if yes for each question
		27. The following special measures may be imposed in cases of water stress: a. restricted issuance of new water use permits b. curtailment of existing water use permits c. restricted issuance of new construction / activity permits with impacts on water resources	A score of 1 if all of the listed measures may be imposed by the government A score of 0.5 if at least one of the listed measures may be imposed by the government A score of 0 if none of the listed measures may be imposed by the government
		28. Water conservation and efficiency is promoted through the following features in the law: a. mandate for the government to promote conservation and efficiency b. incentives c. obligation to adopt improved water use practices d. promotion of less water-intensive crops e. obligation to implement a mechanism to quantify efficiency	A score of 1 if the legal framework promotes water conservation and efficiency and provides all of the features listed. A score of 0.5 if the legal framework provides at least two of the listed features A score of 0 if the legal framework does not promote water conservation and efficiency
		29. Water quality standards for use in irrigation are set out in the law and include the following parameters: a. coliforms b. salinity c. nitrates d. phosphates	A score of 1 if the legal framework prescribes all the listed water standards for use in irrigation A score of 0.5 if the legal framework includes at least two of the listed parameters A score of 0 if the legal framework does not prescribe water quality standards for use in irrigation

(continued)



INDICATOR

DESCRIPTION

WHAT IS MEASURED?

HOW IT IS SCORED

**INDIVIDUAL
WATER USE
FOR
IRRIGATION**

This indicator measures legal requirements for water abstraction and use permits, as well as the depth and quality of these permit requirements by examining public notice requirements, transfers, water use charges, and obligations and enforcement.

<p>30. A permit or declaration before abstracting and using water for irrigation is required</p>	<p>A score of 1 if a permit is required A score of 0.5 if only a declaration is required A score of 0 if neither are required</p>
<p>31. Permit issuance must comply with an applicable basin plan 32. Detailed procedures to acquire a new abstraction and use permit are set out in the law 33. There is a public notice obligation for new permit applications 34. A minimum time length applies to public notice 35. Public notice for new permit applications must be via a specific medium (for example, a newspaper, government website, billboard and so on) 36. Water abstraction and use permits are subject to a maximum time duration set out in the law 37. Legal framework specifies streamlined renewal procedures 38. Legal framework allows permit transfer</p>	<p>A score of 1 if yes for each question</p>
<p>39. Notification or approval by the government is required before a permit can be transferred</p>	<p>A score of 1 if notification is required A score of 0.5 if approval is required A score of 0 if neither notification nor approval is required</p>
<p>40. Detailed procedures for permit transfer are set out in the law 41. Charges apply based on the amount of water resources abstracted for irrigation 42. A specific government agency or unit is designated by law to set charges for water abstraction 43. A method for calculating the water abstraction charge is provided in the law 44. A specific government agency or unit is designated by law to collect charges for water abstraction</p>	<p>A score of 1 if yes</p>
<p>45. Standard permit conditions include the following: a. volume/rate of withdrawal b. place of abstraction c. place of use d. purpose of use e. return flows f. quality of returned water</p>	<p>A score of 1 if the legal framework specifies all of the listed conditions. A score of 0.5 if only three of the listed conditions are specified A score of 0 if none of the listed conditions are specified</p>
<p>46. Record keeping on the quantity of water abstracted is required</p>	<p>A score of 1 if yes</p>
<p>47. The government has certain inspection powers to ensure permit compliance, including: a. demand users to produce relevant documentation b. enter premises c. take measurements</p>	<p>A score of 1 if the government has all listed inspection powers A score of 0.5 if the government has only general inspection powers or two of the listed specific inspection powers A score of 0 if the government has neither general nor specific inspection powers</p>
<p>48. Specific offenses in violation of permit-related obligations are prescribed in the law, including: a. using water without a required permit or declaration b. failure to comply with permit conditions c. misrepresenting or omitting information to regulators d. hindering investigators or disabling monitoring equipment e. constructing water abstraction points without permission</p>	<p>A score of 1 if the law prescribes specific offences and includes all the listed specific offenses. A score of 0.5 if the law declares that any water-related violation will be considered an offense or prescribes only two of the specific offenses listed A score of 0 if neither general nor specific offenses are prescribed in the law</p>
<p>49. Before it can curtail permits, the government is required to make a formal declaration of drought or emergency</p>	<p>A score of 1 if yes</p>

