

## KEY MESSAGES

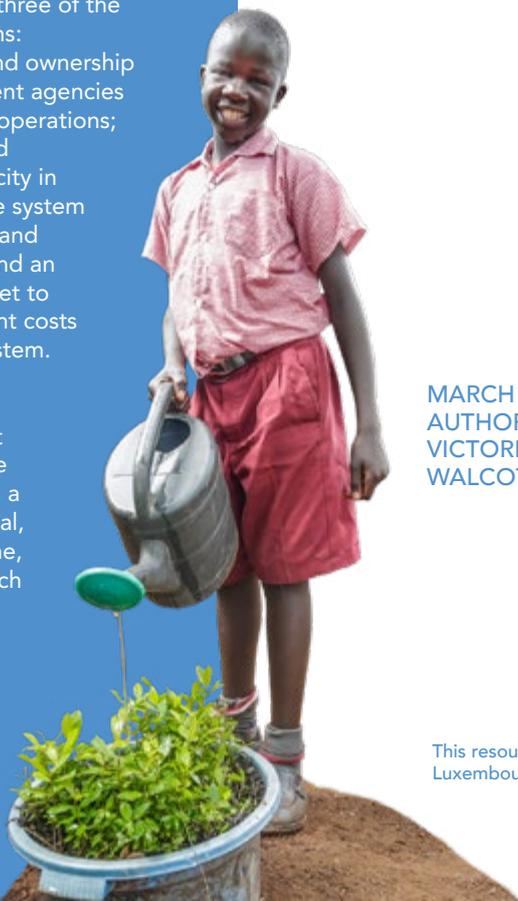
1. Safeguards information system (SIS) operations require the definition of institutional arrangements and procedures to manage, analyze, validate and disseminate diverse types of environmental and social information from different government agencies and sectors, and across all scales of REDD+ implementation – national, subnational and project level.

2. A key technical challenge is the development of a new, or modification of an existing, database or online platform for the management and dissemination of safeguards information in ways commensurate with available information and country capacities.

3. An operational SIS requires investing across all three of the following dimensions:

- political capital and ownership among government agencies implicated in SIS operations;
- human capital and institutional capacity in country to run the system year in, year out; and
- financial capital and an operational budget to cover the recurrent costs of running the system.

4. Perfection need not be the enemy of the good - starting with a simple and functional, and at the same time, flexible system, which can accommodate stepwise updates, improvements and future needs, facilitates getting the SIS up and running.



# INFO BRIEF

# GLOBAL

## REDD+ SAFEGUARDS INFORMATION SYSTEMS: MOVING FROM DESIGN TO OPERATION

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## READ THIS BRIEF...

- [If you are involved in processes in your country to meet safeguards requirements](#) for REDD+, particularly if your country is designing a SIS or if it has a SIS design in place and is now looking to make it operational.
- [If you are looking for technical assistance](#) or want to gain a better understanding of what other countries have experienced in trying to get their SIS operational.

## INTRODUCTION

Under the policy and incentives mechanism for climate change mitigation that is [REDD+](#), the United Nations Framework Convention on Climate Change (UNFCCC) requires participating countries to develop a ‘system for providing information on how [the ‘Cancun’] safeguards are being addressed and respected throughout the implementation of REDD+ activities’ ([UNFCCC Decision 1/CP.16](#), paragraph 71d). This system, commonly known as the safeguards information system (SIS), constitutes a prerequisite for results-based payments from REDD+, both under the Convention and its funding arm – the Green Climate Fund (GCF).

Some general characteristics for the SIS have been agreed under the UNFCCC ([Decision 12/CP.17](#), paragraph 2); the system needs to:

1. [provide transparent and consistent information](#) that is accessible by all relevant stakeholders and updated on a regular basis;
2. [be transparent and flexible](#) to allow for improvements over time;
3. [provide information](#) on how all of the safeguards are being addressed and respected;
4. [be country-driven](#) and implemented at the national level; and
5. [build upon existing systems](#), as appropriate’.

In recent years, there has been significant global progress on SIS design and several countries ([Argentina](#), [Brazil](#), [Chile](#), [Ecuador](#), [Ghana](#), [Indonesia](#), [Liberia](#), [Mexico](#), [Pakistan](#), [Paraguay](#), [Philippines](#), and [Vietnam](#), as of 2019) have

launched online platforms to share information with domestic and international audiences on how safeguards are addressed and respected. Many other countries, however, still need to finalize the design of their systems and get them operational.

In addition to the UNFCCC guidance, the UN-REDD Programme identified four key SIS design considerations based on country experiences and consultations with key stakeholder constituencies (donor governments, civil society and REDD+ countries). These key considerations are elaborated in the UN-REDD Technical Brief [REDD+ safeguards information systems: practical design considerations](#) and are summarized below (see Figure 1):

1. [SIS objectives](#) that respond to domestic needs and international requirements.
2. [SIS information needs and structure](#) to report on how safeguards are being addressed and respected that determines how the information is compiled, managed and disseminated in an organized way.
3. [SIS functions and institutional arrangements](#) that explain the relevant mandates, procedures and capacities for SIS functioning, as well as the roles of government institutions and non-state actors.
4. [SIS technological systems requirements](#) that relate to the development or strengthening of an online interface, design of a database, and considerations of storage and access to information.



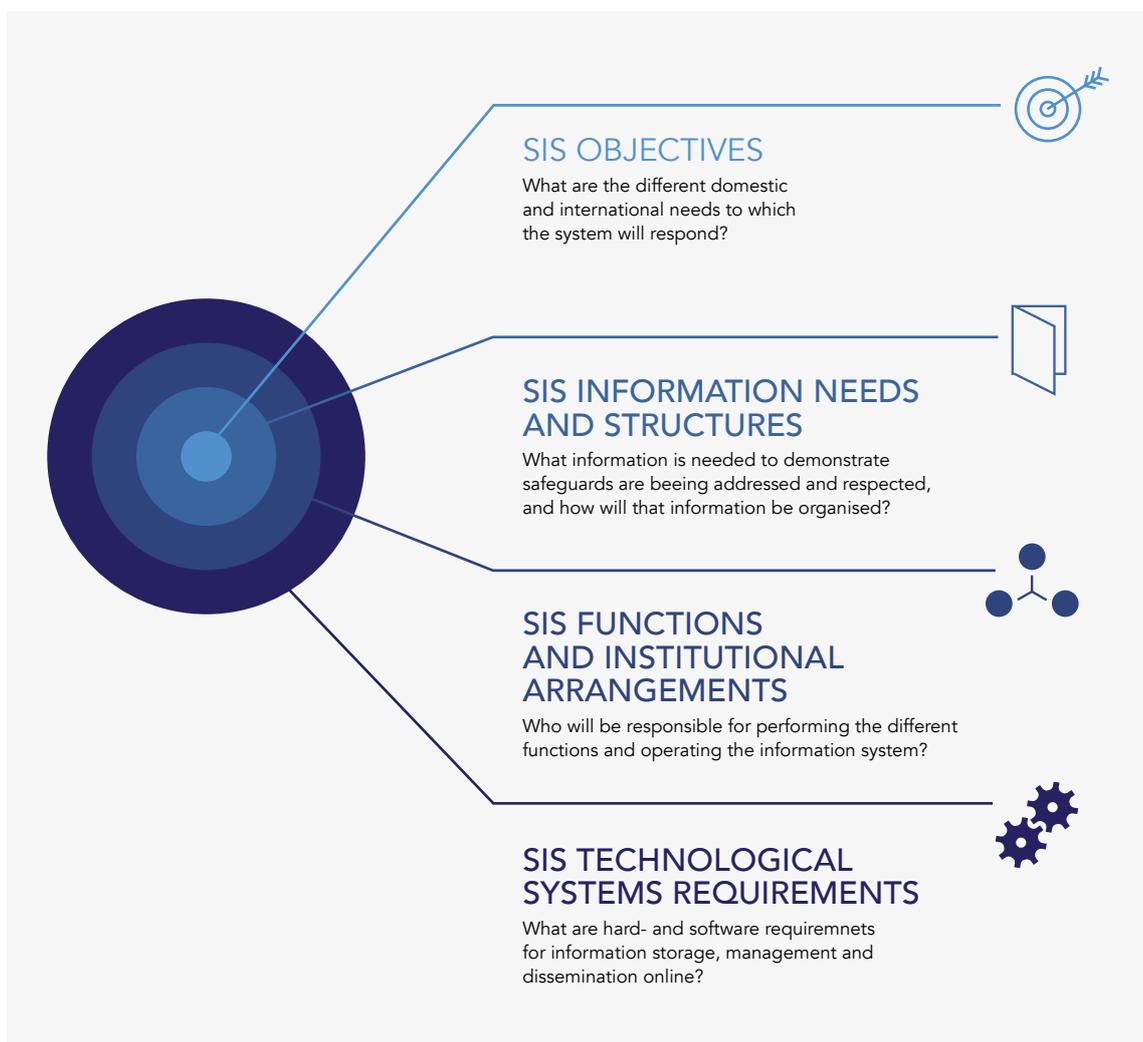


Figure 1: Key design considerations for REDD+ safeguards information systems

SIS design choices and processes are likely to incorporate iterative improvements over time – with a view to expanding or refining system objectives, structure, functions, institutional arrangements and technological platforms over time – in line with the progress of REDD+ implementation. In addition, there rarely is a clear differentiation between SIS design and SIS operation stages. Countries can choose to combine the design considerations with complementary elements needed for putting the system into operation.

This technical brief builds on, and attempts to summarize, key considerations synthesized from initial country experiences for putting a SIS into operation. The brief is aimed at an audience

of developing country government institutions preparing for, or moving into the implementation phase of, REDD+. It is hoped that the brief can also be of value to civil society organizations, international development partners, donors and other stakeholders that are involved in ensuring that all safeguards are addressed and respected throughout the implementation of REDD+. The brief is structured around the four-paired functional responsibilities identified as key SIS design considerations (Figure 2), i.e. how to:

- **Compile and manage;**
- **Analyze and interpret;**
- **Assure quality and validate; and**
- **Disseminate and use safeguards information.**

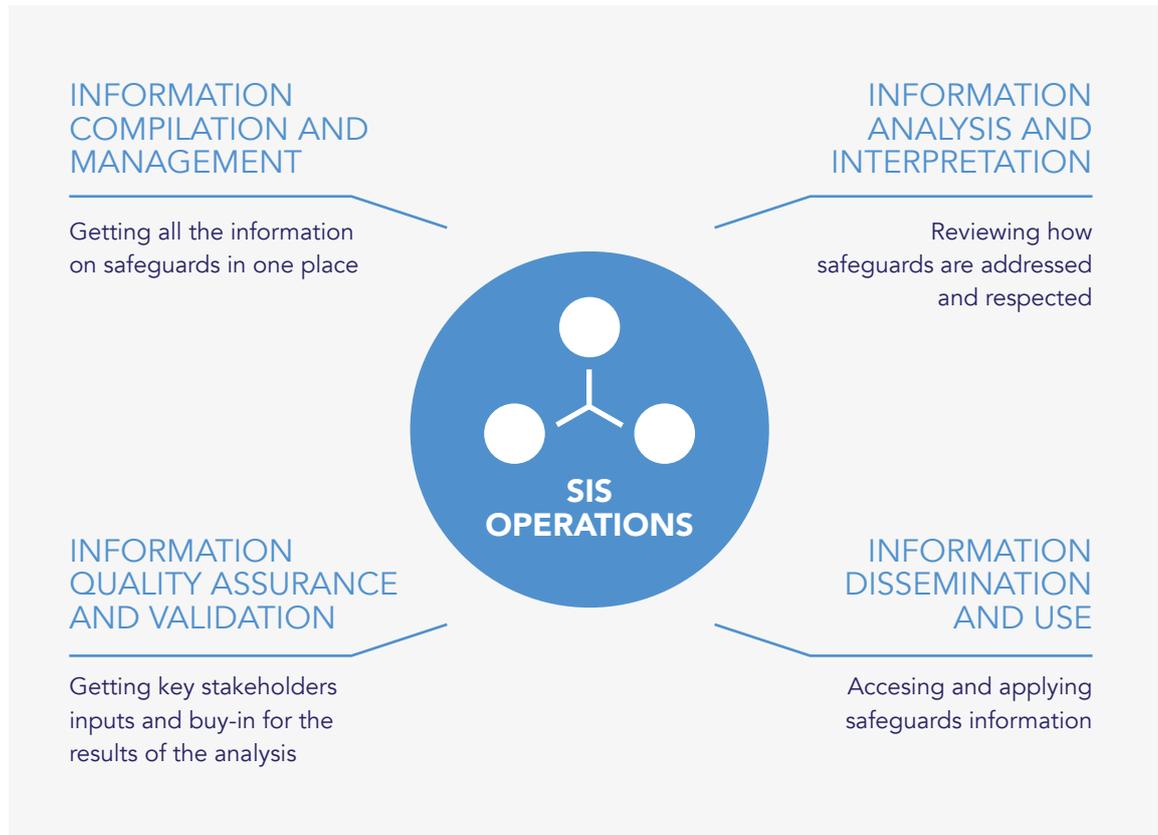


Figure 2: Key operational considerations for REDD+ safeguards information systems

### INFORMATION COMPILATION AND MANAGEMENT: GETTING ALL THE INFORMATION ON SAFEGUARDS IN ONE PLACE

As part of their approaches to meeting UNFCCC REDD+ requirements, countries have unpacked the substantive content of the Cancun safeguards in the context of their particular national circumstances. National interpretations, or clarifications, of the generic Cancun safeguards often take the form of principles, criteria and indicators, a narrative description or a set of definitions of key terms. These national interpretations can help define what information is needed to demonstrate how safeguards are being addressed and respected, and what information will be reported in the SIS.

As a consequence of the inherently broad nature of the Cancun safeguards, the information encompassed in a SIS, based on the national interpretation of the safeguards, can be a diverse

mix of environmental and social, qualitative and quantitative, narrative, spatial and statistical information all coming from a variety of different sources. The information may also differ in terms of timeframes, geographical coverage, and collection methods. This poses the operational challenge of how to compile different types of information from different institutions that have a role in implementing REDD+ actions and applying safeguards. The information should be compiled in ways that are technically efficient and politically viable, as well as appropriate to national circumstances.

The system needs to coherently aggregate information horizontally, from across diverse sectors and line ministries, as well as vertically, from smaller to bigger levels of administration and implementation – e.g. national, subnational, and project levels. Once compiled at the national level, a country may choose to aggregate, synthesize and present general and broader

information for the whole country. Detailed case-, location- or REDD+ action-specific safeguards information can also be presented to illustrate specific cases or experiences of safeguards application to REDD+ actions, or to allow for comparison between different locations within the country.

Some countries have found it challenging to consider other safeguards frameworks as the basis for the information that will be reported in the SIS, e.g. World Bank and Green Climate Fund safeguards frameworks, particularly when the themes and geographic scales in which these frameworks are applied differ from the national safeguards approach for REDD+ under the UNFCCC. Compiling information requires additional effort to be able to report on safeguards in a way that complies with different commitments.

### Tools for compilation and management of information

In order to allow an efficient and organized compilation of information, certain tools – such as templates, protocols, direct technological solutions for establishing links between existing information systems and, ultimately, some form of database – will be needed for sharing and storing safeguards-relevant information. Templates and protocols promote standardized compilation of information and can support information processing and facilitate entry into a database.

It can be useful to develop protocols that indicate who (which institution or stakeholder) is reporting what (scope of information), when (periodicity), how (template or form to capture the information), and through which channel (e.g. physical documents or online system). The responsible parties for submitting and receiving the information should be clearly identified. The process of developing templates and protocols should engage and gather feedback from the key information providers and statistical offices in charge of defining standards for information management.

A template can include multiple choice options, sections for reporting on predetermined

indicators, or a format that allows gathering more detailed information. There might be a need to tailor the templates to accommodate the specific procedures and capacities of key information providers, e.g. definitions of key terms, technical guidance, explanation of the purposes for which the information will be used.

If necessary, countries can start by using physical analogue templates (i.e. pen and paper forms) filled by the information providers, and gradually move towards an automated information technology (IT) solution, which would allow information providers to complete and submit forms online. The use of manual processes versus automated processes for the operation of the SIS will be guided by the capacities of the different stakeholders contributing and managing information, the architecture of existing information systems upon which the SIS is built, and the type and availability of the information itself.

Some countries have formulated SIS or safeguards indicators. Countries can think about what is needed to move from a generic indicator focused on a particular topic to an operational indicator with clear and specific determination of what will be measured and reported, how this will take place, and the tasks and responsibilities associated with such reporting. It is advised to start with a manageable number of indicators for which data are available, and adjust or add new ones based on the needs and capacities in a country.

In order to compile and support information management, developing a new, or modifying an existing, database is likely to be central to SIS operations. It allows the information related to safeguards to be organized, stored and aggregated based on the reporting needs. Some considerations that can inform the development and operation of a database, and choices of corresponding software applications, include:

- preference for an online versus offline, or basic spreadsheet-based, database;
- information structure to be used, e.g. organization of the information according to indicators or other elements such as narrative text;

- functions that the database are expected to perform, e.g. searchable by year or location;
  - types of information to be included (e.g. narrative, spatial or map-based, statistical) and whether only official or published information can be shared;
  - how information should be presented in the end-user application;
  - expected storage capacity;
  - decisions on security, privacy and access to information, e.g. are logins or access levels needed;
  - update needs and timeframes, which may differ across different information sources;
- existing or proposed information workflows, e.g. who should check and sign off on uploads or changes to the database; and
  - existing capacities of database managers and end-users versus training needs.

A detailed operational manual or protocol can be developed to document the structure and functioning of the SIS database and any corresponding web platform.

## COUNTRY EXAMPLE 1 – ZAMBIA

### Compilation of information

Zambia's SIS online platform shares information through a website and stores it in a database. The system includes safeguards information on the application of relevant policies, laws and regulations as well as the identification and implementation of gap-filling measures. The scope of the information is defined by the national interpretation of the Cancun safeguards that states key concerns associated to each safeguard. This information is generated at the national level by key institutions – such as Forestry Department, Central Statistics Office and other members of the National Climate Change Committee – , and by projects that contribute to REDD+ implementation at the subnational and local levels.

The information is being compiled to be part of the database of the SIS, hosted by Zambia Environmental Management Agency (ZEMA), through the application of standardized templates for reporting on safeguards. In the future, the SIS may include the report of outcomes of the application of safeguards.



### Institutional arrangements

In some countries, information sharing across sectors is mandated by an existing policy or regulation, but in many cases, the SIS will require that requests for information are institutionalized and that the various agencies involved agree on what information is provided, how it is used, and any standards to be applied. Certain countries may need to formalize the creation of the SIS and the corresponding mandate of the hosting institution. This also contributes to the sustainability of the system.

While the SIS hosting institution is responsible for running the system, as well as for future improvements, as needed, the operational management of the SIS will entail other roles and responsibilities, and other institutions may be involved. For instance, the national statistics office may be the SIS host institution, but the national REDD+ focal point or steering committee can decide on the scope of information that will be included in the SIS, determine if all or part of it will be publicly available, and help understand the linkages between the information and REDD+. Putting the SIS in operation could involve reviewing, updating or formalizing the institutional arrangements once it is clear how the system will function and who will be involved. Building or strengthening inter-agency information-sharing agreements often represents a challenge for SIS operation, as this process can require a significant amount of time, effort and political buy-in. Thus, clear and efficient institutional arrangements are a vital element of operationalizing SIS. It may be necessary to review mandates related to information sharing, as well as other regulatory requirements associated with confidentiality, transparency and sensitive data.

### ANALYSIS AND INTERPRETATION OF INFORMATION: REVIEWING HOW SAFEGUARDS ARE ADDRESSED AND RESPECTED

Once the information is compiled, an analysis is needed to interpret it and review how safeguards are being addressed and respected throughout the implementation of REDD+ actions. The starting point of this analysis is a country's

national interpretation of the Cancun safeguards. The analysis of how safeguards have been addressed and respected can be informed by: i) the legal and institutional frameworks relevant for addressing each safeguard; ii) how the policies, laws, regulations, mandates, and procedures are applied in practice; and iii) what were the environmental and social outcomes of REDD+ implementation.

In addition to understanding how the Cancun safeguards have been addressed and respected, the analysis can also allow for the identification of gaps, recommendations and future actions needed for strengthening the application of safeguards. Analyzing and interpreting information on how safeguards have been respected will also yield an understanding of whether, and to what extent, non-carbon benefits were obtained. Although not explicitly included in any of the Cancun safeguards, it is important that the analysis and interpretation of safeguards information incorporate a gender dimension both in terms of gender-responsive processes, as well as disaggregation of safeguards information on the basis of gender, where relevant.

Countries would benefit from defining the periodicity for the analysis and interpretation of safeguards information (e.g. once a year, biannually, every quarter), and the analytical methods to be employed, which could be a combination of qualitative and quantitative methods, depending of the objectives of the SIS. These should be specified either in the SIS web platform or in the manual of the system's operation to provide an explanation on how findings were reached.

## COUNTRY EXAMPLE 2 – MEXICO

### Analysis of safeguards information

REDD+ safeguards in Mexico are addressed and respected according to the applicable legal framework and the general measures identified in the State Safeguards Plans, which is the instrument determined for supporting the application of, and reporting on, safeguards at the subnational or state level. The analysis of information takes place at an initial level, local or state scale, which seeks to inform how the State Safeguards Plans will be implemented. Stakeholders and institutions in charge of collecting the information are also in charge of this initial analysis. At a broader (national) scale, the SIS will report on the compiled information from multiple State Safeguard Plan analyses, which requires another, more general, layer of analysis and interpretation of information for the whole country.

After Mexico put its SIS online, the country has assessed the system's operations to identify opportunities for improving it. This allowed determining the need to simplify the analysis and reporting of information, and to be more precise in the content included in the system. The country plans to develop further guidance for implementing safeguards actions, efficient safeguards information analysis and quality control, and simplifying the reporting on safeguards information. Also, this seeks to standardize the information, taking into account the particularities of each state and the efforts previously made.



Appropriate capacities and expertise are needed to analyze safeguards information, considering that there is a diversity of topics encompassed in the seven Cancun safeguards, and that these may be addressed and respected according to different subnational or local project contexts. Formal analysis and interpretation of safeguards information, by one or more government agencies, will benefit from the support of a multi-stakeholder mechanism, such as working groups often assembled during REDD+ readiness, and the stakeholders who have been involved in the safeguards approach and SIS design phase.

### QUALITY ASSURANCE AND VALIDATION: GETTING KEY STAKEHOLDER INPUTS AND BUY-IN FOR THE RESULTS OF ANALYSIS AND INTERPRETATION

Certain institutions that serve as information providers for the SIS may already have quality assurance processes that should be considered when planning these processes for the SIS itself. Ongoing management of the system would benefit from the review of the quality, reliability and validity of the information compiled, analyzed and interpreted.

Quality assurance and validation can occur at three points in the SIS operations, depending on the type of information collected and whether it has already been validated before (e.g. if the information was taken from official statistics). The first entry point for quality assurance is when the information is collected. This can be done by performing spot tests to assess the accuracy of data, or running a statistical analysis to identify patterns that may indicate the information is skewed. The information provider usually implements these methods, and the details of these process and results should be shared with the information submission.

The second entry point for quality assurance and validation is when the information is submitted to the system. The SIS hosting institution can cross-check information from different sources, compare information collected at different sites,

or reach out to key stakeholders or institutions in addition to the information providers to assess the quality and reliability of the information. Information quality is likely to be more robust if it comes from official or other reliable sources that apply sound methodologies and statistical analyses. Quality assurance processes should also consider the use of different sources of information, where relevant and available, such as information coming from non-government institutions, as well as inputs from local stakeholders, including women, youth, indigenous peoples and local communities. Such information can help to complement other information sources, as well as strengthen and demonstrate non-state actor engagement in SIS operations. SIS host institutions, however, should carefully consider any formal government approval procedures that apply before placing official information in the public domain.



## COUNTRY EXAMPLE 3 – ECUADOR

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### Quality assurance

The responsibilities for quality assurance of SIS information in Ecuador are shared between the information providers, which are REDD+ implementing partners (public, private and civil society), and the Ministry of Environment (MAE), which is the REDD+ National Authority and the institution overseeing REDD+ implementation. The institution providing the information is in charge of following up on information gaps and performing quality control activities. In addition, the MAE reviews the information and verifies that complete reports are provided. The Ministry may follow up if questions or issues are raised during the analysis of the information.

To improve the quality of safeguards reporting, capacity building activities were implemented, seeking to clarify doubts and adapt the scope of the reports and templates to specific circumstances of reporting partners. This work benefited from initial pilots that informed improvements to the templates used for reporting information. Ecuador has its [SIS online](#) and, in the near future, safeguards information will be registered online within the SIS by a technical focal point from each REDD+ implementing partner, allowing follow-up on each safeguards report. The country also plans to work on a guide for the verification stage to support the MAE role in quality assurance. To help validate the information, links will be developed between the SIS and other key national systems, such as the web portal of the National Statistics and Census Institute (INEC) and the National Information System (SNI) of the Technical Secretariat Planifica Ecuador.



The final step of quality assurance and validation occurs when the information has been processed and interpreted, to check whether conclusions drawn from the information are sound. At this stage, validation is sought to ensure the accuracy and robustness of the interpretation of the information, i.e. to understand whether the analysis reflects the reality on the ground. Approaches to obtaining stakeholder validation could include consultative processes such as meetings and workshops, surveys, and online public consultation. A multi-stakeholder working group can be invaluable in coordinating various stakeholder inputs to the validation process, and ensuring equitable representation of both men and women. It is important to engage civil society, particularly representatives of indigenous peoples and local communities, in validation processes. Validation processes might be easiest when linked to the review summary of safeguards information.

## INFORMATION DISSEMINATION AND USE: ACCESSING AND APPLYING SAFEGUARDS INFORMATION

When it comes to disseminating safeguards information, attention has largely been focused on online solutions: webpages, platforms or portals linked to a searchable database. There is no explicit UNFCCC requirement to develop an online platform for the SIS. An online SIS, however, helps meet some of the key characteristics set by the UNFCCC, namely transparency and accessibility. The experience of those countries that have launched an online SIS platform is that the publicly available online information fulfills much of the expectations of most stakeholders, particularly those of government institutions, civil society organizations and international donors. In addition, an online SIS solution is a requirement of the GCF's Pilot Programme for REDD+ Results-based Payments.

The content of an online SIS can incorporate diverse elements from introductory texts (e.g. REDD+ in the country, how the SIS is structured and operates, national interpretation of safeguards, etc.); narrative and quantitative

reporting against principles, criteria and indicators; and visual aids, such as figures, graphs, maps and photographs.

Reporting on how safeguards have been addressed and respected is the main information content expected to be shown in the SIS. This can directly mirror, or summarize, information found in the database. It may be useful to share information on the country's approach to meeting UNFCCC and other (such as GCF) safeguards requirements, as well as descriptive details of the SIS's design and operations. Some countries have also added information on, and allow access to, grievance redress mechanisms, safeguards communications materials, on- and offline participation platforms, as well as a library of safeguards-relevant documents. Certainly, any SIS platform should include access to summaries of safeguards information.

The development of an online SIS platform should consider languages in which the information is presented – in both the database and web platform – and the potential need for a mobile-friendly version. Linking the SIS to an existing online platform can be strategic and should also be considered. The first version of the system can include immediate needs and priority information. Later, following a stepwise approach, as advocated under the UNFCCC, further information can be added to enrich the system's content and functionality. For example, some countries have decided to focus initially on publishing online information about addressing and respecting safeguards at the national level and plan to incorporate later information on safeguards processes and results at the subnational level.

## COUNTRY EXAMPLE 4 – VIETNAM

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### Information dissemination

Viet Nam's SIS online platform was developed in 2018 and builds on the country's Forest Management Information System (FORMIS), a set of databases that capture information on Vietnamese forests and forest sector. The SIS is hosted by FORMIS, and some SIS parameters use information drawn directly from the FORMIS databases. Other information is taken from a variety of official sources – such as the General Statistics Office and the Committee for Ethnic Minority Affairs – and will be expanded in the future.

The SIS web platform, a subpage of the main Viet Nam REDD+ website, provides substantial information from the database and other sources, covering all of the safeguards, though noting where information is not yet available at the early stage of REDD+ implementation. It includes qualitative, statistical and spatial information, with links to maps in the FORMIS platform. In addition, the SIS web platform provides information on the REDD+ context in Viet Nam, the national safeguards approach, the design of the SIS, as well as relevant resources and news.

Viet Nam's SIS aims to share information with both national and international audiences, and is in both Vietnamese and English. Efforts to better communicate the information on safeguards through the platform include using visual aids, such as maps and infographics, structuring the information using a series of questions and parameters, and providing a mobile friendly version.



It is key to involve focal points of institutions that are priority information providers during the development of the SIS online platform. At the same time, a sample of end-users should be canvassed to obtain feedback on the structure and functioning of the platform. On-going capacity building will almost certainly be needed during the stepwise development of an online SIS as contents, features and functionalities expand with each upgrade. Training activities should target, primarily, managers of the SIS and priority information providers.

It is worth noting that an online solution might not be an adequate tool for disseminating safeguards information to certain grassroots stakeholders, particularly indigenous peoples and local communities. To facilitate the access to information by these actors, complementary

approaches could be used such as village meetings, distribution of printed information, radio broadcasts and visual communications products such as posters. These approaches should be in line with the country's REDD+ communications and stakeholder engagement strategy, and should be guided by the identification of communications objectives, target audiences, key messages and communication channels for safeguards information and the SIS.



## CONCLUSION

To put the SIS into operation and to keep it running, two main challenges will have to be overcome: one organizational and one technical. The **organizational challenge** is the need to strengthen existing – or put in place novel – inter-institutional arrangements for sharing information and ensuring the efficient management of the SIS. Multiple institutions, inside and outside of government are likely to be involved, as the safeguards cover a broad thematic range and type of environmental and social information. The diverse suite of information on how safeguards are being addressed and respected will also need to be harvested from across all scales of REDD+ implementation – national, subnational, and project levels.

The **technical challenge** relates to database and online platform development, or modification of existing national government information systems and websites for information management and dissemination. Technological solutions present the pitfall of temptation to develop structural and functional complexity way beyond the available

resources. At the same time, solutions are required for delivering the functions needed and expected for the SIS, in line with the objectives and the scope of the system.

Maintaining SIS operations beyond any external assistance during the readiness phase demands in-country resources: political, human, and financial. **Political capital** refers to national government ownership and political support for the maintenance of the SIS; this needs to be secured to get the system operational. An online SIS as a prerequisite for results-based payments from the GCF, together with expectations for reinvestment of some of those REDD+ revenues in SIS upgrades, should help to incentivize political commitment to operating the SIS. Different objectives of the SIS – accessing results-based payments, adaptive management of REDD+, improving access to information, and others – may secure additional support for the development and operation of the system.

In order to develop, manage and maintain the SIS there is also a need for **human capital**, which translates into investment in institutional



capacities to operate the system. The number of institutions and individuals involved will depend on the system's scope (horizontally across agencies and sectors, and vertically across scales of REDD+ implementation), its functions, and the diversity of REDD+ actions implemented in the country. Investments in personnel, such as specialized expertise for analyzing safeguards-related information, should ideally be forecast to maintain and improve the system in the long run. This may require a strategy for identifying expertise among government departments and partners, and for building institutional capacities in the SIS host agency as well as principal information providers.

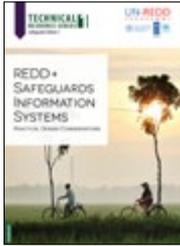
Countries need to have the appropriate budget to address and respect the safeguards throughout the implementation of REDD+ and to report on this through the SIS. The costs of developing a database and online platform, establishing and maintaining the SIS, and upgrading the system step-by-step, should be calculated upfront, ideally in the design phase. The level of **financial capital** needed will depend on the existing country circumstances and capacities, the degree of information complexity, level of SIS functionality, diversity of REDD+ actions, among others. It is difficult for any government to secure the financial resources to run the SIS if the full costs, and possible sources of funding, are not detailed in an operational budget in the first place.

So long as REDD+ activities are being implemented, a functional SIS will be needed. To avoid spending too much time, human and monetary resources at the outset, getting started with a simple and flexible system, that will continue operating in the long term, is advisable over a prolonged investment in a sophisticated system (potentially facilitated by temporary external financial and technical assistance), which may be beyond the immediate in-country capacities to operate. Improvements in structure and functionality can be included as needed, stepwise over time, and financed (at least in part) by REDD+ revenues obtained for REDD+ results.

## FURTHER INFORMATION



UN-REDD Technical Brief 1:  
v2.0 Safeguards Information  
Systems practical design  
considerations  
(English - Español - Français)



UN-REDD Technical Resource  
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