

BRIEFING PAPER

Good neighbours

A development policy perspective on community acceptance and procedural justice in the context of utility-scale renewable energy

Boris Schinke and Jens Klawitter

Brief Summary

Simply because utility-scale renewable energy (RE) projects substitute for fossil fuel plants does not *per se* imply that they will result in sustainable, equitable or even pro-poor development outcomes in the environments in which they are embedded and on the people they serve.

As a consequence, it is increasingly recognized that achieving community acceptance may be a constraining barrier to the further progress of converting current unsustainable energy infrastructures into a sustainable energy system based on high shares of RE.

This paper highlights that procedural justice and engaging meaningfully with local communities in the vicinity of utility-scale RE projects should be regarded as a long-term investment into a mutually sustainable neighborhood: strong communities benefiting from RE projects and a sustained *license to operate* for the full lifespan of RE projects.

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1. Introduction

The increasing impacts of climate change on the natural environment, the economy, and human livelihoods underscore unsustainable development pathways in most parts of the world. As a consequence, socio-economic development can no longer follow traditional energy trajectories that depend heavily on fossil energy sources. Instead, the adoption of renewable energy (RE) and the phase-out of fossil fuels will need to be increased significantly to enable climate-compatible development and pave the way towards resilient societies. While decentralised small-scale RE technologies will play a major role in the envisioned energy future, centralised utility-scale RE projects¹ will be required as well to generate dispatchable and reliable electricity for urban and industrial centres.

Yet, the deployment of utility-scale RE projects does not occur in isolation but within the complexity of socio-economic and environmental systems. While RE projects are generally favored by society (e.g., Chatzimouratidis and Pilavachi, 2008), this acceptance has not always been reflected in community responses due to their transformative characteristics that may adversely affect local communities. This is because local communities in the proximity of utility-scale RE projects tend to bear much of the socio-environmental externalities and see little of the benefits - especially since the electricity generated is generally transported to distant consumption centers instead of being used locally. In some cases, community discontent, *NIMBY (Not In My Backyard)* attitudes and civil conflict in regards to conflicting interests have, therefore, caused RE projects to be delayed, modified, or abandoned altogether and thus resulted in significant economic burden for project developers, energy suppliers and national budgets (Pasqualetti, 2011). This is particularly apparent in the case of utility-scale wind and solar projects, which have become a subject of contested debates in many countries (e.g., in Germany, Denmark or the U.S.).

Hence, simply because utility-scale RE projects substitute for fossil fuel plants does not *per se* imply that they will result in sustainable and equitable development outcomes in the environments in which they are embedded and on the people they serve. As a consequence, it is increasingly recognized that achieving community acceptance may be a constraining barrier² to the further progress of converting current unsustainable energy infrastructures into a sustainable energy system based on high shares of RE and pursuing larger national goals, including socio-economic development, poverty reduction, climate change mitigation and energy security (Pasqualetti, 2011). Research shows that alongside others factors, procedural justice in form of meaningful community engagement in the deployment of utility-scale RE projects emerges as one major determinant of fostering community acceptance (Wüstenhagen et al., 2007).

This is where the roll-out of RE offers two unique opportunities: to a) break with traditional energy pathways, and b) depart from the largely technocratic top-down driven policy structures that are connected to utility-scale energy projects in general and specifically to the fossil power supply system by enhancing community engagement in energy decision-making.

¹ Even though there is no commonly accepted definition as to what size comprises "utility-scale", we understand it as RE projects that feed into the grid, supply a utility with electricity, have a Power Purchasing Agreement (PPA) in place, and are generally in the five to hundreds of megawatts (MW) range. Projects on the top of this scale are also often called mega or major projects. According to Thießen (2012:10) these projects require substantial investments (more than 250 million Euro), have relevance beyond their region and usually require special regulatory and development instruments.

² There is a range of other determinants, such as grid capacity, economic viability or regulatory framework conditions, which require policy direction, but the degree of community acceptance is one of the most difficult areas to influence.

To successfully transform energy systems and address what Ringen (2007) calls the "democratic deficit in traditional energy policy-making", innovative models are needed to shift from an overly top-down approach (DEAD - "decide, announce, defend") to a less formalized and more participatory and community-orientated model in the context of utility-scale RE (MUM - "meet, understand, modify") (Vanclay et al., 2015:20; see info-box).

In this regard, the introduction of participatory governance in RE decision-making is particularly promising since adverse implications stemming from RE technologies are found to be generally lower and benefits on the living standard as well as levels of acceptance generally higher compared to fossil energy sources (Chatzimouratidis and Pilavachi, 2008; Maxim, 2014). Because of this advantage, acknowledging affected citizens as active participants and encouraging positive relationships with local communities in the development of utility-scale RE projects could be seen as a long-term investment into a mutually beneficial neighborhood: strong communities benefiting from RE projects and a sustained *license to operate* for the full lifespan of RE projects. This would, however, imply RE policy-makers to move beyond "do-no-harm" approaches towards an enhancement philosophy in which the preferences, capabilities and needs of affected communities as well as a commitment to a participatory partnership and shared decision-making model would form the basis of project design and development.

2. Aim of the publication

Based on the assumption that one key aspect of community acceptance in the context of utility-scale RE deployment is the level of engagement that local communities are granted in the project development, our publication aims to provide some answers to the following question:

How could the outcomes stemming from utility-scale RE projects at the local level be improved through procedures of participatory governance, so as to balance legitimate community interests with achieving national policy goals?³

The answers developed in the following chapters are, on the one hand, based on a myriad of scientific publications and manuals that have been developed on the issue of community involvement in project, program and policy development. On the other hand, we recall experiences made by Germanwatch in the context of Concentrated Solar Power (CSP) in Morocco, and in the grid debate at the national level in Germany and in the EU during the last four years (e.g., Rottmann, 2013 and Hänlein, 2015).

In the first part of the paper, we introduce the concepts of community acceptance (3) and community engagement (4) and illustrate different challenges and opportunities of participatory governance in RE decision-making (5). Although, our publication has no geographical focus (for example on Europe), we emphasize the potential of utility-scale RE to address poverty alleviation in developing countries in the central part (6). Lastly, we highlight the special role Civil Society Organisations (CSOs) could play to support community engagement processes in the context of utility-scale RE projects (7) and conclude with some general principles on how to develop RE projects in partnership with communities, and achieve more sustainable, locally-appropriate, and potentially acceptable project outcomes (8).

³ Although participation may also be understood economically as financial participation in RE policy-making, we focus only on community engagement in RE project decision-making processes.

3. Community acceptance in utility-scale RE

In the context of utility-scale RE, community acceptance can be defined as "the acceptance secured for a development from affected stakeholders within the community in which the development is located" (Hall et al., 2013:207). As part of a broader framework on social acceptance, community acceptance is limited to local stakeholders in the vicinity of concrete projects and, therefore, differs from socio-political or market acceptance due to the project proximity to and effects on local communities. According to this definition and in line with the work of Wüstenhagen et al. (2007), Devine-Wright (2011) and Cohen et al. (2013), we understand community acceptance as a multi-dimensional concept determined by different underlying factors. Built upon the definition of these scholars, and derived from an empirical case study of a 160 MW CSP project in Morocco, our concept of community acceptance evolves around the *project outcomes and processes* in three dimensions: the livelihood context embedment of a project, the project's livelihood sustainability, and community perceptions and awareness (see fig. 1) (Germanwatch and Wuppertal Institute, in press).

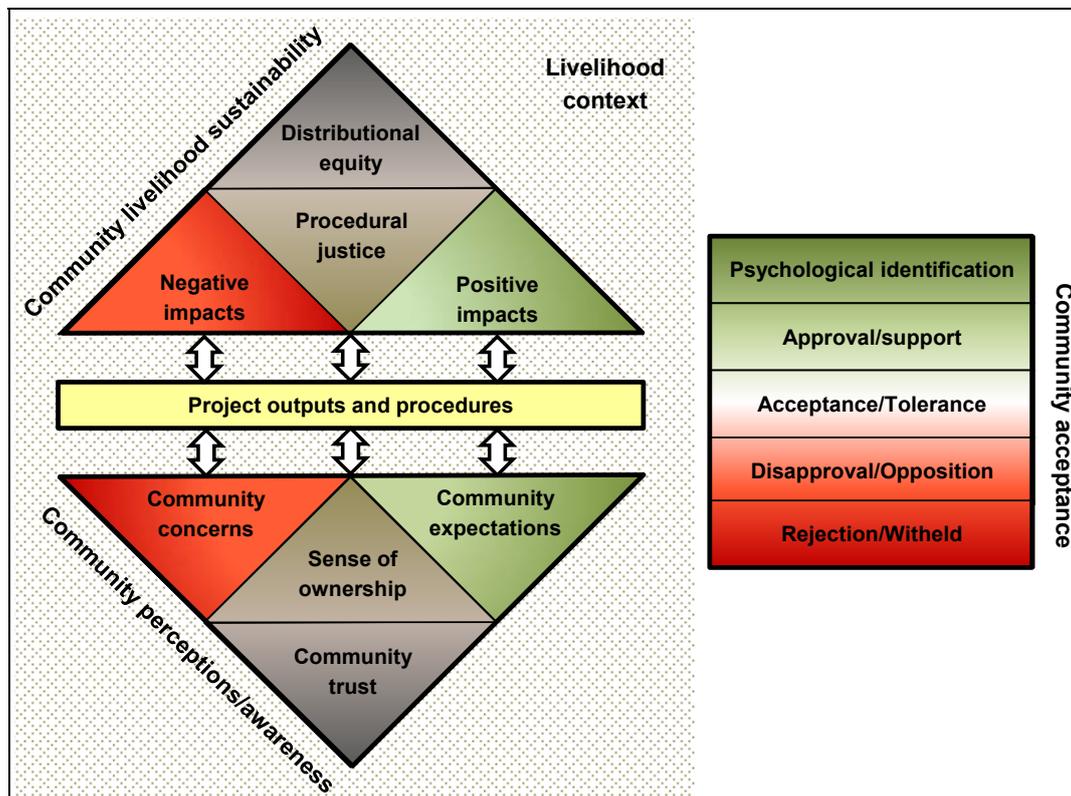


Figure 1: Factors influencing the livelihood dimension and community acceptance.

The livelihood context is shaped by the geographic location as well as the exposure and coping capacities of communities in regards to prevailing livelihood challenges, in which a specific project is embedded. It has four categories:

- The *biophysical and socio-economic vulnerability context* that refers to trends, shocks and seasonalities which impact on people's livelihood situation;
- The prevailing *socio-political and institutional structures and processes*, e.g., policies and legislations, which enable or constrain peoples' access to livelihood assets;

- The *livelihood assets* which people own or have access to (social, natural, financial, political, physical, and human);
- *Peoples' livelihood strategies* to mobilize their assets to achieve their livelihood goals, such as improved food security, employment or poverty reduction.

Implications for the community livelihood sustainability relates to the direct or indirect consequences and issues of justice of a project during its planning, implementation and operation phase. It is composed of four determinants:

- *Positive impacts or benefits* stemming from the project, such as employment and income opportunities, skill development, technology and knowledge transfer, improved local infrastructure and services, domestic industry generation or reversed migration patterns;
- *Negative impacts* stemming from the project, such as pollution and health impacts, safety aspects, influx of outsiders, deprived access to agricultural land or resettlement, competing water uses, loss of cultural heritage, diminished view-sheds, inflation of commodities, loss of sense of place or social conflict;
- *Distributional justice* relates to the extent and fairness in which benefits and burdens are distributed among the affected communities and encompasses benefit sharing mechanisms, e.g., local content requirements, voluntary social development funds, or compensation regimes in case of displacement or loss of livelihood assets;
- *Procedural justice or community engagement* is a prerequisite for distributional justice and refers to dialogue procedures, e.g., information provision and transparency, as well as meaningful participation in decision-making and accountable grievance mechanisms.

Community perceptions and awareness of the project relates to the local community's conception of a project as determined by the project's context embedment and livelihood sustainability. It is also composed of four determinants of which two can be summarized in one:

- The understanding of the project's procedures and outcomes translates into *community expectations and concerns*, which can be exaggerated, realistic or weak, depending on the four determinants of the project's livelihood sustainability;
- *A sense of ownership or buy-in* develops among affected communities mainly through the axes of distributional and procedural justice and vice versa, allowing citizens to get their voices heard (process), having a say in the project decision-making (outcome) and in the fair distribution of project outcomes;
- *Community trust and credibility* is also connected to perceptions of procedural and distributional justice and the relationship between local stakeholders and decision-makers, thereby very much relating to community ownership as well as to the understanding and fulfilment of expectations and concerns.

While it is clear that these factors all somehow influence community acceptance, their *exact* interplay as well as the relevance of additional context-specific determinants not mentioned here are still up to scientific debate and research (Ebert et al., 2015:53). Simplified cause and effect relationships are often not sufficient to explain the presence or absence of community acceptance. For example, the notion that more transparency, which is mostly related to sufficient information disclosure, would lead to more acceptance will not always hold true (e.g., more information about high risk technologies and their potential hazardous impacts will probably lead to less acceptance). Moreover, a project facilitated by a project developer that already enjoys a high level of trust may be able to counterbalance participatory weaknesses. Hence, the livelihood context in which the project is embedded makes every situation unique with varying determinants and calls for tailored processes, methods and tools in order to achieve community acceptance.

4. Community engagement in utility-scale RE

The way in which decisions are made, and are perceived to be made, has a critical impact on the acceptance of RE projects in neighboring communities and influences whether conditional supporters may turn into objectors. The procedural dimension in utility-scale RE deployment is therefore crucial for its further roll-out and can deliver mutual benefits to all stakeholders involved - policy-makers, project developers and community citizens.

However, although genuine community engagement may increase the likelihood of RE projects to be met by higher levels of community acceptance rather than opposition, caution must be paid not to understand participatory procedures as means to placate project-affected communities or remove all objections. Instead, it should always be viewed as the democratic right of local communities to equity, fairness, transparency (e.g., established in the Aarhus Convention or as a core value of *Social Impact Assessments (SIA)*) and to have a say in decisions that concern their wellbeing. But most importantly, it should always be understood as an open-ended, exploratory and deliberative process to foster community empowerment, consensus-building and cooperation in RE decision-making, which optimally could lead to project approval or adjustment but possibly also to rejection among involved community stakeholders.

There are various definitions of giving local interests an active voice in decision-making processes. However, because the terms *public involvement*, *public participation*, and *community engagement* are essentially synonyms, we hereafter collectively refer to it as community engagement. As an important building block of participatory governance and following Loukopoulos and Scholz (2005), we understand it in the context of RE as the active "involvement (of community stakeholders) in decision-making with the purpose of influencing the choices being made (that will likely affect their lives)" (Loukopoulos and Scholz, 2004:2205).

According to Minkler (2000), community engagement also has an underlying philosophy about empowerment and social inclusion, particularly of minority and vulnerable groups and, thus, is additionally characterized by:

- A recognition of limitations of expert knowledge and, as a consequence, valorization of local knowledge and community expertise;
- A tendency to be driven by community priorities and capabilities rather than external expert or project priorities;
- An emphasis on community strengths and its problem-solving capacity, use of local resources and supporting local development.

These arguments in favor of participatory in contrast to technocratic expert-oriented approaches in decision-making processes are summarized by Goldschmidt (2014:40) as the *substantial motivation* for participation. Goldschmidt also recognized a *normative motivation* for participation meaning that it is the legitimate, democratic right of affected stakeholders to play a part in the decision-making process. The normative argument for participation becomes even more important as complex decision problems are often associated with collective value-judgments and perspectives that must mediate between different social interests. A third argument for participatory approaches mentioned by Goldschmidt is the *instrumental motivation*: For affected stakeholders it is often difficult to understand and comprehend decisions made on an institutional level. Therefore, it is important to integrate affected stakeholders in the decision-making process and convey competence. Through participatory processes, affected stakeholders may better be able to recognize not

only their interests, but also which other vested interests and societal interests influence the decision-making process.

Despite its rationale to "level the playing field in the sense that everyone should have an equal voice in the process" (Deitz and Stern, 2008:207), these characterizations of community engagement are somewhat idealized as in reality the extent of citizen involvement in project development can differ significantly along three axes: the involved stakeholders, the level of influence, and the project phases.

The stakeholders: The key question here is: *Who should get engaged in the project's decision-making process?*

In principle, community engagement should encompass different stakeholder groups (fig. 3). Since this paper is about the community level in utility-scale RE, a closer look on what constitutes local actors to be involved is required. The selection of community stakeholders to be involved in the project development is critical for both the success of the community engagement and the project decision-making processes. According to Wilburn and Wilburn (2011), civil stakeholders that should be engaged can be divided in two groups depending on their affectedness by and interest in the project (see also fig. 2):

Vested stakeholders "[...] have a right to the possession of something tangible in the community in which the social license to operate is being requested [...] [for instance] owning physical property or inhabiting property with a need for resources such as water, arable land, and clean air". Some examples of vested stakeholders include: local residents, people who will be affected by the roads and construction works, and people in communities where construction workers are staying (Vanclay, 1999).

Non-vested stakeholders "[...] have an interest in the activity that is being pursued in the license to operate" (Wilburn and Wilburn, 2011: 9). Non-vested stakeholders could be non-resident natives that have a cultural attachment to the site or civil society groups, such as CSOs, that have an interest in the environmental conservation of the area or the livelihood of local communities, but also hold strong opinions in regards to the promotion of RE in general.

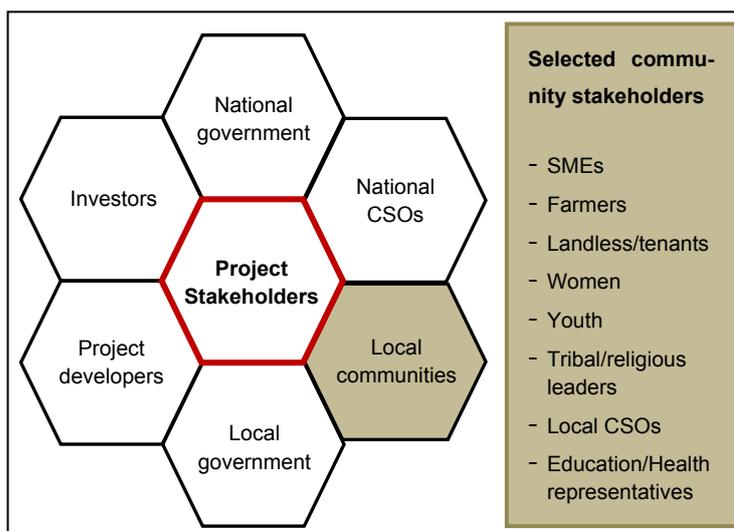


Fig. 2: Project stakeholder groups

With this definition, stakeholders can be approached in a way that is most fitting. However, while not all stakeholders need to be engaged in the same way or provided the same level of influence, it is important to include and approach pro-actively especially vulnerable and marginalized groups as these groups often have the least means of making their voice heard.

The level of influence: The key question here is: *To what extent are decision-makers willing and able to engage affected communities in the project decision-making process?*

Community engagement can be realized to varying extents, referred to as increasing levels of influence. In the academic literature, several different models of community engagement have been identified by scholars.

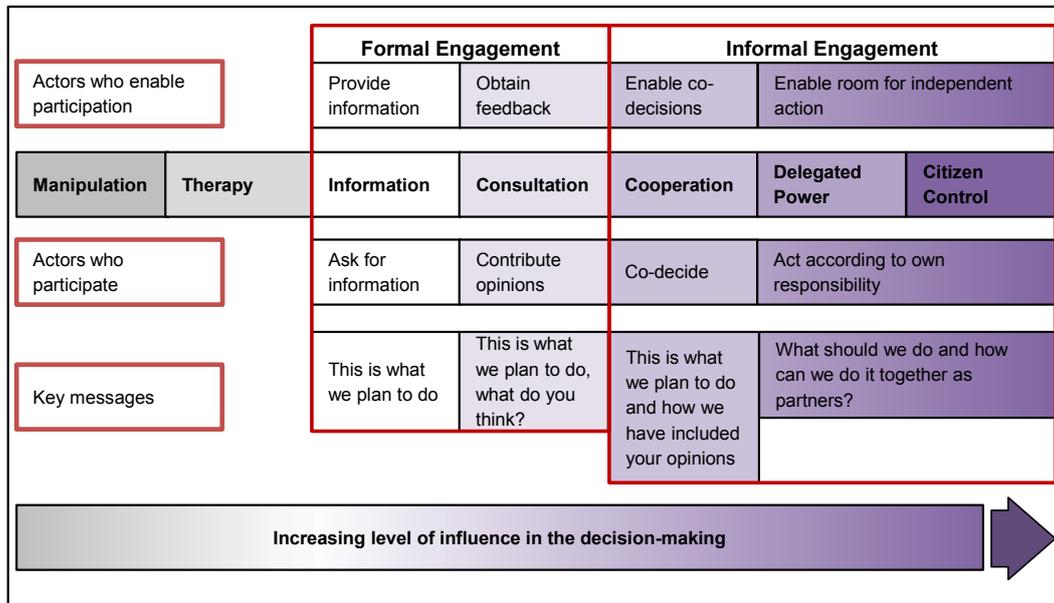


Figure 3: Community engagement as adapted from Arnstein (1969) and Rau et al. (2012).

A widely used version of community engagement is Arnstein's ladder of participation (1969) including eight levels of citizen influence, with each level representing a more active role for the community in decision-making. In order to provide a more comprehensive picture, we adapt a slightly adjusted version of Arnstein's ladder of participation and merge it with a more recent model developed by Rau et al. (2012), which additionally considers the different roles of involved and involving actors along the levels of influence. Based on this model, four levels of community engagement with different levels of influence are differentiated, ranging from information to consultation, to cooperation and self-governance (citizen control) (see fig. 3).

- *Information:* Unlike Arnstein (1969), who also took into account negative engagement tactics, e.g., *manipulation* and *therapy* to "educate" or "cure participants" (Arnstein 1969:217), we consider information as the lowest level of influence because the provision of transparent, understandable and timely information on the project's outcomes and processes is a prerequisite for any form of community involvement.
- *Consultation:* On the level of consultation, local stakeholders can contribute inputs through measures of a two-way dialogue with project decision-makers, such as concerns and aspirations, but still lack real sharing of power in the decision-making process. It includes mostly consultancy feedback and input gathered from a representative community body during a limited comment period with few public meetings, for example on scoping of potential impacts or establishing and dispersing a local development fund to support local community-based projects as voluntary enhancement or *Corporate Social Responsibility (CSR)* measures.

In the decision-making of utility-scale RE projects, providing information and consultation is usually the dominant *formal* model, legally fixed in permit granting requirements of funding institutions or state legislations and put into practices through the vehicle of *Environmental Social Impact Assessment (ESIA)* studies during the project planning phase. It corresponds to a "decide, an-

nounce, defend" mode of community engagement and bears the risk of being accused of tokenism with, what Hildyard et al., (2001) call "ghostly participants" ultimately only there because their involvement lends credibility and legitimacy to decisions that already had been made. If we are to avoid the situation of "ghostly participants", it can be decided to go beyond the *formal* model towards the sphere of *informal* community engagement procedures, reaching cooperation ("meet, understand, modify") or even self-governance. Both *formal* and *informal* forms are often combined and closely linked.

- *Cooperation*: At the level of cooperation, the degree of interaction moves from consultative dialogue to deliberative participation and mutual learning. This is where the active involvement of local citizens begins by providing them with opportunities of consensus-building, co-decision, and incorporating their opinions at least in some parts of the project development process. It includes enabling a wider spectrum of local residents or groups to contribute to the design and delivery of the project and tailoring it in ways to fit local circumstances.
- *Self-governance*: The highest level of influence is reached if those parties involving citizens in the decision-making *delegate the power* into the hands of citizens, enable shared decision-making among local authorities, project developers and affected communities, or collaborative *citizen control* where a project is fully governed by citizens. This is where one could speak about developing an RE project in partnership and with shared responsibilities. Yet, in the case of utility-scale RE projects, this model is rather rare. However, some medium-size examples do exist, such as a small-scale PV or biomass plant to supply a village.

Although increasing levels of influence are intuitively associated with more socially robust project outcomes, the level of influence reached and the participatory techniques applied at each project stage and in each project process (see fig. 4) are highly project-dependent. Clearly, there is no "one size fits all" solution to community engagement and no "the more, the better" recommendation. It can differ significantly according to the appropriateness of the situation defined by the project location, its scale, its implications, and the degree for room to manoeuvre (Nanz and Fritzsche, 2012). Nevertheless, at its root community engagement always implies a relationship with local stakeholders, and its successful application is measured by the perceived quality of the engagement and the perceived quality of the mutual relationship between the decision-makers, the project developers and local communities.

Depending on the national or local political system for example, different degrees of participatory governance are possible and different levels of community engagement advisable. In decentralized democratic countries, participatory governance in the context of utility-scale RE can be taken to its ideal form with the highest levels of community influence. This, however, might not be possible in countries with centralized authoritarian structures that provide less room for citizen involvement. Also, in cases where a project leaves little room for changing the original decisions, informing and consulting techniques may be more appropriate. Especially if there are no possibilities for incorporating stakeholder opinions that would substantially change the project design, rather *informal* engagement procedures might end up in frustration, mistrust and opposition as people will give input and subsequently realize that their input had no added value or influence (Rottmann, 2013). On the other side of the spectrum, however, it can be concluded that the more adverse implications or the more benefits a project could bring, the more the engagement process could move towards a proactive and cooperative approach. While in cases of strong opposition this may come with a certain degree of further social resistance (see also chapter 5), evidence from European countries suggests that for projects that already receive a strong *social license to operate*, the move towards cooperation is more likely to leverage further acceptance and benefits.

Info-Box: Conventional (formal) and unconventional (informal) procedures

Community engagement procedures can be distinguished in *formal* (conventional) and *informal* (unconventional) forms of participation (Goldschmidt, 2014:66). *Formal* procedures are embedded in an institutional framework and they are often prescribed and mandated by law. The advantage of these processes lies within their direct embedment in lawful decision-making processes with concrete, binding results. However, the scope of co-decisions within these procedures and the exchange between decision-makers and affected stakeholders or other groups is often comparably low. *Informal* procedures, on the other hand, are not mandated by law, but are also able to accompany decision-making processes. They are often closer related to self-organized citizens' commitment. Moreover, Bentele et al. (2015:6) describe that, due to a changing society that has, e.g., a higher level of education as well as more time and resources for engagement, top-down decisions and *formal* engagement are no longer "per-se" socially accepted. Consequently, "new forms" of *informal* engagement procedures are frequently recommended that do not replace, but usefully complement *formal* forms in order to establish trusting relationships and, optimally, restore acceptance.

The project phases: The key question here is: *At what point during the project lifespan should affected communities be provided opportunities to get engaged in the decision-making process?*

Following Lane (1995), channels of meaningful community engagement should be open throughout the entire lifespan of a project. Also, it is important to know that relationships between decision-makers, project developers and local communities begin long before construction of a RE project and thus should be established at the earliest possible stage.

Three phases can be differentiated.

- *Planning and conceptualization:* All what occurs before the project breaks ground is considered to be part of the project planning and conceptualization phase. In this phase, institutions and project developers arrange project scoping, feasibility studies, and stakeholder negotiations. Once the conceptual design of the CSP project is complete, the permission/licensing process, the bid invitation and contract negotiations begin. After the project is announced, it typically takes up to three years before ground can be broken. Despite the common assumption that effects on the livelihood environment will only appear with the launch of construction activities, livelihood consequences actually start the moment the project is announced. These initial effects differ from those during construction. Project information can raise expectations and concerns within communities. Effects can include an increase in property prices due to speculation about demand for land or a pre-emptive influx of non-residents searching for employment. Local stakeholders may be fearful or worried about potential environmental impacts. Competition over limited natural resources may incite opposition to the project. Corruption and privileged access to information might exacerbate negative responses to the project. Additionally, construction of supporting infrastructure, like roads, may begin early.
- *Construction and implementation:* After the project proposal has been approved, the project developer proceeds with the design and construction of the CSP project. Typically, construction includes recruiting workers, purchasing, importing or manufacturing components, sourcing raw material, and installing and assembling the CSP facilities - including the construction camp. Further, construction consumes land, water, and electricity. Many significant livelihood consequences, both positive and negative, are anticipated in

this phase. On the positive side, for example, the largest number of jobs will be created during manufacturing and construction. On the negative side, for example, the local community may lose land and may struggle to adapt to the influx of new residents. The increasing demands of livelihood services and physical infrastructure and potentially rising commodity prices might spur concerns in the local community about the equitable distribution of costs and benefits.

- *Operation and maintenance:* With the end of the construction phase, the operational phase of the project begins and typically lasts over decades. This stage could have many potential benefits like the actual generation of electricity, long-term employment or the use of process heat for industries. On the downside, long-term trade-offs can set in at this stage, such as visual impacts, waste disposal, competing water demands, or waste water discharge. The benefits could also bypass the local community, as employment opportunities for construction were only temporary and the industrial and electricity benefits are realized elsewhere.

While usually only applied as part of ESIA studies late in the planning phase, the ideal involvement of local citizens starts prior to any decision-making and continues over the implementation and operation (eventually even the dismantling) phase. Yet, in each project phase the entry points to involve local citizens and their respective influence can be different (see fig. 4).

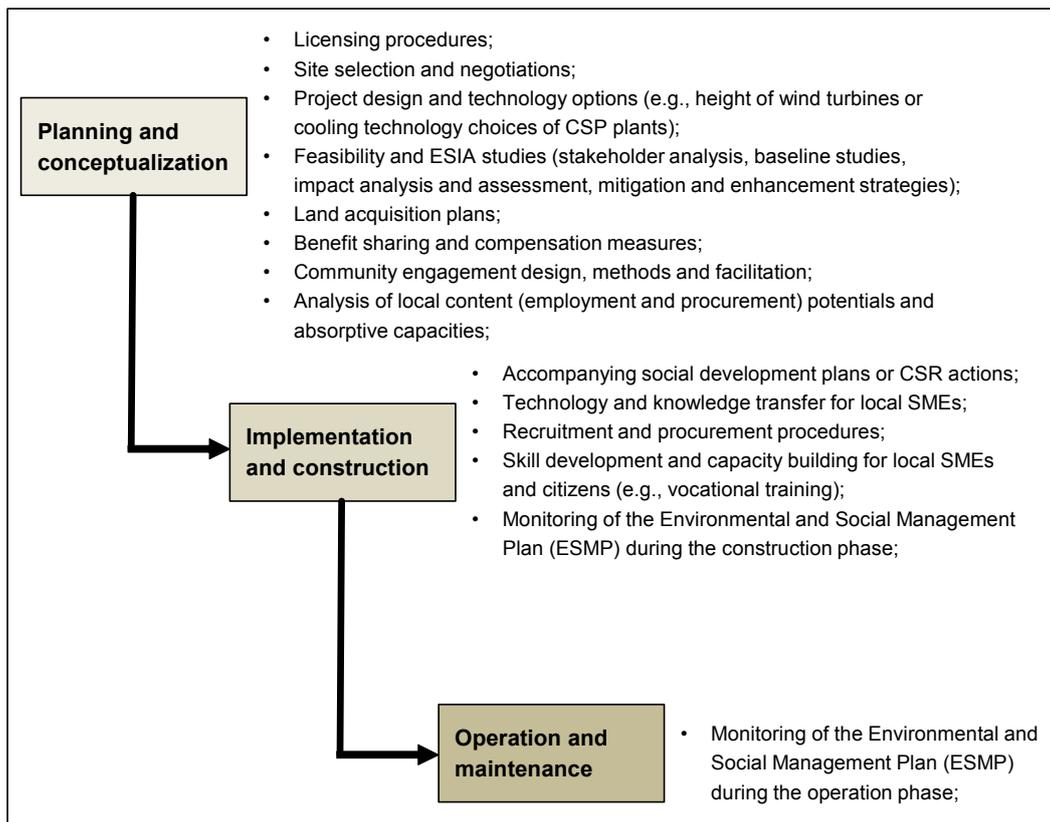


Figure 4: Selected entry points for community engagement in different project phases.

Also, not all elements in the development process must be addressed with the same participatory approach. Different approaches, ranging from information provision, consultation to cooperation can be applied on the same project but in different project phases or on different project elements. However, reality usually looks quite different.

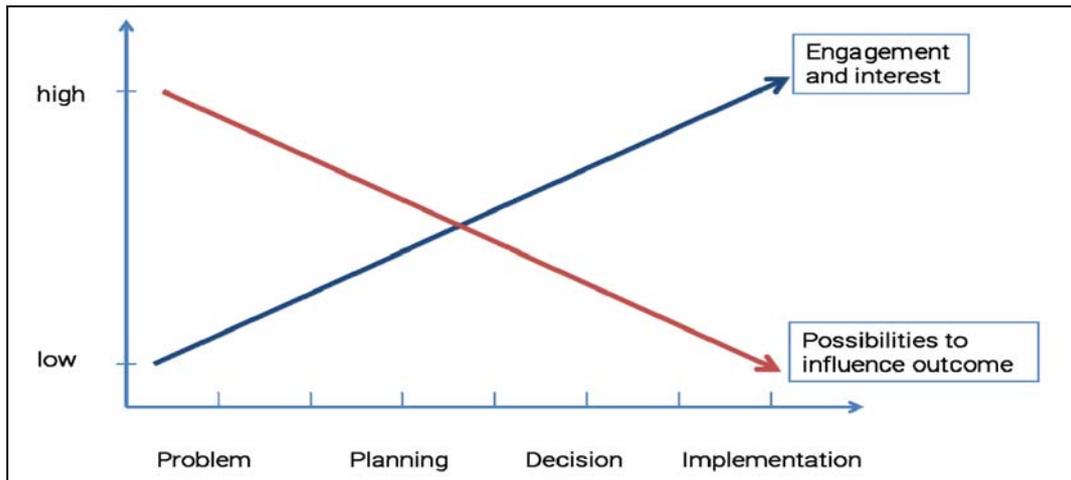


Figure 5: The paradox of public participation (University Leipzig 2013).

On the one hand, most people become interested in a project only once it has reached a high level of maturity and has become relatively concrete, thus making it difficult to reach out to community stakeholders and motivate their engagement (see fig. 5). On the other hand, community engagement mostly only starts after the project negotiations have been made, leaving little to no room for changes according to community opinions. This has been described as the paradox of public participation (University Leipzig, 2013).

5. Opportunities and challenges of community engagement in utility-scale RE

The opportunities and challenges of involving local stakeholders in decision-making have been described comprehensively in many scientific articles and practitioner manuals for a variety of RE projects, e.g., building a wind park, a community-based solar plant or grid infrastructures. Drawing on these publications and based on the experience of Germanwatch in the field of CSP in Morocco and the grid debate in Germany and Europe, this chapter, therefore, only aims to provide an overview of the most essential opportunities and challenges in regards to input legitimacy (process of community engagement) and output legitimacy (outcomes of community engagement) of utility-scale RE projects.

Opportunities of community engagement

Although no panacea, genuine community engagement in RE decision-making based on mutual learning, respect and transparency, is more likely to lead to a long-term *social license to operate* by contributing to the sustainability, acceptance and risk reduction of utility-scale RE projects. At the same time, permit granting procedures may become faster and fewer complaints may be expected because of various reasons.

- *More effective and sustainable project outcomes and processes:* Community engagement may help decision-makers to increase their knowledge base and learn about the livelihood context in which a particular RE project is embedded. This could lead to the development of more effective and improved project outcomes, as well as participatory pro-

cedures appropriate to local circumstances (Tognato, 2012; Fung and Wright, 2001; Schneider, 1999). For instance, based on the local knowledge of the bio-physical and socio-economic environment which hosts a particular RE project, more comprehensive ESIA studies could be developed beforehand and thus more efficient and creative ideas for mitigation measures formulated - especially on aspects that experts might otherwise have missed (Sovacool, 2014). Also, citizens may have more innovative ideas about siting a project to fit their neighbourhood, on conducting a stakeholder analysis, involving local actors in appropriate settings, or enhancing pro-poor co-benefits and their fair distribution through Social Development Needs Assessments (SDNAs) based on their development priorities.

- *Greater legitimacy of project procedures and outcomes:* Providing citizens with information and participation opportunities which are perceived as both fair and meaningful can increase trust and feelings of ownership among affected communities, thereby resulting in greater project legitimacy and community pride (Alasti, 2011). Because citizens are unlikely to change their perceptions about a project if they mistrust the source of communication or the intentions of offered participation, civil society groups and NGOs could be approached for support, since they often hold a trustworthy image in the population (ESCWA, 2013) (see also chapter 7).
- *Improved expectation management and risk perceptions:* Through exchange and communicative dialogue, the understanding of the project's outcomes and procedures could be improved among affected communities, thereby keeping expectations and concerns on a realistic level and avoiding misperceptions.
- *Reduced social conflict:* The introduction of RE projects in populated areas bears risks of social conflict and rivalry among affected communities over the distribution of adverse impacts and benefits. Early engagement and communication could not only increase the understanding of the project outcomes and procedures, but also help in defining fair benefit and burden sharing systems, thus avoiding any damage to the community cohesion or exacerbation of social disparities.
- *Increased capacity building and empowerment:* Inclusive engagement procedures aiming to enable mutual learning may lead to enhanced social and human capital through dialogue, knowledge improvement and strengthened community cohesion, which in turn enable greater commitment for involvement in decision-making (Stoll-Kleemann and Welp, 2006).
- *More effective grievance mechanisms:* Utility-scale RE projects inevitably raise concerns and complaints from affected community members. Through dialogue and participation, project-level grievance mechanisms could be put in place that offer a variety of culturally appropriate and accessible approaches to address and resolve community complaints at any stage of the project.

Challenges of community engagement

Despite the many opportunities arising from community engagement procedures in utility-scale RE decision-making at the local level, there are also considerable challenges that could undermine the legitimacy of participatory processes and their outcomes. When these challenges are ignored, the involvement of local community stakeholders may be perceived as unjust, tokenistic or biased and raise the level of local resentments instead of contributing to project sustainability and community acceptance.

- *Little or too much room to manoeuvre:* Discontent and resistance could arise due to a lack of flexibility in the results of a participatory process. If all decisions have been made prior to the start of the engagement procedures, and the involvement of citizens will have no impact on the project's outcomes and processes, the project may be perceived as imposed on local communities and the offered participation accused of being tokenistic and false. On the other hand, because genuine community engagement does not necessarily entail community acceptance, a truly open-ended dialogue prior to the project decision may face the risk of the community vetoing the project.
- *Lacking motivation to deliver and get engaged:* Irritation could occur, if decision-makers and/or involved community stakeholders do not have the capacities to follow through and deliver on the agreed outcomes of the participatory process, or if the limitations and roles of the procedures are not transparently displayed. In case of "too much talking and not enough action" or highly technical discussions, the involvement of community stakeholders could then result in their fatigue and decreased motivation to participate, thus hampering the effectiveness of the engagement process.
- *Insufficient awareness of cross-cultural settings:* In rural areas with strong traditional community structures, protocols and cultural values or high levels of illiteracy that may be unfamiliar to distant decision-makers, the lack of cross-cultural skills or vocabulary to discuss technical complex issues could result in misunderstandings and mistrust.
- *Limited time, budget and human resources:* Community engagement is time consuming, costly and sometimes unpredictable. Additionally, community engagement should be facilitated by experienced staff. If participatory procedures are not endowed with sufficient financial and human resources as well as schedules, their inflexible and limited execution may not tap its full potential and backfire due to these constraints.
- *Existing mistrust in policy-makers and/or project developers:* If local communities have experienced corruption and nepotism among political elites or have been generally excluded from political decisions, establishing trustful working relations with project decision-makers may face suspicion, which presents an obstacle to any meaningful participation process.
- *Reproduced power relations:* Participatory processes may bear the risk of favouring the influence of better educated, financially endowed or politically connected citizens, thereby excluding disadvantaged community stakeholders, risking the intensification of social disparities or causing social conflict. This is particularly relevant in rural areas, where communities are widely spread, yet affected by RE projects, and limited transportation and mobility options could leave low-income residents voiceless in the decision-making.
- *Stakeholder selection and compatibility of viewpoints:* As resources like time and budget are limited, the concrete implementation of stakeholder involvement is a complex task, where often theory collides with feasibility (e.g., "Who will be invited to be part of a focus group? And who not? Does the opinion of a community representative really reflect what the community thinks?"). Furthermore, there exists no best solution if viewpoints among stakeholders and/or stakeholders and project developers even after an intensive dialogue still differ considerably. A "forced consensus" often only reflects the lowest common denominator of participants and is, therefore, trivial (Goldschmidt, 2014:37).

Info box: Ideal or non-ideal conditions for successful community engagement

According to Irvin and Stansbury (2004), several conditions for enhanced and successful community engagement may be described as ideal (yes) or non-ideal (no):

N	Y	Cost indicators
		Citizens readily volunteer for projects that benefit the entire community;
		Key stakeholders are not too geographically dispersed so that participants can reach easily meetings;
		Citizens have enough income to attend meetings without harming their ability to provide for their families;
		Affected communities are homogenous, so fewer representatives of interest groups are required;
		The topic does not require representatives to master complex technical information quickly;
		Benefit indicators
		Citizens want to participate actively in the decision-making process;
		The issue is of high interest to stakeholders, and may even be considered at "crisis stage" if actions are not changed;
		Citizens have different opinions and preferences than decision-makers;
		The issue is gridlocked and a citizen mandate is needed to break the gridlock;
		Mistrust towards decision-makers is high;
		Community representatives and CSOs are willing to serve as representatives and third-party mediators to facilitate negotiations;
		The group facilitator has credibility with all representatives;

6. Poverty alleviation through utility-scale RE in developing countries?

Recognizing that the majority of RE technologies are now cost-effective, many countries in the *Global South* are currently striving to achieve a balance between their socio-economic development objectives and energy policies that respond to the carbon constraints stipulated by the latest climate science. In this regard, overcoming energy poverty, building a modern energy infrastructure and creating a sound policy framework that allow for poverty alleviation and socio-economic uplift are among the top priorities in many rural areas of developing countries.

As emphasized by the United Nations *Decade of Sustainable Energy for All* (2014-2024) as well as its accompanying *Sustainable Energy for All (SE4ALL)* initiative, access to clean and reliable electricity is regarded a prerequisite for alleviating poverty and obtaining sustainable livelihoods, especially for the rural poor. To date, the relationship between electricity and poverty alleviation in developing countries has been discussed particularly in the context of decentralized small-scale RE projects. Due to missing grid infrastructures in poor and sparsely populated areas, off-grid and community-based RE projects are widely understood as important catalysts to overcome energy pov-

erty. As a result, decentralized energy services remain at the forefront in the fight against energy poverty and enabling the 1.3 billion people living in the world's poorest countries without modern electricity today, to escape the vicious energy-poverty trap by replacing traditional fuels - predominantly animal dung, crop residues, wood or gas - with clean energy sources (e.g., rooftop PV or community wind turbines) (IEA, 2014).

Utility-scale RE projects, too, are generally located in rural areas endowed with abundant land resources to cover the spatial requirements of installations. Yet, they feed into the grid with the electricity generated being routed to urban and industrial consumption centers to meet growing national demands, rather than remaining in the host communities to cover local needs. Because access to electricity in many developing countries is almost exclusively enjoyed by the non-poor in urban areas, this simple difference between decentralized and centralized RE raises questions of distributional justice and whether the poor will benefit from utility-scale RE projects - particularly when combined with options of export. In this regard it is understandable why this potential for injustice has resulted in a typical "conflict-oriented" portrayal of deploying utility-scale RE projects in rural communities and the perception that transferring or even exporting electricity from local communities to other regions or countries would necessarily end in exploitative relationships. However, set within the right framework conditions, the development of centralized RE could also contribute to improvements of existing livelihood baseline conditions and affect the income and non-income aspects of poverty in adjacent communities through two channels.

- *National electrification and economic growth:* Although grid-connected RE projects primarily serve national needs by prioritizing more densely populated and industrialized regions, a growing share of utility-RE power generation improves the quantity and reliability of domestic electricity supply and, thus, may, on the one hand, contribute to increased connection rates of rural communities. On the other hand, increased electricity generation capacities and consumption can stimulate economic growth and, hence, may also have an indirect impact on rural poverty reduction. Yet, caution must be paid not to associate electrification and national economic growth directly with higher per capita incomes in rural areas, as these impacts depend very much on the affordability of electricity and the way macro-economic effects are distributed among poorer society groups.
- *Local integration:* Despite that the main aim of utility-scale RE projects should always be the provision of green electricity they could also be aligned with broader human development objectives to demonstrate shared value and provide direct socio-economic prospects for neighbouring communities. Depending upon the conditions under which utility-scale RE projects are deployed at the local level, such contributions to poverty alleviation and rural development could be channelled through different mandatory or voluntary measures:
 - Increased employment, income and multiplier opportunities resulting from *local content requirements* to emphasize local recruitment and procurement and the integration of the project in the productive structure of the local economy;
 - Raised absorptive capacities resulting from *skill development (vocational training or university programs) and Research and Development (R&D)*;
 - Strengthened industrial bases resulting from *technology and knowledge transfer* between foreign, national and local firms;
 - Improved rural infrastructure and services resulting from affirmative measures, such as a *Social Development Plan* created from the proceeds of the land acquisition process, or voluntary *CSR actions*;
 - New economic revenues stemming from project *royalties and taxes* allocated directly to local communities;

Clearly, addressing poverty alleviation and sustainable development at both the national and local level requires an integrated approach that combines decentralized and centralized modes of electrification with broader development objectives. In this regard, the energy policy-making of the Kingdom of Morocco provides many valuable lessons learned and best practice elements on how to take into account the needs of the poorest citizens through RE.

The power sector in Morocco is experiencing a phase of rapid changes and will probably witness important transformations in the near future as well. Faced with a sustained growing demand for electricity (7% in 2013), the country will need to install large amounts of additional power generation capacity and continuously expand the power grid in the short to mid-term (Cirlig, 2013). As a response and with the goal to increase electricity availability and access while at the same time preserving the environment and fostering development, the Kingdom has taken two crucial steps.

On the one hand, the country is one of the global success stories in terms of improving rural electrification. Since 1996, the universal rural electrification program *Programme d'Electrification Rurale Global (PERG)* has increased the national electrification rate from 18% to levels close to full electrification in both rural (98.2%) and urban (99.6%) areas. Within less than two decades, more than 12 million Moroccans living in rural areas have been connected to the grid or offered off-grid solutions of decentralized electrification systems - especially in the country's most isolated and vulnerable communities (Tsikalakis et al., 2011).

On the other hand, Morocco ranks among the global forerunners in centralized RE policy-making. While the country's electricity sector today is strongly dominated by fossil fuels (coal, oil and gas), along with hydroelectric and wind production, and imports from Algeria and Spain, totalling in an installed electricity generation capacity of 6,723 MW in 2012, the share of RE is envisioned to increase significantly (RCREEE, 2013). Already today, Morocco generates the largest share of electricity from renewables and has the greatest number of RE projects under construction of all Arab countries (RCREEE, 2014).

With ambitious targets, strong governmental policies and the patronage of King Mohammed VI, in particular the country's national *Solar Plan* represents a game changing paradigm shift towards a low-carbon future and freeing the country from its 97% energy import dependency. The overall RE target is to build 6 Gigawatt (GW) of utility-scale solar (2 GW), wind (2 GW) and hydro (2 GW) projects, totalling in 42% of installed capacity by 2020 (up from 24% in 2010) - which equals around 30% of electricity (up from around 10% in 2010) or 10-12% of the final primary energy production by 2020 (EIA, 2013) (see fig. 6). For a comparison: In 2011, Germany, the country of the *Energiewende*, had a share of 20% RE in its electricity mix and 40% of RE in its installed capacity, and is projected to reach 37% and 57% by 2020 respectively according to the latest reference projections (EWI, GWS and Prognos, 2014; see Annex).

While wind and hydro projects are nothing new in the country's energy portfolio, the *Moroccan Agency for Solar Energy (MASEN)* was created in 2010 to also put utility-scale solar power on a level playing field with other RE technologies. Five sites in the South have been slated for the development of five mega solar parks, totalling in 2 GW on approximately 10.000 ha of land (World Bank, 2011). By 2020, utility-scale solar will constitute 14% of Morocco's total installed capacity and 16% of electricity production.

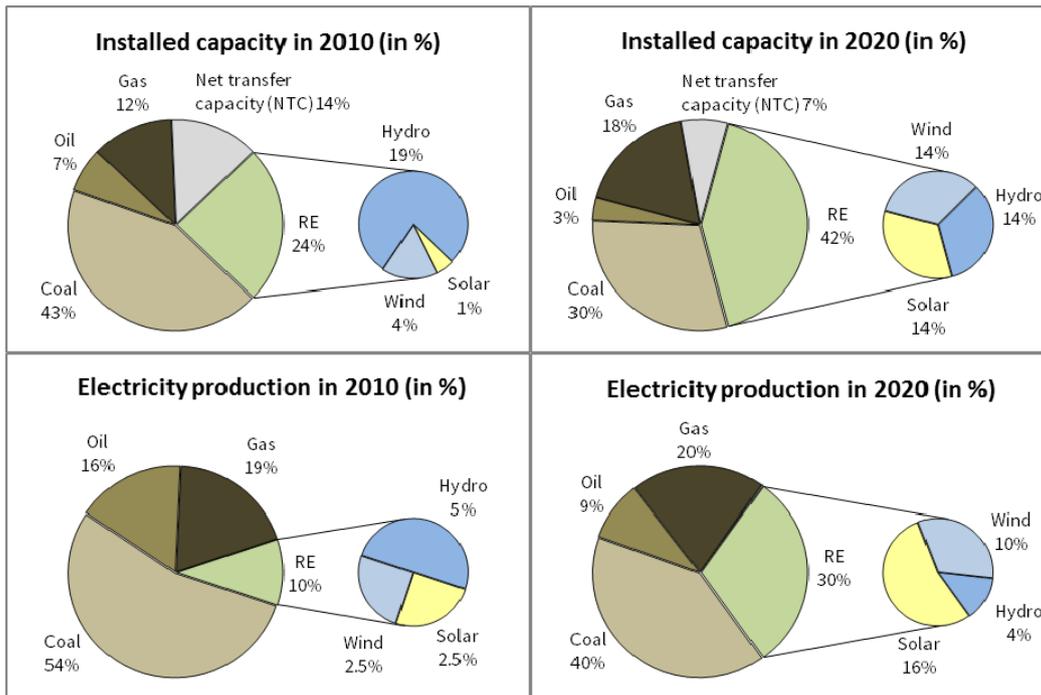


Fig. 6: Installed capacity and electricity production in Morocco for the years 2010 and 2020 (own calculations, based on BETTER, 2015).

However, the country has not simply prioritized its solar ambition out of concern for the climate, but rather as means to achieve multiple development objectives. Embedded within national development plans, the production of green electrons is envisioned to yield long-lasting dividends in



Fig. 7: The MASEN approach of integrated solar projects (MASEN, Personal Interview, 2014).

terms of energy security, self-reliance and balance of payments as well as to address local socio-economic factors through *integrated solar development projects* along the renewables value chain (fig. 7).

Besides its contribution to national electricity generation, the efforts taken by MASEN to address the local dimension of utility-scale solar projects include: skill development and

training, R&D, industrial integration and local content targets, direct and indirect employment, as well as social development and socio-cultural enhancement financed from the land transfer. And indeed, a research conducted by Germanwatch and Wuppertal Institute to explore the local dimension of Morocco's first solar project under the national *Solar Plan*, the 500 MW *Noor* complex next to the city of Ouarzazate, proved that efforts of aligning utility-scale RE deployment to meet broader human development objectives and of integrating the project within the productive structure of the local economy were both real and substantial.

By recognizing the importance of local communities in successful CSP development, the high level of support found in the Province of Ouarzazate, even among local communities who are negatively affected or who are living in proximity to the project, underlines the substantial efforts taken by MASEN to counteract the local conflict potential of CSP by converting renewable energy assets into

assets of improved socio-economic development, capacity, and infrastructure. While community outcomes of large-scale investments are rarely the focus of governments or investors, and generally only marginally benefit the local population, the planning of *MASEN* in regards to the country's first standalone CSP plant was commendable. In regards to project outcomes, the *MASEN* approach taken in the context of the *Noor* solar complex, therefore, provides many best-practice elements on how to address poverty alleviation and socio-economic development by setting community-oriented conditions for the deployment of utility-scale RE projects (Germanwatch and Wuppertal Institute, in press).

7. The value of civil society organisations in utility-scale RE

Experience in the development of large-scale infrastructure projects illustrate, that reaching out to local citizens and framing the right messages should not be left only to decision-makers or project developers because their communication may not be understood or mistrusted by local actors who are otherwise potentially receptive. In this regard, civil society organisations (CSOs) which often are committed to sustainable development goals and RE specifically are key stakeholders to consider in bridging the "communication gap" between policy-makers, project developers and local communities. Due to their legitimacy in society and local communities as independent, trustworthy actors, CSOs should therefore be part of any community engagement process aiming to achieve community benefits and to apply appropriate engagement channels in the context of RE projects.

Two main categories of CSOs with different interests and roles in utility-scale RE deployment are relevant in this regard:

- Advocacy CSOs at the national level to bring local issues of RE projects into national policy-making and public debates and vice versa;
- Operational CSOs, so called community-based organizations, at the local level to represent the voices of affected local communities in the deployment of RE projects;

In regards to community engagement and the sustainable and socially robust deployment of utility-scale RE, both types of organizations could be mutually reinforcing and complementing each other. Germanwatch believes that this is why a partnership approach with both categories of CSOs, based on transparency, respect and mutual learning, and driven by the desire to improve the procedures and outcomes of a specific RE project, may bring several advantages throughout the various stages of utility-scale RE.

Info box: The role of CSOs in the grid development and debate in Europe

In the discussions and the development of grid infrastructure projects in Europe, collaboration between CSOs and transmission system operators (TSOs) at the local level has led to successful results in expanding transmission lines. In Germany, for example, CSOs are generally well-integrated into the power grid development and debate - both at the national policy and the local project level. CSOs and TSOs have established cross-cutting, permanent expert meetings and discussion groups to investigate the most effective and sustainable deployment of transmission lines. Additionally, German CSOs play a mediating role between local and national interests in order to foster consensus among all parties.

- *Framing messages and creating a locally-understandable narrative:* CSOs can help in developing and adjusting messages and the broader narrative in which utility-scale RE projects are embedded based on existing local values and cultural models;
- *Utilizing local knowledge:* CSOs may support the incorporation of existing local knowledge to complement decision-making in the different project phases, e.g., scoping of impacts in ESIA studies, developing mitigation and enhancement measures, conducting needs assessments for CSR or other voluntary development actions;
- *Facilitating the engagement process:* CSOs can help in gathering community input on the needs, aspirations and concerns, as well as promote the facilitation of the participatory exchanges with local citizens through co-hosting consultation rounds in settings residents are comfortable with;
- *Strengthening local engagement capacities:* CSOs may help in providing trainings and mutual exchange in order to foster the capacities of local actors to get engaged and make their voices heard within the community engagement process;
- *Reaching out to the marginalized:* CSOs, their social networks and structures in remote areas can help that also the marginalized and disadvantaged community groups are approached and their voices heard;
- *Raising awareness and motivation:* CSOs can act as catalysts by helping to translate and explain information on the project outcomes and procedures to local citizens, as well as stimulate debates, thereby increasing the awareness and motivation to get involved effectively and in meaningful ways;
- *Fostering trust and providing mediation:* CSOs can help promoting trusting relationships between decision-makers, project developers and local communities, as well as provide mediation in conflictual or deadlocked situations;
- *Monitoring of project activities:* CSOs can complement the formal monitoring procedures in each project stage by securing on-going dialogue with local communities and being "community sentinels" dedicated to safeguard the *social license to operate*;

Info box: Selected ideal or non-ideal conditions for a CSP partnership approach

N	Y	Key questions
		Are CSOs involved or interested to get involved in energy policy-making at the national level?
		Are nationally active CSOs in favour of RE in general and utility-scale RE in particular?
		Are there CSOs active in the region affected by a specific utility-scale RE project?
		Are locally active CSOs in favour of the RE project in their area and interested to get involved?
		Do local CSOs have communication and mediation skills appropriate to local circumstances?

8. Principles of meaningful community engagement in utility-scale RE

Although it is in the end the responsibility of policy-makers and project developers to decide on an appropriate balance between the need and the desire for more community engagement, we conclude our paper with some general procedural justice principles derived from two sources: The *Standard for Responsible Mining (2015)* developed by the *Initiative for Responsible Mining Assurance (IRMA)* and a *Sustainability Framework for CSP Projects (in press)* developed by *Germanwatch* and *Wuppertal Institute*. Notwithstanding, that the operationalization of these principles may vary according to the context in which utility-scale RE projects are embedded and thus will have to be project-tailored, they are independent from the question "Who should be involved, when and with what level of influence?". Instead, they should form the basis of any meaningful community engagement process and for encouraging positive relationships with local communities in the development of utility-scale RE projects.

1. **Accountability:** Ensure that the community engagement process and its outcomes comply with all relevant customary, national, and international laws, rules, regulations, permit requirements, and ratified conventions;
2. **Context and stakeholder analysis:** Analyse relevant community stakeholders - vested and non-vested - and incorporate socio-economic, environmental and political context specifics, e.g., procedures of traditional decision-making, through a transparent and participatory process;
3. **Representativeness:** Verify that stakeholders involved in the community engagement process legitimately represent the views and interests of affected communities and that they can be relied upon to faithfully communicate the results to their constituents;
4. **Inclusiveness:** Emphasize social inclusion by involving a wide cross-section of local stakeholders - vested and non-vested - with a special focus on marginalized and vulnerable minority groups (e.g., women, young, elderly, and indigenous people);
5. **Free, Prior and Informant Consent (FPIC):** Obtain FPIC by pro-actively providing:
 - Information on the project's outcomes and engagement procedures in accessible, transparent and contextually appropriate formats prior to the project deployment;
 - Sufficient time, resources and advice to allow stakeholders to familiarize with the project outcomes and procedures;
 - Confidentiality of feedback and security in regards to coercion or intimidation;
 - Two-way communication channels throughout the entire project lifecycle to ensure ongoing dialogue and participation;
 - Reports on issues raised during the engagement process and its progress;
6. **Empowerment:** Support participants to get engaged effectively by providing them with awareness-raising and capacity-building (e.g., logistical or process-orientated skills);
7. **Respect diversity:** Treat every position, interest or perception with respect and create mutual understanding;
8. **Enhancement:** Move from a do-no-harm" concept and a risk-based perception towards a community-orientated enhancement philosophy to demonstrate shared value;
9. **Responsiveness:** Be flexible to adjust the community engagement process according to emerging issues, changing circumstances and mutual learning;

10. **Grievance mechanisms:** Provide channels to lodge complaints, solve project-related disputes and seek remedies through project-level grievance mechanisms that are culturally appropriate and accessible;
11. **Review:** Monitor the performance of the community engagement process and its outcomes periodically based on indicators agreed upon with community participants, with particular attention to expectation management.

9. Conclusions

Simply because utility-scale RE projects substitute for fossil fuel plants does not *per se* imply that they will result in sustainable, equitable or even pro-poor development outcomes in the environments in which they are embedded and on the people they serve. As a consequence, it is increasingly recognized that achieving community acceptance may be a constraining barrier to the progress of converting current unsustainable energy infrastructures into a sustainable energy system based on high shares of RE and achieving larger national goals. Procedural justice in form of meaningful community engagement and encouraging positive relationships with local communities in the development of utility-scale RE projects, therefore, must be regarded as a long-term investment into a mutually sustainable neighborhood: strong communities benefiting from RE projects and a sustained *license to operate* for the projects' full lifespan.

Four levels of community engagement with different levels of influence are differentiated, ranging from information to consultation, to cooperation and self-governance (citizen control). In many cases, it can be recommended to move beyond the *formal* "do-no-harm" model of information and consultation fixed in permit and legal compliance obligations, towards the sphere of *informal* community engagement procedures that could complement, enhance and support the formal engagement processes. This would mean to imply a community-orientated enhancement philosophy in which the preferences of affected communities as well as a commitment to a participatory partnership and shared decision-making model would form the basis of project design and development. However, there is no "one size fits all" solution to community engagement. The level of influence reached and the participatory techniques applied at each project stage and in each project process are highly project-dependent.

Yet, at its root, community engagement always implies to achieve a trusting relationship between the decision-makers, the project developers and vested as well as non-vested local stakeholders throughout the different project stages. Due to their legitimacy in society and local communities as independent, unbiased actors, establishing partnerships with civil society organisations, could increase the credibility and legitimacy of utility-scale RE projects. Although no panacea, a community engagement based on procedural justice principles would not only increase the legitimacy and effectiveness of utility-scale RE project procedures and outcomes but also lead to improved project sustainability, equity and a mutually beneficial neighborhood between utility-scale RE projects and local communities.

10. Annex

A comparison of the efforts taken in Morocco and Germany, two countries currently regarded as forerunners in the context of RE policy-making:

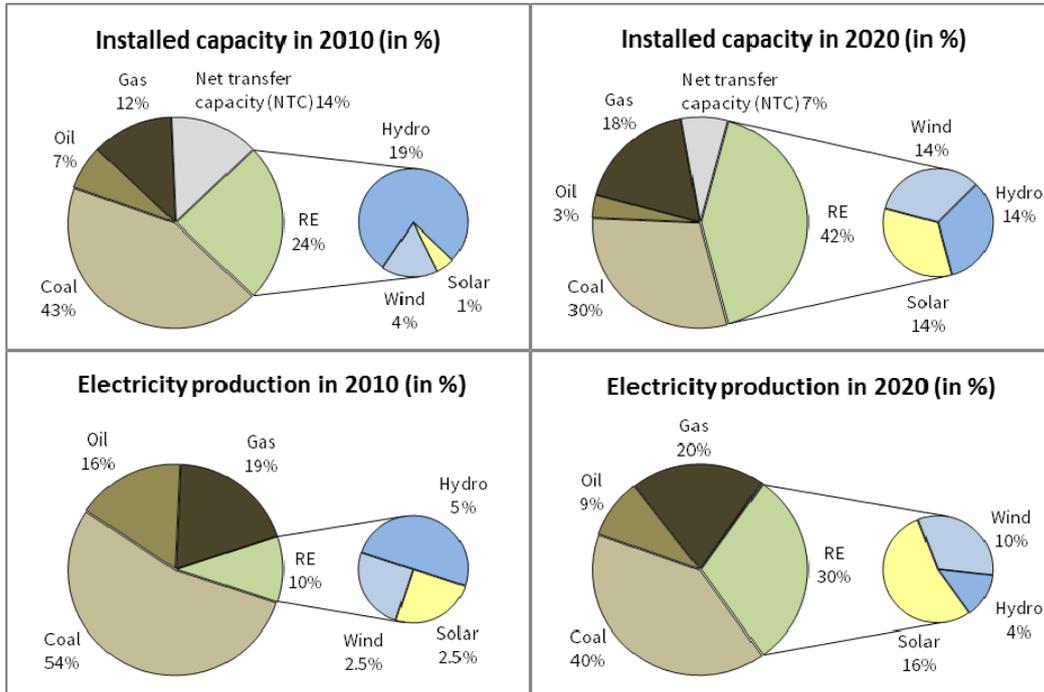


Fig. 8: Installed capacity and electricity production in Morocco for the years 2010 and 2020 (own calculations, based on BETTER, 2015).

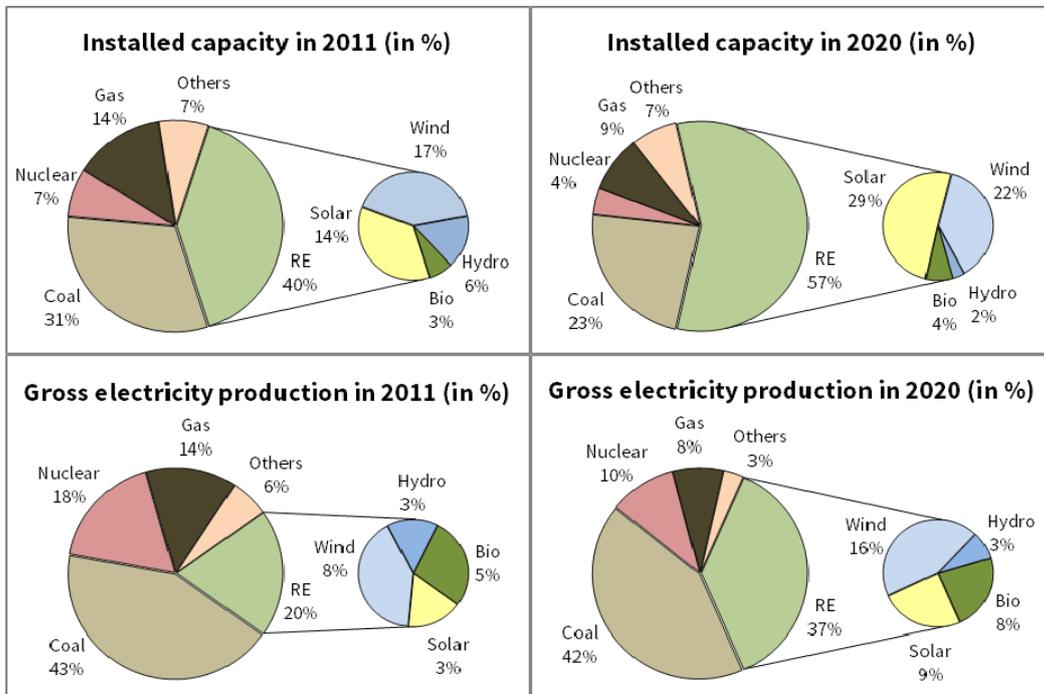


Fig. 9: Installed capacity and gross electricity production in Germany for the years 2011 and the reference projection for 2020 (own calculations, based on EWI, GWS and Prognos, 2014).

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Germanwatch

Following the motto “Observing, Analysing, Acting”, Germanwatch has been actively promoting global equity and the preservation of livelihoods since 1991. In doing so, we focus on the politics and economics of the North and their worldwide consequences. The situation of marginalised people in the South is the starting point of our work. Together with our members and supporters as well as with other actors in civil society, we intend to represent a strong lobby for sustainable development. We attempt to approach our goals by advocating for the prevention of dangerous climate change, for food security, and compliance of companies with human rights.

Germanwatch is funded by membership fees, donations, grants from the “Stiftung Zukunftsfähigkeit” (Foundation for Sustainability) as well as grants from various other public and private donors.

You can also help achieve the goals of Germanwatch by becoming a member or by donating to:

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