

November 1, 2017

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Guidance Note for ESS4
Community Health and Safety

Note on the feedback:

Thank you for the opportunity to comment on the Draft Guidance notes for ESSs. In general I find that the notes are carefully prepared and informative. They should assist Project team members with application of the ESSs.

With my experience in the World Bank and elsewhere in medicine, public health, health services management, and in teaching and editing English for speakers of other languages, I have reviewed the Note for ESS4, Community Health and Safety and provided feedback through marked up suggested edits and other comments.

The main suggestions I have are:

1. Choice of words and sentence structure, keeping in mind the readership – many may not have extremely high levels of written English comprehension. Suggest review to remove all unnecessary words, check whether a phrase can be simplified or omitted, and reduce the use of passive tense in favor of more direct or active tense where possible. Of course, the best way to check, if you have time, is to ask representatives of the target audience to read and compare different wording of some sentences or paragraphs.
2. Layout. Where many examples are given, suggest using (vertical) lists and/or bullets rather than one long sentence, for ease of reading.
3. Technical content. Recommend checking some technical issues and classifications, especially in GN15, with respect to disease categories and the choice of disease examples. This would ensure currency and consistency with authoritative health sources, e.g. WHO.

Please let me know if I can be of further assistance in any way.

Best regards,
Janet Hohnen
jhohnen@msn.com
29 November, 2017

These Guidance Notes are to help the Borrower in applying the Environmental and Social Standards (ESSs) during project design and preparation. The ESSs are part of the World Bank's 2016 Environmental and Social Framework. The Guidance Notes help to explain the requirements of the ESSs. They are not Bank policy, nor are they mandatory and they do not remove the need for sound judgment in making project decisions. In case of inconsistency or conflict between the Guidance Notes and the ESSs, the provisions of the ESSs prevail. Each paragraph of the Standard is highlighted in a box, followed by the corresponding guidance.

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Introduction

4. ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.

5. ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

Objectives

- To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life-cycle from both routine and non-routine circumstances.
- To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.
- To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials.
- To have in place effective measures to address emergency events.
- To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

Scope of Application

6. The applicability of this ESS is established during the environmental and social assessment described in ESS1.

4. This ESS addresses potential risks and impacts on communities that may be affected by project activities. Occupational health and safety (OHS) requirements for project workers are set out in ESS2, and measures to avoid or minimize impacts on human health and the environment due to existing or potential pollution are set out in ESS3.

Requirements

A. Community Health and Safety

5. The Borrower will evaluate the risks and impacts of the project on the health and safety of the affected communities during the project life-cycle, including those who, because of their particular circumstances, may be vulnerable. The Borrower will identify risks and impacts and propose mitigation measures in accordance with the mitigation hierarchy.

GN5.1. Examples of action to address Community health and safety risks:

- incorporating safe road crossings into project design;
- implementing specific sensitization and mitigation measures for social impacts from labor influx during construction;

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- establishing emergency response planning and monitoring for pollution or other incidents during operation; and
- ensuring protocols are in place for temporary blasting during demolition at the reinstatement or restoration phase.

Commented [JH1]: These examples could be bullet points or listed a, b, c etc.

GN5.2. Some groups in a community may be particularly vulnerable to health and safety risks from a project because of, for example, their age, health, level of education, gender and/or disability. Identifying individual vulnerable groups is an important part of the environmental and social assessment of each project.

GN5.3. Where an assessment identifies risks that may arise from the interaction of project workers with local communities, the project's environmental and social documents should describe the risks and measures to address them. Such measures may include, more generally, raising awareness among project workers of risks, expected behaviors, and the consequences of violations, communicated through training, and publicized codes of conduct. It may also be important to raise awareness of the risks among community members and inform them about available grievance mechanisms. Any risks and mitigation measures relating to project workers should also be included in the *labor management procedures* for the project as discussed in GN9.4 of ESS2.

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Infrastructure and Equipment Design and Safety

6. *The Borrower will design, construct, operate, and decommission the structural elements of the project in accordance with national legal requirements, the ESHGs and other GIIP, taking into consideration safety risks to third parties and affected communities. Structural elements of a project will be designed and constructed by competent professionals, and certified or approved by competent authorities or professionals.¹ Structural design will take into account climate change considerations, as appropriate.*

Footnote 1. This may include, where appropriate, third-party life and fire safety audits for existing buildings that are used for communal purposes and for new buildings prior to their commissioning or use.

GN6.1. "Structural elements" are the physical parts of the project, such as: existing or new buildings, earthworks, bridges, retaining walls, drainage ditches, roadways, penstocks, water and irrigation channels, pylons, air conditioning units, power stations, and dams.

GN6.2. Third parties referred to in ESS4 may include members of the public, businesses or the users of infrastructure that are not considered affected communities.

GN6.3. The process of certification or approval by competent authorities or professionals reflects the risk of adverse consequences posed by the type and use of structural elements, and also the natural conditions of the area (e.g. potential for hurricanes, earthquakes, flooding). The process also takes into account relevant engineering safety considerations, such as geotechnical, structural, electrical, and mechanical specifications. In considering these factors, the team should decide whether third-party life and fire safety audits are required.

GN6.4. Note that measures to reflect climate change issues are discussed in detail in the ESHGs and GIIP.

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7. Where the project includes new buildings and structures that will be accessed by members of the public, the Borrower will consider the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events. Where technically and financially feasible, the Borrower will also apply the concept of universal access² to the design and construction of such new buildings and structures.

Footnote 2. The concept of universal access means unimpeded access for people of all ages and abilities in different situations and under various circumstances, as set out in GIIP.

GN7.1. Where national laws or regulations have mandatory accessibility requirements, these are included in the project design, together with any additional measures to meet the universal accessibility requirements of Footnote 2.

GN7.2. Steps taken when applying the concept of universal access in the design and construction of new buildings and structures, such as schools, public facilities or roads, may include the following, where technically and financially feasible:

- (a) Consider universal access as integral to the design of the project;
- (b) Seek input from stakeholders, such as potential users of the buildings and structures and organizations representing disabled people;
- (c) Explicitly include reference to universal access in the procurement documents; and
- (d) Consider local accessibility standards and codes on universal access and non-discrimination.

GN7.3. Examples of measures to support universal access in buildings or structures include:

- sidewalks with ramps and drop curbs,
- clear and visible signs,
- tactile strips,
- audible announcement of signs,
- appropriate placement and height of equipment,
- easily identified emergency exits,
- raised toilet seats and handrails, and
- wide doors.

8. When structural elements or components of a project are situated in high-risk locations, including those with risk of extreme weather or slow onset events, and their failure or malfunction may threaten the safety of communities, the Borrower will engage one or more independent experts with relevant and recognized experience in similar projects, separate from those responsible for the design and construction, to conduct a review as early as possible in project development and throughout the stages of project design, construction, operation, and decommissioning. Where the project involves a new or existing dam, the Borrower will provide sufficient resources to apply the requirements on safety of dams, as set out in Annex 1.

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Commented [JH2]: Again, suggest bullets rather than a long sentence

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GN8.1. High-risk locations are those where communities are vulnerable to failure or malfunction of structural elements of the project because of environmental risk, for example, from earthquakes, landslides, drought, floods, cyclones, wildfires or storms. Slow onset changes due to climate change may include changing current patterns, sea level rise, increasing temperatures and desertification. Where such situations are relevant to the project appropriate experts are engaged to make an assessment and recommendations, based on the significance and type of risks.

Safety of Services

9. *Where the project involves provision of services to communities, the Borrower will establish and implement appropriate quality management systems to anticipate and minimize risks and impacts that such services may have on community health and safety. In such circumstances, the Borrower will also apply the concept of universal access, where technically and financially feasible.*

GN9.1. Projects may provide many services to communities, including those relating to education, health, social security and social protection, transport and utilities such as electricity and gas, water, sanitation, and waste disposal. Project management systems must address the community health and safety risks posed by project services, such as risks associated with water or irrigation canals, quarries or excavation works, or the dangers of electric shock from electrical cabinets or cables.

GN9.2. The management systems must (a) allow for timely identification of community health and safety risks, (b) be designed with reference to national and internationally recognized standards, and (c) support the development and monitoring of appropriate mitigation measures during the design, construction, operation or provision of such services.

Traffic and Road Safety

10. *The Borrower will identify, evaluate and monitor the potential traffic³ and road safety risks to workers, affected communities and road users throughout the project life-cycle and, where appropriate, will develop measures and plans to address them. The Borrower will incorporate technically and financially feasible road safety measures into the project design to prevent and mitigate potential road safety risks to road users and affected communities.*

Footnote 3. May include all motorized transportation relevant to the project.

GN10.1. Motorized transportation covers the different kinds of transport used in a project; it primarily concerns road transport, but may include air and sea traffic.

11. *Where appropriate, the Borrower will undertake a road safety assessment for each phase of the project, and will monitor incidents and accidents, and prepare regular reports of such monitoring. The Borrower will use the reports to identify negative safety issues, and establish and implement measures to resolve them*

GN11.1. Projects for construction of new roads or rehabilitation or structural improvement to existing roads can create traffic and road safety risks. Changes to traffic flow or volume on an existing road may create risks, as for example when construction of a new bypass leads to reduced congestion and therefore increased speed of traffic on local roads. Communities affected by traffic and road safety issues include those alongside, bisected or fragmented by a project road. Shops, stalls and residential property may all

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be affected, along with people using the road, whether non-motorized (pedestrians and cyclists) or motorized (on motorcycles, in cars, trucks or buses).

GN11.2. For projects that affect traffic flow or volume on existing roads, the environmental and social assessment considers risks arising from the proposed changes, paying attention to vehicle mix, volume, speed and condition (including vehicle weight, height and length, and the carriage of hazardous materials). Other risks to be considered include those related to lane width, slope, speed management, roadside uses, pedestrian usage and facilities.

GN11.3. Identification of risks is part of project identification, so that measures to address these risks can be included in the project design. The environmental and social assessment reviews the relevant aspects of the project design, such as junction layout, alignment, road signs and signals, provision of pedestrian footways and crossings, barriers (for pedestrians and vehicles), median layout, and access to public transport. The assessment also takes account of risks that may materialize through the project life-cycle.

GN11.4. A separate road safety assessment is conducted as part of the environmental and social assessment when the traffic and road safety issues are likely to be significant for the community or road users. Such projects involve new roads, road improvements, traffic management, increasing traffic speed, bus rapid transport and other forms of urban transport that may change the traffic mix. The assessment considers risks to pedestrians, for example from bisecting communities or pedestrian routes, creating transport nodes, or affecting access to or traffic on a road. Both construction-related and operational risks are considered.

GN11.5. Details of the road safety measures should be set out in the road safety assessment or incorporated in a plan for health and safety or for traffic management. Such plans should identify specific safety measures, for example to manage traffic speed, or to control single lane two-way traffic.

GN11.6. Monitoring information on traffic incidents and accidents helps to manage traffic risks and impacts, and to improve safety measures over the project cycle. Monitoring and reporting data covers details of deaths, injuries, and crash type and location. An emergency response plan (ERP) may help to set out clearly the contingencies in place for emergency assistance in the event of incidents and injuries (see Paragraph 20 of ESS4). The ERP should be developed in consultation with the local communities and local emergency responders.

12. For vehicles or fleets of vehicles for the purposes of the project (owned or leased), the Borrower will put in place appropriate processes, including driver training, to improve driver and vehicle safety, as well as systems for monitoring and enforcement. The Borrower will consider the safety record or rating of vehicles in purchase or leasing decisions and require regular maintenance of all project vehicles.

GN12.1. Vehicles or fleets of vehicles for project purposes may include construction vehicles, logging vehicles, cars, trucks, school buses, ambulances and, in some projects, boats and aircraft.

GN12.2. Processes to promote driver and vehicle safety include regular maintenance, inspection and testing of vehicles, and training for drivers. Other issues to be addressed include compliance with speed

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limits, seatbelt use, and helmet use for motorcycle riders. Driver fitness assessments, GPS in vehicles, and tally of infractions received may be included in monitoring programs.

13. For projects that operate construction and other equipment on public roads or where the use of project equipment could have an impact on public roads or other public infrastructure, the Borrower will take appropriate safety measures to avoid the occurrence of incidents and injuries to members of the public associated with the operation of such equipment.

Ecosystem Services

14. The project's direct impacts on ecosystem services may result in adverse health and safety risks to and impacts on affected communities.⁴ With respect to this ESS, ecosystem services are limited to provisioning and regulating services as defined in ESS1. Where appropriate and feasible, the Borrower will identify the project's potential risks and impacts on ecosystem services that may be exacerbated by climate change. Adverse impacts will be avoided, and if they are unavoidable, the Borrower will implement appropriate mitigation measures.

Footnote 4. For example, land use changes or the loss of natural buffer areas, such as wetlands, mangroves and upland forests, which mitigate the effects of natural hazards such as flooding, landslides and fire, may result in increased vulnerability and community safety-related risks and impacts. The diminution or degradation of natural resources, such as adverse impacts on the quality, quantity, and availability of freshwater, may result in health-related risks and impacts.

GN14.1. As defined in Footnote 27 of ESS1, ecosystem services are the benefits that people derive from ecosystems. Ecosystem provisioning services are the products people obtain from the ecosystems, such as food, fresh water, timber, fibers and medicinal plants. The regulating services of ecosystems are the regulating benefits people obtain from the ecosystem processes, such as surface water purification, carbon storage and sequestration, climate regulation and protection from natural hazards.

Community Exposure to Health Issues

15. The Borrower will avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable and non-communicable diseases that could result from project activities, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. Where specific diseases⁵ are endemic in communities in the project area, the Borrower is encouraged to explore opportunities during the project life-cycle to improve environmental conditions that could help minimize their incidence.

Footnote 5. Such as malaria.

GN15.1. Water-borne diseases are caused by consuming water contaminated by human, animal, or chemical wastes. These diseases are especially prevalent in areas with inadequate sanitation, and include cholera, diarrhea and typhoid.

GN15.2. Water-based diseases are caused by parasites that spend at least part of their life cycle in water, including guinea worm and schistosomiasis. Water-related diseases are transmitted by vectors that live and breed in or around water. Vectors are insects or animals that carry and transmit parasites between infected people or animals, such as the mosquitos that transmit malaria.

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Commented [JH3]: This section would benefit from critical review and feedback by an authoritative health source, e.g. WHO. – including assurance that the definitions of different groups and examples of disease are in line with current knowledge and presentation. Also maybe be more selective in choice of infectious disease examples; maybe mention vaccine preventable diseases as a group, as there is potential for effective action for this group.

Commented [JH4]: ** check for ?better definitions – tabular format for the 4 identified categories might improve presentation and understanding.

Commented [JH5]: This para contains reference to two categories of disease but the para before and para after contain only one category each

Commented [JH6]: Please check, as vectors can carry bacteria and viruses as well as parasites? – seems to be implied in following text re "pathogens"

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GN15.3. Vector-borne diseases are caused by pathogens and parasites in human populations transmitted by vectors. These diseases include Chagas disease, human African trypanosomiasis, Japanese encephalitis, leishmaniasis, malaria, onchocerciasis, schistosomiasis and yellow fever.

Commented [JH7]: Parasite is a type of pathogen – needs check against an authoritative source, e.g. WHO

GN15.4. Communicable diseases (infectious diseases) are caused by microscopic agents (bacteria, viruses etc.) transmissible from person to person through air, blood or other bodily fluid. They include hepatitis, cholera, HIV/AIDS, influenza, polio, syphilis and tuberculosis.

Commented [JH8]: The water linked diseases mentioned above are also all communicable. Do you think this is clear in the present draft?

GN15.5. Non-communicable diseases are not passed from person to person. They tend to be of long duration and slow progression (chronic) and are of four main types: cardiovascular diseases (for example, heart attacks and stroke); cancers; chronic respiratory diseases (for example, chronic obstructive pulmonary disease and asthma); and diabetes.

Commented [JH9]: Suggest check with current health expert on best/accurate summary

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GN15.6. Projects that require specific consideration of health risks include:

- (a) those that create permanent or temporary bodies of water, increasing the risk of water-borne diseases. Such project include dams, irrigation schemes, construction pits or other depressions;
- (b) projects in areas with inadequate discharge and treatment of sanitary wastewater discharge;
- (c) projects that may result in exposure to hazardous material or contribute to a higher incidence of non-communicable diseases; and,
- (d) projects that exacerbate existing health conditions.

Commented [JH10]: Would benefit from specific examples of these groups

GN15.7. Project-related health risks are included in the environmental and social assessment or, where considered significant, through a standalone health impact assessment. Appropriate measures to avoid, minimize or mitigate risks and impacts identified in the assessment are then included in the project design and implemented throughout the project.

GN15.8. Health risks from project activities may differ within communities, as various factors contribute to vulnerability, including gender, physical or mental illness or disability, poverty or economic disadvantage, and dependence on unique natural resources. For example, households relying on water directly from natural sources may be at greater risk of water-borne and water-based diseases than those who receive water from a distribution network.

16. *The Borrower will take measures to avoid or minimize transmission of communicable diseases that may be associated with the influx of temporary or permanent project labor.*

GN16.1. Labor influx occurs when some or all of the labor force for a project comes from outside the project area. Other people may also follow the incoming workforce with the aim of selling them goods and services or seeking work or business opportunities. Further guidance is provided in the World Bank's Guidance Note on Managing Risks Related to Labor Influx, available on the World Bank's website.

GN16.2. The project's environmental and social assessment is the main mechanism for determining the risk of communicable diseases as a result of labor influx, and where appropriate, identifying measures to avoid, minimize, or mitigate the transmission of such diseases. It is important to establish a baseline as

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part of the assessment, for monitoring and managing these risks. Risks and impacts may be potentially more significant in certain circumstances, for example, when there are large numbers of project workers, contractors and third parties, or due to the sensitivity of project location or the characteristics of the affected communities.

Management and Safety of Hazardous Materials

17. *The Borrower will avoid or minimize the potential for community exposure to hazardous materials and substances that may be released by the project. Where there is a potential for the public (including workers and their families) to be exposed to hazards, particularly those that may be life-threatening, the Borrower will exercise special care to avoid or minimize their exposure by modifying, substituting, or eliminating the condition or material causing the potential hazards. Where hazardous materials are part of existing project infrastructure or components, the Borrower will exercise due care during construction and implementation of the project, including decommissioning, to avoid exposure to the community.*

18. *The Borrower will implement measures and actions to control the safety of deliveries of hazardous materials, and of storage, transportation and disposal of hazardous materials and wastes, and will implement measures to avoid or control community exposure to such hazardous material.*

GN18.1. Hazardous materials and wastes are defined in the EHSs as materials that present a risk to human health, property and the environment due to their physical or chemical characteristics. The following should be considered for attention, according to the project:

- explosives;
- compressed gases, including toxic or flammable gases;
- flammable liquids and solids;
- oxidizing substances;
- toxic materials;
- radioactive material;
- corrosive substances;
- chemical fertilizers;
- soil amendments;
- chemicals, oils and other hydrocarbons;
- paints;
- pesticides, herbicides and fungicides;
- asbestos;
- metal waste;
- hospital waste, including biological, chemical and radioactive medical waste;
- used batteries;
- fluorescent light bulbs and ballasts;
- byproducts of plastic incinerated at low temperatures; and
- PCBs in electrical equipment.

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Commented [JH11]: 'toxic' is a non-specific term

Commented [JH12]: PCB's - Write in full?

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GN18.2. The risks and impacts on community health from hazardous materials used in the project must be included in the environmental and social assessment. Risks to the community may occur from exposure during the transport of hazardous materials to and from project sites, as well as during project activities.

GN18.3. Understanding how community members, especially those most vulnerable, may be exposed to hazardous materials, taking into account their different activities and use of resources, helps to identify appropriate mitigation measures. For example, women may be exposed to contaminants in water when carrying out domestic activities, or children may play in contaminated soil or water.

GN18.4. Where there are substantial risks and potential impacts of community exposure to hazardous materials and wastes, consider preparing a Hazardous Waste Management Plan or a Hazardous Materials Management Plan for implementation of mitigation measures throughout the project life-cycle.

Commented [JH13]: Is there any reference or template for these plans that could be mentioned? Or "on WB website"?

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Emergency Preparedness and Response

19. *The Borrower will identify and implement measures to address emergency events. An emergency event is an unanticipated incident, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons, including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning. The measures will be designed to address the emergency event in a coordinated and expeditious manner, to prevent it from injuring the health and safety of the community, and to minimize, mitigate and compensate for any impacts that may occur.*

20. *Borrowers engaged in projects having the potential to generate emergency events will conduct a risk hazard assessment (RHA), as part of the environmental and social assessment undertaken pursuant to ESS1. Based on the results of the RHA, the Borrower will prepare an Emergency Response Plan (ERP) in coordination with the relevant local authorities and the affected community, and will take into account the emergency prevention, preparedness and response arrangements put into place with project workers under ESS2.⁶*

Footnote 6. ESS2, paragraph 25.

GN20.1. A Risk Hazard Assessment (RHA) aims to identify the potential harm to community health and safety from man-made or natural emergency events. The RHA should be conducted where emergency events, such as fire, explosions, leaks or spills, might have serious community impact. It can be conducted as part of an environmental and social assessment or as a stand-alone activity. The RHA should also include any risks that hazardous material or substances may be released by a project. The findings of the RHA would help determine if there is a need to prepare an Emergency Response Plan (ERP). The ERP will describe the steps to be taken to address the emergency and to protect those groups at risk.

Commented [JH14]: Suggest either say 'potential harm' or 'risk', but not 'potential risk' – check definition of 'risk'

GN20.2. Preparation of the ERP should include consideration of the views of all segments of the local community, including the elderly, children and any other vulnerable groups, along with the emergency services/local response teams and relevant government agencies.

21. *An ERP will include, as appropriate: (a) engineering controls (such as containment, automatic alarms, and shut-off systems) proportionate to the nature and scale of the hazard; (b) identification of and secure access to emergency equipment available on-site and nearby; (c) notification procedures for designated emergency*

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responders; (d) diverse media channels for notification of the affected community and other stakeholders; (e) a training program for emergency responders including drills at regular intervals; (f) public evacuation procedures; (g) designated coordinator for ERP implementation; and (h) measures for restoration and clean-up of the environment following any major accident.

GN21.1. Specific requirements for ERPs related to dams are described in Annex 1 of ESS4 on Safety of Dams.

22. The Borrower will document its emergency preparedness and response activities, resources, and responsibilities, and will disclose appropriate information, as well as any subsequent material changes thereto, to affected communities, relevant government agencies, or other relevant parties. The Borrower will assist and collaborate with affected communities, relevant government agencies and other relevant parties in their preparations to respond effectively to an emergency event, especially where their participation and collaboration will be an important part of an effective response.

GN22.1. For effective implementation of an ERP all relevant parties must work together and must understand their own and others' roles in event of emergency. These parties include those implementing the project and project workers, emergency services, government agencies and the local community. The roles and responsibilities of each party are agreed through consultation with the relevant agencies and all concerned groups. It is important to share the ERP widely so that all parties understand exactly what action to take in an emergency. However, it is also important NOT to disclose sensitive information regarding project security. ESS10 provides more information on disclosure.

23. The Borrower will review the ERP on a regular basis, and confirm that it is still capable of addressing the potential range of emergency events that might arise in connection with the project. The Borrower will support affected communities, relevant government agencies and other relevant parties through training and collaboration, and will conduct such training in conjunction with the training provided to project workers as part of the OHS requirements under ESS2.

GN23.1. Regular review of the project ERP helps to ensure that it will address the emergency risks throughout the project cycle. Where equipment is needed for the emergency response, such as fire-fighting equipment, training and review of the availability and suitability of such equipment are important elements of the ERP.

B. Security Personnel

24. When the Borrower retains direct or contracted workers to provide security to safeguard its personnel and property, it will assess risks posed by these security arrangements to those within and outside the project site. In making such arrangements, the Borrower will be guided by the principles of proportionality and GILP, and by applicable law, in relation to hiring, rules of conduct, training, equipping, and monitoring of such security workers. The Borrower will not sanction any use of force by direct or contracted workers in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

GN24.1. Decisions on the appropriate scope of the project's security arrangements are guided by an assessment of (i) risks to the project's personnel and property that may require a security response; (ii)

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appropriate responses to the identified security risks; (iii) potential impacts of a security incident on the project, local communities and other parties; and (iv) potential mitigation measures.

GN24.2. The project security arrangements must (a) be proportional to the nature and significance of identified security risks and the project's operating environment, and (b) take into account both GIIIP and national law. For example, for projects in low- to medium-risk contexts, fencing, sign-posting, lighting, basic security awareness training and a security guard may be sufficient. Larger, more complex projects or projects in high-risk settings, will require more comprehensive security arrangements. For some projects, it may be advisable to engage external security experts to prepare comprehensive and detailed risk assessments and management plans.

GN24.3. Periodic assessment of security risks during the life of the project allows updating of security arrangements to reflect new risks or changes in the operating environment. It is good practice to review security arrangements annually, or whenever a major event occurs that could affect the security of the project or the project's operating environment.

GN24.4. A project's security arrangements may themselves pose risks and impact on project workers and local communities. It is important to assess these risks and impacts and to specify action to address them. This aspect of project security should be part of the ongoing stakeholder engagement, as described in ESS10. Available project-level grievance mechanisms allow project workers, local communities and other stakeholders to give feedback on the project's security arrangements and personnel.

GN24.5. Appropriate conduct is expected and required of all private security personnel employed by the project. Contractual arrangements provide clear instructions on the limited circumstances in which force may be used to protect project personnel or property. Adequate protocols should also be in place and implemented for security services provided by government entities.

25. *The Borrower will seek to ensure that government security personnel deployed to provide security services act in a manner consistent with paragraph 24 above, and encourage the relevant authorities to disclose the security arrangements for the Borrower's facilities to the public, subject to overriding security concerns.*

26. *The Borrower will (i) make reasonable inquiries to verify that the direct or contracted workers retained by the Borrower to provide security are not implicated in past abuses; (ii) train them adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities; and (iii) require them to act within the applicable law and any requirements set out in the ESCP.*

27. *The Borrower will review all allegations of unlawful or abusive acts of security personnel, take action (or urge appropriate parties to take action) to prevent recurrence and, where necessary, report unlawful and abusive acts to the relevant authorities.*

GN27.1. The project-level grievance mechanism must be able to receive concerns or complaints about the conduct of security personnel. These concerns and complaints, as well as any associated evidence and facts, must be promptly documented and assessed and action taken to prevent recurrence. Actions

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implemented in response to complaints received are monitored and the outcomes communicated to the relevant parties, while strictly protecting the confidentiality of victims and complainants.

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ESS4-ANNEX 1. Safety of Dams

A. New Dams

1. The Borrower will engage experienced and competent professionals for the supervision of the design and construction of new dams,¹ and require the owner of the dam to adopt and implement dam safety measures during the design, bid tendering, construction, operation, and maintenance of the dam and associated works.

Footnote 1. Dams include, for example, a water storage dam for a hydropower, water supply, irrigation, flood control, or multipurpose project, a tailings or a slimes dam, or an ash impoundment dam.

2. The dam safety requirements set out in this Annex apply to:

- (a) "Large dams" which are defined as dams with a height of 15 meters or greater from the lowest foundation to crest or dams between 5 meters and 15 meters impounding more than 3 million cubic meters;
- (b) All other dams regardless of size or retention capacity (referred to as "small dams") that (i) could cause safety risks, such as an unusually large flood-handling requirement, location in a zone of high seismicity, foundations that are complex and difficult to prepare, retention of toxic materials, or potential for significant downstream impacts or (ii) are expected to become large dams during their operating life.

3. The dams referred to in paragraph 2 require:

- (a) Reviews by an independent panel of experts (the Panel) of the investigation, design, and construction of the dam and the start of operations;
- (b) Preparation and implementation of the following detailed plans, as further described in Section C2:² a plan for construction supervision and quality assurance, an instrumentation plan, an operation and maintenance plan, and an emergency preparedness plan;
- (c) Prequalification of bidders during procurement and bid tendering; and
- (d) Periodic safety inspections of the dam after completion, and implementation of measures required to address safety deficiencies.

Footnote 2. As part of established dam safety practices in certain countries, the Operation and Maintenance (O&M) Plan includes the Instrumentation Plan and the Emergency Preparedness Plan as specific sections of the O&M Plan. This method will be acceptable provided the relevant sections of the O&M Plan contain the details, and are prepared in accordance with the timing, set out in Section C below.

4. The risks associated with a dam are design and situation specific, and will vary depending on structural components, socioeconomic factors and the environment within which the dam is being constructed and will operate. Application of the requirements set out in paragraph 3 will reflect these considerations, and be proportionate to the size, complexity and potential risk of the dam.

5. Where a dam does not fall into the categories set out in paragraph 2, dam safety measures designed by qualified engineers in accordance with GIIP will be adopted and implemented.³

Footnote 3. In such circumstances, the Borrower will confirm, through the environmental and social assessment, that there will be no or negligible risk of significant adverse impacts due to potential failure of the dam structure to local communities and assets, including assets to be financed as part of the proposed project. Such dams could include farm ponds, local silt retention dams and low embankment tanks.

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6. *The Panel referred to in paragraph 3 above consists of three or more experts, appointed by the Borrower and acceptable to the Bank, with expertise in the various technical fields relevant to the safety aspects of the particular dam.⁴ The Panel will review and advise the Borrower on matters relative to dam safety and other critical aspects of the dam, its appurtenant structures, the catchment area, the area surrounding the reservoir, and downstream areas. The Borrower will normally extend the Panel's composition and terms of reference beyond dam safety, to cover such areas as project formulation; technical design; construction procedures; and, for water storage dams, associated works such as power facilities, river diversion during construction, ship lifts, and fish ladders.*

Footnote 4. The number, professional breadth, technical expertise, and experience of Panel members are appropriate to the size, complexity, and hazard potential of the dam under consideration. For high-hazard dams, in particular, the Panel members will possess recognized international expertise in their field.

GN A1.6.1. Relevant expertise for a dam project includes geology, hydrology, hydraulics, civil engineering, hydro-mechanical expertise, hydro-electrical expertise, and materials expertise.

GN A1.6.2. The selection of panel members is carried out by the Borrower, and subject to *no objection* by the Bank. The Borrower convenes the panel either in person or virtually, and ensures that its members have access to relevant documentation, including through the provision of relevant reports or studies (for example, those prepared for the environmental and social assessment).

7. *The Borrower will contract the services of the Panel and will provide administrative support for its activities. Beginning as early in project preparation as possible, the Borrower will arrange for periodic Panel meetings and reviews, which will continue through the investigation, design, construction, and initial filling and start-up phases of the dam.⁵ The Borrower will inform the Bank in advance of the Panel meetings.⁶ After each meeting, the Panel will provide the Borrower with a written report of its conclusions and recommendations, signed by each participating member; the Borrower will provide a copy of the Panel's report to the Bank. Following the filling of the reservoir and start-up of the dam, the Bank will review the Panel's findings and recommendations. If no significant difficulties are encountered in the filling and start-up of the dam, the Borrower may disband the Panel.*

Footnote 5. If the Bank's involvement begins at a later stage than project preparation, the Panel is constituted as soon as possible and reviews any aspects of the project that have already been carried out.

Footnote 6. The Bank will normally send an observer to these meetings.

B. Existing Dams and Dams Under Construction (DUC)

8. *Where a project relies or may rely on the performance of an existing dam or a dam under construction (DUC) in the Borrower's territory, the Borrower will arrange for one or more independent dam specialists to: (a) inspect and evaluate the safety status of the existing dam or DUC, its appurtenances, and its performance history; (b) review and evaluate the owner's operation and maintenance procedures; and (c) provide a written report of findings and recommendations for any remedial work or safety-related measures necessary to upgrade the existing dam or DUC to an acceptable standard of safety.*

9. *Such projects include, for example, power stations or water supply systems that draw directly from a reservoir controlled by an existing dam or a DUC; diversion dams or hydraulic structures downstream from an existing dam or a DUC, where failure of the upstream dam could cause extensive damage to or failure of the project facilities; and irrigation or water supply projects that will depend on the storage and operation of an existing dam or a DUC for their supply of water and could not function if the dam failed. They also include projects that require*

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increases in the capacity of an existing dam, or changes in the characteristics of the impounded materials, where failure of the existing dam could cause extensive damage to or failure of project facilities.

10. *The Borrower may use a previously prepared dam safety assessment or recommendations for improvements needed in an existing dam or DUC, if: (a) an effective dam safety program is already in operation; and (b) full-level inspections and dam safety assessments of the existing dam or DUC have already been conducted and documented, and are satisfactory to the Bank.*

11. *For projects that include additional dam safety measures or require remedial work, the Borrower will require that: (a) the dam is designed and its construction is supervised by competent professionals; and (b) the reports and plans required for a new dam (specified in paragraph 3 (b)) are prepared and implemented. For high-hazard cases involving significant and complex remedial work, the Borrower will also employ a panel of independent experts on the same basis as for a new dam (see paragraphs 3 (a) and 6 of this Annex).*

12. *When the owner of the existing dam or DUC is an entity other than the Borrower, the Borrower will enter into agreements or arrangements providing for the measures set out in paragraphs 8 to 11 of this Annex to be undertaken by the owner.*

13. *Where appropriate, the Borrower may discuss with the Bank any measures necessary to strengthen the institutional, legislative and regulatory frameworks for dam safety programs in the country.*

C. Dam Safety Report

14. *Dam safety reports will contain the information set out below and be prepared as follows:*

- (a) Plan for construction supervision and quality assurance. This plan will set out details of the organization, staffing levels, procedures, equipment and qualifications for supervision of the construction of a new dam or of remedial work on an existing dam. For a dam other than a water storage dam⁷, this plan takes into account the usual long construction period, covering the supervision requirements as the dam grows in height—with any accompanying changes in construction materials or the characteristics of the impounded material—over a period of years. This plan will be prepared and submitted to the Bank during project preparation.*
- (b) Instrumentation plan. This is a detailed plan for the installation of instruments to monitor and record dam behavior and the related hydrometeorological, structural and seismic factors. This plan will be prepared and submitted to the Panel and Bank before bid tendering.*
- (c) Operation and maintenance (O&M) plan. This plan will set out details of the organizational structure, staffing, technical expertise and training required; equipment and facilities needed to operate and maintain the dam; O&M procedures; and arrangements for funding O&M, including long-term maintenance and safety inspections. The O&M plan for a dam other than a water storage dam, in particular, will reflect changes in the dam's structure or in the nature of the impounded material that may be expected over a period of years. Elements required to finalize the plan and initiate operations are normally financed under the project. A preliminary plan will be prepared and provided to the Bank during project preparation. The plan will be refined and completed during project implementation. The final plan will be completed not less than six months prior to the start of the initial filling of the reservoir. Elements required to finalize the plan and initiate operations are normally financed under the project.*
- (d) Emergency preparedness plan. This plan will specify the roles of responsible parties when dam failure is considered imminent, or when expected operational flow release threatens*

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downstream life, property, or economic operations that depend on river flow levels. It will include the following: clear statements on the responsibility for decision-making relating to dam operations and for the related emergency communications; maps outlining inundation levels for various emergency conditions; flood warning system characteristics; and procedures for evacuating threatened areas and mobilizing emergency forces and equipment. The plan for emergency communication will include the mechanism through which potentially affected downstream communities will be informed. The broad framework plan and an estimate of funds needed to prepare the plan in detail will be prepared and provided to the Bank during project preparation. The plan itself will be prepared during implementation and is provided to the Panel and Bank for review not later than one year before the projected date of initial filling of the reservoir.

Footnote 7. For example, tailings dam or ash impoundment dam.

GN A1.14(d). The Emergency Preparedness Plan is the same as the ERP referred to in Paragraph 20 of ESS4.

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