



**UNITED NATIONS**  
Economic and Social Commission for Western Asia


  
UN-ESCWA


# Main Finding and Results of the Regional Mapping Exercise

*Regional Mapping and Policy Guidelines of Green  
Productive Sectors*




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## Outline

1. Scope of the Study
2. Focus Areas
3. Methodology
4. Note on Data
5. Implications of the Green Economy for the ESCWA Region



**RIO+20**  
United Nations Conference  
on Sustainable Development



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**1** **Outline**

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**Scope of the Study**

**1**

- Provide a methodology for:
  - mapping the progress in the Arab region in the adoption and implementation of green economy policies.
- Carry out the mapping to:
  - Define "current status"
  - Identify: Drivers, Enablers, challenges
  - Help to
    - "frame" Guidelines
    - Define scope of legal framework

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# Green Economy

1

- **Decoupling:**
  - **Relative:**
    - Production increases
    - Resource use and pollution do not rise as quickly.
  - **Absolute: "Green Growth"**
    - Production increases
    - Resource use and pollution fall

# Green Economy: Arab Perspective

1

- Regional commitment:
  - April 2012 "*Arab Ministerial Declaration on the United Nations Conference on Sustainable Development (Rio+20)*" of the Council of Arab Ministers Responsible for the Environment (CAMRE).
- Green Economy approaches to ensure:
  - Environmental Sustainability
  - Approaches developed based on national needs and priorities
  - **Specific** to the ESCWA Region
  - **No** "one size fits all" standard model.
  - **No** Green Protectionism

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## Outline

1. Scope of the Study
2. Focus Areas
  - Environmental Sustainability
  - Economic Transformation
  - Progress and Well-Being
  - Policy Response
  - Means of Implementation
3. Methodology
4. Note on Data
5. Implications of the Green Economy for the ESCWA Region

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## Environmental Sustainability

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- The Environment:
  - “natural asset base”;
  - Active Asset, provides “ecosystem services”
    - Directly: Inputs to production,
    - Indirectly: Biodiversity
  - “Net investment” has to be positive, with resources added in such a way as to promote natural regeneration rather than deplete or depreciate them.

| Category    | Indicator | Description                        |
|-------------|-----------|------------------------------------|
| Environment | ESI       | Environmental Sustainability Index |
|             | EPI       | Environmental Performance Index    |

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## Economic Transformation



2

- Improved resource efficiency through:
  - Sustainable production
  - Sustainable consumption
- Measures:
  - Share of renewable energy,
  - water treatment; USD Generated by m<sup>3</sup> of water.
  - Businesses dynamism:
    - Private sector share of Gross Domestic Product (GDP)
    - Proportion of Small and Medium Enterprises (SME)

| Category                | Indicator   | Description  | Source         |
|-------------------------|-------------|--|----------------|
| Economic Transformation | Energy      | Share of Renewable Energy as % of Total                | ESCWA          |
|                         | WealthWater | Wealth Generated by the Use of Water in Industry       | Beaumont, 2000 |
|                         | GDP-P       | Domestic Credits to Private Sector as share of GDP (-) | World Bank     |
|                         | GDP-SME     | Contribution of SMEs to GDP (-)                        | Nicola, 2009   |

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## Progress and Well Being



2

- Enhanced livelihoods:
  - Human Development Index (HDI)
  - Employment
  - Air Quality
  - Water Quality

| Category                | Indicator  | Description  | Source        |
|-------------------------|------------|--|---------------|
| Progress and Well-Being | HDI        | Human Development Index  | UNDP          |
|                         | Emp        | Proportion of the Population Employed, 2008 Data (-)   | ESCWA, 2011-a |
|                         | Emp-WM     | Ratio of Women to Men Employment (-)   | ESCWA, 2011-a |
|                         | Air-CO2    | Air Quality: per Capita CO2 Emissions (Tonnes/Capita)  | World Bank    |
|                         | Air-CEC    | Air Quality: per Capita Commercial Energy Consumption, in kg of oil equivalent per capita            | World Bank    |
|                         | W-Quantity | Per Capita Water Quantity (m <sup>3</sup> /Person), normalized with respect to "Water Stress Index". | FAO-Aquastat  |
|                         | W-Quality  | Water Quality: BOD Emissions Per Worker (kg / Worker / Day)  | World Bank    |

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## Policy Response & Means of Implementation

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- Institutional Policies,
  - Incentives
  - Capacity strengthening
  - Technology transfer and education
- Means of Implementation; Direct and Indirect

| Category                                    | Indicator | Description   | Source |
|---|-----------|---|--------|
| Policy Response and Means of Implementation | GreenP    | Green Procurement: % of public procurement earmarked for Green Projects.                | N/A    |
|   | ETax      | Environmental Taxation: % of Taxes and fines collected specifically linked to pollution | N/A    |
|   | Incentive | Business Incentives: % of public incentives earmarked for Green Projects or Green SMEs  | N/A    |
|   | GreenF    | Green Financing: % of bank financing for Green Projects or Green SMEs                   | N/A    |

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## Methodology

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### 1. Plot:

- Based on Indicators

### 2. Drivers:

- Actively effects contributes to: Green Growth / Green the Brown.

### 3. Enablers:

- Permit, allow, promote, or empower the transition.

### 4. Challenges:

- Hinder drivers
- Negate enablers.

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## Methodology: 1- Plot

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| Category                                    | Indicator   | Description  | Source         |
|---|-------------|--|----------------|
| Environment                                 | ESI         | Environmental Sustainability Index   | FAO-Aquastat   |
|   | EPI         | Environmental Performance Index  | FAO-Aquastat   |
| Economic Transformation                     | Energy      | Share of Renewable Energy as % of Total  | ESCWA          |
|   | WealthWater | Wealth Generated by the Use of Water in Industry   | Beaumont, 2000 |
|   | GDP-P       | Domestic Credits to Private Sector as share of GDP (-)   | World Bank     |
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## Methodology: 1- Plot

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- Each parameter is computed in 2 steps:
  - ➔ ✓ Average of any given parameters for ESCWA Region countries,
  - ➔ ✓ For each individual country, express any given parameters as a ratio.

|     | Bahrain | Egypt | Iraq | Jordan | Kuwait | Lebanon | Libya | Morocco | Oman | Palestine | Qatar | KSA  | Sudan | Syria | Tunisia | UAE  | Yemen | AVG  |
|-----|---------|-------|------|--------|--------|---------|-------|---------|------|-----------|-------|------|-------|-------|---------|------|-------|------|
| ESI | 33.6    | 47.8  | 36.6 | 40.5   | 42.3   | 44.8    | 47.9  | 37.8    | 35.9 | 43.8      | 51.8  | 44.6 | 37.3  |       |         |      |       |      |
| EPI | 42.0    | 59.0  | 41.0 | 56.1   | 51.1   | 57.9    | 50.1  | 65.6    | 45.9 | 48.9      | 55.3  | 47.1 | 64.6  | 60.6  | 40.7    | 48.3 |       | 52.3 |

|     | Bahrain | Egypt | Iraq | Jordan | Kuwait | Lebanon | Libya | Morocco | Oman | Palestine | Qatar | KSA  | Sudan | Syria | Tunisia | UAE  | Yemen |
|-----|---------|-------|------|--------|--------|---------|-------|---------|------|-----------|-------|------|-------|-------|---------|------|-------|
| ESI | 1.05    | 0.80  | 1.14 | 0.87   | 0.96   | 1.01    | 1.07  | 1.14    |      |           |       | 0.90 | 0.85  | 1.04  | 1.23    | 1.06 | 0.89  |
| EPI | 0.80    | 1.18  | 0.78 | 1.07   | 0.98   | 1.11    | 0.96  | 1.25    | 0.88 |           | 0.93  | 1.06 | 0.90  | 1.23  | 1.16    | 0.78 | 0.92  |

*Focus: to give a sense of perspective  
to Help identify best practices*

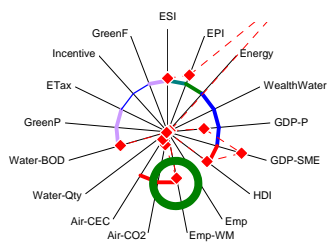
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## Methodology: 1- Plot

Egypt



Indicator Value

|             |        |
|-------------|--------|
| ESI         | 44     |
| EPI         | 62.004 |
| Energy      | 2.47   |
| WealthWater | 18.58  |
| GDP-P       | 33.1   |
| GDP-SME     | 80     |
| HDI         | 0.644  |
| Emp         | 9.7    |
| Emp-WM      | 0.2533 |
| Air-CO2     | 27113  |
| Air-CEC     | 559.88 |
| Water-Qty   | 21.808 |
| Water-BOD   | 0.1878 |

Indicator Value

|             |        |
|-------------|--------|
| ESI         | 36.6   |
| EPI         | 51.125 |
| Energy      | 0      |
| WealthWater | 1887.7 |
| GDP-P       | 73.6   |
| GDP-SME     | 0.7603 |
| HDI         | 1.8    |
| Emp         | 0.5432 |
| Air-CO2     | 30.308 |
| Air-CEC     | 4363.8 |
| Water-Qty   | 0      |
| Water-BOD   | 0      |
| GreenP      |        |
| ETax        |        |
| Incentive   |        |
| GreenF      |        |

*Focus: to give a sense of perspective  
to Help identify best practices*


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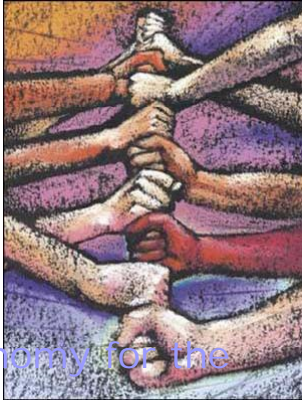


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**4 Data Availability**

- Environmental statistics are **available yearly**:
  - Bahrain, Egypt, Jordan, Lebanon, Oman and Palestine.
- Environmental statistics are **not available yearly**,
- But where resources are available:
  - Kuwait, Qatar, Saudi Arabia and United Arab Emirates.
- Environmental statistics are **not always available**,
- Resources are **not** available:
  - Iraq, Sudan, Syrian Arab Republic and Yemen.

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## Data Sources



- Global “macro-level” Sources
  - Official databases:
- Individual “Micro-Level” Sources
  - Technical Publications,
  - Scientific Publications...

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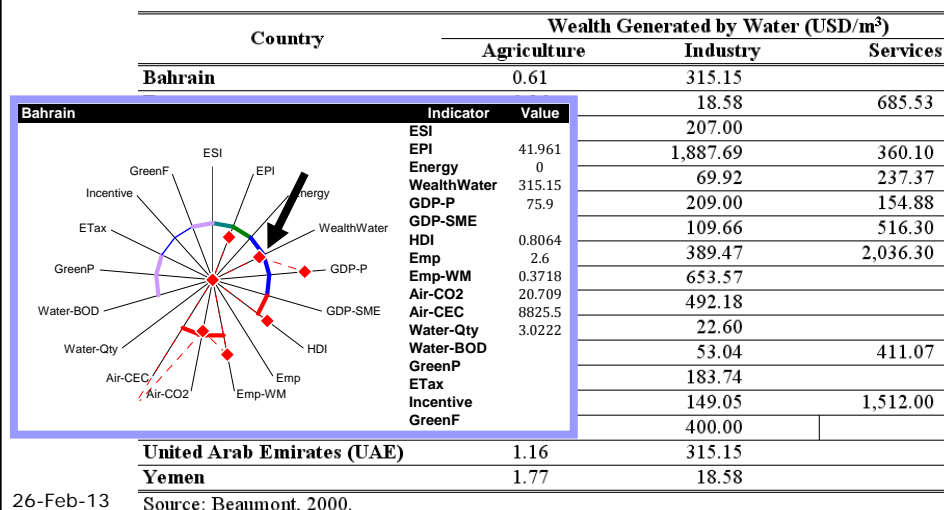
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## Environmental Sustainability



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Over 66% of water resources originating from outside the borders of the ESCWA Region

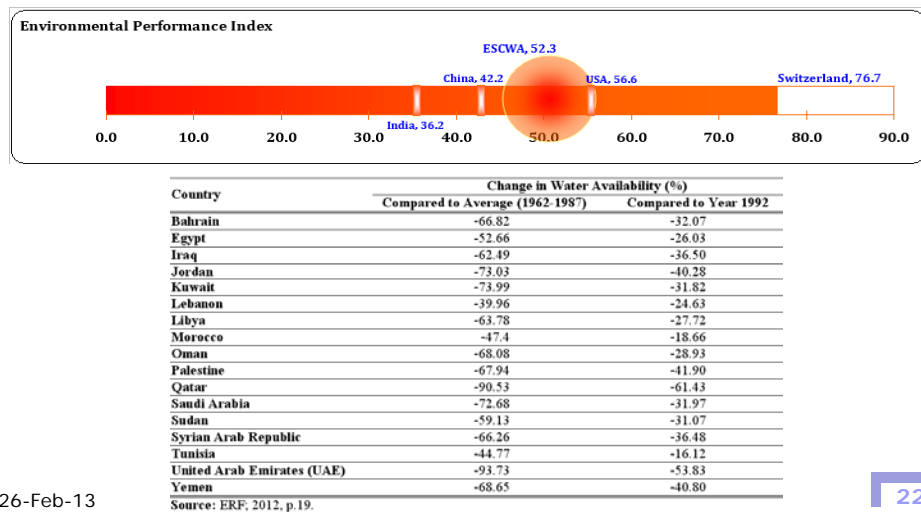


## Environmental Sustainability



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Environmental degradation in the ESCWA region is generally believed to be "more severe" than in other parts of the world".



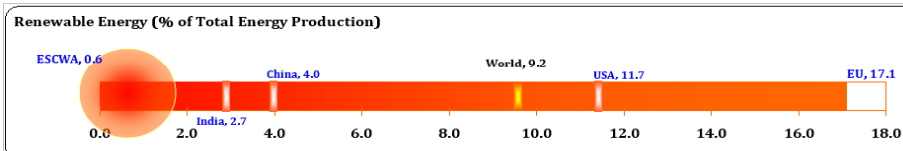
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## Economic Transformation

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### Share of Renewable Energy



#### Solar and wind energy from North Africa and the Middle East



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## Economic Transformation

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### • Wealth generated by water,

| Country                    | Wealth Generated by Water (USD/m <sup>3</sup> ) |          |          |
|----------------------------|---|----------|----------|
|                            | Agriculture                                     | Industry | Services |
| Bahrain                    | 0.61  | 315.15   |          |
| Egypt                      | 0.96  | 18.58    | 685.53   |
| Iraq                       |   | 207.00   |          |
| Jordan                     | 1.91  | 1,887.69 | 360.10   |
| Kuwait                     |   | 69.92    | 237.37   |
| Lebanon                    | 0.69  | 209.00   | 154.88   |
| Libya                      | 0.48  | 109.66   | 516.30   |
| Morocco                    | 1.47  | 389.47   | 2,036.30 |
| Oman                       | 0.45  | 653.57   |          |
| Palestine                  | 9.89  | 492.18   |          |
| Qatar                      | 0.53  | 22.60    |          |
| Saudi Arabia               | 0.81  | 53.04    | 411.07   |
| Sudan                      | 0.52  | 183.74   |          |
| Syrian Arab Republic       | 2.18  | 149.05   | 1,512.00 |
| Tunisia                    | 2.90  | 400.00   |          |
| United Arab Emirates (UAE) | 1.16  | 315.15   |          |
| Yemen                      | 1.77  | 18.58    |          |

Source: Beaumont, 2000.

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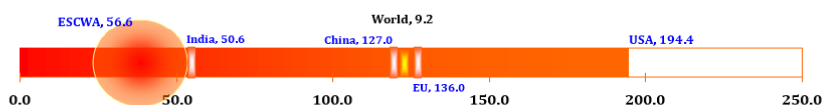
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## Economic Transformation

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### • Role of Private sector in the economy

Domestic credit to private sector (% of GDP)



**Domestic Credits to Private Sector as Share of GDP:** Financial resources provided to the private sector, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment.

However, in some countries, the data may be misleading as these claims include credit to public enterprises.

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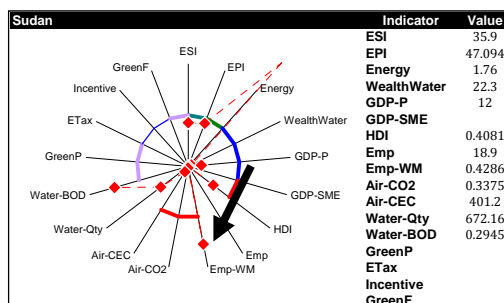
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## Progress & Wellbeing

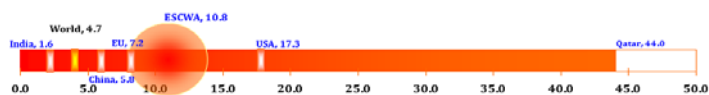
- Share of youth in total unemployed exceeding 50 % for most Arab countries.

- Women Unemployment:
  - 45% to 50% of female labour force 15-24 years is unemployed in Egypt, Jordan, Palestine, Saudi Arabia and the Syrian Arab Republic.
  - Unemployment rates in some countries are highest among highly educated individuals
    - 56% in Jordan, 50% in Yemen, and 27% in Morocco.



- Air Quality

CO2 Emissions (Tonne Per Capita)



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## Policy Response & Means of Implementation



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- Promotion of SMEs.
  - Establishment of an Arab Fund to support SMEs.
- “South-South” technology transfer
  - ESCWA Technology Centre
- Capacity strengthening:
  - Three pilot Green Production Help Desks
    - Association of Lebanese Industrialists (ALI) in Lebanon,
    - Ministry of Environmental Affairs in Egypt,
    - Ministry of Commerce and Industry in Oman.

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## Policy Response & Means of Implementation



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- “South-South” technology transfer
- Capacity strengthening

| Country                    | Education Spending <sup>(1)</sup><br>(% of GDP) | R&D Spending <sup>(2)</sup><br>(% of GDP) |
|----------------------------|---|---|
| Bahrain                    | 2.9   |   |
| Egypt                      | 3.8   | 0.23                                      |
| Jordan                     |   | 0.34                                      |
| Lebanon                    | 2.0   |   |
| Morocco                    | 5.6   | 0.64                                      |
| Oman                       | 4.3   |   |
| Qatar                      | 2.5   |   |
| Saudi Arabia               | 5.6   |   |
| Sudan                      |   | 0.29                                      |
| Tunisia                    | 6.3   | 1.02                                      |
| United Arab Emirates (UAE) | 1.6   |   |
| Yemen                      | 5.2   |   |

(1) Data for the year 2008, except Oman (2009); World Bank.

(2) Data for the year 2007 (Stevenson, 2007; ARF, 2009)

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## Country Fact-Sheets



### 1. Plot:

- Based on Indicators

### 2. Drivers:

- Actively effects contributes to: Green Growth / Green the Brown.

### 3. Enablers:

- Permit, allow, promote, or empower the transition.

### 4. Challenges:

- Hinder drivers
- Negate enablers.

**Thank You for your attention**