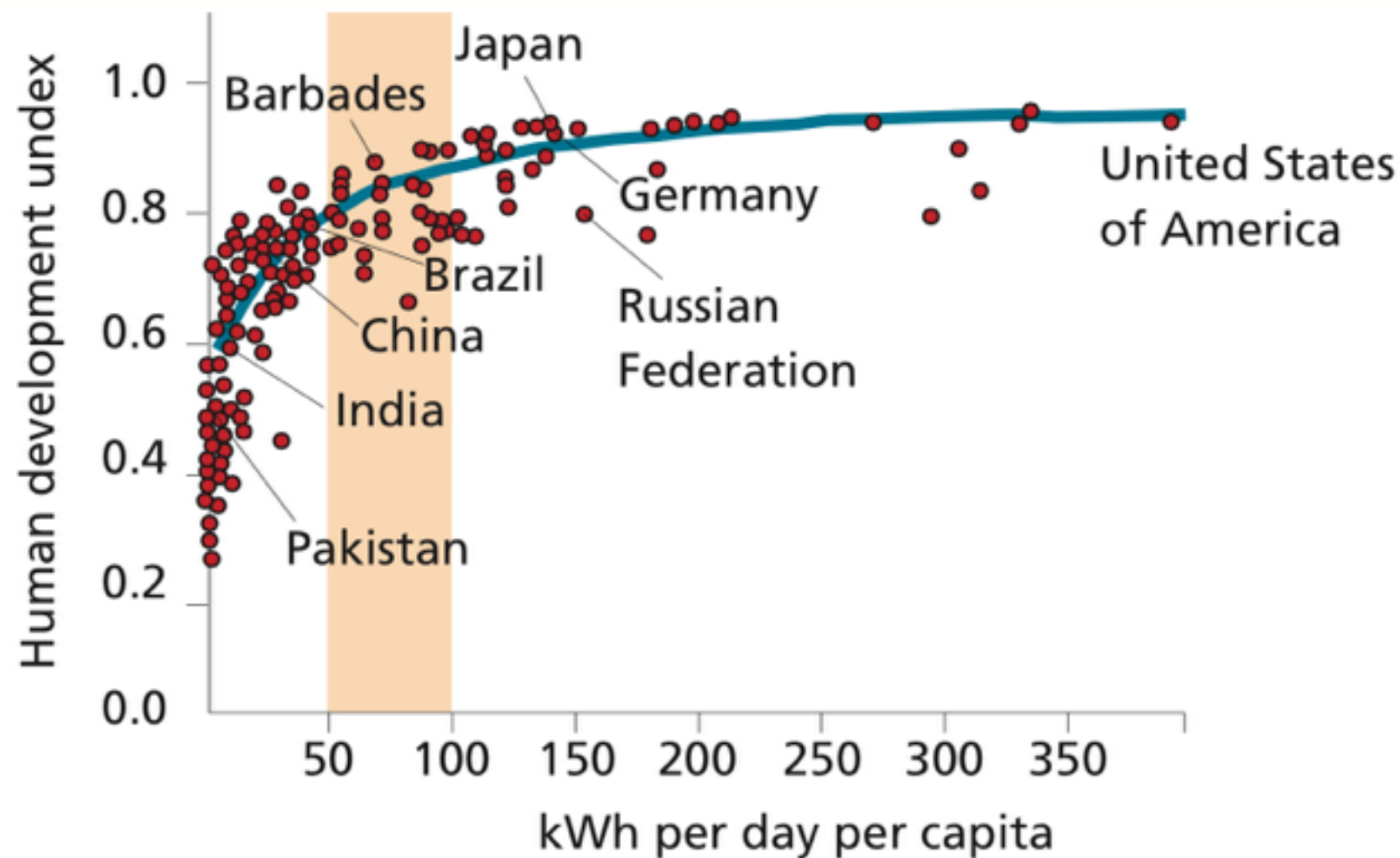


Challenges and Vision

Correlation - Human Development Index and primary energy use



Support mechanisms – Mix

Grid

- ◆ Feed-in tariffs and Net metering way to go
 - ◆ Quite straight-forward!
 - ◆ What are needs for sharing of experiences of detailed design and approaches?

Off-grid/minigrid islands

- ◆ Generation-based incentives likely the way to go
 - ◆ Not as clear and proven on ground projects
 - ◆ Need pilots
 - ◆ Scalability and ambition from the beginning

A bold programme

Envision and enable full energy access by all in 20 years

- ◆ How much more energy is needed? Where is convergence for responsible well-being? For Africa a 5-20 fold increase in per capita energy use. Need to further clarify energy access.
- ◆ 700 Twh/year —> 3000-4000 Twh/year (?) for African continent.
- ◆ Most of the energy infrastructure not yet built. Considerable capital costs – particularly for Renewable Energy.
- ◆ Feed-in tariffs to drive these investments: likely USD 80 billion per year at peak, over 40 years (average +USD 40 billion per year).
- ◆ Revenues from the overall increase of energy likely to provide enough funds for directed extra funding for off-grid support (Uganda example of 5% internal taxation to fund off-grid programme). How can such off-grid support be secured?
- ◆ How ensure that the on-grid support favours distributed energy and diverse ownership with strong focus on communities?

A bold programme

Conditions/incentives for off-grid and access

- ♦ Make added grid connections conditional to access to on-grid feeding tariff support?
- ♦ Incentivise through bonuses and additional payments/support for additional off-grid access (that is removed if/when grid-connection) – on top of feed-in tariffs/payment guarantees for generation.
- ♦ Ensuring access and no regulatory or technical barriers for feeding into the grid (including minigrids/off-grids). Must be a condition. Develop clear norms.

Upfront financing

- ♦ Key challenge for RE expansion –
- ♦ Soft loans for middle size and off-grid/minigrids = key. Grants for capacity and additional requirements.
- ♦ Must be integral to the support programme.

Capacity = key!

Support

- ♦ Must be integral to a support scheme.
- ♦ Separate and distinct funding stream
- ♦ 'Challenge Fund' for creative experimentation

Activities

- ♦ Exchange programmes key and must be enabled/supported
- ♦ Policy/decision-makers exchanges at scale
- ♦ Implementers to work at in each others' countries for e.g 6 months
- ♦ Technicians at ground level – massive demand!
- ♦ South-South exchanges = key
- ♦ Support for cooperatives/communities that can engage and inspire other communities

A bold programme

Transformation towards a new model

- ♦ The very nature of feed-in tariffs drives towards a breakup of current concentration of ownership and a much more distributed system with much smaller owners, including communities.
- ♦ But – is this enough? What additional policies and principles are needed at country as well as international levels to ensure community energy and distributed solutions?
- ♦ Must ensure that support for/conditions early enough include support for grid (have to be conducive to lots of distributed energy and a future with virtual power plants and embedded RE) – how set new path dependencies early?
- ♦ Cost situation very favourable now: it's not more expensive, but we must make it possible to deal with high upfront investment costs and risk. Every avoided fossil fuel plant is a significant win – must be enabled now, across the line.