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The Social Performance Index (SPI)

Assessing and monitoring community well-being through energy sector investments

Sebastian Helgenberger, Grace Mbungu,
Héctor Rodríguez, Almudena Nunez

IASS POTSDAM

Summary

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While the positive impacts of renewable energy for people and the planet are widely recognized, the direct contribution of local renewable energy projects to local community well-being has received limited attention. And while the Paris Climate Agreement and the 2030 Agenda for Sustainable Development have been rightfully celebrated as global milestones for securing livelihoods and opportunities now and in the future, they lack societal ownership and traction in local communities, who are decisive in supporting and driving the necessary sustainability transformation.

In this paper, we introduce the Social Performance Index (SPI) for energy sector investments as a tool to systematically assess, monitor, compare, and communicate the social performance of energy projects on the well-being of communities and their members. By social performance of energy sector investments, we mean direct and positive social impacts on the well-being of individuals and communities during the development and implementation of energy projects and their access to locally generated energy, either in a monetary or a non-monetary way.

We have developed the SPI to be easily applicable to existing tools for socio-economic impact assessments. The SPI can be used to quantify essential items of social performance systematically and transparently along a set of context-specific indicators. It can be applied to compare renewable energy projects with fossil energy projects in terms of their social performance, or to enhance the social performance of renewable energy projects in their planning and design phase.

To implement and apply the SPI, we draw on the transformative research approach of IASS Potsdam, where the co-design of research and co-creation of knowledge between academia and society take centre stage, as well as on the experiences gained with dialogic co-benefits assessments in the COBENEFITS project. The principles of co-design and co-creation ensure that the perspectives of relevant stakeholders are actively included and ongoing.

We illustrate the SPI tool by referring to an explorative study on the social expectations and impacts of renewable energy projects in rural Mexico, where a country-specific Social Performance Index for Mexico has been developed with stakeholders who were positively or negatively impacted by renewable energy projects.

Measuring the contribution of renewable energy to enhancing the well-being of individuals and communities is especially important for the majority of people in countries of the Global South, whose lives and livelihoods – and in some cases survival – depend on sustained access to clean and sustainable energy services, and a healthy environment. However, we expect that the SPI is equally relevant for energy transitions in other regions and countries like Germany, where social ownership in renewable energy plays an important role in social and political discourse.

Preface

> The **Social Sustainability** of a policy intervention, project development, or investment allows for continuity and a long-term perspective by identifying and harnessing social opportunities, and by preventing and mitigating social conflicts and community unrest. Social sustainability is facilitated through prioritising the well-being of people and communities for current and future generations, and by pursuing inclusivity and broad political and economic ownership in the development process and its results.
>
> By emphasising social sustainability […], we intend not only to highlight the importance of the social performance dimension of energy transitions, but – most importantly – to also activate and strengthen the implementation of the Paris Agreement and the SDGs, and illustrate the on-the-ground relevance of these planetary commitments.
>
> Mbungu & Helgenberger (2021): The Social Performance Approach

In the above-cited paper, we outlined the Social Performance Approach, offering a new perspective on understanding and shaping energy sector investments for the benefit of people and communities. In this subsequent report, we propose an instrument to operationalize and apply this approach, which we call the Social Performance Index (SPI).

Both reports have evolved from collaborative research and knowledge-creation activities on the social dimensions of energy transitions, led by the IASS Potsdam with worldwide partners in expert organizations, governments, civil society organizations, and industry associations. More specifically, the concepts and application options that we propose here emanate from and feed back into the IASS research area Social Sustainability and the COBENEFITS project, led by the IASS Potsdam under Germany's International Climate Initiative (IKI).

While already a multitude of insights and experiences from many skilled research partners across the globe have contributed to developing the Social Performance Approach, we believe that we are still just beginning to learn and explore this perspective, which we believe to be at the centre of a successful global transition towards sustainable energy.

This report as well as the latest research activities it builds on, have been developed amid the COVID-19 pandemic. As we have all learned the hard way, the pandemic has made social interactions and the co-design of sustainable solutions considerably more difficult. However, we are convinced that the challenges we are facing will trigger innovative forms of collaboration which will enrich our future social interactions.

In this spirit, we extend our invitation to join the indispensable and stimulating "think – do – re-think – re-do" process of fostering community well-being and global sustainability through energy-sector investments.

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IASS POTSDAM

1. Social performance of energy-sector investments

Putting peoples' well-being at the centre of sustainable energy transitions

While the positive impacts of renewable energy on people and the planet are widely recognized, the direct contribution of local renewable energy projects to local community well-being has received limited attention. The potential for local energy projects to perform for communities beyond providing them access to energy services, such as by generating community revenue through co-investments in rooftop solar PV or community wind parks, are mostly considered secondary co-benefits, if not entirely ignored, by climate and development policies and practices. And while the Paris Climate Agreement and the 2030 Agenda for Sustainable Development with its Sustainable Development Goals (SDGs) have been rightfully celebrated as global milestones for securing livelihoods and opportunities now and in the future, they lack societal ownership and traction in communities, who are decisive in supporting and driving the necessary sustainability transformation.

Tapping the positive social community impacts for successful climate and development practices calls for a different approach to sustainable energy development (energy transitions in some countries) to energy development and investments: a social performance approach (cf. Mbungu & Helgenberger 2021).

> **Social performance of energy sector investments refers to direct and positive social impacts on the well-being of individuals and communities during the development and implementation of energy projects and the access to locally generated energy, either in a monetary or a non-monetary way.**
>
> Social performance can be used to compare how different energy options (e.g., a renewable wind park or a coal-mining site) effectively and comprehensibly improve the lives of people and local communities.
>
> Social performance can be measured by assessing the contributions of energy project development, implementation, and use of monetary or non-monetary **functionings of well-being** (e.g., employment or a healthy environment). In addition, energy projects also can contribute to an enabling local environment (e.g., through community funds) with a positive or negative effect on these functionings, which can be measured as **facilitators of well-being**.
>
> Mbungu & Helgenberger (2021): Social Performance Approach: Fostering community well-being through energy-sector investments.

The Social Performance Approach we have introduced (Mbungu & Helgenberger 2021) builds on the conceptual foundations of the capabilities approach (Nussbaum & Sen 1993, Nussbaum 2011), the co-benefits approach (Helgenberger & Jänicke 2017, Helgenberger et al. 2019), the Needs-Opportunity-Ability (NOA) model (Gatersleben & Vlek 1998 and Mbungu 2020) and important groundwork on community development in South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) (Wlokas 2015, IASS & CSIR 2019, INSPIRE 2021).

The Social Performance Approach can be used to compare how different energy options (e.g., a renewable wind park, decentralized energy services such as solar mini-grids, or a coal-mining site) effectively and comprehensibly improve the lives of people and local communities. An important aspect of the Social Performance Approach is its focus on the direct and local contributions of renewable energy projects to fostering the well-being of individuals by reflecting their aspirations for a good life. The approach can be used to assess social progress through local energy projects and foster accountability of related investments by ensuring that projects perform both for the people and the planet. The Social Performance Approach helps to identify points of concrete intervention – or enablers – to ensure and increase the positive contributions of energy-sector investments to the well-being of individuals and communities either in monetary ways, such as local economic value creation and employment, or non-monetary ways, such as community cohesion and social inclusion (Figure 1).

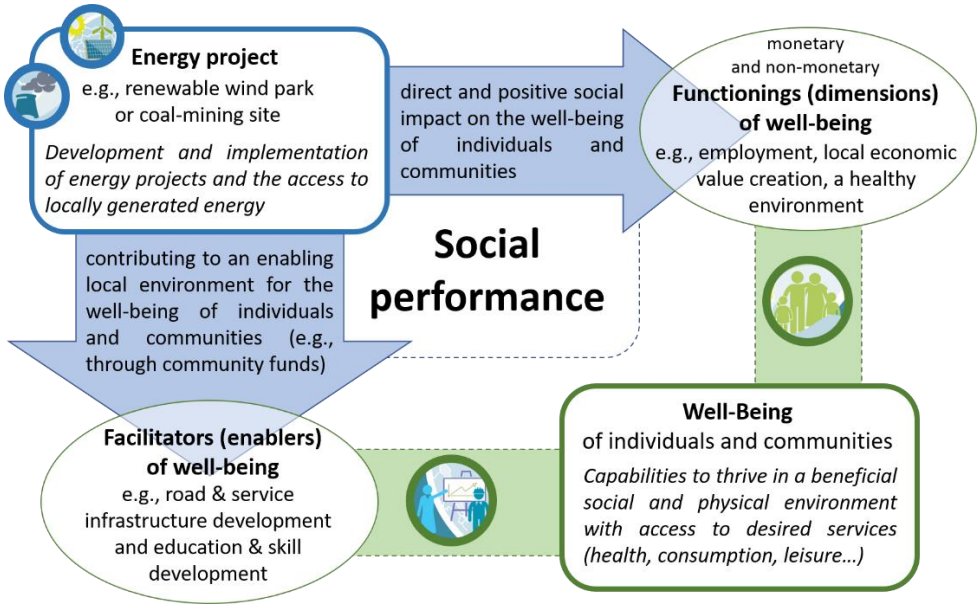

Figure 1: Social Performance Approach for energy sector investments

Source: Mbungu & Helgenberger 2021

In this paper we translate the Social Performance Approach into an applicable tool, considering conceptual lessons learned from Mbungu & Helgenberger (2021, summarized in Box 1), which we have named the Social Performance Index (SPI).

The Social Performance Index (SPI) for energy sector investments is a tool to systematically assess, monitor, compare, and communicate the social performance of energy projects for communities in terms of their (positive/negative) social impact on the well-being of communities.

We define the Social Performance Index (SPI) specifically for assessing investments and policy interventions connected to electricity generation in view of the contributions of energy project development, implementation, and use of energy services. Thus, the SPI can be applied to compare renewable energy projects with fossil energy projects in terms of their social performance. The SPI in this configuration can also be used to enhance the social performance of renewable energy projects in their planning and design phase, and this can be expected to increase local societal ownership and support for these projects.

Box 1: Conceptual lessons learned for building the Social Performance Approach (Mbungu & Helgenberger 2021)

1. Social performance characteristics are to be context-specific, i.e., in order to perform a social performance analysis, the functionings that are relevant to the focused context must be identified.

2. If we want to both understand and improve social performance, we need to not only identify context-specific functionings of individuals' and communities' well-being, but also the facilitators which determine the capability to achieve these functionings.

3. Social performance should connect to the needs, aspirations, and interests of the target group or community in focus.

4. Social performance monitoring criteria should be tangible (quantifiable), timely, and traceable for an investment/intervention.

5. Social performance monitoring should go hand-in-hand with developing enabling policies to make sure these opportunities materialize for communities and individuals.

6. Achievement of needs and well-being is facilitated by personal abilities, which can be monetary or non-monetary, as well as external facilitators, which can be technological or non-technological infrastructure and support services.

7. Meso-level facilitating conditions such as local value chains, and support organizations should be of specific relevance for analysing and facilitating the local social performance, while micro- and macro level conditions are likely to be outside the local sphere of influence.

8. Specific community needs are to be connected with local facilitating conditions to understand and assess the social performance of local energy projects.

9. Neglecting the social performance of local energy projects can cause community unrest and conflicts which can slow down or impede these projects – monitoring and planning for the social performance of energy projects should be used to reconcile political and company interests with community needs and well-being.

10. The consideration of social performance should be part of any professional relationship management among government, communities and companies and should be incorporated into a standard management tool.

2. The Social Performance Index (SPI)

Functionings and facilitators of well-being

We have developed the SPI as a tool which is easily applicable to existing tools for socio-economic impact assessments[1]. The SPI can be used to systematically and transparently quantify essential items of social performance along a set of context-specific indicators. The SPI follows capabilities and co-benefits approaches (Sen 1993, Helgenberger & Jänicke 2017) which put people's needs and concerns at the centre of transformational processes. Against this backdrop, the SPI represents a tool for social impact assessment which is centred on the well-being of local communities and their related aspirations, needs, and interests (cf. Mbungu & Helgenberger 2021).

Following the Social Performance Approach, the well-being of communities is conceptualized in terms of functionings and facilitators of well-being as well as their respective indicators. While functionings relate to personal abilities, both monetary and non-monetary, facilitators represent external factors in terms of technological and non-technological infrastructures and support services (cf. Mbungu & Helgenberger 2021). To capture the local social impact of energy projects, we have selected functionings and facilitators which represent local conditions that could be influenced locally through local energy projects, such as local value chains and service infrastructure. Furthermore, functionings and facilitators are selected as impact categories that allow capturing both existing and potential community conflicts around energy projects (such as distributional conflicts) and performed or untapped social opportunities (such as employment opportunities).

Examples of these categories are provided in Box 2 below, taken from previous social performance assessments. To ensure relevance and to account for the unique needs and aspirations of individuals and local communities, context-relevant social performance goals and indicators should be agreed upon by all relevant stakeholders before the start of a social performance assessment.

For each specified social performance target (functionings and facilitators of well-being), we define a set of (usually) three country-specific indicators. Indicators are signs or gauges that provide information on what a situation is like and how it is changing. While indicators are often dismissed as simplistic assessments of complex realities, they are an important tool for standardized and systematic evaluations and provide a clear outlook on the progress and impact of various policy measures (cf. EEA 2001). Indicators of the SPI are defined according to the SMART criteria set, i.e., they are Specific, Measurable, Achievable, Relevant, and Time-bound.

In view of the applicability and tangibility of the SPI as a tool, for each social performance target we identify one lead performance indicator which encompasses the essence of the respective factor to allow for a quick initial assessment. The lead indicator can be extended by secondary indicators for each target to provide a more detailed analysis, and to permit a more detailed understanding of the status, untapped opportunities, and shortcomings in social performance.

[1] Such as the standardized socio-economic assessment in South Africa's Renewable Energy Independent Power Procurement Programme (REIPPP)

Box 2: Social Performance Index (SPI): Examples of functionings and facilitators

Exemplary functionings (dimension) of well-being

Monetary functionings:

- Local economic value creation
- Employment opportunities

Non-monetary functionings:

- Healthy, nurturing environments
- Community cohesion and social inclusion
- Secure livelihoods
- Dignity/status/pride

Exemplary facilitators (enablers) of well-being

- Physical and service infrastructure development: digital transformation/internet access, medical treatment/hospitals, roads
- Education and skills development: training and skill development in renewable and sustainable energy
- Access to electricity: access to clean and reliable energy services
- Long-term perspective: a more secure, better quality of life for everyone at every income level is an absolute necessity if renewable energies are to gain the backing they need to make them the norm.
- Equity: inclusiveness and solidarity among the local community to fulfil social and economic/physical needs[2]

[2] According to Sovacool & Hess, the term equity "describes the right of all people within the current generation to have fair access to the entitlement of Earth's resources" (Sovacool & Hess 2017, p. 725).

Table 1: Social Performance Index (SPI) scheme: Targets and indicators

	Functionings of well-being		**Example**
Social performance targets	**Functioning 1**	**Functioning 2,3…n**	local employment
Lead indicator			jobs (FTE) created locally
Secondary indicator(s)			high- and middle-income jobs (FTE) created
	Facilitators of well-being		**Example**
Social performance targets	**Facilitator 1**	**Facilitator 2,3,…,n**	trainings and skill development in renewable and sustainable energy
Lead indicator			number of students among local population currently receiving training
Secondary indicator(s)			number of high-skilled persons among local population

3. Implementation of the SPI

Establishing the missing social link in energy transitions

To implement and apply the SPI, we draw on the transformative research approach of IASS Potsdam, which brings together the co-design of research and co-creation of knowledge among academia and society (IASS 2019), as well as on the experiences gained with dialogic co-benefits assessments in the COBENEFITS project (Sperfeld & Helgenberger 2020). The principles of co-design and co-creation ensure that the perspectives of relevant stakeholders are actively included on an ongoing basis (Mbungu et al. 2020).

In this section, we propose procedural principles and application options in four areas: (i) community co-design of well-being functionings and facilitators; (ii) incorporation of SPI into an overall impact strategy; (iii) participatory SPI assessment; and (iv) SPI integration with existing processes and tools.

Community co-design of well-being functionings and facilitators

To ensure a context-specific understanding of community well-being, its functionings, facilitators and their respective indicators, and to enable broad ownership of the SPI assessment, its results and implications, we propose to co-design the SPI with representatives of the community in focus, applying consultative interviews, focus groups or establishing a continuous working group – see Box 2 for the suggested process of performing a community-centred SPI Assessment.

Inspiration from existing social development frameworks

The bottom-up design of the context-specific SPI with identified communities and individuals is inspired by existing social impact and development frameworks (e.g., SDGs) as well as SPI, developed in other contexts (e.g., Table 3). They are to be used as "sensitizing[3]" impulses for discussion and not in a prescriptive, exclusive manner. In this way, they can help to facilitate the integration of an SPI assessment with existing processes and tools (see below).

Participatory SPI assessment

A successful SPI assessment builds on the local knowledge, perceptions, and preferences of the addressed community, and not least its ownership of the process and outcomes. This can be achieved through processes which facilitate knowledge co-creation by building on the active and inclusive participation of different groups in the community. Research has shown how knowledge co-creation processes positively contribute to community networking, problem and solution awareness and consensus building; as such, they contribute to the empowerment of the community and its members (Walter et al. 2007, Wüstenhagen et al. 2007, IASS 2019, Mbungu 2020).

The SPI assessment thus represents an empowering and participatory evaluation format (cf. Weiss 1988). Particularly in contested project developments we recommend that the SPI assessment is facilitated by an independent expert organization to ensure fairness, soundness, and bias correction in

[3] In social analysis, sensitizing concepts is used to draw attention to important features of an object of investigation, to inform an assessment and to ensure diversity in analytic perspectives (cf. Bowen 2006).

the process. In cooperative environments, however, the SPI may also be applied as a formative tool for self-evaluation, mutual learning, and project enhancement.

In addition to these procedural considerations, we recommend the involvement of research and expert organizations in the process to facilitate knowledge transfer from similar or contrasting settings to identify possible blind spots, open the analysis for counter-intuitive results, and stimulate community reflection.

Incorporation of SPI into an overall transition strategy

The Social Performance Approach can be applied to compare renewable energy projects with fossil energy projects in terms of their social performance and to increase the social performance of renewable energy projects for the well-being of individuals and local host communities. Based on experience with dialogic co-benefits assessments, we understand social performance that not only monitors energy-related policy interventions and investments (both fossil and renewable), but it also maximizes the social performance of decarbonizing energy systems.

From impact assessment to impact design: Understanding co-benefit assessments as strategic planning instruments for progressive climate and renewable energy policies to pro-actively seize social and economic opportunities (Helgenberger & Jänicke 2017). Hence, SPI assessments should not be considered stand-alone interventions but should be embedded in an overall transition strategy, connecting the energy transition to existing needs and interest, thereby facilitating the ownership and support required for making the transition a success.

Box 3: Process of performing a community-centred SPI Assessment

1. Defining the regional scope (context/community) and resources of a social performance assessment

2. Identifying stakeholder groups and individuals to be consulted in view of the representation of important interests, needs or conflicts, and the project's social/economic/transformative role in the community

3. Co-design a set of mutually agreed functionings and facilitators of community well-being for the SPI

4. Specifying an agreed list of indicators and selecting a lead indicator

5. Performing a science-driven but participatory SPI assessment, communicating and explaining the applied method

6. Compiling and communicating the results in a scientifically sound, un-biased and understandable way

7. Co-creating enabling policy options to increase the social performance of ongoing/planned/future energy projects and mitigate social conflicts

SPI integration with existing processes and tools

Several processes and tools exist to assess the social and socio-economic impacts of renewable energy and energy transitions which are being brought forward both by government agencies and expert organizations. For Germany, the IASS Potsdam suggested systematic monitoring of the social performance of the energy transition (IASS 2013) and has implemented the Social Sustainability Barometer4 as a standardized annual assessment of the societal support and perceived issues with implementing Germany's energy transition to renewables. This tool has incorporated a set of functionings and facilitators such as impacts on personal mobility, access to new technologies, employment opportunities, personal economic prospects, and perceived justness of the related policy environment (IASS 2020).

In terms of integrating the SPI into existing processes and professional tools (cf. Box 1), we provide two additional examples: in South Africa, socio-economic impact assessments are already a standard procedure for the planned evaluation of renewable energy investments in the country's Renewable Energy Independent Power Producers Programme (REIPPPP). The SPI can be used to re-evaluate existing socio-economic assessments such as the REIPPPP assessment. In this regard, a Social Performance Index for South Africa will allow defining, monitoring, and actively improving local determinants and enablers of community well-being. To showcase the nature and quality of social investments engendered by renewable projects, it has been recommended that detailed information be made available (IASS, UfU & IET 2020).

A country-specific SPI building on priority functionings and facilitators across individual communities can also prove useful in informing country assessments on the social impacts and opportunities of climate policies and Nationally Determined Contributions (NDC) to the Paris Climate Agreement. In Vietnam, recent climate policy developments are already based on socio-economic impact and co-benefits assessments (Nguyen & Helgenberger 2020). Yet these assessments tend to focus on macro-economic indicators and neglect social performance. The SPI can not only help to close this blind spot: the process of co-creating and communicating the SPI can also rally public ownership and support for domestic climate policies and international commitments (Helgenberger & Mbungu 2021; IASS, GREENID, UFU & IET 2020).

[4] https://www.iass-potsdam.de/en/barometer

4. Case Study: Social Performance of renewable energy in Mexico

From igniting community conflicts to unfolding social performance: Prospects for renewable energy projects in Mexico

4.1 Country context

> The Mexican government has reiterated its commitment to transforming the country and bringing greater equality and social justice to Mexican citizens. At the same time, the country is faced with the challenge of fomenting an energy transition that will allow it to meet its national and international climate objectives.
>
> IASS/GIZ (2019). Co-benefits of energy efficiency and renewable energies for sustainable development in Mexico. CONECC Briefing, October 2019

With the Energy Transition Law (Ley de Transición Energética, LTE) enacted in 2015, Mexico's government established a legal framework to push towards a greener power sector. The LTE target of increasing Mexico's share of renewable energy sources in its power generation to 35% by 2024 has been amended by setting additional targets for 2030 (38%) and 2050 (50%) through the Transition Strategy to Promote the Use of Cleaner Fuels and Technologies, issued in the year 2020. By the end of 2020, the share of renewable energy sources in the country's power generation had reached 27.6% (65,401 GWh, Government of Mexico 2020).

However, Mexico's transition towards higher shares of renewables has not been entirely swift. While a variety of social and economic opportunities for renewable energy have been reported for Mexico (IASS/GIZ 2020; Government of Mexico 2019), many renewable energy projects, particularly wind energy projects, have since been subject to social discomfort. Communities in the state of Oaxaca in particular have brought attention to difficulties they have experienced with the development of wind parks. In one instance, expectations raised by project developers that local communities would financially benefit from wind energy projects were not fulfilled, leading to dissatisfaction among these communities (cf. Burnett 2016, El Universal 2019). Consequently, communities are being polarized and are dividing into those in favour and those against renewable energy projects (Luna & Torres 2018).

When taking office in December 2018, the Mexican government under President Obrador made social politics a top priority, particularly by aiding indigenous and marginalized communities across the country. Given the social discomfort towards renewable energy projects and with the president's agenda towards more social politics, the social performance of renewable energy is likely to define the future direction and pace of Mexico's energy transition.

4.2 Study

In an explorative study conducted by IASS Potsdam in the context of the COBENEFITS project in 2020, a Social Performance Index (SPI) was developed with stakeholders of communities who had been positively or negatively impacted by renewable energy projects. The study centred on two questions:

- How does a renewable energy project perform socially, i.e., how does it contribute to the well-being of individuals and local host communities?
- How can the social performance of renewable energy projects to improve and sustain the well-being of individuals and local host communities be ensured and enhanced?

This case study builds on insights from consultative interviews with renewable energy experts, activists, community leaders, representatives of non-governmental organizations, and public officials from the environmental sector in Mexico (cf. Table 2). The interviews shed light on diverging perspectives and experiences with renewable energy projects in Mexico regarding their social performance for local communities. The interviews explored the different notions and understandings of what social performance means for communities in Mexico as well as the perceived status quo and the prospects of renewable energy projects performing for society.

The interviews were conducted between September and November of 2020. The input gathered from the interviews was connected to previous research (IASS/GIZ 2020). The interviews were semi-structured and guided by the following queries:

1. Expertise and field experiences related to the interviewee
2. Impacts of renewable energy projects on local communities and existing conflicts
3. Building a future where renewables effectively deliver social benefits
4. Success stories where renewables create a positive impact in the communities

Table 2: Stakeholder perspective

Represented perspective	Organization type	Number of interviewees
Community energy and gender activist	NGO	1
Community well-being and environmental legislation activist	NGO	1
Indigenous community representative	NGO	1
State government “territorial and environmental conflicts” representative	Public sector	2
State government climate policy representative	Public sector	2
Renewable energy expert	University	1

4.3 Exploratory Social Performance Index for Mexico

The presented Social Performance Index summarizes the identified functionings and facilitators of well-being connected to local energy development processes in Mexico. The identified social performance targets have been supplemented with indicators, building on the interviews and external sources (such as ICAT 2020).

Given the limited stakeholder group and time of involvement, the presented SPI should be considered of exploratory nature. It can serve as a basis for empirical studies and policy consultation processes to advise and increase the social performance of energy projects, mitigate social conflicts, and identify unexplored social opportunities, not least with a view to make the Paris Climate Treaty a success for the world and its communities.

Table 3: Social Performance Index (SPI), exploratory for Mexico (part 1/2 functionings)

Functionings (dimensions) of well-being						
Social performance targets	**Employment opportunities**	**Local economic value creation**	**Community cohesion and social inclusion**	**Secure livelihoods**	**Status (pride/dignity)**	**Healthy, nurturing environments**
Lead indicator	Jobs (FTE) created	Local annual tax revenue	Community funds: annual budget	Share of population with an average monthly income above the social security limit	Share of population with high-income in comparison with country/state/…	Share of local population with pollutant-induced diseases
Secondary indicator	High- and middle-income jobs (FTE) created	5-year trend in local enterprise development	Local community/social programmes: annual budget	Safety: number of robberies/burglaries/ homicides	Number of external visitors to local RE site	Land autonomy: share of area owned by community

Table 4: Social Performance Index (SPI), exploratory for Mexico (part 1/2 facilitators)

Facilitators (enablers) of well-being						
Social performance targets	Education and skilling	Physical and service infrastructure development	Transparency and inclusiveness	Energy access	Equity	Long-term perspective
Lead indicator	Number of participants in skilling programmes directed to the community	Number of local physicians per 1000 inhabitants	Inclusive planning and procurements processes	Local electricity costs/tariffs per kWh	Financial ownership of the lowest income group in revenue	Share of the 20-40 year-olds among local population (5-year trend)
Secondary indicator	Number of high-skilled persons among local population	Number of grocery stores per 1000 inhabitants	Share of population informed about social and economic benefits related to the project	Share of local population unable to pay electricity bill	Representation of the lowest income group in decision-making (political ownership)	Local private investments (and/or public investments)

4.4 Policy options to increasing social performance and mitigating social conflicts

Through the stakeholder interactions, enabling policy options have been identified which would increase the social performance of renewable energy projects and mitigate social conflicts in affected communities. The exploratory study identified three action areas with enabling policy options to facilitate the social performance of renewable energy projects for communities in Mexico. This is outlined in more detail in Box 4 below.

1. **Project governance:** Restoring community trust in renewables through inclusive planning and implementation processes
2. **Land use planning:** Promoting best practices to embrace traditional and local land use
3. **Project ownership:** Reconsidering renewable energy investments and revenues

Box 1 Social Performance Action Areas: Facilitating community well-being through renewable energy development in Mexico

SP Action Area 1 – Project governance: Restoring community trust in renewables through inclusive planning and implementation processes

- Existing mandatory consultations can be further strengthened by incorporating specific guidance for improving the accessibility and readiness of the information to ensure that all community members can follow and participate in the process.

- Specific measures include actively approaching community members to increase their awareness in the development process, simplifying the language of the process by communicating a clear schedule of project development and consulting about the start of the planning phase, and ensuring the project's transparency in terms of scope, investors, and beneficiaries.

- Specified guidance to inclusive project planning and implementation along these measures could foster the active participation of community members in local assemblies and increase local ownership, community trust, and support in renewable energy projects.

- A high level of transparency, particularly concerning financial flows around the projects created within and outside communities would also help to counter existing corruption problems in medium and large-scale infrastructure projects. Practices used by public officials and developers such as non-transparent procurement processes and fixing over-priced contracts have been denounced by the Ministry of Energy (SENER) and the President of Mexico.

- Opening tendering processes through more transparent procurement decision frameworks and including members of the communities as part of the decision board could reduce corruption. Reducing loopholes for corruption can enhance the process, facilitate negotiations, and mitigate conflict. Cases of corruption have been repeatedly denounced by communities in the different stages of the development and implementation of renewable energy projects in Mexico.

SP Action Area 2 – Land use planning: Promoting best practices to embrace traditional and local land use

- Land and soil have special significance for communities beyond their economic value and legal ownership, issues that are typically considered in planning renewable energy projects. A local-cultural understanding and recognition of the non-economic values of land for communities can be actively fostered by a regardful continuous dialogue with community leaders, native families, and local producers to share their knowledge on existing and historical land use.

- In addition to recurring inquiries and dialogue sessions with community members, developers, and local authorities, the understanding and recognition of the non-economic values of land for communities could be further enhanced by collaborating with local universities and academic experts in mapping the territory according to productive and heritage use.

- Promoting best practices to respect traditional and local land use in the development and implementation of renewable energy projects would help to counter unconsented changes in land and soil use from their traditional activities such as agricultural, forestry, preservation, or traditional uses and customs, thereby tackling the frequent unease especially rural and indigenous communities in Mexico feel regarding the development of renewable energy projects.

- A proactive and intentional approach of project developers, incentivized through best-practice guidance by public authorities, could reduce conflicts with traditional customs, local industries, and with native protected lands while founding a respectful and mutually beneficial relationship with local communities.

SP Action Area 3 – Project ownership: Reconsidering renewable energy investments and revenues

- Community-oriented ownership schemes directed towards smaller-scale investors and locally shared investments, such as community shares, mini bonds, revenue-based financing, and co-investment in communal off-grid solar, should be explored to simultaneously increase the financial ownership of local citizens, increase families' income, and increase local private investments.

- Local participation can increase the awareness of the social performance of local energy investments and regain trust in renewable projects.

- Traditional ownership and procurement schemes such as large-scale auctions in both fossil and non-fossil energy projects are currently poorly received by communities in Mexico. Community-oriented ownership schemes can play an important role in re-establishing confidence not only towards the established developers and public stakeholders but also in renewable energy technologies in general.

5. Conclusions and outlook

Unless the direct contribution of measures to mitigate climate change, such as renewable energy and energy-saving measures, to local socio-economic progress and well-being in communities is systemically measured, our understanding of existing gaps and available opportunities to fill such gaps will remain elusive, making it difficult to address the twin challenges of ensuring access to clean and reliable energy services and climate protection.

The aim of the Social Performance Index (SPI) for energy sector investments is to improve community well-being (see section 2). It allows specifying social performance targets and indicators that systematically assess, monitor, compare, and communicate the impacts of energy projects on the well-being of individuals and local communities, coping with negative impacts, and capitalizing on the benefits of such projects. This systematic, indicator-driven social performance assessment is important because it can show the achievements in the transition to renewable energy thus far, and provide an outlook of the changes needed to ensure achievement in future. Both functionings and facilitators can be understood as policy goals which can also be connected to the Sustainable Development Approach. In this regard, we emphasize the importance of measuring social performance from the point of view of affected individuals and communities because they understand their own needs, aspirations and the challenges and opportunities to meet them best (Mbungu 2020). This individual and context-specific focus ensures that this assessment has a direct connection to immediate individuals' experiences and their experiences during interactions with their immediate surroundings (local communities). The approach also ensures that renewable energy development and investments take into account the local socio-cultural and environmental considerations, local governance and institutional structure, unique needs and aspirations, as well as the available opportunities and challenges at the individual and local community levels, aspects that are often overlooked or taken for granted at the macro level.

The different categories of functionings, facilitators, and indicators have been defined against the backdrop of our current social performance/co-benefits assessments[5] in countries of the Global South. While the displayed illustrative Social Performance Index for Mexico can be used to inspire future social performance assessments, it should not be used as a template. Rather, we understand SPI assessments as empowering and participatory evaluations which build on the local knowledge, perceptions and preferences of the addressed community and not least its ownership in the process and outcomes. Correspondingly, we consider the context and community-specific co-design of the SPI and its social performance targets an integral part of applying the Social Performance Approach.

Measuring the contribution of renewable energy to enhancing the health and well-being of individuals and communities is especially important for the majority of people in countries of the Global South, whose lives and livelihoods – and in some cases survival – depend on sustained access to clean and sustainable energy services as well as a healthy environment. However, we expect that the SPI is equally relevant for energy transitions in other regions and countries like Germany, where social ownership in renewable energy plays an important role in social and the political discourse (cf. Wüstenhagen et al. 2007, IASS 2013, Helgenberger 2016, Setton 2020) and can be connected to existing approaches[6] to measure and ensure the social sustainability of the transition.

[5] See www.cobenefits.info

[6] Such as the Social Sustainability Barometer, developed by IASS Potsdam and partners: https://www.iass-potsdam.de/en/barometer

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7. About the authors

Sebastian Helgenberger
Sebastian Helgenberger leads research projects on the social and economic dimensions of climate action and renewable energy and on the social sustainability of energy transitions. He studied environmental sciences at Leuphana University Lüneburg and ETH Zurich and holds a PhD in socioeconomics for his work on the relevance of global warming on investment decisions in small and medium enterprises.

Grace Mbungu
Grace Mbungu is a research associate at the IASS Potsdam. Her research focuses on the social dimensions of energy access and transitions towards sustainable energy for all, with a focus on the Global South. She holds a BA in Political Science and Gender Studies as well as a Master's in Public Administration (MPA) with a focus on human rights and international development from Bowling Green State University, Ohio, USA. She holds a PhD from the University of Stuttgart.

Héctor Rodríguez
Héctor Rodríguez is a researcher and project manager focused on climate and energy topics. He holds an interdisciplinary MSc in economics, politics, and philosophy from the University of Hamburg and a BSc in economics and international business from the University of Guadalajara.

Almudena Nunez
Almudena Nunez is a Research Associate at the IASS where her research focuses on Hydrogen Partnerships. She holds a bachelor's degree in international relations from Anahuac University in Mexico, and a master's degree in public policy from the Willy Brandt School of Public Policy in Germany.

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Contact:
Sebastian.Helgenberger@iass-potsdam.de

Address:
Berliner Strasse 130
14467 Potsdam
Tel: +49 (0) 331-28822-340
Fax: +49 (0) 331-28822-310
Email: media@iass-potsdam.de
www.iass-potsdam.de

ViSdP:
Prof. Dr Mark G. Lawrence,
Managing Scientific Director

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