



GEEREF IMPACT REPORT 2014

Catalysing EUR10 billion
of clean power

ABBREVIATIONS

AML	Anti-money laundering
CDAP	Community development action plan
CLO	Community Liaison officer
CO2	Carbon dioxide
DEG	Deutsche Investitions-und Entwicklungsgesellschaft
DSC	Direct Site Contact
EIB	European Investment Bank
EPC	Engineering, procurement and construction
ESCO	Energy savings company
ESG	Environmental, social and governance
ESIA	Environmental and social impact assessment
ESMS	Environmental and social management system
FPIC	Free Prior Informed Consent
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GHG	Greenhouse gas emissions
GIIN	Global Impact Investor Network

HDP	Historically disadvantaged people
IFC	International Finance Corporation
IPP	Independent power producer
IUCN	International Union for Conservation of Nature
KYC	Know Your Customer
MW	Megawatt
MWH	Megawatt hour
PPA	Power purchase agreement
PRI	Principles for Responsible Investment
RAD	Resettlement Action Plan
REDD	Reducing Emissions from Deforestation and Forest Degradation
RFSF	Regional Fund Support Facility
SCAF	Seed Capital Assistance Facility
SEP	Stakeholder Engagement Plan
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization

GEEREF PORTFOLIO IN NUMBERS

AS AT END OF 2014

GEEREF HAD BACKED
6 FUNDS BY END OF 2014

6 **33**

FUNDS PROJECTS

GEEREF FUNDS HAVE INVESTED
IN 33 PROJECTS

GEEREF MADE COMMITMENTS OF
EUR 66M TO THESE FUNDS

COMMITMENTS INVESTMENT

EUR 66M **EUR 105M**

GEEREF FUNDS DEPLOYED
EUR 105M TO PROJECTS

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GEEREF IMPACT OVERVIEW

Catalysing EUR10 billion of clean power

GEEREF IMPACT OVERVIEW

INTRODUCTION BY CYRILLE ARNOULD, HEAD OF GEEREF

Dear Investor,

Thank you for reading GEEREF's first Impact Report. Impact is at the heart of what we do at GEEREF. We exist to catalyze investment into clean electricity capacity in developing countries and to maximize the positive impact of those projects in environmental, social and developmental areas.

The GEEREF team focuses on backing emerging investment teams who share its values and who implement the highest international standards for responsible investment through their businesses and projects. By catalysing nascent managers, GEEREF is able to have a profound bearing upon its Funds' strategies and, particularly, their approaches to impact investing.

As an example, at our request, each one of the Funds in our portfolio has an investment professional responsible for sustainability and half of our Funds have now appointed a fulltime ESG Officer.

In this Impact Report we highlight some of the ways in which our Funds have been strengthened by implementing some of the most stringent standards in the global investment industry.

We also present the key impact metrics that we and our Funds track across our portfolio of investments. These fall within four categories: A) CLEAN ENERGY, B) ENVIRONMENT, C) FINANCIAL LEVERAGE and D) SUSTAINABLE DEVELOPMENT. The metrics are calculated both on the actual results of portfolio projects for 2014 and for their projected economic lifetimes.

In the fourth section we also discuss the 'GEEREF Multiplier' and illustrate how some EUR10 billion will be mobilized through GEEREF over its lifetime. We calculate GEEREF's leverage effect at the end of 2014 to be over 6x at the Funds level and 36x at the project level and this will continue to build towards the final target of 50x once both GEEREF and its Funds are fully invested. Interestingly, for the public investors in GEEREF whose EUR112 million catalyzed our private sector investors, these multiples can be doubled. GEEREF was honoured to win the *Finance For Resilience (FiRe)* Award at the Bloomberg New Energy Summit in New York in April 2014, partly in recognition of this multiplier effect.

At the end of this Report we also feature a thematic study of Community Engagement, illustrating some of the main issues our Funds face through the development and operations process and how they are addressed in best practice by our Fund Managers.

We know that impact investing is an interactive and continuously evolving sphere therefore we welcome any comments or questions you may have.

Yours faithfully,

CYRILLE ARNOULD
HEAD OF GEEREF



GEEREF IMPACT OVERVIEW

THE IMPACT APPROACH

“While much of our investment impact can be captured in numerical indicators, as important are the many areas of engagement that are not so easily counted. For these we have developed a comprehensive and rigorous set of environmental and social standards.”

Matthias Zoellner, Head of Division of Environment, Climate and Social Office, EIB



The GEEREF team from left to right: David Pin, Jenia Ganzen, Dunja Dolanjski, Mélanie Martin, Cyrille Arnould, Ioannis Tsakiris, Aglaé Touchard-Le Drian, Mervin Chaumiere, Gunter Fischer, Mónica Arévalo, Quirin Slijs, Eleni Zioga, Nicolas Panayotopoulos, Eva Chrysanthou, Eugene Howard

GEEREF IMPACT OVERVIEW

GEEREF QUALITATIVE AND QUANTITATIVE IMPACT ASSESSMENT

QUALITATIVE EIB IMPACT STANDARDS	QUANTITATIVE GEEREF IMPACT METRICS
1. ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS	A. CLEAN ENERGY
2. POLLUTION PREVENTION AND ABATEMENT	B. ENVIRONMENT
3. BIODIVERSITY AND ECOSYSTEMS	C. FINANCIAL LEVERAGE
4. CLIMATE-RELATED	D. SUSTAINABLE DEVELOPMENT
5. CULTURAL HERITAGE	
6. INVOLUNTARY RESETTLEMENT	
7. RIGHTS AND INTERESTS OF VULNERABLE GROUPS	
8. LABOUR STANDARDS	
9. OCCUPATIONAL AND PUBLIC HEALTH, SAFETY AND SECURITY	
10. STAKEHOLDER ENGAGEMENT	

GEEREF IMPACT OVERVIEW

EIB IMPACT STANDARDS: IMPLEMENT AND COMPLY

EIB STANDARDS	EIB STANDARDS (CONTINUED)
1. Assessment and Management of Environmental and Social Risks	6. Involuntary Resettlement
2. Pollution Prevention and Abatement	7. Rights and Interests of Vulnerable Groups
3. EIB Standards on Biodiversity and Ecosystems	8. Labour Standards
4. EIB Climate-related Standards	9. Occupational and Public Health, Safety and Security
5. Cultural Heritage	10. Stakeholder Engagement



EIB ENVIRONMENTAL AND SOCIAL HANDBOOK:

<http://www.eib.org/infocentre/publications/all/environmental-and-social-practices-handbook.htm>

Release date: 03 December 2013 (208 pages)

The EIB Group's impact standards are set out in Volume I of its Environmental and Social Handbook, which complements the Bank's Statement of Environmental and Social Principles and Standards. These standards are widely judged to be among the most comprehensive and rigorous in the world.

A comparison with the IFC Performance Standards is available.

GEEREF IMPACT OVERVIEW

GEEREF IMPACT METRICS: QUANTIFY AND MEASURE

A) CLEAN ENERGY	UNIT	DEFINITION
1. Clean energy sector	%	Clean electricity generation or technology / equipment company
2. Electricity generated	MWh/yr	Annual electricity output across portfolios/funds
3. Energy efficiency savings	MWh/yr	Annual electricity savings across portfolios/funds

B) ENVIRONMENT	UNIT	DEFINITION
1. Environmental sector	%	Emissions reductions projects or environmental technologies
2. Emissions reduced	Tonnes	Annual tonnes of carbon emissions reductions across portfolios/funds
3. Pollution	%	Level of investment reducing non-CO2 pollution

C) FINANCIAL LEVERAGE		DEFINITION
1. Fund Multiplier	EURM x	Total amount raised by Funds divided by GEEREF's total fund commitments (eg EUR423M divided by EUR66M)
2. Project Multiplier	EURM x	Gross capital invested (including co-investment and debt) at project level divided by GEEREF commitments (eg EUR2,385M divided by EUR66M)

D) SUSTAINABLE DEVELOPMENT	UNIT	DEFINITION
1. Energy access	%	Level of investment providing off-grid electricity access
2. Labour intensity	%	Level of investment in high labour-intensive activities
3. Beneficiary households	#	Number of households gaining new/improved access to clean energy
4. Beneficiary SMEs	#	Number of energy-related small and medium-sized enterprises involved in the investment projects



GEEREF IMPACT STANDARDS

Catalysing EUR10 billion of clean power

GEEREF IMPACT STANDARDS

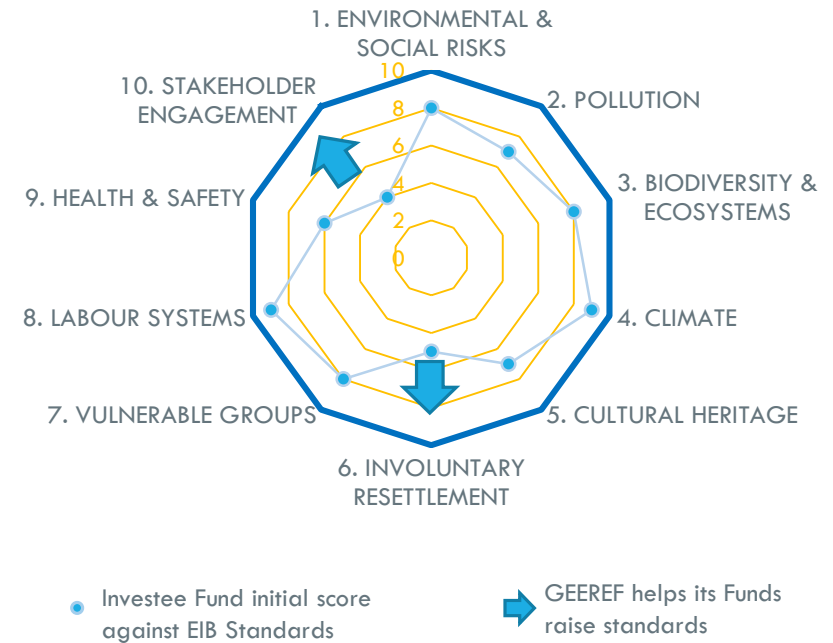
INTEGRATING BEST PRACTICE: CREATING SUSTAINABLE VALUE

INVESTMENT MANAGEMENT PROCESSES



As a cornerstone investor backing first-time funds, early in their development, GEEREF drives implementation of EIB Standards across its portfolio of funds and underlying projects

EXAMPLE OF FUND EVALUATION AGAINST EIB STANDARDS



GEEREF IMPACT STANDARDS

INTEGRATING BEST PRACTICE: CREATING SUSTAINABLE VALUE

EIB STANDARDS

SELECTED EXAMPLES

1. Environmental and Social Risks	
2. Pollution	
3. Biodiversity and Ecosystems	<ul style="list-style-type: none"> • Frontier's Kakaka hydro project will touch on two acres within the Rwenzori National Park, a UNESCO World Heritage Site. As a result, Frontier is working proactively with UNESCO/IUCN in Uganda to develop a comprehensive and appropriate Biodiversity Offset Plan to protect critical habitats.
4. Climate	
5. Cultural Heritage	<ul style="list-style-type: none"> • REAF's Lake Mainit hydro energy project is providing assistance to local indigenous people in the Philippines to develop an Ancestral Domain and Sustainable Development and Protection Plan for their ancestral land.
6. Involuntary Resettlement	
7. Vulnerable Groups	<ul style="list-style-type: none"> • Evolution One's Kouga Wind Farm wind power project comprises 26% black economic empowerment ownership, all of which is owned by a local community trust with expenditure ring-fenced for disadvantaged communities. • Over USD100 million of revenues will flow directly to these communities over the project's 20-year life.
8. Labour Standards	
9. Health and Safety	
10. Stakeholder Engagement	<ul style="list-style-type: none"> • Armstrong's Symbior Energy and Annex Power installed a 4-5 kW solar system at two schools, Wittayakarn Primary School and Kokklang School, in northeast Thailand. As a result, each school will save over USD14,000 during the life of the PV installations. • Symbior Energy provided the PV modules and inverter and Annex Power was responsible for the DC cables, connectors and overall design and installation of the project. Operations and maintenance is also provided by the two companies.



GEEREF IMPACT METRICS

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GEEREF IMPACT METRICS

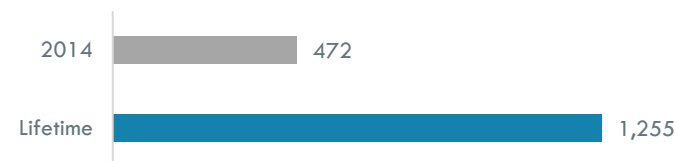
PORTFOLIO SUMMARY: A) CLEAN ENERGY

472MW of installed capacity and over 1 million MWhs of electricity generated in 2014

1. PERCENT INVESTED IN CLEAN ENERGY



2. INSTALLED CAPACITY (MW)



3. ELECTRICITY GENERATED (MWH)



4. ENERGY EFFICIENCY SAVINGS (MWH)



KEY: Portfolio projects' 2014 performance Portfolio projects' economic lifetime forecast

GEEREF IMPACT METRICS

PORTFOLIO SUMMARY: B) ENVIRONMENT

Over 1 million tonnes of greenhouse gas emissions avoided during 2014

1. PERCENT INVESTED IN GHG REDUCTION



2. GHG EMISSIONS AVOIDED (TONNES)



KEY: ■ Portfolio projects' 2014 performance ■ Portfolio projects' economic lifetime forecast

NOTE ON METHODOLOGY

GEEREF Funds convert megawatts hours of clean electricity produced into avoided greenhouse gases, using a standard conversion number which differs from country to country according to energy mix and other variables.

This conversion ranges from 0.5 tonnes to 1 tonne of avoided greenhouse gas per megawatt hour of clean electricity produced.

GEEREF IMPACT METRICS

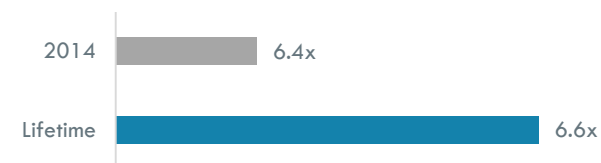
PORTFOLIO SUMMARY: C) FINANCIAL LEVERAGE

6.4x Fund Multiplier and 13.5x Project Multiplier in 2014*

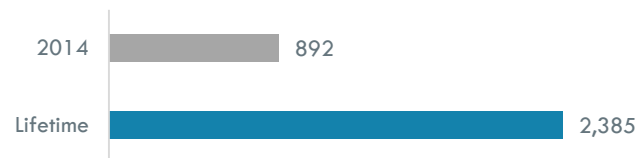
1. OTHER FUND CAPITAL COMMITMENTS (EUR M)



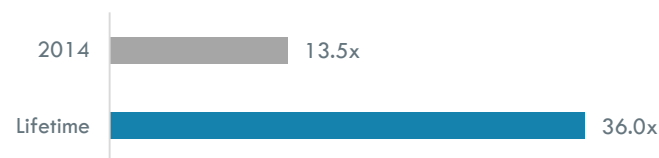
2. FUND MULTIPLIER (TOTAL FUNDS RAISED / GEEREF COMMITMENTS)



3. TOTAL PROJECT FINANCE (EUR M)



4. PROJECT MULTIPLIER (TOTAL CAPITAL / GEEREF COMMITMENTS)



KEY: ■ Portfolio projects' 2014 performance ■ Portfolio projects' economic lifetime forecast

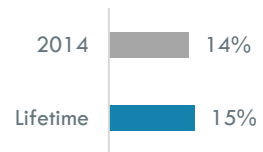
**Please note: Multipliers are calculated based on Fund and project commitments as at the end of 2014 and for the same over their lifetimes. The Project Multiplier should build from 36x towards 50x as Funds complete their project commitments. These Fund and Project Multipliers can be doubled for public (A Share) investors who catalysed the private investors in GEEREF.*

GEEREF IMPACT METRICS

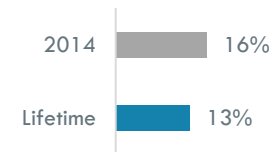
PORTFOLIO SUMMARY: D) SUSTAINABLE DEVELOPMENT

More than 500,000 beneficiary households in 2014

1. PERCENT INVESTED IN ENERGY ACCESS



2. PERCENT INVESTED IN HIGH LABOUR INTENSITY



3. BENEFICIARY HOUSEHOLDS



4. BENEFICIARY SMES



KEY: Portfolio projects' 2014 performance Portfolio projects' economic lifetime forecast



GEEREF MULTIPLIER

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GEEREF MULTIPLIER

CONCEPTUAL MODEL: GEEREF TARGETS 50X MULTIPLIER ON COMPLETION

1. GEEREF COMMITMENTS

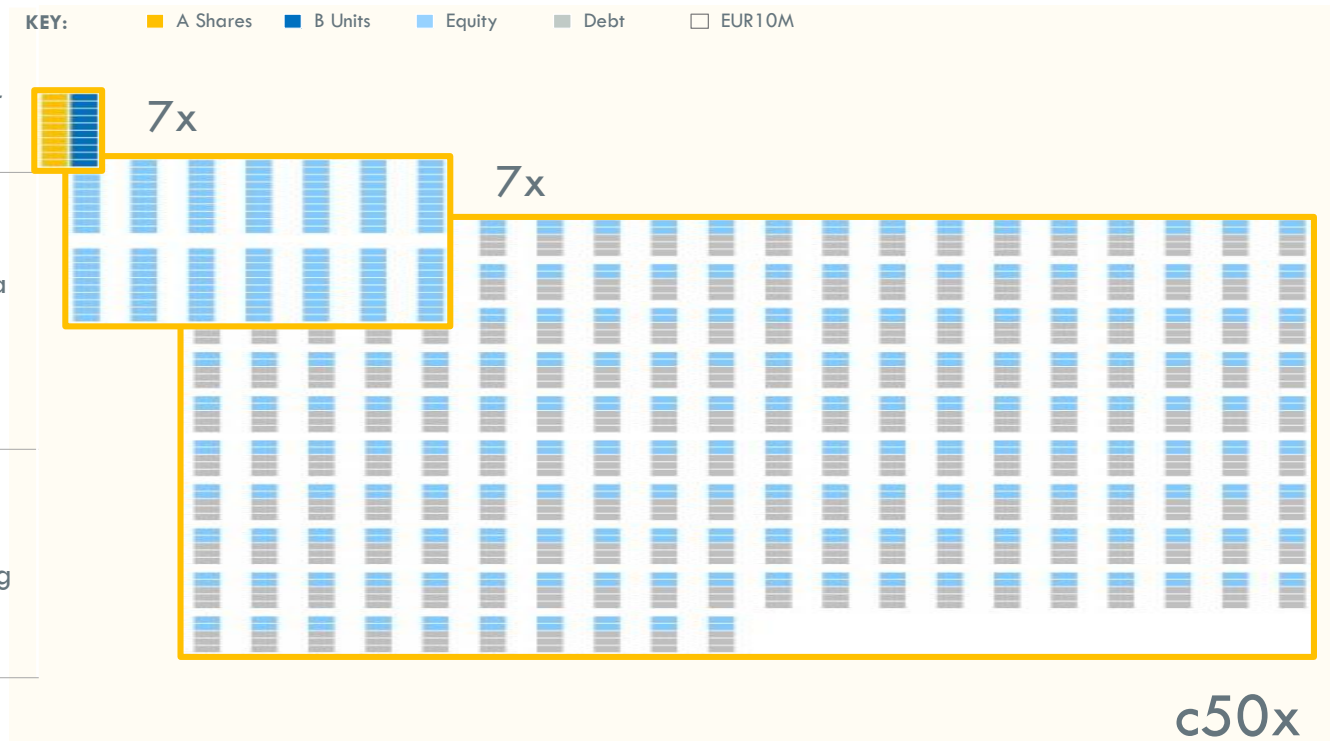
- EUR112M of public commitments (A Shares) attract a further EUR110M of private investor commitments (B Units)

2. GEEREF REGIONAL FUNDS

- GEEREF is the cornerstone investor for Funds that then raise a multiple of its initial commitment
- GEEREF's initial investment may range from EUR10M to EUR15M and may catalyse EUR100M (7x) per Fund

3. REGIONAL FUNDS' PROJECTS

- GEEREF's Regional Funds construct 10-15 projects each, using Fund equity, co-investor equity and debt finance (7x again)



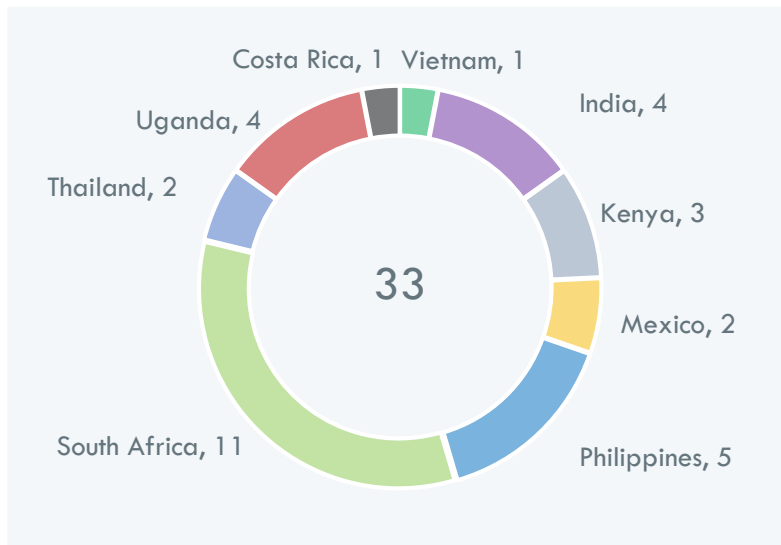
GEEREF FUNDS PORTFOLIO

Catalysing EUR10 billion of clean power

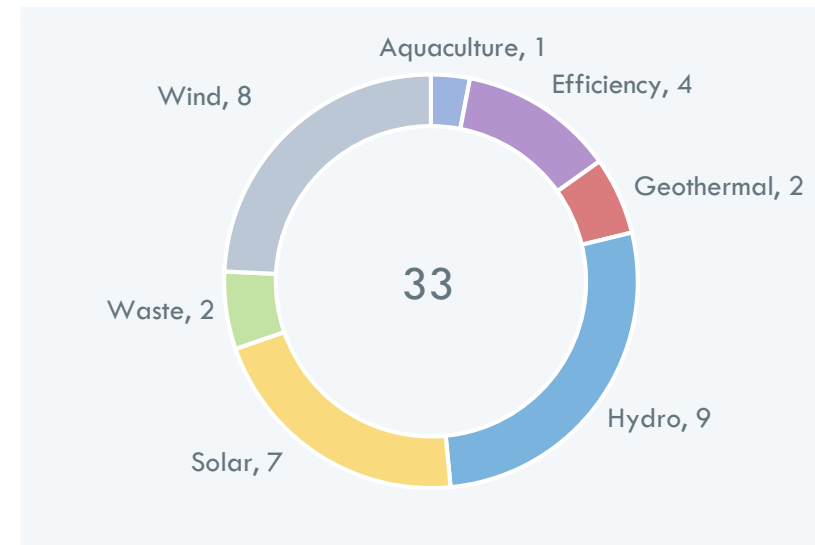
GEEREF FUNDS PORTFOLIO

PORTFOLIO ALLOCATION: GEOGRAPHY AND SECTOR

PROJECTS BY GEOGRAPHY



PROJECTS BY SECTOR





GEEREF IMPACT THEME

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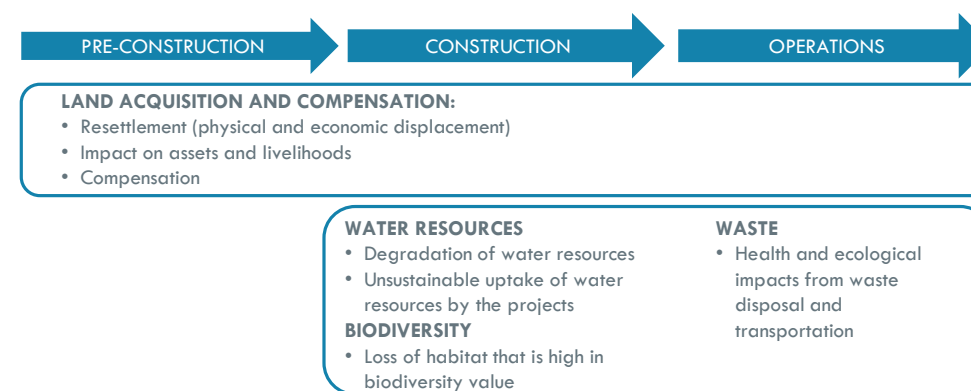
GEEREF IMPACT THEME

COMMUNITY ENGAGEMENT

INTRODUCTION

- This last section of the GEEREF Impact Report introduces the transversal theme of Community Engagement.
- The aim is to illustrate some of the common and most important challenges that GEEREF's Fund Managers face during the project lifecycles, whilst trying to achieve positive ESG outcomes and deliver successful investments.
- These challenges vary from the potential impact upon individuals, communities and livelihoods, the need for resettlements and dealing effectively with complaints from host communities and other stakeholders. All of these must be identified and managed proactively to yield the best outcomes.
- GEEREF works with its Fund Managers to implement comprehensive community engagement practices and mechanisms that meet or exceed best-in-class standards required by the EIB
- The EIB Standards and those of the IFC are highly comparable although there are some areas where the EIB standards are more stringent, particularly in Community Engagement (*Standard 10: Stakeholder Engagement, see comparable analysis in Appendices*).

TYPICAL COMMUNITY ENGAGEMENT ISSUES ARISING OVER PROJECT LIFE



GEEREF IMPACT THEME

COMMUNITY ENGAGEMENT: GRIEVANCE MECHANISMS

OVERVIEW

- A key aspect of effective Community Engagement are feedback loops that provide the Fund Manager with information for timely action and/or correction. These feedback systems enable Fund Managers to control project risk more effectively throughout the project lifecycle.
- GEEREF requires its Fund Managers to set up such a feedback system, known as a *grievance mechanism*.
- A grievance mechanism is a system designed to receive, evaluate and address grievances from affected communities. It should be culturally appropriate, accessible, transparent, accountable, safeguarded and scaled to the potential risks involved, both social and environmental.
- The grievances most commonly anticipated, and the issues that require close involvement with the local community during the project lifecycle, concern land acquisition and the impact the project may have on the environment, including water resources and biodiversity.
- The design of grievance mechanisms is project-specific but broadly follows these steps: i) publication of the mechanism, ii) collection of grievances, iii) review and investigation of grievances, iv) development of resolution matrix, v) response and, finally, vi) ongoing monitoring of the situation.

GRIEVANCE MECHANISM EXAMPLE: SYMBIOR (ARMSTRONG)

PRE-CONSTRUCTION	<ul style="list-style-type: none"> • Symbior organized a public hearing process with the local community to provide information on the planned project and identify any issues or concerns. • These concerns were then addressed and integrated into the planning process.
DURING CONSTRUCTION	<ul style="list-style-type: none"> • Symbior appointed a Direct Site Contact (DSC), at each site, who was available for any issues arising as a result of Symbior's or its contractors' operations. • Since the impact on the community is greatest during the construction phase, Symbior's DSC invited local community members for regular face-to-face meetings to maintain an open line of communication and address any grievances in a timely manner. • All community grievances are brought to the attention of a member of Symbior's senior management team and are followed up expeditiously.
DURING OPERATION	<ul style="list-style-type: none"> • During operation, the impact on communities is expected to be lower. A phone number and email are made available publicly to provide easy access to Symbior. • In addition, annual face-to-face visits by the project manager will continue to ensure that any potential grievances are dealt with promptly.

GEEREF IMPACT THEME

COMMUNITY ENGAGEMENT: RESETTLEMENT EXAMPLE (SITI HYDRO, FRONTIER)

MS KOKOP MWONGUSHO CHEMUSA MARGARET

- Ms Kokop Mwangusho Chemusac Margaret is a 65 year old single mother of two adult children who have left to her care five grandchildren of primary school age.

RESETTLEMENT RISKS

- With the development of the project, Ms Margaret was deemed to be at risk of *Landlessness* and *Homelessness*, per IFC Guidelines Notes, with the high dependency ratio exacerbating these risks.
- It was assessed that the project construction process would render her small residual piece of land unviable for farming (where she grew food crops and coffee for income) and her advanced age meant that she would not be able to continue providing for her dependants.

MEASURES TAKEN

- The affected land was fully compensated and her semi-permanent galvanised house was replaced by a two bedroomed permanent house.

ONGOING ASSISTANCE

- Ms Margaret has received relocation assistance. The project manager hired farm help to cultivate her land to produce food for her grandchildren and herself.



OUTSIDE THE ORIGINAL
HOUSE



OUTSIDE THE NEW
HOUSE

GEEREF IMPACT THEME

COMMUNITY ENGAGEMENT: CONCLUSION

- Implementing an effective grievance mechanism and involving stakeholders in all stages of the project lifecycle are not merely risk mitigants, they form an integral part of managing an investment holistically to achieve optimal project outcomes.
- GEEREF's Fund Managers have found that an early and proactive engagement with their host communities (including cultural sensitivity and training), as well as the local presence of community specialist on the ground ensure that the right measures are taken.
- For instance, in cases when land compensation is necessary, proactive engagement prevents a situation in which new inhabitants move to the project location in anticipation of future compensation by the developers.
- GEEREF's participation ensures that the EIB Standards are implemented through sound environmental and social practices, transparency and accountability.

BERKELEY ENERGY ON IMPORTANCE OF COMMUNITY ENGAGEMENT

“Berkeley has always believed that good stakeholder engagement helps to promote good relations and communication between the project developer and the local community. This is especially important when engaging with Indigenous Peoples as a few of our projects have demonstrated. We have seen projects being developed within the same region as ours that have not taken community needs into consideration, or that have not developed a practical grievance mechanism, experience community unrest through road blockages and complaints.

On the other hand through our early and frequent engagement with communities we are able to quickly pick up on any complaint before it escalates. Our communities see us as an organization that listens to their needs and provides benefits where it is feasible. As there is always room for improvement, we strive to continue to learn from our experiences and from those of others and to keep recognizing communities as an important stakeholder rather than a barrier.”

Berkeley Energy, Manager of REAF



GEEREF APPENDICES

Catalysing EUR10 billion of clean power

GEEREF IMPACT STANDARDS

COMPARISON OF EIB AND IFC STANDARDS: **STAKEHOLDER ENGAGEMENT**

	EIB	IFC
10. STAKEHOLDER ENGAGEMENT	<p>Standard 10 outlines a systematic approach to stakeholder engagement. It requires that information on the project be disclosed in an appropriate and timely manner, that all relevant stakeholders be properly identified and consulted and that the outcome of consultations be taken into account in the decision-making process. Additionally, Standard 10 requires the set-up of an independent and easily-accessible grievance mechanism at the level of the project, open to all project-affected stakeholders.</p> <p>Standard 10 defines stakeholders as those who will be and/or are likely to be directly or indirectly affected, positively or negatively, by a project, as well as those who might have an interest in, or may influence, the project. It further requires that the promoter not only provides identified stakeholders with relevant information in a timely and appropriate manner but that it also discloses and grants access to relevant information to any other interested party as appropriate. A Stakeholder Engagement Plan is identified as the appropriate document to outline such strategy for the entire scope of the project, throughout its life cycle.</p>	<p>IFC holds no standalone standard on stakeholder engagement, instead the need for effective community engagement is raised only in PS 1, complemented by a Good Practice Handbook on Stakeholder Engagement. Stakeholder engagement, as defined in PS 1, focuses on affected communities (e.g. the grievance mechanism established under the project is only open to affected communities). Stakeholder engagement extends to other relevant stakeholders in specific circumstances.</p> <p>PS 1 provides a section on private-sector responsibilities under government-led stakeholder engagement.</p>
<i>EIB Standard 10</i>		

A comparative analysis of all 10 Standards is available on request.

GEEREF IMPACT STANDARDS

COMPARISON OF EIB AND IFC STANDARDS: [STAKEHOLDER ENGAGEMENT \(CONTINUED\)](#)

	EIB	IFC
<p>10. STAKEHOLDER ENGAGEMENT (CONTINUED)</p> <p><i>EIB Standard 10</i></p>	<p>It provides for different stakeholder engagement processes within and outside of the EU.</p> <p>It contains elaborate reference to the principle of Free Prior Informed Consent and its operational application, extending the scope of its relevance beyond solely indigenous populations to include forest communities (whether indigenous, mix, or non-indigenous), the latter in the context of mandated international best practice under specific transactions (e.g. REDD+).</p> <p>In the case of FPIC application for indigenous populations, no specific circumstances are required by the EIB, but the establishment of adverse impact by the project on the habitats or ancestral territories of these populations, natural resources in these habitats and territories, as well as customary cultural, economic, social, or political institutions of theirs.</p> <p>On Grievance Mechanism under SEP: The scope of such mechanism concerns the entire operation, yet it is not intended to serve employer-workforce relations, as a separate grievance structure is exclusively dedicated to this purpose.</p>	<p>Specific reference to the principle and applicability of Free Prior Informed Consent may be found under IFC PS7. FPIC is applicable to indigenous populations alone, triggered by circumstances clearly identified in PS7 as requiring Free, Prior, and Informed Consent.</p>

A comparative analysis of all 10 Standards is available on request.



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