SDG 6.4.1 Indicator: Change in water use efficiency

Prepared by
Sudki Hamdan

Expert Environmental and energy Statistics

Department of Statistics – Jordan

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- **Target 6.4: By 2030**, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- Indicator 6.4.1 Change in water use efficiency over time

Monitoring Concept and Definitions

- **Concept:** this indicator provides an estimation of the reliance of economic growth of a country on the exploitation of water resources. An indicator growing less than the economy indicates a potential problem on the medium or long term sustainability of the economic growth itself.
- **This indicator is defined** as the value added per water withdrawn, expressed in USD/m3 over time of a given major sector (showing the trend in water use efficiency). Following ISIC 4 coding, sectors are defined

- as:
- agriculture, forestry and fishing (ISIC A);
- mining and quarrying, manufacturing, constructions and energy (ISIC B, C, D and F);
- all the service sectors (ISIC 36-39 and ISIC 45-99), which includes, water collection, treatment and supply industry (ISIC 36)

Methodology for Indicator 6.4.1

- **It is important to split this indicator to sub-indicators, to ensure that the monitoring efforts provide insights in how policies can be adapted. (i) Agriculture (excluding the contribution of rain fed agriculture in GVA, (ii) Services sector including Domestic/service water), (iii) industry which include (Mining, Industry and construction**

- **This indicator is defined as the value added per water withdrawn, expressed in USD/m3 over time of a given major sector (showing the trend in water use efficiency). Following ISIC 4 coding by: This indicator is defined as the value added per water withdrawn, expressed in USD/m3 over time of a given major sector (showing the trend in water use efficiency).**

$$WUE = Awe \times PA + Iwe \times PI + Swe \times PS$$

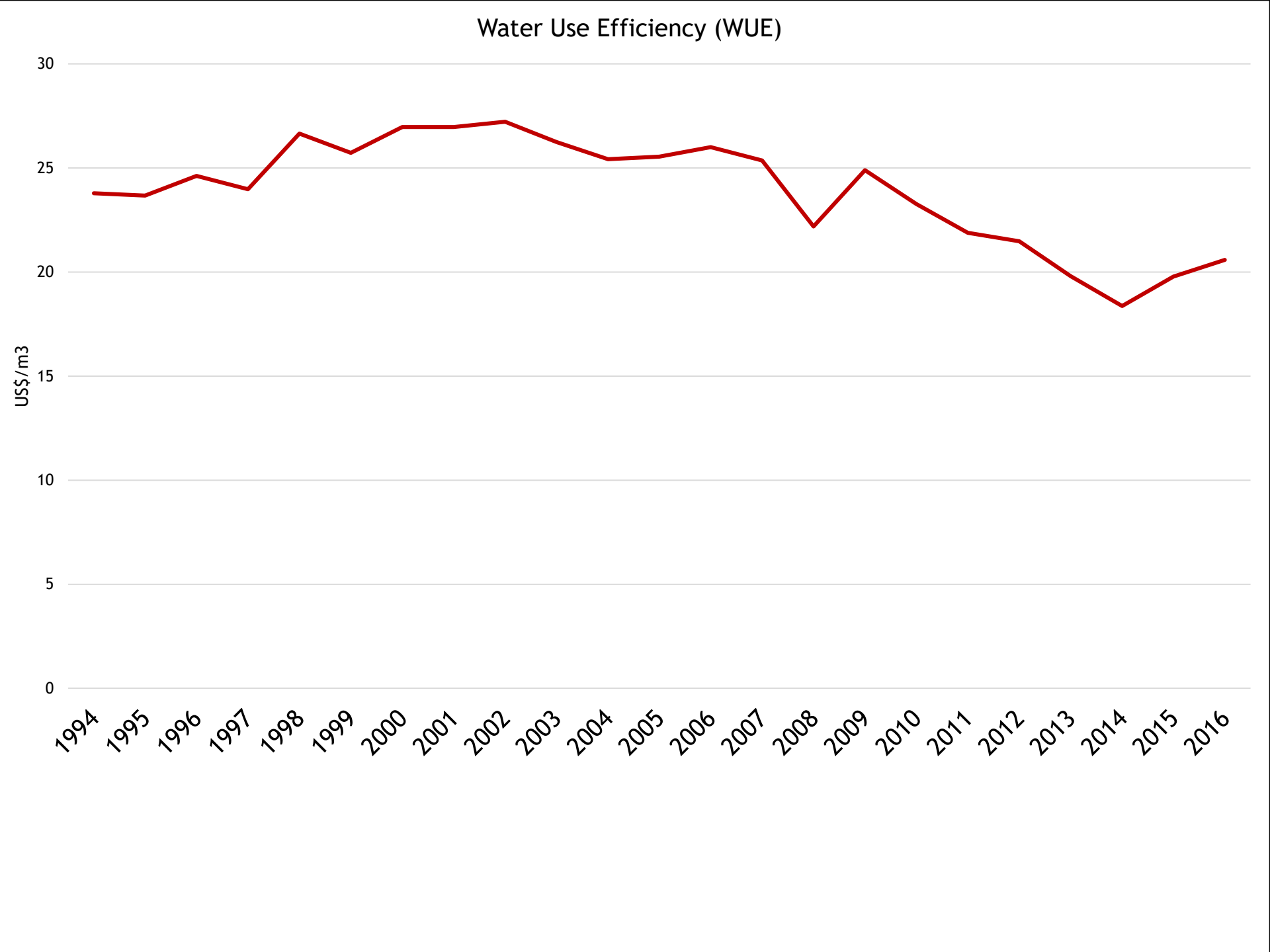
- Where
- WUE = Water use efficiency ,
- Awe = Irrigated agriculture water use efficiency [USD/ m3] ,
- Iwe = Industrial water use efficiency [USD/ m3],
- Swe = Services water use efficiency [USD/ m3] ,
- PA = Proportion of water withdrawn by the agricultural sector over the total withdrawals,
- PI = Proportion of water withdrawn by the industry sector over the total withdrawals,
- PS = Proportion of water withdrawn by the service sector over the total withdrawals

Source of Data

- data calculate from different sectors and sources are needed for the computation of this indicator, mainly department of Statistics (Dos), Ministry of Water and Irrigation (MWI), Ministry of Agriculture (MoA). It is necessary that a national coordination is in place in order to assure the timely and consistent collection of the data.
- Data on volumes of withdrawn and distributed water are collected at country level from the municipal supply utilities records and reported in Mai annual report in a units of million cubic meter (mcm).
- Services water supply efficiency is calculated as the service sector value added (ISIC 36-39 and ISIC 45-99) divided by water withdrawn for distribution by the water collection, treatment and supply industry (ISIC 36), expressed in USD/m3. Services value added is obtained from national statistics, deflated to the baseline year 2015

Water Use Efficiency (US$/m^3) over times by main sectors in Jordan (1994-2016

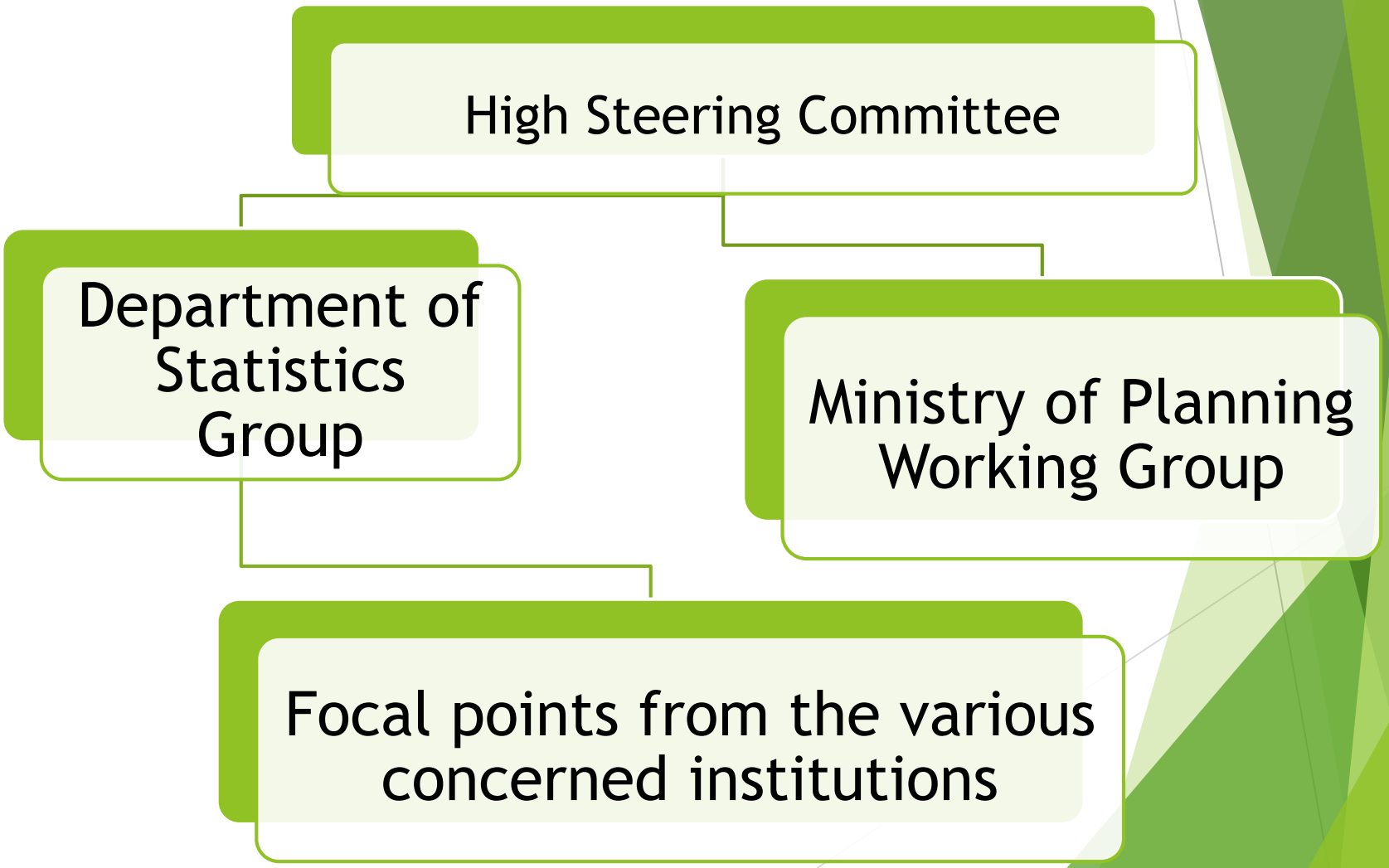
Year	I_{we}	S_{we}	A_{we}	WUE
	Industrial sector (US$/m^3)	Services Sector (US$/m^3)	Agricultural sector (US$/m^3)	Total Water Use Efficiency (US$/m^3)
1994	316.03	46.71	2.22	23.79
1995	378.07	47.31	2.20	23.67
1996	515.88	48.41	2.16	24.62
1997	724.77	45.18	2.10	23.98
1998	578.66	44.04	2.42	26.65
1999	221.87	41.59	2.49	25.73
2000	308.64	37.89	2.74	26.97
2001	366.61	40.34	2.59	26.96
2002	361.32	41.06	2.60	27.22
2003	371.63	40.42	2.43	26.24
2004	386.13	41.49	2.16	25.42
2005	322.68	40.86	2.19	25.54
2006	291.49	43.07	2.21	26.01
2007	231.13	41.49	2.25	25.36
2008	162.08	37.02	2.09	22.19
2009	243.64	35.03	2.47	24.90
2010	223.52	29.93	2.46	23.27
2011	187.91	27.76	2.74	21.89
2012	199.75	27.32	2.66	21.48
2013	242.19	23.60	2.54	19.80
2014	240.93	20.80	2.42	18.37
2015	282.55	20.47	2.36	19.78
2016	330.88	20.71	2.31	20.58


Water Use Efficiency (WUE)
US$/m3
30
25
20
15
10
5
0
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

- The United Nations Statistical Commission has endorsed the list of goals, targets and indicators for sustainable development.
- 231 indicators were identified under 17 targets with 169 targets
- . PARIS 21, under the auspices of the UN Statistical Commission, developed a planning tool called "Advanced Data Planning Tool"

SDGs Indicators

Mechanism of implementation and work



The Objectives of the internal technical committee

- Evaluate the indicators available in DOS.
- Identification of gaps (data availability, reporting, data breakdown, financial gaps for monitoring and evaluation).
- Develop a plan to provide the remaining indicators.
- To designate FOCAL POINTS from the various departments to cooperate in sending the required data, and Preferred to be the same focal points with the Ministry of Planning.

The Available indicators by goal

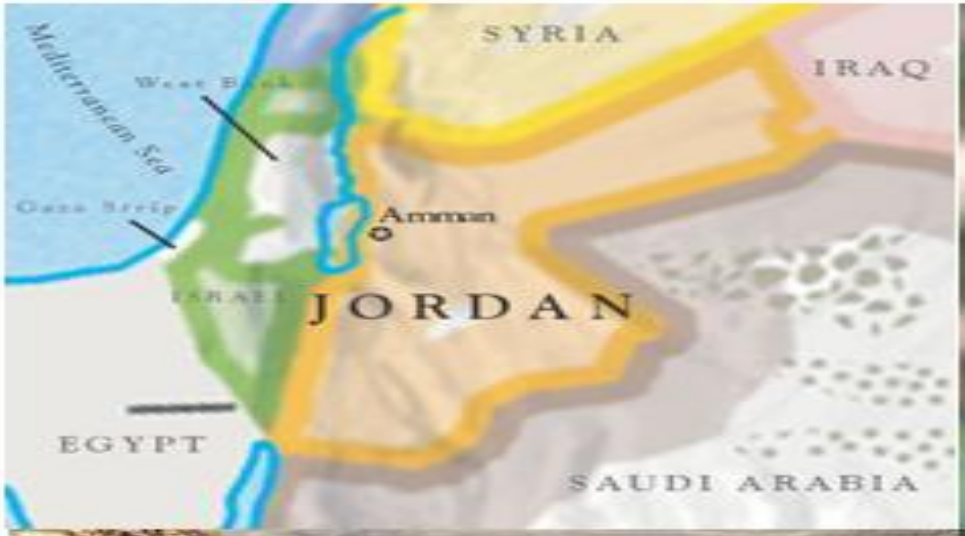
Goal	Total indicators	Available indicators	%
First goal	12	2	16.7
Second goal	14	6	42.9
Third goal	26	24	92.3
Fourth goal	11	10	90.9
Fifth goal	14	6	42.9
Sixth goal	11	7	63.6
Seventh goal	6	4	66.7
eighth goal	17	6	35.3
Ninth goal	12	1	8.3
tenth	11	0	0
Eleventh goal	15	8	53.3
Eleventh goal	13	6	46.2
Thirteenth goal	7	4	57.1
Fourteen goal	10	1	10.0
Fifteen goal	14	10	71.4
Sixteen goal	23	1	4.3
Seventeen goal	25	5	16.0
Total	**241**	**101**	**%41.9**

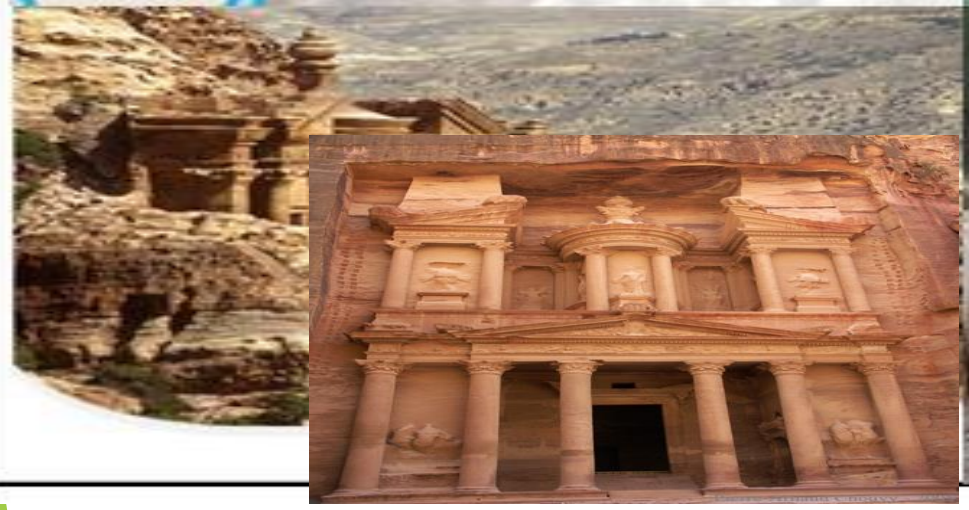
Challenges to sustainable development indicators

- There is Gaps and lack of comprehension within the required levels of detail to produce the indicator.
- Shortages of financial support for the implementation of large sample surveys to provide basic data for some indicators.
- The need for coordination to assess the development of indicators and determine performance indicators for each indicator
- Difficulties in the implementation of some surveys on the provision of indicators

Recommendations

- Consolidate all efforts to reach a set of indicators that meet different needs and a unified mechanism to reduce the effort exerted in this area.
- the importance of capacity building and the strengthening of statistical infrastructure to ensure the quality of indicators.
- Adopt a clear and binding plan of action for Arab countries to produce sustainable development reports.
- To provide financial support to Member States to comply with these reports within the time set for the collection of indicators / Focus on the importance of a national task force for the preparation of the report on sustainable development covering all national focal points





Thank You