Principles and applications

A SET OF PRINCIPLES TO MONITOR PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT

Edgar E. Gutierrez-Espeleta – Sep. 09

SOME BACKGROUND

- Since the I Earth Summit in Rio de Janeiro (1992) there has been a concerned about how to measure progress towards sustainable development to direct public policy to ensure improvement of wellbeing and its sustainability
- Assessing SD is a complex and difficult task. Several efforts have been launched over the last 15 years, among which, the one lead by UNCSD has been at the front.
- In order to develop a common ground for SD assessment, a set of guiding principles is necessary to make them applicable on global, national, regional and local scale

SOME BACKGROUND

- 1996 the first release of the Bellagio Principles was published which pursued to facilitate the exchange of experiences
- In the following years, several international organizations used them as a reference point for their assessments
- Since then, new methods were developed and new problems have emerged
- In 2009 the second release of the Bellagio Principles was set up by a group of experts invited by ISSD, OECD and the Rockefeller Foundation

THEN, WHAT?

- The new BellagioSTAMP (The Bellagio **S**us**T**ainability **A**ssessment and **M**easurement **P**rinciples) replace the old Bellagio Principles:
  - *as guidelines for the whole of the assessment process including the choice and design of indicators, their interpretation and communication of results*
  - *intended for use in starting and improving assessment activities of community groups, NGOs, corporations, national governments and international institutions, to better focus the assessment on issues identified as priorities*

BELLAGIOSTAMP

- The principles will help realize the full potential of sustainability assessments by guiding them in the following areas:
  - **content** – the questions that should be answered in assessments
  - **process** – the way in which assessments should be carried out
  - **scope** – the range of the assessment across the dimensions of time and geography.
  - **impact** – the way to maximise the impact of the assessment on individuals' and policy makers' decisions
- It is important to note that the principles are interrelated and are intended for use as a complete set.

THE BELLAGIOSTAMP PRINCIPLES:

1. GUIDING VISION

- Assessment of progress towards sustainable development will be guided by the goal of delivering well being within the capacity of the biosphere to sustain it for future generations.

2. ESSENTIAL CONSIDERATIONS

Assessment of progress toward sustainable development will consider:

- the underlying system as a whole and the interactions among its components
- dynamics and interactions between current trends and drivers of change
- risks, uncertainties, and activities than can have an impact across boundaries
- implications for decision making, including trade-offs and synergies

3. ADEQUATE SCOPE

Assessment of progress toward sustainable development will adopt:

- an appropriate time horizon to capture both short and long term effects of current policy decisions and human activities

- an appropriate geographical scope ranging from local to global

4. FRAMEWORK AND INDICATORS

Assessment of progress toward sustainable development will be based on:

- a conceptual framework that identifies the domains that core indicators have to cover
- the most recent and reliable data, projections and models to infer trends and build scenarios
- standardized measurement methods wherever possible, in the interest of comparability
- comparison of indicator values with targets and benchmarks, as possible

5. TRANSPARENCY

Assessment of progress toward sustainable development will:

- ensure the data, indicators and results of the assessment are accessible to the public
- explain the choices, assumptions and uncertainties determining the results of the assessment
- disclose data sources and methods
- disclose all sources of funding and potential conflicts of interest

6. EFFECTIVE COMMUNICATION

In the interest of effective communication, to attract the broadest possible audience and minimise the risk of misuse, assessment of progress towards sustainable development will:

- use clear and plain language
- present information in a fair and objective way, that helps to build trust
- use innovative visual tools and graphics to aid interpretation and tell a story
- make data available in as much detail as is reliable and practicable

7. BROAD PARTICIPATION

To strengthen its legitimacy and relevance, assessment of progress towards sustainable development should:

- find appropriate ways to reflect the views of the public, while providing active leadership
- engage early on with users of the assessment so that it best fits their needs

8. CONTINUITY AND CAPACITY

Assessment of progress towards sustainable development will require:

- repeated measurement
- responsiveness to change
- investment to develop and maintain adequate capacity
- continuous learning and improvement

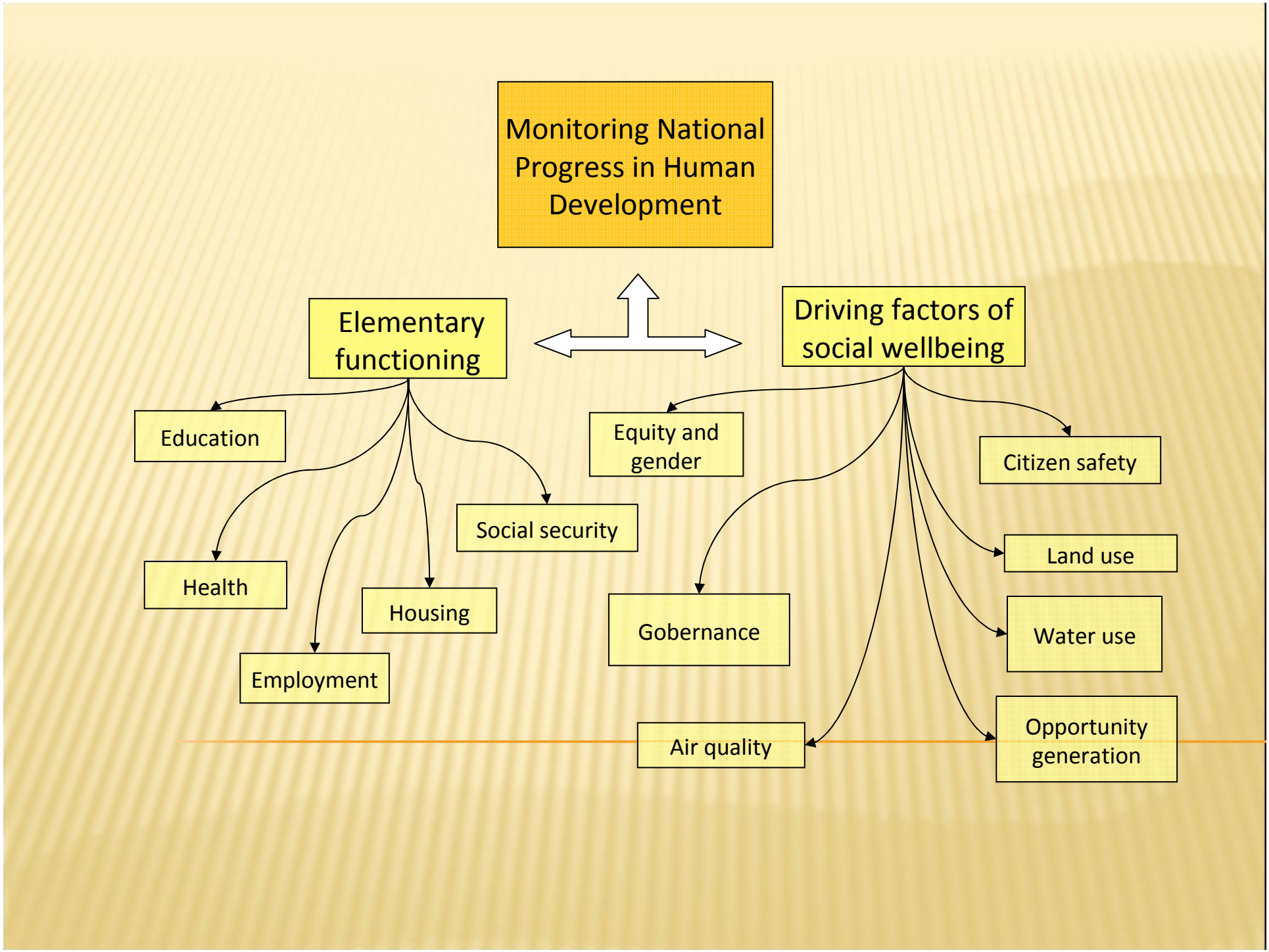
The principles in action

A QUICK CHECKLIST:

Name of Project:			
Principle	Comply		Observations
	Yes	No	
1. Guiding principles			
2. Essential considerations			
3. Adequate scope			
4. Framework and indicators			
5. Transparency			
6. Effective communication			
7. Broad participation			
8. Continuity and capacity			

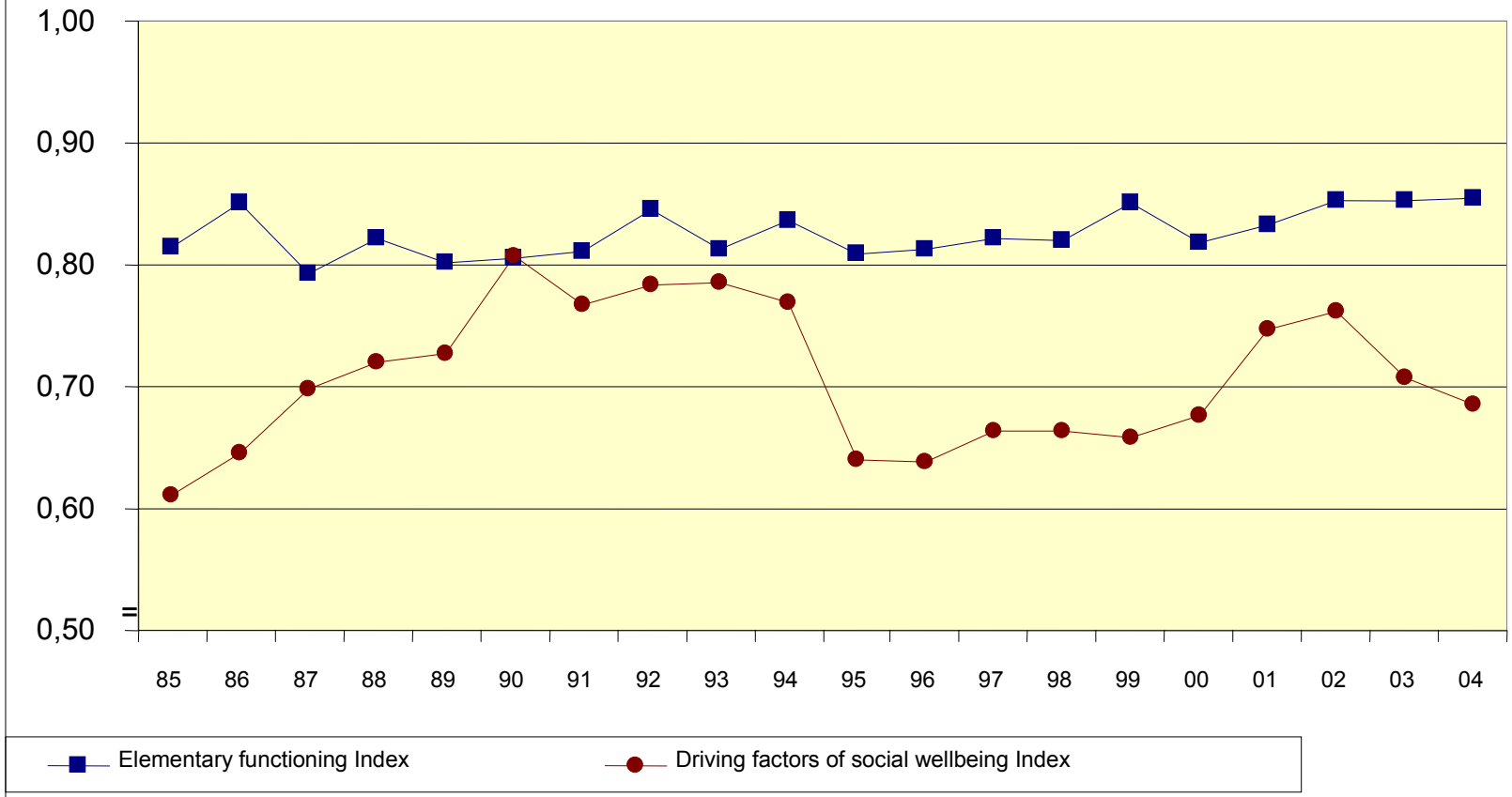
AN EXAMPLE
A PROJECT IN COSTA RICA TO MONITOR SOCIAL PROGRESS

- Proposal from the academia (University of Costa Rica)
- Broad participation of scientists, from different disciplines, to select core variables and indicators and set up the goals for 2010 and 2015


Monitoring National Progress in Human Development
Elementary functioning
Driving factors of social wellbeing
Education
Health
Employment
Housing
Social security
Equity and gender
Gobernance
Air quality
Citizen safety
Land use
Water use
Opportunity generation

Elementary functioning Index and Driving factors of social wellbeing Index

According to goals for 2010



***BellagioSTAMP®** in action*

Name of Project: MONITORING NATIONAL PROGRESS IN HUMAN DEVELOPMENT - CRI			
Principle	Comply		Observations
	Yes	No	
1. Guiding principles	√		
2 Essential considerations			
a. The whole and its parts	√		
a. Current trends and drivers	√		
a. Risks, uncertainties, cross boundary impacts		√	
a. Implications for decision making	√		
3 Adequate scope			
a. Time horizon	√		
a. Geographical scope		√	
4 Framework and indicators			
a. Conceptual framework	√		
a. Standardized measurement methods	√		
a. Targets	√		
5 Transparency			
a. Inputs and outputs accessible to the public	√		
a. Assumptions and uncertainties explained	√		
a. Data sources and methods disclosed	√		
a. Funding resources and potential conflicts of interest disclosed	√		
6 Effective communication			
a. Attract broadest audience	√		
a. Clear and plain language		√	
a. Build trust	√		
a. Tell a story easily	√		
a. Make relevant data available	√		
a. Guard against misuse and encourage analysis	√		
7 Broad participation			
a. Strengthen legitimacy	√		
a. It is useful for decision making	√		
8 Continuity and capacity			
a. Repeated measurement process		√	
a. Responsiveness to change	√		
a. Investment to keep effort on		√	
a. Continuous learning and improvement	√		

ANOTHER EXAMPLE:
NATIONAL STRATEGY ON CLIMATE CHANGE – MINISTRY OF ENVIRONMENT COSTA RICA

National Strategy on Climate Change (NSCC)

MINAE

Two complementary agendas:

I.

National Agenda

II.

International Agenda

Transverse axis

Economic, Social, and Environmental Sustainability of Development

NATIONAL AGENDA

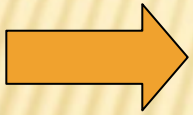
METRICS

Goal: Develop a precise, reliable and verifiable information system

- The CCNS considers, in addition to IPCC sectors, other ones in consequence to national needs, such as the need to develop the metrics to monitor and follow up the CCNS

METRICS

- Need to develop a methodology, organizing structure, and norms to generate and collect information to produce indicators for the other 5 pillars



support decision making process to confront climate change in different national and international areas

METRICS

Objective:

Have a precise, reliable and verifiable set of indicators built in the national decision making process

METRICS

- Under this objective a workshop was held in October 2007 to define next steps
- Multi stakeholders (more than 80 representatives from different institutions and universities) were invited to discuss and identify main challenges
- The main results were:

METRICS

- Sectors were identified for the two main pillars of the NSCC

Mitigation	Vulnerability and adaptation
Energy	Water resources
Transport	Agriculture
Agriculture	Fisheries and coastal zone
Industry	Health
Solid waste	Infrastructure
Tourism	Biodiversity
Water resources	
Land use change	

METRICS

- Next, indicators had to be identified and prioritized
  - Then, indicators have to be validated and
  - communicated to main stakeholders
- Later, weaknesses and strengths in the implementation of indicators were recognized, as well as
  - institutional strengthening
  - and need for funding allocation

METRICS

- The workshop was able to define key criteria to identify indicators:
  - Simple
  - Measurable
  - Achievable
  - Relevant
  - Temporally defined

METRICS

- Also, the workshop was able to define guiding principles to identify indicators:
  - Perceptible to changes
  - Quantifiable
  - Comprehensive
  - Synthetic
  - Cost-efficient

- As a result of this, the workshop explored possible indicators which, later, have to be developed thoroughly

MITIGACION			
SECTOR	**OBJETIVE**	**INDICATOR FOR INMEDIATE APLICATION**	**INDICATOR TO BE DEVELOPED AND TESTED**
Energy	Contribute to the mitigation of GHG and other contaminants in the energy sector	Consumption Reduction in Tj from thermal origin by process	Tons of CO_2 by process (production, storage, transport, distribution and commercialization of fossil fuels and electricity)
		Tons of C fixed by year and sector	
Transport	Reduce, by 2021, to 50% of 2005 emission of contaminants associated to transport (consider air transport) (include use of technology needed for achieving the objective (use of biodiesel, electric vehicles, ethanol, etc,))	Emission quantity by zones	
		Quantity of fuel sale (GM, DO, Jet fuel)	
		Quantity of vehicles inspected by RTV	
Agriculture	Promote actions leading to impact minimization of climate change		C balance by crop and by zone to 2010
			Proportional reduction of crop yield due to climate change
			Associated costs to the development of mitigation measures
Industry			
Solid waste	Prevent and reduce up to 50% the production of GHG from solid waste disposal by 2015		CO_2 equivalent by solid waste management
			Percentage of solid waste disposed in sanitary fillings
			Percentage of solid waste treated in sanitary plants
Tourism			
Water resources	Reduce the consumption of fossil fuel by hydroelectric power production	Energy production in Mw produced by hydropower as a percent of fossil fuel	Storage capacity with respect to offer
		Electric power consumed with respect to production value	
Land use change	At least keep and rearrange national pools with respect to 2005 to compensate and mitigate GHG	TM of CO_2-e stored and mitigated in forest pool	
		TM of sediment registered by hydroelectric plants	
		TM of CO_2-e emission from burned forest land	
		TM of CO_2-e emission from burned non forest land	

VULNERABILITY AND ADAPTATION			
SECTOR	**OBJECTIVE**	**INDICATOR FOR INMEDIATE APPLICATION**	**INDICATOR TO BE DEVELOPED AND TESTED**
Water resources	Provide national hydro system, by 2021, with adaptation capacities to climate change threats to reduce impact of extreme hydrometeorology events	Number of watersheds with risk studies to climate change	
		Water Resources Act passed	
Agriculture	Generate information to determine vulnerability and mechanism to help the development and adaptability of this sector by ecological characterization where different agriculture activities are taken place	Complete weather monitoring by 2010 with 60% of total meteorological stations	Plagues-intensity, severity and new ones.
		Quality and crop yield	
Fish and coastal zones	By 2021 climate change impact on marine and coastal areas are known and opportunities for adaptation have been identifies and 90% of them implemented	National Vulnerability Report available	
		National Adaptation Plan available	
Health	Strengthen interinstitutional and intersectorial coordination to enhance information systems to plan harmonized activities towards the reduction of vulnerability and the establishment of mechanism to adapt to climate change effects on health, increasing population ability and capacity to adopt healthy life styles		In 2010 an information system on environment and health will be in place
			In 2015 the environment and its effects on population health state will be watched over to create action plans
			In 2021 information on promotion actions on health will lead to the reduction of 30% of acute and chronic pathologies related to climate change
Infrastructure	Keep the infrastructure quality and capacity by means of policies, actions and investments in different sectors to adapt, and reduce risk, in human and natural environments due to climate change impact.	Water availability by planning region	Ratio of Km of bad roads with respect to Km of roads in good condition nationally
		Cubic meters per capita of stored and processed water for human consumption in dams, catchments tanks and other places.	
		Proportion of energy produced by alternative sources with respect to total (% Kwh with respect to total)	
Biodiversity	At 2012 adaptation priority measures have been implemented in the three identified ecosystems more vulnerable of loosing biodiversity because of climate change. (it is important to include cultural diversity, species development with commercial potential, genetic biodiversity, impact from other activities)	Area and degree of fragmentation of natural habitat for each fitogeographic unit represented in each of the 3 vulnerable ecosystems Area and degree of fragmentation of forest cover and agroforestry in the main biological corridors represented in the 3 vulnerable ecosystems Area of agricultural ecosystems in forest land	Index of red list for resident birds

BellagioSTAMP® *in action*

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- The task is unfinished and continues

THANK YOU