University of Stuttgart
IER Institute of Energy Economics
and Rational Energy Use

3.1 SOCIAL EVALUATION

SOCIAL EVALUATION

This fact sheet explores the use of social indicators in evaluation and monitoring of impacts the Hy4Daure project has on some socio-economic aspects, infrastructures and standards of living of the people of Daures (site), Namibia and SADC.

The social indicators (listed in table 1) relate to the United Nations (UN) Sustainable Development Goals 7: *Access to clean and affordable energy* and *8: Decent work and economic growth*.

SOCIAL INDICATORS (STATUS QUO)

Table 1: Social indicators to be used for the evaluation of social impacts of Hy4Daure Project

Indicator	Daures (site)	Namibia	SADC	Assumptions	Sources
Access to electricity	0%	55%	50%	Population with access to electricity	WHO; IEA
Renewable energy share	0%	20%	32%	Total cons. hydro, wind, solar, geothermal, tide, biofuels, biogases, excl. traditional biomass	UNSD; IEA; WHO
Affordability of electricity	0%	2.1%	1.37%	Avg. monthly income spent on electricity, cons. per capita	EIA; MERA; World Salaries; World Bank
Share of informal settlement	0%	41%	51%	Urban population	World Bank
Unemployment	0%	20.8%	11.3%	Unemployed youth 46.1% in Namibia	World bank; SADC report
Gini index	0	59.1 (2015)	67	No recent data for Namibia	World bank
GDP per capita	0 USD	4685 USD	2160 USD	Increase in GDP for Namibia since 2020	World bank; SADC report

Only about 50% of SADC population has access to electricity, with a share of renewable energy in the total energy consumption corresponding to 20% for Namibia and 32% for SADC.

On average 1.37% of income per capita is spent monthly on electricity in SADC countries. Namibia has about 41% of its population living in informal settlement in urban areas, while the total for SADC is 51%.

Namibia's unemployment rate currently sits at 20.8%, of which 46.1% is the youth, while the total for SADC is 11.3%. The Gini index for Namibia is 59.1 (2015) while SADC has 67. Namibia's GDP per capita is higher than the average of SADC with more than 2500 USD. All indicators are currently *null* for the Daures project site since its unoccupied and has no infrastructures.

SOCIAL IMPACT EVALUATION

Social impact evaluation is carried out through energy system and economic modelling;

Social indicators (status quo) are inputs to the TIMES energy system model and the Computable General Equilibrium model NEWAGE.

The models therefore forecast the status of social indicators in the model time horizon (2030 / 2050), enabling the evaluation of impacts of the Hy4Daures Project and the establishment of a Green Hydrogen Economy in Namibia on the social aspects of Daures, Namibia and SADC at large.

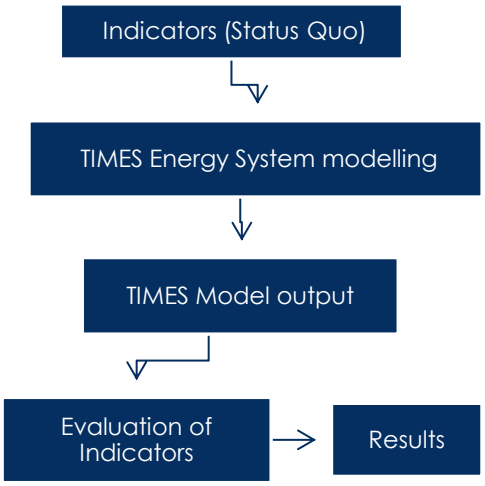

Figure 1 Steps for social impact evaluation using TIMES energy model

FURTHER WORK

The results of the evaluation of the social indicators, using the different modeling tools will be published in due course.

FOR FURTHER INFORMATION AND FEEDBACK

Have a look at our other Fact Sheets covering topics from Project Descriptions, Use Cases, Techno-Economic analysis, Indicators, Energy System Analysis, Macro-Economic modelling, and many more:

https://github.com/IER-Hy4Daures/Fact-Sheets

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