Costa Rica
Ministry of Environment and Energy
National Forestry Financing Fund

Summary

Proposal for REDD´s Safeguards Information System in REDD adopted by the COP 16 of the UN Framework Convention on Climate Change

At the COP 16 of the United Nations Framework Convention on Climate Change, paragraph 69, Decision I, affirms that in the implementation of REDD measures referred in paragraph 70 of that decision safeguards referred to in paragraph 2 of appendix I to this decision should be promoted and supported. Also, in accordance with paragraph 71 subsection D, Costa Rica which began in 2010 the process of REDD, must have a system to provide information on addressing and respecting safeguards in the whole process of implementation of the measures mentioned in paragraph 70, while respecting sovereignty. The information system should be a mechanism for reporting to the UNFCCC on how the safeguards are addressed and respected throughout the implementation of the activities (Figure 1) and the measures in Costa Rica, according to Decision 12 adopted by COP 17.

"…that developing country Parties undertaking the activities referred to in decision 1/CP.16, paragraph 70, should provide a summary of information on how all of the safeguards referred to in decision 1/CP.16, appendix I, are being addressed and respected throughout the implementation of the activities (…) The summary of information referred to in paragraph 3 should be provided periodically and be included in national communications, consistent with relevant decisions of the Conference of the Parties on guidelines on national communications from Parties not included in Annex I to the Convention, or communication channels agreed by the Conference of the Parties." (***http://unfccc.int/resource/docs/2011/cop17/eng/09a02.pdf***)

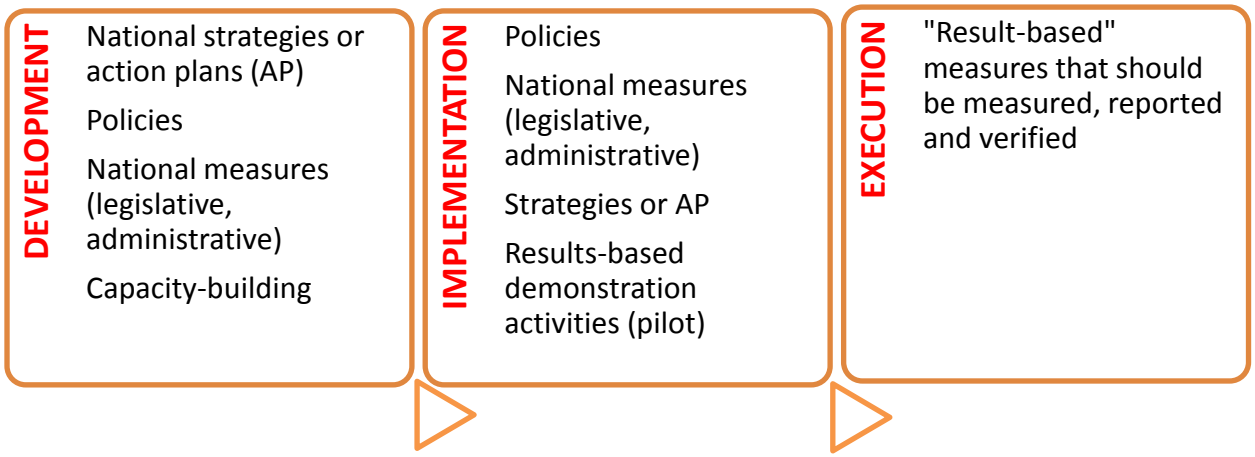

Figure 1. REDD phases defined by the UNFCCC, Decision I, COP 16.

Background of the REDD-SIS proposal

To meet the development of the System, Costa Rica received a Targeted Support (TS1) of the UN-REDD Programme from May 2013 to December 2014. The TS1 focused on collecting and analyzing primary and secondary information on available systems, and on the perception of potential users of the System. The project also develops activities focused on the collection and analysis of information related to the safeguards components, and on generating ideas using statistics and indicators. This process involved the support of workshops by the REDD Executive Secretary, and the development of materials that will facilitate the understanding and discussion on the subject (available at ***http://www.reddcr.go.cr/en/safeguards-information-system-product-redd***).

Due to the need of designing a system that uses existing platforms, in mid-2014 Fonafifo established a partnership with the National Center for Geoenvironmental Information (CENIGA) in order to create a module on REDD safeguards in the system of indicators of the National System for Environmental Information (SINIA). This module was developed through a consultancy financed by the TS1 (See: ***http://www.sinac.go.cr/ceniga***).

By law, SINIA is the official platform of institutional and sectoral coordination and linking of the Costa Rican government to facilitate the management and distribution of knowledge on national environmental information.

As an integral part of SINIA there is a system of environmental indicators (SIA, for its Spanish acronym), which is a system for the systematization and publication of environmental statistics and indicators based on an adaptation of the PNUMA GEODATOS

for Costa Rica. Based on the spatial data infrastructure (IDE, for its Spanish acronym) of the National Geographic Institute (IGN, for its Spanish acronym), there is a module of geographic information with critical environmental information and its corresponding geographic database that has interoperability with the National Territorial Information System (SNIT, for its Spanish acronym) of the National Geographic Institute. The page also includes a link to the official site of the MINAE´s Integrated System for Processing and Addressing Environmental Complains (SITADA, for its Spanish acronym) (***http://www.minae.go.cr/denuncias-publico***) to file or consult environmental reports or complaints, among others.

Fonafifo, with CENIGA´s support, developed a list of statistics and possible indicators. This list was reviewed by 92 actors to in order to know their perception on the relevance and significance of each indicator according to the safeguards. Those who achieved more than 50% of the responses received (available at ***www.sinac.go.cr/ceniga***) were considered relevant for the purposes of the project. In 2015, when the Executive Secretary delivered Draft 2 of the Strategy to the World Bank, despite the absence of MRV, the Reference Level and Forest Monitoring System, Fonafifo summarized the information analysis based on policy statements and developed the first proposal of REDD SIS and SINIA´s indicators.

The REDD-SIS proposal, available in Spanish, is divided into three sections. The first deals with the function of each safeguard, about conceptual issues and describes the institutional and/or policy contexts. This section presents legal information and REDD´s policy statements as part of the Draft 2 presented by the Strategy. Also, it includes a summary of the REDD process, and the preliminary results from the organization Earth Law & Climate (April 2015) that identified gaps to comply with the safeguards in Costa Rica.

Section II describes the available information systems and refers about the National System of Environmental Information (SINIA), while section III includes the proposal of the REDD-SIS structure and the indicators for REDD´s Safeguards Module (***www.sinac.go.cr/ceniga***).

The Information System, in accordance with the decisions taken by the country over REDD preparation process could be in charge of an institution that would generate and compile information to prepare, according to the deadlines established by the Convention, a report on the addressing of the safeguards. These reports would be delivered to the National Meteorological Institute which, in the case of Costa Rica, is the institution responsible for preparing the communications for the Convention.

Under this approach, it would be necessary during the preparation process to define the necessary budget and resources for the responsible institution to effectively develop these

tasks, so that the information will be relevant and comparable over time. In addition to these reports, data from the Forest Monitoring System and the MRV could be included.

The decision to include indicators on the SINIA responds to decisions adopted by the UNFCCC. Among them, COP 16 decision I, paragraphs 70, 71 (item d), 72 and 73. Its design has been guided by COP 17 Decision 12. From this point of view, it focuses on access to quality information and compliance with the time required to prepare reports for the Convention and the use of available information systems and platforms to ensure methodological rigor. According to the indicators selected during the process of preparation, several institutions, according to their powers, would compile information to generate reports and official indicators. The inclusion of indicators in the SINIA requires the institution or institutions responsible for REDD measures to use the protocols of the National Geo-Environmental Information Center that are supported by MINAE.

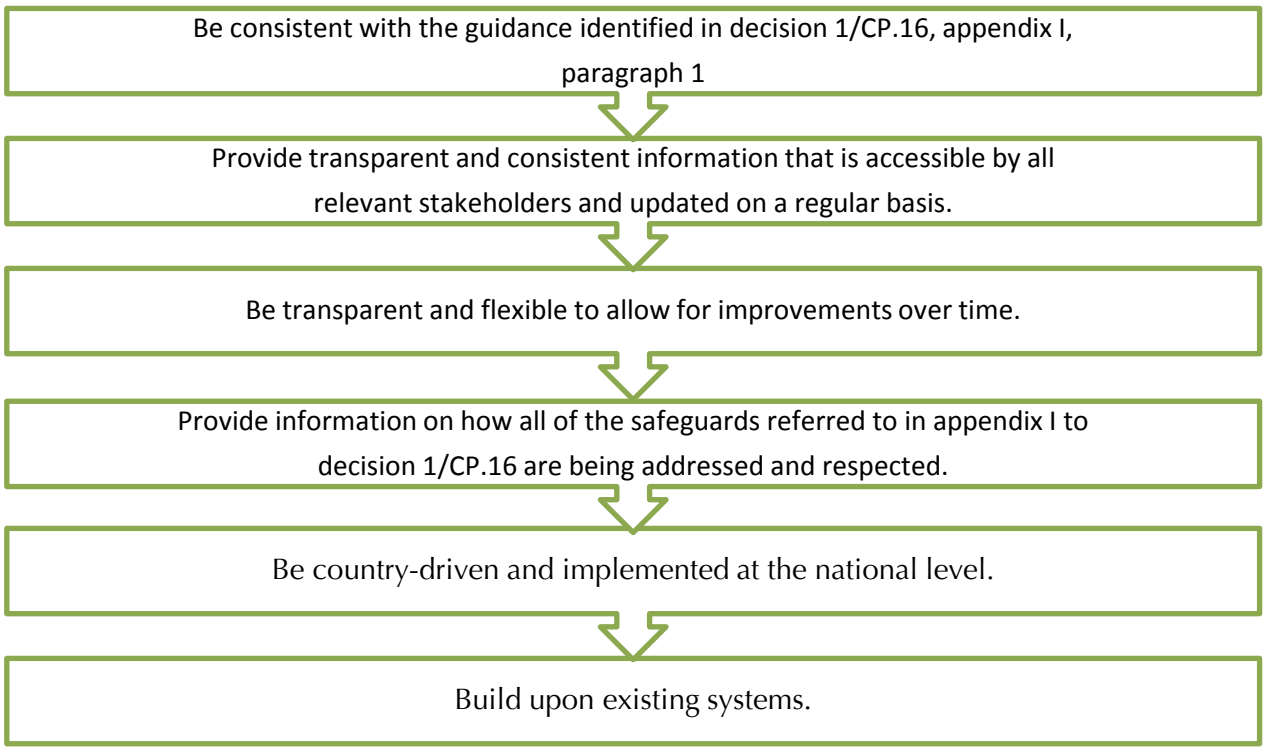

Figure 2. Considerations for the design of a REDD Safeguards Information System, COP 17, UNFCCC.

Description of the proposal

The SIS shall seek to serve several objectives to inform the Convention while generating information for decision makers, as shown in the following objectives.

Proposed objectives

a) Collect and submit relevant information to show the United Nations Framework Convention on Climate Change how the safeguards adopted by COP 16 are addressed and respected during the implementation of the REDD measures (legislative, administrative).

b) Develop a group of indicators that allow for taking timely decisions on risks that must be addressed.

c) Contribute to the preparation of country reports related to the state of the environment through the SINIA official platform and ensuring the use of its protocols to generate quality information.

d) Have information accessible to different stakeholders relevant to REDD and to agencies that constitute sources of funding and cooperation.

Conceptually, the SIS-REDD in Costa Rica consists of a **set of elements** that must interact with the treatment and management of data and information, through institutional arrangements that have been established.

The people who will interact with the System are the officials responsible for the generation of information, data and specific working techniques; the people leading REDD policies or measures; those designated as responsible for the NODE of SINIA´s REDD Safeguards, for the communication resources to ensure access to different players, and for the computer resources used by different platforms.

The methodologies for collecting information that are included in the method sheet will outline the types of information to be collected for each indicator and how the collection of information should be developed (eg. sample size, frequency, etc.). The framework for the provision of information will define how the information is stored and shared since the reports must be submitted to the Convention and also be used for outreach and communication purposes.

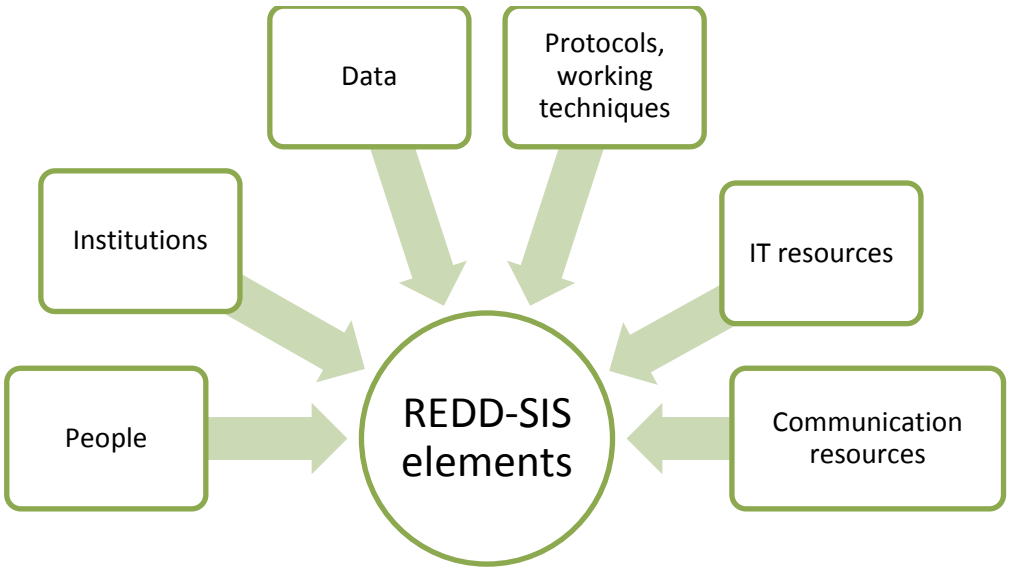

Figure 3. Elements of the Information System on how the REDD safeguards are addressed and respected during the preparation and implementation of the REDD Strategy, measures and activities.

This System approach will require institutional structures responsible for compiling, adding and packaging information for various reporting needs. In this field, there are institutions in Costa Rica with already defined powers, such as the Ministry of Environment and Energy, the State´s authority on forestry issues, and its Minister of Environment, Energy, Oceans and Land Management; the National System of Conservation Areas (SINAC, for its Spanish acronym), the authority on forestry, protected wildlife areas and water resources; the National Fund for Forest Financing, the institution responsible of the payment for environmental services as defined in the Forest Act; the Ministry of Agriculture and Livestock; the National Indigenous Commission, the National Forestry Office; the Associations for the Indigenous Integral Development; the College of Agricultural Engineers, etc.

For this reason, during REDD´s preparation, institutional arrangements and the necessary strengthening should be identified including on budget, finances, technology. In this way, each participating institution can effectively and efficiently develop their tasks.

As for the indicators, these would help determine if a safeguard is being respected. So, they set the parameters to determine what information should be collected. The legal framework is clear in defining the responsible institution. In selecting SIS indicators a process should be fulfilled to ensure the relevance and viability, as shown below:

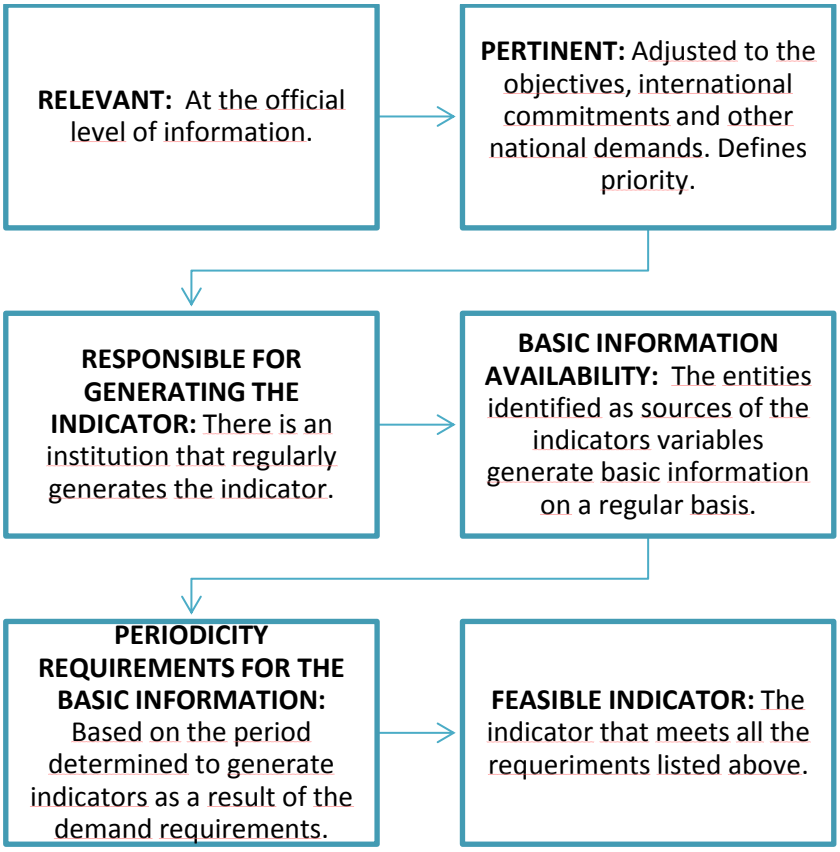

Figure 4. Process for the selection of REDD Safeguards indicators for the SINIA module – Costa Rica.

Eventually, as the implementation process moves forward, the institution responsible for REDD in Costa Rica may decide to develop descriptive or added indicators to projects implemented at the regional or local levels. In this case, local indicators could be used as those used by PROMEC for conservation areas. Statistics and processed data would be provided by the competent institutions in REDD issues.

As the SINIA is a platform for coordination between the different nodes of information, the designation of a REDD Safeguards Node would be required, responsible for producing the reports according to the frequency and the preset requirements. This node should be coordinated by the National Meteorological Institute, responsible for the communications and reports for the Convention. In accordance with COP19, Decision 11/, paragraph 5, acknowledges that Parties' national forest monitoring systems may provide, as appropriate, relevant information. In this sense, the institution responsible for preparing REDD reports will use data from the MRV System and the Forest Monitoring System by the SINAC.

The **REDD Safeguards Node** would monitor safeguards compliance. This Node should be made up by official representatives of the institutions responsible for the implementation of REDD measures, be they legislative or administrative. A decree of REDD operation in Costa Rica could formalize and define the functions of the participants in the NODE for SINIA.

Once started, the implementation of the measures referred to in CP.16, decision 1, paragraph 70, the IMN would present the summary of the information through their national communications or the website of the Convention. Subsequent presentations of a summary of the information would be made at a frequency consistent with the provisions related to the submission of national communications and, in a voluntarily basis, through the Internet web site platform of the Convention.

Each REDD report should be addressed by the official responsible institution, so that it is accessible and understandable to the general public. This work will imply staff availability at the relevant institution of REDD in order to perform actions addressed towards the cultural appropriateness of the information, and to define and implement strategies that ensure accessibility for all stakeholders, especially local communities and indigenous territories. Due to transparency and accountability issues, both, country reports and statistics or reports from the competent institutions should be published in the relevant web pages.

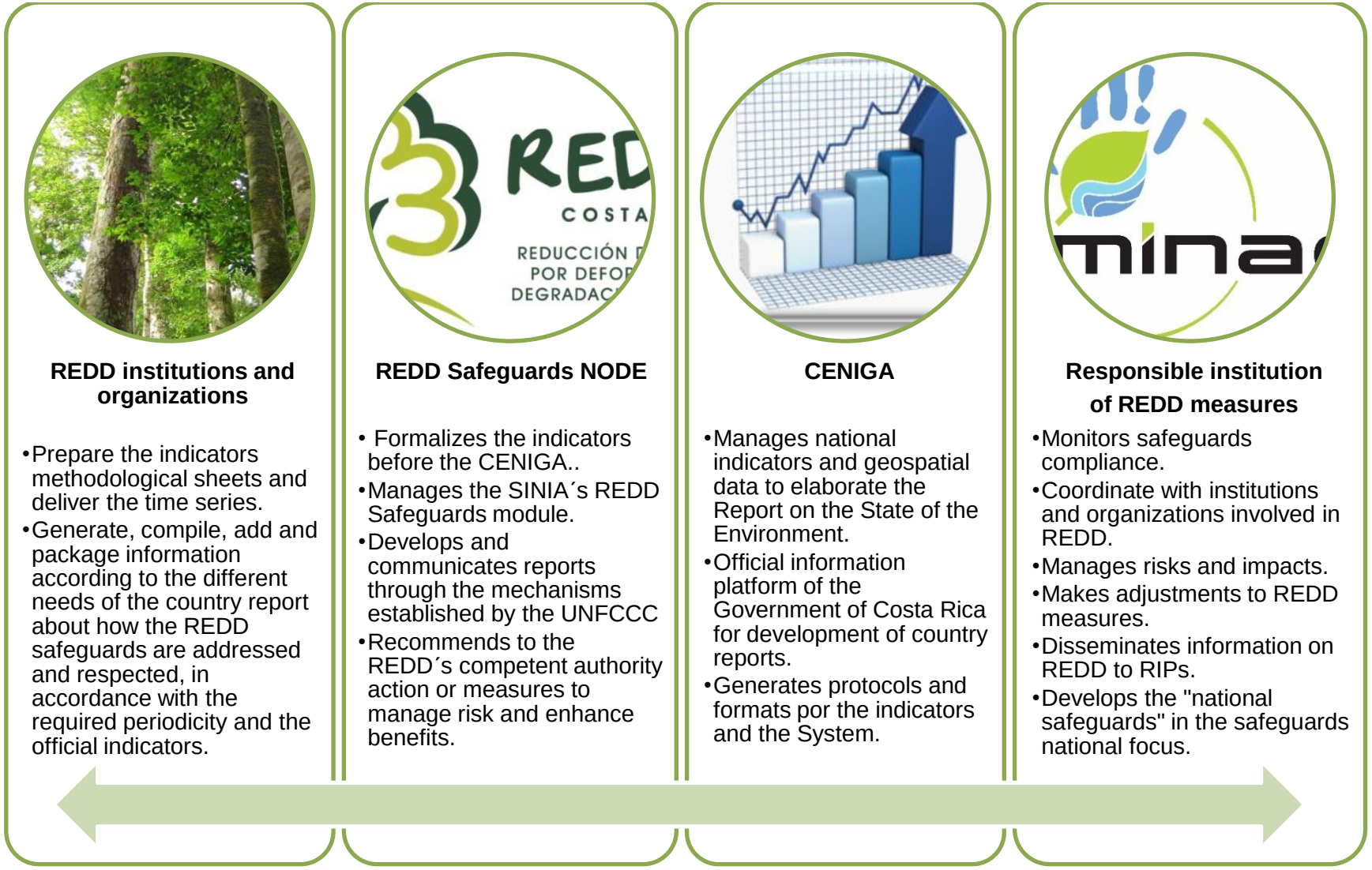

Figure 5. Proposed scheme for REDD-SIS operationalization.

REDD Safeguards Module at www.sinac.go.cr/ceniga

By a consulting financed by the UN-REDD Programme it was prepared the module for SINIA. According to Dobles (2014) DRUPAL (V.6) was selected as the software for the System. This is a Content Management System (CMS) and a free program with GNU / GPL written in PHP. It has the advantage of being multipurpose modular and highly configurable. Also, it can be used to publish articles, images and files and other services such as forums, polls, elections, blogs and to manage users and permissions very swiftly.

The DRUPAL system is used by the CENIGA as a mini site for this Center applications related to environmental statistics, geospatial information and links to other information systems on environmental issues. DRUPAL uses POSTGRES (V9.2) as a database, an object-oriented relational database management system, which is also a free program.

For the module the default content option "Books was used, which is multimode and hierarchical. The structure of this module starts from the "*Salvaguardas de REDD*" option on the main menu at CENIGA´s page (***www.sinac.go.cr/ceniga***). Through this option it is possible to access a description of the REDD Safeguards Information System and to contents that have been defined between Fonafifo and CENIGA (*Dobles, 2014*).

To document the System indicators, it is necessary to use a methodological sheet provided by CENIGA. This methodological sheet is very useful tool for specifying the indicator metadata (data about data) and contains the following information:

Code: A series of alphanumeric characters that represent the indicator.
Name: accurate name of the indicator
Units: The units associated with the metric that defines the indicator (eg. area, tons, liters, etc.).
Thematic classification: Locates the indicator on a specific subject area. The CENIGA thematic classification is mainly based on the Framework for the Development of Environment Statistics (FDES) proposed by the United Nations Statistics Division. Because FDES focuses on statistics (single variables), the methodological sheet has an additional field to describe the thematic classification of composite indicators involving more than one variable.
Related initiatives: Those known initiatives that refer to this same indicator.
Associated regulatory framework: This field specifies whether the indicator is reflected in a regulatory framework.

Targets: Refers to the identification of those official goals that have been defined, both nationally and internationally, as part of national regulations, multilateral agreements, etc.

Geographic coverage: it indicates the coverage that the indicator refers to, which may be national or sub-national.

Availability period: Corresponds with the period of time this indicator has been available.

Associated environmental problems and type of DPSIR indicator: it is based on the approach on the Integrated Environmental Assessment (IEA) adopted by the CENIGA as a proposal for the reports on the state of the environment, based on UNEP's GEO approach. Firstly, priority environmental issues should be identified and, for each of them, indicators should be selected based on the framework Driving Forces (D), pressure (P), state (S), impacts (I) and responses (R).

Ease of production: It is subdivided into three categories, high, medium and low. It refers to the degree of difficulty in obtaining the information required to produce the indicator.

Overview: It is subdivided in i) General definition, ii) Definition of variables, iii) Calculation Methodology iv) Interpretation, v) Limitations, vi) Sources of information.

- **General Definition:** Includes a short, clear and precise description of what the indicator shows through a simple and explanatory language to guide the user for a correct understanding (*).
- **Definition of variables:** A technical description of each of the variables that are required to generate the indicator. This provides clarity and definition in the detail needed for a better understanding of the attributes of the indicator. (*)
- **Calculation methodology:** Specification on how data is calculated or generated data, either by mathematical operations or processes, from which the final value is obtained. The formula is included, if it exists. (*)
- **Interpretation:** It indicates what the variable, indicator and index say. In this case, it is to clarify, explicitly, what should be the correct interpretation of changes (increases or decreases) in the value showed by the variable, indicator. (*)
- **Limitations:** it should be clarified what is NOT captured by the variable, the indicator or the index. It means, what other dimensions and dynamics cannot be captured or viewed from the indicator, and that the less experienced user could take for included. (*)

Sources of information:

International Source: The source must be stipulated for each of the variables, in a detailed manner. Also, the institution, department or office, and / or physical or electronic publication should be indicated. Specifically, it should be stated an international source as a reference, for example: FAO, UNEP, IPCC, ISO, etc. with their respective references to publications and / or websites.

National Source: The source must be stipulated in detail for each of the variables and in a detailed manner. Also, the institution, department or office, and / or physical or electronic publication should be specified. The countries should explain their sources in this field and mention, in general terms, where this information could be obtained in each country. (*)

Type of sources of information: It should be indicated how the information was managed: 1) Monitoring, 2) Survey, 3) Direct estimation, 4) Administrative Register 5) Other.

Responsibles: Information on the technical unit, the name of the contact that provides the information and his/her contact information (phone number and email).

Availability: It refers to the indication of the physical location of the entity that has the role of a source of information as well as the website where you the information related to the indicator can be consulted.

(*) Based on ECLAC (Economic Commission for Latin America and the Caribbean).

Dobles, L. 2014. Informe Final de Consultoría. TS1 Programa ONU- REDD, Fonafifo.

Proposed indicators

The current indicators proposal is developed in two dimensions; the first is subjective because it compiles perceptions or opinions regarding safeguards. The second dimension intends to be an input for evaluating the closeness or distance to the targets of a REDD strategy that complies with the decisions taken by the Convention. This type of indicator is closer to the process developed by CENIGA.

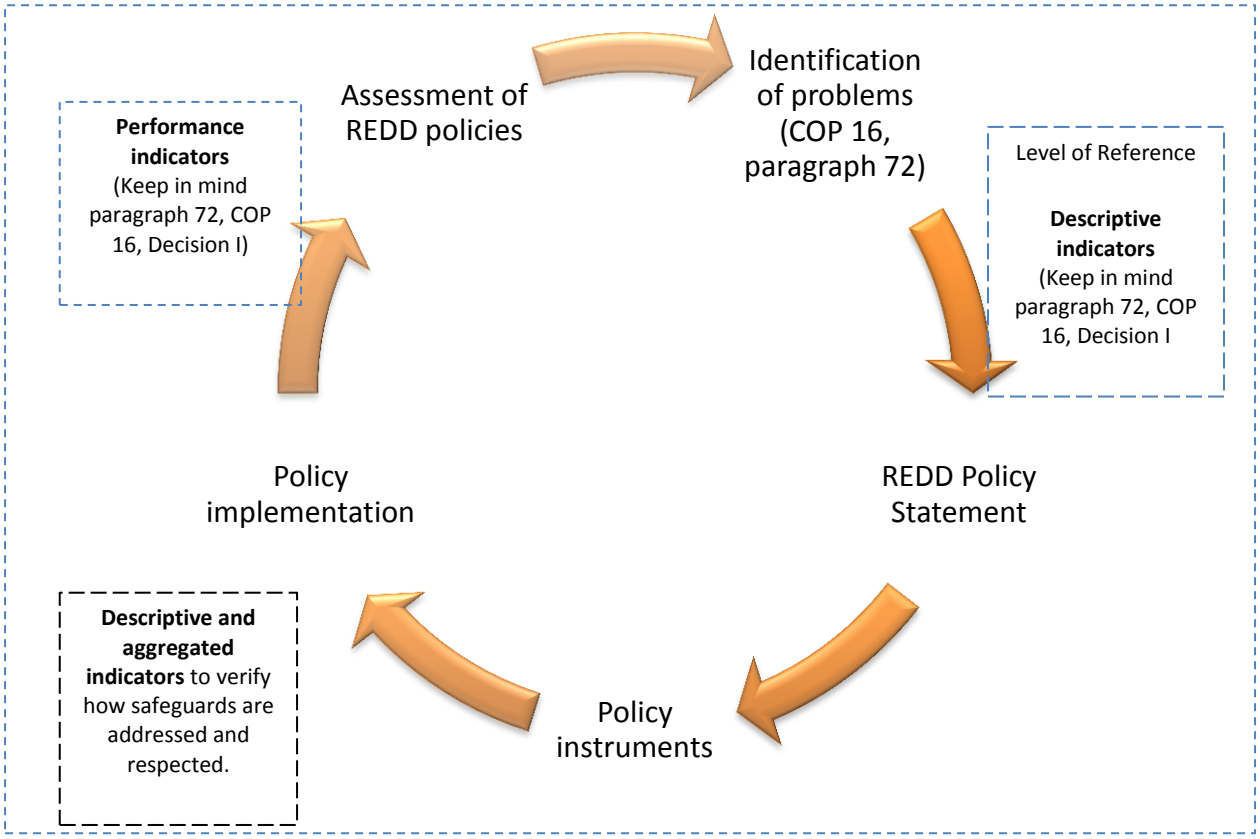

Figure 6. From a REDD-SIS module to a REDD module that would include indicators to assess the implementation of "REDD policies" as well as to measure its performance.

The REDD node (Figure 5) must proceed with the steps to build the definitive indicators, using CENIGA protocols. For indicators to be entered and published in an official capacity at the SINIA´s SIA, the following tasks must be carried out (Dobles, 2014):

a. Submit the final list of indicators to CENIGA, accompanied by a note from the responsible for REDD in Costa Rica, indicating their official recognition. It also should define and formalize the responsible for each indicator.

b. According to their skills, the institutional structures develop the methodological sheets.
c. CENIGA evaluates the list of indicators and the methodological sheets supplied. If no disadvantages are identified they are incorporated at the SIA.
d. The organizations and institutions responsible for the information for the indicators should elaborate the relevant time series based on what is indicated in the methodological sheets, and add the information to the SIA. To this end, CENIGA will generate a user code so the contact, defined by the Technical Unit (TU), can have access to the system.
e. For the time series to be published in the SIA, the REDD Node Manager must enter the system and validate the information entered by the TU. To that end, the person responsible should have a user account to access SIA. In this way, the information will be duly formalized in the SINIA´s SIA.

The SIS-REDD proposal contains 22 indicators, of which only the indicator´s name and classifier are included in this summary:

INDICATOR´S NAME	**REDD complementary measures**
REDD Safeguard	A
Classification of indicator	Product
INDICATOR´S NAME	**Consistency of REDD measures**
REDD Safeguard	A
Classification of indicator	Product
INDICATOR´S NAME	**Effectiveness of Public Administration**
REDD Safeguard	B
Classification of indicator	Product
INDICATOR´S NAME	**Transparency of Public Administration**
REDD Safeguard	B
Classification of indicator	Product
INDICATOR´S NAME	**Participatory Forestry Governance**
REDD Safeguard	B
Classification of indicator	Product

INDICATOR´S NAME	**Respect for the knowledge of indigenous peoples and local communities in the implementation of REDD measures.**
REDD Safeguard	C
Classification of indicator	Product
INDICATOR´S NAME	**Respect for the rights of indigenous peoples and local communities.**
REDD Safeguard	C
Classification of indicator	Product
INDICATOR´S NAME	**Effective participation in REDD**
REDD Safeguard	D
Classification of indicator	Product
INDICATOR´S NAME	**Full participation in REDD**
REDD Safeguard	D
Classification of indicator	Product
INDICATOR´S NAME	**Forest conservation**
REDD Safeguard	E
Classification of indicator	Product
INDICATOR´S NAME	**Area and degree of fragmentation of natural habitat**
REDD Safeguard	E
Classification of indicator	Impact
INDICATOR´S NAME	**Area and degree of fragmentation of different types of coverage in biological corridors**
REDD Safeguard	E
Classification of indicator	Product
INDICATOR´S NAME	**REDD incentives for forest conservation**
REDD Safeguard	E
Classification of indicator	Impact
INDICATOR´S NAME	**Area of Forest Ecosystems**
REDD Safeguard	E
Classification of indicator	Impact

INDICATOR´S NAME	**REDD financial benefits for indigenous peoples and local communities**
REDD Safeguard	E
Classification of indicator	Effect
INDICATOR´S NAME	**Satisfaction on Benefit Sharing Mechanism**
REDD Safeguard	E
Classification of indicator	Product
INDICATOR´S NAME	**Amount of GHG emissions avoided or captured in the forestry sector**
REDD Safeguard	F, E
Classification of indicator	Effect
INDICATOR´S NAME	**Forest cover**
REDD Safeguard	F
Classification of indicator	Effect
INDICATOR´S NAME	**Gross deforestation**
REDD Safeguard	F
Classification of indicator	Impact
INDICATOR´S NAME	**Forest carbon stocks**
REDD Safeguard	F
Classification of indicator	Impact
INDICATOR´S NAME	**Effective control to risks associated with REDD measures**
REDD Safeguard	F, G
Classification of indicator	Impact
INDICATOR´S NAME	**Social return of the risk management of REDD measures**
REDD Safeguard	F, G
Classification of indicator	Impact

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Learned lessons

SIS REDD must have official and explicit indicators available, that are clear and specific for users and that constitute a standards to evaluate, estimate or demonstrate adherence to safeguards.

A key aspect is that the collection of information, by competent institutions, allows building the same indicator, in the same way, so that comparisons are valid over time. Similarly, the selected indicator should be sensitive to changes.

A major challenge in REDD is the systematic collection of data by the competent authorities, and the choice of indicators to measure compliance to safeguards. This data shall be subject to continuous review in order to constitute an important instrument for decision-making. In this sense, these are not a specific subject for statists.

Regarding complex issues, institutions usually think about designing expensive systems impossible to be implemented, rather than developing systems adjusted to economic and human resources realities. Under this circumstances, the implementation of actions are postponed despite legally binding mandates, such as the case of biodiversity monitoring. Moreover, instead of starting with more manageable scales, it is aimed to start with a level of specificity that cannot be covered with the available resources.

Other challenges are the implementation of a culture that generates quality information and uses it to make decisions in a timely manner. Also, carrying out the process for formalizing indicators before the CENIGA and the delivery of the methodological sheets and the time series are part of these challenges. Similarly, it is important to identify the requirements of the institutions that generate the information for the system, so they have the knowledge, skills, abilities and the necessary resources to be able to perform their duties effectively and efficiently.

The following are some considerations to keep in mind during the design process of the SIS:

- Integration of a team by members who know about information systems, design of indicators and the topics covered by each of the safeguards. A large team is not required. It can consist of 2 or 3 people who receive specific inputs from consultants. This team should be trained on the specific issue of possible REDD measures, Convention decisions, etc. Unskilled work is very difficult since it requires a deep and prolonged reading on a topic discussed by other people, but not necessarily by those involved in the design of the SIS.
- A key issue for REDD-SIS design consists on the political-decision making on what REDD is, its usefulness, the extent that REDD will have in regard to other national

programs or policies, which program objectives and arrangements will be considered in the analysis and in the synergy that the country wants to establish between them; the scope of SIS, will it only include safeguards of the Convention, or will also include safeguards from other organizations and, eventually, "national" safeguards created to manage the risks of REDD measures?

- ♣ The country must clarify from the outset how far will REDD, that delimit the analysis of issues related to safeguards, will save you time and effort.
- ♣ It is essential to understand the decisions adopted by the Framework Convention of the United Nations on REDD and the design of an information system. The country should prepare a report for the Convention and this report must meet the basic requirements.
- ♣ Another key element is to distinguish between the safeguards adopted by the Convention, for which they must develop an analysis process to determine whether the country can demonstrate respect for safeguards, or if it is necessary to create instruments (policies, laws, procedures, etc.) which constitute by themselves "national safeguards" to enforce the safeguards of the Convention. For example, if a country that ratified the ILO Convention 169 has not developed the means for its implementation, such as policies, programs or REDD projects that may affect indigenous peoples, specific instruments or safeguards should be created to manage the identified risks.
- ♣ Manage the process of preparation and implementation of REDD in a comprehensive manner, so that each of its components (policies, programs, projects, etc.) help to achieve the objectives of the Convention and the goals of each country. Regardless of the available funding source, the institution responsible for the preparation process should assume the leadership and create an integrated plan so that safeguards and their analysis are a key element in the development of each of the products. It is essential to harmonize concepts and definitions between representatives of institutions and consultants and that each consultant or new person, receive an induction.
- ♣ Breakdown each safeguard to analyze its components and to establish definitions and the situation of the issue in the country. It is not possible to specify a product if this situation is unknown. The diagnosis of each component should be an input for the diagnosis that allows generating REDD strategies. It is important to collect the available information on the different components and integrate it into a single analysis. This information comes both from official technical reports or country reports and from legal information ruled by judges that have defined it as of REDD interest.

- ♣ Identifying gaps in the instruments to enforce safeguards. This requires a detailed analysis of policies, legislation, procedures, etc. This analysis will allow the development of "national safeguards" to ensure respect for the safeguards adopted by the Convention. This analysis also defines strategic actions to strengthen governance and participation.
- ♣ Know what information is available, but especially to know what are the limitations of the institutions to generate this information (training, staff, budget, technology, etc.). It is also important to know the duplication of information, the existence of harmonized protocols, the changes in methodology, the weaknesses of coordination between institutions and the accessibility of information. Other substantive topics are the analysis of policies that affect current or future strengthening of these institutions and their information systems and if there are government policies that reduce budgets and limit recruitment.
- ♣ An important issue for me is that SIS and any REDD product should be developed together with the people who will be responsible for their implementation. Trainings and new knowledge should be left to the responsible institutions.

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Review and translation

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Access to documents: *www.fonafifo.go.cr*

http://www.reddcr.go.cr/

http://www.sinac.go.cr/ceniga/

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