

Review of National Policies for rural roads in countries with developing economies

Paola Villani

- TC 2.5 *Rural roads systems and accessibility to rural areas*
- Chair of the Italian National Technical Committee
- paola.villani@polimi.it



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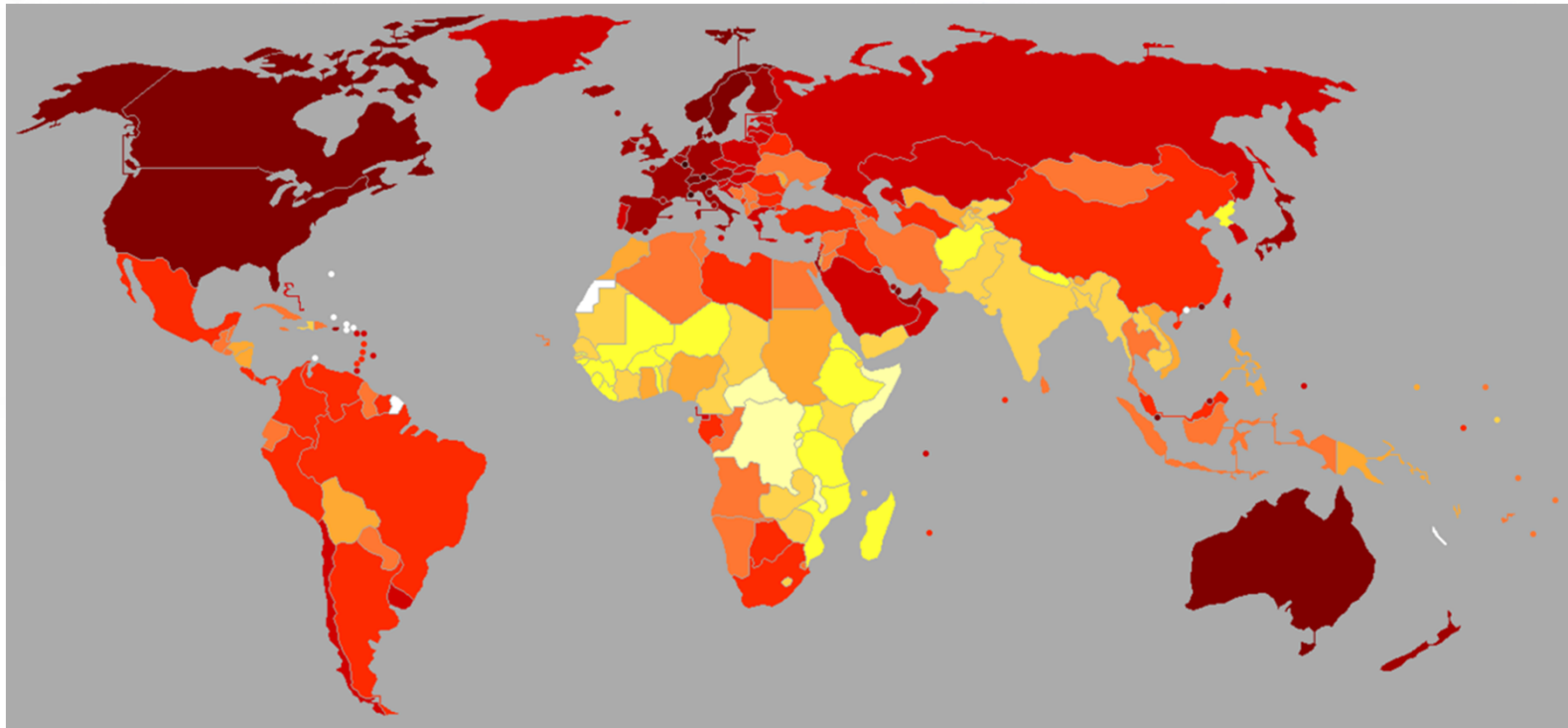
Purpose-built: objectives of the document

This report aims to provide information to road infrastructure managers about best practices for sustainable rural road maintenance in all countries, but especially for the countries of Asia, Africa and Central and South America with developing economies.



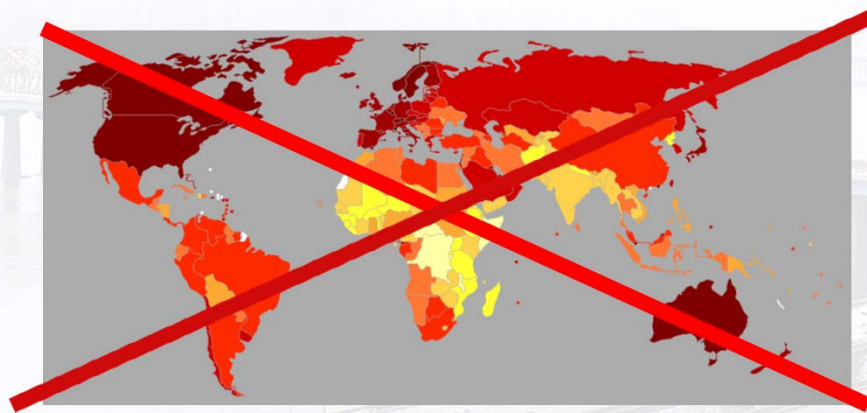
Economic Outlook and analysis of the various Continents

Countries in the world ranked by the value of gross domestic product (GDP) annual (2013) per capita.



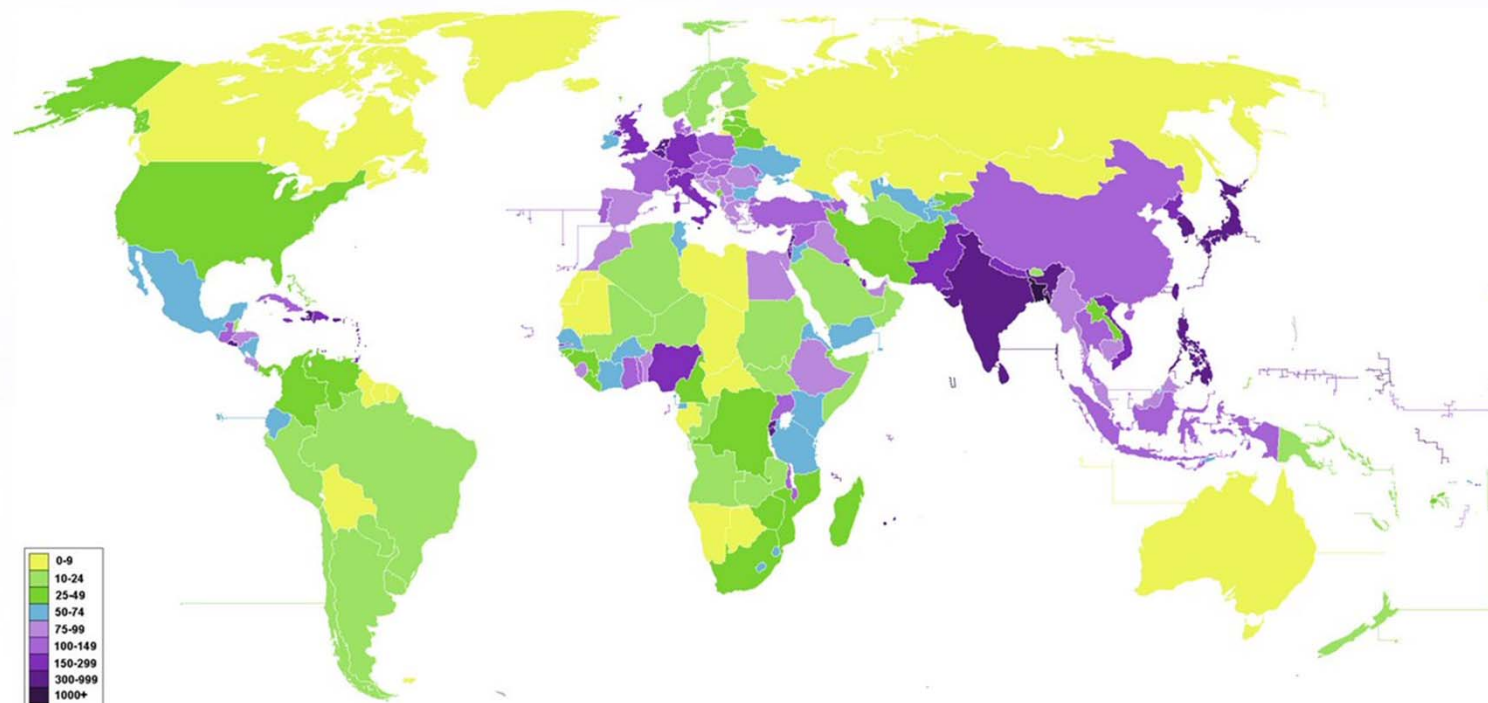
Economic Outlook and analysis of the various Continents

Committee members have the opinion that the GDP per capita is not a good indicator of development for several reasons: first, the expenses related to events (erosion, floods, earthquakes, etc.), expenses related to traffic accidents determine higher costs. All emergency measures taken accordingly to reduce hydrogeological risk (landslides and network failures) will increase global GDP, but this does not mean that the country has a growing economy.



Countries of the world classified by density

We have developed specific indicators (density of networks, in terms of kilometers of roads per square kilometer of area, percentage of paved roads in total), road density indicators for each country that allow a complete reading and can help develop consistent and sustainable policy.



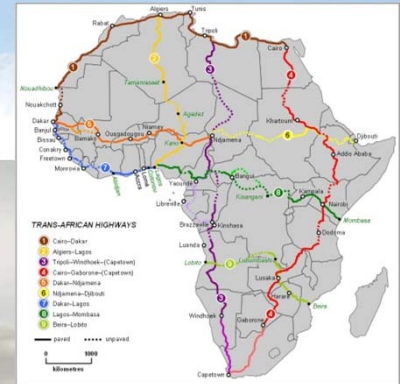
What is a route? What is a country road or highway?

In programs for rural and secondary roads, the definition of these concepts is constantly confused. A road or a route that is a collector road public domain, designed and built primarily for vehicle traffic.

A path is a channel of communication where we usually happens. In this context, **a road becomes a road when we improve the technical specifications** and we design the roadway to withstand heavier vehicles, by type of road. We have several methods to classify our roads: geometric / functional classification (traffic) / Administrative.

Geometric Ranking * / functional classification ° (traffic) / Administrative rank ^

A104 Nairobi-Nakuru [Kenya] (136 km)



2,55 mètres

Many roads have a width of 7 meters

- * Minor road
- ° Main Road
- ^ State Highway



Rural roads

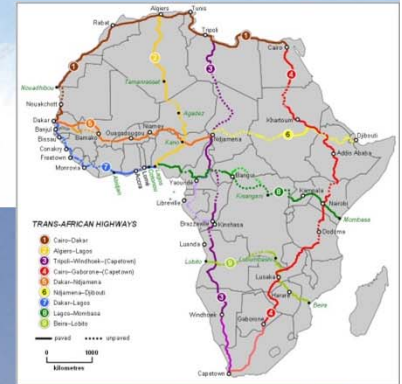
The committee focused on rural roads with the following specifications :

TYPOLOGIE E	
Surface	paved
Way number	1
Average traffic	100 vehicles per day
Maximum slope	13%
Pavement width	4.6 m

and we analyzed the experiences that have been applied to roads with higher specifications to connect the rural network more.

Geometric rank / functional classification (traffic) / Administrative classification

A109 - Mombasa Road [Kenya] (470 km)



Road Corridor A109 Mombasa –
Trans-African Highway 8 (TAH 8)
Lagos-Mombasa, 6.259 km



National policies for rural roads

Regular maintenance of roads is essential to the economic vitality of a country. There is a particular need to focus on the maintenance of rural roads when planning and managing a vast transportation network, although the roads are often considered less important than the main roads or highways.



To make good policies must be known and measured

Population and Area countries, regions or continents macro-2013 (density of classified roads, highways, roads, paved, unpaved, etc. - in kilometers of roads 100 km / km²).

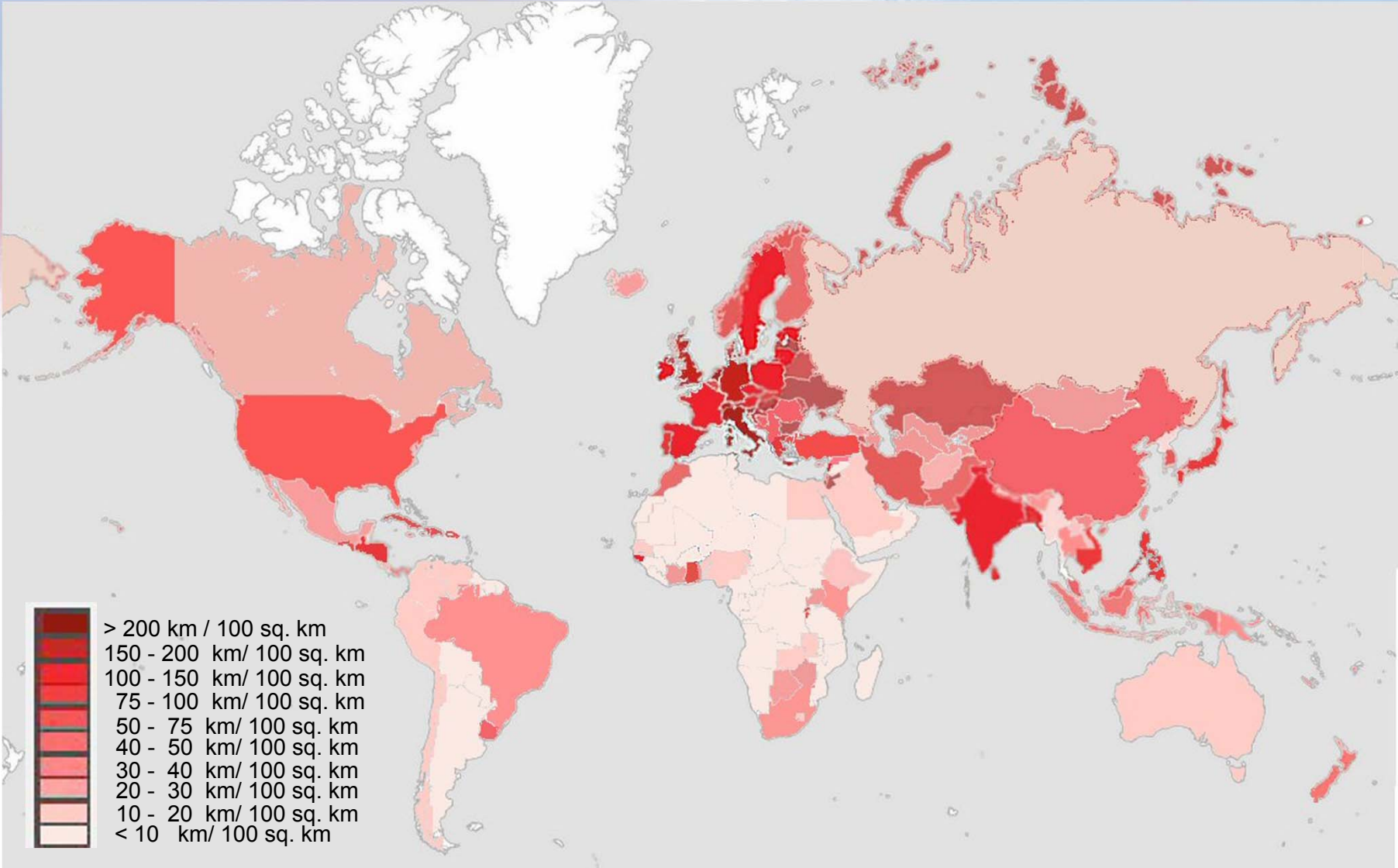
Stratégie d'échantillonnage statistique: Population et superficie des 12 macros régions en 2013. Base de données: 215 Pays du monde		Variables pour l'analyse économique des infrastructures routier de chaque Pays	Source d'information	Observation
12	215	Population	Banque mondiale (1)	Chiffres estimés à partir de données de la Division de la population de l'Organisation des Nations Unies
12	215	Superficie	Banque mondiale (1)	
12	215	Réseau routier	Banque mondiale (1)	Données des Membres du Comité Technique 2.5 (rapport d'études, actes de Congrès, Conférences, Séminaires, etc.)
12	215	Réseau routier classé	Banque mondiale (1)	
12	215	Routes qui ont une chaussée d'une largeur entre 3 et 7 mètres	Données des Membres du Comité Technique 2.5 (rapport d'études, actes de Congrès, Conférences, Séminaires, etc.)	
12	215	Km de chaussées revêtues et pas revêtues	Données des Membres du Comité Technique 2.5 (rapport d'études, actes de Congrès, Conférences, Séminaires, etc.)	
12	215	Densité routière : nombre de km de route par 100 km²	Statistiques routières mondiale, AIPCR / PIARC, IF	Nombre de km de route par 100 km ² en 2013 (année d'étude) ou la dernière année où ces données étaient disponibles.
7	215	Politiques nationales en faveur de l'investissement routier	Enquête effectuée par le Comité Technique 2.5	Documents officiels des différents États, Questionnaire

To make good policies must be known and measured

The work includes a questionnaire to determine the length in kilometers of the network (national, departmental roads, local roads, minor collector roads*), Investment and maintenance of the road network (density of the classified road network, motorways, national roads, paved, unpaved, etc. - in kilometers of roads 100 km / km²).

* In some countries (e.g. France), a rural road is a path assigned to public use but belonging to the private domain of the commune, not rated in the municipal roads

Road density (km of road per 100 sq. km of land area)



To make good policies must be known and measured

In the database there is not much data as regards the number of existing roads. In addition, in some countries, the entire network does not denote good coordination between sub-regional areas or do not support the location of production activities: this aspect does not allow to fully evaluate and appreciate the country's resources.

On the other hand, there are serious gaps in traffic conditions due to poor maintenance and lack of infrastructure (bridges, etc.)

To make good policies must be known and measured

The road network analyzed by this report is a composite network, with variable width of course, even within country: roads with road width of 3 and 7 meters, paved roads or not coated with different percentages in the vast network road infrastructure of each country.



Economic vision and political affairs

1/4

A new approach to the funding of the management and maintenance of rural roads is necessary. **The strategic goal should focus on the participation of different levels of government and different sectors:** coordination and integration are necessary to implement specific initiatives to ensure road maintenance of financial planning (and in the case, the tracks), preventive maintenance and long-term.



Economic vision and political affairs

2/4

This coordination should include guidelines that give priority to the reconstruction of the existing road infrastructure, the strengthening of embankments to protect against road damage, prevent landslides and subsidence. There must be a perpetual funding.



Economic vision and political affairs

3/4

When we neglect rural roads, this can cause a harmful imbalance that has a negative impact on socio-economic development and political participation: in many cases the issues of hydrogeological damage is a clear example of misguided policies that have financed only main network instead of all the basic routes.



Economic vision and political affairs

4/4

The objectives are:

- given to specialists and organizations with the tools and best practices in sustainable maintenance;
- emphasize the importance of the maintenance of rural roads, including their socio-economic benefits;
- estimate different operating methods that enhance maintenance practices;
- Identify maintenance costs and funding options;



Scope of the document

1/2

The report covers a wide range of topics including:

- analysis of planning procedures, financing and management, to identify best practices;
- identify common obstacles and ensure proper maintenance of rural roads;
- providing large-scale employment during road construction;
- evaluate the successful experiences in the allocation of funds for rural road maintenance;



Scope of the document

2/2

- evaluate the access of poor rural communities to local markets and social services;
- determining policy and governance to meet local needs for mobility and accessibility;
- consider best practices related to the use of appropriate and innovative technologies for road maintenance focus on the participation of local communities;
- review the analytical tools used to assess sustainable maintenance.



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National policies regarding perpetual accessibility of rural areas

- 1) compilation of national policies for rural development
- 2) identify institutional aspects
- 3a) analyze issues of decentralization
- 3b) assess the forms of decentralization
- 4) consider the funding mechanisms
- 5) compare public policies
- 6) develop recommendations



ECA Member States

Note: Although Portuguese and Spanish are national languages in a few countries, English, French and Arabic are the three UN working languages that apply to the Africa region.

English Speaking

Botswana
 Cameroon (also French)
 Egypt (also French and Arabic)
 Eritrea
 Ethiopia
 Gambia
 Ghana
 Kenya
 Lesotho
 Liberia
 Libyan Arab Jamahiriya (also Arabic)
 Malawi
 Mauritius
 Mozambique
 Namibia
 Nigeria
 Seychelles
 Sierra Leone
 Somalia
 South Africa
 Sudan (also Arabic)
 Swaziland
 Uganda
 Tanzania
 Zambia
 Zimbabwe

French Speaking

Algérie (also Arabic)
 Angola
 Bénin
 Burkina Faso
 Burundi
 Cameroun (also English)
 Cap-Vert
 Comores
 Rep. du Congo
 Dem. Rep. du Congo
 Côte d'Ivoire
 Djibouti
 Egypte (also English & Arabic)
 Gabon
 Guinée
 Guinée-Bissau
 Guinée équatoriale
 Madagascar
 Mali
 Maroc (also Arabic)
 Mauritanie
 Niger
 Rép. Centrafricaine
 Rwanda
 Sao Tomé-et-Principe
 Sénégal
 Tchad
 Togo
 Tunisie (also Arabic)

Arabic Speaking

Algeria (also French)
 Egypt (also English & French)
 Libyan Arab Jamahiriya
 Morocco (also French)
 Sudan (also English)
 Tunisia (also French)



Durban, 2012

Sudáfrica
 Benin
 Etiopía
 Mali
 Marruecos
 Namibia

Case studies ^{1/2}

- Cotonou, Benin, 2012

- Niamey, Niger, 2012

- Abidjan, Cote d'Ivoire 2013
















- Rabat, Maroc, 2014

- El Salvador, 2012

- Benin
- Chile
- Colombia/Italia
- Costa Rica
- El Salvador
- Guatemala
- India
- México
- Nicaragua
- Paraguay

Case studies 2/2

Países			
●	●●●●	 Belice	
●	●●●●	 Costa Rica	
●	●●●●	 El Salvador	
●	●●	 Guatemala	
		 Honduras	
●	●●●●	 Nicaragua	
	●	 Panamá	
Territorios Limítrofes de:			
	●●●●	 Colombia (Chocó)	
●	●●●●	 México (Campeche)(Chiapas) (Quintana Roo)(Tabasco)	
Dependencias		 Isla Clipperton	 Francia

Países			
●	●●●●	 Argentina	
●	●●●	 Bolivia	
●	●●●	 Brasil	
●	●●●●	 Chile	
●	●●●●	 Colombia	
●		 Ecuador	
		 Guyana	
●	●●●	 Paraguay	
●	●●●	 Perú	
		 Surinam	
		 Uruguay	
		 Venezuela	
Dependencias		 Aruba	
		 Bonaire	
		 Curazao	
		 Guayana Francesa	
		Islas Malvinas	
		Islas Georgias del Sur y Sandwich del Sur	



● Bávaro, Rep. Dominicana, 2012

● Roma, 2013

● Madrid, 2013

● Rabat, Maroc, 2014

● Managua, Nicaragua 2015

- Argentina
- Chile
- Costa Rica
- El Salvador
- Mexico
- Nicaragua
- Paraguay

● El Salvador, 2012

- Benin
- Chile
- Colombia/Italia
- Costa Rica
- El Salvador
- Guatemala
- India
- México
- Nicaragua
- Paraguay



... and taking into account many States that were analyzed as case studies ... here there is only a summary of policies

1. Countries should have well-defined policies for rural road maintenance.

- Administration
- Prioritization
- Decentralization
- Financial, Technical and Social Sustainability

Establishing tolls on the secondary network is an unreasonable error and contrary to the reasons that led to build a road or modernize.

National policies for the planning and construction of rural roads 1/2

... Country differences between the models and strategies



National policies for the planning and construction of rural roads

2/2

2. One must have specific resources for rural road maintenance

Decentralization works only in some countries.

Overall resources for the maintenance of rural roads are defined by the central government.....

The issue of rural roads, must be a state policy

What are the financial resources to fund specific rural roads?

The following funding sources for the sustainable maintenance of rural roads have been identified: Taxes, Excise, * tax warehouses on Weights and Measures **, private Contributions Other Contributions Other Fund (central government, local governments and municipalities).

* system linking all countries to encourage the use of motorized vehicles and thus poor funding system.

** Establish tolls on the secondary network is an unreasonable error and contrary to the reasons that led to build a road or modernize.

Specific funds for rural road maintenance

The lasting and sustainable maintenance of rural roads and access to the territories is a problem administratively treated with a different way in each country and assumes importance due to political, economic and strategic governments in most developing countries.



Decentralization for rural road maintenance

3. **The participation of the Community in the case of the planning and execution of the maintenance of rural roads** Generally there was a greater community involvement in the planning and execution of the maintenance of rural roads, what brought the communities to support the work decisively and demand that those responsible take decision with the necessary attention by asking financial resources for sustainable road maintenance.



The sustainability and maintenance of rural roads

4. Consider a priority, the protection of the environment in road maintenance tasks.

Protecting the environment is still a subject of debate and, in some cases, taken into account, but in most cases wobbles cons basic needs to have appropriate materials for the formation of roads inadequate materials and use of available financial resources.



Financial, technological and social resources

5. Research new technologies for soil stabilization. Implement the use of management systems (BIM) for rural roads

- Deepen and highlight the importance of management with modern management systems for sustainable maintenance of rural roads.



- Mark the scope of maintenance to ensure food security and access to health and education.
- Examine the environmental benefits of specific projects.