# Module 4
# Sustainable Development Goal No 7

## Affordable and Clean Energy

Ensure access to affordable, reliable, sustainable and modern energy for all

Presentation on SDG7 by Jennifer Pohlmann and Fernanda Frankenberger
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# Agenda

- 1.1 Introduction to the Sustainable Development Goals (SDGs)
  - Defining SDG 7
  - Significance
  - Advantages
  - Interdependencies
  - Challenges
- 1.2 Good practices within SDG 7
- 1.3 Excercises
- 1.4 Supplementary Readings and Quizzes (extra doc)

# 1.1

- What are the SDGs?
- What do they want to achieve?

©United Nations System Staff College 2017
URL: https://vimeo.com/206120732

# 1.1

- 17 Goals to be reached until 2030 (*Agenda 2*
- Five critical dimensions:

**people, prosperity, planet, partnership and peace**

- three core elements:

**social** inclusion, **economic** growth, an

**environmental** protection

- holistic approach to tackle the challenges

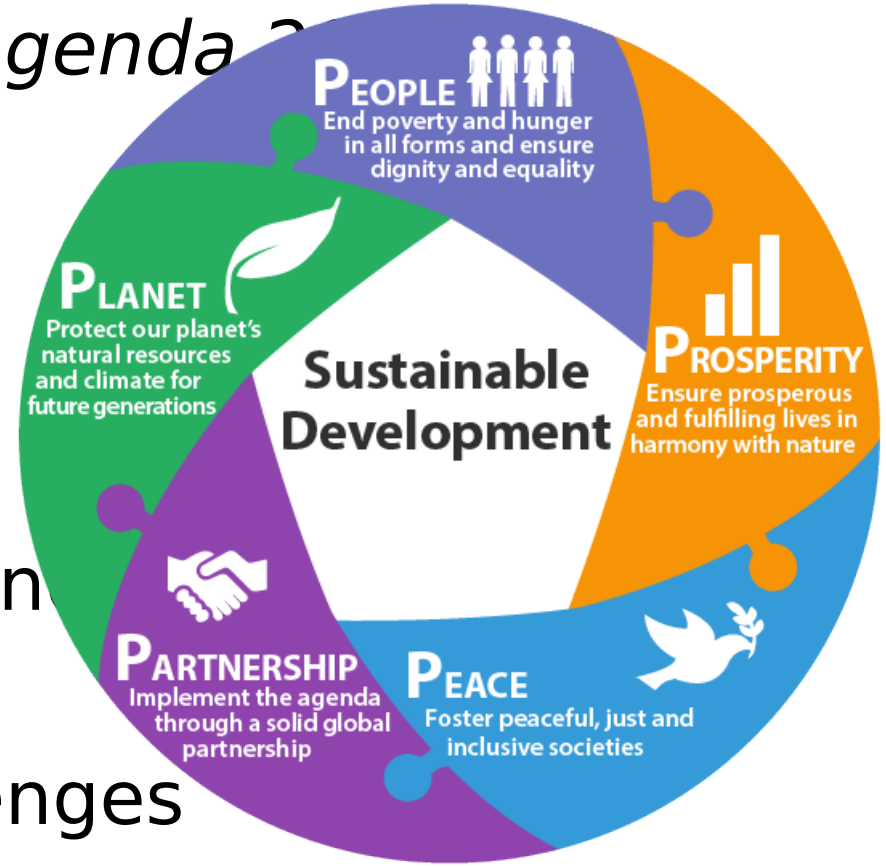



Fig. 1: ©United Nations Department of Public Information (UN DPI) https://trello.com/c/jb39QPqs/36-infographic-on-the-five-elements-of-the-sdgs

# 1.1 Defining SDG 7

- Significance
- Advantages
- Interdependencies
- Challenges

(Source: © https://sustainabledevelopment.un.org/sdgs refers to all SDG icons)

# 1.1 Defining SDG 7 (1)

**Affordable and Clean Energy**

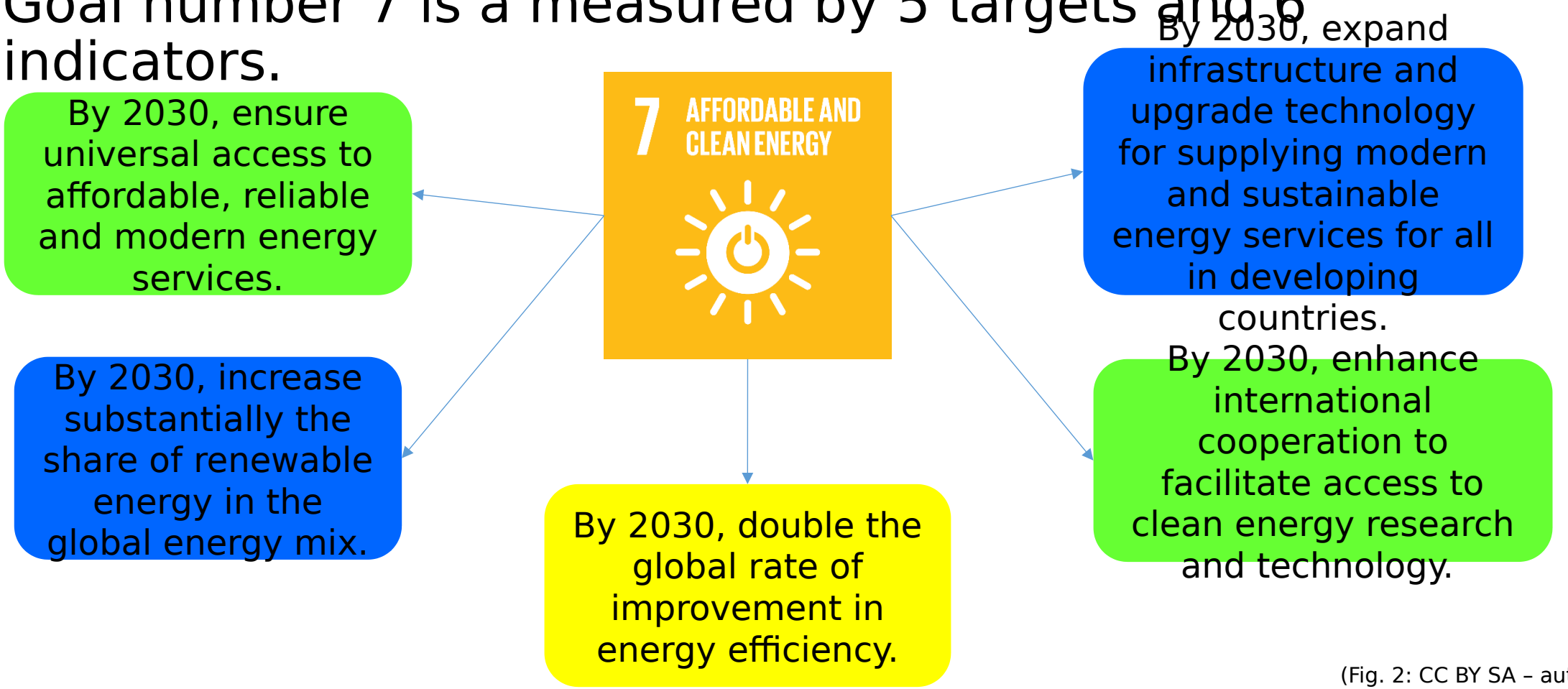
Ensure access to affordable, reliable, sustainable and modern energy for all




Source: Sustainable Energy For All, 2019. URL: https://www.youtube.com/watch?v=t3c8sLfw36o

# 1.1 Defining SDG 7 (1)

- Goal number 7 is a measured by 5 targets and 6 indicators.




(Fig. 2: CC BY SA – author: Fernanda Frankenberger

# Significance of SDG 7

| | | |
|---|---|---|
| Affordability | Minimising financial costs (although some studies have shown people tend to worry about fairness, justice and equitable cost sharing as well) | Demski et al. (2017) |
| | Quantifying the share of household income spent on energy | Winkler et al. (2011) |
| | Effect on household expenses as a result of a product purchase | Riley (2014) |
| | Indicative of the purchasing ability of the households to buy a particular service | Reddy (2015) |
| | Depends on raising income levels (and hence purchasing power) and controlling the impacts that impersonal economic forces operating at global levels have on the costs that people face on an everyday basis | UN Chronicle (2015) |
| Sustainability | Comprising three main pillars including energy supply diversity, demand management, and environmental impact mitigation | Alsayegh et al. (2018) |
| | Production, conservation and use of energy sources in ways that promote or at least are suitable with long-term human well-being and ecological balance | Vidadili (2017) |
| | Providing energy services that meet the economic, social and environmental needs, while recognizing equitable distribution in meeting those needs | Davidson (2002) |

| | | |
|---|---|---|
| Reliability | Depends on a steady supply, robust governance, and an efficient and stable distribution system | UN Chronicle (2015) |
| | Its evaluation depends on failure-free operation in big data systems in order to predict the occurrence of unpleasant events so that preventive measures can be taken | Kuo and Pan (2017) |
| | Indicates the continuous supply as well as the quality of end-use appliances | Reddy (2015) |
| Modernity | Access to three forms of energy: less polluting household energy for cooking and heating (including solid biomass fuels and renewable energy sources); electricity for powering appliances and lights in households and public facilities; and mechanical power from either electricity or other energy sources that improve the productivity of labor | Pachauri et al. (2012) |
| | All sustainable energy must be modern, although not all forms of modern energy are sustainable (e.g. coal) | UN Chronicle (2015) |

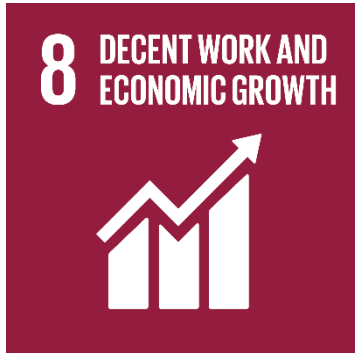
# Advantages of SDG 7

- Can help people have access to electricity, clean fuels and more efficient technologies, and also improve energy efficiency globally.

- **“Achieving SDG 7 will catalyse actions to combat climate change and reach the other SDGs on poverty eradication, gender equality, mitigation of and adaptation to climate change, food security, health, education, sustainable cities and communities, clean water and sanitation, jobs, innovation, transport, and refugees and other situations of displacement. ”**
  (Accelerating SDG7 achievement, 2018).

# Interdependencies of SDG 7

- Example of interlinkages between SDG 7 & SDG 8




E.g. : Energy is associated with the Gross Domestic Product (GDP), as with affordable and clean energy, higher levels of economic productivity and more jobs can be created.

# Interdependencies of SDG 7

- Example of interlinkages between SDG 7 & SDG 9

E.g.: Industry in a general definition, is one of the sectors with the biggest energy consumption.

# Interdependencies of SDG 7

- Example of interlinkages between SDG 7 & SDG 11

E.g.: Cities consume a lot of energy, so having clean energy available in the cities would support them to sustainable.

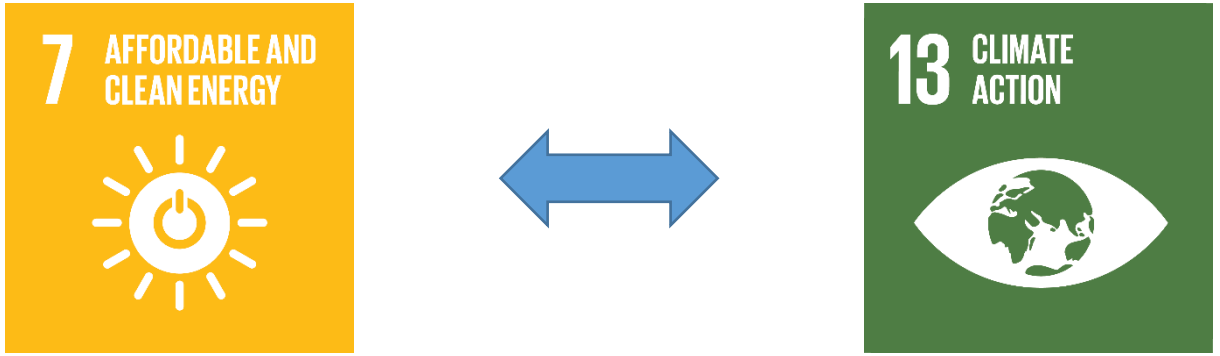
# Interdependencies of SDG 7

- Example of interlinkages between SDG 7 & SDG 12

E.g.: Sustainable patterns of consumtion and production need clean energy as means to achieve both goals.

# Interdependencies of SDG 7

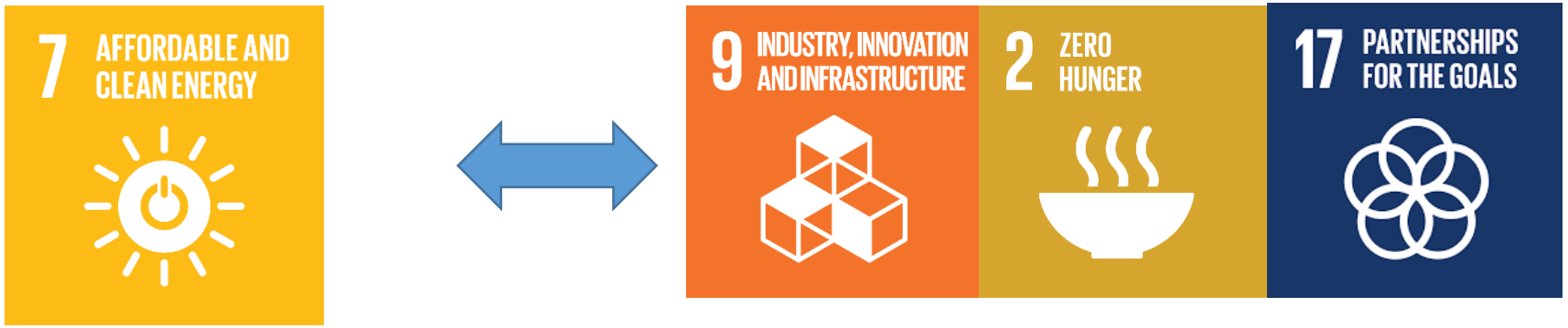
- Example of interlinkages between SDG 7 & SDG 13




E.g.: Using clean energy supports the reduction of fossil fuel use and greenhouse gas emissions, which contribute to climate action.

# Interdependencies of SDG 7

- Which can be more interdependencies of SDG 7?

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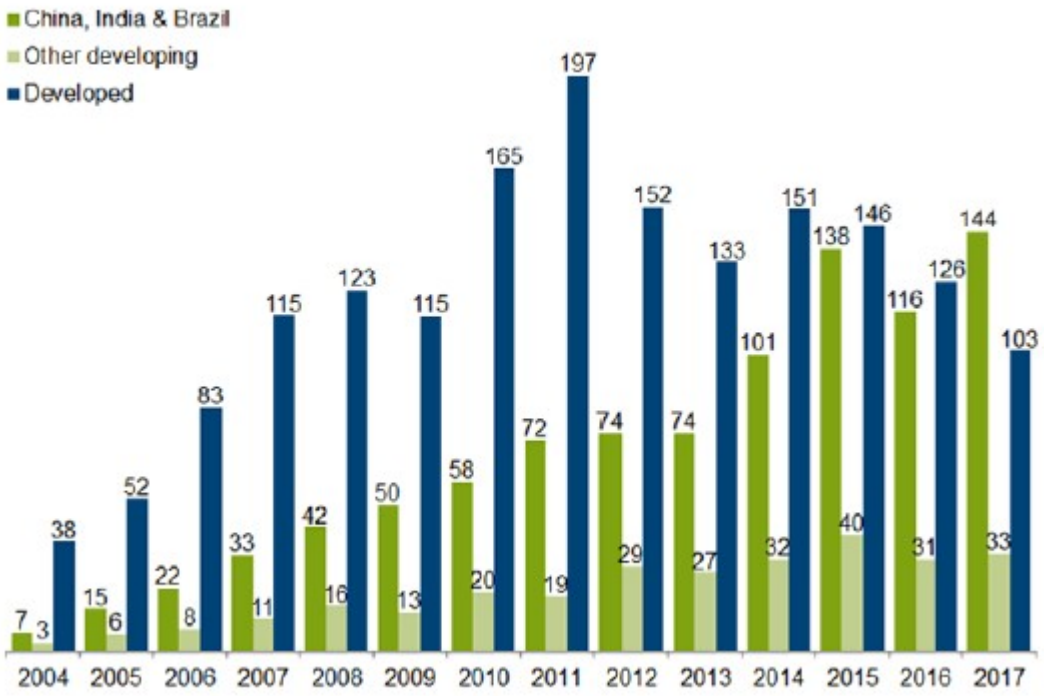
# Challenges of SDG 7

- Ensure universal access,
- Increase the share of renewable energy and efficiency measures used globally,
- Promote international cooperation,
- Increase its use in the global energy mix, by gradually reducing fossil-fuel use,
- Enable strategies for action,
- Reinforce governance, partnerships and coordination,
- Promote accountability and financing,
- Schedule monitoring, follow-up, reviews and reports.

# 1.2 Good Practices of SDG 7

- General
  - According to UN (2018), in the years 2015, 2016 and 2017 (178, 147 and 177 US dollars billion respectively), the developing countries invested more in renewable energy as the developed [illegible] rs billion respectively).




Source: United Nations (2018). Global Trends in Renewable Energy Investment 2018. https://europa.eu/capacity4dev/file/71900/download?token=57xpTl4W

# 1.2 Good Practices of SDG 7

- Namibia

- In Lüderitz the strong winds attract people from all over the world to practice wind- and kitesurf. It made sense therefore to have near the city a wind power plant, which was the first in Namibia (IRENA, 2019).
    - For more information you can access:
    - https://www.bluebirdkite.de/package/namibia-2/
    - https://www.surfertoday.com/kiteboarding/the-luderitz-speed-challenge-2015-kicked-off-with-a-new-record

(https://commons.wikimedia.org/wiki/File:Zara_Davis,_Luderitz_Speed_Canal.jpg CC BY-SA 3.0)

# 1.2 Good Practices of SDG 7 – Case Studies

Prepare and present examples of project - or country-related good practices on the implementation of SDG 7

# 1.3 Excercises on SDG 7: CleanEnergyMakingSense

- How do you make sense of the SDG7?
- To what extent is SDG 7 feasible?
- Which are the difficulties in implementing an affordable and clean energy in your community?

# 1.3 Excercises on SDG 7: Describing links with other SDGs

Map SDG 7 in relation to other SDGs.

- How strong is the link between SDG4 and SDG7?
- How can SDG7 on affordable and clean energy support the completion of SDG1?
- How does SDG7 foster healthy lives and promote well-being for all at all ages (SDG3)?
- **How can an integrative approach be adopted to tackle SDG7 in tandem with other**

| Targets | Key interactions |
|---|---|
| 7.1 □ 11.1 | Affordable housing |
| 7.2 □ 11.3 | Sustainable urbanization |
| 7.A □ 17.3 | Financial resources from multiple sources |
| **7.B □ 9.1** | **Resilient infrastructure** |

Own representation

# 1.3 Excercises on SDG 7 – Gather and analyse data on SDG 7

1. Gather and analyse global, regional, national and local data on SDG 7. E.g. from the UN Sustainable Development Knowledge Platform ( https://sustainabledevelopment.un.org/sdg7 , https://ec.europa.eu/eurostat/statistics-explained/index.php/Renewable_energy_statistics
2. Analyse the Data bank from the World Bank by picking some of the targets and present them in a visually appealing way (https://databank.worldbank.org/data/home.aspx)
3. Collect data on clean energy in your community (classroom / university / house) and analyse the trends in both a qualitative and quantitative manner to find out major narratives, frequencies, correlations and causalities. See how well your data is situated in comparison to the local (if available) or national data from the other platforms.

# 1.3 Excercises on SDG 7 – Localizing4Development

- How can you identify the benefits of SDG7 at your community (class-room/university/school/neighborhood/house) and at individual level?

  1. Which are the pros and cons of such approach?

  2. Do a comparison with specific countries/states as examples.

# 1.3 Excercises on SDG 7 – Policy Briefs

- Write policy briefs on any topic pertinent to affordable clean energy as identified by SDG7

  - For that, check how international policy briefs are structured.
    - http://www.un-energy.org/
    - https://www.ises.org/content/global-100-renewable-energy-campaign
    - https://sustainabledevelopment.un.org/content/documents/18041SDG7_Policy_Brief.pdf

# 1.3 Excercises on SDG 7 – @CleanEnergy

- First check your social media for campaigns already existing about Clean Energy.
- Discuss about these campaigns: main topics, possible results for the community, etc.

***Drive your social media platforms in ways that promote clean energy awareness in your community!***

Source: HuffPost

# 1.3 Excercises on SDG 7 – CleanEnergyPreneurs

- Which stories about entrepreneurship and clean energy do you find? Search for examples in your community.

  - Use vlogs, blogs and journals to promote this exercise on SDG7

# 1.3 Excercises on SDG 7 – BreakingSilos

- Target of this exercise is to actively think and write on SDG7 from the wide variety of sciences and arts

  - philosophical perspective
  - education issues in SDG7 from a managerial p
  - inclusion of SDG 7 in your research field

Source: AIIP

Developed and produced by Jennifer Pohlmann (University of Applied Sciences Hamburg) with material Amanda Lange Salvia & Luciana Londero Brandliand, Fernanda Frankenberger support from Johanna Heimfarth

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