

Cumulative-Level Impacts



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A. Background

There are numerous definitions of “cumulative impacts”. The definition used in this SWIA Report is the successive, incremental and combined environmental and social, including human rights, impacts from multiple projects or multiple activities located in the same region or affecting the same resource (e.g. a watershed or an air shed).⁴⁴⁴ Each project (i.e. different projects or different phases of the same project) adds incremental impacts to other existing, planned, or reasonably predictable future projects and developments, leading to an accumulation of impacts. Environmental and social impacts from one project alone are not always significant. Instead it is the building up of smaller impacts over time, or within the same physical footprint, that have a cumulative effect. Sometimes a series of smaller events can trigger a much bigger environmental or social response if a tipping point is reached, changing the situation abruptly (for example where there is a rapid influx of people seeking jobs at, or in the vicinity of, newly established projects (the “boomtown effect”). They can also be triggered by poorly designed policies that prompt companies to make the same mistakes over and over again. The resilience of the environment or society to cumulative impacts depends upon both the nature of the impacts and the vulnerability (or sensitivity) of the society or ecosystem (i.e., the degree to which they are susceptible to and unable to cope with injury, damage, or harm).⁴⁴⁵

More recent approaches refer to the “cumulative dimensions of impacts” which mean the “major aspects of comprehending and managing impacts from a cumulative perspective.”⁴⁴⁶ This has the advantage of considering governance, cumulative processes and impacts, rather than just the impacts themselves. This positions impact assessments as an adaptive management process that modulates the management of impacts according to the changes in and on projects over their life cycle.⁴⁴⁷

⁴⁴⁴ Franks, Brereton and Moran, “Cumulative Social Impacts,” in Vanclay and Esteves (Eds), *New Directions in Social Impact Assessment: Conceptual and Methodological Advances*, (2011). They are sometimes also referred to as collective impacts.

⁴⁴⁵ IFC, “[Good Practice Handbook on Good Practice Handbook, Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets](#)” (2013).

⁴⁴⁶ Franks et al in Vanclay and Esteves (Eds), above, pg. 640-647.

⁴⁴⁷ Franks et al in Vanclay and Esteves (Eds), above, pg. 640-647

Cumulative impacts can be negative (e.g. outmigration due to cumulative land acquisition results in government withdrawal of health services) or positive (e.g. cumulative economic developments in the area justifies opening of a public health clinic). In some cases, cumulative impacts can have both positive and negative effects.

If not managed, cumulative impacts can overwhelm environmental or social “carrying capacity” to withstand or recover from the changes. They can act upon:

- Institutions – the accumulated impacts overwhelm the local capacity to provide services, including protection or fulfillment of the population’s human rights, providing remedies, or managing or changing the course of events;
- Society – the rapid onset and acceleration of the changes overwhelms societal structures and capacity to manage change, which may eventually lead to a rise in tensions or violence and a potential breakdown in law and order;
- Environment – the biophysical impact surpasses the environment’s carrying capacity.

There are several clear challenges in managing these kinds of impacts: there are often multiple actors contributing to the impact, often with front-end licensing that sets operating conditions at the beginning of the project; the impacts may accumulate over time making them harder to predict; perceived lack of incentives to take on responsibility for impacts that cannot be directly linked to their activities and unfamiliarity and capacity constraints on regulators.⁴⁴⁸ Because these impacts typically involve more than one actor, a collective approach to managing these kinds of impacts is often required.

Strategies for collaboration range from at their simplest, information exchange, forums, networking or coordinated community engagement to options of increasing complexity, that require more effort, and co-ordination, such as multi-stakeholder monitoring or the collective management of data.⁴⁴⁹ Strategic master plans that are accompanied by strategic impact assessments for the region that take account of multiple sectors and multiple activities projected or planned for the region can provide an important starting point. These need to be coordinated with sectoral master plans that make sectoral projections of development. However, often enough the two kinds of planning (regional and sectoral) are not coordinated.

Box 24: Human Rights Concerns Regarding Cumulative Impacts

Cumulative impacts are a clear area of concern from a human rights point of view for a number of reasons:

- Cumulative impacts are often much harder to predict than singular impacts from one project. Unless the hard work is done to assess and analyses the potential for such impacts, it is much harder to prevent environmental and social changes that can have long term impacts on human rights, such as the rights to life and security of person, health, education and an adequate standard of living.
- Cumulative impacts can be severe – both in terms of the type of impact (e.g. the cumulative burden on poor infrastructure causes it to collapse, killing hundreds) or

⁴⁴⁸ Franks et al in Vanclay and Esteves (Eds), above, pg. 640-647.

⁴⁴⁹ Franks, et al., “[Cumulative Impacts: A Good Practice Manual for the Australian Coal Mining Industry](#)” (2010), p. 28 and 38.

the widespread nature of the impact (e.g. cumulative water use reduces water tables, resulting in drought with widespread effect on food security in the local community) or because repetition increases the severity (e.g. a singularly-occurring, minor impact may not pose a human rights risk, but a series of minor impacts may add up to a human rights impact).⁴⁵⁰

- Even where a responsible party can be identified in the case of a singular negative human right impact, there are often challenges in holding the responsible party accountable; where cumulative impacts are involved, responsibility for impacts is even more dispersed making it even harder to identify parties responsible for prevention, mitigation and remediation, and hold them accountable.
- Companies and regulators may not consider they are responsible for cumulative impacts since they make only a *contribution*. This is especially the case when their activities may individually fit within acceptable regulatory limits, but where the regulatory regime is not advanced enough to take account of accumulation of impacts over time or space.⁴⁵¹
- It may often be populations most at risk who are affected by cumulative impacts, as they will have the least resilience to respond and the least capacity to demand a response from the authorities or businesses.
- Cumulative impacts are sometimes slow and build up incrementally over time, meaning it is harder to draw attention to the issues and prompt action from responsible parties.

B. National Context

Because project developers (exploration companies, operators) and regulators focus on assessing impacts of individual projects in a typical ESIA process, they often do not consider and miss the incremental impacts on areas or resources used or directly impacted by a project from other existing, planned or reasonably defined developments.⁴⁵² Cumulative impacts are of growing importance in regions where environmental and social systems have reached their maximum capacity to absorb (as may be the case in parts of neighbouring China) and adapt to additional impacts,⁴⁵³ but they can also be equally as important to consider in regions that will undergo significant growth, as is the case in certain areas in Myanmar. The framework or expertise does not currently exist in Myanmar (or in many emerging markets). However, as an important first step, the FESR recognises the need to consider the cumulative impacts of projects and programs on regions and groups, both across sectors and through time, stating: "Planners and policy-makers will need to consider the longer-term dimensions of a balanced strategy of economic, social, environmental and cultural development, recognising particularly that stakeholder groups can be affected simultaneously by projects or programs that are considered independently of each other without acknowledging their cumulative impact on particular stakeholders. Decision-making and monitoring processes

⁴⁵⁰ Rio Tinto, "[Why Human Rights Matter: A resource guide for integrating human rights into Communities and Social Performance work at Rio Tinto](#)" (Jan. 2013).

⁴⁵¹ OHCHR, "[WG meeting on cumulative impacts, United States of America](#)" (8 May 2013).

⁴⁵² Global Compact Dilemmas Forum, "[Cumulative Human Rights Impacts](#)" (accessed 25 July 2014).

⁴⁵³ Franks et al in Vanclay and Esteves (Eds), p. 202

will need to be open to such cumulative impacts. Taking a longer-term perspective may also help to resolve apparent trade-offs in situations where greater emphasis on equitable development in the short-term contributes to greater sustainability and economic growth over the longer term.⁴⁵⁴ In addition, the current draft of the E(S)IA Procedure includes references to cumulative impacts, especially for complex projects.⁴⁵⁵

As noted above, the National Energy Management Committee (NEMC) is currently working on a National Energy Policy and is required to explore environmental and social impact assessment as part of its mandate.⁴⁵⁶ It is unclear how detailed the policy will be and whether it will address the cumulative impacts of the sector. A more detailed master plan for the sector would provide a useful starting point for identifying areas for potential cumulative impacts of the sector and therefore areas for potential collaboration between the local or regional governments and existing or new O&G operations and operators.⁴⁵⁷ It will also be important for such sectoral plans to be matched to the regional plans where there will be sectoral operations to ensure coordination and consideration of cumulative impacts as early as possible in areas such as Rahkine, Ayeyarwady, Tanintharyi and Magwe where O&G operations have or will shortly be increasing.

Given the low capacity, the Government will have to think carefully about the most effective way of addressing cumulative impacts, together with the sector. This could start out with a small number of identified areas for collaboration between O&G operators and regional or local authorities, developing a joint understanding of some key potential cumulative impacts, their impact pathways and how these impacts may affect local communities (see [Part 7 Recommendations](#)).

C. Assessment Findings⁴⁵⁸

Potential Areas of Cumulative Impacts from Myanmar's O&G Sector

Institutions

- Overload of local and regional capacity to effectively consider E(S)IA and monitor E(S)MP, especially for managing cumulative impacts.
- Overload of existing social services due to a rapid influx of people seeking work (e.g. childcare, healthcare and education).

⁴⁵⁴ [“Framework for Economic and Social Reforms - Policy Priorities for 2012-15 towards the Long-Term Goals of the National Comprehensive Development Plan”](#), (Jan 2013) (Final Draft – Submitted to the First Myanmar Development Cooperation Forum), para 92.

⁴⁵⁵ The key issues will be whether that provision remains in the finally adopted EIA Procedure, when it will be adopted and how it will be implemented. In the meantime, there may be numerous E(S)IA commissioned for the O&G sector that do not address cumulative impacts.

⁴⁵⁶ The Republic of the Union of Myanmar President's Office, [“Formation of National Energy Planning Committee and Energy Management Committee”](#) (9 Jan. 2013).

⁴⁵⁷ The assumption is that it will be easier to prompt cooperation among companies in one sector than it will be to cross-sectoral collaboration among Myanmar companies where there is no common approach or experience in acting collectively. A sectoral plan would not address cumulative impacts arising where O&G operations are already adding to existing developments from other sectors where there may equally be cumulative impacts that must be managed.

⁴⁵⁸ These are a result of field assessment findings and research findings.

- Overload of labour inspection capacity to deal with multiple operators, especially for offshore.
- Overload of local ports in Rakhine, Ayeyarwady, Mon and Tanintharyi, resulting in displacement of local fishermen.
- Overload of Sittwe port, disrupting humanitarian operations addressing intercommunal violence.

Society

- Overloading the labour market, increasing competition for workers, attracting workers from less-well paid but important Government services such as health and education.
- Competition for workers drives up wages and inflation, raising the local cost of living with potential negative effects on local standard of living.
- Successive construction of pipelines in the same areas repeatedly disrupts the same communities.
- Successive land acquisitions within an area that rapidly diminishes the land available for livelihoods to local populations.
- Influx of predominantly male workers attracts sex workers, exploitation of at risk groups and potential increase in crime.

Environment

- Increases in pollutant concentrations in a local water body or in the soil or sediments, or their bioaccumulation as a result of several projects in the same area.
- Reduced water quality (e.g. pollution discharge into rivers) and water quantity (groundwater draw and water table impacts) from multiple users all taking a modest amount of water.
- Traffic congestion, road degradation and increased dust from multiple projects on one roadway.⁴⁵⁹
- Reduced fish catch, disruptions to marine mammals due to increased boat traffic for offshore seismic operations (noise, congestion, pollution).
- Increases in pollutant concentrations in offshore areas due to offshore operations (tanker discharges, discharges from operations).

Key Concerns Regarding Procedures for Addressing Cumulative Impacts in the Short-Term

- **Consultation overload of local communities:** The current onshore and offshore permitting process will potentially require O&G operators to carry out E(S)IAs within a condensed timeframe (i.e. six months). In both cases, those E(S)IA will require consultations with local communities. This could result in multiple consultations and investigations with the same local communities, causing consultation fatigue and confusion within communities. Given the small number of sites where offshore exploration could impact, those sites should be subject to joint E(S)IAs for those areas that also look at the potential for cumulative impacts, through a consolidated

⁴⁵⁹ Franks, et al., "[Cumulative Impacts: A Good Practice Manual for the Australian Coal Mining Industry](#)" (2010).

set of consultations. Depending on how proximate onshore blocks (i.e. new blocks in the same general area) are developed, it may make sense to include them in a coordinated impact assessment approach.

- **Wasted resources of having numerous E(S)IAs** looking at the same areas but without considering the cumulative impacts of their operations. Again joint or coordinated E(S)IAs would avoid this.

Key Locations or Activities Potentially Associated with Cumulative Impacts (past, present or future)

- There are several identifiable areas of operations where there will be multiple operations in the same area – both from onshore and offshore:
 - Landing offshore operations (e.g. Kyaukphyu, Sittwe in Rakhine State, Yebyu in Tanintharyi Region and possibly sites in Ayeyarwady Region).
 - Offshore routes between landing areas and offshore platforms.
 - Successive construction of parallel pipelines or other facilities (e.g. in Tanintharyi Region and from Rakhine to Shan States) that required or requires successive disruption to the same communities.
 - Concentrated onshore O&G operations (e.g. Minbu, Chauk, Yenangyaung Townships, in Magway Division).
 - Areas of concentrated use of certain roadways or other transport corridors.
 - Planned additions of O&G Operations to SEZs (eg. Kyauk Phyu, Dawei).

Box 25: Relevant Guidance on Cumulative Impacts

- IFC, "[Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets](#)"
- Franks *et al*, "[Cumulative Impacts: A Good Practice Manual for the Australian Coal Mining Industry](#)"
- Global Compact, "[Business & Human Rights Dilemmas Forum: Cumulative Impacts](#)"