

# PROGRESS IN THE APPLICATION OF THE EASE – IIRSA METHODOLOGY

## CASE STUDY:

Group 6 of Projects in the Andean Hub:

Connection: Colombia – Ecuador II

Bogotá – Mocoa - Tena – Zamora – Palanda – Loja

**Fanny Peña Villamil**

Buenos Aires, August of 2009

## **PROGRESS IN THE APPLICATION OF THE EASE – IIRSA METHODOLOGY**

Background related to the application of the EASE/IIRSA

Context and Overview of the Application of the EASE/IIRSA

1. Territorial dynamics – trends and scenarios
2. Proposals regarding strategies and lines of action
3. Recommendations to strengthen the environmental management of the projects of the group
4. Recommendations to validate the EASE- IIRSA methodology

## OBJECTIVE OF THE APPLICATIONS OF THE EASE-IIRSA

To validate the use of the EASE-IIRSA Methodology as a tool for environmental and social planning at a strategic level, which allows:

- (i) To improve the understanding of the current and future territorial dynamics,
- (ii) To identify limitations and possibilities related to the execution of infrastructures (Groups of Projects), in order to generate more sustainable development processes in the territory.
- (iii) To promote processes to improve decision quality in relation to integration and development, at the supranational, national-central and regional-local level, through proposals devoted to the optimization of the benefits of the regional infrastructure.

## PRODUCTS OF THE APPLICATION

1. Trends and scenarios of the territory through the analysis of strategic factors (critical aspects, implications, risks and opportunities), associated to the execution of the Group of Projects.
2. Strategies, lines of action and magnitude of the investment required to build more sustainable development and integration options associated to the execution of the Group of Projects.
3. Environmental and social recommendations for the planning and layout of the Group 6 projects that have not been executed already and for the projects that are being built, improved or refitted.
4. Recommendations to validate and provide feedback in relation to the methodological layout proposed by the CAF (Andean Development Corporation, in English) for the EASE-IIRSA.



## OVERVIEW OF THE GROUP 6 PROJECTS OF THE ANDEAN HUB

### GROUP 6 PROJECTS OF THE ANDEAN HUB:

- CEBAF San Miguel and its Accesses (Anchor Project)
- Section: Mocoa - Santa Ana - San Miguel
- Enlargement: Zamora Airport
- Section: Bella Unión-Plan de Milagro-Gualaquiza
- Building of Road: Zamora Palanda
- Section: Narupa – Guamaniyacu

### STRATEGIC FUNCTION OF THE GROUP:

To develop a corridor that would articulate in international trade schemes zones of central and southern Colombia with (i) north Amazon provinces and central Ecuador (Tena, Puyo) as well as (ii) areas of southern Ecuador (Loja).

### DIMENSIONS OF THE INFRASTRUCTURE:

Road length: 2,600 Km and study area: 79,000 Km<sup>2</sup> (40% in Colombia and the 60% in Ecuadorian territory).

### GEOGRAPHIC LOCATION:

Ecuadorian Zone known as one of the areas with the most biodiversity in the planet – Hotspot of Biodiversity – Tropical Andes.

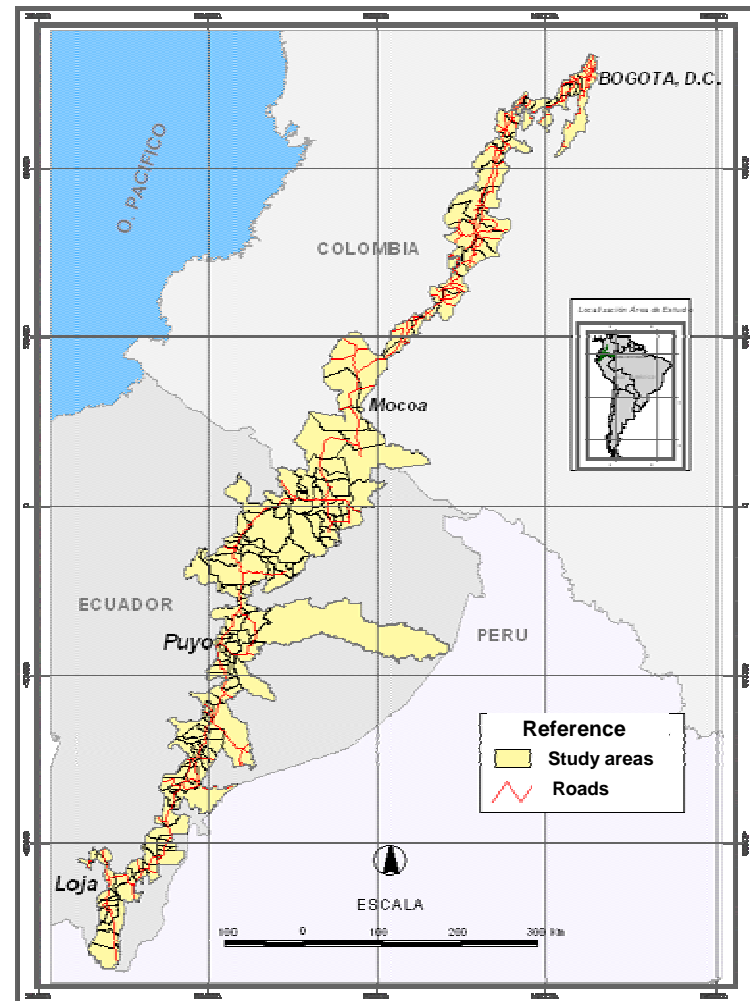
### ALTITUDINAL RANGE:

From 5,700 msnm (Cotundo Parish - Cayambe volcano in Cordillera Real Oriental, in Ecuador) and 200 m (Curaray Parish – Ecuadorian Amazon).

### POLITICAL-ADMINISTRATIVE COVERAGE:

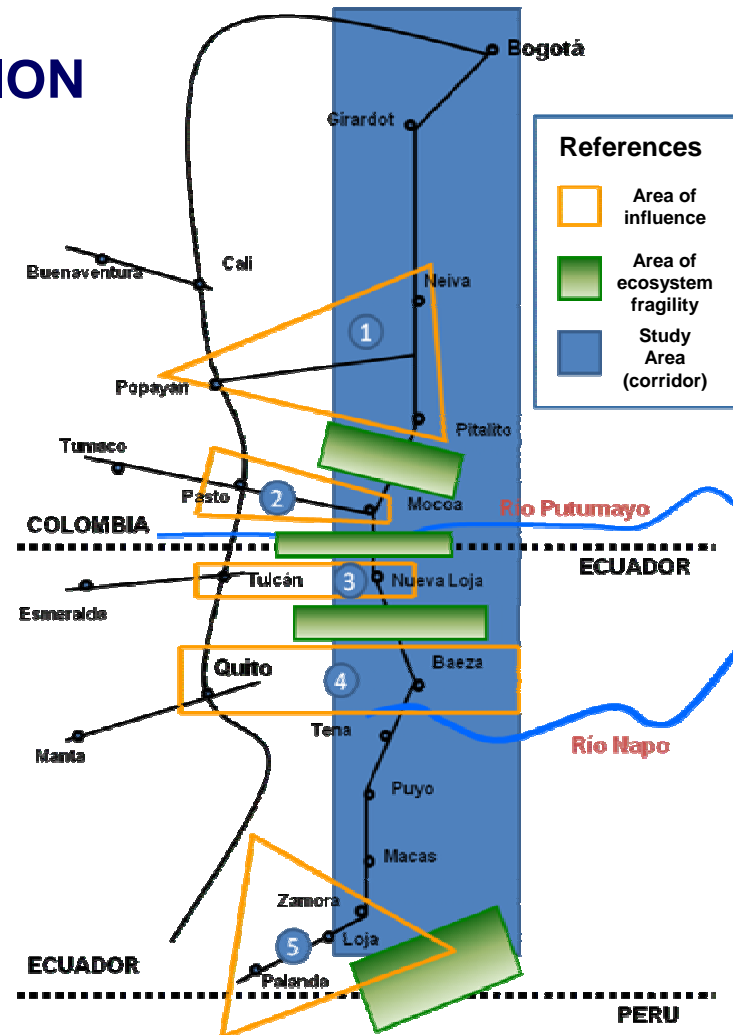
41 municipalities in 5 departments in Colombia, and 130 parishes in 26 cantons in Colombia and Ecuador.

From Bogotá to Neiva, Pitalito, Mocoa and San Miguel in the border with Ecuador, and in Ecuador, from Lago Agrio (Nueva Loja), Tena, Puyo, Gualaquiza, Méndez, Zamora, Loja and finishes in Palanda, in the border with Perú.



## IDEOGRAPHIC REPRESENTATION OF THE STUDY AREA

It defines areas of external connectivity influence with the study area of the Group 6 of the Andean Hub through the analysis of integrated infrastructure systems.

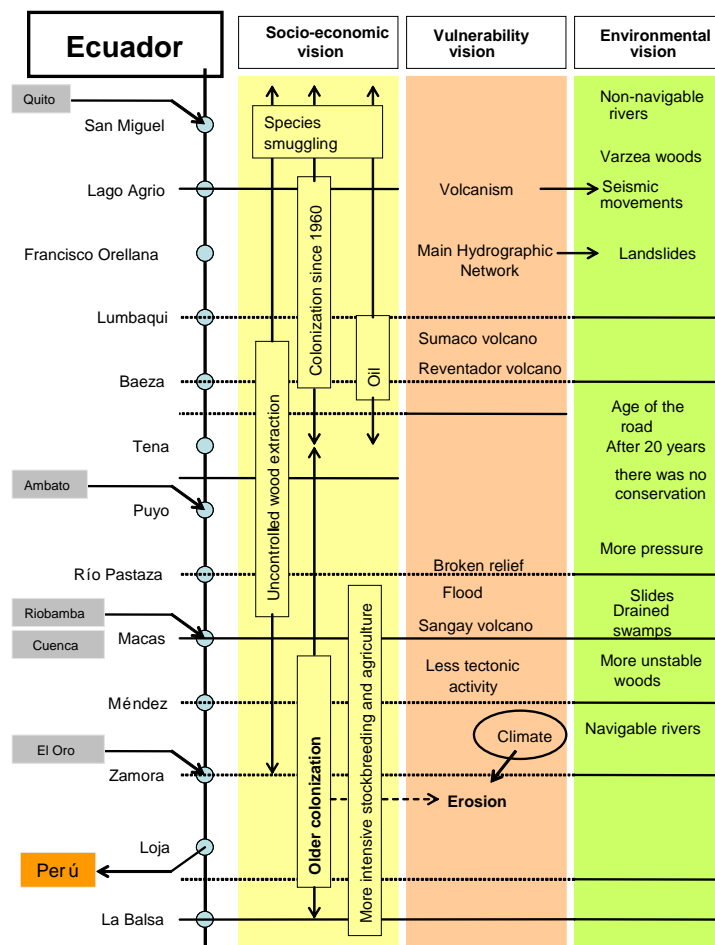
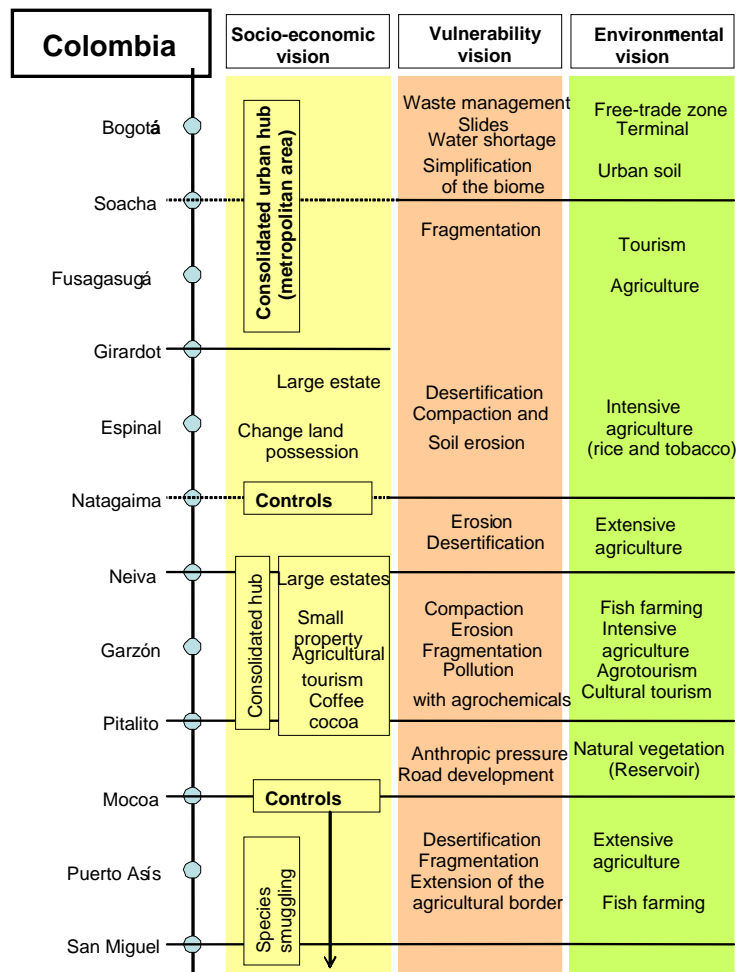


The application of the ESAE allowed consultation and dialogue on information, trends, scenarios and action proposals with “key actors” that directly or indirectly act in the territory where the study is being carried out.

- Ministries of Transportation and Public Works,
- National Planning and Development Secretariat – SENPLADES, in Spanish,
- National Department of Planning, Colombia,
- Ministries of the Environment,
- Departmental and Provincial Planning Secretariats.
- Ministries of Mines, Oil and Energy,
- Amazon Research Institutes,
- Non-Governmental Organizations (UICN, ZioAi, Ecolex, etc.),
- Universities, among others.



# 1. TERRITORIAL DYNAMICS – TRENDS AND SCENARIOS



Current and trend scenarios (2018) were defined through categories of territorial analysis that summarize attributes for the description and assessment of the territory as an organized and complex entity.

1. **Representativeness Category**: composition and organization of the territorial systems. It allows to analyze the territory in terms of importance (convenience, interest, consequence); peculiarity (rareness) and implication (role of the components within the system)
2. **Connectivity Category**: structure of the territorial systems in terms of spatial distribution, coexistence, communication and exchange (elements, service, goods, products)
3. **Functionality Category**: dynamics of the territorial systems in terms of the setting of flows, cycles and functions.
4. **Vulnerability Category**: capacity of the territorial systems to accept changes, interventions and pressures in terms of flexibility, adaptation, resistance and resilience, and consilience.
5. **Impact Category**: approximation to the current or future impact that the groups of projects may generate on the environment and the society.

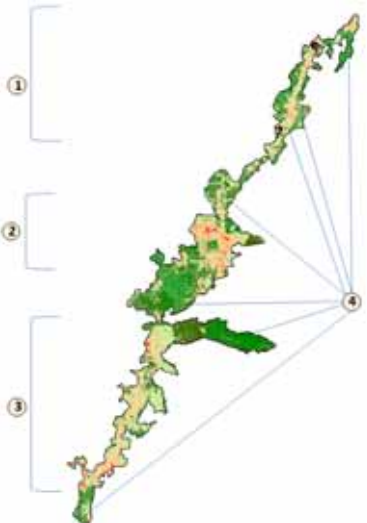

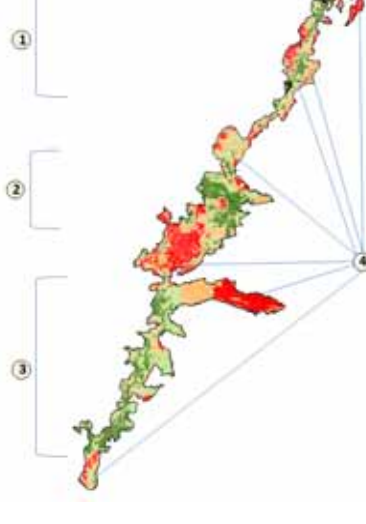



# 1. TERRITORIAL DYNAMICS – TRENDS AND SCENARIOS

TERRITORIAL REPRESENTATIVENESS STRATEGIC FACTORS (Environmental sub-system)	ENVIRONMENTAL	STRATEGIC FACTOR	SOCIO-ECONOMIC AND CULTURAL	TERRITORIAL REPRESENTATIVENESS STRATEGIC FACTORS (Socio-economic and cultural sub-system)
	Hydric environmental offer for the energy sector (1) sale of environmental service (water, air, ecotourism, biodiversity), biodiversity patents for traditional communities, development of germplasm banks and conservation <i>in situ</i> (2,6 AND 8)	<b>OPPORTUNITY</b> 	Subregional center to continental scale, extension of tourism offer, agroindustrial entrepreneurship (1) alternative tourism (scientific, ecotourism, contemplative, agro-ecotourism), agroforestry (2, 6 AND 8) service offer (4) research development, systems of low-impact settlement to generate appropriation and sovereignty processes (5) consolidation as a free-trade zone (7)	
	Biodiversity / high biogeographic value, rich and rare ecosystem, environmental services, development of research and pharmacologic industry, cosmetics, food and textile, building industry (2, 5, 6, 7 AND 8)	<b>POTENTIAL</b> 	Territorial GDP increase , diversified and complex logistics platform, trend to the population stabilization, development of subregional centers (1) efficient use of the oil royalties (2, 7), alternative tourism public institutionality models, systems of integral production, food security (8) subregional center of southern Ecuadorian Amazon, capacity for territorial management, subregional network of cities and settlements, natural tourism and of immovable patrimony (4)	
	Growth of population under risk (1, 2, 3, 4, 5) informal economic activities, underground economies (1,2 and 5) pressure of colonization and extraction economic activities, vulnerability due to deforestation and fire threatens (2, 3, 5, 6, 7 and 8) deforestation, implantation or enlargement of settlements aggressive for the environment, convergence of natural threats, loss in areas of natural ecosystems (2,3,5,6,7 and 8) risk of slides, seismic activity, geological faults, tectonism (2, 3 and 5) influence of the El Niño phenomena and risk of drought (4 and 5)	<b>RISK</b> 	Informal economic activities, underground economies (1,2) movement of the indigenous cultures from old territories, implantation or extension of settlements that are aggressive for the environment (3, 7) pressure of the extractive economic activities 2,3,5,6,7 and 8) increase in crime rates technological risks due to the oil economic activities (2 and 7) Dependence on the international cooperation (3) pressure due to the development of soil markets (5) illegal economic activities, illegal traffic, smuggling (2, 5 and 7)	
	Soil degradation, loss of biodiversity, increase in the ecologic trace (1, 3, 4 and 5) illegal traffic of flora and fauna as well as of products and ancient knowledge, genetic material traffic, (2, 5, 6, 7 and 8) extension of the agricultural border aggressive agricultural production systems (1, 2,3,5 and 6) colonization pressure on protected areas (2, 6 and 8) progression of desertification, erosion, desestabilization of the land, loss of soil (1 and 5)	<b>CRITICAL NATURE</b> 	Weakness of urban metabolism, increase of land unsustainability (1) reduction and provision of culture to the indigenous population (2, 3 AND 7) enclave economy generated by the oil activity, increase of illegal activity, cultural homogenization and installation of values that do not belong to the territory (2 and 7) aggressive agricultural production systems (1, 2, 3, 5 AND 6)	

# 1. TERRITORIAL DYNAMICS – TRENDS AND SCENARIOS

TERRITORIAL CONNECTIVITY STRATEGIC FACTORS (Environmental sub-system)	ENVIRONMENTAL	STRATEGIC FACTOR	SOCIO -ECONOMIC AND CULTURAL	TERRITORIAL CONNECTIVITY STRATEGIC FACTORS (Socio-economic and cultural sub-system)
	Ecological connectivity (5)	<b>OPPORTUNITY</b> 	Increase in subregional connectivity (1 and 2) consolidation of a free-trade zone and border crossing (San Miguel-Lago Agrio (1) consolidation of a free-trade zone and border crossing in the second connectivity access with Perú (La Balsa)(3)	
	Generation of ecological connectivity corridors (3, 4 and 5)	<b>POTENTIAL</b> 	Development of subregional centers(1 and 2) multimodal cross connectivity to the group of projects: Manta – Manaos and Tumaco - Belén de Pará, alternative way to the Panamerican hub (1) cross connectivity with the hills and ports in the Pacific and Perú (1)	
	Fragmentation of ecosystems Loss of connectivity in areas of natural ecosystems (1 and 2)	<b>RISK</b> 	Fragmentation of the public institutionalality at a regional scale (1, 2 and 3) deforestation, implantation or enlargement of settlements aggressive for the environment (1, 2, 4, and 5)	
	Loss of ecological connectivity and rise of fragmentation (1, 2, 4 and 5) Loss of connectivity in areas of natural ecosystems (1, 2 and 4)	<b>CRITICAL NATURE</b> 	Weakness of environmental institutionalality pressure of colonization and extractive economic activities (2, 4, and 5) movement of the indigenous cultures from old territories (1, 2 and 5)	

# 1. TERRITORIAL DYNAMICS – TRENDS AND SCENARIOS

TERRITORIAL FUNCTIONALITY STRATEGIC FACTORS (Environmental subsystem)	ENVIRONMENTAL	STRATEGIC FACTOR	SOCIOECONOMIC AND CULTURAL	TERRITORIAL FUNCTIONALITY STRATEGIC FACTORS (Socio-economic and cultural subsystem)
	Sustainable agricultural activity, medium-density settlements and low impact (4) sell of environmental services (water, air, ecotourism, biodiversity), biodiversity patents for traditional communities, development of germplasm banks and conservation <i>in situ</i> , alternative tourism, (scientific, ecotourism, contemplative tourism, agro-ecotourism), (4)	<b>OPPORTUNITY</b> 	To form and consolidate a functionally integrated area (1 and 3) increase of the territorial GDP, diversified and complex logistics platform, trend to the stabilization of the population (1 and 3) deepening of decentralization for the strengthening of the indigenous institutionality, strategic partners for development initiatives, ecotourism, environmental services (2, 3 and 4) low-impact settlement systems to generate appropriation and sovereignty processes (2 and 4 in border zones)	
	Generation of a sustainable Amazon settlement, for a potential coexistence laboratory (2, 3 and 4 in Amazon areas)	<b>POTENTIAL</b> 	Development of subregional centers and increase of subregional connectivity (1, 2, and 3) alternative tourism, models of public institutionality, systems of Integral production, food security (1, 2 and 3)	
	Pressure of colonization and extractive economic activities, vulnerability due to deforestation and fire threats, movement of indigenous cultures from old territories, desestabilization of the land, deforestation, implantation or enlargement of settlements aggressive for the environment, convergence of natural threats, technological risks due to the oil economic activities, forest fires in agroforest fields, Increase of the ecologic trace (2, 3 and 4)	<b>RISK</b> 	Territorial imbalance, urban duality, social conflict (1, 2, and 3) problems of territorial management, Institutionality conflicts (1, 2, 3 and 4)	
	Weakness of the environmental institutionality (1, 2, 3 and 4) illegal traffic of fauna and flora and of products and ancestral knowledge, genetic material traffic (4) pressure of the extractive economic activities (4)	<b>CRITICAL NATURE</b> 	Pressure of the extractive economic activities, rise of the illegal activity, cultural homogenization and installation of values that do not belong to the territory (2,3,and 4) increase of crime rates (2)	

## RESULTS OF THE SCENARIO ANALYSIS

The EASE for the Group 6 of the Andean Hub allowed the identification of the main factors. They are as follows: opportunity, potentiality, risk and environmental and social critical nature of the territory, which generate the projects as a whole.

- **Areas subject to threats** due to movements in mass, volcanism, floods, droughts, seismic activity forest fires,
- **Areas with potential** for restoration of ecologic connectivity corridors, environmental services, sustainable use of the forest and biodiversity, sustainable Amazon settlements and coexistence laboratories,
- **Critical areas** due to fragmentation of natural ecosystems in protected areas, as well as armed conflicts, illegal traffic in border zones and risks of institutional disarticulation and scarce governability, among others.

## 2. PROPOSALS REGARDING STRATEGIES AND LINES OF ACTION

1. Governance in the territorial development processes
2. Conservation and restoration of ecosystems
3. Prevention and risk reduction
4. Development of sustainable road infrastructure
5. Creation of sustainable urban settlement networks
6. Sustainable productive entrepreneurship

## 1. Governance in the territorial development processes

- ✓ Strengthening of the existing public institutional for the development of planning and management instruments.
- ✓ Creation of planning and territorial development management corporations or agencies at a regional scale (*supradepartmental, supracantonal and supranational*).
- ✓ Development of a system of standardized indicators, applicable to the nations that make up the integration hubs of the IIRSA.
- ✓ Regulatory juggling and binational operative articulation and/or articulation of the Amazon basin.
- ✓ Strengthening of the social weave, social networks and interculturality and gender.



### 2. Conservation and restoration of ecosystems

- ✓ Functional connectivity of ecological corridors
- ✓ Strengthening of the conservation planning

### 3. Prevention and risk reduction

- ✓ Identification of the risk
- ✓ Prevention and reduction of new risks
- ✓ Mitigation and adaptability of existing risks
- ✓ Arrangements and management of emergencies
- ✓ Recovery and financial protection of public and private capital

4. **Development of sustainable road infrastructure**
  - ✓ Green roads
  - ✓ Sustainable engineering
5. **Creation of sustainable urban settlement networks**
  - ✓ Multi-purpose municipal cadastral systems
  - ✓ Contention of urban expansion
  - ✓ Smart settlements
6. **Sustainable productive entrepreneurships**
  - ✓ Eco-tourism entrepreneurships
  - ✓ Sell of environmental services

<b>Required investment for the implementation of the strategies</b>		<b>USD 296,000,000</b>	
Total surface of the territory object of strategies	<b>76,000 Km<sup>2</sup></b>	Average investment (Km <sup>2</sup> )	<b>USD 3,897</b>
Total population that belongs to the territory object of strategies	<b>7,767,825</b>	Average investment per inhabitant	<b>USD 38</b>

- Formulation and Execution of Environmental and Social management Plans for the Group of Projects
- Land and assets management.
- Program for the resettlement and restitution of socio-economic conditions for the population
- Promotion and fostering of the outreach of information and participation rating
- Good practices for the management of slopes and disposal of spare material

Exercises for the CAF to apply the EASE-IIRSA methodology to case studies:

- Group 6 of Projects of the Andean Hub: Connection: Colombia – Ecuador II, Bogotá – Mocoa- Tena – Zamora – Palanda – Loja.
- Road Project: Km.19-Nareuda-Extrema, Nicolás Suárez Province, Department of Pando, Republic of Bolivia.
- Road macroproject: Valle de Aburrá – Golfo de Urabá, Department of Antioquia, Republic of Colombia.

### 1. About the EASE-IIRSA Methodology:

- The application to particular cases allows to develop new criteria, instruments, procedures, activities and other variables for the validation of the EASE-IIRSA.
- The attainment and accreditation of information is constituted in a road critical for the construction of scenarios through indicators (report, register, systematization and analysis).
- The participation of subject-oriented experts as well as territorial and ancestral experts is decisive in relation to the achievement of results in the EASE-IIRSA.
- It is necessary to have a technical, subject-oriented and administrative support team.
- The estimation of costs regarding the investment derived from the strategies and lines of action of the EASE-IIRSA misleads the strategic nature of the methodology.
- The layout may be adapted and may be complemented according to the results of its application to other case studies.

## 2. About the definition of technical criteria for the implementation and analysis of the EASE-IIRSA:

- To identify and select strategic factors for the analysis,
- To gather, analyze and synthesize secondary information,
- To define spatial units for the territorial analysis,
- To define categories of analysis,
- To select indicators,
- To select analysis tools,
- To develop technical files on socio-environmental indicators.

### 3. About the role of the Governments in the application of the EASE-IIRSA

- It is required more compromise and participation of the involved governments during the process of application of the EASE-IIRSA methodology to particular case studies in order to achieve the best results of this applied exercise.
- The responsible government entity must call the key actors (e.g. IIRSA National Coordinators) and the entity responsible for the EASE-IIRSA must do the same (at least 1.5 month in advance).

### 4. About the role of the key Actors in the application of the EASE-IIRSA

- The actors called for the application of the EASE-IIRSA have a limited understanding of the strategic analysis that is expected to achieve with the application of the EASE.
- It is necessary to provide training on this strategic analysis so that the key actors, specially the governmental ones, can understand, manage and legitimize it.



### 5. About the Consultation Process and actor participation scheme

- The key actors mistrust the application and results of the methodology due to limitations in participation.
- The Participation Plan in the methodology is expected to include recommendations so that, during the phases previous to the implementation of the strategies, processes related to a greater participation and participation and decision legitimization spaces are generated.

**THANK YOU VERY MUCH!**