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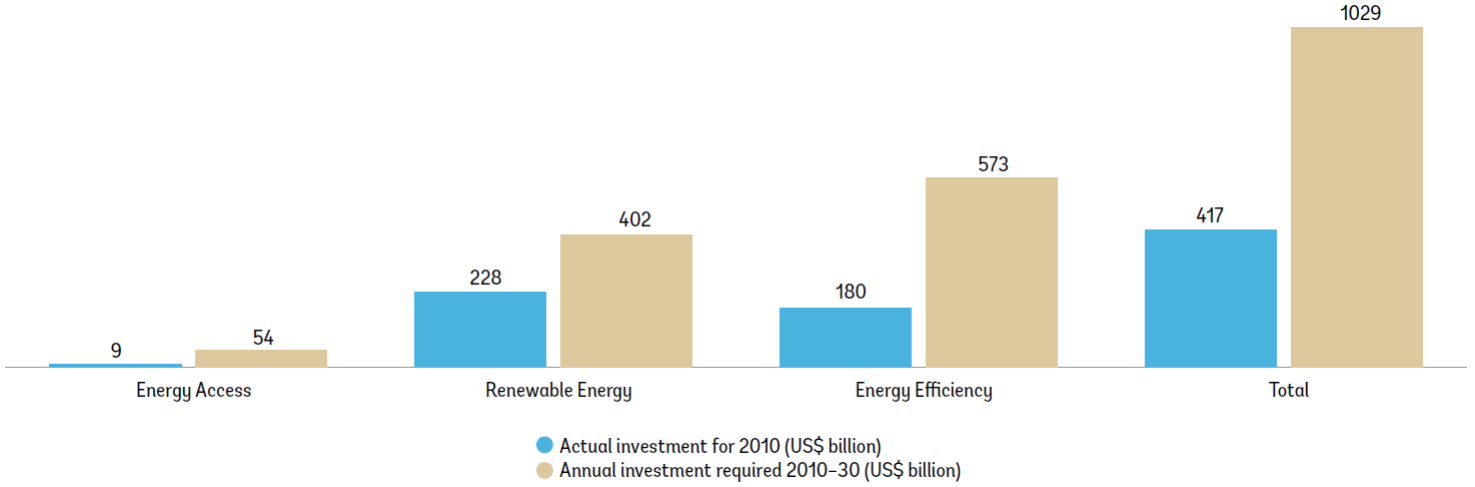
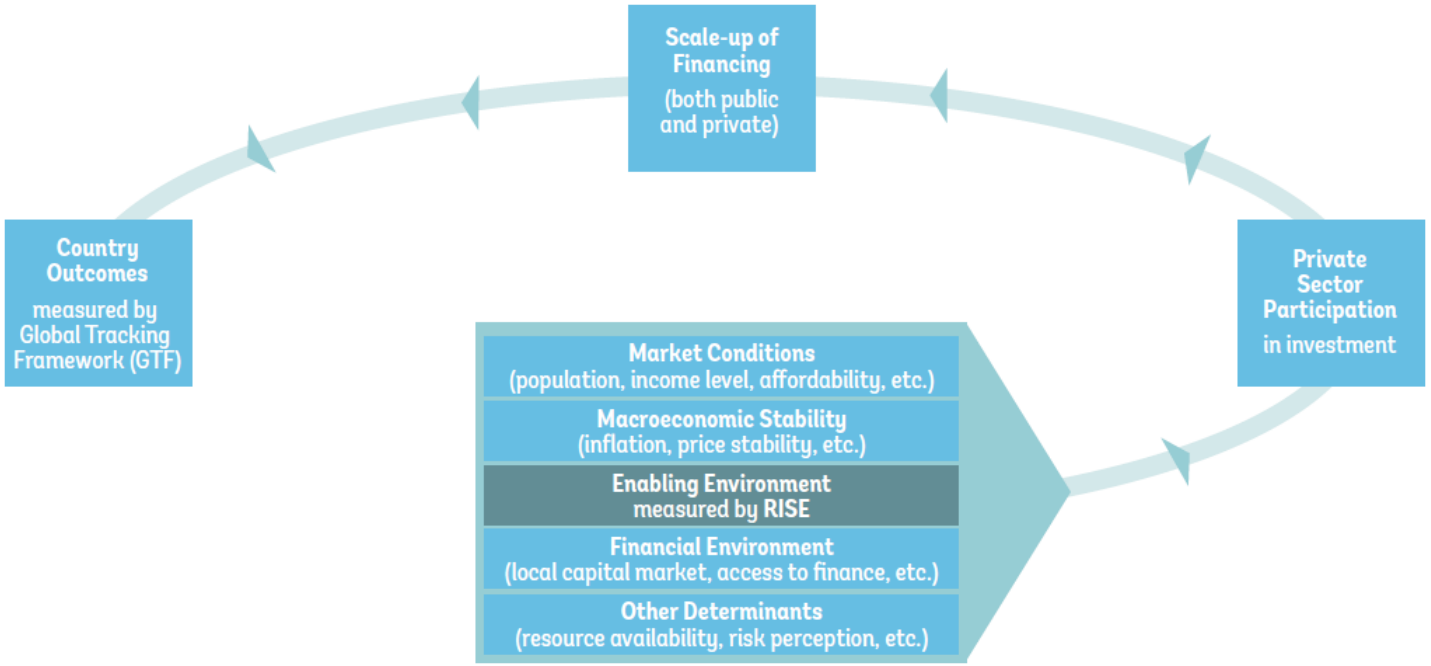
Readiness for Investment in Sustainable Energy (RISE)

November 18, 2014

RISE assesses enabling environment for sustainable energy





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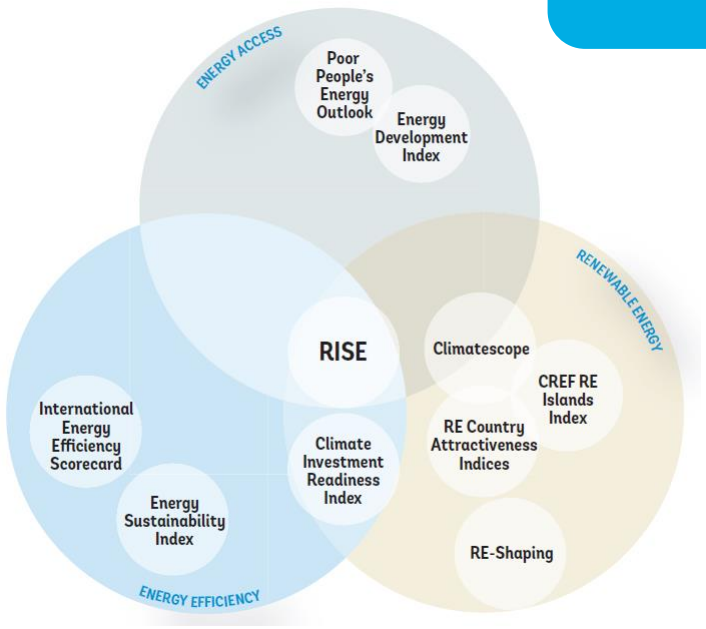
RISE is a unique initiative

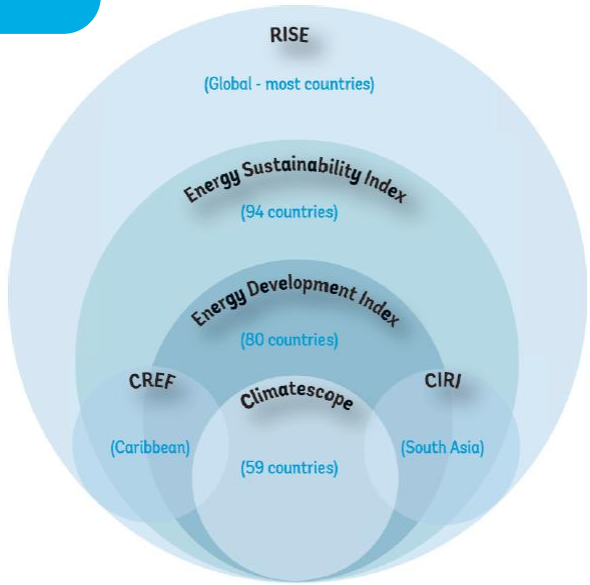
Aimed directly at policymakers

Encompass all 3 pillars of SE4ALL

Plan to cover 100+ countries

Collect and produce primary data





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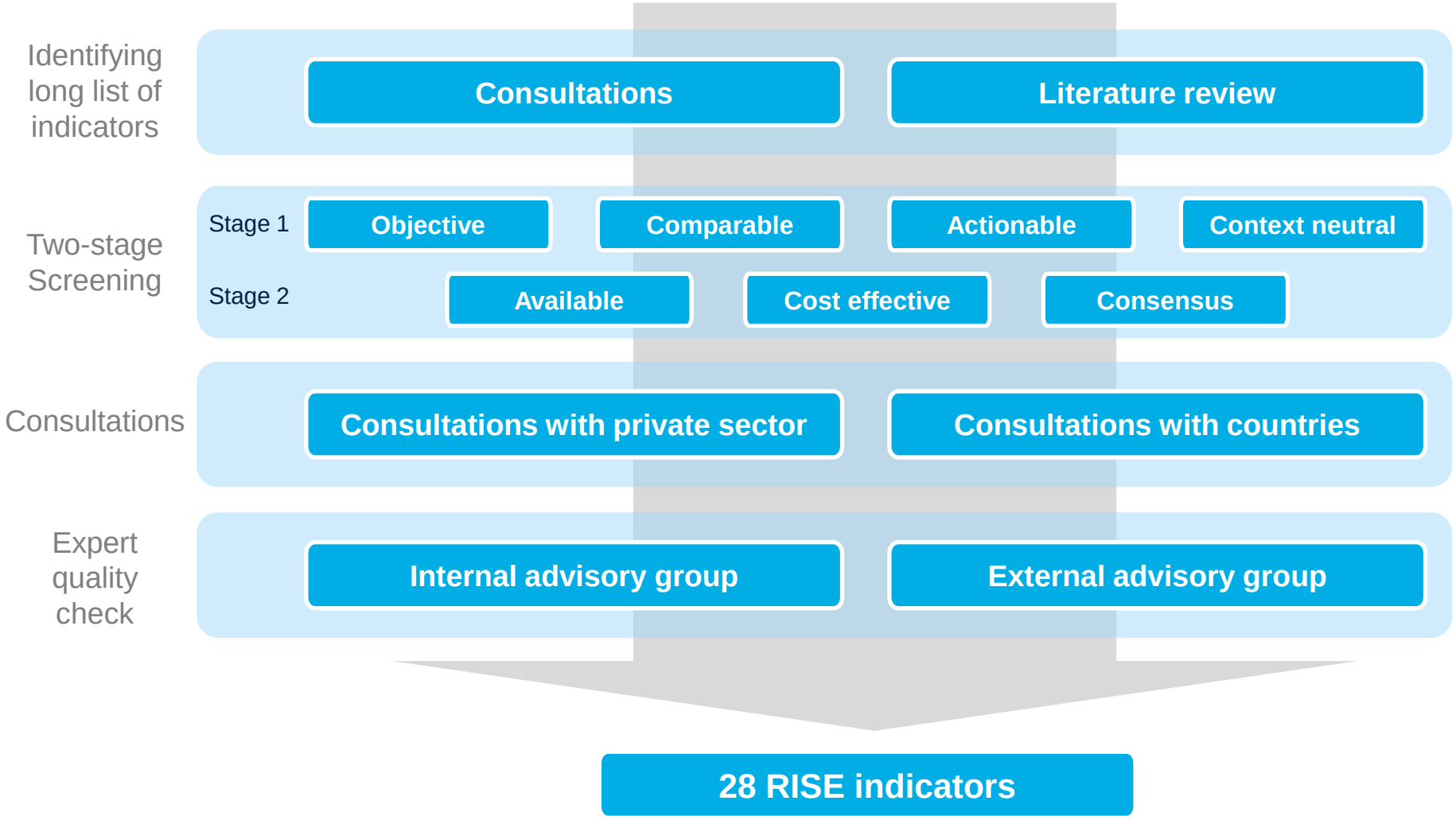
RISE was developed through exhaustive quality assurance steps



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RISE comprises 28 indicators and 85 sub-indicators

Includes 4 cross-cutting indicators that are relevant to all three pillars of SE4ALL

- **Fossil fuel subsidy**
- **Carbon pricing mechanism**
- **Utility performance**
- **Retail price of electricity**

Indicators are grouped into four different framework categories

- **Planning**
- **Policies and Regulations**
- **Pricing and Subsidies**
- **Procedural Efficiency**

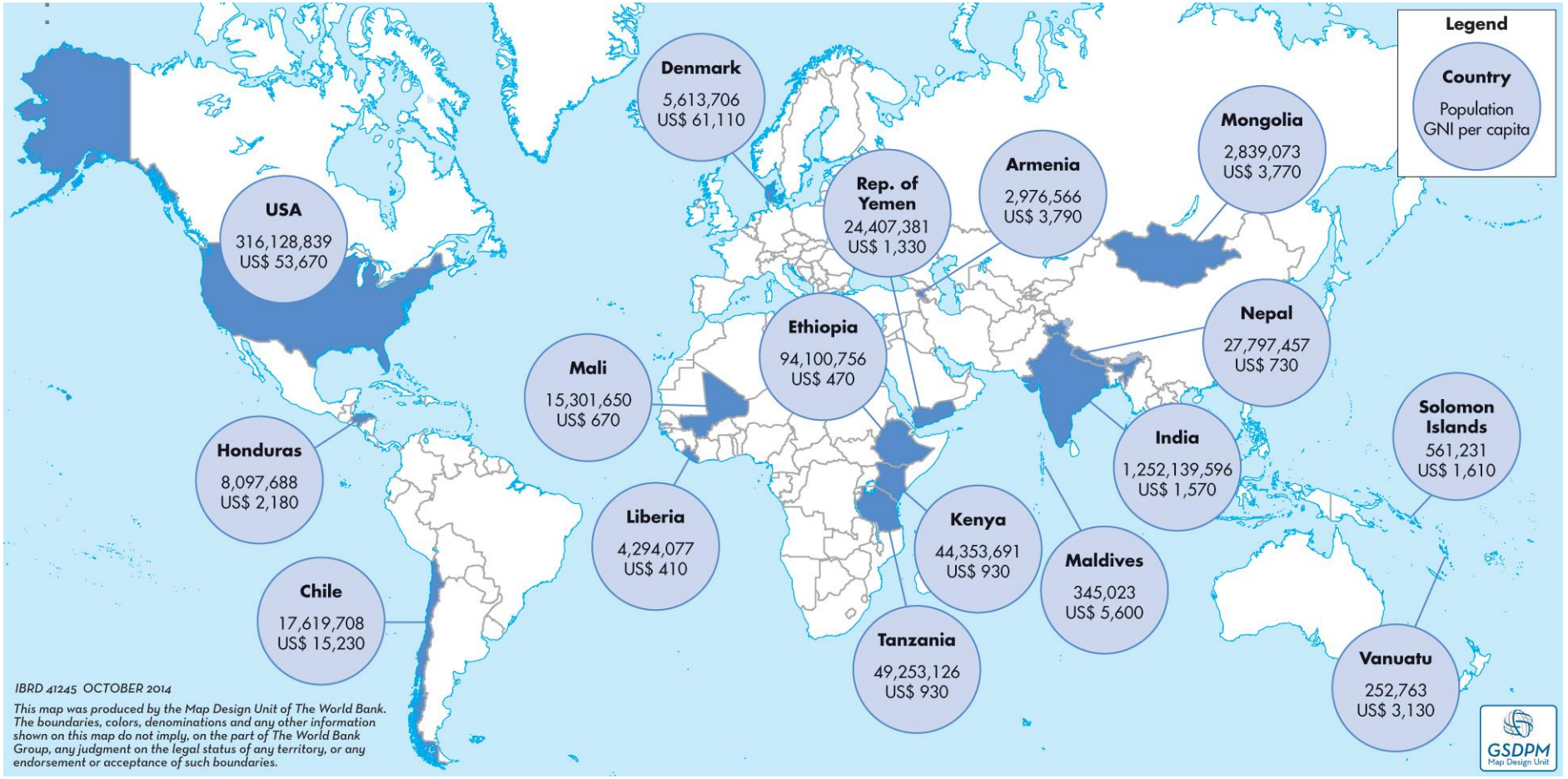
Scoring methodology

- Each indicator is scored between 0 and 100 and equally weighted
- Distance to frontier (DTF) method is applied for procedural efficiency category
- A “traffic light” indicates scores

	for countries with a score ≥ 75, considered close to good practice
	shows countries that are in between green and red
	for countries with a scores ≤ 25, presenting that they have a lot to improve to achieve good practice

RISE was piloted in 17 countries

SREP and USAID provided seed funding for the development and pilot of RISE



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Global rollout is planned for 2015

Cover 100+ countries, including 14 new SREP countries

ESMAP and IRENA confirmed funding

RISE will remain a valuable tool for SREP

Pilot lessons will be incorporated

Findings	Data availability is one of the biggest challenges. Statistical capacity building will remain an important agenda going forward. Local experts are essential to collect right information. RISE will continue to utilize local capacity.

It will attempt to establish the causality between RISE and private investment

Key Findings from the Pilot

RISE indicators in energy access

Planning

- **Electrification Plan**
  - National Plan
  - Coverage of Grid and Off-grid
  - Regular Update

Policies and Regulations

- **Enabling Environment for RE Developers to Invest in Mini-grids**
  - Existence of Regulations
  - Regulation Attributes
  - Standards
  - Protection against Expropriation
  - Subsidies or Duty Exemption
- **Enabling Environment for Standalone Home Systems**
  - National Program
  - Standards
  - Subsidies or Duty Exemption

Pricing and Subsidies

- **Funding Support to Electrification**
  - Dedicated Funding
  - Subsidy to Household Connection
  - Subsidy to Grid Extension
- **Affordability of Electricity**
- **Utility Performance**
  - Reporting Practice
  - Financial Performance

Procedural Efficiency

- **Establishing a New Connection**
- **Permitting a Mini-grid**

- Energy access indicators
- Cross-cutting indicators

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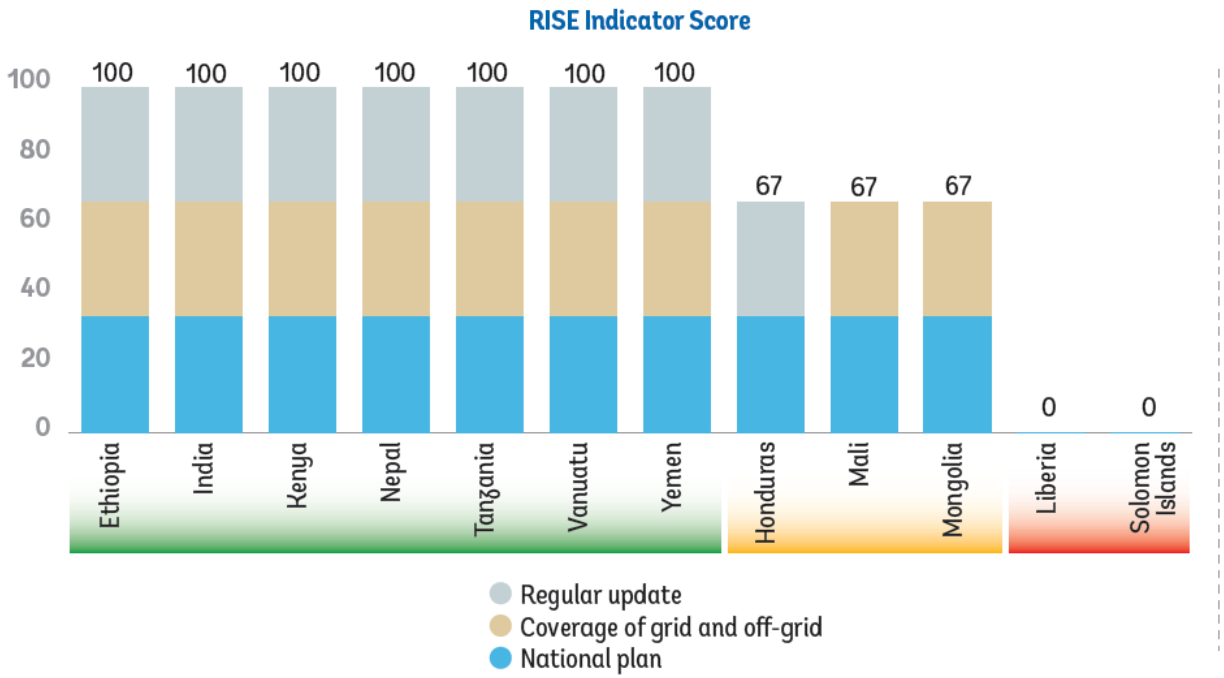
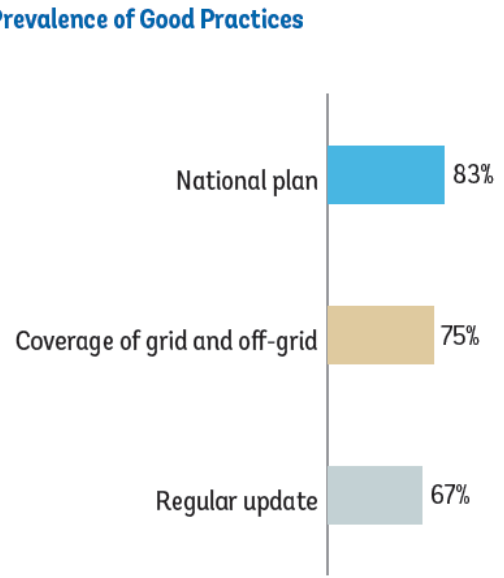
Most countries have developed electrification plans to some extent

Only Liberia and Vanuatu do not have a national electrification plan, but even these two countries have a plan in draft which is yet to be endorsed





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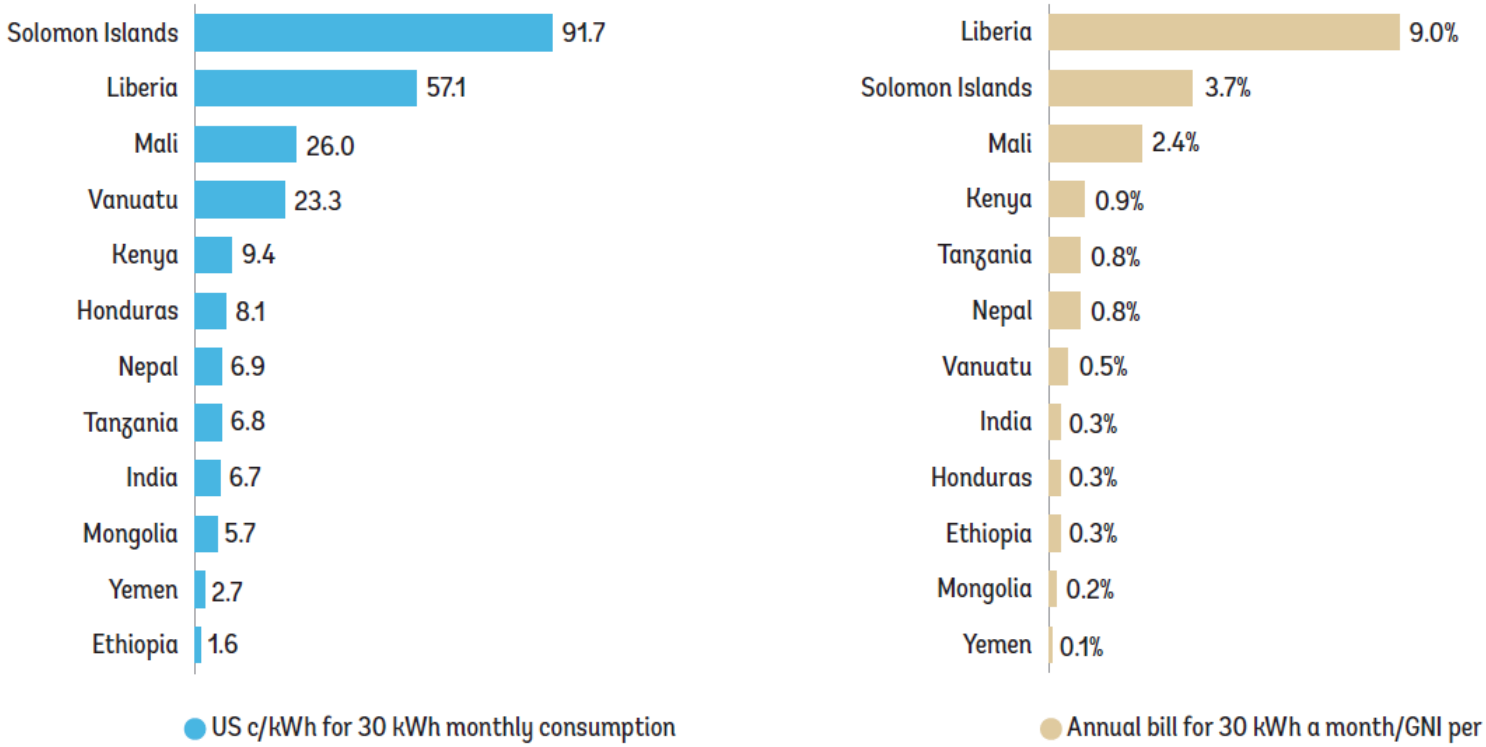
Subsistence level of electricity is affordable for most of the countries

Cost for subsistence electricity consumption is less than 5% of GNI per household in all countries except Liberia



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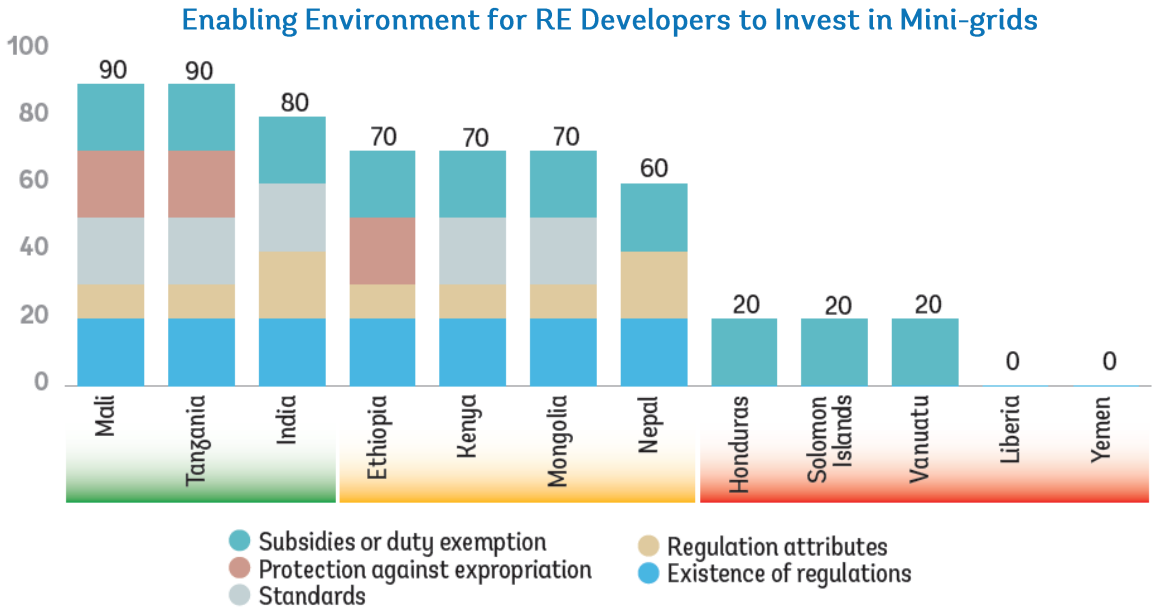
Enabling environment for mini-grid needs to be improved the most

Only seven countries have regulations on mini-grids with varying attributes

Among them, only four countries have mini-grids operated by private sector



Permitting a Mini-grid

Country	Time (days)	Cost ($)	Number of agencies
India	90	48	1
Mali	181	-	2
Nepal	215	37	6
Tanzania	510	6,620	3

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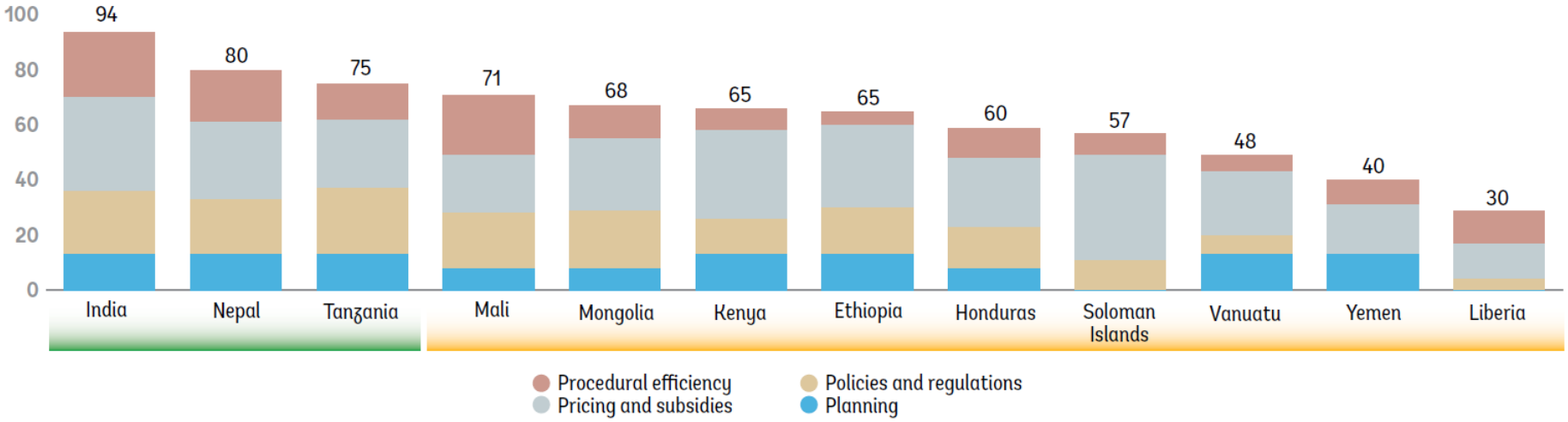
Time/cost of getting a household electricity connection varies widely

Time ranges from 8 days in India and Solomon Islands to a year in Ethiopia

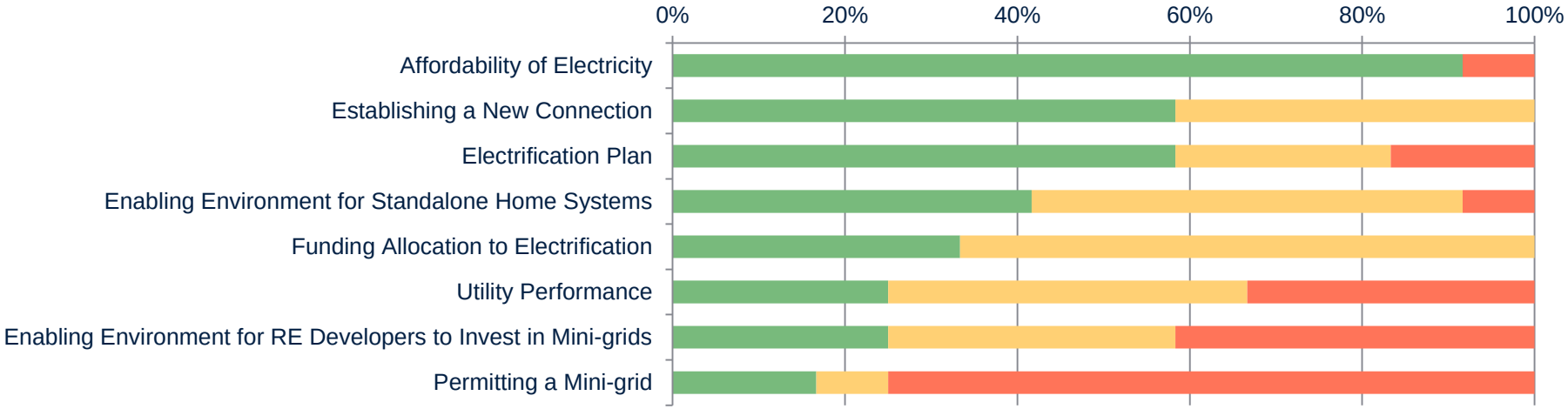
Cost ranges from US$ 10 in Mongolia to US$ 675 in Vanuatu

Countries	Time (days)	Cost ($)
Ethiopia	365	126
Honduras	17	156
India	8	74
Kenya	83	369
Liberia	14	20
Mali	18	86
Mongolia	21	10
Nepal	21	26
Solomon Islands	8	470
Tanzania	69	73
Vanuatu	28	675
Yemen	30	303

India, Nepal and Tanzania perform well in energy access



Proportion of countries by traffic lights



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RISE indicators in renewable energy

Planning

- **Planning for Renewable Energy Expansion**
  - RE in Expansion Planning
  - RE in Transmission Planning
  - Target with an Action Plan
  - High Quality Resource Mapping

Policies and Regulations

- **Legal Framework for Renewable Energy**
- **Regulatory Policies and Procurement**
  - Incentives to Grid-connected RE
  - Incentives to Distributed RE
- **Regulatory Policies - Policy Design Attributes**
  - Predictability
  - Sustainability
  - Accessibility
  - Remuneration Efficiency
- **Network Connection and Pricing**
  - Connection Cost Allocation
  - Network Usage Pricing
- **Public Financial Support Mechanisms**
  - Credit Enhancement
  - Utility Payments Guarantee
  - Fiscal Incentives
  - Public Financing Supports

Pricing and Subsidies

- **Fossil Fuel Subsidy**
- **Carbon Pricing Mechanism**
  - GHG Emission Reduction Target
  - Carbon Pricing Mechanism
- **Utility Performance**
  - Reporting Practice
  - Financial Performance

Procedural Efficiency

- **Starting a New Renewable Energy Project**

- Energy access indicators
- Cross-cutting indicators

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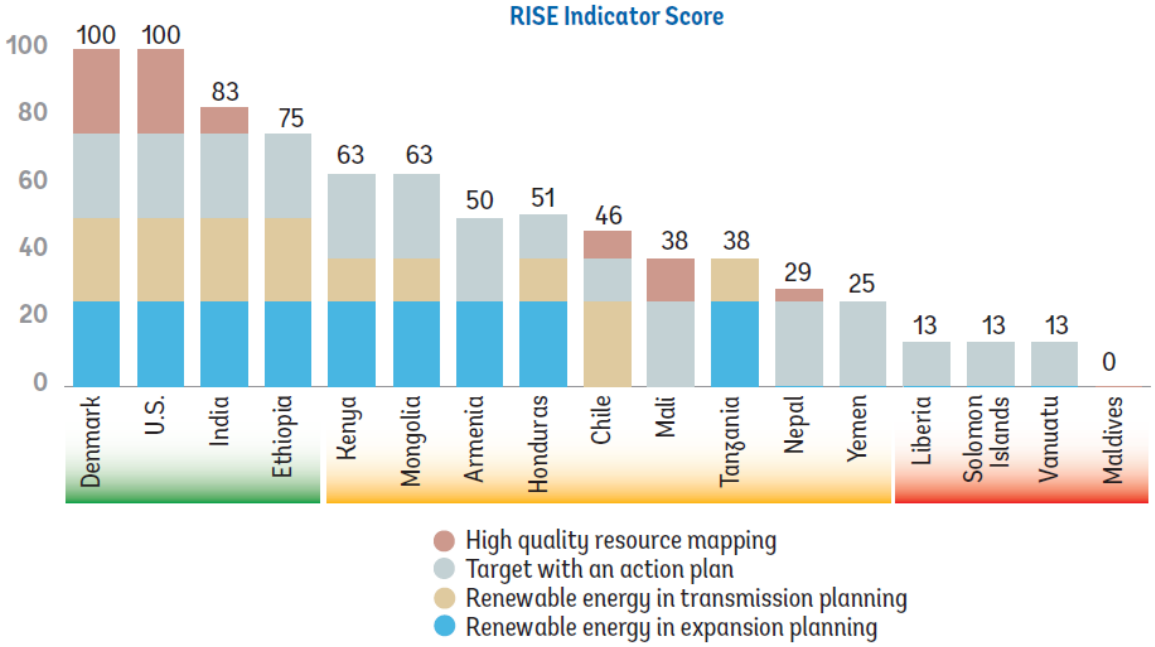
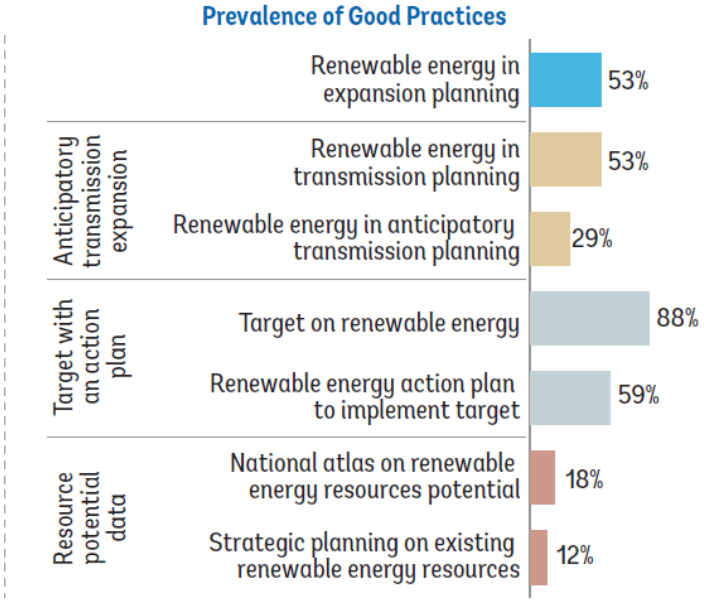
Countries with RE target often lack planning and resource mapping

Integration into expansion and transmission planning as well as high-quality resource mapping should follow to implement the target





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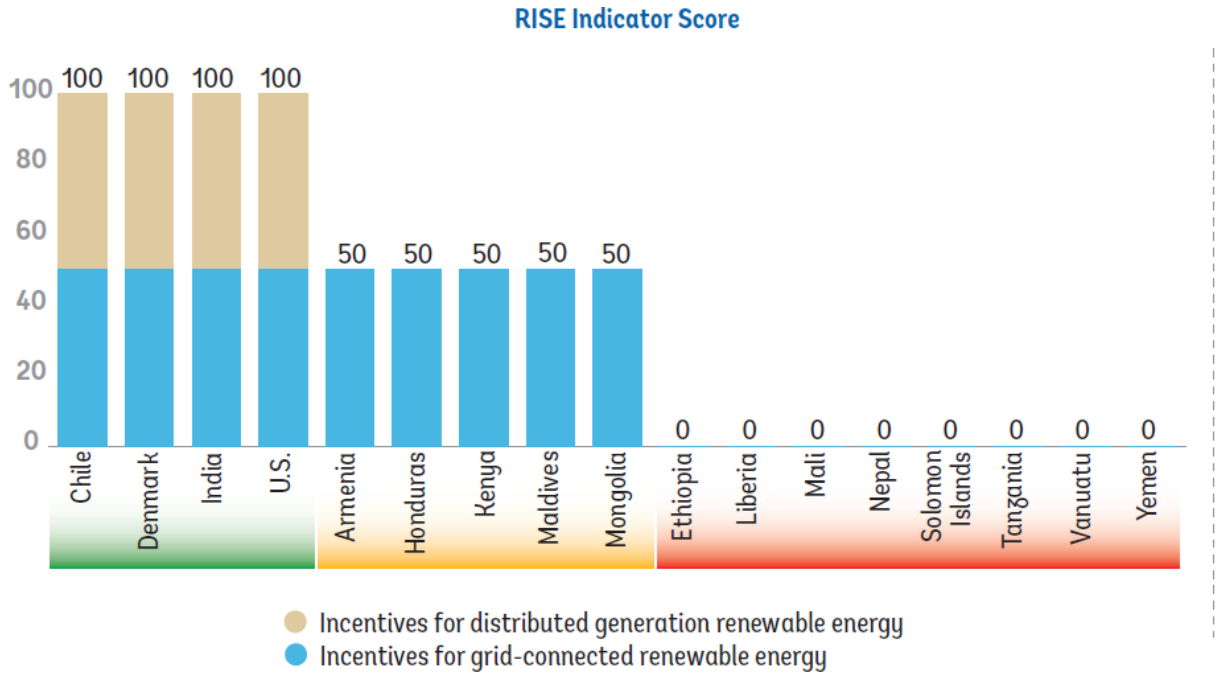
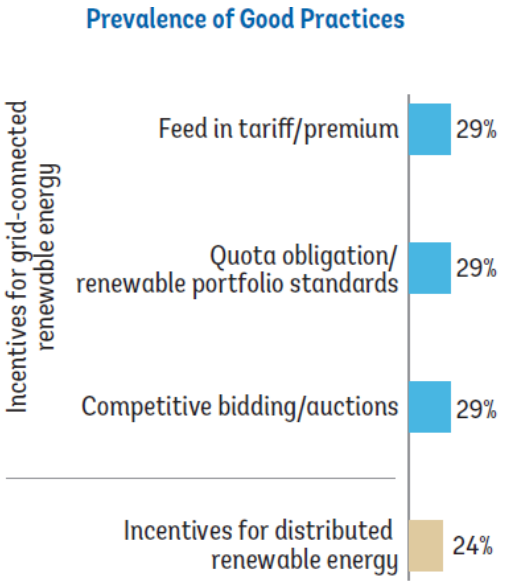
About half of the countries have a regulatory policy to support RE

Feed in tariff/premium, renewable portfolio standards and auctions are equally distributed among them





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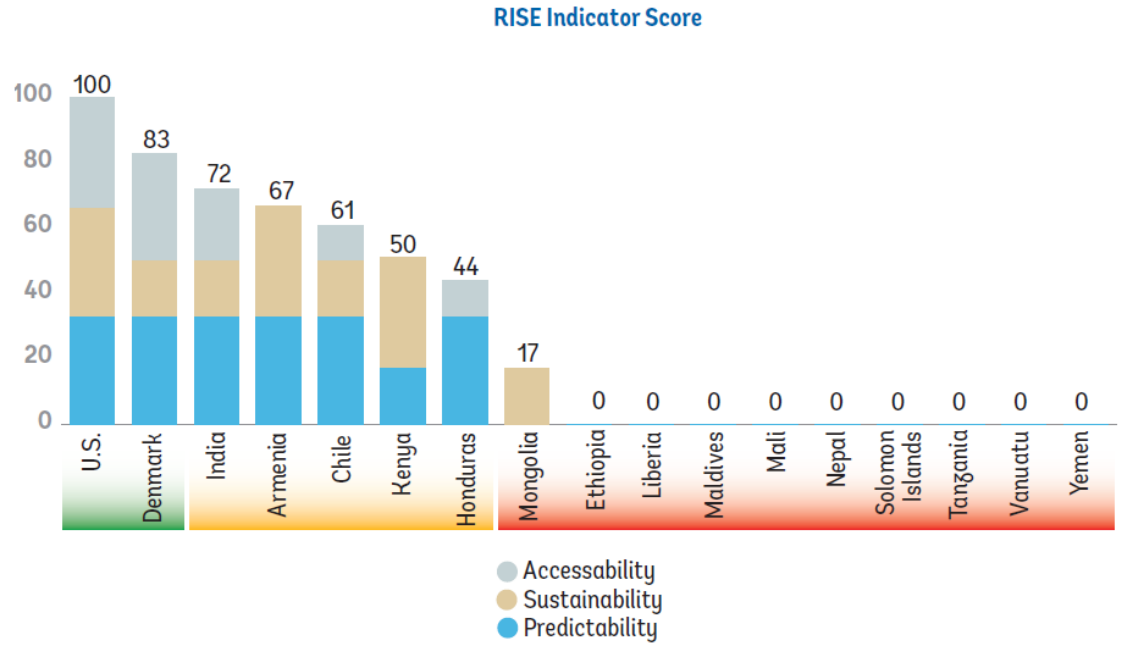
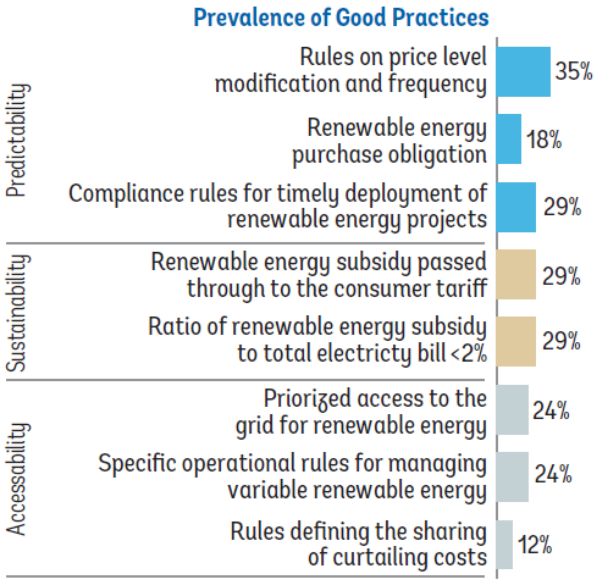
But regulatory policies differ in design attributes

Developing countries have met only part of attributes that enhances the quality of regulatory policies like feed in tariff/premium, renewable portfolio standards





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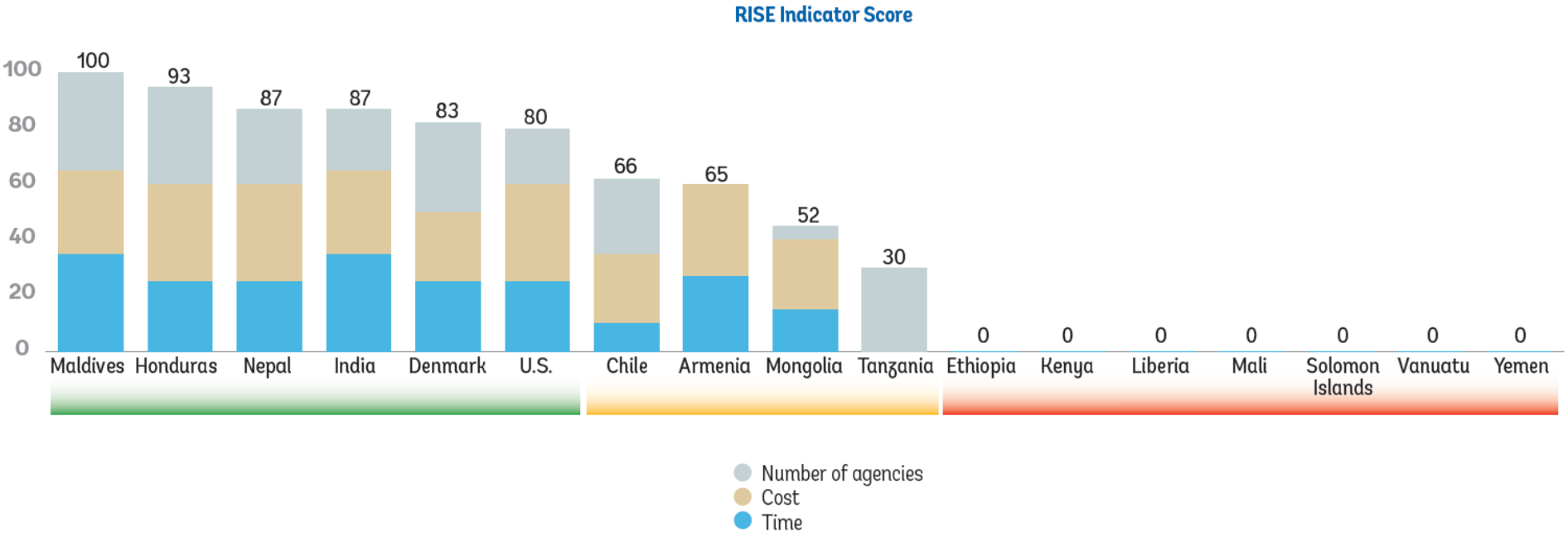
The ease of getting a RE project running varies enormously

Time to obtain required licenses/permits ranges from 96 days in Maldives to 840 days in Tanzania



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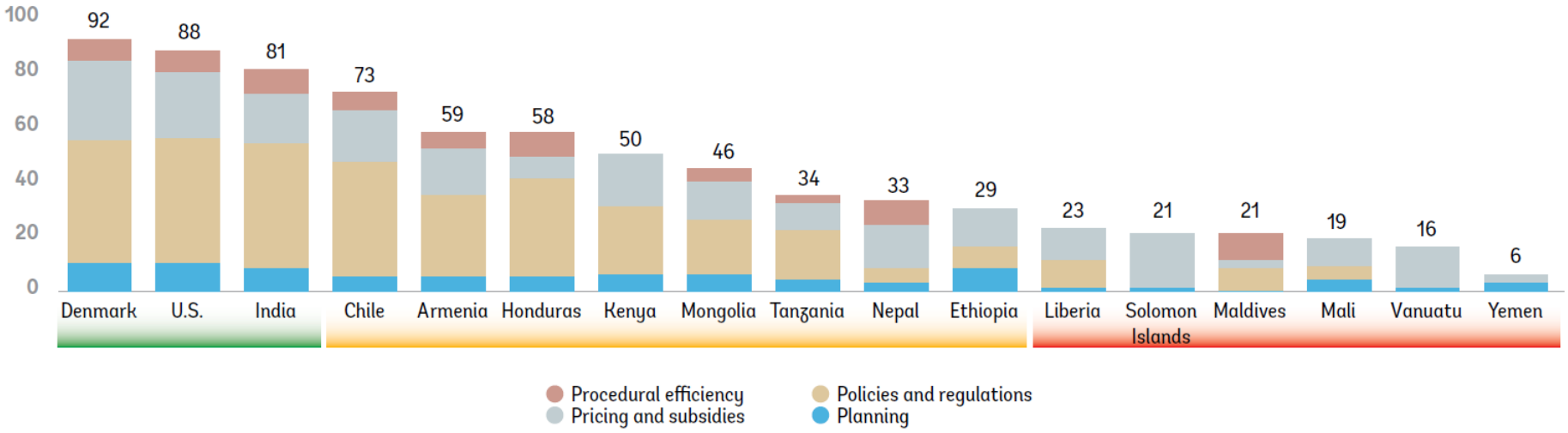
Denmark and US score high in renewable energy



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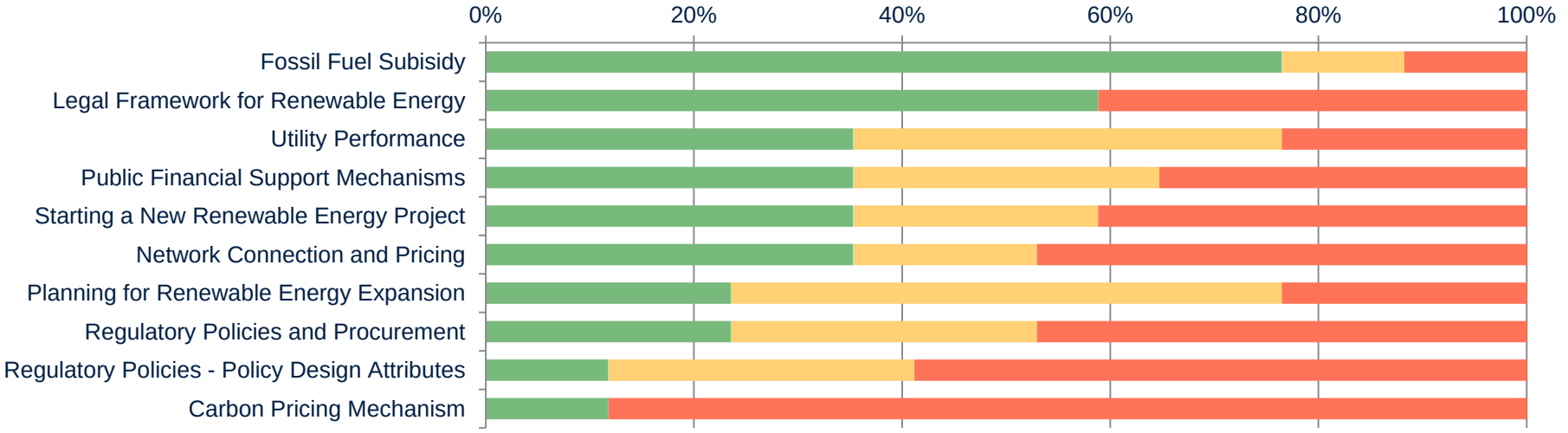

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RISE indicators in energy efficiency

Planning

- **National Plan for Increasing Energy Efficiency**
  - National EE Target
  - EE Legislation/Action Plan
  - Sub-sectoral Targets
- **Entities for EE Policy, Regulation and Implementation**
  - Setting EE policy
  - Setting EE standards
  - Regulating EE activities of suppliers
  - Regulating EE activities of consumers
  - Equipment standards compliance
  - Building standards compliance

Policies and Regulations

- **Quality of Information Provided to Consumers**
  - Reports on Electricity Usage
  - Quality of Information in Report
  - Comparison with Other Users
  - Energy Saving Information
- **Incentives or Mandates for Energy Supply Utilities**
  - Mandates for Utilities
  - Penalties for Non-compliance
  - Measurement of Savings
  - Third Party Validation
  - Cost Recovery for Utilities
- **Incentives or Mandates for Public Entities**
  - Obligations for Public Buildings
  - Obligations for Other Public Facilities
  - Public Procurement of EE Products
  - Multi-year Contracts
  - Allowance to Retain Savings
- **Incentives or Mandates for Large-scale Users**
  - Mandates for Large-scale Users
  - Penalties for Non-compliance
  - Measurement of Savings
  - Incentives for Large-scale Users
- **Minimum Energy Efficiency Performance Standards**
  - Appliances
  - Lighting
  - Electric Motors
  - Industrial Equipment
  - Regular Update
  - Penalties for Non-compliance
- **Energy Labeling System**
  - Appliances
  - Lighting
  - Electric Motors
  - Industrial Equipment
- **Building Energy Codes**
  - Residential Buildings
  - Commercial Buildings
  - Compliance System
  - Renovated Buildings
  - Building Energy Information

Pricing and Subsidies

- **Incentives from Electricity Pricing**
  - Electricity Rate Structure
  - Charges to Large Customers
- **Fossil Fuel Subsidy**
- **Carbon Pricing Mechanism**
  - GHG Emission Reduction Target
  - Carbon Pricing Mechanism
- **Retail Price of Electricity**

Energy access indicators

Cross-cutting indicators

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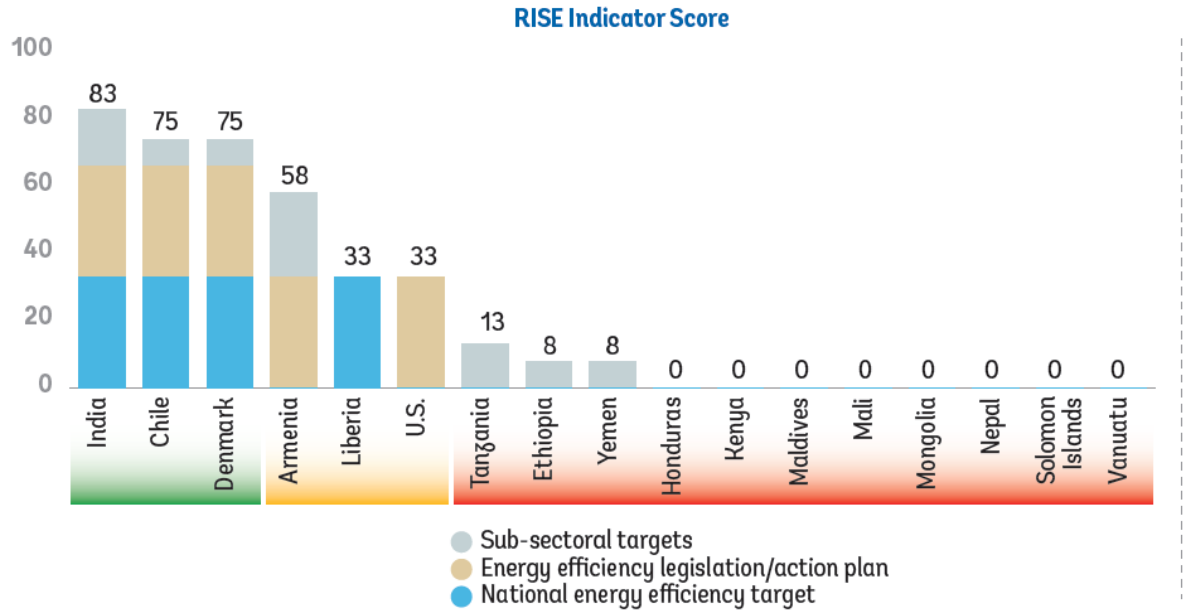
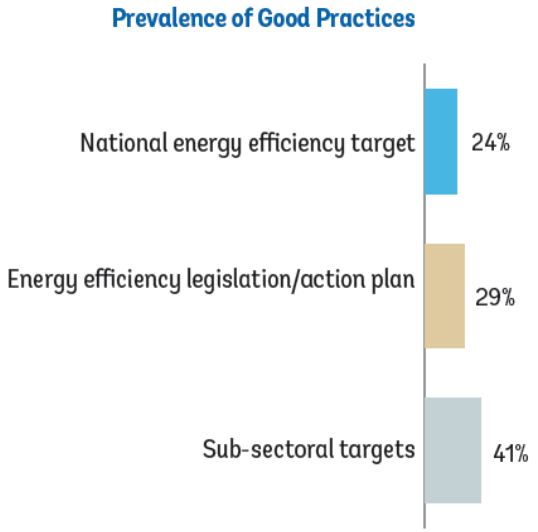
Only four countries have national energy efficiency targets

About half of the pilot countries do not have any target, legislation or action plan





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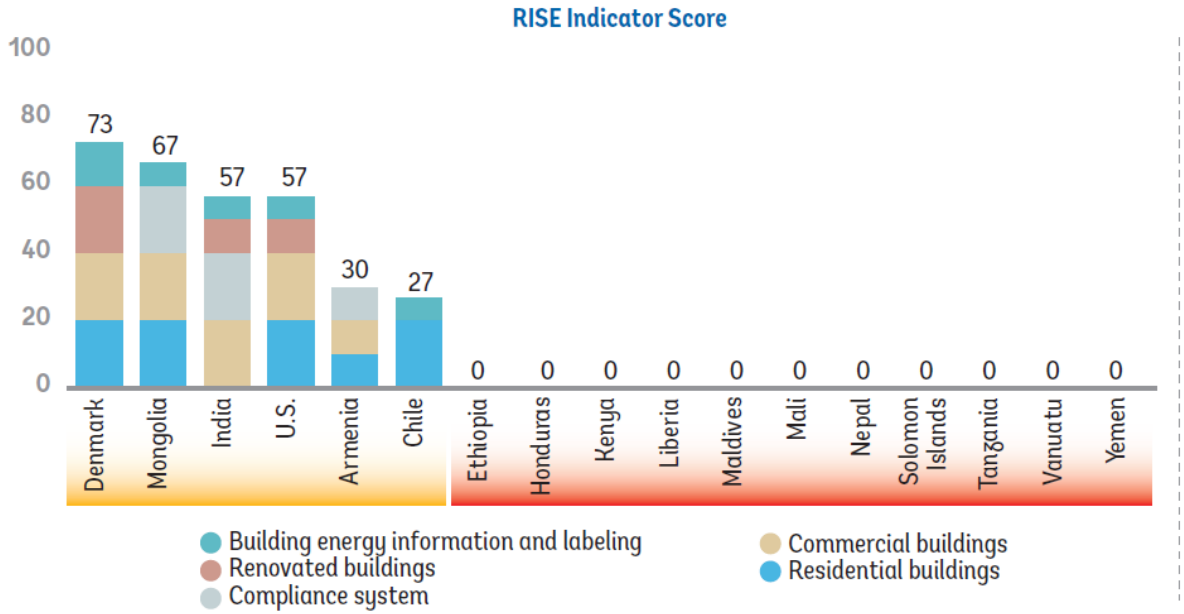
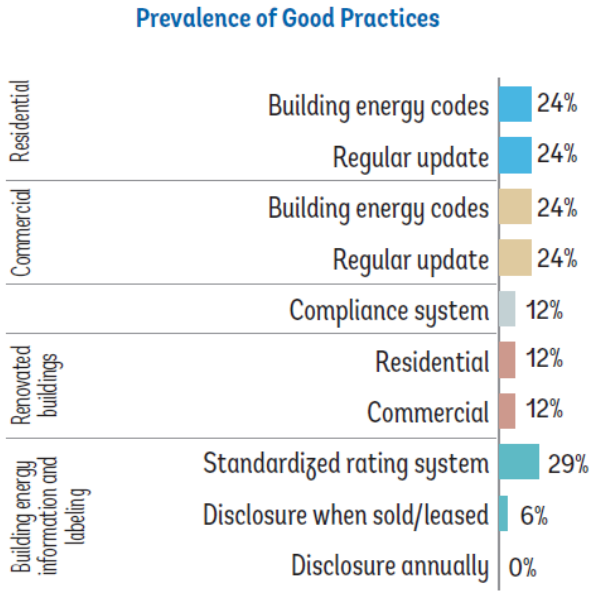
Only about a third of the countries have building energy codes

Compliance system or application to renovated buildings is not prevalent among them





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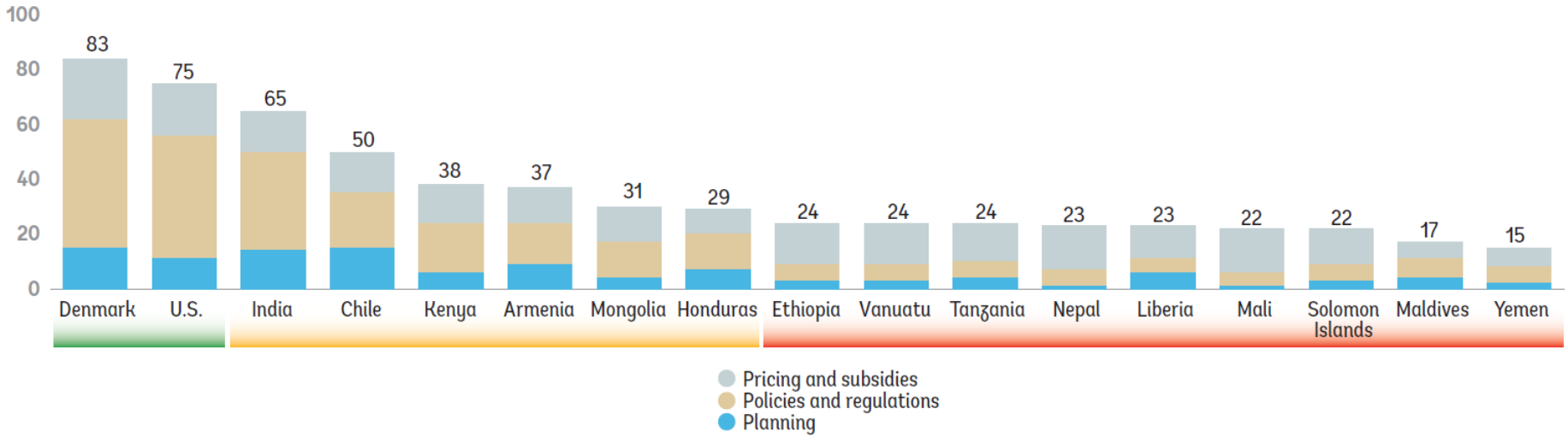
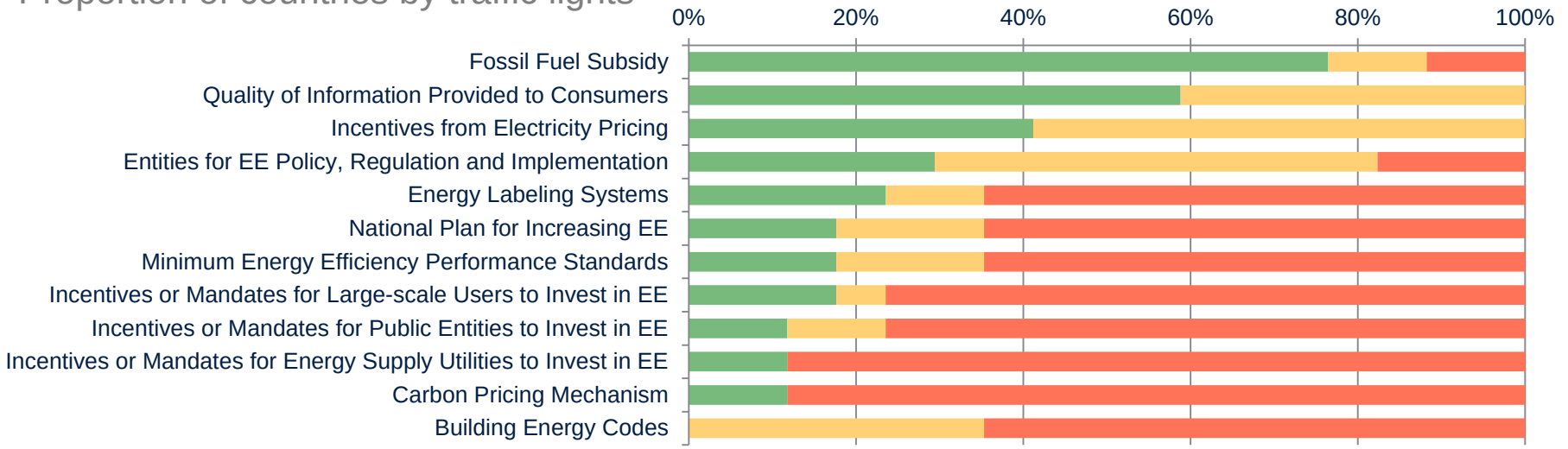
Denmark and US are farthest ahead in energy efficiency



Proportion of countries by traffic lights



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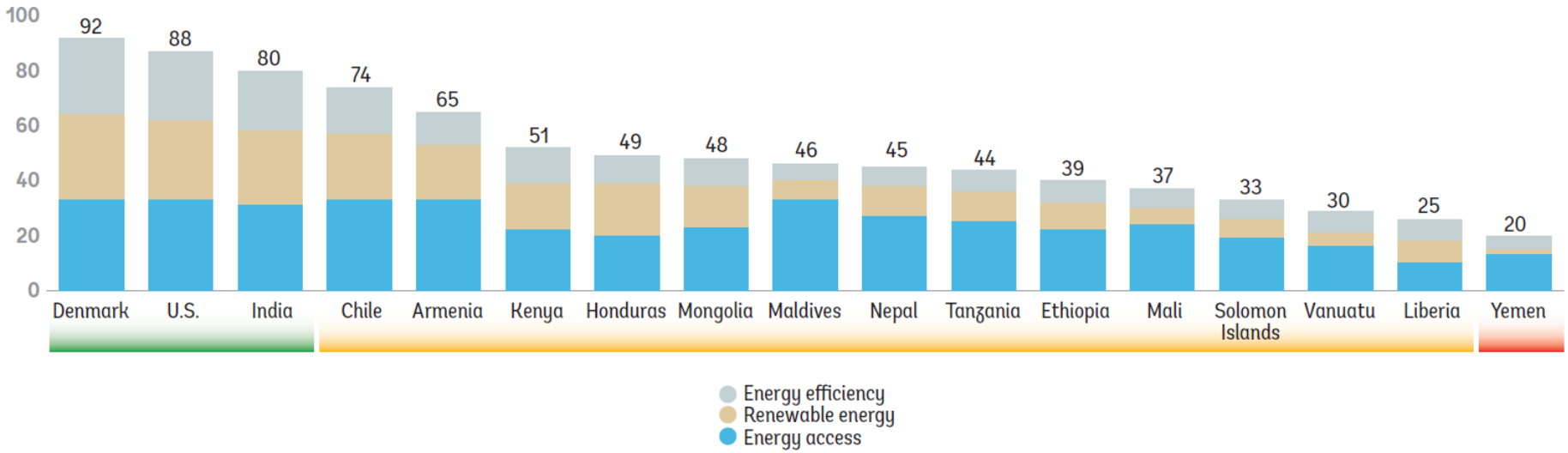
India performs the best in RISE among developing countries



* Armenia, Chile, Denmark, Maldives and the U.S. were given full points to energy access as they do not have access challenges

	Armenia	Chile	Denmark	Ethiopia	Honduras	India	Kenya	Liberia	Maldives	Mali	Mongolia	Nepal	Solomon Islands	Tanzania	U.S.	Vanuatu	Yemen
Energy Access	–	–	–						–						–		
Renewable Energy																	
Energy Efficiency																	

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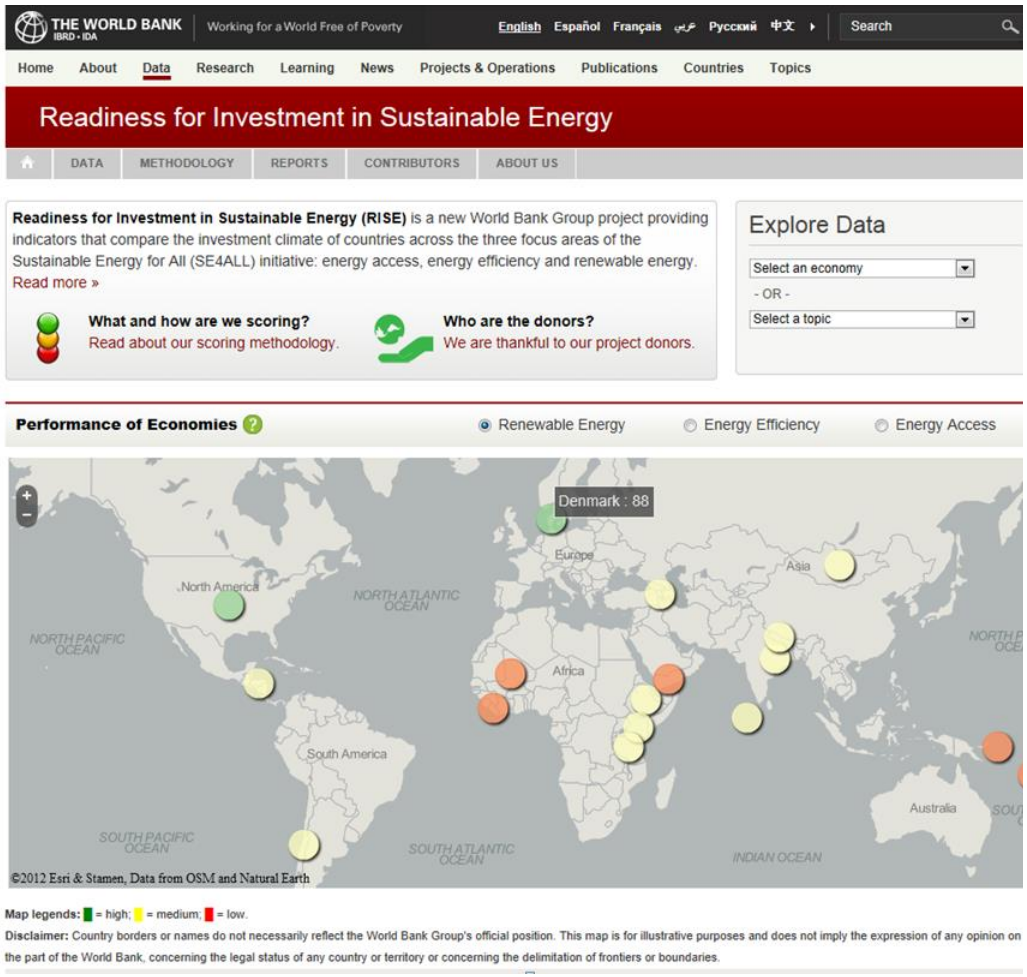

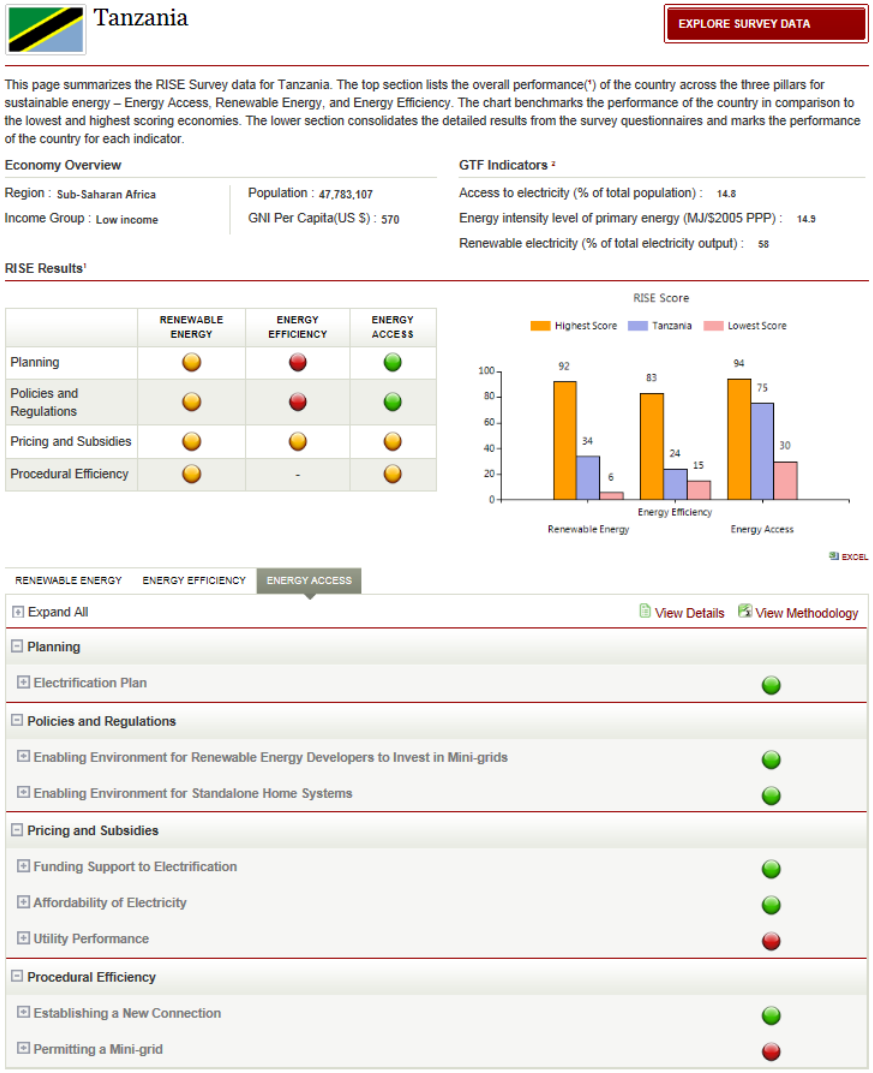

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Thank you