



## REPORT

# Toward a peaceful and just energy transition

Understanding peace and conflict dynamics to strengthen the impact of renewable energy projects in fragile contexts.

*As a potentially powerful catalyst for development and social cohesion, the energy transition in fragile states rests on increasing private sector financing. Conflict sensitivity is the key to ensuring these investments yield positive and sustainable outcomes.*

JULY 2023

WITH SUPPORT FROM



Answering  
tomorrow's  
challenges  
today

DIRECTED BY



---

## Acknowledgements

This report was written by Sharon Beijer, Robert Pollock, and Maria Yetano of Ecorys, Daniela Bosnjak and Johannes Schreuder of the PeaceNexus Foundation, and Sarah Logan, Amna Mahmood, and Sanjana Srivastav from the International Growth Centre (IGC). A special thanks goes to the different stakeholders from civil society, academia, communities in proximity to renewable energy projects, energy developers, investors and other groups who provided us with their insights on the topics discussed which fed into this report. Views expressed in this publication do not necessarily reflect the views of those interviewed, and are the sole responsibility of Ecorys, the PeaceNexus Foundation, and the IGC.

For any inquiries about this work or further engagement, please contact the IGC's State Fragility initiative team at [sfi@theigc.org](mailto:sfi@theigc.org) or PeaceNexus at [info@peacenexus.org](mailto:info@peacenexus.org).

**Scope and audience of paper.** This paper focuses on projects that generate electricity from renewable energy sources: solar, wind, small hydro, and geothermal were included in this research, whereas biomass and large hydropower were excluded. Resource extraction for renewable energy infrastructure is outside scope of study. Both the World Bank's classification of fragile and conflict-affected situations and the Fund for Peace's Fragile States Index were used to identify relevant case studies (see **Annex 1** for the list of fragile and conflict-affected situations).

This paper is intended to be of value to public and private investors ('investors') and entities involved in development, construction, and operations of renewable energy projects ('project developers') in fragile and conflict-affected situations.



---

## List of abbreviations

Abbreviation	Meaning
ARIA	Africa Resilience Investment Accelerator
DFI	Development finance institution
DRC	Democratic Republic of the Congo
EEP	Ethiopian Electric Power
ESG	Environmental, social, and governance
FCAS	Fragile and Conflict-Affected Situations
M&E	Monitoring and evaluation
O&M	Operations and maintenance
PCIA	Peace and Conflict Impact Assessment
PPI	Peace Positive Index
P-RECs	Peace Renewable Energy Credits
RE	Renewable energy
TOC	Theory of change
VE	Virunga Energies

---

# Contents

---

<b>Executive summary</b>	<b>6</b>
<hr/>	
<b>1. Introduction</b>	<b>8</b>
<hr/>	
1.1. Setting the scene	8
<hr/>	
1.2. Aims, limitations, and approach of this paper	9
<hr/>	
<b>2. Potential impacts of RE projects in FCAS</b>	<b>11</b>
<hr/>	
2.1. Potential positive impacts of RE projects	11
<hr/>	
2.2. Potential negative impacts of RE projects	13
<hr/>	
2.3. The central importance of conflict sensitivity	14
<hr/>	
<b>3. Conflict sensitivity across the project lifecycle</b>	<b>16</b>
<hr/>	
3.1. Project design	16
<hr/>	
3.1.1. Undertaking a comprehensive conflict assessment	17
<hr/>	
3.1.2. Meaningful engagement with local communities	18
<hr/>	
3.1.3. Using findings to inform project design and developing a risk mitigation and management framework	20
<hr/>	
3.1.4. Developing an M&E framework	20
<hr/>	
3.2. Project financing	22
<hr/>	
3.3. Local institutional and labour capabilities	24
<hr/>	
3.4. Data and active learning	25
<hr/>	
3.4.1. Baseline data collection at start of project	26
<hr/>	
3.4.2. Ongoing data collection during project construction and operations	26
<hr/>	
3.5. Expanding evidence on conflict sensitivity	27
<hr/>	

---

<b>4. Case studies examined as part of this study</b>	<b>28</b>
4.1. Aftissat (Boujdour), Western Sahara	28
4.2. Ashegoda and Adama Wind Farms, Ethiopia	30
4.3. Virunga Energies, DRC	31
<b>Conclusion</b>	<b>34</b>
<b>References</b>	<b>35</b>

---

# Executive summary

---

Achieving targets for universal energy access and net zero emissions by 2050 requires an exponential expansion of investment in renewable energy, including in fragile and conflict-affected settings (FCAS). These countries are home to many of the 675 million people living without access to electricity globally.<sup>1</sup> Renewable energy (RE) projects in FCAS have delivered positive socio-economic impacts to local communities and, in some instances, enhanced social cohesion. However, if not implemented with sufficient conflict sensitivity, there is a risk that RE projects in FCAS have unintended negative impacts, including reinforcing existing inequalities, violating human rights, exacerbating community grievances, and worsening local conflict dynamics.

As we look to scale up RE projects in FCAS, it is essential that project developers and investors design and develop RE projects taking into account the varying local contexts where these projects will be developed to avoid triggering unintended negative impacts.

Improved conflict sensitivity and contextual awareness in FCAS benefits project developers and investors, as well as local communities, by helping to better mitigate and manage risks that come with operating in fragile settings, thereby minimising the likelihood of unrest, costly project delays, disruptions and damage to infrastructure. Beyond their benefits to both business and society, responsible business practices are increasingly mandatory: as growing demands for greater responsiveness to environmental, social, and governance (ESG) concerns translate into expanded regulatory frameworks, conflict sensitivity is vital for investors and project developers to meet heightened due diligence and reporting requirements for their activities in FCAS.

Drawing on literature and interviews with project developers, investors, affected communities, energy practitioners, and researchers, this paper offers **five key recommendations**:

## 1 **Integrate conflict sensitivity throughout the lifecycle of the RE project.**

By strengthening understanding of the mutual interaction between the project and context, conflict sensitivity helps to manage risks, maximise the positive impacts of RE projects, and support more informed decision-making. It is a continuous, tailored approach that brings greatest benefit when integrated throughout the project lifecycle. Key elements include:

- **Undertake a conflict assessment** – A robust conflict assessment is the foundation of any sound due diligence and risk management framework in FCAS. If done well, it provides a thorough insight into the interactions between the project and local context. Although the components vary based on a given context, a conflict assessment typically includes context analysis, stakeholder mapping, conflict risk screening, and the identification of key trends as well as opportunities for positive impact. Findings should be integrated into the project design and business processes.
- **Develop a comprehensive risk mitigation and management framework** – This framework should be based on findings from the conflict assessment and community engagement and identify measures to address risks to the project and local context. The continuous analysis of the interaction between the project and local context

---

1 ESMAP, 2023.

enhances understanding and foresight and facilitates effective risk mitigation throughout the project's lifecycle. The framework should be regularly refreshed based on changes in the context.

- 2 Engage continuously and meaningfully with affected communities.** This is vital for generating public and political acceptance of the project and understanding the perspectives of those affected by it. Establishing and cultivating meaningful, systematic engagement necessitates accessible and responsive communication channels, which can build trust and deepen understanding of community dynamics. Key components include obtaining informed consent; identifying opportunities to leverage and develop local capacity (such as workshops and training programmes); establishing accessible grievance mechanisms; adopting a systemic approach to information sharing; and employing effective communication strategies that convey information about the project, opportunities, benefits, and potential impacts.
- 3 Ensure the benefits communities experience from the project outweigh any harms caused.** Furthermore, to go beyond 'doing no harm' to create positive peace impacts, projects should be intentionally designed and developed with this aim in mind and should seek to address existing conflict drivers among affected communities. Attention should be paid to the equal distribution of benefits across different interest groups. This may require the provision of skills training (by either government or project developers) to ensure that some local community members are able to be employed on the project. Opportunities can also be created by the RE supply chain and productive use of the generated energy (either from the project or separately installed). Such opportunities should also be explored with local community members in community consultations. Local community expectations should be managed where necessary, to ensure that unrealistic expectations do not later give rise to anger and resentment.

- 4 Explore opportunities to increase the flexibility, duration, and risk tolerance of capital provided.** Blended financing solutions that include grants or concessional loans can make projects more financially attractive for a wider range of investors with different risk-return profiles and can support affected communities by reducing the cost of energy. Both increasing equity participation and local currency financing can reduce the debt servicing burden in the initial phases of the projects, giving project developers more flexibility to accommodate the needs of local stakeholders. Furthermore, investors should explore possibilities for investing in local intermediaries (banks and investment funds) that have greater contextual knowledge and can support smaller RE project in fragile states. Critically, investors and donors could play a pivotal role in mainstreaming conflict sensitivity by requiring it as a condition of funding RE projects in FCAS.

- 5 Share learnings from developing RE projects in FCAS.** The sharing of information among project developers and investors on project design, community engagement, and associated impacts is essential to improving practice. Sharing experiences of risks faced and of integrating conflict sensitive approaches into RE project development is crucial to encourage other private sector actors to follow suit by demonstrating the value of conflict sensitivity, as well as to increase market information that can lead to more accurate risk expectations (and potentially reduced risk premia). More external evaluations of the impacts of RE projects in FCAS will strengthen the evidence base on what works to minimise negative impacts and maximise positive impacts of these projects.

RE can increase energy access to millions of unconnected people in FCAS, enabling increased incomes, better access to education, healthcare, and other basic services. When designed and implemented in a conflict sensitive way, these projects may also contribute to peace and stability in some of the world's most challenging contexts.

---

# 1. Introduction

---

## 1.1. Setting the scene

---

**To reach universal energy access and net zero by 2050, financing for renewable energy projects needs to exponentially grow and expand to include fragile settings.** IEA estimates that by 2030, annual RE investment in emerging countries, many of which are affected by conflict and fragility, needs to be multiplied by more than seven – from less than \$150 billion to over \$1 trillion.<sup>2</sup>

**Energy access deficits are increasingly concentrated in FCAS.** Many of the countries with least electrification and greatest energy deficits are categorised as FCAS (see Annex 1) and the majority of the 675 million people without energy access globally live in fragile settings.<sup>3</sup> At current trends, the global electricity access deficit will be concentrated primarily in FCAS by 2030.<sup>4</sup> FCAS markets remain underserved for a number of reasons, including their higher perceived risks and uncertainty, less developed financial and energy markets, poor policy and regulatory frameworks, and weak infrastructure.<sup>5</sup>

**RE offers specific promise for people without access to energy in FCAS.** RE has the potential to enable countries to achieve greater development and stability by helping to deepen and (re-)build energy markets, facilitate the delivery of healthcare and education services, support food security and livelihoods, and reduce vulnerabilities. It is also frequently thought that energy access can support peacebuilding and conflict prevention. Despite these clear potential benefits and a booming global RE market, little investment in RE is reaching FCAS.<sup>6</sup>

**RE is an increasingly viable and competitive option to meet the significant energy deficits of FCAS.** Cost reductions in solar and wind technologies have made these highly attractive energy solutions. RE solutions are already cheaper than fossil fuel options and are becoming more affordable every year.<sup>7</sup> The social impacts of RE investments are also increasingly being factored into business propositions for investors seeking to make positive development or peace impacts, including (and sometimes especially) in FCAS. Donors, investors, and project developers have a growing number of financing mechanisms, de-risking tools, and conflict sensitivity approaches that they can utilise to overcome the challenges of investing in FCAS.

---

<sup>2</sup> IEA, 2021.

<sup>3</sup> ESMAP, 2023.

<sup>4</sup> ESMAP, 2022.

<sup>5</sup> Logan & Sacchetto, 2021.

<sup>6</sup> Energy Peace Partners, n.d.

<sup>7</sup> Malchman, J., 2022.



**However, International public financial flows to developing countries for clean energy have been decreasing in recent years.** 2020 flows reflected a reduction of 25% from the previous decade's average, and a decline of 50% from the peak of USD 24.7 billion in 2017.<sup>8</sup> Funding from bilateral and multilateral DFIs for decentralised (or off-grid) RE projects, which are crucial to closing energy access gaps in developing countries, has also fallen sharply from USD 260 million in 2018 to USD 34 million in 2019, although DFI investment levels have since somewhat recovered.<sup>9</sup> The figures for FCAS are even lower.

**At the same time, fragility is worsening globally.** The world is facing various and changing complex challenges in the domain of conflict and fragility. Multilateral systems are showing flaws in their ability to prevent or mitigate conflict and to support peacebuilding and transitions towards resilient democracies. Geopolitical shifts, rising commodity prices, intensified competition over resources, and various transnational challenges (including the climate crisis) are affecting the lives of millions of people living in FCAS.

**Going forward, scaling up RE investments will be essential and conflict sensitivity is crucial to enabling RE projects in FCAS.** Conflict sensitivity, an approach which ensures interventions do not unintentionally contribute to conflict but strengthen opportunities for positive social impact, will help project developers and investors to identify and mitigate conflict risks, enabling better interactions with local communities and fewer costs and disruptions arising from local unrest.

## **1.2. Aims, limitations, and approach of this paper**

---

There is an evident need to significantly scale up RE investments in FCAS. However, RE projects pose risks in settings already affected by conflict and fragility and a deeper understanding of the drivers of impact between RE projects and peace and conflict dynamics in FCAS is needed. This would help ensure that, as more RE projects are developed in FCAS, project developers are able to better design and implement these projects to mitigate potential risks and maximise the benefits of RE projects for local communities beyond only direct energy supply.

The existing literature on the impacts of RE projects on peace and conflict dynamics is relatively limited. Notably, many sources covered in the literature review outline hypotheses of the potential peace contributions that RE projects could offer (e.g., women's economic empowerment, increased trust in the state, etc.), but robust or quantitative analysis on these impacts is rare. While some sources cover conflict sensitivity risks in FCAS, the predicted peace impacts are less well explained or supported by evidence. Few studies look at the impact of RE projects in FCAS specifically and those that do tend to draw from the same selection of case studies, notably the Grand Ethiopian Renaissance Dam, Kenya's Lake Turkana Wind Power project, and cobalt mining in Eastern Democratic Republic of the Congo (DRC).

---

<sup>8</sup> ESMAP, 2022.

<sup>9</sup> SEforAll and CPI, 2021.

The lack of reliable evidence may be due to many factors, including difficulties around measurement, slow materialisation of project outcomes, and attribution and causation being obscured by a variety of contributing factors.<sup>10</sup> More broadly, project developers and investors have tended to be preoccupied with the financial returns of projects and have focused less on facilitating robust, long-term learning from their projects. As a result, comprehensive data on project impacts has rarely been captured and few in-depth case studies have been compiled on a broader range of projects.

This paper aims to take stock of the existing evidence on the links between RE projects and peace and conflict dynamics from the literature and experience of actors involved in RE project development and to supplement this with learnings from specific RE projects developed in FCAS. This was done through:

- **Undertaking a literature review** to examine the existing evidence base and current research and policy perspectives. Specific attention was put on identifying best practice and feasible, actionable learnings.
- **Conducting over 20 interviews** with energy practitioners, project developers, investors, development finance institutions, peace building actors, members of communities in the proximity of RE projects, and researchers. It should be noted that few private sector actors were willing to engage with the authors or participate in consultations for this paper, leading to the under-representation of their perspectives in this work and less access to in-depth project information.
- **Developing several case studies** of RE projects, notably in DRC, Ethiopia, and the Western Sahara, as well as examination of a range of other RE projects. Chosen case study examples were those where it was possible to gain an understanding of project-specific operational challenges (and opportunities) as well as insight into the positive and negative impacts of the RE project at the local level. Both large-scale and small-scale RE projects were considered.

It is hoped that this paper will be useful for RE project developers and investors active in (or considering becoming active in) FCAS in informing their approach to conflict sensitivity throughout RE project lifecycles. In this way, more RE projects in FCAS could achieve positive impacts for local communities, thereby better unlocking the potential that RE has in FCAS.

---

<sup>10</sup> Energy Peace Partners, 2022.

---

## 2. Potential impacts of RE projects in FCAS

---

The interaction of energy on conflict and peace dynamics is multi-faceted. Energy systems can be the *objective* of conflict (e.g., for participants to improve their own energy security); a *means* by which actors achieve other, non-energy related objectives; or a *cause* of conflict when projects destabilise local communities and exacerbate tensions that lead to conflict.<sup>11</sup> In turn, conflict can damage or destroy energy infrastructure, trigger humanitarian crises, disrupt logistics and supply chains, and reduce access to finance for investments as investors withdraw.<sup>12</sup> Energy is critical to maintaining provision of basic services during conflict and is essential to enable post-conflict recovery.<sup>13</sup>

While the socio-economic benefits for local communities of energy access are relatively well documented, the potential for RE projects to positively impact peace and stability specifically is more complex. Detailed information on RE project outcomes and impacts on local peace and conflict dynamics are largely missing from the discourse and rigorous evidence on the impact that RE projects may have within their area of operations and along their supply chains remains deficient. Below we summarise the existing state of the literature in terms of documented or hypothesised positive and negative impacts of RE projects.

### 2.1. Potential positive impacts of RE projects

---

RE projects can have positive impacts in terms of socio-economic development, particularly in rural areas. For example, access to solar energy and appliances have increased income generation opportunities and strengthened livelihoods for households and small business.<sup>14</sup> Electrification has also had significant positive effects on rural households in terms of education, employment, women's economic empowerment, and productive use of time.<sup>15</sup>

While the potential positive impacts of energy access on peace and social cohesion are seldomly made explicit, strong theoretical linkages exist. Distributed RE systems can provide cost-effective and reliable electrification for service provision by powering clinics and schools, thereby contributing to strengthening state legitimacy, **enhancing trust in authorities**, and human capital development.<sup>16</sup> Electrification has also been seen to have a positive effect on individual perceptions of **safety and security**<sup>17</sup> through, for example, the provision of street lighting

---

<sup>11</sup> Mansson, 2014.

<sup>12</sup> EADP Critical Infrastructure in Crises, Workshop 1. June 7, 2023.

<sup>13</sup> Ibid.

<sup>14</sup> EnDev, 2021.

<sup>15</sup> Ayana & Degaga, 2022.

<sup>16</sup> Energy Peace Partners, 2022.

<sup>17</sup> Ibid.

and reducing the need for women to collect firewood in contexts of insecurity, where they face the risk of sexual assault and violence.<sup>18</sup>

As concentrated power generation can predispose energy systems to corruption, it is thought that decentralised energy systems could support **greater energy democracy** by encouraging the distribution of political power.<sup>19</sup> Theoretically, this redistribution of power and reduced energy scarcity, through the creation of new resources and opportunities, could lower competition over existing resources and reduce energy inequalities, thereby **lowering social tensions** and conflict and creating more peaceful communities.

More concretely, some of the positive socio-economic benefits achieved by the RE projects in the case studies examined are included in **Box 1**.

### **BOX 1. SOCIO-ECONOMIC BENEFITS FROM RE PROJECTS**

- **Burundi** – Mubuga solar project brought affordable power to 90,000 people, stimulated economic and social development in the serviced communities (including promoting local skills development and linkages to tertiary education), and promoted female participation in the economy.
- **Rwanda** – the 8.5 MW Agahozo Shalom project increased Rwanda's generation capacity by 6%, provided electricity for local services (including health and education), and created sustained revenues for social purposes.
- **DRC** – Virunga Energies' three small hydropower projects supply electricity to 25,000 households and 1,300 businesses in and around the Virunga National Park. Some 93% of SMEs in Rutshuru were created after electricity was introduced, with each SME directly employing 3.5 people on average.
- **Myanmar** – SmartPower Myanmar promoted rural development by using electricity provision as a catalyst for entrepreneurship and poverty alleviation in project locations.
- **Ethiopia** – the Ashegoda and Adama wind projects improved national energy resilience (given the vulnerability of Ethiopia's hydroelectric production to drought), created over 2,000 temporary construction jobs, and developed a cohort of over 100 Ethiopian engineers, technologists, and operational specialists.

<sup>18</sup> Global Alliance for Clean Cookstoves, n.d.

<sup>19</sup> Energy Peace Partners, 2022.

## 2.2. Potential negative impacts of RE projects

Despite the great potential of RE to benefit local communities, **how** these projects are implemented matters hugely – if not done well, RE projects may aggravate existing tensions and cause conflict rather than contribute to peace and stability. RE projects can fuel conflict in FCAS by introducing valuable resources into resource-scarce environments, creating a new source for competition and conflict.<sup>20</sup> Unequal distribution of project benefits across different interest groups can give rise to anger and resentment, entrench the *status quo*, or further amplify existing injustices and inequalities.

Land issues are often a major trigger of conflict in RE projects, particularly where land ownership is contested and/or large tracts of land are required for projects, as is the case with solar. Many RE projects have been developed on the land of indigenous people, which land is often seen by project developers and government authorities as idle or unproductive land and they overlook the value these areas have for local livelihoods, such as pastoralism.<sup>21</sup> Conflicts can arise over land usage, displacement, land valuing, and compensation, and a lack of meaningful community engagement and inclusion of local communities in decision-making processes, particularly around land issues, may contribute to conflict.<sup>22</sup>

Specific negative impacts that RE projects in the case studies occasioned are in **Box 2** below.

### BOX 2. POTENTIAL NEGATIVE IMPACTS OF RE PROJECTS

- **Western Sahara** – The Aftissat (Boujdour) Wind Farm commenced operation in the disputed territory of Western Sahara without consulting and obtaining consent from the indigenous Sahrawi. The project consequently aggravated tensions between the Moroccan government and Sahrawi, who view the project as an attempt to legitimise Morocco's presence in the region and further delay their self-determination. Additionally, energy generated from these projects appears destined for industrial use rather than local residential use in Western Sahara.<sup>23</sup> Skilled job roles have also largely gone to Moroccans from outside Western Sahara, further marginalising Sahrawis from participating in and receiving benefits from the projects.<sup>24</sup>

<sup>20</sup> Ateyo, 2022; CCSI, 2016; Kenner, 2017.

<sup>21</sup> Ateyo, 2022.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

- **Iraq** - Ongoing grievances over power shortages in Iraq have fuelled widespread protests in the south of the country. Efforts to develop solar capacities to address the deficiencies are stalled due to stagnant political negotiations over regulatory and commercial reforms, thereby benefitting elites who profit from the energy provision deficit for personal gain and political advantage.
- **Ethiopia** – The Adama wind farms in Oromia led to the requisitioning of significant tracts of agricultural land that adversely impacted the livelihoods of more than 1000 farmers and raised tensions between the Oromo people and the federal government.

The larger an investment, the larger the impact(s) will likely be given their greater presence and reach. There can be dire consequences for project developers, investors, governments, and local communities if the risks of RE project development in FCAS are overlooked. Insecurity and fragility in the locality of projects imperils projects by disrupting project development or operations and risking staff safety. Additionally, project developers and investors can become embroiled in lengthy legal battles and experience considerable reputational damage.

### **2.3. The central importance of conflict sensitivity**

---

Conflict sensitivity refers to an organisation or actor's awareness of:

- The specific (conflict) context where a project or intervention will be implemented.
- Based on the contextual awareness, an understanding of the positive and negative interactions between a project and the local environment, and *vice versa*.
- Using this understanding to inform the design, implementation, monitoring, and adaptation of projects to minimise negative effects and, where possible, maximise contributions towards positive peace, conflict prevention, and resilience.<sup>25</sup>

For years, there has been an awareness among peacebuilding, humanitarian, and development sectors that interventions can have unintended negative effects on local communities, especially in contexts already experiencing fragility and conflict. However, from the interviews conducted for this study, it appeared that awareness of the potential negative impacts of investments was lower among private sector actors. There may be various reasons for this, including only nascent documenting of the negative impacts that RE projects can have on prevailing conflict situations and the absence of mandatory

---

<sup>25</sup> Stabilisation Unit, 2016.



Ras as Sinn, Syria. Solar panels of the solar power plant in the Kafr Gals camp of Maram.  
Photo by Omar Albam/SOPA Images/LightRocket via Getty Images.

requirements for conflict sensitive approaches (either from government regulations or as conditions of funding from donors or investors). However, as growing stakeholder demands for corporate responsiveness on ESG issues spurs an expansion of global regulatory frameworks, investors and project developers are facing increased pressure to better understand, assess, and report on ESG aspects of their investments in FCAS, including how these issues dovetail.

With growing evidence on the need for more careful approaches to investing in FCAS, greater attention is now being given to conflict sensitivity, recognising that investments and business activities can trigger unintended negative impacts. Understanding the social dynamics shaping FCAS is the foundation for proactively managing such risks and ensuring investments yield anticipated financial and social returns. Beyond mitigating potential risks, conflict sensitivity also enables investors and companies to capitalise on opportunities in their operating environments. Conflict sensitive practices can help facilitate access to resources and markets in fragile regions, improve the stability of supply chains, strengthen actors' social license to operate, and help project developers identify entry points to foster stable operational environments that are conducive to sustainable long-term business growth.

However, the benefits of conflict sensitivity are limited if it is approached as a one-time exercise. Rather, conflict sensitivity is a lens that is relevant to and should be embedded across all decision-making processes, and its implementation should be tailored to the distinct requirements of each project and operating environment. While conflict sensitivity should ideally be adopted from the pre-investment phase, it can be integrated into ongoing projects at any point of the project cycle. The following section offers recommendations on how conflict sensitivity can be integrated throughout the lifecycle of RE projects.

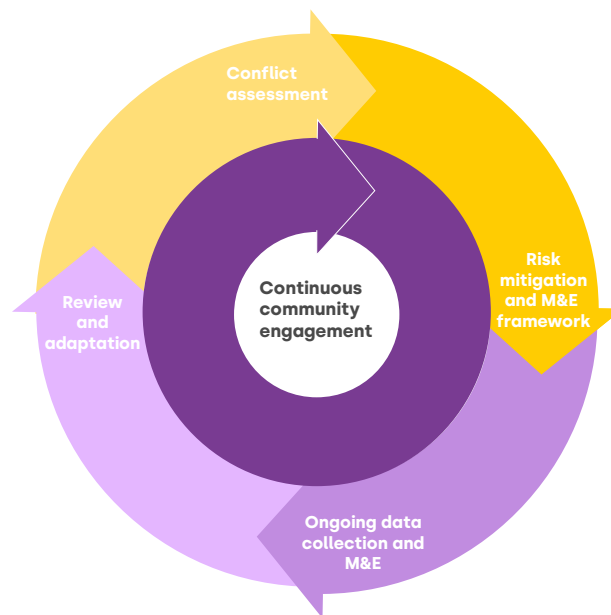
---

## 3. Conflict sensitivity across the project lifecycle

---

Conflict sensitivity is a continuous, tailored approach that brings greatest benefit when integrated throughout the lifecycle of projects. **Figure 1** below summarises the key elements involved during project design and development.

**Figure 1: Conflict sensitivity in project design and development**



While the analysis and processes involved in incorporating conflict sensitivity into project design and development may initially seem costly, the beneficial value of this approach for investors and project developers is significant and, ultimately, is considerably less costly than project disruption, delay, or damage – risks that frequently materialise in the absence of robust conflict sensitivity.

### 3.1. Project design

---

Project design is central to project development and ensuring that design is shaped by conflict sensitivity considerations is of fundamental importance. This requires adopting a deliberate and systematic approach to project design based on a robust and credible analysis of the context. Integrating conflict sensitivity into project design takes into consideration the complex interplay between the project and conflict context, which can help to effectively manage risks, maximise the positive impact of RE projects, and support more informed decision-making. In practical terms for project design, this necessitates the following elements.



### 3.1.1. Undertaking a comprehensive conflict assessment

A robust **conflict assessment** is not an addition to, but rather the foundation of any sound due diligence and risk mitigation and management framework. Comprehensive environmental and social impact assessments should be accompanied by a rigorous and transparent conflict assessment of the local environment that gauges the potential impact that the project may have on the local context and *vice versa*.

Conflict assessments are a systematic and structured approach comprised of several components that collectively provide a comprehensive understanding of local conflict dynamics. Although the components may vary based on the given context, a conflict assessment would typically include the following:<sup>26</sup>

- **Context analysis** – this involves examining and understanding the broader political, social, economic, and historical context in which the RE project will be implemented. This includes examining the existing conflict (i.e., its origin and evolution over time), power dynamics, drivers of conflict, and potential triggers for violence in the area. It is important to ensure that the analysis is participatory and goes beyond desk research to reflect the perspectives of local stakeholders.
- **Stakeholder mapping** – this involves identifying and analysing the various stakeholders involved in or affected by the conflict, the interplay between these stakeholders, and their influence on the conflict dynamics. Actively engaging with local stakeholders can provide valuable insight into community structures, enabling a better understanding of how RE projects may intersect with local dynamics and identification of factors that could exacerbate tensions or trigger conflict.
- **Conflict risk screening** – this involves assessing the potential risks and triggers that may arise during a project, such as risks arising from distributing goods or services along the fracture lines of conflict, building parallel systems of service provision outside of government, and potentially legitimating local elites by aligning with them. By conducting such a screening, project developers can gain a deeper understanding of the conflict risk landscape, which can then feed into project design. Ultimately, a robust conflict risk screening can help ensure that RE projects are more resilient to potential shocks, strengthen preparedness measures, and prevent unintended consequences.
- **Identifying opportunities for positive impact** – this requires examining trends and patterns in the conflict dynamics and scoping for entry points for potential peacebuilding, reconciliation, or enhanced social cohesion.

The following sources provide further information on the components of conflict assessments:

---

<sup>26</sup> These points were taken from a combination of ARIA, 2023 and Stabilisation Unit, 2016.

- A **guide on conflict sensitivity** developed for private sector clients by Africa Resilience Investment Accelerator (ARIA), which brings together development finance institutions to unlock investment opportunities in transition states in Africa.
- **Conflict sensitivity tools and guidance** developed by the UK government's Stabilisation Unit.

### 3.1.2. Meaningful engagement with local communities

**Inclusive and meaningful engagement with local (affected) communities** and their inclusion in decision-making processes is essential to effectively integrate a conflict sensitive approach into projects. Additionally, effective community engagement can also cultivate an environment of trust and lead to greater public and political acceptance of the project.<sup>27</sup> Community engagement should be consistent throughout the project lifecycle and should include the following:

- Initiating **open and transparent conversations** with community leaders to **build trust and mutual understanding**. Cultivating an environment of trust is particularly important in FCAS where there is often a general sense of mistrust and reluctance to deviate from norms. In these settings, facilitating dialogue with local leaders or community heads could play a key role in bringing communities together and helping shape a positive attitude towards RE projects, contributing to their long-term success.
- Conducting a thorough assessment of existing skills and expertise within the community to identify opportunities for **leveraging and developing local capacity**. This could include providing training programmes and workshops to strengthen skills needed for RE project roles during implementation and operations and maintenance (O&M).
- Establishing an accessible **grievance mechanism**, which should be co-designed with local communities. Principle 31 of the **UN Guiding Principles on Business and Human Rights** outlines principles to shape grievance mechanisms, including that they be legitimate, accessible, predictable, equitable, transparent, compatible with human rights, a source of continuous learning, and be based on engagement and dialogue.<sup>28</sup> Grievances should be addressed promptly to prevent deterioration of relationships and project support.
- Developing an **effective communication strategy** that conveys project information, benefits, potential impacts, and addresses any key concerns in a context sensitive and accessible manner. This can be achieved using a variety of communication tools including community meetings, newsletters, local media outlets, and awareness campaigns to disseminate relevant information and encourage two-way communication.

---

<sup>27</sup> Birch & Carter, 2023.

<sup>28</sup> UN Guiding Principles on Business and Human Rights, Principle 31.



Wind turbines operate in a wind farm in Golan Heights. Photo by JALAA MAREY / AFP via Getty Images.

- Adopting a systematic approach for **information sharing** is crucial to ensure that relevant project information is accessible and understandable to community members. This will enable community members to make informed decisions, actively participate in the project, and contribute to fostering a sustainable learning ecosystem.
- Obtaining **informed consent** from local communities for the RE project to proceed is necessary, and this is only possible if full information is shared, meaningful consultations with local communities are undertaken, and project developers have a deep understanding of local land ownership and land use patterns. The legitimate owners of land and local resources are the entities and individuals whose consent matters.

It is important to recognise that when RE project developers enter a context affected by conflict and fragility, they are no longer neutral actors but rather become connected to a complex web of pre-existing dynamics. Project developers should be mindful of the power disparities that often exist between their companies and local communities, which may result in communities feeling compelled to accept unfavourable project conditions and can give rise to resentment.

Local partners can play an important role, particularly in complex or highly fluid contexts. Local partners can assist with increasing developers' understanding and awareness of conflict sensitivity risks and building community support for the planned project. Conversely, they may also hinder project development if they are seen by the local community as being representatives of local elites or lacking legitimacy or credibility. Project developers should therefore be cautious about their associations with local partners.

Ultimately, meaningful engagement with local communities can help cultivate trust and deepen understanding of community structures, such as how they deal with grievances, the representation of different groups (e.g., youth and women), communal dynamics (e.g., social cohesiveness), and the distribution of land and resources. This is particularly important in FCAS where this knowledge can help situate how a project may interact with local dynamics and identify potential triggers of tensions or conflict.

### 3.1.3. Using findings to inform project design and developing a risk mitigation and management framework

To be of value in practice, the conflict risk information garnered through the conflict assessment and community engagement must tangibly **inform project design and be integrated into business processes**. Conflict risk mitigation and management approaches should be developed to respond to identified conflict risks, ensuring that the risks the project poses to the local context are covered in addition to risks the local context may pose to the project (e.g., kidnapping of staff and armed groups blocking access to project sites), the latter of which are generally already included in project developers' regular project risk mitigation and management processes.

A comprehensive **risk mitigation and management framework** that includes key conflict sensitivity risks should be developed for implementation throughout project development. Implementation of this framework can provide some protection to project developers and investors against both conflict-related and regular project risks and it can serve as an entry point for regular discussions with relevant stakeholders on the status of current risks and help inform appropriate adjustments. By engaging in continuous, in-depth analysis of the interaction between the project and local context (and *vice versa*), this allows for ongoing learning, enhances understanding and foresight, and facilitates effective risk mitigation throughout the project's lifecycle.

### 3.1.4. Developing an M&E framework

Establishing a **robust M&E framework** is necessary to track progress, measure the effectiveness of interventions, and identify where further adjustments to the project may be needed. Such a framework could involve the following:<sup>29</sup>

- Developing a **results frameworks** based on clearly defined indicators for monitoring anticipated or potential project outcomes and impacts, including conflict risks identified in the conflict assessment.
- Incorporating mechanisms for **community feedback**, e.g., from regular community engagement or grievance mechanisms, is needed to ensure the perspectives and needs of local stakeholders are considered and integrated into project adjustments. This mechanism also provides valuable information on unanticipated negative or positive impacts and can help gauge how a project is perceived by affected communities.
- Updating the **conflict assessment** regularly to keep abreast of evolving context and dynamics – for example, this could be done after a major political, economic, or security change takes place in the country of operation or as part of project developers' annual review to ensure that the project remains responsive to changing conditions.

---

<sup>29</sup> Stabilisation Unit, 2016.

If investors and project developers intend for their projects to not only do no harm<sup>30</sup> in contexts affected by fragility and conflict but to also have a **positive impact** on local development or peace, it is necessary that the M&E framework is underpinned by a project-specific **theory of change** (TOC). A theory of change:

- Outlines hypothesised causal relationships between project outcomes and desired impacts.
- Identifies assumptions that must hold and risks that exist to the desired impacts being achieved.
- Should be developed consultatively (particularly with local communities).
- Should be grounded in available evidence and tested against new evidence that emerges, being revised as needed.

The TOC exercise helps understand complex dynamics, provides a framework for learning, articulates a shared vision and strategy for change, and can be a means by which views and assumptions of different actors can be gauged and better understood.<sup>31</sup> It should reflect findings from the conflict assessment.

There are several sources that project developers could draw on to help develop a M&E framework and TOC for projects intended to have positive development or peace impacts, including:

- The **Peace and Conflict Impact Assessment** (PCIA), which is a “means of anticipating and evaluating the impacts of development projects on structures and processes that (1) strengthen prospects for peaceful coexistence and decrease the likelihood of violence, and (2) increase the likelihood that conflict will become violent.”<sup>32</sup>
- The **Positive Peace Index** (PPI) developed by the Institute for Economics and Peace, which defines ‘positive peace’ as “the attitudes, structures, and institutions required to create and sustain peaceful societies.”<sup>33</sup> The PPI consists of eight actionable components that systematically interact to build a societies’ attitudes, structures, and institutions to create sustainable peace.<sup>34</sup> Among others, Energy Peace Partners use the PPI to inform their Peace Renewable Energy Credits.
- A **guide to monitoring and evaluation for energy projects**, developed by the Monitoring and Evaluation in Energy for Development (M&EED) International Working Group.

---

<sup>30</sup> For more information, see <https://www.wvi.org/peacebuilding-and-conflict-sensitivity/do-no-harm>

<sup>31</sup> UNDP, n.d.

<sup>32</sup> Haider, 2014.

<sup>33</sup> Energy Peace Partners, n.d.

<sup>34</sup> The eight pillars/components are a well-functioning government, equitable distribution of resources, free flow of information, good relations with neighbors, high levels of human capital, acceptance of the rights of others, low levels of corruption, and a sound business environment.

- A **handbook on measuring the benefits of energy access**, developed by the Inter-American Development Bank.

Importantly, effective measurement of the interaction between a RE project and the local context will depend on how well the indicators capture relevant peace and conflict dynamics. A combination of objective indicators (for example, how many local community members have been affected directly or indirectly by the project developer's operations) as well as subjective indicators (for example, how well local community members feel the project developer is managing risks to local biodiversity).

As project developers are often already collecting data to report on compliance with ESG requirements and, in some cases, for reporting needed for certain innovative finance mechanisms such as impact bonds and results-based financing, it could be relatively easy to include M&E on conflict sensitivity measures as part of these efforts. **Section 3.4** provides more information on how conflict sensitivity can be integrated into data collection and M&E efforts in different stages of the project lifecycle.

## **3.2. Project financing**

---

Project financing is a key constraint to the scale up of RE projects in FCAS and the way in which projects are financed often hampers the ability of project developers to take the needs of local stakeholders into account. Investments in FCAS face a number of unique financial challenges, including:

- Financial constraints of host governments, raising the importance of private finance.
- High project preparation costs, as greater upstream work is typically required in more undeveloped energy markets.<sup>35</sup>
- Smaller project investment sizes, which result in overheads comprising a higher proportion of project costs, undermining project profitability.<sup>36</sup>
- Limited liquidity in relatively undeveloped local financial markets - where credit does exist, it's often subject to high interest rates and short repayment periods.
- Currency risk resulting from volatility in exchange rates tends to be higher in FCAS, which frequently experience macroeconomic instability.
- Lower purchasing power among populations affected by fragility and conflict.

---

<sup>35</sup> Carter, 2021.

<sup>36</sup> Carter, 2015.

For these reasons, development finance institutions (DFIs), private impact finance providers, and subsidies play an important role in project financing. Subsidies can be justified when a project has the potential to achieve development impact, but the returns to society exceed the private returns on an investment.<sup>37</sup>

The socio-economic benefits of RE projects in FCAS can surpass those in developed markets, which may justify the use of concessional finance. Concessional financing is funding provided on below-market terms, generally from public finance (bilateral donors or DFIs) or philanthropic sources. The use of concessional financing enables private investors to participate in FCAS investments with reduced risks, thereby raising their overall returns. This approach leverages private funding to mobilise more financing for RE projects in FCAS. Work by the International Growth Centre on **development finance in fragile settings** outlines the current state of investing in FCAS and the policy, operational, and other reforms needed, as well as financing mechanisms that can be leveraged to scale up investments in FCAS.<sup>38</sup>

A growing body of evidence highlights financing options that effectively address the challenges associated with investing in FCAS, for example:

- Projects in FCAS need financing that is **flexible, patient, and risk tolerant**.
- When project funding includes **grants and concessional loans**, it can become attractive for a wider range of private investors. Subsidies will often be justified for RE projects planned in FCAS.
- **More equity participation** is valuable, as this tends to allow for sustained engagement through cycles of volatility and offers longer-term horizons and growth strategies.<sup>39</sup> Achieving more equity investment will require DFIs and other investors to reduce their over-reliance on loans and to raise their risk threshold. An added advantage is that equity partners also frequently bring technical expertise in addition to funding.
- Working more with **local financial institutions** can ensure funders can leverage the deep contextual understanding of local partners to support project development. It also enables financing of smaller projects, building of trust and credibility within the local community where the local intermediary is a trusted entity, and it contributes to local financial market development, which is critical for scaling investments in FCAS in a sustainable manner.<sup>40</sup>

---

<sup>37</sup> Ibid., p. 3.

<sup>38</sup> Collier et al., 2021.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

- More **local currency financing** would have a significant positive impact, particularly since RE projects tend to generate revenues in local currency. If project developers could borrow in local currency (rather than hard currency), it would guard against their repayment obligations multiplying if the local currency depreciates as a result of e.g., macroeconomic instability, which is common in FCAS. Comprehensive analysis on mitigating foreign currency risk in local currency lending in FCAS has been undertaken by the International Growth Centre and provides **more information** on this issue.
- Accompanying financing with **technical support** achieves superior outcomes to financing alone. For example, British International Investments (BII) supports Virunga Energies with both concessional loans and technical assistance on different issues, including business integrity and compliance with ESG standards.

Critically, conflict sensitivity and heightened due diligence could be more mainstreamed by donors and investors by including this approach and related assessments as a **condition of funding** RE projects in FCAS. Furthermore, technical expertise support on conflict sensitivity from donors and investors could greatly benefit project developers.

### 3.3. Local institutional and labour capabilities

---

There tends to be limited local capacity in the RE sector in FCAS, with constraints existing at both the institutional and operational levels. Insights from interviewees emphasised the importance for investors and project developers in FCAS to prioritise the use of RE technologies that align with existing local expertise. Rather than piloting new technologies that require specialised skills and resources not readily available in those locations, focusing on established technologies could leverage the existing knowledge and capabilities available within the region. When introducing a new technology to an environment unfamiliar with such technology, project developers must remain flexible and accommodate changing circumstances.

There may be a lack of sufficiently skilled labour in local communities for employment beyond the construction phase, as FCAS frequently lack prior experience with RE project development. As a result, developers often resort to recruiting skilled staff from outside local communities, which may lead to resentment among local community members who wanted to be able to benefit from these employment opportunities. Although local skills and capacity development is primarily the responsibility of government, project developers are nonetheless encouraged to **invest in local skills development**, particularly where the investment in skills development would have benefits beyond the construction phase of a single project. Examples of this would include ongoing O&M roles or if the project developer has other RE projects planned in the area, so the cost of skills development would not rest on a single RE project (which may otherwise make the project financially unviable).



There are successful examples of project developers in FCAS who have invested in local capacity development for O&M roles. For example, in Pakistan, local community members initially lacked the necessary skills to qualify for skilled positions in offshore wind farms. To address this, some wind power plants, such as Fauji Fertilizer Company (FFC), developed Technical and Vocational Centres to provide training for community members in the operation of wind power plants.<sup>41</sup> This initiative achieved some success as reports indicate that community members from cities near the Jhimpir wind plants who underwent training are now working on various wind plants in the region.<sup>42</sup>

### **3.4. Data and active learning**

---

Flexibility is essential in complex and fluid environments and remaining responsive and adaptable is important for RE projects in FCAS. Conflict and fragility evolve over space and time and, for example, a project that was constructed outside of a conflict area can nevertheless become directly affected as the conflict infiltrates the project's supply chains. Adjusting approaches in response to changed circumstances requires the strategic use of data and active learning throughout the project.

Conflict sensitivity measures can be introduced throughout the project lifecycle, including in the initial feasibility and needs assessment exercises and on an ongoing basis during routine M&E activities. The frequency of data collection will depend on what data collection method(s) are being used, e.g., surveys are valuable for gaining insight into local community members' perceptions of the RE project development but can be expensive and time consuming and are generally more useful over longer time periods, whereas administrative and geospatial data can be updated more frequently and even in real time, but the information gathered through these methods differs to what can be acquired through surveys.

New, open source geospatial energy planning tools are also being used to conduct rapid site assessments to identify optimal least-cost electrification options through mapping demographic data (such as population density and growth patterns), social and physical infrastructure (such as schools, health centres, administrative offices, and roads), economic landscape (such as household income, poverty, commercial activity, etc.), and distance to the existing grid network among other parameters.<sup>43</sup>

---

<sup>41</sup> FFC is the first fertilizer industry player in Pakistan to engage in commercial wind energy by launching a Wind Farm in Jhimpir, Sindh in 2012.

<sup>42</sup> Aslam et al, 2022.

<sup>43</sup> ESMAP, 2022.

### 3.4.1. Baseline data collection at start of project

Project developers already collect and use data as part of their business activities. During project planning, they generally undertake pre-feasibility and feasibility field studies to identify the optimal site(s) based on RE resource availability, current and future energy demand assessments, logistics of bringing in equipment and of energy transmission, availability of skilled labour, and understanding community and local dynamics.

Conflict sensitivity can be integrated into baseline data collection by additionally collecting data and information around the following questions:<sup>44</sup>

- What is the conflict context in which the project operates?
- What is the two-way interaction between the project and the local context?
- What triggers can contribute to the outbreak/further escalation of conflict?
- What are the interests, goals, positions, capacities, and relationships of the main actors?
- What possible negative effects could the conflict have on the project?
- What are the project's expected positive effects on the conflict (outcomes, impact)?
- What possible negative effects could the project have on the conflict (do no harm)?
- What are the best ways for the project to minimise its negative effects and maximise its positive impacts on conflict?

### 3.4.2. Ongoing data collection during project construction and operations

Project developers are increasingly required by public regulatory authorities and investors to report on ESG requirements and, therefore, collect relevant data for this purpose, both at the start of the project and throughout construction and operations. Additionally, project developers with funding from innovative financing mechanisms such as impact bonds and results-based financing will already be collecting data on their project outcomes and impacts for reporting and payment purposes.

---

44 IFC, 2019.

Adding M&E on conflict risks to these efforts would be relatively marginal in practice and would add significant value to project developers in ensuring they are able to adjust their approach in response to changing conflict circumstances. This would involve collecting data and information around the following questions:<sup>45</sup>

- To what extent are interventions achieving their objectives?
- Are there key changes in the context? How are tensions and conflict issues in the targeted areas evolving?
- Is the intervention having effects on the context and conflict and, if so, how?
- Is the intervention affected by particular tensions, conflict issues, or evolutions in the context?
- Are there any unintended or unforeseen (positive and negative) impacts of the project?

### **3.5. Expanding evidence on conflict sensitivity**

---

It is essential that more evidence be generated on the varied impacts that RE projects can have on peace and conflict dynamics in FCAS under different conditions and approaches. A stronger evidence base will allow investors and project developers to make **more informed business decisions** and it can be a key signalling mechanism for subsequent market entrants by increasing the confidence of investors looking to invest in FCAS markets. Indeed, several interviewees indicated that if more evidence was available on the social and peace benefits of RE projects, as well as ease of adoption of conflict sensitivity approaches, this could **incentivise greater uptake of conflict sensitivity** among investors and project developers. More generally, as more evidence is made available on investing in different FCAS markets, it will become possible to more accurately assess and price risk, potentially bringing down risk premia in many instances (as perceived risks tend to exceed real risks), which would reduce project costs.

Building the evidence base depends on willingness and commitment from different actors – donors, DFIs, investors, project developers, government entities, and others. This effort will require transparency around data (to the extent it is not privileged information), robust M&E systems of project developers, and a willingness to allow independent study of RE projects and the impacts their development has on peace and conflict dynamics in different localities. Support (both financial and technical) from concerned parties (governments, project developers and investors, donors, DFIs, etc.) can greatly assist in strengthening the evidence base on this critical topic.

---

<sup>45</sup> Ibid.

---

## 4. Case studies examined as part of this study

---

A number of current RE projects across different FCAS using different RE technologies were examined, with three projects of sufficient scale and duration identified for inclusion as the approaches yield insights into their impact on peace and conflict in local areas around the projects.

### 4.1. Aftissat (Boujdour), Western Sahara

---

Western Sahara is a disputed territory in the Maghreb region in northwest Africa that is recognised by nearly 50 UN member states. About 20% of the territory is controlled by the self-proclaimed Sahrawi Arab Democratic Republic while the remainder is under Moroccan government control. The UN considers the Sahrawi's Polisario Front to be the legitimate representative of the indigenous Sahrawi people and maintains that they have a right to self-determination. Many Saharawi people see Morocco's installation of wind farms in Western Sahara as an attempt to legitimise Morocco's presence in the region and further delay self-determination.<sup>46</sup> Consent for these projects has not been given by the Polisario Front nor has engagement or consultation with the Sahrawi people been undertaken.

This project resulted in controversies for consortium partners and turbine suppliers who faced accusations of violating international law and the local population's right to self-determination, as well as undermining efforts to peacefully resolve the conflict by legitimising Morocco's occupation and control over Western Sahara. Siemens Gamesa Renewable Energy SA, a supplier of wind turbines to wind farm projects in the Western Sahara, has worked in partnership with project developers, supply chain companies, and operators to construct and install these projects, including Enel Green Power S.p.A., Windhoist Ltd., and Nareva Holding (an energy company wholly owned by SNI, an investment company in the ownership of the Moroccan Royal Family). Despite Siemens Gamesa becoming increasingly cognisant of the disputed nature of the territory, it has not altered its commercial relationships or publicly recognised the implications of its operations in the Western Sahara in legitimising the actions of the Moroccan government in the area.

---

<sup>46</sup> Ateyo, 2022.

This position has adversely impacted the reputation of Siemens Gamesa, Siemens Energy, and Enel and has led to Norwegian asset manager Storebrand adding these companies to its list of excluded companies. Storebrand's decision recognised that these companies had not carried out sufficient due diligence on the human rights issues around the projects or their business partners in Morocco-occupied Western Sahara. Moreover, the companies' activities in Western Sahara are a recurring issue at annual general meetings and a focus for human rights activists and investors.

### Key project lessons

This case demonstrates the following key lessons:

**1. Context analysis** – developing a detailed understanding of the local context by integrating conflict analysis into due diligence procedures is necessary. Businesses do not enter conflict environments as neutral actors and the development of wind farms in Western Sahara has entrenched the existing *status quo* of political, social, and economic injustices while strengthening the position of the Moroccan government to pursue its political ends in the territory. Project developers and investors that enter FCAS without understanding the local context and the potential for their projects to impact local conflict dynamics run the risk of violating international human rights standards and resulting in reputational damage.

**2. Consent** – obtaining consent is critical. While the Sahrawi's legitimate right to self-determination and subsequent ownership of the wind and land resources in Western Sahara remain disputed by Morocco, their consent should be viewed as indispensable for any projects taking place in Western Sahara. To avoid exacerbating tensions, relevant parties to the dispute should be consulted. Utilisation of RE resources in unstable settings without appropriate consent will affect wider peace and conflict dynamics and further compound marginalisation and mistrust.

**3. Community benefits** – projects should aim to provide social-economic benefits to affected communities. Although the projects in Western Sahara created green electricity at scale and employment opportunities, local communities gained limited access to the electricity generated. Rather, the electricity generated is destined for industrial uses and, potentially, for export to Europe as demand for clean energy increases significantly in Europe.<sup>47</sup> In addition, employment opportunities were given to new residents to the territory rather than local indigenous residents, creating further inequalities and tensions.

---

<sup>47</sup> Pearce, 2013.

## 4.2. Ashegoda and Adama Wind Farms, Ethiopia

---

In an effort to diversify Ethiopia's energy mix and strengthen resilience in the electricity sector (which has historically relied heavily on hydro power), the Ethiopian government initiated the development of wind farms, including the Ashegoda and Adama projects. Development of the Adama project came in the context of existing tensions between the country's two largest ethnic groups, the Oromo and the Amhara.

### Ashegoda Wind Farm

The Ashegoda wind farm, contracted in 2009 and inaugurated in 2013, was Ethiopia's first wind energy project. Ethiopian Electric Power (EEP) collaborated with Vergnet, a French company, to develop this 120 MW wind farm. The project was financed by the French Development Agency (AFD), BP Paribas and the Ethiopian government. However, challenges arose due to the Ethiopian government's and EEP's limited experience of procuring wind energy projects and managing related contractual arrangements and adjustments with the contractor. Subsequently, for their next wind energy project (i.e., the Adama wind farms), the Ethiopian government and EEP opted for Chinese contractors who were perceived as more flexible in adapting the project to changing circumstances and requirements.

### Adama Wind Farms

The Adama I (53 MW) and Adama II (151 MW) wind farms are located close to Adama Town in Oromia Regional State. The Ethiopian government collaborated with two Chinese contractors, HydroChina Corporation and China Geoengineering Corporation Overseas Construction Group, to develop these projects. Both Adama I and Adama II wind farms were financed through a combination of concessional loans and contributions from the Ethiopian government. Adama I was completed in 2012 and Adama II in 2015.

The development of the Adama wind farms raised tensions due to existing land displacement issues in Oromia associated with the expansion of the capital, Addis Ababa, which is located in Oromia. Tensions further escalated when Adama I and II requisitioned 145 hectares of farmland for the construction of wind turbine foundations and access roads, negatively impacting approximately 1,327 local farmers.<sup>48</sup> Local communities resisted the projects, citing inadequate consultations and unjust land compensation rates proposed by the government. This resulted in delays in project implementation and led to ongoing tension.

---

<sup>48</sup> Chiyemura, 2022.

## Key project lessons

This case demonstrates the following key lessons:

**1. Stakeholder consultations** – to mitigate tensions arising from land displacement and compensation issues, it is critical to engage with local communities from the project's onset. Adequate consultation can help minimise unintended consequences and can also help ensure that broader socio-economic benefits from RE projects are maximised, including local skills and capacity development.

**2. Institutional sensitivity and contract flexibility** – project developers need to be sensitive and responsive to the institutional environment in which they operate. In this case, a standard engineering, procurement, and construction contract model was inappropriate for the development of a new technology like wind energy in a country where wind farms had not been developed before. It is necessary for project developers to adopt flexible contracts that are tailored to the institutional context and enable the transfer of required knowledge, learning, and capacity building. Ultimately, by adapting contracts to the specific needs and dynamics of the institutional environment, developers can strengthen the effectiveness and success of their projects.

**3. Local capacity development** – despite the Ethiopian government's policy of developing the capacity of local engineers and technicians, employment creation around these wind farms was mainly temporary and most skilled job opportunities during implementation and O&M phases were fulfilled by foreign staff employed by project developers. Although some higher skills were developed by EEP employees and there was transfer of know-how, it was not at the scale needed to create significant numbers of skilled supply chain and O&M jobs for Ethiopian nationals or to generate socio-economic benefits for local communities. Efforts should be made to strengthen local capacity, enabling long-term employment opportunities for the Ethiopian workforce and maximising the socio-economic impact of the project.

### 4.3. Virunga Energies, DRC

---

DRC faces multiple conflicts over territorial and resource control in many regions of the country, especially in the east. The province of North Kivu, where Virunga Energies (VE) operates, has been an area of recurrent waves of conflict and is home to the Virunga National Park, a world heritage site, biodiversity hotspot, and home to endangered mountain gorillas.

VE was founded in 2013 as a subsidiary of Virunga Foundation, in what was seen at the time as a post-conflict setting following the 2012 peace agreement. Virunga Foundation is a private UK charity that manages the park under a public-private partnership with the governmental agency Congolese Institute for the Conservation of Nature (ICCN).

The Foundation has a three-fold mission: the conservation of the park's natural resources, the reduction of poverty, and the promotion of peace.<sup>49</sup>

VE is a key element of the Foundation's efforts to contribute to peace, being based on the theory that electricity is indispensable for economic activity and, by extension, that economic growth and formal employment support local stability. Its three run-of-river hydroelectric stations (13.2MW Matebe, 1.4MW Mutwanga, and 14.6MW Luviro) currently supply electricity to 25,000 rural and urban households and 1,300 businesses in and around the park. In addition, VE has installed free public street lighting in the villages and towns it serves and provides free water pumping services and electricity to local clinics and schools. VE is in the process of developing a fourth 14MW site and has a long-term goal of reaching an installed capacity of 105 MW.

VE's impact thesis is that affordable and reliable electricity access will (i) reduce local communities' reliance on the land and natural resources of the park (control over these resources perpetuates the conflict) and (ii) boost the economy of the region through creating direct and indirect jobs, improving livelihoods, and providing an alternative means of subsistence outside the park. The aim is to create 100,000 jobs by 2030, and USD 1 billion in economic activity before 2050.<sup>50</sup>

VE operates as a semi-commercial business and its financing comes from diverse sources: primarily grants, debt from DFIs, and its own revenues. VE lays the ground for long-term sustainability of the project but currently has no plans to change the semi-commercial approach to its operations. Investors, however, recognise that there is potential for attracting commercial equity and debt in the future and several commercial project developers are emerging in the region.

### Key project lessons

This case demonstrates the following key lessons:

**1. Intentionality about positive impacts** – VE is inextricably linked to the Foundation's mission to protect Virunga National Park. VE hopes that by providing RE access, the five million people living in proximity to the park will benefit from increased income generation opportunities and become less reliant on illegal charcoal from park trees for their home as, if charcoal usage continues unabated, the park will be deforested within a decade.<sup>51</sup> Additionally, the Foundation supports initiatives that complement VE's work, such as promoting entrepreneurship in agribusiness and facilitating access to finance, recognising that increased economic activity means electricity demand can be sustained and further stimulated through productive use.

---

<sup>49</sup> Virunga Foundation, 2019.

<sup>50</sup> Ibid.

<sup>51</sup> ClimatePartner, n.d.





Wind turbines in the Western Sahara. Photo by Giovanni Mereghetti/UCG/Universal Images Group via Getty Images.

**2. Semi-commercial business model** – this offers significant benefits for local communities. Electricity revenues allow VE to cover O&M costs, invest in scaling up, re-pay debt, and provide free electricity to local clinics and schools and for public street lighting.

**3. Active and regular community engagement** – despite the gains generated by VE's activities, issues with community engagement and transparency have come to the fore. For example, some evidence points at a perceived lack of transparency and misunderstanding among the population around VE's approach.<sup>52</sup> Specifically, communities do not appear to realise that the energy generated by VE is reinvested in conservation and social projects rather than VE operating as a purely commercial business. It is important for VE to engage more actively with the communities it serves on a regular basis to ensure any apprehensions about VE activities are addressed in a timely manner.

---

<sup>52</sup> Verweijen et al., 2020.

---

## Conclusion

---

Though electricity access deficits are becoming increasingly concentrated in FCAS, financial flows to support RE projects in these regions are declining, despite RE development being a potentially powerful catalyst for socio-economic development and social cohesion. To scale up investments in RE projects and facilitate the energy transition, it is crucial to increase private sector participation to bridge the funding gap and enable large-scale project development in fragile settings.

Improved understanding of the two-way interaction between RE projects and local contexts benefits project developers, investors and local communities alike, and is crucial to proactively mitigate risks and capitalise on the potential positive social impacts of renewable energy. Conflict sensitivity is central to achieving improved contextual awareness, and while it brings the greatest benefits when incorporated throughout the project lifecycle, it can and should be integrated into ongoing projects at any point of the project cycle.

As responsible business practices are increasingly prioritised and the regulatory landscape evolves accordingly, there is growing momentum towards incorporating conflict sensitivity in projects in FCAS. Frameworks on heightened due diligence in fragile states are pending, and this paper is just one of the numerous guidance materials and tools that are being developed to support project developers and investors in effectively adopting conflict sensitive approaches. Moreover, the growing number of renewable energy partnerships between DFIs, international organisations, and non-governmental organisations offers to provide valuable expertise and support in incorporating conflict sensitivity into RE project development and financing.

However, further research is needed to deepen our understanding of the impact that RE projects have on peace and conflict dynamics in FCAS, as well as to further develop practical approaches to apply the principles of conflict sensitivity across the lifecycle of RE projects. More evidence will not only enable better informed business decisions, but potentially reduce project costs through lowered risk premia and incentivise the uptake of conflict sensitivity among RE investors and developers. To build up the requisite evidence base, it is critical that project developers and investors engage on this topic and document and share their experiences. In doing so, they can better unlock the potential that RE offers to drive positive change and foster peace in FCAS.

## References

---

- Adams, S. et al., (2006). A guide to monitoring and evaluation for energy projects. Monitoring and Evaluation in Energy for Development (M&EED) International Working Group.
- ARIA (2023). Conflict sensitivity in projects: Practical measures for private sector clients. Africa Resilience Investment Accelerator.
- Aslam H.; Nazir, A.; Zia, U. 2022. Annual state of the renewable energy report Pakistan 2021, Sustainable Development Policy Institute.
- Ateyo, P. (2022) Fuelling conflict? The impact of the green energy transition on peace and security. International Alert.
- Ayana, O.U. & Degaga, J. (2022) Effects of rural electrification on household welfare: A meta-regression analysis. International Review of Economics, vol. 69(2): 209-261.
- Barnes, D.F. & Hussain, S. (2018). Measuring the benefits of energy access: A handbook for development practitioners. Inter-American Development Bank.
- Birch, I. & Carter, B. (2023). 'Conflict-sensitive social protection: Kenya country report'. Institute of Development Studies & Irish Aid.
- Carter, P. (2021). The economics of development finance: Practical thinking on investing for development. CDC Insight.
- Carter, P. (2015). Why subsidise the private sector? What donors are trying to achieve, and what success looks like. Overseas Development Institute.
- Chiyemura, F. (2022) Adama I and Adama II Wind Power Projects. People's Map of Global China.
- ClimatePartner (n.d.) Hydropower for the habitat of mountain gorillas: Our exclusive climate project in Virunga National Park in the Democratic Republic of the Congo. ClimatePartner.
- Collier, P., Kriticos, S., Logan, S. & Sacchetto, C. (2021). Strengthening development finance in fragile contexts. International Growth Centre.
- CCSI (2016). No free passes: Making renewable energy responsible. Columbia Centre on Sustainable Investment
- EADP Critical Infrastructure in Crises, Workshop 1. June 7, 2023.
- EnDev (2021). Customer insights on the productive use of energy. EnDev Tanzania Green Economic Recovery Fund (GERF).
- Energy Peace Partners (2022). Energy access, renewable energy and social impact: A literature review.

- Energy Peace Partners (n.d.). 'Powering peace'. Energy Peace Partners.
- ESMAP (2022). Tracking SDG 7: The Energy Progress Report. IEA, IRENA, UNSD, World Bank & WHO.
- ESMAP (2023). Tracking SDG 7: The Energy Progress Report. IEA, IRENA, UNSD, World Bank & WHO.
- Falchetta, G., Michoud, B., Hafner, M., Rother, M. (2022). Harnessing finance for a new era of decentralised electricity access: A review of private investment patterns and emerging business models. *Energy Research & Social Science*, Vol. 90, August 2022, 102587.
- Fink, C., Lankes, H.P. & Sacchetto, C. (2023). Mitigating foreign exchange risk in local currency lending in fragile states: Review and options. International Growth Centre
- Fund for Peace (2022). Fragile States Index – Annual Report 2022.
- Global Alliance for Clean Cookstoves (n.d.). 'Statistical snapshot: Access to improved cookstoves and fuels and its impact on women's safety in crises.'
- Haider, H. (2014). Conflict sensitivity: Topic guide. GSDRC.
- Holt, V.K., Hopkins, A.R., Mozersky, D., Dar, S. (2021) Shifting power - Transitioning to renewable energy in United Nations peace operations. Energy Peace Partners.
- International Alert (2022). Towards peace-positive investment: Bringing investors and fragile and conflict-affected states together, sustainably. International Alert.
- IEA (2021). Financing clean energy transitions in emerging and developing economies: The World Energy Investment 2021 Special Report. International Energy Association, World Economic Forum & World Bank.
- IFC (2019). Generating private investment in fragile and conflict-affected areas. International Finance Corporation.
- Kenner, S. (2017). Solar and wind energy: Driver of conflict or force for peace? *Why Green Economy?*
- Klare, M. (2014). Twenty-first century energy wars: How oil and gas are fuelling global conflicts. *EnergyPost.eu*.
- Logan, S. & Sacchetto, C. (2021) Scaling energy investments in fragile states. Council on State Fragility & International Growth Centre.
- Malchman, J. (2022). 'Which renewable energy is cheapest? A guide to cost and efficiency.' Galooli. March 13, 2022.
- Mansson, A. (2014). Energy, conflict, and war: Towards a conceptual framework. *Energy Research & Social Science* 4(2014): 106-116.

- Marijnen, E. & Schouten, P. (2019). Electrifying the green peace? Electrification, conservation, and conflict in the Eastern Congo. *Conflict, Security & Development*, 19:1, 15-34.
- Ministère du Plan (2019) Province Nord Kivu, Profil. UNDP.
- Pearce, F. (2023). In scramble for clean energy, Europe is turning to North Africa. *Yale Environment* 360. February 16, 2023.
- Sandwell, P. Mach, E., Mozersky, D. Fohgrub, T. (2019). A white paper on the future of environmental peacebuilding: Nurturing an ecosystem for peace. *Ecosystem for Peace*.
- SE4All & CPI (2021). Energizing finance – Understanding the landscape 2021. Sustainable Energy for All & Climate Policy Institute.
- Spyrou, E., Hobbs, B., Bazilian, M., Chattopadhyay, D. (2019). Planning power systems in fragile and conflict-affected states, *Nature Energy*, DOI 10.1038/s41560-019-0346-x.
- Stabilisation Unit (2016). Conflict sensitivity: Tools and guidance. Stabilisation Unit, UK Government.
- Thompson, C. (2020). Financing in fragile contexts. *OECD Development Co-operation Working Papers*, No. 88.
- Todman, W. (2023) Powering recovery. Reform, reconstruction, and renewables in conflict-affected states in the Arab World.
- UNDP (n.d.). Theory of change: UNDAF companion guidance. United Nations Development Programme.
- UN Guiding Principles on Business and Human Rights
- Verweijen, J., Kubuya, S., Mahamba, E., Marijnen, E., Murairi, J., and Mvano, C. (2020). Conflicts around Virunga National Park: Grassroots perspectives. The Hague: Knowledge Platform Security & Rule of Law.
- Virunga Foundation (2019). Virunga Foundation – Trustees’ Report and Consolidated Financial Statements for the year ended 31 December 2019.
- Western Sahara Resource Watch (2021). Greenwashing occupation - How Morocco's renewable energy projects in occupied Western Sahara prolong the conflict over the last colony in Africa.
- World Bank Group (2023). Classification of Fragile and Conflict-Affected Situations, <https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations>

## Annex 1. List of fragile and conflict-affected situations

	Fragile States Index ranked from most fragile down)	WB FCAS list - violent conflict	WB FCAS list - high levels of institutional and social fragility	Countries with least electrification and highest energy access deficits
Yemen	Very High Alert			
Somalia				
Syria	High Alert			
South Sudan				
Central African Republic				
Congo, Democratic Republic				
Sudan				
Afghanistan				
Chad				
Myanmar				
Haiti	Alert			
Guinea				
Ethiopia				
Mali				
Zimbabwe				
Nigeria				
Cameroon				
Eritrea				
Burundi				
Niger				
Libya				
Mozambique				
Iraq				
Congo, Republic of				
Uganda				
Venezuela				
Guinea-Bissau				
Lebanon				
Burkina Faso				
Ukraine				
Comoros				
Kosovo				
Marshall Islands				
Micronesia, Federated States of				
Papua New Guinea				
Solomon Islands				
Timor-Leste				
Tuvalu				
West Bank and Gaza				

State Fragility  
initiative



IGC



The **State Fragility initiative** (SFi) aims to work with national, regional, and international actors to catalyse new thinking, develop more effective approaches to addressing state fragility, and support collaborative efforts to take emerging consensus into practice. SFi brings together robust evidence and practical insight to produce and promote actionable, policy-focused guidance.

**[www.theigc.org/statefragilityinitiative](http://www.theigc.org/statefragilityinitiative)**

**PeaceNexus** is a Swiss private foundation that strengthens the effectiveness of organisations that play a role in building peace. The foundation supports the organisational development of peacebuilding entities and engages with businesses to improve their operations in fragile states by integrating conflict-sensitivity and supporting business-community dialogue processes.

**[www.peacenexus.org](http://www.peacenexus.org)**

