

Gold Standard for the Global Goals Safeguarding Principles & Requirements

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GOLD STANDARD FOUNDATION VISION & MISSION

OUR VISION: Climate security and sustainable development for all.

OUR MISSION: To catalyse more ambitious climate action to achieve the Global Goals through robust standards and verified impacts.

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1.0 SCOPE AND APPLICABILITY

1.1 All Projects shall conform to the Gold Standard for the Global Goals Safeguarding Principles & Requirements, as set out in this document. This document ~~considers~~ outlines the following areas for which a Safeguarding Principles Assessment shall be carried out:

- (a) Social Safeguarding Principles
- (b) Economic Safeguarding Principles
- (c) Environmental & Ecological Safeguarding Principles

1.2 The Safeguarding Principles Assessment Procedure set out in this document includes the following key elements:

- (a) Principles: The overarching principles and rationale for the inclusion of the given Assessment Questions and Requirements. ~~-These are based on the Gold Standard's Vision and Mission.~~
- (b) Assessment Questions: The key issues that a Project shall respond to in order to identify key risks and adverse outcomes to the Principles. The Assessment Questions also determine how the Requirements shall be met for each Principle.
- (c) Requirements: These define what a Project shall achieve through design, management or risk mitigation. ~~-under each Assessment Question.~~

2.0 SAFEGUARDING PRINCIPLES ASSESSMENT PROCEDURE

2.1 All Assessment Questions shall be comprehensively answered by the Project Developer by completing a Safeguarding Principles Assessment. This shall include responses to all Assessment Questions, including justification for response and details of how the Requirements set out against each item shall be met. The Requirements shall be used to guide any re-design/mitigation proposals where a risk is identified, i.e., the response to a given outcome shall be designed with the intention of achieving the stated Requirements. - Note that certain Requirements are mandatory for all Projects and are noted as Mandatory Requirements and are not accompanied by an Assessment Question.

2.2 All Safeguarding Principles and Requirements ~~shall~~ apply to all Projects. ~~-To make the Assessment more practical the Project Developer may justify responses to Assessment Questions as follows: (Note that certain Requirements are mandatory for all Projects and are noted as Mandatory Requirements (and are not accompanied by an Assessment Question):~~

(a) **'Yes'** – Meaning that the risk or expected issue identified in the Assessment Question is relevant to the Project and context. The Requirements shall apply and adherence shall be demonstrated. They must be included in the Monitoring & Reporting Plan and future Monitoring Reports.

(b) **'Potentially'** – Meaning that the risk or expected issue may be relevant at some point in the Project's cycle but is not necessarily relevant now and/or may never arise. The Requirements apply but the Project Developer may justify why these Requirements do not need to be demonstrated as being met.

(c) **'No'** – Meaning that the risk or expected issue is not relevant to the Project. Justification shall be provided to support this conclusion, with evidence provided where required.

2.3 The scope of each Requirement (for example, its application during implementation or to upstream or downstream issues) is defined within the individual section.

2.4 In certain circumstances an exception to a specific Safeguarding Principle or Requirement may be sought. Gold Standard encourages Projects to understand and demonstrate the trade offs associated with them. In the presence of unavoidable negative impacts that exceed the Requirements and may not be remediated by consultation or mitigation, the Project Developer shall submit a Deviation Request to Gold Standard for review. All such requests shall be reviewed by a panel made up of Gold Standard Secretariat and at least two relevant third party Expert Stakeholders and a Gold Standard TAC Member. The panel shall make recommendations to the Project Developer as to any changes to the project to minimise adverse outcomes and also to Gold Standard as to whether the exception should be accepted. The final decision shall be taken by Gold Standard.

Examples could include where a Project introduces a major innovation, makes a major positive contribution to sustainable development or where a legitimate body of affected stakeholders is empowered to make decisions on such matters.

2.5 Certain Safeguarding Principles require the opinion and recommendations of an Expert Stakeholder. These are identified throughout the [Safeguarding Principles Assessment procedure](#) and/or in the Activity Requirements. The Project Developer shall demonstrate that the Expert Stakeholder has conducted a thorough review (and, if needed, an onsite visit) and that their recommendations have been incorporated into the Project design.

2.6 Process:

2.6.1 Stakeholder Consultation: Information on the Safeguarding Principles Assessment shall be provided for Stakeholder Consultation and feedback as per the Gold Standard Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines.

2.6.2 Preliminary Review: A draft Safeguarding Principles Assessment shall be presented at Preliminary Review.

2.6.3 Validation: The Safeguarding Principles Assessment shall be fully completed by the Project Developer and assessed by the GS-VVB. Evidence of mitigation proposals and their justification shall be included (where required) to the satisfaction of the GS-VVB in order for a Project to complete Validation in support of Validation submission. In addition, the outcomes of the Assessment shall be incorporated into the Project Monitoring & Reporting Plan and in Monitoring Reports to inform ongoing Verifications.

2.6.4 Verification: ~~The Monitoring & Reporting Plan shall capture any elements of the Safeguarding Principles Assessment to be incorporated into~~ the Monitoring Report considered for verification. ~~These Reports~~ shall include:

- (a) An update on the implementation and success or improvements required for proposed mitigation.
- (b) Monitoring and reporting on any key indicators identified, including against pre-set tolerances.
- (c) Any Assessment Questions answered 'Potentially' or where Requirements call for regular reassessment, shall be reassessed at each Monitoring Report.

2.7 The Project Developer shall include in the Monitoring Report a review (relative successes and failures, including any updates) to the mitigation measures proposed to meet the Safeguarding Principles.

2.8 Any failure, at any time in respect to the completion of the Safeguarding Principles Assessment, including conformity with Requirements and Monitoring Plan/Reporting Requirements shall lead to the implementation of the Non-Conformity section of the Gold Standard Requirements.

3.0 ~~SAFEGUARDING PRINCIPLES AND REQUIREMENTS~~ SOCIAL & ECONOMIC SAFEGUARDING PRINCIPLES AND REQUIREMENTS

3.1 -Principle 1 – Human Rights

The Gold Standard ~~Foundation~~:

- (a) Recognises the centrality of human rights to sustainable development, poverty alleviation and ensuring fair distribution of development opportunities and benefits; and supports “universal respect for, and observance of, human rights and fundamental freedoms for all”^[1]
- (b) Does not recognise or support Projects that contribute to violations of a state’s human rights obligations and the core international human rights treaties, and seeks to support the protection and fulfilment of human rights.
- (c) Upholds the principles of accountability and the rule of law, participation and inclusion, and equality and non-discrimination, noting that prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority.

MANDATORY REQUIREMENTS:

1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights^[2].
2. The Project shall not discriminate with regards to participation and inclusion.

3.2 Principle 2 – Gender Equality and Women’s Rights

The Gold Standard ~~Foundation~~:

- (i) Promotes gender equality and the empowerment of women.
- (ii) Does not recognise Projects that contribute to discrimination against women or reinforce gender-based discrimination and/or inequalities.
- (iii) Recognises and seeks to contribute to SDG 5^[3], ~~(- Achieve gender equality and empower all women and girls.)~~

Project Developers are referred to the [Gold Standard Gender Equality Requirements & Guidelines](#) and [Gold Standard Gender Policy](#).

MANDATORY REQUIREMENTS:

1. The Project shall complete the following gender assessment questions in order to inform Requirements 2-4, below:

- Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits?
- Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)?
- Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?
- Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)?
- Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities?
- Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits?
- Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services?
- Is there a likelihood that the proposed Project would expose women and girls to further risks or hazards?

2. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. Specifically, this shall include (not exhaustive):

- Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking.
- Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.
- Restriction of women's rights or access to resources (natural or economic).
- Recognise women's ownership rights regardless of marital status – adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources.

3. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work, specifically:

- Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities.
- Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status.
- Ensure that these conditions do not limit the access of women or men, as the case may be, to Project participation and benefits.

4. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks.

5. Based on the Preliminary Review assessment of Requirement 1, above, Gold Standard may require that the Project seek the input of an Expert Stakeholder and to include their recommendations in the Project design.

3.3 -Principle 3 – Community Health, Safety and Working Conditions

The Gold Standard ~~Foundation~~:

(a) Requires Projects to anticipate and avoid adverse impacts on the health and safety of affected communities during the Project's life cycle from both routine and non-routine circumstances.

(b) Requires Projects to provide workers with safe and healthy working conditions and to prevent accidents, injuries, and disease.

MANDATORY REQUIREMENTS:

1. The Project shall avoid community exposure to increased health risks^[4] and shall not adversely affect the health of the workers and the community.

3.4 -Principle 4 – Cultural Heritage, Indigenous Peoples, Displacement and Resettlement

The Gold Standard ~~Foundation~~:

(a) Promotes and supports the protection and preservation of cultural heritage and the equitable sharing of benefits from the use of cultural heritage.

(b) Advocates the avoidance of alteration, damage or removal of artifacts and objects of cultural value.

(c) Recognises and respects the prohibition of forced evictions and the use of violence generally.

(d) Recognises and fosters full respect for indigenous peoples' human rights as recognised under Applicable Law, including but not limited to their rights to self-determination, their lands, resources and territories, traditional livelihoods and cultures.

(e) Requires that Projects that may impact indigenous peoples and local farmers are designed in a spirit of partnership with them, with their full and effective participation, with the objective of securing their free, prior, and informed consent (FPIC) where their rights, lands, resources, territories, traditional livelihoods may be affected.

3.4.1 -Sites of Cultural and Historical Heritage

ASSESSMENT QUESTION

Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)?

REQUIREMENTS:

1. The Project shall not involve or be complicit in the alteration, damage or removal of any sites, objects or structures of significant cultural heritage.
2. Where a Project proposes to utilise Cultural Heritage, including the knowledge, innovations, or practices of local communities, affected communities shall be informed of:
 - (a) Their rights under Applicable Law,
 - (b) The scope and nature of the proposed commercial development; and
 - (c) The potential consequences of such development.
3. The Project shall provide for equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions.
4. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.

3.4.2 -Forced Eviction and Displacement

ASSESSMENT QUESTION:

Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?

REQUIREMENTS:

1. The Project shall not involve and shall not be complicit in the involuntary relocation of people.
2. Projects shall avoid physical (i.e., relocation or loss of shelter) and economic displacement (i.e., loss of assets or access to assets that leads to loss of income sources or means of livelihood), and mitigate displacement impacts on displaced persons and host communities when displacement cannot be avoided. In such cases, the Project shall integrate into the Project documentation a Resettlement Action Plan or Livelihood Action Plan as appropriate. Please refer to [UNDP Standard 5: Displacement and Resettlement](#) requirements for further details in this regard.
3. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.

3.4.3 -Land Tenure and Other Rights

ASSESSMENT QUESTION:

1. Does the Project require any change to land tenure arrangements and/or other rights?
2. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership?

Examples include, but are not limited to water access rights, community-based property rights and customary rights.

REQUIREMENTS:

1. The Project Developer shall identify all such sites/matters potentially affected by the Project. For all such sites/matters identified the Project shall respect and safeguard:
 - (a) Legal rights, or
 - (b) Customary rights, or
 - (c) Special cultural, ecological, economic, religious or spiritual significance of people shall be demonstrably promoted/protected.
2. Changes in legal arrangements must be in line with relevant law and regulation and must be carried out in strict adherence with such laws. All legal disputes must be resolved prior to Project being carried out in such areas. All such changes must be demonstrated as having been agreed with free, prior and informed consent.
3. The Project Developer must hold uncontested land title for the entire Project Boundary to complete Project Design Certification.
4. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.

3.4.4 Indigenous Peoples^[5]

ASSESSMENT QUESTION:

Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?

REQUIREMENTS:

1. The Project Developer shall identify all communities of Indigenous Peoples within the Project area of influence who may be affected directly or indirectly by the Project.
2. The Project Developer shall recognise and respect the indigenous people's collective rights to own, use, and develop and control the lands, resources and territories that they have traditionally owned, occupied or otherwise used or acquired, including lands and territories for which they do not yet possess title.
3. The Project Developer shall respect, protect, conserve and shall not take the cultural, intellectual, religious and spiritual property of indigenous peoples without their free, prior and informed consent.
4. The Project Developer shall ensure that the indigenous people are provided with the equitable sharing of benefits to be derived from utilisation and/or commercial development of natural resources on lands and territories or use of their traditional knowledge and practices by the Project. This shall be done in a manner that is culturally appropriate and inclusive and that does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions and housing.
5. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.

3.5 Principle 5 – Corruption

The Gold Standard ~~Foundation~~:

(a) Does not recognise Projects that engage in, contribute to or reinforce corruption of any kind.

MANDATORY REQUIREMENTS

1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.

3.6 Principle 6 – Economic Impacts

The Gold Standard ~~Foundation~~:

- (a) Promotes equitable, sustainable economic growth and stability and Projects that are appropriate and considerate of the economic situation in which they are developed.
- (b) Requires Projects to respect and promote worker's rights, to promote the right to decent work, fair treatment, non-discrimination, and equal opportunity for workers, and to avoid the use of forced labour and child labour.
- (c) Prioritises appropriate and properly considered local employment and procurement wherever possible.

3.6.1 -Labour Rights

REQUIREMENTS:

1. The Project Developer shall ensure that there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard.
2. Workers shall be able to establish and join labour organisations.
3. -Working agreements with all individual workers shall be documented and implemented. These shall at minimum comprise:
 - (a) Working hours (must not exceed 48 hours per week on a regular basis), AND
 - (b) Duties and tasks, AND
 - (c) Remuneration (must include provision for payment of overtime), AND
 - (d) Modalities on health insurance, AND
 - (e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND
 - (f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.
4. The Project Developer shall justify that the employment model applied is locally and culturally appropriate.
5. Child labour, as defined by the [ILO Minimum Age Convention](#) is not allowed. The Project Developer shall use adequate and verifiable mechanisms for age verification in recruitment procedures. Exceptions are children for work on their families' property as long as:

- (a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND
- (b) The tasks they perform do not harm their physical and mental development, AND
- (c) -The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.

6. -The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.

3.6.2 -Negative Economic Consequences

REQUIREMENTS:

1. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period.
2. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken into account in Project design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalised social groups in targeted communities and that benefits are socially-inclusive and sustainable.

4.0 -ENVIRONMENTAL & ECOLOGICAL SAFEGUARDING PRINCIPLES AND REQUIREMENTS

The Gold Standard ~~Foundation~~:

- (a) Promotes Climate Security (mitigation and adaptation) and Sustainable Development.
- (b) Promotes sustainable management, protection, conservation, maintenance and rehabilitation of natural habitats and their associated biodiversity and ecosystem functions.
- (c) Requires a precautionary approach to natural resource conservation and avoids negative environmental impacts.

4.1 -Principle 1 – Climate and Energy

4.1.1 -Emissions

ASSESSMENT QUESTION

Will the Project increase greenhouse gas emissions over the Baseline Scenario?

REQUIREMENTS

1. Projects shall not increase greenhouse gas emissions over the Baseline Scenario unless this is specifically allowed within Activity Requirements or Gold Standard Approved Methodologies.

4.1.2 -Energy Supply

ASSESSMENT QUESTION:

Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?

REQUIREMENTS:

1. The Project shall not affect the availability and reliability of energy supply to other users.

4.2 -Principle 2 – Water

4.2.1 -Impact on Natural Water Patterns/Flows

ASSESSMENT QUESTION:

Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?

REQUIREMENTS:

1. The opinions and recommendations of an Expert Stakeholder (or multiple experts if appropriate) shall be sought and demonstrated as being included in the Project design and Monitoring Plan.

2. The Project shall ensure that water resources are conserved. For surface waters this means:

(a) Maintaining credible environmental flows demonstrated by providing a verifiable calculation demonstrating that conservation is maintained at a level as advised by the independent Expert Stakeholder, and

(b) Ensuring that waste water discharged is of a high enough standard to allow beneficial reuse. For ground water this means limiting abstractions to levels less than or equal to rates of recharge. Managed aquifer recharge may be used to conserve groundwater resources.

Sources: Historical records, ongoing monitoring and reporting through data logging of physical measurements, online sources, government data.

Methods: Quantitative documentation of all sources and volumes of water abstractions. Use of weirs and gauges, flow meters, pump energy consumption, transpiration rates, government data, remote sensing.

3. At each Performance Certification the Project shall assess whether it is in an area of physical water stress or scarcity:

Sources: [Aqueduct](#), [GWSP Digital water Atlas](#), [Water Risk Filter](#), [WBCSD Global Water Tool](#), [Water Stress Index Maplecroft](#), [Water Scarcity Index Pfister](#) or other recognised tools.

Method: An analysis of the water scarcity within the Project's physical area of influence (e.g., basin, watershed) and impacts Monitoring frequency.

The Project shall provide verifiable evidence of water stress experienced in the basin(s) in which the Project is active, and demonstrate that consumption of water by the Project (over Baseline) is negligible or will bring positive impacts or, at minimum, not increase the overall annual basin stress.

4. The risk(s) of the Project negatively impacting the catchment shall be assessed and addressed to ensure its ongoing, long-term viability and impact on surrounding social-economic and environmental assets.

Sources: Mapping tools, or other appropriate nationally recognised tools.

Methods: Online tools, engineering or physical assessment. Use historical flow records, land use records, and verbal or written surveys with local agencies and residents. Examination of longitudinal and lateral conductivity to check connectivity of flows, including vertical connectivity (i.e., sufficient flows or dead zones).

5. Where the Project is involved in abstraction from water resources required to support biodiversity and other ecosystem services, an eflow assessment consistent with good practice, including a modern method outlined in one of the ~~three~~ key references listed below must be undertaken. Alternatively, where local, national or regional regulation exists or where alternative approaches may be more appropriate then these may be put forward to Gold Standard for approval.

Where environmental flow assessments are impractical, the Project is required to demonstrate that the flow rate and variability is maintained from the abstracted water resource. A verifiable calculation shall be provided for each water source demonstrating total flow rates do not fall below levels that are contextually appropriate, as advised by an independent Expert Stakeholder.

Table 1: Methods for environmental flows assessment

1.	ENVIRONMENTAL FLOWS: SAVING RIVERS IN THE THIRD MILLENNIUM, by A.H. Arthington. 2012. University of California Press: Berkeley, 424. URL: http://onlinelibrary.wiley.com/doi/10.1002/rra.2635/full
2.	THE ECOLOGICAL LIMITS OF HYDROLOGIC ALTERATION (ELOHA): A NEW FRAMEWORK FOR DEVELOPING REGIONAL ENVIRONMENTAL FLOW STANDARDS. Poff, N. L., Richter, B. D., Arthington, A. H., Bunn, S. E., Naiman, R. J., Kendy, E., Acreman, M., Apse, C., Bledsoe, B. P., Freeman, M. C., Henriksen, J., Jacobson, R. B., Kennen, J. G., Merritt, D. M., O'keeffe, J. H., Olden, J. D., Rogers, K., Tharme, R. E., and Warner, A. 2010. Freshwater Biology 55, 147–170. URL: http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2427.2009.02204.x/abstract
3.	A GLOBAL PERSPECTIVE ON ENVIRONMENTAL FLOW ASSESSMENT: EMERGING TRENDS IN THE DEVELOPMENT AND APPLICATION OF ENVIRONMENTAL FLOW METHODOLOGIES FOR RIVERS; Tharme, R. (2003), River Research and Application. Volume 19, Issue 5-6, Pages 397–441 URL: http://onlinelibrary.wiley.com/doi/10.1002/rra.736/abstract
4.	A PRESUMPTIVE STANDARD FOR ENVIRONMENTAL FLOW PROTECTION; Richter, B. D., Davis, M. M., Apse, C., & Konrad, C. 2012. River Research and Application. Volume 28, Issue 8, Pages 1312–1321 URL: http://onlinelibrary.wiley.com/doi/10.1002/rra.1511/abstract

1—Environmental flows. Saving rivers in the Third Millennium

Author: Arthington, A.H.

Year: 2012

Title:

Place Published: Berkeley

Publisher: University of California Press

2—Environmental flows. Saving rivers in the Third Millennium

Author: Poff, N.L., Richter, B.D., Arthington, A., Bunn, S.E., Naiman, R.J., Kendy, E., Acreman, M., Apse, C., Bledsoe, B.P., Freeman, M.C., Henriksen, J., Jacobsen, R.B., Kennen, J.G., Merritt, D.M., O'Keefe, J.H., Olden, J.D., Rogers, K., Tharme,

~~R.E. and Warner, A.
Year: 2010~~

~~3—The ecological limits of hydrologic alteration (ELOHA): a new framework for developing regional environmental flow standards Journal: Freshwater Biology~~

~~Author: Tharme, R.~~

~~Year: 2003~~

~~Volume: 55 Issue: 1 Pages: 147-170~~

~~URL: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2427.2009.02204.x/abstract>~~

~~4—A global perspective on environmental flow assessment: emerging trends in the development and application of environmental flow methodologies for rivers Journal: River Res. Applic.~~

~~Volume: 19~~

~~Pages: 397-441~~

~~5—A presumptive standard for environmental flow protection.~~

~~Author: Richter, B. D., Davis, M. M., Apse, C., & Konrad, C. (2012).~~

~~Publication: River Research and Applications, 28(8), 1312-1321. doi: 10.1002/rra.1511.~~

4.2.2 Erosion and/or Water Body Instability

ASSESSMENT QUESTION:

1. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2.
2. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?

REQUIREMENTS:

1. The risk of the Project negatively impacting the catchment and risks impacting Project success shall be assessed and addressed to ensure its ongoing, long-term viability and impact on surrounding social-economic and environmental assets through an assessment of the sensitivity of physical area of influence due to low percentage of impervious cover in a Project's physical area of influence (e.g., basin, catchment), susceptibility to erosion and water body instability, and lack of terrestrial habitat connectivity.

Sources: Mapping tools, or other appropriate nationally recognised tools, academic or published studies on the relevant area.

Methods: Online tools, visual inspection, engineering or physical assessment. Use historical land use records, aerial photographs, and verbal or written surveys with local agencies and residents. Characterisation of geomorphology of water bodies.

2. The Project shall demonstrate that measures to ensure soil protection and minimised erosion are in place prior to the commencement of the Project.

3. The Project shall demonstrate that measures will be undertaken to ensure that surface and ground waters are protected from the impact of erosion are in place prior to the commencement of the Project.

4. Measures shall be incorporated to reduce soil erosion on slopes (e.g., hedge and tree rows, natural terracing, infiltration strips, permanent ground cover). For these measures the concept of the effective slope length shall be taken into account.

5. Impact shall be reassessed at a frequency appropriate to the context of the ecosystem affected. The monitoring approach and frequency shall be justified by reference to natural patterns and variations.

6. Where the Project takes place in a water scarce or water stressed area (see Assessment Question [45.2.1](#)), the opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being considered and incorporated into the Project design.

4.3 Principle 3 – Environment, ecology and land use

4.3.1 Landscape Modification and Soil

ASSESSMENT QUESTION:

Does the Project involve the use of land and soil for production of crops or other products?

REQUIREMENTS:

1. The Project shall identify the functions and services provided by the landscape and demonstrate no net degradation in existing landscape function and services.

2. To ensure healthy soils the following aspects shall be identified and appropriate measures shall be put in place to protect them:

- Soil types, AND
- Biota, AND
- Erosion

3. Measures shall be incorporated to minimise soil degradation (e.g., through crop rotation, composting, no use of heavy machinery, use of N-fixing plants, reduced tillage, no use of ecologically harmful substances).

4. Projects that involve the production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities shall adopt the appropriate and culturally sensitive sustainable resource management practices.

4.3.2 Vulnerability to Natural Disaster

ASSESSMENT QUESTION:

Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?

REQUIREMENTS:

1. The Project shall avoid or minimise the exacerbation of impacts caused by natural or man-made hazards, such as landslides or floods that could result from land use changes due to Projects. The Project Developer shall include mitigation measures (if possible), the emergency preparedness plan and response strategies. The Project Developer shall disclose appropriate information about emergency preparedness and response Projects, resources, and responsibilities to affected communities.

4.3.3 Genetic Resources

ASSESSMENT QUESTION:

Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?

REQUIREMENTS:

1. Projects involving the use of GMOs^[6] are not eligible for Gold Standard Project Design Certification.
2. An assessment for the risk of GMO contamination from outside the Project area and reasonable and appropriate counter measures should be taken.

4.3.4 Release of pollutants

ASSESSMENT QUESTION:

Could the Project potentially result in the release of pollutants to the environment?

REQUIREMENTS:

1. The Project shall avoid the release of pollutants^[7]. This applies to the release of pollutants to air, water, and land due to routine, non-routine and accidental circumstances^[8].
2. The Project Developer shall ensure that pollution prevention and control technologies and practices consistent with national regulation or international good practice are applied during the Project life cycle.
3. All potential pollution sources that may result from the Project that cause the degradation of the quality of soil, air, surface and groundwater within the Project's area of influence shall be identified. Appropriate mitigation measures and monitoring shall be implemented to ensure the protection of resources.

Sources: Historical records, ongoing monitoring and reporting through data logging of physical measurements, online sources, government data.

Methods: Quantitative documentation of all sources and volumes of water abstractions. Use of weirs and gauges, flow meters, pump energy consumption, transpiration rates, government data.

4. The Project Developer shall provide explanation to support answer including sources and methods used, reasons for choice of sources and methods, estimation of impact, etc.

4.3.5 Hazardous and Non-hazardous Waste

ASSESSMENT QUESTION:

Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?

REQUIREMENTS:

1. Projects shall avoid or, when avoidance is not feasible, minimize and control release of hazardous materials resulting from their production, transportation, handling, storage and use in the Project. Where avoidance is not possible, the health risks, including potential differentiated effects on men, women and children, of the potential use of hazardous materials shall be addressed appropriately.
2. Projects shall consider the use of less hazardous substitutes for such chemicals and materials and will avoid the manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer^[9].
3. All sources of waste and waste products shall be identified and classified. Waste products include amongst others:

- Chemical wastes, AND
- Containers, AND
- Fuels and oils, AND
- Human waste, AND
- Rubbish (including metals, plastics, organic and paper products), AND
- Abandoned buildings, machinery or equipment.

4. Where waste generation may not be avoided, the Project shall reduce the generation of waste, and recover and reuse waste in a manner that is safe for human health and the environment.

5. Where waste may not be recovered or reused, it shall be treated, destroyed, or disposed of in an environmentally sound manner that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material.

6. If the generated waste is considered hazardous^[10], reasonable alternatives for its environmentally sound disposal will be adopted while adhering to the limitations applicable to its transboundary movement^[11].

7. The Project shall not make use of chemicals or materials subject to international bans or phase-outs. For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol.

4.3.6 Pesticides & Fertilisers

ASSESSMENT QUESTION:

Will the Project involve the application of pesticides and/or fertilisers?

REQUIREMENTS:

1. Projects involving pest management, the integrated pest management (IPM) and /or integrated vector management (IVM) approaches shall be adopted and aim to reduce reliance on chemical pesticides.
2. The health and environmental risks associated with pest management should be minimised with support, as needed, to institutional capacity development, to help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management.
3. When Projects include pest management or the use of pesticides, pesticides that are low in human toxicity, known to be effective against the target species and have minimal effects on non-target species and the environment shall be selected.

4. There shall be a 'Chemical Pesticides Policy' that is documented, implemented and regularly updated. This policy shall include at a minimum:

- (a) Provisions for safe transport, storage, handling and application, AND
- (b) Provisions for emergency situations.

5. The Project Developer shall not purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous) of the [World Health Organization Recommended Classification of Pesticides](http://www.who.int/ipcs/publications/pesticides_hazard/en/) by Hazard.

http://www.who.int/ipcs/publications/pesticides_hazard/en/

6. Fertilisers shall be avoided, or their use shall be minimised and justified. If the aerial application of fertiliser is used, then measures shall be put in place to prevent drift.

4.3.7 Harvesting of Forests

ASSESSMENT QUESTION:

Will the Project involve the harvesting of forests?

REQUIREMENTS:

1. The Project shall:

- (a) Enhance the sustainable management of forests, including the application of independent, credible certification for commercial, industrial-scale timber harvesting, AND
- (b) Maintain or enhance biodiversity and ecosystem functionality in areas where improved forest management is undertaken.

4.3.8 Food

ASSESSMENT QUESTION

Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?

REQUIREMENTS:

1. The Project activity shall not negatively influence access to and availability of food for people affected.

4.3.9 Animal husbandry

ASSESSMENT QUESTION:

Will the Project involve animal husbandry?

REQUIREMENTS:

1. The welfare of animals shall be ensured by:
 - (a) Provision of sufficient drinking water, AND
 - (b) Access to daylight, AND
 - (c) The prohibition of cattle trainers, AND
 - (d) No hindrance in their sensory perception and performing their basic needs, AND
 - (e) Management policies and staff training to prevent mistreatment (evidence of animal mistreatment shall be treated as an immediate Non-conformity).
2. Excessive or inadequate use of veterinary medicines shall be avoided. Thus, all medications shall be:
 - (a) Administered strictly according to label and package instructions, OR
 - (b) According to a trained veterinarian.
3. Injured or sick animals shall be treated and isolated, if necessary, for recovery.
4. Synthetic growth promoters including hormones shall not be administered.
5. Animals shall be exposed to the least stress possible during transportation and slaughtering.
6. Appropriate space per animal and stocking rates per land unit should be set according to their developmental and physical needs.

4.3.10 High Conservation Value Areas and Critical Habitats

ASSESSMENT QUESTION:

Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites^[12] identified?

For example, Ramsar wetlands, World Heritage Areas, 'wilderness' areas, free-flowing rivers, unique or species-rich areas, primary forest, threatened or endangered species, migratory species as defined by treaties and national authorities or areas of natural cultural significance.

REQUIREMENTS:

1. No Project that potentially impacts identified habitats as identified above shall be implemented unless all of the following are demonstrated:
 - (a) The risk of the Project negatively impacting the catchment and risks impacting Project success shall be assessed and addressed to ensure its ongoing, long-term viability and impact on surrounding HCV and ecological assets.

(b) No measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values;

(c) A robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan is in place to achieve net gains of those biodiversity values for which the critical habitat was designated.

2. Within the Project the area that is managed by the Project Developer and the area of impact downstream, the following shall be identified and protected/enhanced. In the case of downstream impacts, the Project shall ensure mitigation is in place within the Project Boundary such that the Project shall not adversely affect these areas:

(a) Existing patches of native tree species, AND

(b) Single solitary stems of native tree species, AND

(c) All freshwater resources including rivers, lakes, swamps, ephemeral water bodies and wells

(d) Habitats of rare, threatened and endangered species, AND

(e) Areas relevant for habitat connectivity shall be identified and managed to protect or enhance biological diversity.

3. If the Project is located in such habitats; the Project Developer shall:

(a) Minimise unwarranted conversion or degradation of the habitat.

(b) Identify opportunities to enhance the habitat as part of the Project. For Projects applying the Land-use & Forest Activity Requirements Projects, a minimum 10% of the Project area shall be identified and managed to protect or enhance the biological diversity of native ecosystems. For this, the HCV approach should be followed (www.HCVnetwork.org). This area has to be located within the Project region and managed by the Project Developer. The area may also include the areas of requirement (for example, buffer zones for water bodies in the case of Land-use & Forests).

4. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.

ADDITIONAL INFORMATION:

Sources: Mapping tools such as [LEFT](#), [IUCN Red List](#), [IBAT](#) or other appropriate nationally recognised tools may be used or visual inspection.

Method: Online tools, visual inspection, engineering or physical assessment. Use historical data and verbal or written surveys with local residents.

4.3.11 Endangered Species

ASSESSMENT QUESTION:

1. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?
2. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?

If either question is answered 'yes,' the Requirements apply.

REQUIREMENTS:

1. Under no circumstances shall the Project lead to the reduction or negative impact of any recognised Endangered^[13], Vulnerable or Critically Endangered species.
2. Habitats of endangered species shall be specifically identified and managed to protect or enhance them.
3. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being considered and incorporated into the Project design.

Endnotes

[1] Charter of the United Nations, Article 1, para 3. <http://www.un.org/en/sections/un-charter/chapter-i/index.html>

[2] <http://www.un.org/en/universal-declaration-human-rights/>

~~[3] <http://www.unwomen.org/en/news/in-focus/women-and-the-sdgs/sdg-5-gender-equality#sthash.djWac8gn.dpuf>~~

[4] Such as (but not limited to) transmission of communicable diseases to water-borne, water-based, water-related, and vector-borne diseases, and communicable diseases (e.g. HIV, TB and malaria) that could result from the Project, taking into consideration the differentiated exposure to and higher sensitivity of marginalized groups, including communities living in voluntary isolation

[5] There is no one universally accepted definition of indigenous peoples. For purposes of this Standard "Indigenous peoples" refers to distinct collectives, regardless of the local, national and regional terms applied to them (For example, "tribal people", "first peoples", "scheduled tribes", "pastoralist", "hill people."), who satisfy any of the more commonly accepted definitions of indigenous peoples. Including but not limited to those provided for in the Convention concerning Indigenous and Tribal Peoples in Independent Countries (ILO Convention No. 169), the Study on the Problem of Discrimination against Indigenous Populations (the "Martinez Cobo Study"), and the

Working Paper on the Concept of “Indigenous People” prepared by the Working Group on Indigenous Populations.

[6] (Source: FSC) An organism in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination. See ‘FSC Interpretation on GMO – FSC-POL-30-602’: <https://ic.fsc.org/download.fsc-pol-30-602-2000-fsc-interpretation-on-gmos-genetically-modified-organisms.a-499.pdf>

[7] 1 For the purposes of this Standard, the term “pollution” refers to both hazardous and non-hazardous pollutants in the solid, liquid, or gaseous phases, and includes other components such as pests, pathogens, thermal discharge to water, GHG emissions, nuisance odours, noise, vibration, radiation, electromagnetic energy, and the creation of potential visual impacts including light.

[8] Including those covered under the Convention on Long-range Transboundary Air Pollution, available at http://www.unece.org/env/lrtap/lrtap_h1.html

[9] As defined by international conventions or local legislation. Where local legislation and international conventions may diverge, the higher standard will apply.

[10] Shall be Consistent with the objectives of the Stockholm Convention on Persistent Organic Pollutants, available at <http://chm.pops.int/default.aspx>, and the Montreal Protocol on Substances that Deplete the Ozone Layer, available at <http://ozone.unep.org/en/treaties-and-decisions/montreal-protocol-substances-deplete-ozone-layer>. Similar considerations will apply to certain World Health Organization (WHO) classes of pesticides.

[11] Transboundary movement of hazardous materials should be consistent with national, regional and international law, including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, available at <http://www.basel.int>, and the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, available at <http://www.imo.org>. For further guidance, the Strategic Approach to International Chemicals Management (SAICM) is a policy framework to foster the sound management of chemicals, available at <http://www.saicm.org/>.

[12] 4—Critical habitats are a subset of both modified and natural habitats that require special attention. Critical habitats are areas with high biodiversity value, including any of the following features:

- (i) habitat of significant importance to Critically Endangered and/or Endangered species;
- (ii) habitat of significant importance to endemic and/or restricted-range species;
- (iii) habitat supporting globally significant concentrations of migratory species and/or

congregatory species;

(iv) highly threatened and/or unique ecosystems; and/or

(v) areas associated with key evolutionary processes.

Critical habitats include those areas that are

(i) legally protected,

(ii) officially proposed for protection,

(iii) identified by authoritative sources for their high conservation value (such as areas that meet criteria of the World Conservation Union classification, the Ramsar List of Wetlands of (iv) International Importance, and the United Nations Scientific and Cultural Organization's world heritage sites), or

recognized as protected by traditional local communities.

[13] All endangered and critically endangered species as defined by the [IUCN Red List](#).