RSAT Topic and performance statement Checklists

[Content is example from RSAT Assessment in Upper Se San River Basin, Viet Nam]

# Topic 1: Institutional Capacity

***Examples of evidence -***

* *national legislation, policy and regulations;*
* *RBO governance framework;*
* *budgets and resourcing plans for line agencies and RBOs;*
* *Transboundary procedures, e.g. data sharing, notification;*
* *evidence of meetings;*
* *hydropower plans,*
* *SEA reports,*
* *monitoring and auditing reports;*
* *compliance reports;*
* *hydropower monitoring reports and CSR policy;*
* *hydropower agreements (PDAs and PPAs) and MOUs;*
* *national policies relevant to hydropower;*
* *capacity building plans for line agencies and RBOs.*

| ***Criteria*** | ***Questions to ask and information to be collected for the assessment based on the basin context and stage of development*** | ***Yes/Present*** | **No/Absent** | ***Source – where will you find this information*** | ***Results******Use this column to record responses and information that you find during your data collection. You will then use this information for the gap analysis against criteria.*** |
| --- | --- | --- | --- | --- | --- |
|  | **Complete** | ***Partially present******Old / out of date*** | ***Ineffective*** | ***Inadequate*** |
| **1.1 Trans-boundary institutional capacity** |
| River basin planning | Does a transboundary RBO exist within an agreed framework for transboundary basin cooperation or information collection and storage? |  |  |  |  |  |  |  |
| Have procedures and mechanisms been agreed for countries to notify, and consult for hydropower projects within international river basin? |  |  |  |  |  |  |
| Do countries comply with their obligations under these agreements and consult in good faith? |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Are national energy agencies and regulatory authorities are represented in transboundary basin planning processes? |  |  |  |  |  |  |  |
| Hydropower projects | Planning studies relating to hydropower projects on international rivers are carried out within agreed frameworks for transboundary co-operation.  |  |  |  |  |  |  |  |
| In the operations stage, transboundary communication and co-ordination between hydropower projects and RBOs is evident.  |  |  |  |  |  |  |
| Regulatory and governance | Are national laws and regulations compatible with international, regional, provincial agreements, plans, and policies for transboundary impact assessment? |  |  |  |  |  |  |  |
| Are regulations covering transboundary impact assessment for hydropower projects on international rivers enforced? |  |  |  |  |  |  |  |
| 1.2 National to local institutional capacity |
| River basin planning | Does a river basin planning and management framework exist at national and provincial levels? |  |  |  |  |  |  |  |
| Is there broad stakeholder participation across sectors within this framework? |  |  |  |  |  |  |  |
| Are there arrangements for data management and sharing (from local to national levels)?  |  |  |  |  |  |  |  |
| Do conflict resolution and coordination mechanisms (from local to national levels) exist, and do these include stakeholders at all levels? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Do regional and provincial energy planning and regulatory agencies operate within a national sustainable development policy framework? |  |  |  |  |  |  |  |
| Are there mechanisms for cross sectoral coordination to address sustainability considerations? |  |  |  |  |  |  |  |
| Hydropower projects | Do hydropower projects comply with relevant national laws and regulations at all project stages (design, construction, operation)? |  |  |  |  |  |  |  |
| Have all relevant data and reports about the projects been published? |  |  |  |  |  |  |  |
| Have risk and EIA studies used adequate baseline data, applied the precautionary principle and are consultative?  |  |  |  |  |  |  |  |
| Are management plans being implemented for these projects and is their performance measured? |  |  |  |  |  |  |  |
| Regulatory and governance | Does a national policy and regulatory framework for hydropower exist that promotes sustainable development and IWRM principles? Is it being implemented? |  |  |  |  |  |  |  |
|  | Do responsible agencies have enough the capacity to implement and enforce hydropower and related policies, plans, and regulations for new and existing projects?  |  |  |  |  |  |  |  |
|  | Do capacity-building plans exist to address gaps? |  |  |  |  |  |  |  |
| **1.3 Water and energy sector integrated planning** |
| River basin planning | Does a national policy and regulatory framework for hydropower that promotes sustainable development and IWRM principles exists and is it implemented? |  |  |  |  |  |  |  |
| Do RBO’s, national and provincial water resource agencies and water user groups exist? |  |  |  |  |  |  |  |
| Are RBO’s, national and provincial water resource agencies and water user groups consulted in hydropower planning studies, impact assessment studies and the design and implementation of mitigation plans and operating rules for projects. |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Have trade-offs and synergies between water and energy sectoral plans in the basin been identified in power development plans?  |  |  |  |  |  |  |  |
| Do these water and energy sector plans include these trade-offs in ranking of development options? |  |  |  |  |  |  |  |
| Have hydropower operating rules been institutionalised into water allocation policies and procedures in the basin? |  |  |  |  |  |  |  |
| Hydropower projects | Are hydropower projects been represented in river basin planning and management processes?  |  |  |  |  |  |  |  |
| Do they share data and information at all project stages? |  |  |  |  |  |  |  |
| Do hydropower projects collaborate with other basin stakeholders on IWRM including environmental and social management and monitoring programs for the basin? |  |  |  |  |  |  |  |
| Regulatory and governance | Do regulatory and planning frameworks contain allocation of roles, responsibilities and mechanisms for integrated water and energy planning for hydropower? |  |  |  |  |  |  |  |
| Do they include requirements for co-operation, consultation and information sharing? |  |  |  |  |  |  |  |
| Do mechanisms exist to ensure that policies and plans made by energy and water ministries and RBOs are aligned? |  |  |  |  |  |  |  |

# Topic 5: Social aspects and stakeholder consultation

**Examples of evidence:**

* EIAs and Social impact assessments
* Cultural, heritage and Ethnic group impact assessments
* evidence of good faith negotiations,
* evidence of support Information provided to stakeholders – accuracy and quality of communication,
* watershed plans, and
* hydropower strategic communication.

| ***Criteria*** | ***Questions to ask and information to be collected for the assessment based on the basin context and stage of development*** | **Yes/Present** | **No/Absent** | ***Source – where will you find this information*** | ***Results******Use this column to record responses and information that you find during your data collection. You will then use this information for the gap analysis against criteria.*** |
| --- | --- | --- | --- | --- | --- |
|  | **Yes/complete** | ***Old or out of date*** | ***Ineffective*** | ***Inadequate*** |
| **5.1 Stakeholder identification and consultation** |
| River basin planning | Stakeholder mapping and analysis has been conducted for the basin to identify key stakeholder groups in relation to water resources and their use?  |  |  |  |  |  |  |  |
| Lines of communication amongst river basin stakeholders groups on river basin planning issues are institutionalised through mechanisms such as representative committees, RBOs and other relevant institutions? |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Are energy and economic planning processes for hydropower consultative? |  |  |  |  |  |  |  |
| Are energy plans and project information publicly disclosed? |  |  |  |  |  |  |  |
| Hydropower projects | Do hydropower ESIA’s include a detailed stakeholder mapping based on risks and vulnerabilities associated with the project?  |  |  |  |  |  |  |  |
| Are consultation processes are meaningful, timely and two-way at all project stages? |  |  |  |  |  |  |
| Do consultation processes address communication approaches and needs of impacted groups? |  |  |  |  |  |  |
| Do grievance mechanisms exist and are they implemented?  |  |  |  |  |  |  |
| Regulatory and governance | Do regulations include requirements for information disclosure and consultation with communities affected by hydropower projects at all project stages?  |  |  |  |  |  |  |  |
| Is compliance with consultation requirements monitored? |  |  |  |  |  |  |  |
| 5.2 Assessment and management of basin wide social impacts |
| River basin planning | Is basin wide social baseline and regular monitoring conducted and data disaggregated?  |  |  |  |  |  |  |  |
| Are basin wide cumulative assessment of water resource development scenarios conducted?  |  |  |  |  |  |  |  |
| Are indicators used to measure impacts in the basin? |  |  |  |  |  |  |  |
| Are trends in social well-being monitored at the district and basin level? |  |  |  |  |  |  |  |
| Can equitable improvement in social well-being in the basin be demonstrated? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | In national and regional energy planning, have government agencies prioritised the selection of hydropower sites that avoid or minimise population displacement? |  |  |  |  |  |  |  |
| Hydropower projects | Are SIA studies and management plans consultative, appropriately timed, publicly disclosed and informed by baseline data?  |  |  |  |  |  |  |  |
| Do they address social risks, including economic displacement in both the inundated and downstream areas? |  |  |  |  |  |  |  |
| Do they allocate of responsibility for implementation and monitoring?  |  |  |  |  |  |  |  |
| Are plans to address social impacts, including resettlement plans adequately funded and implemented in an equitable manner. |  |  |  |  |  |  |  |
| Regulatory and governance | Do regulations and policies for hydropower SIA, resettlement action plans and livelihood restoration exist and are they enforced. |  |  |  |  |  |  |  |
| Is the suitability of land allocated by authorities for resettlement assessed in consultation with resettlement communities. |  |  |  |  |  |  |  |
| Are funds, resources and institutional responsibilities allocated to implement and evaluate resettlement activities and livelihood restoration in all project stages?  |  |  |  |  |  |  |  |
| Do independent arbitration mechanisms exist to resolve disputes? |  |  |  |  |  |  |  |
| 5.3 Food security and poverty alleviation  |
| River basin planning | Does a basin wide baseline of income, food security, health and nutrition status exist?  |  |  |  |  |  |  |  |
| Is data disaggregated by gender and other social groupings?  |  |  |  |  |  |  |  |
| Social groups in hydropower sub-basins with low baseline social indicators experience a measurable and timely improvement in income, food security, nutrition and health status as a result of development. |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | In national and regional energy planning, have government agencies prioritised the selection of hydropower options that enhance food security and avoid significant risks to the nutrition status of the basin population? |  |  |  |  |  |  |  |
| Hydropower projects | Do ESIA studies assess the impact and benefits of hydropower on poverty, nutrition, public health, education and food security status of women, men and children upstream and downstream of projects? |  |  |  |  |  |  |  |
| Do management plans specifically address social risks? |  |  |  |  |  |  |  |
| Is the health, nutrition and livelihood status of project-affected communities monitored and publicly reported? |  |  |  |  |  |  |  |
| Regulatory and governance | Are poverty alleviation and food security policies and plans in place that set binding targets and objectives at national and district levels and are implemented?  |  |  |  |  |  |  |  |
| Do monitoring and evaluation of the implementation of these plans and regulations exist for water and energy development projects? |  |  |  |  |  |  |  |
| Is there regular public reporting of this monitoring and evaluation of poverty and food security targets? |  |  |  |  |  |  |  |
| 5.4 Indigenous peoples and ethnic minorities |
| River basin planning | Is basin-wide socio- economic data disaggregated by ethnicity and gender? |  |  |  |  |  |  |  |
| Is data available on indigenous people and ethnic minorities and their reliance on land and water resources for livelihoods and cultural practices? |  |  |  |  |  |  |  |
| Is the impact of water development scenarios, on indigenous and ethnic men, women and children assessed in water resource planning processes? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation |  |  |  |  |  |  |  |  |
| Hydropower projects | Do hydropower SIA studies and management plans include culturally appropriate good faith consultation with indigenous and ethnic women and men?  |  |  |  |  |  |  |  |
| Are indigenous and ethnic people’s plans implemented and include effective grievance mechanisms for indigenous people to raise issues and receive feedback? |  |  |  |  |  |  |  |
| Do indigenous and ethnic people give consent for the plans and aspects of the project that affect them directly? |  |  |  |  |  |  |  |
| Regulatory and governance | Do the regulatory framework for hydropower include requirements to consult with and assess impacts to indigenous men and women in project SIA’s and develop indigenous people’s action plans? |  |  |  |  |  |  |  |
| Is the performance of indigenous and ethnic people’s plans monitored?  |  |  |  |  |  |  |  |
| Are grievance mechanisms enforced and action is taken to address issues that arise? |  |  |  |  |  |  |  |

# TOPIC 6: Environmental management and ecosystem integrity

**Examples of evidence –**

* strategic environmental assessments at the basin or sector level;
* hydropower/basin development options studies;
* initial environmental examinations and/or EIA for specific projects at the feasibility study stage;
* environmental management plans;
* ecosystem studies and inventories;
* biodiversity management plans;
* habitat assessment studies;
* environmental policies, regulations and agreements to protect biodiversity in the basin;
* national inventory of high value rivers about and/or describes the state of the environment, and has a significance extending beyond plan/ IWRM plan;
* environmental monitoring associated with any given parametric value.

| ***Criteria*** | ***Questions to ask and information to be collected for the assessment based on the basin context and stage of development*** | **Yes/Present** | **No/Absent** | ***Source – where will you find this information*** | ***Results******Use this column to record responses and information that you find during your data collection. You will then use this information for the gap analysis against criteria.*** |
| --- | --- | --- | --- | --- | --- |
|  | **Yes/complete** | ***Old or out of date*** | ***Ineffective*** | ***Inadequate*** |
| **6.1 Assessment and management of environmental impacts** |
| River basin planning | Is there ongoing and systematic environmental baseline and regular monitoring being conducted in the basin to identify environmental changes and hotspots, and fill knowledge gaps associated with hydropower risks? |  |  |  |  |  |  |  |
| Is there regular State of the Basin reporting which identifies the environmental baseline condition, key pressures and trends in the basin? |  |  |  |  |  |  |
| Have environmental indicators been developed for hydropower and is performance measured? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Are Strategic and cumulative environmental assessments conducted for power development plans and hydropower master plans? |  |  |  |  |  |  |  |
| Do project agreements include provision for the ongoing identification and management of cumulative environmental impacts during the project life  |  |  |  |  |  |  |  |
| Do project agreements include the need for coordination with other projects in the basin to manage current and future environmental impacts? |  |  |  |  |  |  |  |
| Hydropower projects | Do hydropower projects apply a systematic approach to the identification, management and monitoring of environmental impacts at all project stages, using suitable expertise.  |  |  |  |  |  |  |  |
| Are Pre-project environmental baselines established against which future change is measured? |  |  |  |  |  |  |
| Are EIA’s, environmental management plans and monitoring reports publicly disclosed and implemented in a timely manner. |  |  |  |  |  |  |
| Regulatory and governance | Does a regulatory framework for hydropower environmental impact assessment, management and monitoring exist?  |  |  |  |  |  |  |  |
| Is this EIA framework enforced in a timely manner?  |  |  |  |  |  |  |  |
| Are Cumulative and basin wide environmental impacts, beyond individual project sites considered in the regulatory and planning processes for hydropower?  |  |  |  |  |  |  |  |
| Is the environmental performance of hydropower measured at the basin scale? |  |  |  |  |  |  |  |
| 6.2 Biodiversity conservation and ecosystem integrity |
| River basin planning | Does basin-wide baseline data include aquatic and terrestrial species abundance, biodiversity, habitat range, reproductive behaviour, and critical habitats.  |  |  |  |  |  |  |  |
| Have strategies been developed in the hydropower planning processes to site, design and operate projects to maintain ecosystem connectivity at the basin level? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Have hydropower options and ranking studies tried to avoid project sites and designs that have significant negative impacts on biodiversity, environmental hot spots or protected areas. |  |  |  |  |  |  |  |
| Hydropower projects | Has biodiversity and ecological baseline data been used in hydropower EIA studies.  |  |  |  |  |  |  |  |
| Does project siting and design includes provisions for basin wide ecosystem connectivity and the avoidance and mitigation of significant impacts.  |  |  |  |  |  |  |  |
| Have biodiversity off-set programs been implemented and do they include the protection of areas with equivalent values to those lost? |  |  |  |  |  |  |  |
| Regulatory and governance | Do policy and regulations for environmental protection exist and are they enforced.  |  |  |  |  |  |  |  |
| Are biodiversity conservation zones are legally protected from negative impacts.  |  |  |  |  |  |  |  |
| Is compliance with off-set, management and compensation plans enforced and is action taken to address issues that arise. |  |  |  |  |  |  |  |

# Topic 7: Flows and reservoir management

**Examples of evidence:**

* ESIA reports,
* project design and feasibility studies,
* operating rules and
* project agreements,
* flood and drought management plans,
* water allocation plans and policies,
* IWRM plans, multiple use studies,
* options assessment

| ***Criteria*** | ***Questions to ask and information to be collected for the assessment based on the basin context and stage of development*** | **Yes/Present** | **No/Absent** | ***Source – where will you find this information*** | ***Results******Use this column to record responses and information that you find during your data collection. You will then use this information for the gap analysis against criteria.*** |
| --- | --- | --- | --- | --- | --- |
|  | **Yes/complete** | ***Old or out of date*** | ***Ineffective*** | ***Inadequate*** |
| **7.1. Multiple water use optimisation and efficiency** |
| River basin planning | Does baseline data exist on water availability, demand and consumptive and non-consumptive water use, including navigation and fisheries?  |  |  |  |  |  |  |  |
| Has a hydrological model has been developed for the basin, which addresses different water use scenarios? |  |  |  |  |  |  |
| Has the effect of climate change on future water availability and flows been assessed? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Are multiple use projects prioritised in government options assessment, optimisation and ranking studies? |  |  |  |  |  |  |  |
| Hydropower projects | Are hydropower feasibility studies consultative and do they seek to enhance design and operational opportunities for multiple-use where feasible?  |  |  |  |  |  |  |  |
| Do Hydropower projects co-ordinate with other agencies and water users in the operations stage to achieve agreed multiple-use objectives? |  |  |  |  |  |  |
| Regulatory and governance | Does a water use framework exist in domestic legislation and international agreements that sets limits, rules and procedures for consumptive and non-consumptive water use in the basin.  |  |  |  |  |  |  |  |
| Is monitoring of water use conducted?  |  |  |  |  |  |  |  |
| Do regulatory mechanisms exist for the resolution of water allocation conflicts? |  |  |  |  |  |  |  |
| 7.2 Reservoir planning and management |
| River basin planning | Do government water and energy agencies conduct integrated planning to set operational limits for hydropower operations such as, full supply levels, drawdown limits and water release requirements, to integrate with power generation requirements.  |  |  |  |  |  |  |  |
| Is reservoir planning, impoundment and operations conducted within agreed water management limits and thresholds for the basin? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Do projects selected for development aim to minimise the area flooded per unit of energy. |  |  |  |  |  |  |  |
| Do schemes make best use of storage characteristics and operations to meet current and future electrical load patterns and other water demands in the basin. |  |  |  |  |  |  |  |
| Hydropower projects | Are reservoirs designed to avoid, mitigate and off-set impacts including loss of forest resources, population displacement and greenhouse gas emissions.  |  |  |  |  |  |  |  |
| Do reservoir filling plans addresses biomass removal, the timing of environmental and social plans and downstream impacts? |  |  |  |  |  |  |  |
| Are reservoir filling and operational procedures in place to address reservoir management issues? |  |  |  |  |  |  |  |
| Regulatory and governance | Do project agreements and regulations provide clear institutional arrangements for reservoir ownership, access and management responsibility?  |  |  |  |  |  |  |  |
|  | Are roles and responsibilities allocated and is there a co-ordinated approach to managing compliance with reservoir management, operating rules, storage and release commitments? |  |  |  |  |  |  |  |
| 7.3 Co-ordinated hydropower operations |
| River basin planning | Is there allocation of responsibility and institutional arrangements in place for co-ordinated water management and power generation in the basin amongst multiple projects? |  |  |  |  |  |  |  |
| Do hydropower operations co-ordinate with other water users in the basin. |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Does co-ordination of the power system, including hydropower cascades, make optimal use of hydropower capability (peaking, load following) and does it achieve balanced and equitable water use at the sub-basin level? |  |  |  |  |  |  |  |
| Do project level agreements include provision for co-ordination of operations amongst projects in a cascade or sub-basin and consistent design and operational mitigation measures? |  |  |  |  |  |  |  |
| Hydropower projects | Do projects co-ordinate their operations to achieve basin objectives, efficient water use and optimise electricity generation?  |  |  |  |  |  |  |  |
| Are design and operational environmental mitigation measures consistent and co-ordinated between projects to optimise outcomes? |  |  |  |  |  |  |  |
| Regulatory and governance | Does the regulatory framework for hydropower includes provision for multiple projects in a cascade to co-ordinate at all project stages for optimal electricity generation, and efficient resource use? |  |  |  |  |  |  |  |
|  | Do Transboundary mechanisms exist for co-ordination and co-operation for hydropower operations on international rivers? |  |  |  |  |  |  |  |
| 7.4 Downstream and environmental flows |
| River basin planning | Has Environmental flows assessment been conducted for all river reaches affected or potentially affected by hydropower operations to establish criteria and thresholds for environmental and downstream flows?  |  |  |  |  |  |  |  |
| Does this include assessment of water needs of wetlands and floodplains? |  |  |  |  |  |  |  |
| Is the environmental flows assessment consultative and informed by scientific baseline data? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Are water management constraints on electricity dispatch embedded in electricity dispatch and off-taker agreements?  |  |  |  |  |  |  |  |
| Is compliance monitored and publicly disclosed.  |  |  |  |  |  |  |  |
| Do project agreements include design and operational performance criteria to deliver agreed environmental and downstream flows? |  |  |  |  |  |  |  |
| Hydropower projects | Do projects conduct environmental and downstream flow assessments in feasibility stage to inform project design and operations?  |  |  |  |  |  |  |  |
| Do project design and operation rules address commitments made for environmental flows and downstream water releases.  |  |  |  |  |  |  |  |
| Do hydropower projects comply with environmental and downstream flow commitments? |  |  |  |  |  |  |  |
| Regulatory and governance | Do international agreements, national laws and basin plans relating to water allocation include provision for environmental flows.  |  |  |  |  |  |  |  |
| Do ESIA regulations and guidelines include provision for environmental flow assessment?  |  |  |  |  |  |  |  |
| Where commitments are made for environmental and downstream flows, is their effectiveness monitored at agreed sites? |  |  |  |  |  |  |  |
| 7.5 Flood and drought management |
| River basin planning | Does a basin flood and drought management plan exist? |  |  |  |  |  |  |  |
| Does it include flood monitoring and forecasting systems and planning for flood and drought response? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Do project agreements and electricity dispatch arrangements include provision for design and operational flood and drought response measures? |  |  |  |  |  |  |  |
| Do agreements include provision for flood management to be prioritised over power generation in emergency situations? |  |  |  |  |  |  |  |
| Do agreements include provision for drought management to be prioritised over power generation, e.g. water for agriculture? |  |  |  |  |  |  |  |
| Hydropower projects | Do operating rules, project design, management plans include flood and drought mitigation measures that comply with statutory plans and are they implemented?  |  |  |  |  |  |  |  |
| Is response to flood and drought co-ordinated amongst projects in a cascade? |  |  |  |  |  |  |  |
| Regulatory and governance | Do national and provincial governments have flood and drought plans and policies in place, including allocation of roles and responsibilities.  |  |  |  |  |  |  |  |
| Are plans are implemented and enforced? |  |  |  |  |  |  |  |
| Is the response to drought and flood events managed in a co-ordinated manner in the basin? |  |  |  |  |  |  |  |

Topic 10: Dam and community safety

**Examples of evidence - Dam Safety**

* Management System documentation;
* dam safety risk assessment reports
* independent auditing and monitoring reports;
* integrated dam safety risk assessment reports;
* emergency Preparation Plan (EPP);
* integrated EPP for the basin, training programs, community awareness programs
* dam break analysis reports for projects in a cascade;
* national and regional emergency flood management plans and policies.

| ***Criteria*** | ***Questions to ask and information to be collected for the assessment based on the basin context and stage of development*** | **Yes/Present** | **No/Absent** | ***Source – where will you find this information*** | ***Results******Use this column to record responses and information that you find during your data collection. You will then use this information for the gap analysis against criteria.*** |
| --- | --- | --- | --- | --- | --- |
|  | **Yes/complete** | ***Old or out of date*** | ***Ineffective*** | ***Inadequate*** |  |
| **10.1 Dam safety** |
| River basin planning | Do dam owners, government agencies and water users co-operate with each other to address basin-wide and cascade dam and community safety issues? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Have energy planning and regulatory agencies developed clear regulations and standards for dam safety at all project stages in laws, regulations and project agreements? |  |  |  |  |  |  |  |
| Hydropower projects | Do all hydropower projects have a systematic approach to dam safety risks and asset management in design, construction and operation stages? |  |  |  |  |  |  |  |
| Do these comply with mandated national and regional standards? |  |  |  |  |  |  |
| Does this include dam safety reviews by independent expert panels? |  |  |  |  |  |  |
| Do dam owners report regularly on dam safety issues? |  |  |  |  |  |  |
| Regulatory and governance | Do regulatory authorities enforce dam safety regulations consistently across the basin at all project stages including design and construction? |  |  |  |  |  |  |  |
|  | Is there ongoing monitoring and surveillance at all project stages and independent review panels review technical data?  |  |  |  |  |  |  |  |
|  | Is action is taken to address non-compliances and issues that arise? |  |  |  |  |  |  |  |
| 10.2 Community safety and emergency response |
| River basin planning | Does integrated planning for emergency response, including sudden water release, flood, and other disasters exist amongst stakeholders in the river basin.  |  |  |  |  |  |  |  |
| Do notification, warning and evacuation systems exist, are tested regularly and are used in a timely manner.  |  |  |  |  |  |  |  |
| Does a flood risk analysis exists for the basin and includes hydropower assets and operational requirements? |  |  |  |  |  |  |  |
| Energy/ power sector planning and regulation | Do policies and standards exist for public safety issues associated with hydropower? |  |  |  |  |  |  |  |
| Hydropower projects | Do hydropower procedures for water releases include provision for notification and warning systems, emergency response plans and the avoidance, mitigation and compensation for harm to life and property? |  |  |  |  |  |  |  |
| Have been any major hydropower related community safety incidents in the basin? |  |  |  |  |  |  |  |
| Regulatory and governance | Do regulations for emergency response plans and community safety plans for hydropower projects exist and are enforced?  |  |  |  |  |  |  |  |
| Do government plans for emergency response including flood and disaster response exist and are these tested?  |  |  |  |  |  |  |  |
| Do laws and regulations include provision for compensation for damage to life and property and are these enforced?  |  |  |  |  |  |  |  |
| Are emergency response plans regularly tested with provincial and local police and emergency crews? |  |  |  |  |  |  |  |