Analysis of the potential benefits and risks of Policies and Measures (PaMs) proposed for the Myanmar National REDD+ Strategy
- Summary by safeguard –
Updated July 2019

This document provides a summarized overview of the potential benefits and risks of REDD+ PaMs that have been identified during the national benefits and risks workshop and the stakeholder engagement process. It has been updated in July 2019 to incorporate additional inputs from the subnational consultations and consultations with ethnic nationalities on the National REDD+ Strategy.

The benefits and risks have been grouped according to the Cancun safeguards. The document can thus be used to obtain an idea of key topics that may be of relevance for the application of each safeguard in the context of Myanmar.

Safeguard a: [REDD+] actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements

None of the benefits and risks that have been identified relate specifically to this safeguard. However, see:

- Safeguard c for benefits and risks related to consistency with conventions and agreements on the **rights of indigenous people and local communities**; and
- Safeguard e for benefits and risks related to consistency with conventions and agreements on **labour rights**, **gender equality** and **environmental conservation**.

Safeguard b: Transparent and effective national forest governance structures, taking into account national legislation and sovereignty

Benefits:

- Enhanced **transparency, accountability** and **rule of law**, including in relation to: government decisions on land use, awarding of concessions, and application of legal requirements such as EIA and SEA; development and implementation of land use plans and management plans for protected areas; forestry operations; use of natural resources by local stakeholders and private enterprises (e.g. fuelwood and timber); use of fees and taxes for natural resource use; and forest conversion.
  This benefit was identified particularly in relation to PaMs on land use planning, reducing illegal logging, promoting good practice standards and certification, strengthening law enforcement, and improving establishment and management of protected areas.
- Making it easier for smallholder farmers and both buyers and suppliers of domestically produced timber and other forest products (such as fuelwood) to act in compliance with the law, thus **avoiding criminalization** of people who have few alternatives to their current use of land and natural resources.
  This benefit was identified particularly in relation to PaMs on promoting good practice standards and certification, and on clarifying land tenure.

- Increased **government revenue** as a result of a **reduction in unregulated use** of timber and other forest resources.
  This benefit was identified particularly in relation to PaMs on reducing illegal logging, promoting good practice standards and certification, and strengthening law enforcement.
- Better **involvement of stakeholders** including local communities in the development of land use plans and management plans for protected areas, leading to **greater ownership** of the resulting plans.
  This benefit was identified particularly in relation to PaMs on land use planning and improving establishment and management of protected areas.
- Strengthened **collaboration between different government departments** whose mandates relate to land use, between the government and **NGOs** and/or **private sector** stakeholders, or between government departments and their counterparts in **neighbouring countries** or territories controlled by **EAOs**. This may in turn facilitate collaboration on other issues, enhance effective governance more widely and contribute to the peace process in areas affected by conflict.
  This benefit was identified particularly in relation to PaMs on land use planning, promoting sustainable land use, promoting alternative sources of energy, strengthening law enforcement, and improving establishment and management of protected areas.
- Increased **availability** and **consistency** of **environmental information** and **data related to land use and use rights**, enabling better decisions on the allocation of land to different uses.
  This benefit was identified particularly in relation to PaMs on land use planning and improving establishment and management of protected areas.
- **Reduced workload** and **expenditure** of the institutions involved in the process of gazetting protected areas.
  This benefit was identified particularly in relation to PaMs on improving the process for establishment of protected areas.
- Strengthening the capacity of government institutions and other stakeholders to address forest-related crimes might also lead to **reduced incidence of crimes** in other areas and an **increase in public security**.
  This benefit was identified particularly in relation to PaMs on strengthening law enforcement.

Risks:

- If the process of developing land use plans, forest management plans and protected area management plans is not well controlled, the resulting plans could be **biased towards** serving the **interests of influential people**, and interests of **poor and vulnerable stakeholders** as well as **environmental considerations** may not be well represented.
  This risk was identified particularly in relation to PaMs on land use planning, promoting community forestry, and improving establishment and management of protected areas.
- The financial transactions, incentive systems and economic opportunities generated by REDD+ PaMs may provide an **increased incentive for corruption or misappropriation of funds**, if sufficient control mechanisms are not put in place.
  This risk was identified particularly in relation to PaMs on land use planning, promoting sustainable land use practices, promoting community forestry, expanding plantations, strengthening law enforcement, revising incentive systems for government staff, changing distribution systems for public revenue, and promoting alternative sources of energy.

- If corruption is not effectively addressed and measures are not implemented diligently, efforts to strengthen law enforcement may lead to **increased prosecution of minor crimes** committed by weak or vulnerable stakeholders, or even to **accusations against innocent persons**, while powerful stakeholders may continue to break the law without punishment, leading to greater **inequality** and **unfair treatment**.
  This risk was identified particularly in relation to PaMs on reducing illegal logging, promoting good practice standards and certification, strengthening law enforcement, and improving establishment and management of protected areas.
- If institutional capacities are not increased sufficiently to meet responsibilities, **increased workload** for officers in charge of law enforcement, implementation of forest-related laws or outreach and conducting participatory processes could lead to a **loss of efficiency**.
  This risk was identified particularly in relation to PaMs on reducing illegal logging, promoting good practice standards and certification, promoting sustainable land use practices, land use planning and strengthening law enforcement.
- Greater variety in the possible governance arrangements for protected areas could lead to **inconsistencies in management** (e.g. national laws, regulations or programmes related to protected areas could not be applicable to areas administered at subnational level).
  This risk was identified particularly in relation to PaMs on promoting the establishment of protected areas.

See also:

- Safeguard c for benefits and risks related to **recognition of customary rights**;
- Safeguard d for benefits and risks related to **participation of stakeholders**, including local communities and vulnerable groups within them (including women) in decision-making and planning processes; and
- Safeguard e for:
  - Benefits and risks related to **allocation of suitable areas for different uses** at landscape level, and the **economic** and **environmental implications** thereof;
  - Environmental risks related to use of **inaccurate information** as a basis for planning;
  - Benefits and risks related to potential **conflict over land use allocation**, to the **ability of vulnerable groups** (including women) to **benefit from PaMs**, and to **livelihoods**; and
  - **Implications** of changes in access to land and resources.

Safeguard c: Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples
Benefits:

- More consistent **recognition of customary land rights**.
  This benefit was identified particularly in relation to PaMs on land use planning, land tenure security and recognition of customary rights.
- If PaMs are designed to help members of vulnerable groups (including women) to assert their rights and gain recognition for them, this could lead to greater **equality in access to land and resources**.

This benefit was identified particularly in relation to PaMs on land use planning, land tenure security and recognition of customary rights.

Risks:

- Processes for the recognition of customary rights may suffer from **elite capture**; i.e. certain people/groups in communities may 'capture' land and benefit more from the process than others.
This risk was identified particularly in relation to PaMs on land use planning, land tenure security and recognition of customary rights.
- If recognition of customary rights and consideration of current land use is not consistently addressed in the implementation of all relevant PaMs, this could result in members of local communities **losing access to land and resources** that are important for their livelihoods, getting into **conflict with the law,** or having their **cultural heritage and customary practices** affected; such situations could have a negative impact on **relations between communities and the government**.
This risk was identified particularly in relation to PaMs on land use planning, re-evaluation and reallocation of PFE and VFV land, improving law enforcement and transparency, expanding plantations, and enabling more effective creation and management of protected areas.

See also:

- Safeguard b for benefits and risks related to increased **transparency, accountability** and **rule of law** in forest governance and decisions on land use;
- Safeguard d for benefits and risks related to **participation of stakeholders**, including local communities and vulnerable groups within them (e.g. women) in **decision-making and planning processes**; and
- Safeguard e for benefits and risks related to the **ability of vulnerable groups to benefit from PaMs**, and to **livelihoods implications** of changes in access to land and resources.

Safeguard d: The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities [in REDD+ actions]
Benefits:

- More inclusive and participatory planning processes leading to **better recognition of local communities' perspectives and needs**, including those of **ethnic minorities**, **women** and other **disadvantaged groups**.
This benefit was identified particularly in relation to PaMs on land use planning, promoting community forestry and enabling more effective creation and management of protected areas.
- **Improved relationships** between the government, local communities and other stakeholders (including NGOs, EAOs, private sector), opening up opportunities for collaboration on other areas as well, and potentially facilitating the peace process in areas affected by conflict.
This benefit was identified particularly in relation to PaMs on land use planning, promoting community forestry, promoting sustainable land use practices and enabling more effective creation and management of protected areas.
- If participatory planning processes and joint implementation approaches are managed well, they can **enhance social cohesion** within communities.

This benefit was identified particularly in relation to PaMs on land use planning, promoting community forestry, promoting sustainable land use practices and enabling more effective creation and management of protected areas.

Risks:

- **Stakeholder groups with low capacity** to participate in planning processes (e.g. due to limitations in knowledge, time, power relationships, legally recognized land rights, etc.) could be **disadvantaged** and not have their **interests fairly represented**, with negative impacts on their **livelihoods** (e.g. by losing access to land that they customarily use).
  This risk was identified particularly in relation to PaMs on land use planning and enabling more effective creation and management of protected areas.
- Depending on the type of changes implemented, streamlining of protected area gazetting processes could **reduce the participation opportunities** of stakeholders with legitimate interests in the decision, such as those with customary rights, and increase the risk of conflict over protected area establishment/management.
  This benefit was identified particularly in relation to PaMs on enabling more effective creation of protected areas.

See also safeguard e for benefits and risks related to the **ability of vulnerable groups to benefit from PaMs**.

Safeguard e: [REDD+] actions are consistent with the conservation of natural forests and biological diversity, ensuring that the [REDD+] actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits
Benefits:

- More efficient **allocation of suitable areas** for different uses, leading to **increased social and environmental benefits at the landscape level**, e.g. income from land use is better balanced with maintaining ecosystem services and so overall **economic productivity is increased** and **costs of environmental damage are reduced**; this can provide benefits for local economies as well as GDP.
  This benefit was identified particularly in relation to PaMs on land use planning.
- Better protection or recovery of **biodiversity and ecosystem services of natural forests** and other natural ecosystems such as **wetlands and water bodies**, including by recognition of ecological linkages between different parts of the landscape.
  This benefit was identified particularly in relation to PaMs on land use planning, promoting sustainable land use practices, better application of EIA and other environmental legislation, improving law enforcement and transparency, reducing illegal logging, reducing fuelwood extraction, restoring degraded forests, and enabling more effective creation and management of protected areas.
- More **sustainable agricultural and forestry practices** (including agroforestry) leading to enhanced provision of **ecosystem services** (e.g. reduced soil erosion, better water regulation), **reduced health risks and pollution** due to safer and more efficient usage of chemical fertilizers and pesticides, and **conservation of biodiversity**.
  This benefit was identified particularly in relation to PaMs on promoting sustainable land use practices, better application of EIA and other environmental legislation, improving law enforcement and transparency, and reducing overexploitation of timber.

- If plantations are **located on degraded land with low biodiversity value** and **appropriate species and planting/management methods** are selected, they may provide **benefits for biodiversity** (e.g. increasing habitat connectivity) and contribute to **ecosystem services** such as erosion control, water regulation, improved local climate and recreational value (green and pleasant environment).
  This benefit was identified particularly in relation to PaMs on expanding plantations and improving their management.
- Environmental accounting can support more accurate **reflection of the value of forests** to society **in government decision-making**; in particular, stronger consideration of values that are likely to be of great relevance to poorer parts of the population (e.g. ecosystem service provision). This may in turn lead to a stronger and more sustainable/equitable economy.
  This benefit was identified particularly in relation to PaMs on environmental accounting and land use planning.
- Increased **awareness and knowledge on environmental issues** among government staff, local communities and other stakeholders, potentially leading to more environment-friendly actions in areas beyond REDD+ as well.
  This benefit was identified particularly in relation to PaMs on promoting sustainable land use practices, land use planning, reducing illegal logging, restoring degraded forests, and enabling more effective creation and management of protected areas.
- Reduced conflict between **humans and wildlife** (e.g. elephants) as a consequence of increased habitat area for wildlife.
  This benefit was identified particularly in relation to PaMs on reducing illegal logging, restoring degraded forests, and enabling more effective creation and management of protected areas.
- **Increased clarity** over land rights and the rights and obligations of land users, reducing the **potential for conflict** (for example within communities or between local communities and investors or the government) and allowing stakeholders to **make long-term plans** and invest in sustainable land or forest uses.
  This benefit was identified particularly in relation to PaMs on land use planning, collection of data on land use and use rights, clarifying land tenure, improving law enforcement and transparency, and enabling more effective creation and management of protected areas.
- Greater **fairness** in citizen's access to use rights, and **increased confidence** of stakeholders towards the government and the legal system.
  This benefit was identified particularly in relation to PaMs on improving law enforcement and transparency, and enabling more effective creation and management of protected areas.
- Strengthening and more consistent implementation of **social standards** in commercial agriculture and forestry operations (e.g. with regard to respecting the rights of local communities and workers' health and safety, social security, etc.).
  This benefit was identified particularly in relation to PaMs on promoting sustainable land use practices, certification, sustainable supply chain initiatives, improving law enforcement and transparency, reducing overexploitation of timber and illegal logging.
- Better **access to electricity** leading to **improved living standards** (ability to use household and communications equipment and access information, reduced fire risk from candles, night time lighting increasing security, etc.) and **economic opportunities** (e.g. for SMEs)
  This benefit was identified particularly in relation to PaMs on promoting alternative energy sources and rural electrification.

- Reduced **indoor air pollution** leading to **health benefits**.
  This benefit was identified particularly in relation to PaMs on promoting alternative energy sources and fuels, especially for cooking.
- Better **nutrition** and **increased food security** as a consequence of diversified agricultural production and higher incomes.
  This benefit was identified particularly in relation to PaMs on promoting sustainable land use practices.
- **Reduced workload** for collecting fuelwood, freeing up time for other tasks including economic activity, especially for women.
  This benefit was identified particularly in relation to PaMs on reducing fuelwood demand, promoting alternative fuels, and expanding plantations and improving their management.
- Reduced **household expenses for energy,** especially if alternative fuels are available at reasonable prices.
  This benefit was identified particularly in relation to PaMs on reducing fuelwood demand, promoting alternative fuels, and expanding plantations and improving their management.
- Reduced risk of **energy shortages**.
  This benefit was identified particularly in relation to PaMs on reducing fuelwood demand, promoting alternative energy sources and fuels, and expanding plantations and improving their management.
- **Increased efficiency** of wood processing enterprises and charcoal producers, potentially resulting in **lower consumer prices** and/or **higher income**.
  This benefit was identified particularly in relation to PaMs on reducing fuelwood demand and promoting alternative energy sources and fuels.
- **Additional income**, reduced problems with **inappropriate waste disposal** (e.g. unsystematic dumping, pollution of waterways) and **reduced fire risk** for agriculture enterprises, sawmills, wood processing factories, etc.
  This benefit was identified particularly in relation to PaMs on promoting alternative sources of energy.
- **Increased capacity** of local community members to apply sustainable practices in agriculture and forestry, develop value added products and access markets, create networks and partnerships, and participate in land use and management planning; thus enhancing their ability to **make their own decisions** about development options, improve their **livelihood situation** and gain **recognition for their interests**, including cultural and traditional values. If the needs of women and other disadvantaged or vulnerable groups are taken into account in the design of PaMs, this can also lead to **greater equality of economic opportunities**.
  This benefit was identified particularly in relation to PaMs on land use planning, promoting sustainable land use practices, promoting community forestry, expanding plantations and improving their management, and enabling more effective creation and management of protected areas.
- Improved **gender equality** in access to knowledge on good agronomic practices.
  This benefit was identified particularly in relation to PaMs on promoting sustainable land use practices.
- Increased **livelihood security, higher incomes,** new **job opportunities** and better **long-term economic perspectives** as a consequence of diversified and more sustainable income sources, improved agricultural practices, increased and more reliable availability of natural resources and ecosystem services, better (and possibly cheaper) energy access, access to affordable credit, employment provided by PaMs (e.g. in community-based monitoring or

tree planting) or benefit-sharing mechanisms. This may in turn lead to a **reduction in social problems** such as child labour, lack of education or illegal migration for work, and a **positive cycle of progress** due to greater ability to make investments. If PaMs are specifically designed to benefit poor or vulnerable groups, they can at the same time contribute to greater **social equality**.

This benefit was identified particularly in relation to PaMs on promoting sustainable land use practices, promoting community forestry, promoting alternative energy sources and rural electrification, reducing fuelwood demand, expanding plantations and improving their management, and enabling more effective creation and management of protected areas (including development of alternative livelihoods in protected areas, such as ecotourism and collection of non-timber forest products).

- More **predictable business conditions** in both national and international markets for forestry operators who comply with standards and regulations.
  This benefit was identified particularly in relation to PaMs on improving law enforcement and transparency, and reducing overexploitation of timber and illegal logging.

- Increased overall **public revenue** due to a lower share of unregistered logging activity and illegal timber trade, less misappropriation of funds and better access to European and other international markets that have restrictions related to timber sourcing.
  This benefit was identified particularly in relation to PaMs on improving law enforcement and transparency, and reducing overexploitation of timber and illegal logging.

- Range of, and access to health, education and other **social services** could improve as a consequence of increased state revenues, leading to better quality of life for citizens. Social services could include measures like food subsidies or development of recreation centres, infrastructure, etc.
  This benefit was identified particularly in relation to PaMs on improving law enforcement and transparency, and reducing overexploitation of timber and illegal logging.

- Increased **capacity, motivation** and **job satisfaction** of government staff, potentially leading to overall improved performance and effectiveness in governance, and higher levels of trust in the government among the general public.
  This benefit was identified particularly in relation to PaMs on improving law enforcement and transparency, supporting the establishment of plantations, and enabling more effective creation and management of protected areas.

Risks:

- Insufficient **consideration of environmental aspects** in land use planning as a result of: powerful interests influencing the process in order to obtain **short-term economic benefit**; a **lack of data** about environmental values; or a **lack of understanding** of environmental issues among those who lead and contribute to the planning process.
  This risk was identified particularly in relation to PaMs on land use planning.

- If appropriate controls are not in place, the process of de-gazetting PFE land could result in a **loss of protection** for areas that still have some forest on them (e.g. partly degraded forest areas), or that would have potential for forest restoration.
  This risk was identified particularly in relation to PaMs on land use planning.

- Processes to recognize customary land rights or increase participatory decision-making may result in **non-environmentally friendly land uses**, e.g. if land-holders decide to use unsustainable agricultural methods or if community forestry is carried out in an inappropriate way. Lack of capacity and awareness and a focus on short-term economic

interests could both contribute to such negative outcomes.

This risk was identified particularly in relation to PaMs on promoting tenure recognition.

- If measures to increase agricultural productivity and incomes (such as extension services, support to market access) are not specifically designed to encourage environmental sustainability, or if sufficient training in sustainable practices is not provided, there could be negative environmental impacts from **agricultural intensification**, e.g. increased use of agrochemicals, inappropriate soil management causing erosion, or focus on a narrow selection of crops.

  This risk was identified particularly in relation to PaMs on promoting sustainable land use.

- If supply chain measures are ineffective, there could be a '**greenwashing effect**', i.e. market access could be increased despite products remaining unsustainable.

  This risk was identified particularly in relation to PaMs on promoting sustainable land use.

- Changes in revenue distribution from forestry and efforts to ensure domestic timber demand is met could have **unintended effects** that lead to **expansion of forest use** into new areas or reduced sustainability of existing uses. For example, there might be an incentive to increase public revenues by allowing higher timber extraction rates, which could lead to **overharvesting**.

  This risk was identified particularly in relation to PaMs on improving law enforcement and transparency, and reducing overexploitation of timber and illegal logging.

- Negative environmental impacts could arise from the generation and use of **alternative energy sources**, e.g. carbon emissions and pollution from fossil fuels, increased land demand and use of agrochemicals and irrigation water for biofuel cultivation, reduced soil fertility due to over-harvesting of agricultural residues as an alternative source of fuel, impacts on freshwater ecosystems and adjacent forests from hydropower, killing of migratory birds and bats at wind energy installations, clearance of trees for electricity distribution infrastructure, or environmental damage through careless disposal of old solar panels or batteries.

  This risk was identified particularly in relation to PaMs on promoting alternative energy sources and rural electrification.

- There could be negative impacts of **plantations** on soil and water resources and biodiversity (e.g. introduction of non-native species or monocultures, increased use of agrochemicals, high water demand, soil compaction or erosion, replacing native vegetation with plantations); short-rotation plantations are likely to be more intensively managed than plantations of long-lived species, which may increase their environmental impact.

  This risk was identified particularly in relation to PaMs on expanding plantations and improving their management.

- There could be environmental risks resulting from **initiatives to increase revenue** for protected areas, or as **unintended consequences of investments** in protected areas; for example, ecotourism development may create problems with waste disposal that need to be addressed, or improved infrastructure may facilitate the development of new, unsustainable economic activities.

  This risk was identified particularly in relation to PaMs on enabling more effective creation and management of protected areas.

- In areas susceptible to drought, an increase in forest or plantation area close to settlements could lead to increased risk of **damage from forest fires**. Increased proximity to forest could also lead to a greater risk of humans being attacked by **dangerous animals** such as snakes or wild dogs.

This risk was identified particularly in relation to PaMs on restoring forest and on expanding plantations and improving their management.

- Depending on the type of changes implemented, efforts to speed up the process of gazetting protected areas could lead to an **increased risk of procedural flaws**, e.g. delineation of protected areas **not based on sound information and analysis**, or new protected areas suffering from **low compliance** due to a lack of ownership or understanding among the local population.
  This risk was identified particularly in relation to PaMs on enabling more effective creation and management of protected areas.
- Subnational governments may not have the institutional capacity to plan and manage protected areas effectively, so **decentralizing protected area governance** may lead to establishment of protected areas that **do not achieve their conservation goals**.
  This risk was identified particularly in relation to PaMs on enabling more effective creation and management of protected areas.
- If the results of environmental accounting processes are not interpreted and used appropriately, forest values which are **difficult to describe in economic terms** (e.g. **cultural values**) may be **more likely to get neglected**.
  This risk was identified particularly in relation to PaMs on environmental accounting and land use planning.
- Poor people and other vulnerable groups (e.g. farmers without clarity over long-term land use rights) may be **unable to participate in or benefit from PaMs**, leading to increased **social inequality** (only some groups benefit); e.g. they may be unable to access credit mechanisms or to afford the initial investment to establish plantations, get certification, adopt new production methods or switch to alternative fuels, etc.
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, promoting community forestry, promoting alternative energy sources and rural electrification, reducing fuelwood demand, and expanding plantations and improving their management.
- **Conflicts over the use of land and resources** could arise or exacerbate during planning processes and efforts to clarify land tenure and use rights, as a result of strengthened law enforcement, due to the promotion of new forms of land use (e.g. for plantations or biofuels), or because of increased profitability of land use (e.g. through improved market access); conflict could be between different groups within communities, between neighbouring communities, or between communities, the government and/or investors (for example when land currently used for grazing livestock is converted to plantations). **Poor or vulnerable groups** (e.g. groups without legally recognized use rights) may be more likely to lose out or suffer harm in such situations.
  This risk was identified particularly in relation to PaMs on land use planning and tenure recognition, promoting sustainable land use practices, promoting community forestry, improving law enforcement and transparency, promoting alternative energy sources, expanding plantations and improving their management, and enabling more effective creation and management of protected areas.
- Perspectives of men and women may not be equally represented in planning processes or the design of PaMs, potentially leading to **gender inequality** in the distribution of benefits and burdens (such as increases in workload or loss of access to land) from the PaMs.
  This risk was identified particularly in relation to PaMs on land use planning and tenure recognition, promoting sustainable land use practices, promoting community forestry,

promoting alternative energy sources, expanding plantations and improving their management, and enabling more effective creation and management of protected areas.

- Traditional approaches in the **selection of participants** for capacity building and training events (e.g. on more sustainable agricultural practices, community forestry or plantation development) may **reinforce gender inequality**.
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, promoting community forestry, promoting alternative energy sources, and expanding plantations and improving their management.

- Efforts to enhance gender equality in relation to land ownership, livelihood opportunities and decision-making on land use may lead to **tension between men and women** if they are not implemented carefully.
  This risk was identified particularly in relation to PaMs on land use planning and tenure recognition and on promoting sustainable land use practices.

- There could be risks for the **safety and health** of workers and local communities from inappropriate handling, storage and disposal of chemicals, hazardous wastes, electrical equipment or flammable and explosive substances, from accidental use of contaminated raw materials in fuel production, from use of materials and equipment that do not meet safety standards, or from unsafe conduction of harvesting operations in forests and plantations, especially if users are not sufficiently trained in the application of new practices and technologies.
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, promoting community forestry, promoting alternative energy sources, reducing fuelwood demand, and expanding plantations and improving their management.

- Community members and owners of small enterprises may become exposed to **increased financial risk** as a consequence of adopting new crops, cultivation practices, marketing approaches or alternative livelihood strategies (such as plantation establishment or development of value-added products) that **require initial investment** or are more sensitive to **market fluctuations** than previous practices; this risk is especially great if market demand and likely timescales and amounts of returns on investment are not sufficiently considered in the design of PaMs (e.g. if a small selection of crops or productive activities is promoted so widely that markets become oversaturated, if the long investment period for plantations is not fully taken into account, or if the price increases that can be obtained by joining certification schemes are not enough to compensate for the cost of meeting the schemes' requirements), or if sufficient training is not provided for applying the new approaches; **poor people** in particular may become **overburdened by debt** if investments fail or if they are unable to pay back credit for other reasons (e.g. if loans are used for more urgent needs such as food and medicine in a crisis).
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, promoting community forestry, reducing overexploitation of timber and illegal logging, promoting alternative energy sources, expanding plantations and improving their management, and enabling more effective creation and management of protected areas.

- Development of land use plans and establishment of protected areas can pose **constraints for economic development**, e.g. there may be less scope for including new activities in village development plans, and livelihood opportunities for local people could be limited, especially if socio-economic impacts are not well considered and addressed in land use planning and in protected area design and management planning.
  This risk was identified particularly in relation to PaMs on land use planning and enabling more effective creation and management of protected areas.

- Promotion of alternative fuels and measures to reduce fuelwood demand or increase supply can have an impact on the livelihoods of **fuelwood selling and charcoal producing households**.
  This risk was identified particularly in relation to PaMs on promoting alternative energy sources, reducing fuelwood demand, and expanding plantations and improving their management.
- Stricter enforcement of legal requirements and use of taxes or other incentives to reduce forest encroachment and overexploitation of timber and fuelwood may lead to **lower profitability** and **job losses** in enterprises producing timber, charcoal and agricultural crops (especially for smaller and/or less cost-effective enterprises), risks to **smallholder livelihoods** and livelihoods of people without land rights who depend on illegal land use activities, as well as **reduced supply of timber, fuel and crops** and **rising consumer prices** (including for alternative fuels or building materials).
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, improving law enforcement and transparency, reducing overexploitation of timber and illegal logging, reducing fuelwood demand and promoting alternative energy sources, and enabling more effective creation and management of protected areas.
- The promotion of alternative livelihood options, improved agricultural practices or increased electrification may lead to a **reduction in traditional practices** and associated **cultural heritage and values**.
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, enabling more effective creation and management of protected areas and promoting alternative energy sources.
- **Poor or vulnerable groups** (e.g. smallholders) may increasingly be brought into **conflict with the law** as a result of not being able to meet (or having limited understanding of) stricter legal requirements in relation to their livelihood activities, or because there is insufficient supply of legally sourced products such as timber and fuelwood at an affordable price.
  This risk was identified particularly in relation to PaMs on improving law enforcement and transparency, reducing overexploitation of timber and illegal logging, reducing fuelwood demand and promoting alternative energy sources, and enabling more effective creation and management of protected areas.
- **Conflict with powerful stakeholders** involved in illegal activities or corruption may put individual government officers, NGO staff or members of local communities at risk. There could also be a risk of **wilful damage to forests or other assets**, of attempts to **stir unrest**, and of an **increase in other crime** if those involved in illegal logging turn to other illegal activities as a consequence of law enforcement efforts.
  This risk was identified particularly in relation to PaMs on improving law enforcement and transparency, reducing overexploitation of timber and illegal logging, and enabling more effective creation and management of protected areas.
- Until the terms of the Nationwide Ceasefire Agreement are agreed between the Union and signatory EAOs, the **proposal to increase revenue collection from forest use** may bring **additional pressure to negotiations**, and expected benefits from additional revenues collected may not materialize.
  This risk was identified particularly in relation to the PaMs on providing financial incentives to reduce overexploitation of timber and illegal logging and increase transparency.
- Establishment of fuelwood plantations and introduction of improved stoves may promote **continued reliance** of some households **on fuelwood and charcoal** for energy and as a

source of income when alternative options might be available, thus **prolonging negative side effects** such as health impacts and fire risk.
This risk was identified particularly in relation to PaMs on reducing fuelwood demand, and on expanding plantations and improving their management.

See also:

- Safeguard b for benefits and risks related to **increased transparency, accountability and rule of law** in forest governance and decisions on land use and land use planning;
- Safeguard c for benefits and risks related to **recognition of customary rights**;
- Safeguard d for benefits and risks related to **participation of stakeholders**, including local communities and vulnerable groups within them (e.g. women) in decision-making and planning processes;
- Safeguard f for benefits and risks related to unintended longer-term impacts of **increased profitability of land use**; and
- Safeguard g for benefits and risks related to **land use displacement** and other forms of **displacement of emissions** (e.g. replacing emissions from one fuel source with emissions from another).

Safeguard f: Actions to address the risks of reversals
Benefits:

None of the identified benefits relate specifically to this safeguard.

Risks:

- Improved efficiency, productivity or profitability of non-forest land uses (e.g. agriculture or plantations) or commercial activities based on timber and fuelwood (e.g. charcoal production) could result in an **unintended incentive for expansion of cultivated land** or **overexploitation of forest resources**, thus potentially reversing the success of PaMs in reducing deforestation and forest degradation, as well as any positive impacts on biodiversity and ecosystem services.
This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, reducing fuelwood demand and promoting alternative energy sources, and expanding plantations and improving their management.
- Private **smallholder plantations** may not be **maintained over the long term**, as political will and support towards their development may change, and a lack of continued awareness raising programmes on plantation management for small-holders may mean that the respective practices are not sustained, especially in the next generations.
This risk was identified particularly in relation to PaMs on expanding plantations and improving their management.
- If **investments** in alternative livelihoods, improved agricultural practices or alternative sources of energy **fail**, farmers may be forced to expand their cultivated area or resort to unsustainable farming practices to make up for the loss (especially if their investment was based on a loan/credit).
This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, reducing fuelwood demand and promoting alternative energy sources.
- If the use of **advanced and more efficient technology** is promoted for energy generation, cooking or agriculture/plantation management, initial successes may be reversed if

equipment breaks or wears out and users do not have the knowledge or funds to repair or replace it, or if spare parts or new equipment are not easily available. Frequent shortages of electricity or difficulties in accessing specific types of fuel may also lead to users abandoning the new technologies after initial trial.
This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, reducing fuelwood demand and promoting alternative energy sources.

See also safeguard e for benefits and risks related to direct (rather than longer term / indirect) **unintended side effects** of PaMs on forests.

Safeguard g: Actions to reduce displacement of emissions
Benefits:

- The overall **carbon footprint of the energy sector** may be reduced if alternative fuels and renewable energies are promoted in those situations where they have a lower footprint than fuelwood.
  This benefit was identified particularly in relation to PaMs on promoting alternative energy sources and rural electrification.

Risks:

- If PaMs do not consider the need to meet demand for agricultural products, crop cultivation and livestock grazing could simply **be displaced to other areas**, leading to **conversion or degradation of forest or non-forest ecosystems** and negating the success of PaMs in reducing emissions, as well as any associated benefits for biodiversity and ecosystem services; for example, initiatives for supply chain sustainability could become ineffective if production of targeted commodities is concentrated on existing agricultural land, while other crops are shifted to land opened through encroachment; similarly, establishment of plantations on arable land could lead to displacement of crop cultivation into forest areas; stricter and more strongly enforced rules about land use in protected areas may lead to displacement of agricultural activity to other areas, including buffer zones.
  This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, expanding plantations and improving their management, and enabling more effective creation and management of protected areas.
- Alternative fuels may themselves have a **high carbon footprint**, cancelling out some or all of the emission savings from reduced use of fuelwood and charcoal; for example, increased **land demand** for the production of biofuels or alternative feedstocks for charcoal production could directly or indirectly lead to **forest conversion**; collection of plant material such as bamboo or grass for biofuel production may lead to carbon emissions from the **degradation of natural ecosystems** (forest or non-forest) through overharvesting; and improved access to equipment for the use of LPG fuel or electricity could encourage increased overall **consumption of fossil fuels** with associated emissions.
  This risk was identified particularly in relation to PaMs on promoting alternative energy sources.
- Measures to **reduce demand for timber** may lead to overall **increased emissions and other environmental impacts such as pollution**, e.g. if timber is replaced with concrete or steel as a building material.

This risk was identified particularly in relation to PaMs on reducing illegal logging and strengthening law enforcement.

- **Strengthened law enforcement** in some areas may lead to **increased demand for illegally or unsustainably sourced forest products and commodities** from other places (either within Myanmar or abroad).
This risk was identified particularly in relation to PaMs on promoting sustainable land use practices, improving law enforcement and transparency, and reducing overexploitation of timber and illegal logging.