

Strengthening China-Africa Cooperation under the Belt and Road Initiative in the Post-COVID-19 Era

Krish Chetty | 10 July 2020

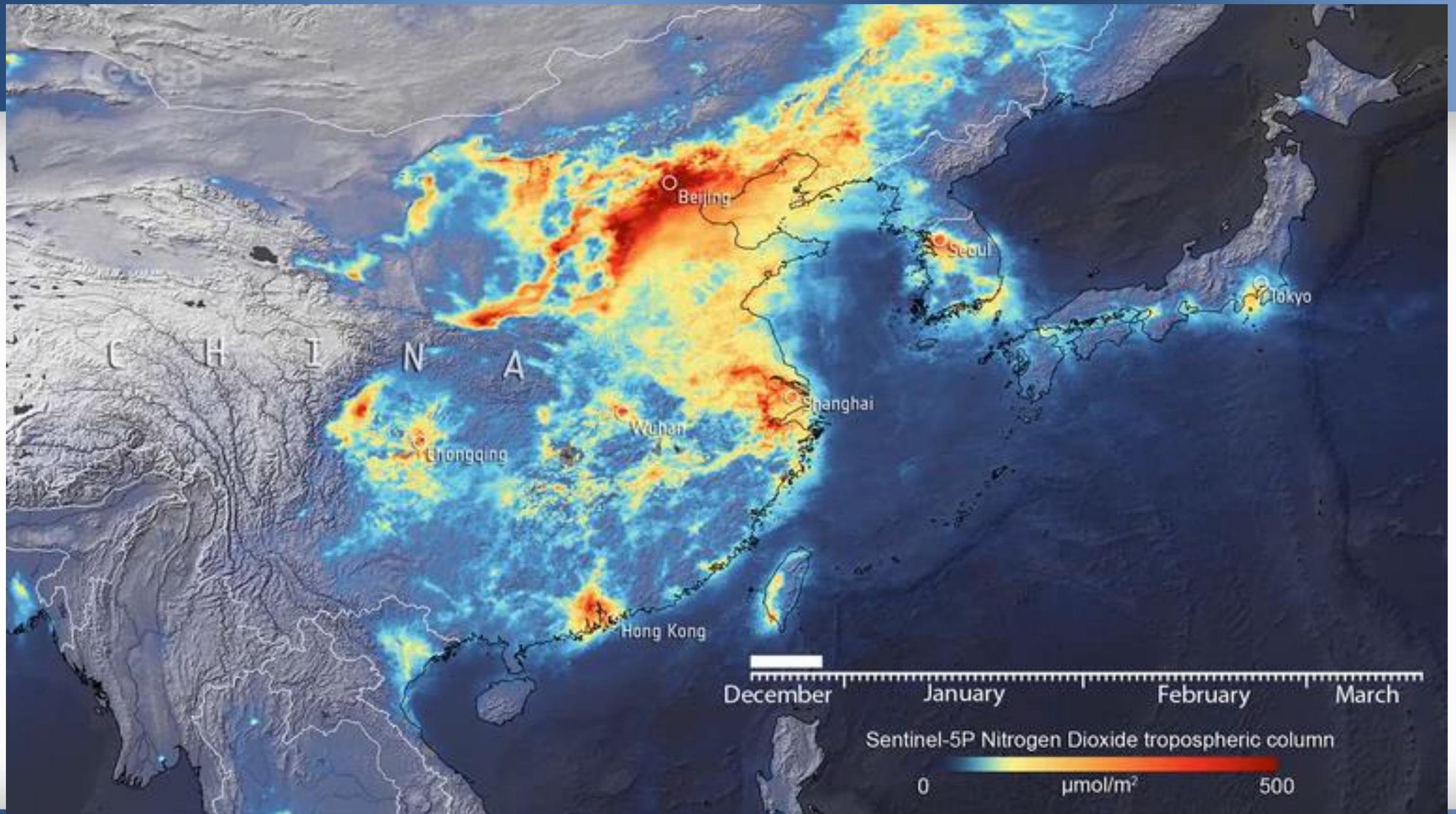


INCLUSIVE ECONOMIC DEVELOPMENT

Renewable Energy Partnerships between South Africa and China

- South Africa and China's Renewable Energy (RE) Commitments
- Progress in China & South Africa
- Importance of Knowledge Sharing
- Role of Renewable Energy (RE) Association in forming partnerships





South African Commitments

- Transition to low-carbon economy
 - Reduce coal consumption by 50% by 2030 from 2009 levels
- Targeting a supply of 17,800 MW of Renewable Energy (RE) by 2030
- Additional policy objectives
 - Increase access to affordable energy
 - Stimulate Economic Development
- Increase Independent Power Producers to supply Renewable Energy
 - Via Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)

China's Commitments

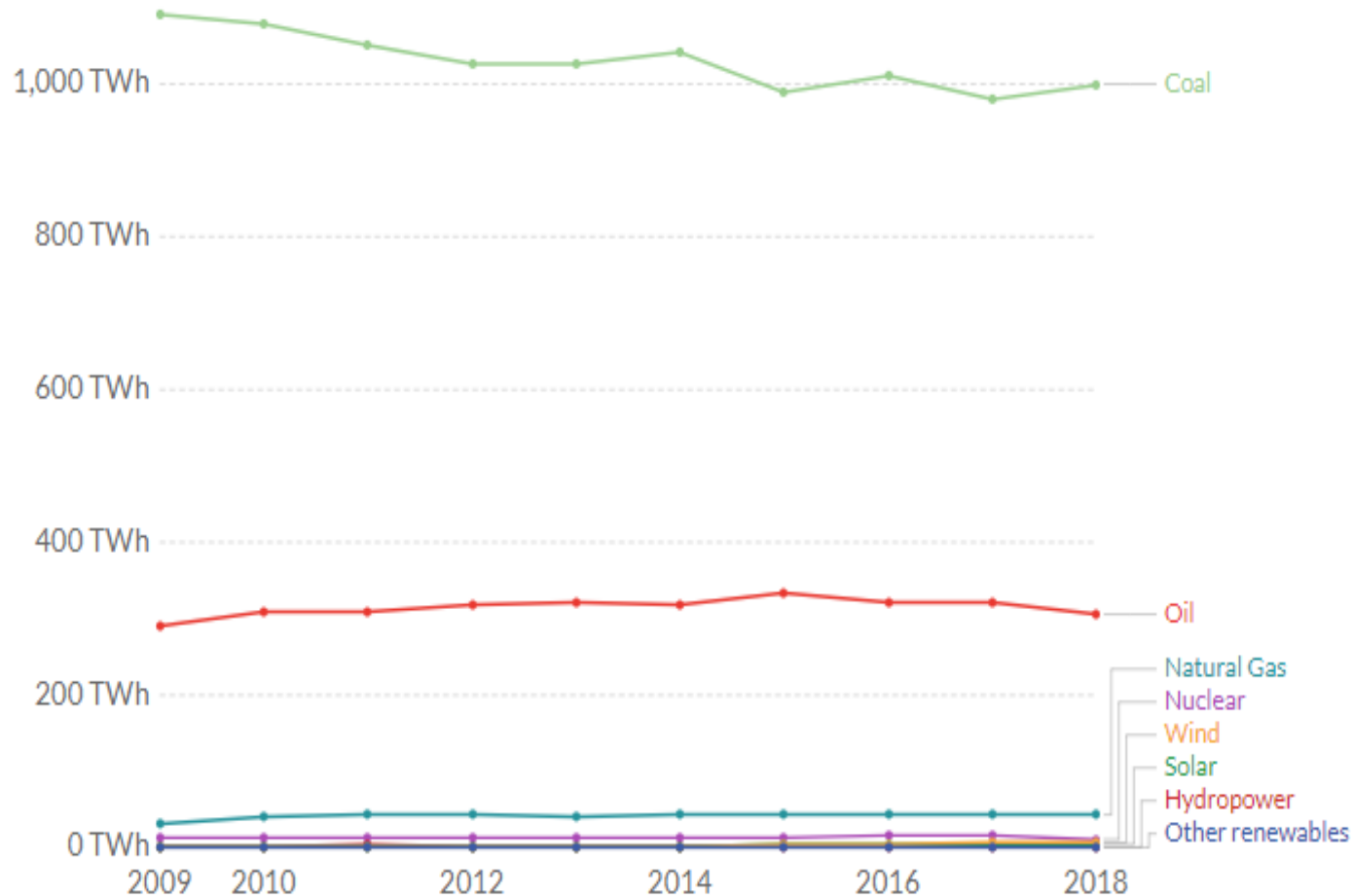
- Plan to lower carbon intensity by 60-65% by 2030, from 2005
 - Reduce coal consumption by 70%
- Promote RE Production and Efficient Energy Consumption
- Renewables to account for 16% by 2020

South African Progress

Primary energy consumption by source, South Africa

Primary energy consumption is measured in terrawatt-hours (TWh).

Our World
in Data



Source: BP Statistical Review of Global Energy (2019)

CC BY

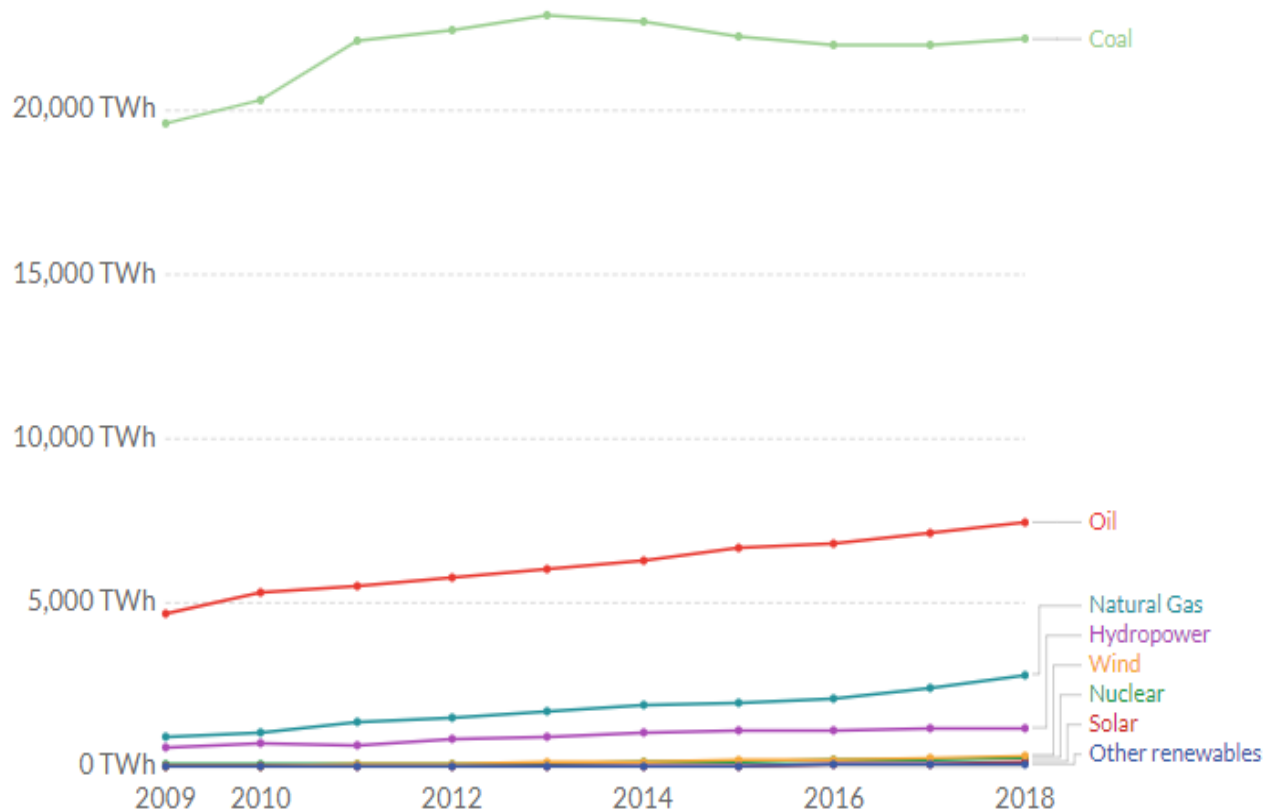
- Country remains highly coal-dependent
- Only reduced coal consumption by 8% since 2009
- Some growth across RE sources
 - Increased from 0 to 5% in last 5 years
- Bottlenecks in policy implementation, gatekeepers and political will

Chinese Progress

Primary energy consumption by source, China

Primary energy consumption is measured in terrawatt-hours (TWh).

Our World
in Data



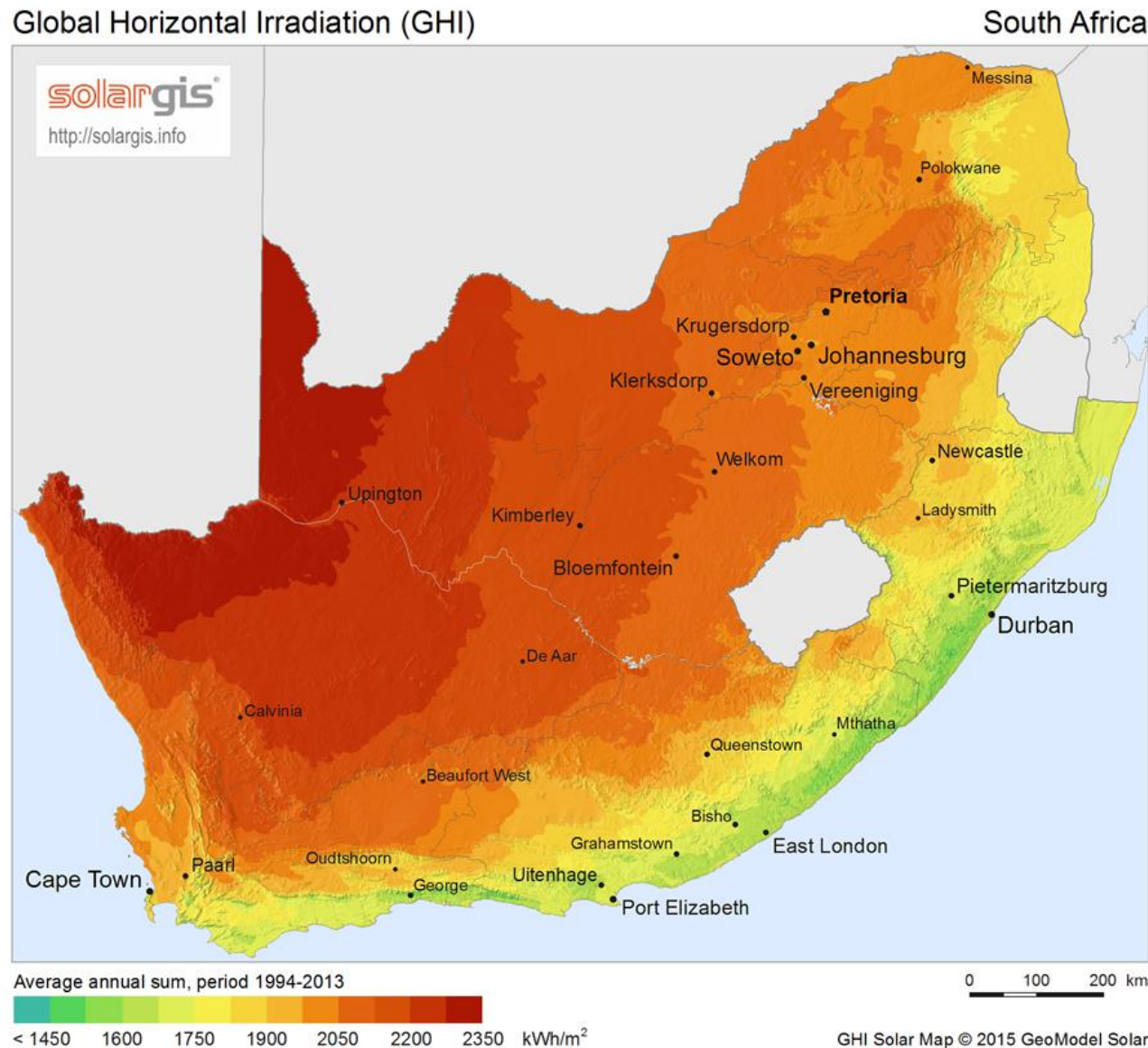
Source: BP Statistical Review of Global Energy (2019)

CC BY

- Consumption concentrated in Coal and Oil
 - 86% of consumption in 2018
- Largest investor in coal and renewable energy in the world
- Clean energy consumption has grown by 148% since 2009 levels.
- Progress in solar consumption – reduced costs in the production of solar energy
- China has registered over 150,000 (29%) of Renewable Energy Patents in the World (as at 2016)
- A huge effort is needed to reduce coal consumption by 2030

- In 2015, South Africa was in the top 10 countries with installed solar photovoltaic capacity
- Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) to incentivise RE investment
- 654 million Africans without electricity – RE can help leapfrog traditional routes to access energy
- Country in desperate need to create new jobs
 - 23000 jobs created to date
- South African environment is conducive to RE initiatives

South Africa has vast renewable energy sources



- Solar Energy
 - Red spaces indicate locations with high annual solar energy
- Municipalities play a vital role in promoting access to land

- China dominates
 - Manufacturing of solar cells, turbines & Electric Vehicle Market
- Is building entire industries in the RE sector
 - China Planned to Create 13 million jobs in the RE sector by 2020
- Have introduced innovative financing models to benefit RE companies
 - Using Pension Funds, Crowd Funding, direct leasing

- The Forum for China-Africa Cooperation Summit in 2018 declared that African Countries and China must work on developing partnerships in the RE Sector
- New energy systems require new knowledge to finance projects, develop infrastructure, manufacture products and operate systems
 - New business models, new jobs, new education programmes
- Knowledge is key to capacity building



Policy Makers

Regulators

Innovation Hubs

Entrepreneurs

Designers

Manufacturers

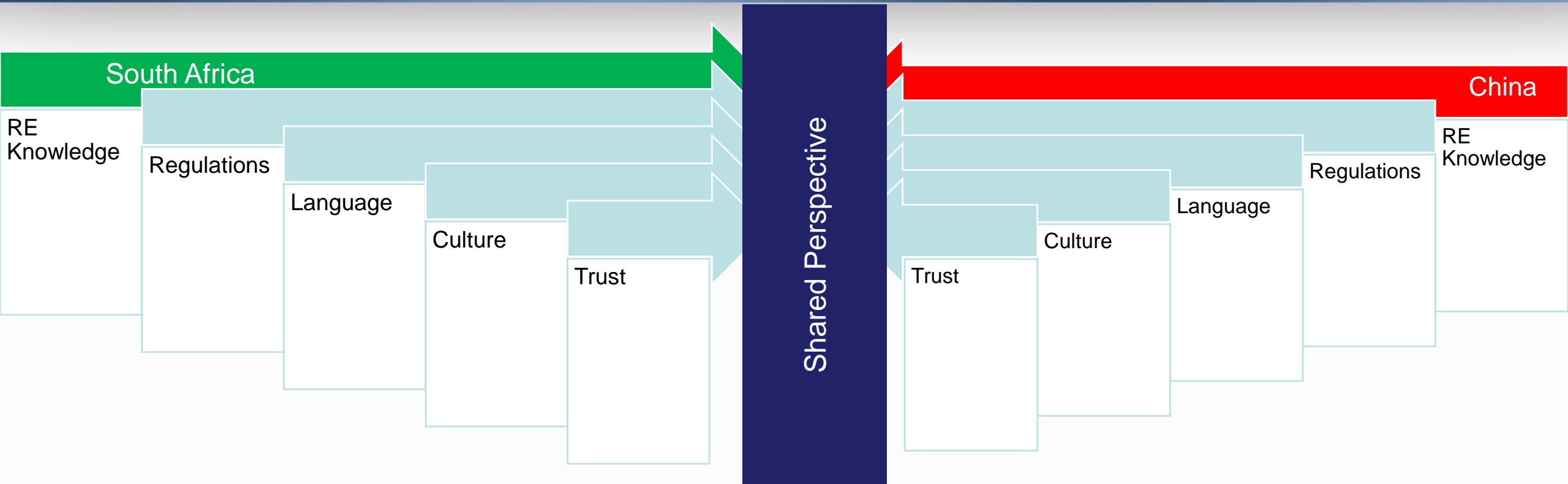
Universities

Workers

RE Associations



- Are non profit organisations
- Promote the industrialisation of the sector
- Disseminate information and knowledge
- Facilitate creation of new standards



- RE Associations can engage on behalf of the sector
- Association can pool resources and overcome issues of language, culture and trust
- Trust is key to partnership building

- RE Association acts as a buffer protecting interests of local sector
- Must build trust to commence knowledge sharing and partnership building

Thank you

Krish Chetty
Chief Researcher, HSRC
kchetty@hsrc.ac.za