Economic and Social Commission for West Asia

الأمم المتحدة - اللجنة الاقتصادية والاجتماعية لغربي آسيا

الإسكوا

ESCWA Work and SEEA Implementation in ESCWA Countries

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UNCEEA MEETING

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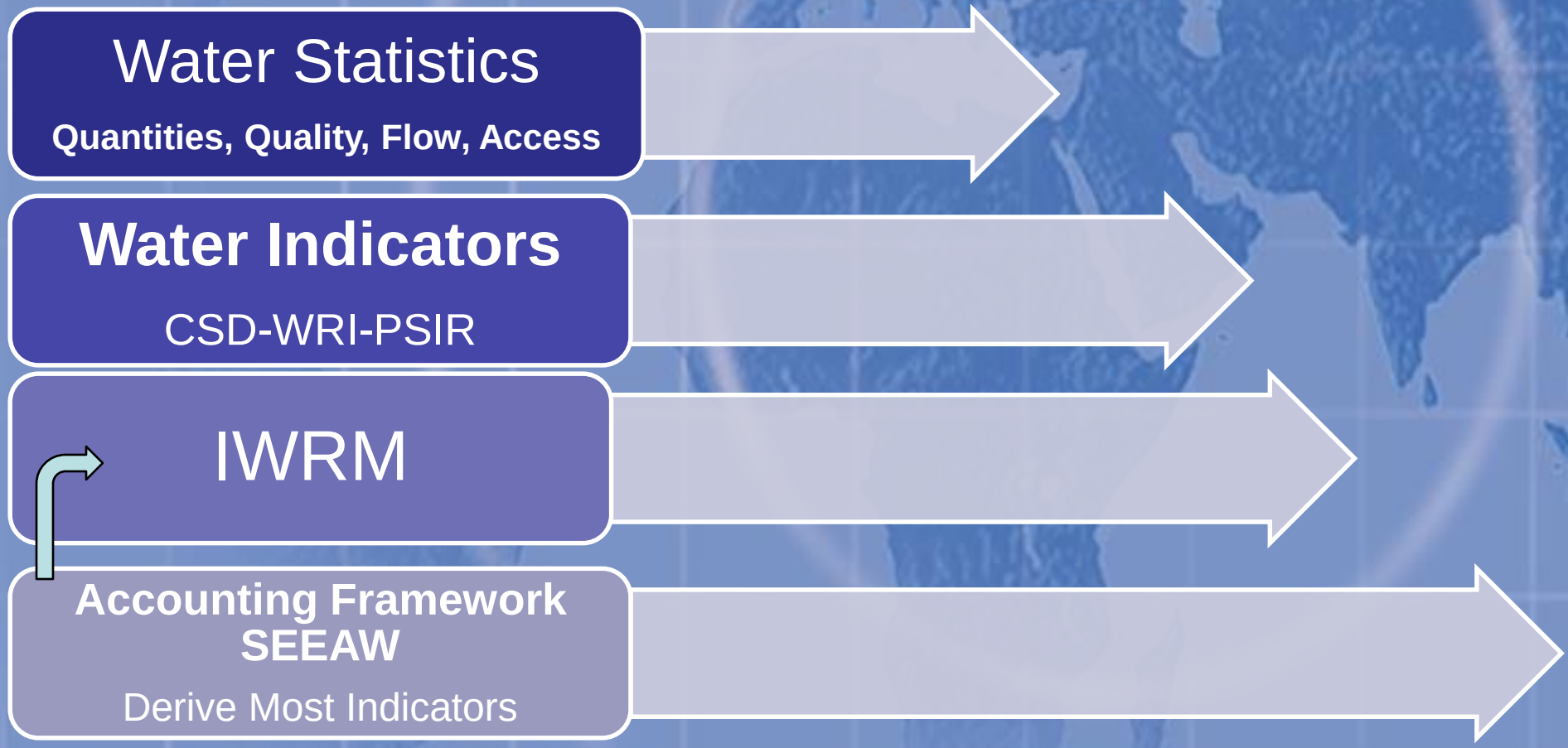
Introduction

- ESCWA countries depend on non-renewable resources to support economic growth
- Constraints to achieve sustainable development: fast growing populations, overexploitation of scarce water resources, deteriorating water quality, land degradation, exploitation of oil and gas.
- Wastewater treatment insufficient and handles only 40% of the domestic wastewater in 2000.
- Urgent need to integrate water and environment issues into development and to account for the manifold interactions between all sectors of the economy and water needs to ensure sustainable development in the region.

Frameworks, Classifications, Methods

WATER SCACITY in the ESCWA region requires data on water in the most efficient way

Frameworks	International Classification	Organize Store	Assess quality/ Manage	Present data into information



Environment Statistics, Indicators and Accounts Project (ESIAP)

for ESCWA-Arab Region and ECLAC

- Home
- Background
- About ESIAP
- Expected Results
- ESCWA Activities
- ECLAC Activities
- ESIA Docubase
- ESIA Forum
- ESIS Database
- ESIA Network
- Questionnaires

•To strengthen National Capacities of ESCWA countries in the collection, coverage, dissemination and exchange of reliable, timely and comparable environment statistics, indicators, and accounts (ES)

•To take advantage of an integrated environmental statistical system approach in support of progress toward achieving national and internationally agreed development goals.

Home

"Strengthening National Capacities in Environment Statistics, Indicators and Accounts Project" (ESIAP) *in support of progress toward achieving* the internationally agreed development goals in the ESCWA and ECLAC Regions" is a development account project that aims to strengthen National Capacities of ESCWA and ECLAC countries in the collection, coverage, dissemination and exchange of reliable, timely and comparable environment statistics, indicators, and accounts taking advantage of an integrated environmental statistical system approach (IESS) to provide policy makers with tools to monitor and ensure environmental sustainability in line with national and internationally agreed development goals (IADGs) such as WSSD and MDGs.

The 2-years project includes missions to countries, expert group meetings, regional and sub-regional workshops, fellowships, development of database and docubase, and the development of a network for experts and institutions in the field to learn from their peers and exchange success stories and lessons learned.

Info Corner

Brochure

Compendium

News

- **Fellowship**
  - Strengthening National Capacities in Environment Statistics, Indicators and Accounts in support of progress toward achieving the internationally agreed development goals in the ESCWA and ECLAC Regions
- **Training Workshop**
  - Training Session on the System of Environmental - Economic Accounting for Water (SEEAW) for the Arab Gulf Countries
  - MEDSTAT II Environment Sector / UNESCWA / UNSD Joint Sub-regional Training Session on the System of Environmental-Economic Accounting for Water (SEEAW)

Links

Beijer Institute of Ecological Economics

European Association of Environmental and Resource Economists (EAERE)

South Asian Network for Development and Environmental Economics

- **International and Regional Resources**
- **National Statistical Offices in Arab Western Asia**

ESCWA | ECLAC | ESCAP | ECA | ECE | UNSD | UNEP | Medstat | FAO | WB | ACSAD

Activities of the Project

- Regional training sessions
- Subregional workshops
- Technical assistance missions
- Expert group meetings
- Methodological documents on integrated environmental statistical systems
- Database, docubase, and expertbase on environment information
- Study tours

Natural resources by type of accounts of priority in the ESCWA region

	Water	Soil	Mineral and Energy	Ecosystems
Flow and pollution accounts **Physical Flows** **(Hybrid accounts)** **Monetary flows** **Pollution (waste, emissions)**	**X**	**X**	**x**	
Asset accounts **Physical Stocks** **Monetary Stocks**	**X**		**x**	
Economic information on the Environment **Expenditures** **Revenues/Taxes** **Etc**	**X**		**x**	

ABOUT ESCWA COUNTRIES

Subregion1
Egypt, Iraq, Lebanon
Syria, Sudan

Subregion2
Arabian Peninsula
Jordan, Palestine
(about 200 m^3/yr/capita)

Surface Water
Shared Water Resources

⇩

Hard to Measure
Water Assets
Water Use
Water Supply

Economics of Water: Cost Subsidies, Taxes

⇩

Social Problems

Limited Surface Water
Ground Water
(Fresh vs. Brackish)
(Fossil vs. Renewable)
(Desalination)

Water Assets
Estimation groundwater, and recharge
Water Use
Water Supply

Economics of Water:
Cost, Subsidies, Taxes
Market values

Pilot Water Accounts
Egypt, Lebanon
1st Step

Pilot Water Accounts
Jordan, Oman, Bahrain, Palestine

SEEA-W
A STEP FORWARD!

REGIONAL AGENDA FOR DEVELOPMENT OF FOR WATER ACCOUNT AND ENVIRONMENT ACCOUNTS

Three groupings of ESCWA countries are distinguished:

- Group 1: Bahrain, Egypt, Jordan, Lebanon, Oman, Palestine. More advanced in Environment Statistics, Possibility of producing water accounts in one year according to the work plan below.
- Group 2: Saudi Arabia, United Arab Emirates, Kuwait, Qatar. Need to establish environment statistics. Possibility of compiling water accounts in two years. Financial and human resources available.
- Group 3: Iraq, Sudan, Syria, Yemen. Need to establish environment statistics. Financial and human resources not available. Possibility of compiling water accounts in 3 years.

REGIONAL AGENDA FOR DEVELOPMENT OF FOR WATER ACCOUNT AND ENVIRONMENT ACCOUNTS

Five phases for development according to the advancement of the country in environment statistics.
Phase I: Setting the ground
Phase II: Institutional Framework , Coordination
Phase III. Technical Support
Phase IV. Production of Pilot Sub-Accounts
Phase V. Dissemination

SEEA Pilot Studies

1. Jordan
2. Lebanon
3. Oman
4. Bahrain
5. Egypt

JORDAN Physical use table,2007

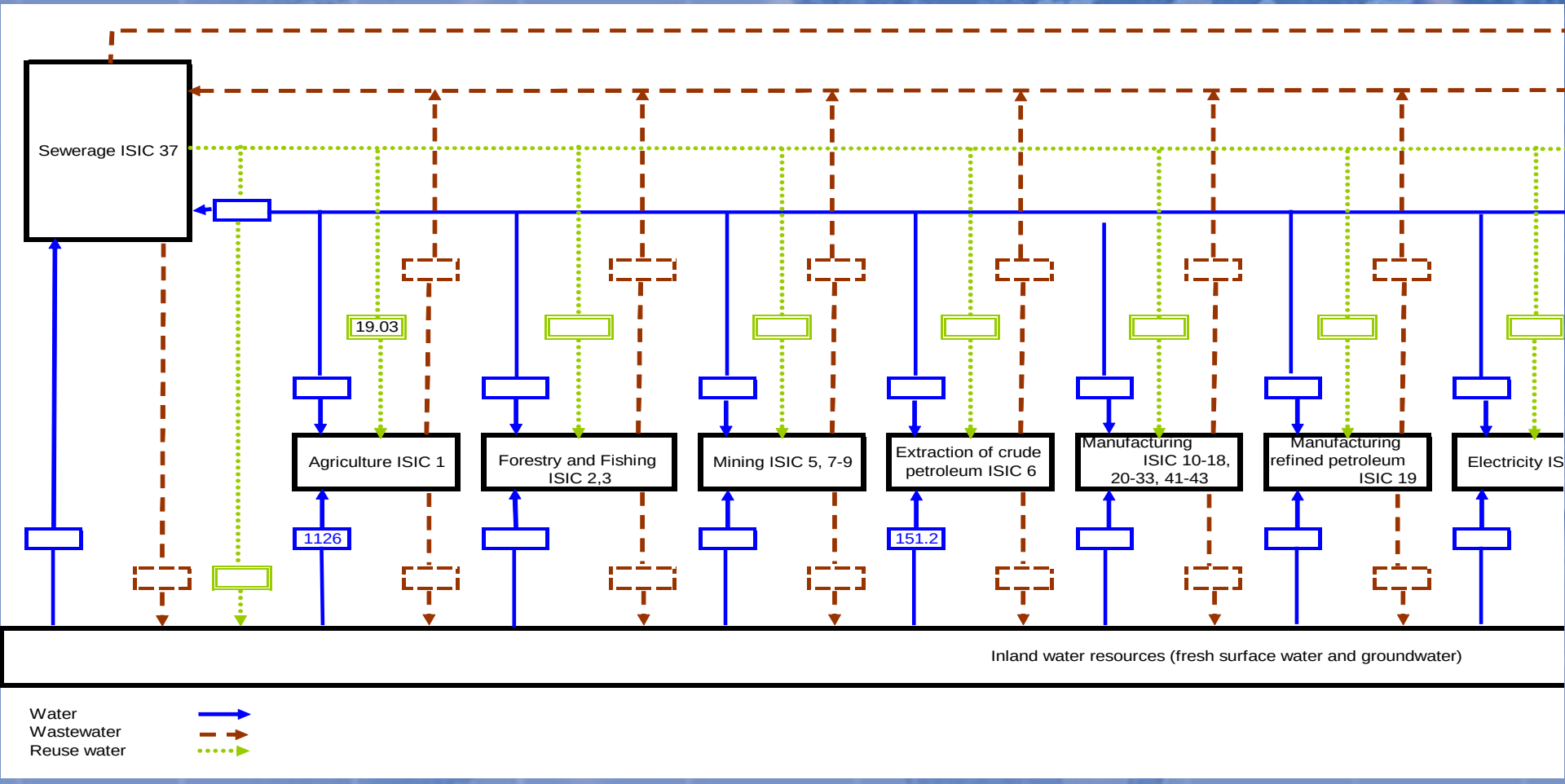
		Industries (by ISIC categories)					Households	Total
		1	36	37	others	Total		
From the environment	**U1 - Total abstraction**	**506**	**294**	**0.0**	**49.0**	**849**	**0.0**	**849**
	a.1- Abstraction for own use	506	0.0	0.0	49.0	555	0.0	555
	a.2- Abstraction for distribution	0.0	294	0.0	0.0	249	0.0	249
	b.1- From water resources:	**506**	**294**	**0.0**	**49.0**	**849**	**0.0**	**849**
	* Surface water	261	80	0.0	4.0	345	0.0	345
	* Groundwater	245	214	0.0	45.0	504	0.0	504
	*Soil water	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	b.2- From other sources	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
	* Collection of precipitation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	* Abstraction from the sea	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Within the economy	**U2** - Use of water received from other economic units	91	0.0	113	0.0	202	147	**351**
	of which: Reused water	91	0.0	0.0	0.0	91	0.0	**91**
	Wastewater to sewerage	0.0	0.0	113	0.0	113	0.0	**113**
Total use of water = U1+U2=								**1200**

JORDAN Physical Supply table,2007

		Industries (by ISIC categories)						
		1	**36**	**37**	**others**	**Total**	**Households**	**Total**
Within the economy	S1- Supply of water to other economic units	0.0	147	91	23	271	90	**351**
	of which: Reused water	91	0.0	0.0	0.0	91	0.0	**91**
	Wastewater to sewerage	0.0	0.0	0.0	23	23	90	**113**
To the Environment	S2- total returns= (D1+D2)	60	140	6	5	211	0.0	**211**
	D1- to water resources	60	140	6	5	211	0.0	**211**
	* surface water	5	10	6	5	23	0.0	23
	* ground water	50	10	0.0	0.0	60	0.0	60
	* soil water	5	120	0.0	0.0	125	0.0	125
	D2- to other sources	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Total supply of water = S1+S2=								**562**
Water consumption= total use – total supply								**638**

Pilot Water accounts for Oman

Trial population of standard physical supply and use diagram



Pilot Water accounts for Bahrain

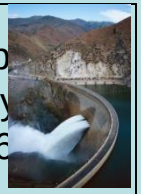
Desalination plant

104.5

Losses .5

104

Water Sup
Industry
ISIC 36



5

4

Losses 1

Industrial
5-33
41-43

5

148.5

Losses 28

120.5

49.5

Losses .5

50

7

Domest

7

Ground water

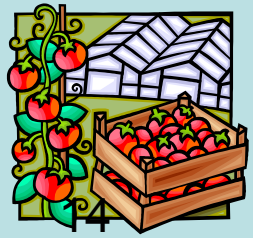
80

128

Sewerage Treatment
ISIC 37

21

Agriculture
ISIC 01



Mean Annual Water Consumption for All Uses (million cubic meters)
الاستهلاك السنوي للمياه لجميع الاستخدامات بالمليون متر مكعب

% use نسب الاستخدام %			Grand total المجموع الكلي				Treated Water مياه معالجة	Desalinated Water مياه تحلية				GroundWater مياه جوفية				المتوسط الفردي لاستهلاك المياه - للاغراض المنزلية LPD	عدد السكان X 1000	السنة
صناعي INDUSTRIAL	زراعي AGRICULTURE	منزلي DOMESTIC	المجموع TOTAL	صناعي INDUSTRIAL	زراعي AGRICULTURE	منزلي DOMESTIC	زراعي AGRICULTURE	المجموع Total	صناعي INDUSTRIAL	زراعي AGRICULTURE	منزلي DOMESTIC	المجموع TOTAL	صناعي INDUSTRIAL	زراعي AGRICULTURE	منزلي DOMESTIC	Mean Domestic Use per Capita	Population*1000	YEAR
4	52	44	192	7	100	85	0	43	1.9	0.4	41.0	149	5	100	44	573	383	1985
4	53	43	207	8	109	90	0	50	2.2	0.5	47.4	157	5	109	42	596	391	1986
3	53	43	220	8	118	95	0	44	2.0	0.4	42.2	176	6	117	53	617	400	1987
4	51	46	217	8	110	99	2	49	2.2	0.5	47.0	166	6	108	52	634	408	1988
3	51	46	230	8	117	105	2	49	2.2	0.5	46.4	178	6	114	58	656	417	1989
3	53	44	243	8	128	107	4	54	2.4	0.5	51.7	184	6	123	55	658	426	1990
3	53	44	241	8	128	105	6	56	2.5	0.6	53.5	178	5	121	51	631	436	1991
3	55	42	262	8	144	109	8	62	2.8	0.6	59.1	192	6	136	50	636	454	1992
3	54	43	273	9	148	116	8	58	2.6	0.6	55.7	205	6	139	60	648	472	1993
3	57	40	287	9	163	115	11	60	2.7	0.6	57.1	215	6	151	58	617	491	1994
3	59	38	292	9	171	112	12	53	2.4	0.5	50.1	227	7	159	62	574	511	1995
3	60	37	307	10	183	114	13	59	2.7	0.6	56.7	233	7	169	57	564	532	1996
3	60	37	318	10	192	116	13	58	2.6	0.6	55.2	247	7	178	61	552	554	1997
3	60	37	322	10	193	119	12	60	2.7	0.6	57.3	250	8	181	62	544	577	1998
3	59	38	315	9	185	121	14	61	2.8	0.6	58.5	239	6	170	62	532	600	1999
3	56	41	315	10	175	130	15	81	3.7	0.8	77.6	219	6	160	53	556	625	2000
3	51	46	301	9	154	138	15	90	4.1	0.9	86.0	195	5	137	52	570	651	2001
3	51	46	309	9	158	141	16	91	4.1	0.9	87.3	201	5	142	54	559	677	2002
3	50	47	314	9	156	149	19	99	4.4	1.0	94.1	195	5	136	54	567	705	2003
3	48	49	322	10	156	156	19	106	4.8	1.1	100.9	190	5	130	55	575	734	2004
3	48	49	329	10	158	161	21	110	4.9	1.1	104.6	190	5	128	57	572	764	2005

Example BAHRAIN 2005

Abdulla Ali,
Authority of Electricity and Water

From Tables to Diagrams
Presented in Beirut August 2008

Challenges in SEAA-W Implementation in MSs

1. Institutionalization and legal provisions on official water statistics and accounts
2. Establish sustainable system for national coordination
3. Strengthening human, technical and financial resources for water statistics
4. Use of common concepts, definitions and classifications within and across countries according to International Standards
5. Ensuring Quality of data
6. Need for aggregate Indicator

Challenges in SEAA-W Implementation

5. Installing monitoring stations and conducting environment and water surveys
6. Implementing Water Quality Accounts and Valuation
7. Communication and Dissemination
8. Technical Problems:
    1. Water Accounts at the watershed levels (Lebanon, Oman, Egypt)
    2. Supply by water tankers, cooling water, desalination
    3. Soil water, brackish water…

Opportunities in SEEAW

WHAT WAS ACCOMPLISHED UNTIL NOW!

1. Countries can use available data and put it into the system allowing gaps to be identified and addressed.
2. Improved data quality by cross- checking the different standard tables
3. Strengthening coordination among national statistical offices and water and environment ministries
4. SEEA-W as agent in creation of regional networks

WAY FORWARD

LONGER TERM APPLICATIONS!

1. Integrating information for water policy and management
2. Developing Environmental Accounts
3. Flexibility and expansion to accommodate regional needs (i.e. inclusion of tourism industry, separate identification of oil industries etc)

Role of Organizations

ESCWA, UNSD,UNEP,MEDSTAT,ECLAC

1. Sharing Water Data (UNSD-UNEP Questionnaire)
2. Verifying and checking data, contacting and following-up with countries for clarifications and corrections
3. Conducting joint trainings and missions on Water Accounts (training material, coordinated assistance)
4. Adding countries concerns and comments in manuals and recommendations
5. Sharing lessons learned with other regions
6. Web Portal on Environmental Accounting for ESCWA Countries ESIAP.escwa.org.lb
7. Engaging other major partners mainly DSD, UNDP,UNEP,WB, FAO

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