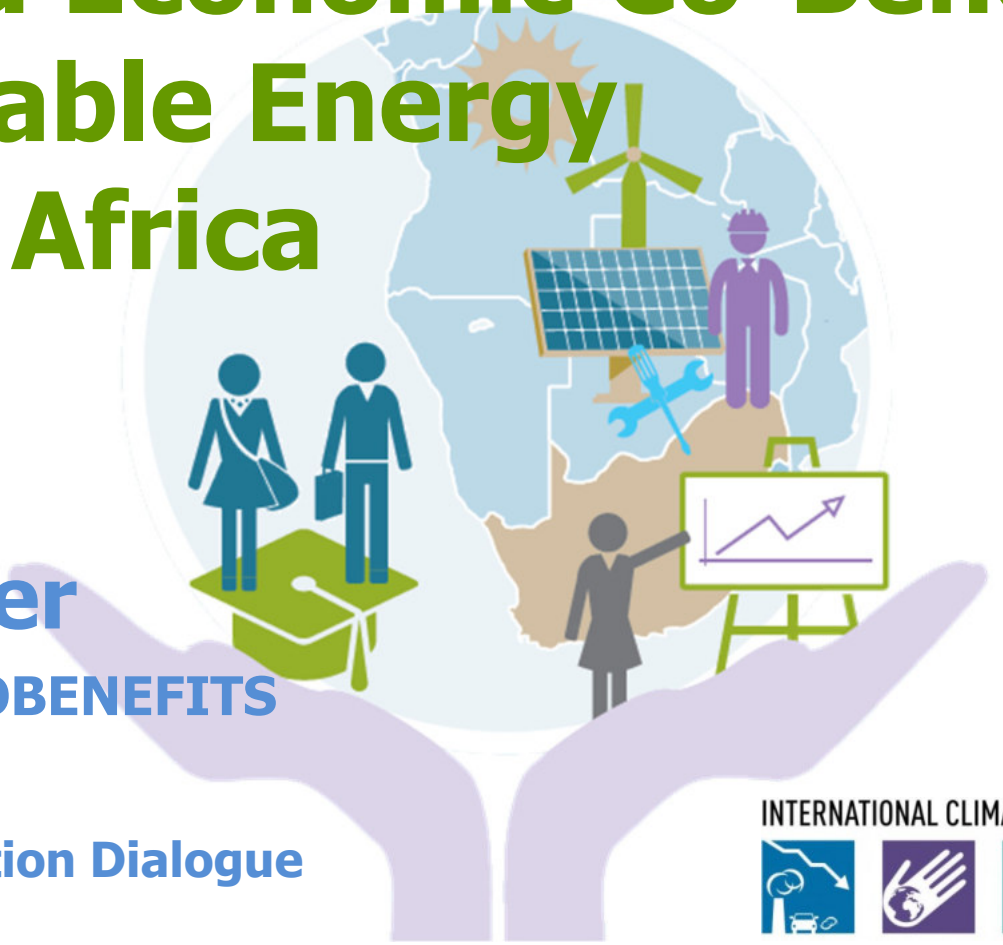
BMU-IASS Side Event

Social and Economic Co-Benefits of Renewable Energy for South Africa



Sebastian Helgenberger

Project Director COBENEFITS
IASS Potsdam

Berlin Energy Transition Dialogue
April 2019

INTERNATIONAL CLIMATE INITIATIVE (IKI)

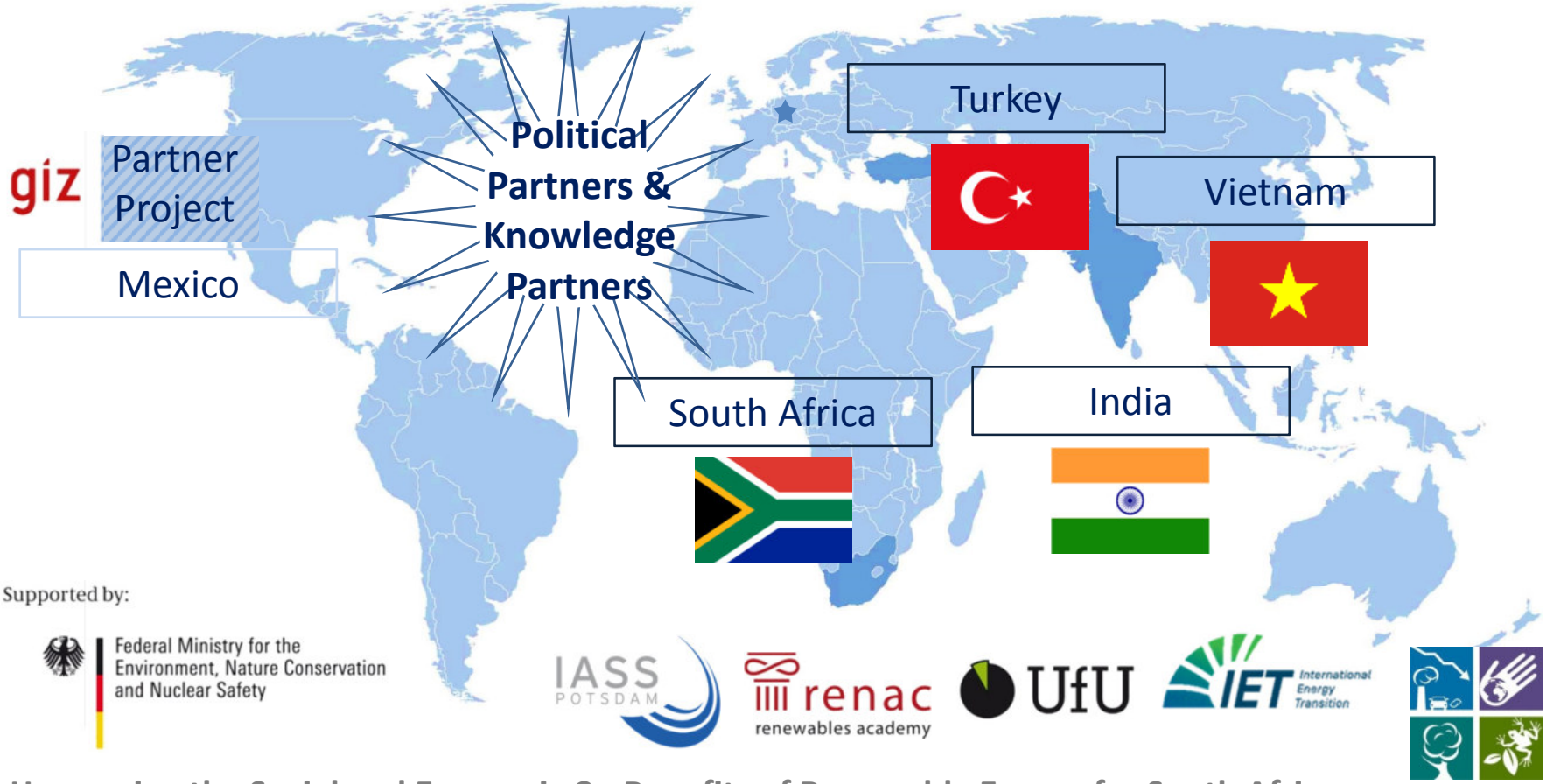
COBENEFITS
International Climate Initiative

»Building a strong alliance for ambitious climate action by harnessing the social and economic co-benefits of renewable energy«

Making the Paris Agreement a success for the Planet and the People

COBENEFITS
International Climate Initiative

»Building a strong alliance for ambitious climate action by harnessing the social and economic co-benefits of renewable energy«



COBENEFITS
International Climate Initiative

»Building a strong alliance for ambitious climate action by harnessing the social and economic co-benefits of renewable energy«

- ✓ **COBENEFITS Assessment Studies:** Country-specific co-benefit assessments
- ✓ **COBENEFITS Training Programme** for government departments / agencies
- ✓ **National Policy Roundtables** on enabling environments to maximise co-benefits
- ✓ **Inter-governmental Policy Dialogues** on connecting Co-Benefits to NDC and SDG implementation

COBENEFITS South Africa Studies

- ✓ Future skills and job creation
- ✓ Improving health and reducing costs
- ✓ Economic prosperity for marginalized communities
- ✓ Consumer savings through solar PV self-consumption

Is it important to jointly working with different government departments?

Department of Energy (DoE)

Department of Env. Affairs (DEA)

IPP Office

COBENEFITS

Dep. of Trade and Industry (DTI)

National Planning Commission

Dep. of Science & Technology (DST)

CSIR

What do we learn from comparing different energy pathways?

Integrated Resource Plan (IRP) 2016

IRP 2018

DEA Rapid Decarbonization Pathway

CSIR Least Cost Scenario

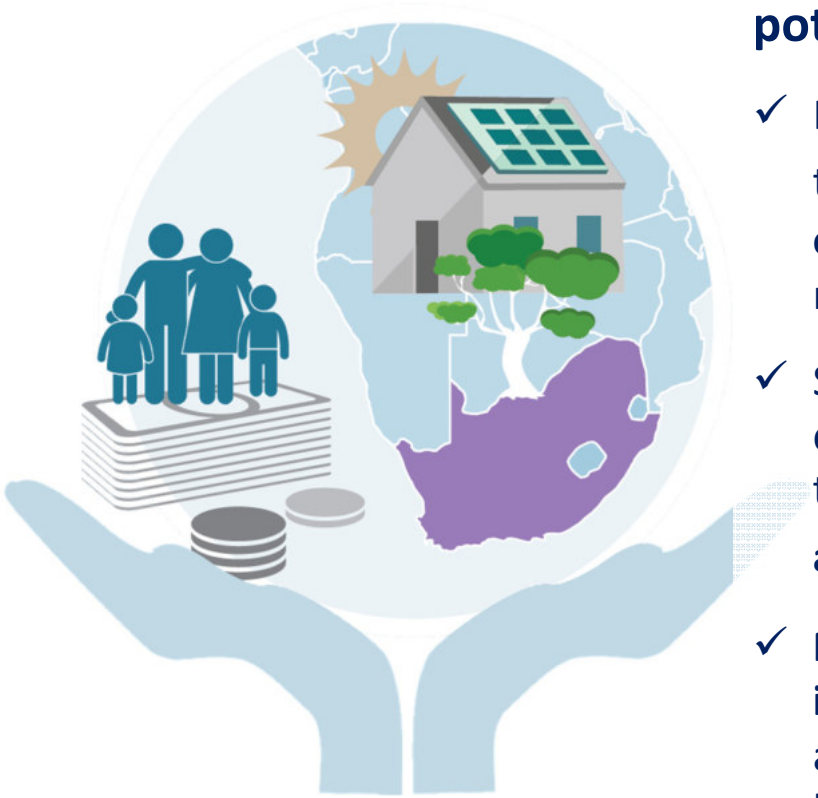
Decarbonisation of South Africa's power sector

- ✓ **What has been achieved?**
- ✓ **Is there room for more?**

RESULTS

Harnessing the Social and Economic Co-Benefits of Renewable Energy for South Africa

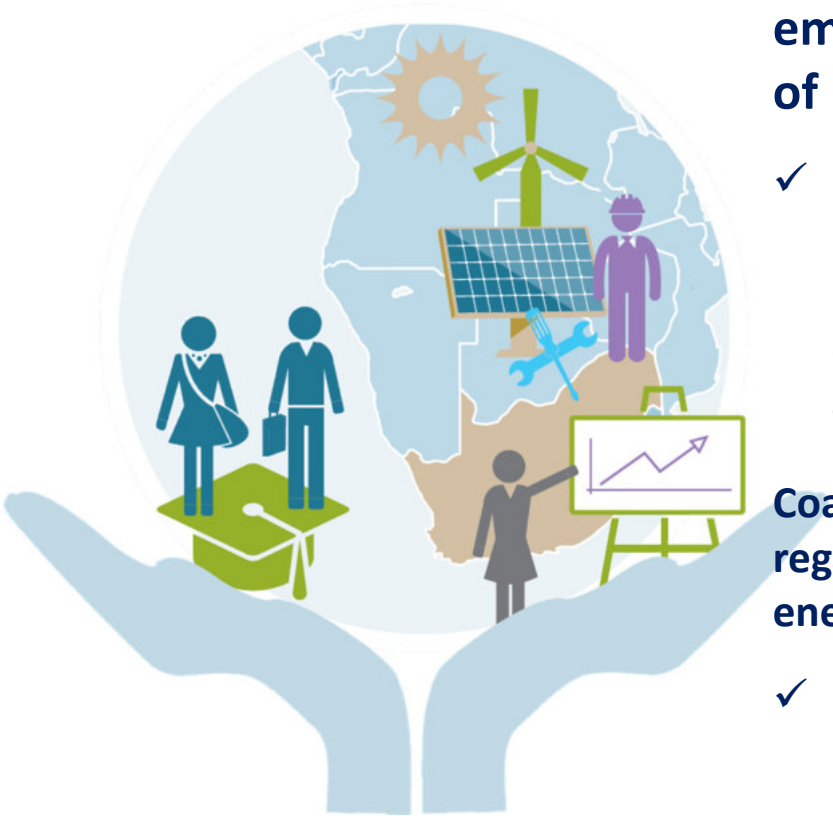
Consumer savings through solar PV self-consumption



South Africa has a tremendous potential for rooftop solar PV

- ✓ It is technically and economically feasible to install **more than 11 GW of solar PV on residential rooftops** in the metropolitan municipalities by 2030
- ✓ South African households and businesses can save money by investing in solar: for the residential sector **savings sum up to around USD 90 billion by 2030**
- ✓ **PV+Battery solutions can play an important role** in incentivizing prosumers and reducing peak load during evening hours.

Future skills and job creation



South Africa can significantly boost employment by increasing the share of renewables

- ✓ With its decision to scale up renewables by moving from IRP 2016 to IRP 2018, employment (job years) can be expected to **increase by an additional 40 % in the next 10 years**.

Coal-sector employment to decline regardless of a shift towards renewable energy

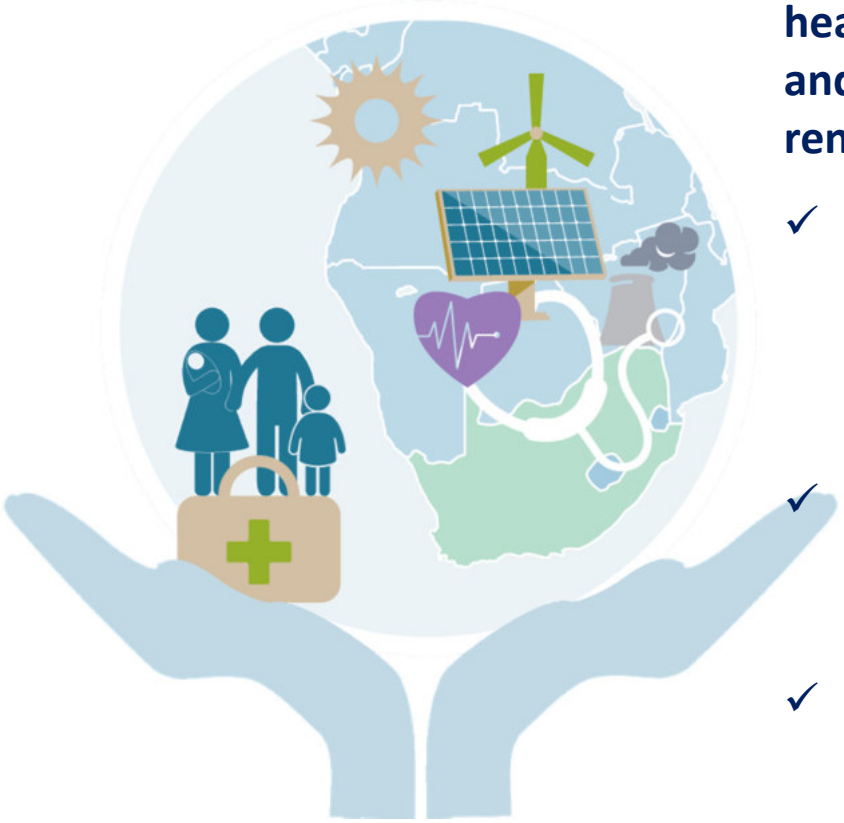
- ✓ With expected reductions in global demand and exports, **coal jobs to decline by 35-40%** between 2020 and 2050.

Economic prosperity for marginalized communities

Local prosperity benefits to increase substantially by following DEA's Rapid Decarbonization Pathway

- ✓ Up to **30 000 individuals** in marginalised communities can benefit from **access to education** programmes by 2050.
- ✓ More than **3 000 local enterprises** in marginalised communities can be supported until 2050.
- ✓ Up to **10 000 local jobs** can be created in marginalised communities through socio-economic and enterprise development until 2050.

Improving health and reducing health system costs



South Africa can significantly cut negative health impacts and related costs for people and businesses by increasing the share of renewable energy

- ✓ With its decision to scale up renewables in South Africa's Integrated Resource Plan (IRP) **health costs associated with the power sector can be cut by 25% by 2050.**
- ✓ Up to **44 million people are exposed to air pollution** from coal power plants in South Africa.
- ✓ **Health cost externalities of Eskom's power plants** are estimated in a range from 5-15 Rand cents per kWh.

BMU-IASS Side Event

How can co-benefits contribute to a just energy transition while raising climate ambitions?

Berlin Energy Transition Dialogue
April 2019

COBENEFITS

@IKI_COBENEFITS #COBENEFITS

HOME OUR WORK STUDIES TRAININGS RESOURCES NEWS/EVENTS

Twitter

Tweets by @IKI_COBENEFITS

Latest News

COBENEFITS Policy Dialogue – Country Focus South Africa – BETD 2019

April 3, 2019

Harnessing the Co-Benefits of Climate Action – [...]

Registration open for co-benefits policy online trainings

April 3, 2019

Following the first module of the Co-benefits Online [...]

Successful start of COBENEFITS trainings in South Africa

November 29, 2018

Connecting the social and economic opportunities of renewable energies to climate change mitigation strategies.

www.cobenefits.info

IASS POTSDAM renac renewables academy UfU IET International Energy Transition

Supported by:

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

INTERNATIONAL CLIMATE INITIATIVE (IKI)