SDG 7 . ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL PRACTICAL CHALLENGES: DATA COLLECTION AND VALIDATION

18-21 September 2017

Economic And Social Commission For Western Asia

UNITED NATIONS

الاسكوا

ESCWA

Wafa Aboul Hosn, Ph.D.

Chief, Economic Statistics Section, Statistics Division

aboulhosn@un.org

In the context of agenda 2030, it will be necessary to measure properly the contribution that energy makes to the 2030 Agenda.

This measurement will require
Developing indicators that target the desired outcomes,
Reviewing the Indicators and their methodologies
Developing the capability to gather the data needed to track the indicators Working with Member States to develop and implement sustainable energy action plans that are founded on credible data.

The SE4All Global Tracking Framework (GTF), SDG7 and SDG 13 are linked and related indicators can serve them all.

In Arab Countries, Multiple Factors Affecting Energy

Demographic

- Population Growth rates among highest 2 to 3 % in most and in some Gulf Countries 8%, implying higher energy demand (Among top ten)
- Poor urban planning, unsustainable transport, (30% of energy use globally is by transport in some Arab Palestine it is 50%)

Natural Environment

- Climate already hot and dry Records in High Temperature
- scarce water resources
- majority of countries are coastal
- 50% of oil global reserves

Economic and Social

- Supply and Prices: In a region providing 30% of global oil production,
- the 50% decrease in oil prices is too low for oil Exporting Countries exhausting government revenues and reserves cutting expenditures and risks of slowing economy; Prices still too high for importing countries that many removed subsidies on transport, heating, with social implications to the poor.

Fiscal Policies

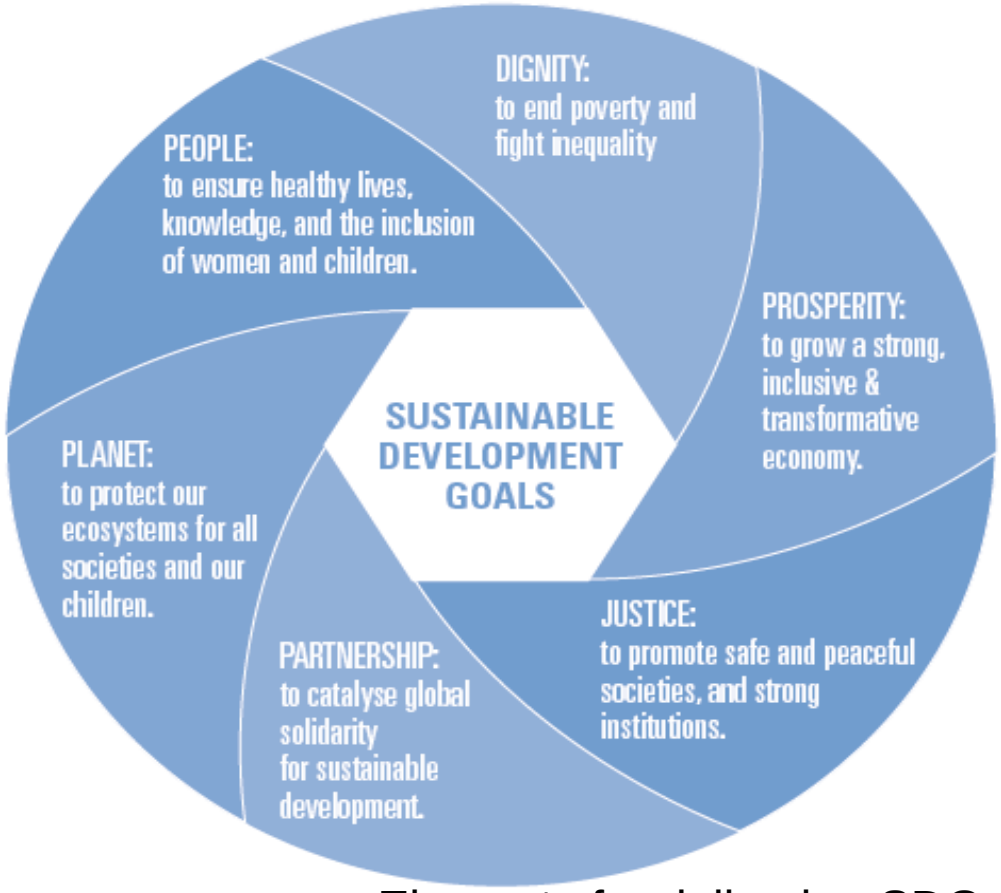
- Subsidies among highest (8 out of 13 top are Arab countries) with average subsidy rates of domestic fuel (50 to 80%, and 120 billion in 2010 in 8 selected countries, and *where subsidies are poorly implemented* Fattouh and Al-Katiri 2016) .
- Underinvestment in the energy sector
- Lack of energy efficiency and environment management standards in Industries
- environmental taxes, incentives for efficiency…

Wars and Conflicts

- reversed development trends and In countries which did not suffer of electricity cuts decades ago people are now relying on private diesel generators (one in 3 families in Iraq), Destruction of Infrastrucutre

The region, oil exporting and oil importing have to work on sustainable energy and address the impacts of Climate change: Enforcing Efficiency, Pricing, Investing in Renewabes and Efficiency, Changing Behavior of consumption and designing sustainable cities and integrated services (transportation, building, Industrial Production, waste management)

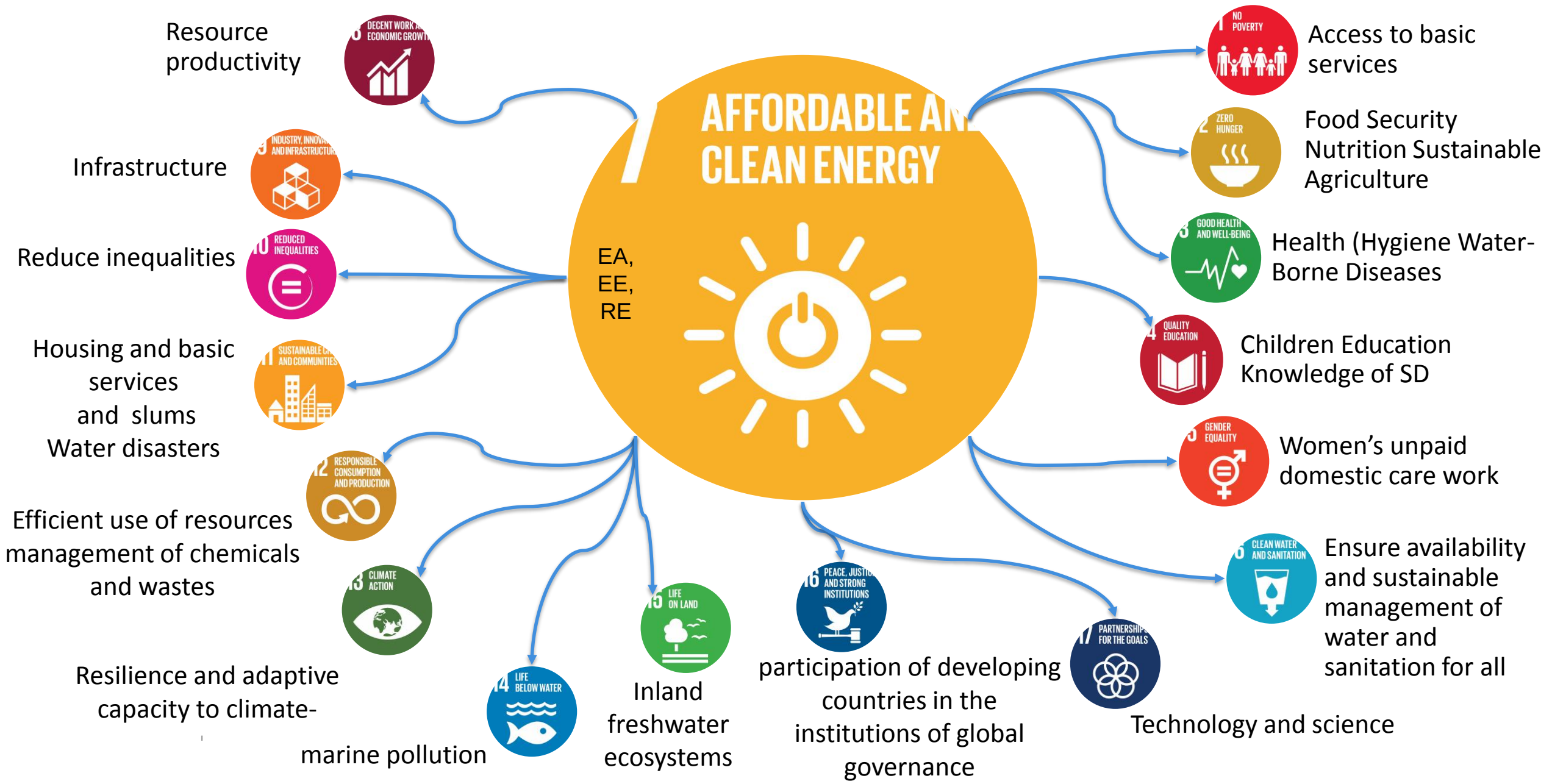
2030 Agenda for Sustainable Development- SDG Essential Elements



Elements for delivering SDGs

Energy is recognized as an integral part of the 2030 Agenda for Sustainable Development. Water and Sanitation are identified as a stand-alone Sustainable Development Goal (SDG 6) and as a central component of many of the 17 goals and 169 targets agreed in the agenda.

Linkages: Energy with other SDGs



Goals and Targets (from the 2030 Agenda)	Indicators	Tier	Custodian Agency(ies)	Other Agencies	المؤشرات	الأهداف والغايات (من خطة عام 2030)
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all					**لهدف 7- ضمان حصول الجميع بتكلفة ميسورة على خدمات الطاقة الحديثة الموثوقة والمستدامة**	
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity	**Tier I**	World Bank	International Energy Agency, FAO, GACC	**7 - 1 - 1 النسبة المئوية للسكان المستفيدين من خدمات الكهرباء**	**7 - 1 ضمان حصول الجميع بتكلفة ميسورة على خدمات الطاقة الحديثة الموثوقة بحلول عام 2030**
	7.1.2 Proportion of population with primary reliance on clean fuels and technology	**Tier I**	WHO		**7 - 1 - 2 النسبة المئوية للسكان الذي يعتمدون أساساً على الوقود والتكنولوجيا النظيفين**	
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	**Tier I**	World Bank, UNSD?	IEA, IRENA, OECD	**7 - 2 - 1 حصة الطاقة المتجددة في مجموع الاستهلاك النهائي للطاقة**	**7 - 2 تحقيق زيادة كبيرة في حصة الطاقة المتجددة في مجموعة من مصادر الطاقة العالمية بحلول عام 2030**
7.3 By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of primary energy and gross domestic product (GDP)	**Tier I**	World Bank, UNSD	IEA& OECD	**7 - 3 - 1 كثافة الطاقة التي تقاس من حيث الطاقة الأولية والناتج المحلي الإجمالي**	**7 - 3 مضاعفة المعدل العالمي للتحسُّن في كفاءة استخدام الطاقة بحلول عام 2030**

7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	7.a.1 Mobilized amount of United States dollar per year starting in 2020 accountable towards the $100 billion commitment	Tier III	OECD	UNFCCC, UNEP	7 - أ- 1 جمع مبلغ مقوم بدولارات الولايات المتحدة في السنة ابتداء من عام 2020 بهدف الوفاء بالالتزام بتوفير مبلغ 100 بليون دولار	7-أ تعزيز التعاون الدولي من أجل تيسير الوصول إلى بحوث وتكنولوجيا الطاقة النظيفة، بما في ذلك تلك المتعلقة بالطاقة المتجددة، والكفاءة في استخدام الطاقة وتكنولوجيا الوقود الأحفوري المتقدمة والأنظف، وتشجيع الاستثمار في البنى التحتية للطاقة وتكنولوجيا الطاقة النظيفة، بحلول عام 2030
7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support	7.b.1 Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services	Tier III	IEA		7 -ب- 1 نسبة القيمة المضافة إلى صافي استخدام الطاقة المحلية، بحسب الصناعة	7-ب توسيع نطاق البُنى التحتية وتحسين مستوى التكنولوجيا من أجل تقديم خدمات الطاقة الحديثة والمستدامة للجميع في البلدان النامية، وبخاصة في أقل البلدان نموا والدول الجزرية الصغيرة النامية، والبلدان النامية غير الساحلية، وفقا لبرامج الدعم الخاصة بك منها على حدة، بحلول عام 2030

Tier System

UNSC And The Inter-agency And Expert Group On Sustainable Development Goal Indicators Classified Proposed Indicators

1. Methodologically Sound (Internationally Agreed Definition)
2. Measurable
3. Accessible And Easy To Interpret
4. Relevant
5. Timely
6. Regularly Produced Over Time

For Global Indicators: Internationally Comparable

- Tier 1: Satisfy All Criteria
- Tier 2: Satisfy Most Criteria But Data Coverage Is Insufficient
- Tier 3: Methodology Still Being Developed

Energy Statistics Challenges in the Arab Region

- Although very important sector in the Arab region, and in spite of many capacity building projects: (Medstat, ESCWA), energy statistics is still not collected, produced and used with the quality, coverage, periodicity and timeliness required

- Gaps, general and specific, exist in many areas
  - Institutional
  - Resources
  - Data Sources and Metadata
  - Technical
  - Users -Producers

Institutional

- **Structural:** In most Arab NSOs, energy statistics is with industry (Egypt, Qatar,…) or environment (UAE) or NA (Tunisia) except in Palestine
- **Lack of Coordination:** different government entities producing/publishing energy data
- **Reporting:**
    - In oil exporting Arab countries, oil & gas are owned & operated by national oil companies and there are no taxes, the data reporting still not fully developed.
    - Customs do not administer trade of oil and gas. (Ministries of Oil, Finances and central Banks).
    - Confidentiality on production and exports data (if only one company is operating)
    - Delays in producing and publishing energy reports

Resources

- Insufficient staff working on energy statistics
- Lack in understanding the energy processes and the information required to produce quality energy data
- Absence of funding for the establishment of effective data collecting, handling, and disseminating systems

Data Sources

- Economic/business /industrial surveys: extraction, production, manufacturing, transportation and distribution, and intermediate and final consumption of fuels and electricity (values and quantities),
- Surveys: Household, Agriculture, Transport for end use
- Administrative records: Business registers, Oil and gas and electricity companies reports/ government agencies, on supply and consumption, prices, investments, etc.
- Customs/others on imports and exports
- Environment Survey: expenditures on environmental Protection

Metadata

Building metadata and ensuring the quality and exhaustiveness of already existing statistics for petroleum, gas and electricity.

Besides being instrumental for the users, it will help the producers of the statistics to ensure the quality and comprehensiveness of the data.

Technical Issues

- Different methodologies used in calculations and estimations of energy balance not applying international standards and methodologies

- Units and conversion factors mass/volume to energy. (Local factors from producers for each product should be used)

  Reference to the International Recommendation on Energy Statistics, IRES http://unstats.un.org/unsd/statcom/doc11/BG-IRES.pdf and the IEA manuals on energy statistics

- Lack of IT tools for energy data collection and management and exchange between databases from producers and users of energy data.

Gaps in Renewable

- Renewable energy is a fast growing sector in the region but in most countries ie. UAE, so far no statistics on renewable energy is published.
- Difficulties in estimating RE (small scale use, biomass, etc..)

Values and Quantities

- Information on energy use is available for either values or quantities. Need to convert values into quantities and vice versa. Unit prices (i.e. value per physical unit)
- Unit prices are not always readily available, i.e. because the energy group in question may be too heterogeneous to be represented by a single energy product
- Basic information at a sufficient detailed level and for groups, identifiable or comparable with other groups.

Specific Issues for Gulf Countries

- Fuel for electricity production and desalination
- How to allocate the input of natural gas by ISIC activities for electricity production and desalination.
- District cooling
- Local sales versus exports (between emirates)

At a global level UNSD

- Data availability and quality Basic data is not available if it was available estimation and calculation is easier
- Coordination is not stable: Within the country it is not a clear how data is coordinated We
- Some countries reply after several times and send partial data
- Energy balance helps to have quality checks
- In the UNSD questionnaire, it is long, countries are recommended
- Use of common classifications
- Uses of Admin Data Do they use same definitions??
- Big data: Transport data Mileage driven by car
- Compilers Guide to share with participants
- Cost of data collection
- The problem is not that UNSD questionnaire is complicated but whether the data is available or not

THANK YOU

Economic And Social Commission For Western Asia

UNITED NATIONS

الاسكوا

ESCWA