



Sustainable Energy in **Central Asia**

12 April 2019

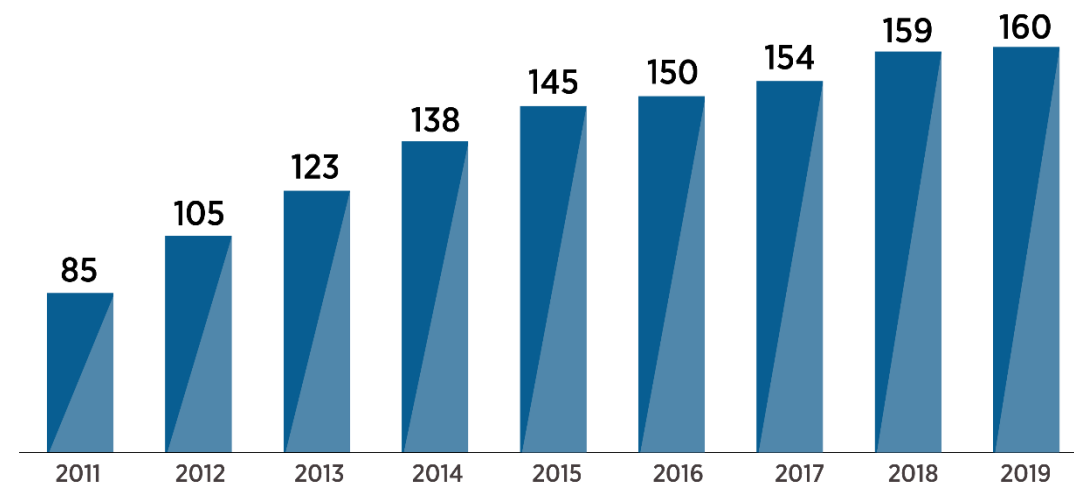
BRUSSELS, CHARLEMAGNE BUILDING – LORD JENKINS ROOM



Gurbuz Gonul – Director, Country Support and Partnerships, IRENA

- » Established in 2011
- » Headquarters in Masdar City, Abu Dhabi, UAE
- » IRENA Innovation and Technology Centre – Bonn, Germany
- » Permanent Observer to the United Nations – New York, USA

160 Members and 23 States in Accession



To promote the widespread adoption and sustainable use of all forms of renewable energy



Bioenergy



Geothermal
Energy



Hydropower



Ocean
Energy

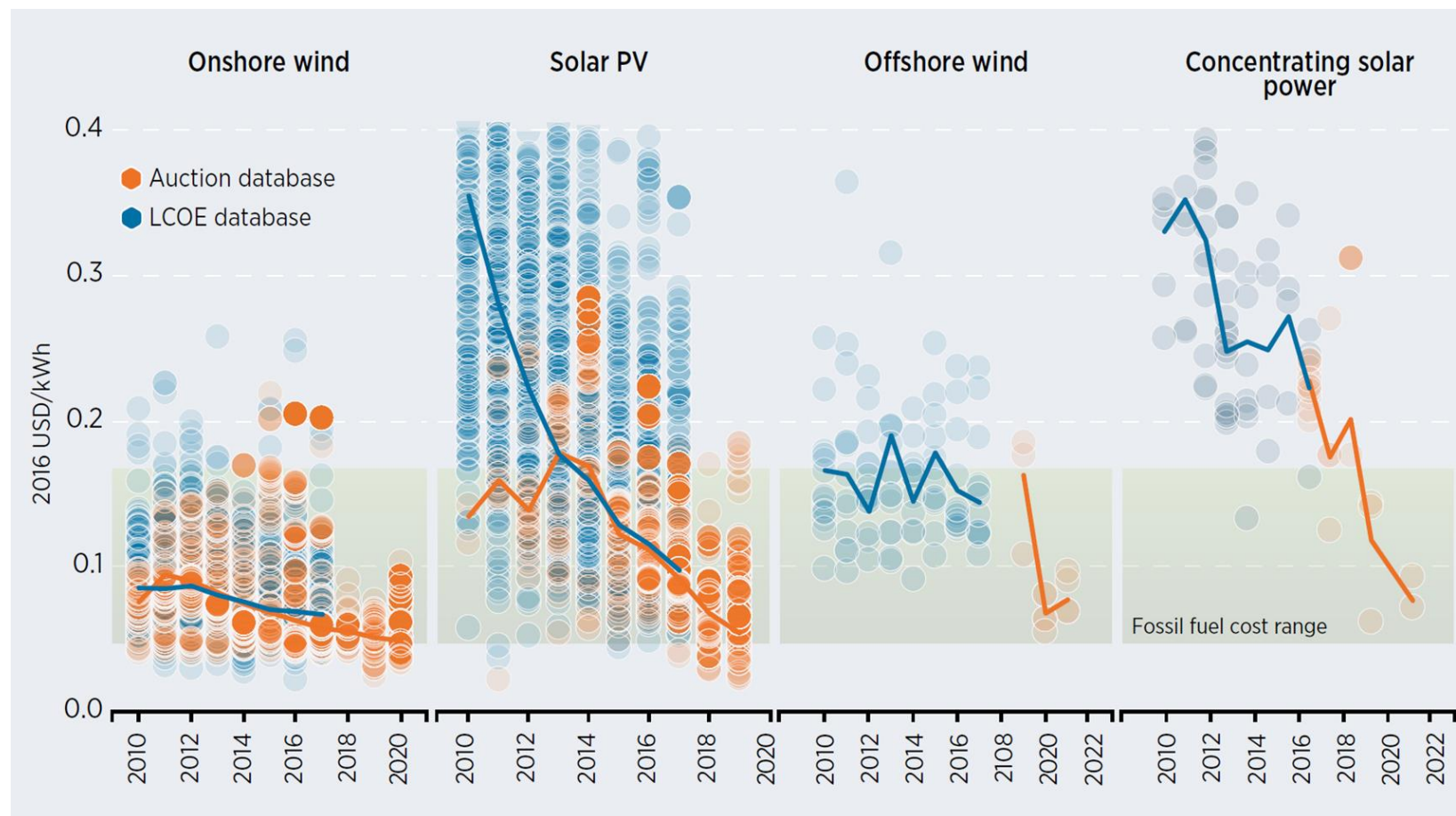


Solar
Energy



Wind
Energy

Global Levelised Cost of Electricity



LCOE reduction in the period
2010 - 2017

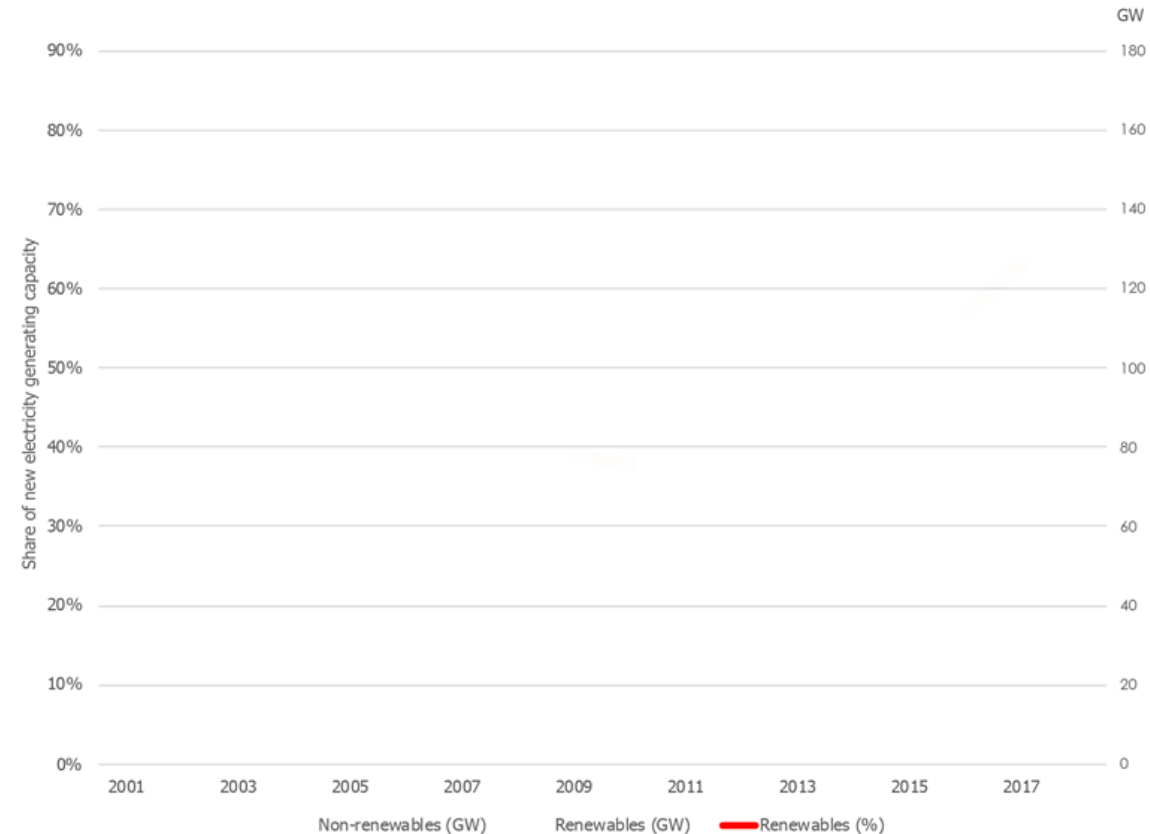

73%
**Solar
PV**




23%
**Onshore
Wind**

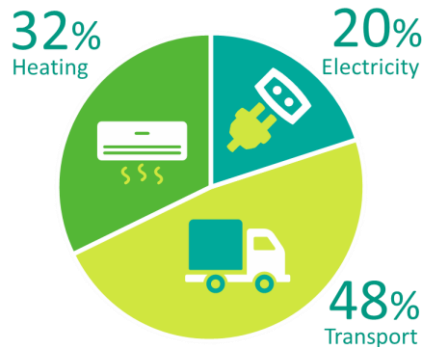
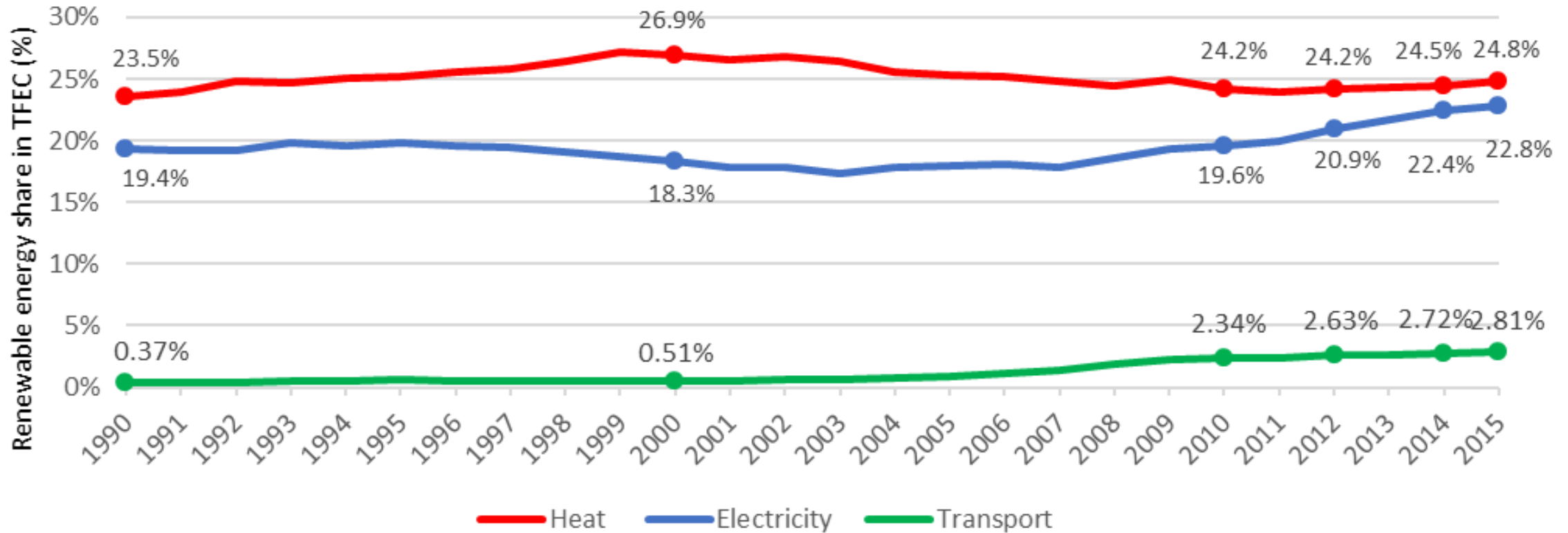


Global power capacity additions



- Nearly two-thirds of all new power generation capacity added in 2018 was from renewables (171 GW)
 - Led by emerging and developing economies
- RE power capacity additions constantly exceed conventional power

RE penetration in heating and transport requires boosted efforts



- Progress in the power sector is not being matched in transport and heating – which together account for 80% of global energy consumption.

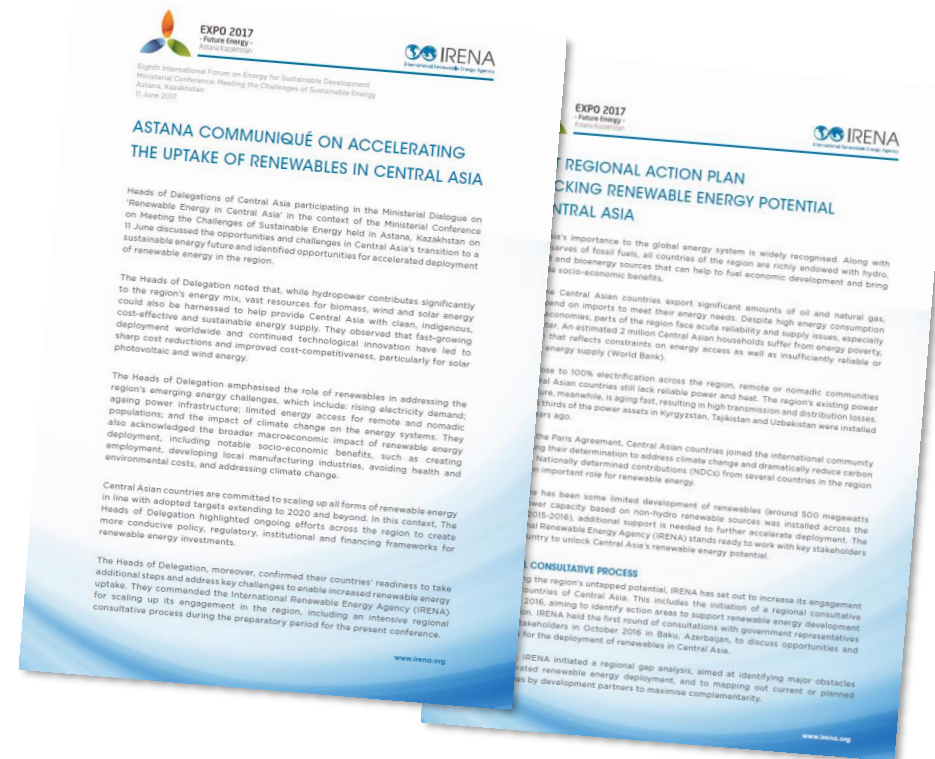
IRENA's Regional Engagement



Astana Communiqué on Accelerating the Uptake of Renewables in Central Asia - 11 June 2017

Action Areas

- Renewable Energy Statistics and Data Collection
- Policies and Regulation for Renewable Energy Deployment
- Resource assessment
- Integration on VREs into Power Grids
- Project Development Support
- Awareness Raising



Enhancing capacities to improve the collection of reliable data on renewables

Main insights:

- There is a need to better define the data requirements
- Data collection can be enhanced through improvements in the legal and institutional framework to clarify methodologies and processes
- Mechanisms for data dissemination could be adjusted to ensure that the collected data is publicly available through online resources

Central Asia Renewable Energy Statistics Training 25-27 September 2018, Abu Dhabi



Enabling Policy and Regulatory Frameworks for Renewables

Improving the understanding of design and implementation of renewable energy targets, policies and support schemes

Main insights:

- Need for adopting comprehensive RE policy with a long-term implementation roadmap
- Access to private finance remains limited, therefore fiscal incentives, along with support mechanisms are critical for RE uptake.
- Issues relating to technical aspects of grid access could be specified in legal documents, such as grid code
- There is an important need to account for the socio-economic benefits in policy-making process

Regional Workshop on Policy Support Mechanisms

17 October 2018, Baku



Long-Term Energy Planning

Improving understanding of technical and regulatory aspects and facilitate the integration of variable renewable energy into power systems

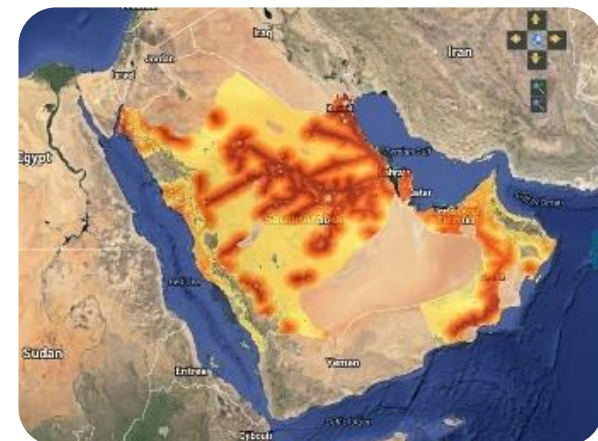
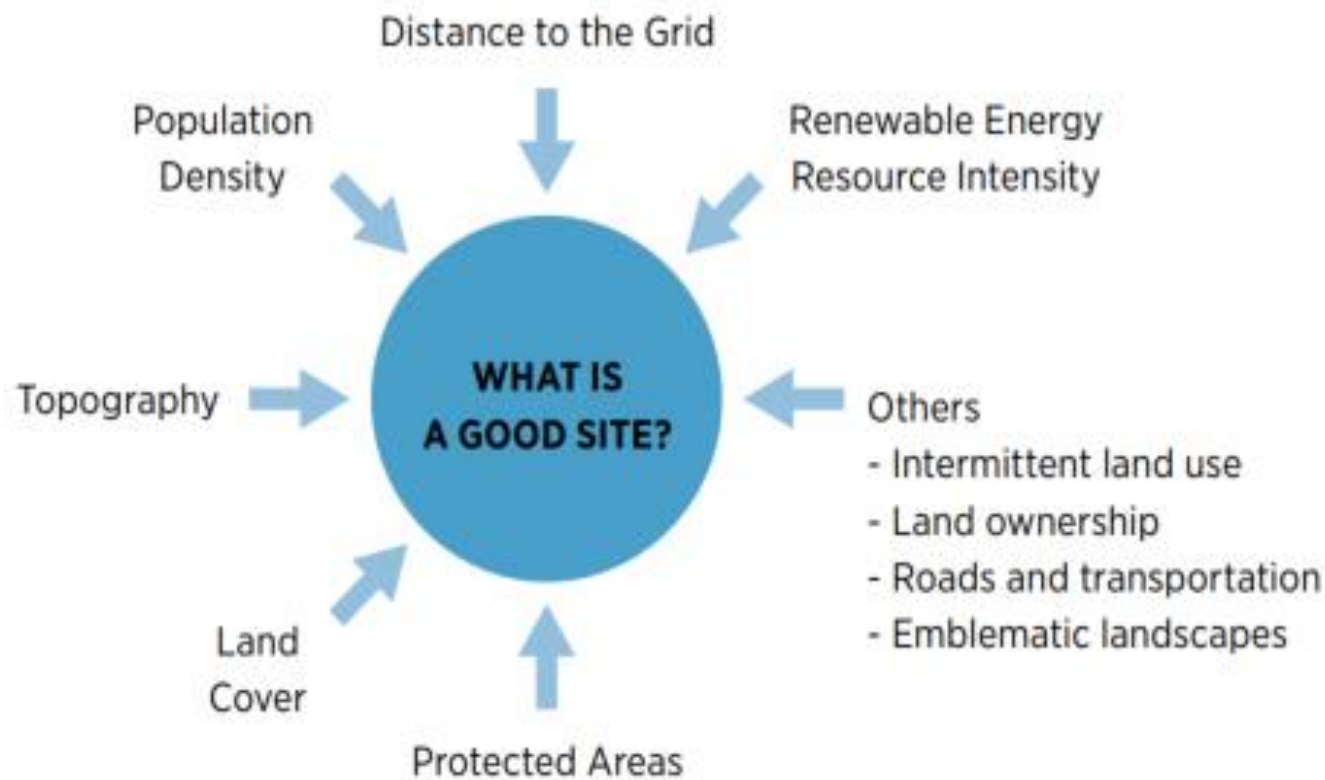
Main insights:

- Very limited application of comprehensive long-term planning tools and methodologies
 - Mostly with utilities
- Planning process could benefit from the inclusion of a wider set of stakeholders
- There is a strong potential for improved regional collaboration on long-term planning, especially involving transmission system operators

Central Asia Workshop on Long-Term Capacity Expansion Planning with a High Share of Renewables 14-15 March 2019, Astana

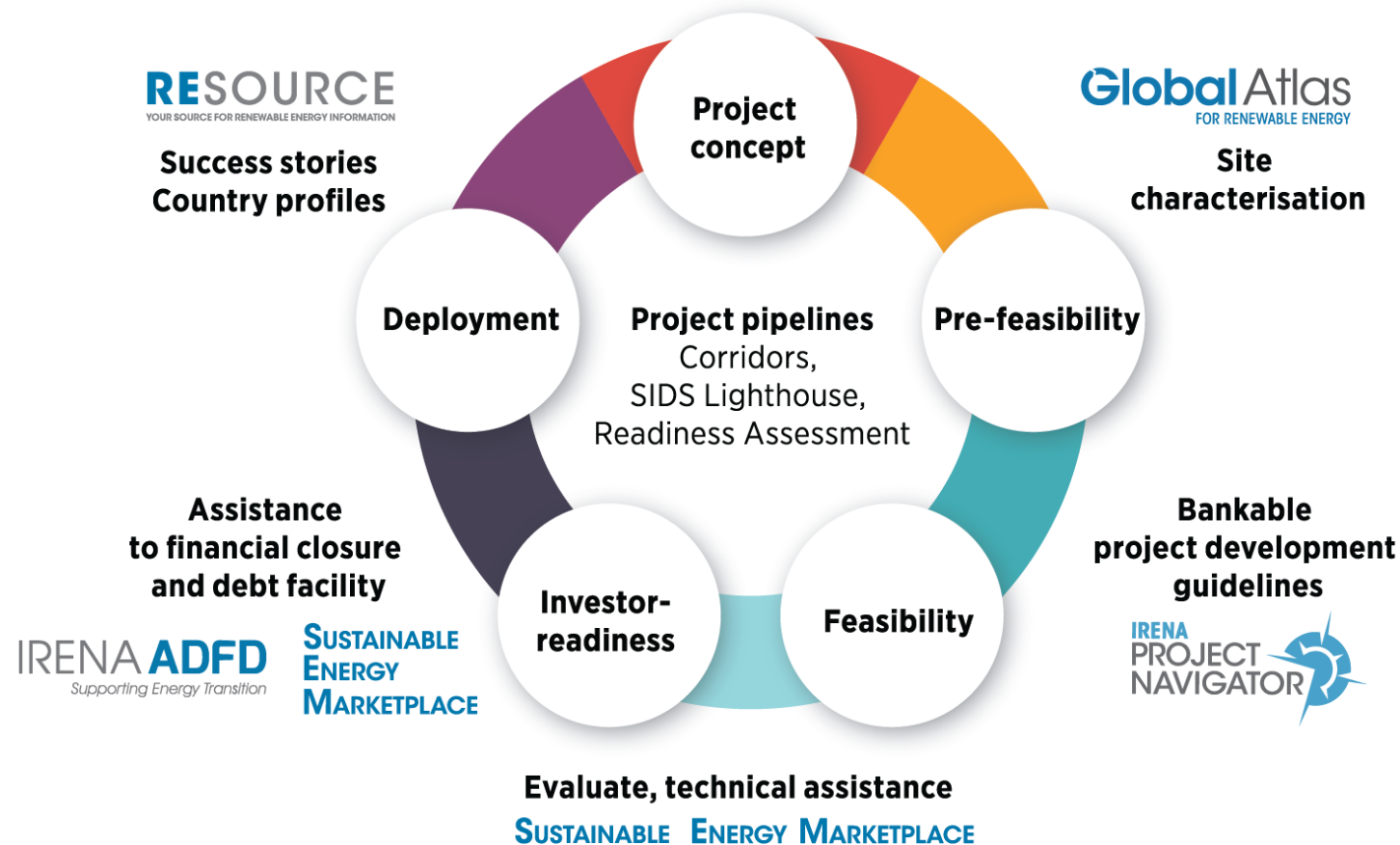


Suitability maps for wind and solar PV potential in Central Asia (*under preparation*)



Renewable Energy Project Facilitation

- Capacity building on financing and risk mitigation for RE projects
- Promoting the use of tools to support development of bankable projects



Socio-Economic Benefits of Renewable Energy

Improving the understanding of benefits and economic impacts of renewable energy deployment



+ 1.0 %

+ 52 USD trillion



Welfare

+ 15 %

- Country initiated and country-led, with IRENA facilitating
- Multi-stakeholder consultative process
- Recommended actions for short and medium-term to address challenges

Recommended Actions focus on:

- Improving the policy, legal and regulatory framework for renewables
- Strengthening the policy support mechanisms
- Grid regulation for renewable energy integration
- Renewable energy financing
- Technical knowledge and capacity

Expert Consultations and Validation Workshop June and October 2018 in Baku





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