

2007
2012

National Infrastructure
Program 2007-2012

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MÉXICO

ISBN: 978-968-828-106-2

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Message from President Felipe Calderón Hinojosa

July 2007

Infrastructure is synonymous of economic, social and human development. Economic growth and opportunities for the well-being of Nations are clearly correlated with the level of development of their infrastructure. The countries we compete with are placing the highest priority on the modernization of their infrastructure, because they know that it is a condition for success in the global economy. Mexico cannot and should not fall behind.

For a number of reasons, Mexico has not been able to maintain a rate of investment in the sector in keeping with its capabilities. The recurrent financial crises, the insufficiency of public finances, the lack of clear incentives and of conditions of certainty for investment, among many other reasons, explain this lag which has also translated, unfortunately, into a loss of opportunities for Mexicans and underdevelopment.

Today, nevertheless, we Mexicans have a great opportunity to overcome these lags. We have conditions of economic stability, sound public finances, a strategic geographical position, a network of trade agreements that afford Mexico direct access not only to the world's largest market but to different regions and to more than one billion consumers on several continents. We have a young population which is increasingly well trained and certainty in the direction of what we want for the future.

Mexicans today have the opportunity and the historical responsibility of giving a renewed projection and a new profile to the country's infrastructure for development. Few sectors such as this better reflect the possibilities for progress. It is therefore possible to say that **to invest in infrastructure is to build a better Mexico.**

Mexico's society and government have progressed gradually but firmly in designing this future: first, through the Farsighted Project "Mexico 2030" we established a long-term planning horizon around a vision of the Mexico we want; then, through the National Development Plan we drew up the general strategies for the next six years and now, through the formulation of different plans and sectoral programs and most importantly this National Infrastructure Program, we specifically designed the task before us.

The conditions are in place so that we can advance in the direction we want with regard to infrastructure, so as to strengthen and modernize our highways, ports and airports, build more dams, power plants and petroleum installations, and also to build new electric power, drinking water and drainage networks.

To that end, the **2007-2012 National Infrastructure Program** establishes the objectives, goals and actions that the federal government will promote to increase the coverage, quality and competitiveness in this strategic sector for national development. The Program takes on the challenge of building a solid, up-to-date and extended infrastructure in benefit of today's and tomorrow's generations. It therefore defines actions with a comprehensive, long-term vision.

The Program is based on recognition that infrastructure is an indispensable requirement to advance more quickly in the fulfillment of three central aims for Mexico's development:

First, it is an essential factor for raising regions' competitiveness because it lowers transportation costs and times, facilitates access to distant markets, fosters the integration of chains of production and furthers the generation of the jobs we so badly need.

Second, it is a key instrument in counting on sufficient, quality energy inputs at competitive prices that broaden the development horizons of families, entrepreneurs, producers, artisans and the providers of services.

Third, it is a powerful resource to provide the poorest families with equal opportunities to improve their situation because it breaks the isolation and social exclusion of their communities, promotes education, health and housing, favors the introduction of basic services, and increases income possibilities.

To achieve these goals, the Program –in compliance with the guidelines established in the National Development Plan– provides a clear and defined strategy to make Mexico one of the leaders in infrastructure both in Latin America and among the emerging countries.

Looking to the future, the National Infrastructure Program seeks to consolidate our country as one of the world's principal logistical platforms, tapping our enormous geographical and trade advantages.

This will create appropriate conditions for this activity to deploy its full economic development power in benefit of an increasingly larger number of Mexican families. In this way, we will achieve a more dynamic, just and inclusive regional development.

The Program will also seek to give unprecedented support to the modernization of the country's highway, airport, port, energy and water infrastructure, safeguarding environmental sustainability at all times. The goal of promoting the infrastructure necessary to give tourism unprecedented support has also been outlined.

My government is convinced that it is possible to harmonize economic development with environmental conservation. That is the only way we can guarantee that coming generations will have natural resources to continuously upgrade their levels of well-being and progress.

The goal of increasing the access of Mexican families to electric power, drinking water and drainage services, above all in the areas with the greatest needs, has also been established.

The National Infrastructure Program is being built on the basis of three scenarios. One is the base scenario, which assumes that Mexico will have additional resources stemming from the "Public Finance Reform for Those Who Have the Least," proposed to the Congress of the Union, and that this reform will enable investment in infrastructure to be permanently increased by at least one point of Gross Domestic Product in the following years. Another is an inertial scenario, which assumes that the government will not have additional resources, so infrastructure investment will consequently not increase and will even decrease because of the need to allocate increasingly greater resources to the payment of pensions and investments made in the past through the mechanism of Investment Projects with Deferred Expenditure Impact (Pidiregas). Finally, the third, called the outstanding scenario, is based on the assumption that a set of structural reforms in various spheres (labor, energy, telecommunications, and others) are achieved and will accelerate the country's growth and allow a greater flow of infrastructure investment.

The National Infrastructure Program being presented to Mexicans is built on the assumptions established in the base scenario; that is, taking into account the positive impact on investment by the proposed Public Finance Reform

In brief, the National Infrastructure Program for 2007-2012 proposes to take decisive steps to increase trade and production, raise the competitiveness of the economy, provide more families with basic services, favor market integration, encourage more balanced regional development, and create the jobs that millions of Mexicans are demanding.

I am convinced that if Mexicans carry out the actions formulated in this Program, we will advance firmly in building the infrastructure the country needs for the 21st century; the infrastructure needed to achieve sound, sustained and sustainable development and to close the gaps of inequality; the infrastructure for us to build a better Mexico together.

In a world of fierce competition, Mexicans have decided to build a winning country. Now is the time for infrastructure. Let's make it a reality.



Introduction

- The National Infrastructure Program 2007-2012 states the objectives, strategies, goals and actions designed to increase the coverage, quality and competitiveness of the country's infrastructure.
- This Program is derived from the National Development Plan, and is a key element to increase growth, generate more and better jobs and attain sustainable human development.

- The document is divided into four parts:
 - i. Current infrastructure situation in Mexico;
 - ii. Long-term vision, including objectives and strategic actions;
 - iii. Sectoral vision, encompassing indicators, strategies, specific goals and key projects for each one of the sectors considered, and
 - iv. Investment requirements, presenting the amounts of resources needed to comply with the objectives.

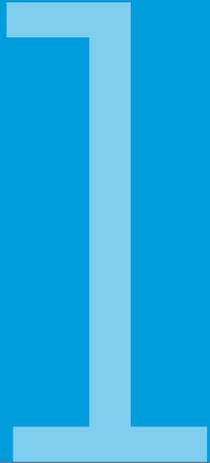
- For the purposes of this Program, the sectors taken into account are: transportation, communications, water and energy.
- The annexes^{1/} contains specific additional information, including a list of more than 300 projects, as well as other considerations regarding sources of financing, sectoral and regional strategies, and the prioritization of projects.
- Each project undertaken is subject to compliance of applicable regulations; for instance, prior to implementation, projects must have undergone the corresponding technical, economic and environmental feasibility studies. The project portfolio shall be updated periodically so as to contribute to the compliance of established objectives.

^{1/} Available at: www.infraestructura.gob.mx

- The Program considers three scenarios:
 - i. Inertial, which assumes that the structural reforms that the country requires will not be carried out;
 - ii. Base, which assumes that only one reform (the Public Finance Reform bill submitted to Congress) will be carried out, and
 - iii. Outstanding, which entails implementing all the required reforms.
- This document was elaborated according to the base scenario, though the main goals of each sector are presented in accordance to the three scenarios.

Content

1. Current Situation _____ 
2. Long-term Vision _____ 
3. Sectoral Vision _____ 
4. Investment Requirements _____ 



Current Situation

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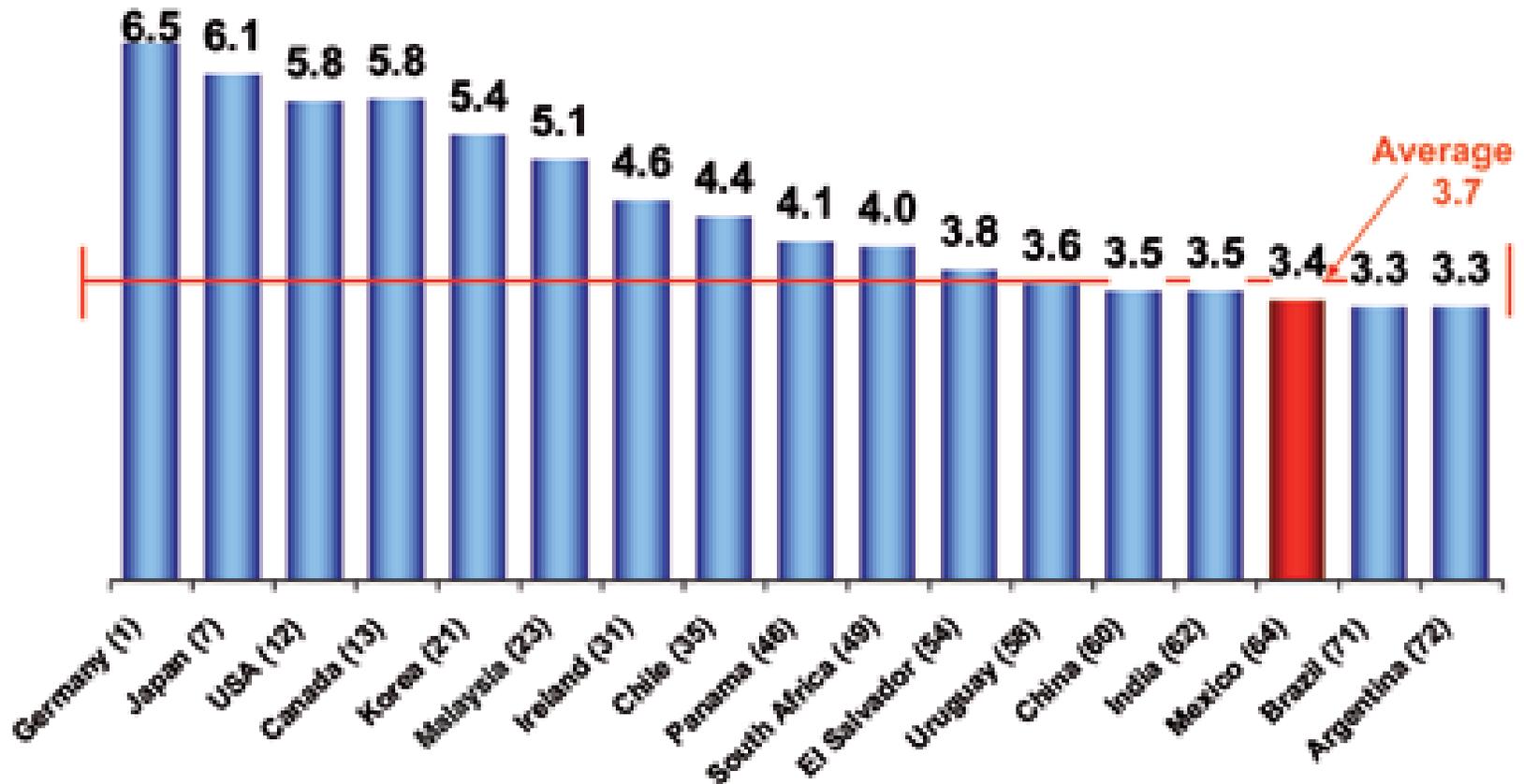
■ 1. Current Situation

Where We Stand

- According to the World Economic Forum^{1/}, Mexico is ranked 64th out of 125 countries, based in terms of the Infrastructure Competitiveness Index.
- At the sectoral level, Mexico is ranked 65th in railways, 64th in ports, 55th in airports, 73rd in telecommunications and 49th in highways.
- In Latin America, Mexico is ranked 7th, behind Barbados (28th), Chile (35th), Panama (46th), Jamaica (53rd), El Salvador (54th) and Uruguay (58th). At the sectoral level, Mexico ranked 3rd in railways, 11th in ports, 8th in airports, 14th in electricity, 8th in telecommunications and 6th in highways.

^{1/} Report 2006-2007.

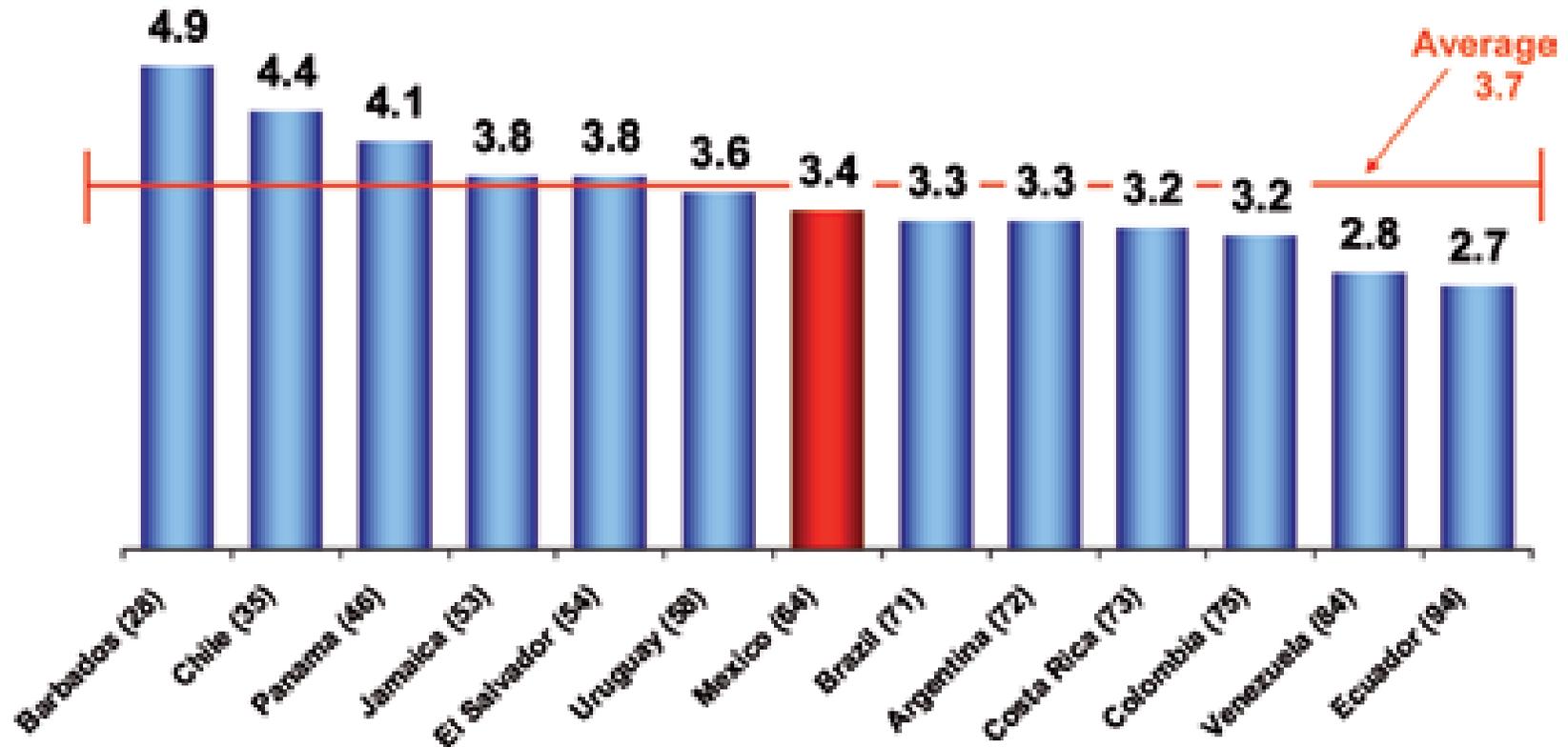
Infrastructure Competitiveness Index^{1/} (World Economic Forum)



Note: 1 = less developed in the world

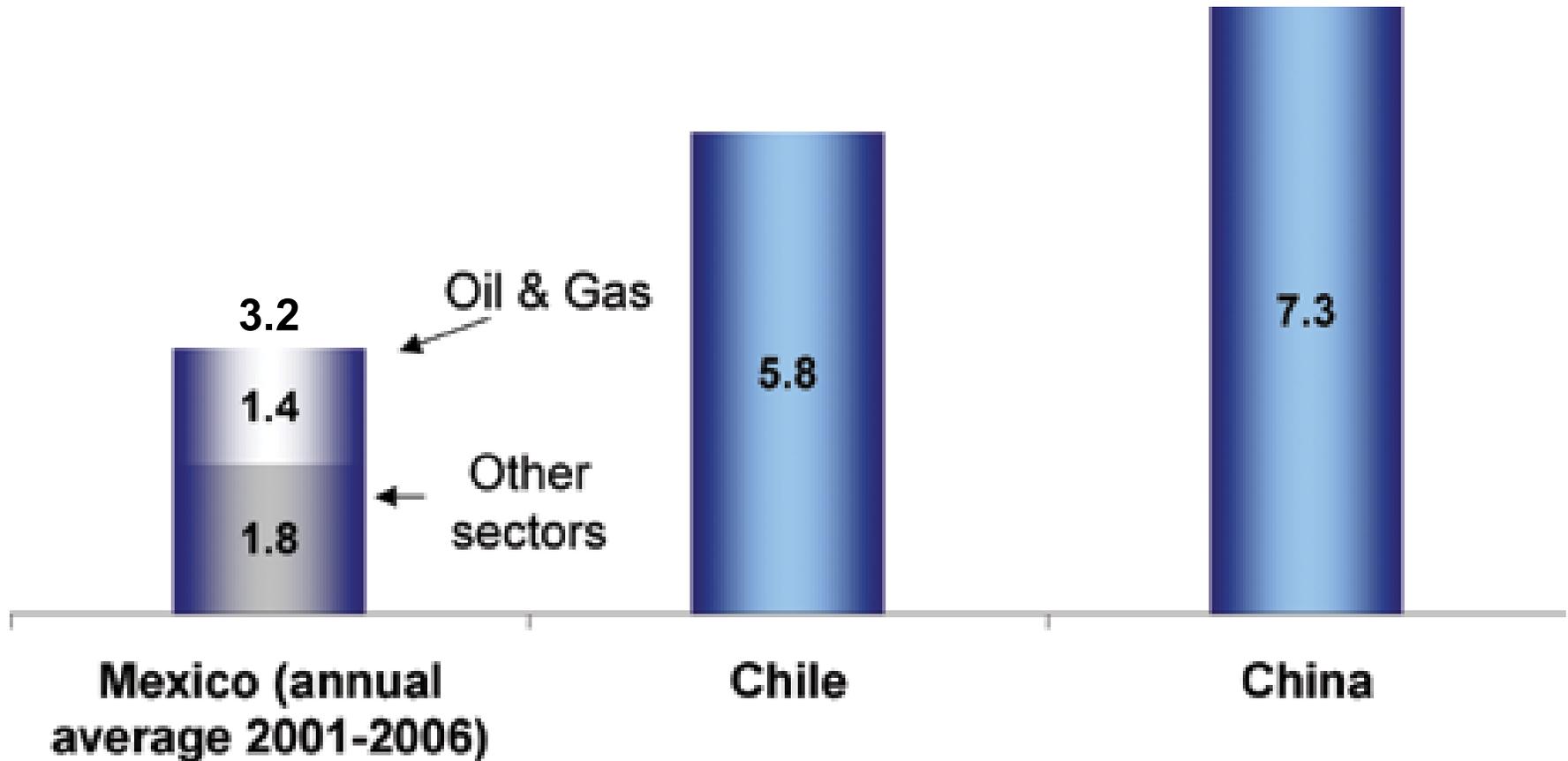
^{1/} All sources are given at the end of the document.

Infrastructure Competitiveness Index in Latin America (World Economic Forum)

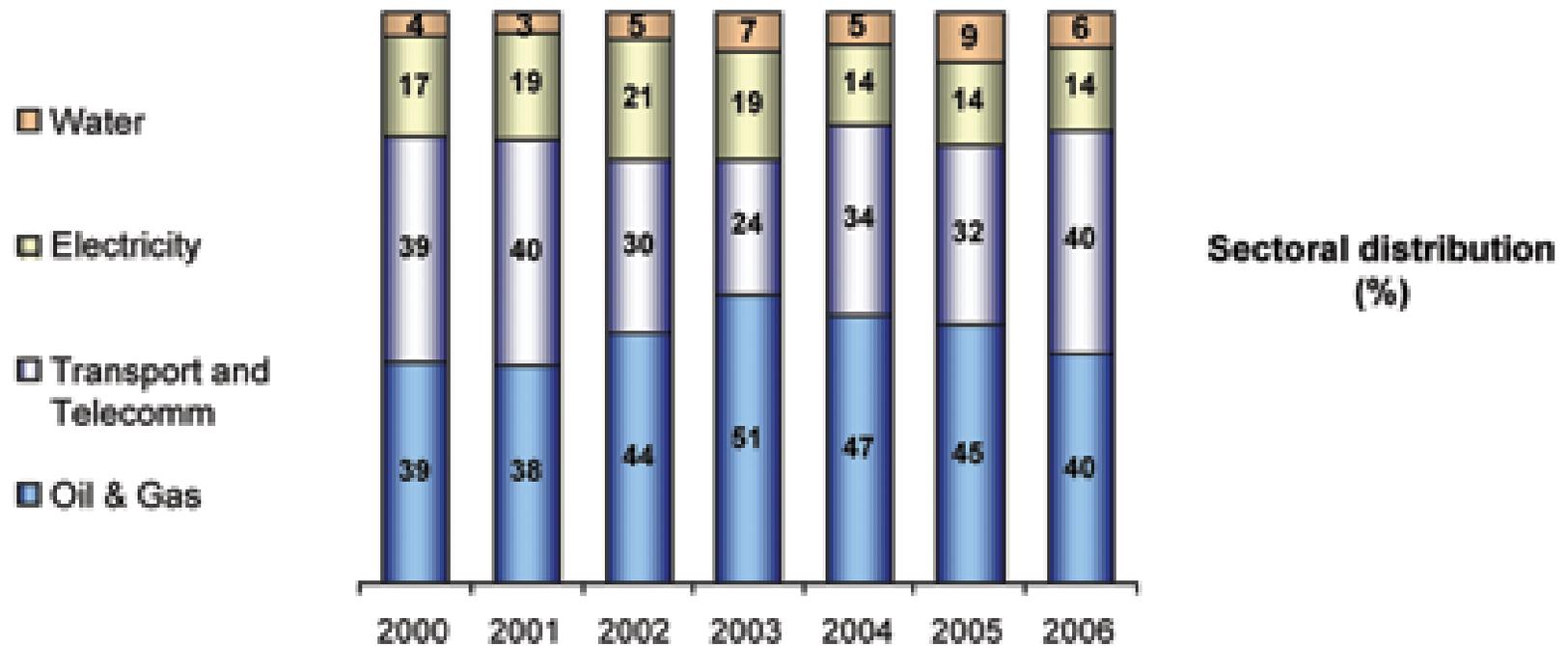
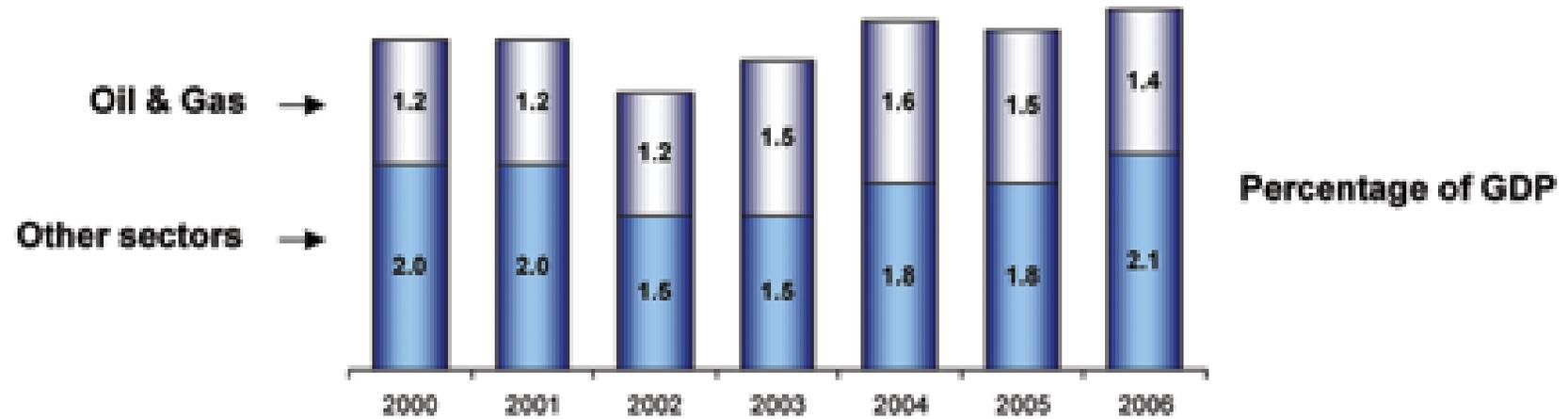


Note: 1 = less developed and inefficient; 7 = among the best in the world

Investment in Infrastructure (percentage of GDP)



Investment in Infrastructure in Mexico



■ 1. Current Situation

2

Long-term Vision

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■ 2. Long-term Vision

What We Want

- Raise the coverage, quality and competitiveness of our infrastructure.
- Make Mexico one of the main world's logistic platforms, taking advantage from our geographic position and our network of international treaties.
- Increase access to public services, particularly in areas of greatest need.
- Promote balanced regional development, paying special heed to the central, southern and southeastern regions of the country.
- Generate more permanent employment.
- Encourage sustainable development.
- Develop the infrastructure needed to promote tourism.

Overall Goal

- Mexico's goal for 2030 is to be ranked at the top 20 percent of the World Economic Forum's Infrastructure Competitiveness Index.
- In order to achieve this goal, Mexico must become a leader in coverage and quality of infrastructure in Latin America by 2012.



How to Achieve It

- i. Establish a long-term vision that will comprehensively define the strategic priorities and projects that will drive the present Administration.
- ii. Substantially increase public and private resources allocated for the development of infrastructure.
- iii. Encourage the authorization of multiyear investment projects.
- iv. Provide efficient follow-up at the highest level for the development of strategic projects and identify and control in timely manner those factors that might jeopardize their execution.
- v. Improve the planning, preparation, administration and execution of the projects, incorporating best practices and standards.

How to Achieve It

- vi. Develop projects that offer the greatest social benefits, based on their technical, economic and environmental feasibility.
- vii. Give solution to problems related to the acquisition of rights of way and simplify formalities for obtaining environmental authorization.
- viii. Strengthen the legal framework and actively promote public-private partnerships for the development of infrastructure.
- ix. Eliminate unnecessary regulations and inhibitors to investment, including, among other aspects, the revision and simplification of contracting procedures.
- x. Improve coordination among federal, state and municipal authorities as well as with the private sector for the development of infrastructure.

What We Need

- In order to attain the proposed objectives and goals, we must undertake a series of structural reforms that will lead to increased social and economic profitability and, through this, significantly increase both public and private resources allocated for the development of infrastructure.
- Three scenarios are contemplated:

Inertial: if the structural reforms needed by the country are not undertaken.

Base: if only the Public Finance Reform is implemented (**scenario used in the National Infrastructure Program's projections**).

Outstanding: if all the required reforms are undertaken.

Scenarios for Investment in Infrastructure 2007-2012

Scenario	Assumptions	Average annual investment ^{1/} (% of GDP)
Inertial	Decreasing resources as compared to those registered in recent years, as a result of the drop in oil income and expenditure pressures in other areas	2.0 – 3.0
Base	Assumes that half of the additional tax revenue stemming from the Public Finance Reform bill sent to Congress is earmarked for infrastructure	3.0 – 4.5
Outstanding	Significant increase in public and private resources for investment in infrastructure as a result of structural reforms	4.5 – 6.0

^{1/} Contemplates public and private investment.

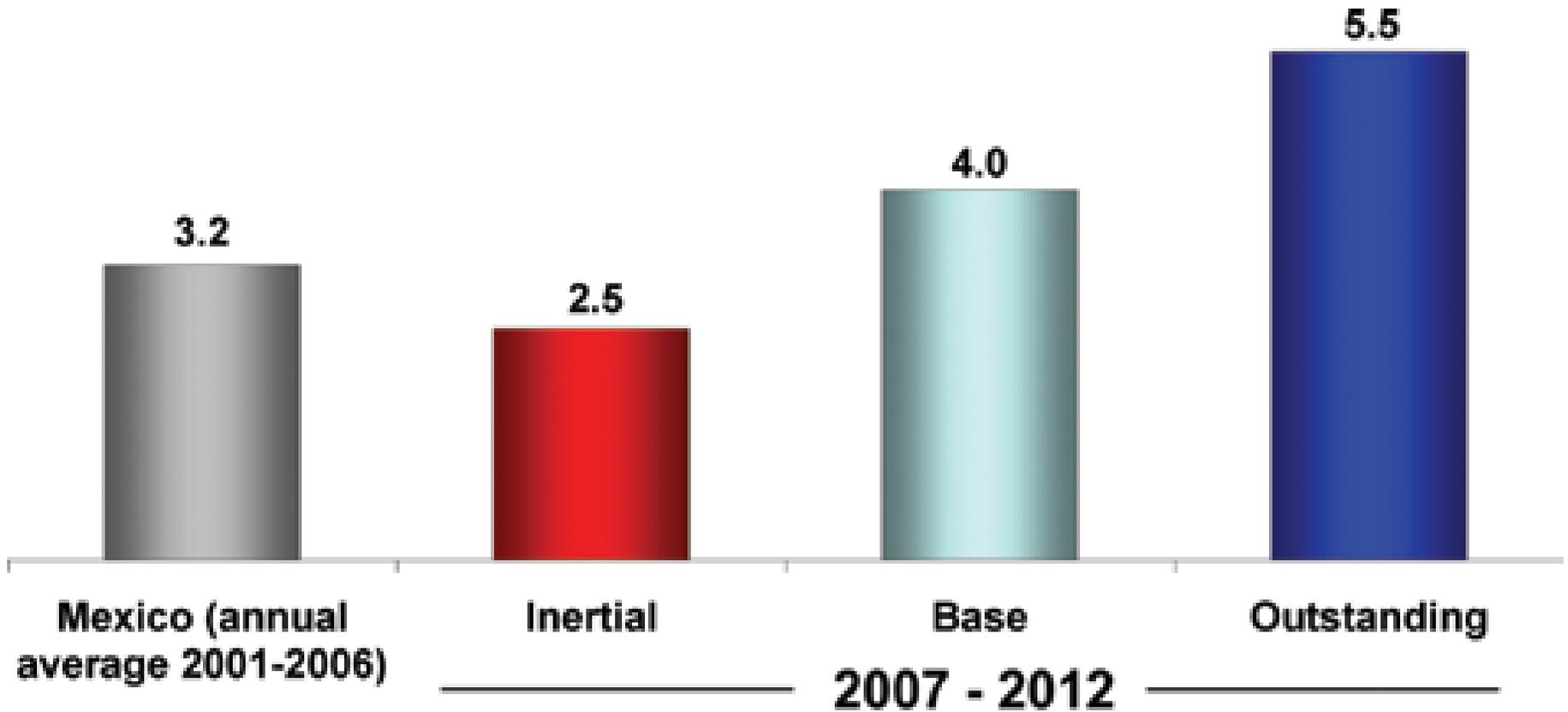
Scenarios for 2007-2012

Scenario	Investment in Infrastructure 2007-2012 (% of GDP)	Additional annual growth of GDP ^{1/}	Additional jobs generated through infrastructure 2007-2012 ^{1/}	Investment in infrastructure 2007-2012 (billions of US dollars)
Inertial	2.5%	0%	0	150
Base	4.0%	0.6%	720 thous.	226
Outstanding	5.5%	1.2%	1,440 thous.	301

^{1/}Refers to the direct impact of improved investment on GDP growth and employment as compared to the inertial scenario. Does not take into account the impact of greater efficiency in the economy resulting from structural reforms.

Note: the original values of this document were in mexican pesos. The exchange rate used for the conversion to US dollars is 11.2 and it's taken from *Crterios Generales de Política Económica 2007* that the Ministry of Finance elaborates for public finance projections purposes.

Investment in Infrastructure (percentage of GDP)

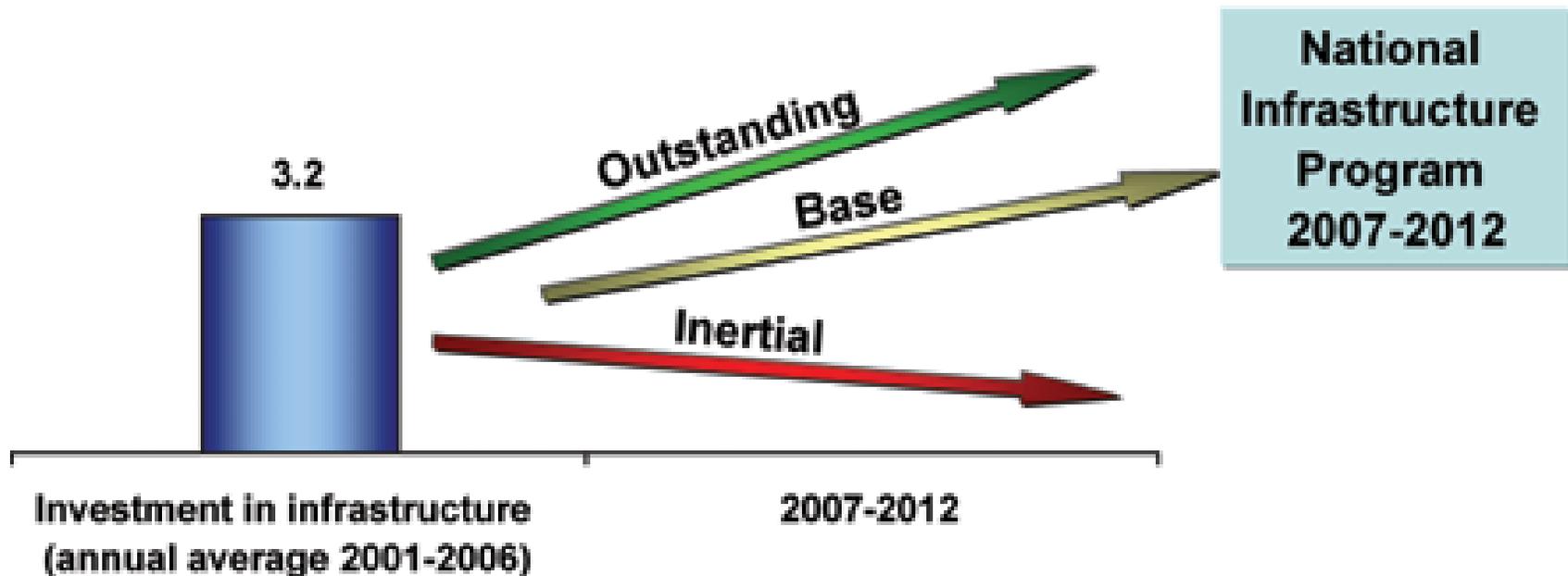


Scenarios for Investment in Infrastructure 2007-2012 (billions of US dollars)

Sector	Inertial	Base	Outstanding
Highways	14	26	37
Railways	3	4	8
Ports	4	6	10
Airports	2	5	7
Telecommunications	25	25	26
Water supply and sanitation	9	14	16
Irrigation and flood control	3	4	6
Electricity	21	34	46
Oil & Gas Production	54	73	96
Refinery, Gas and Petrochemicals	16	34	50
Total	150	226	301

Scenario Used in the Program

- The investment goals and requirements provided for in the National Infrastructure Program 2007-2012 belong to the base scenario.



Public and Private Investment

- Substantial increase in the coverage and quality of infrastructure cannot be achieved if only public resources are to be considered.
- It is imperative to promote greater funding of investment in infrastructure through resources from the private sector, based on the established legal framework and reforms, and through the selection of the best alternatives for carrying out each project.
- Only so Mexico will be able to overcome underperformance regarding the competitiveness of its infrastructure as compared to other emerging economies.



2. Long-term Vision

3

Sectoral Vision

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■ 3. Sectorial Vision

Sectors^{1/}

- 3.1 Highways
- 3.2 Railways and Multimodal Infrastructure
- 3.3 Ports
- 3.4 Airports
- 3.5 Telecommunications
- 3.6 Water Supply and Sanitation
- 3.7 Irrigation and Flood Control Infrastructure
- 3.8 Electricity
- 3.9 Oil & Gas Production
- 3.10 Refinery, Gas and Petrochemicals



Indicators

International Comparison

Strategies and Goals

Initial Situation

Long-term Vision

Investment Requirements

^{1/} Investment in infrastructure for the development of tourism is included in the corresponding sectors.

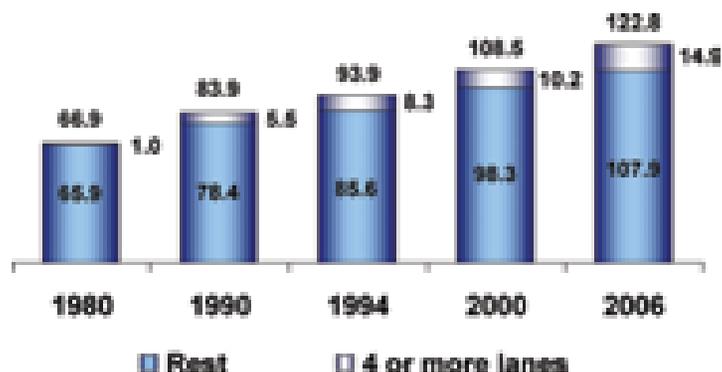
■ 3. Sectorial Vision

Highways

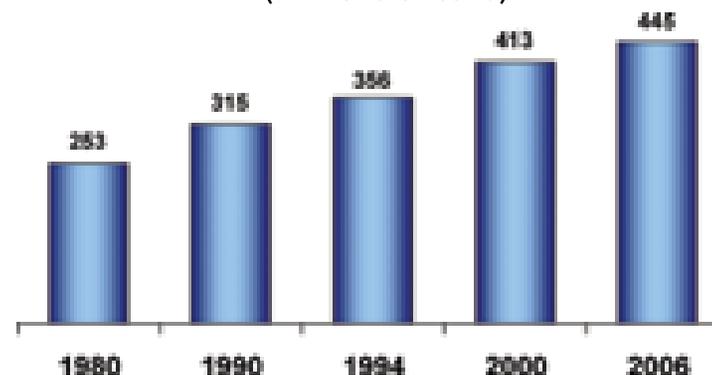


■ 3.1 Highways

Paved Highways
(thousand of kilometers)

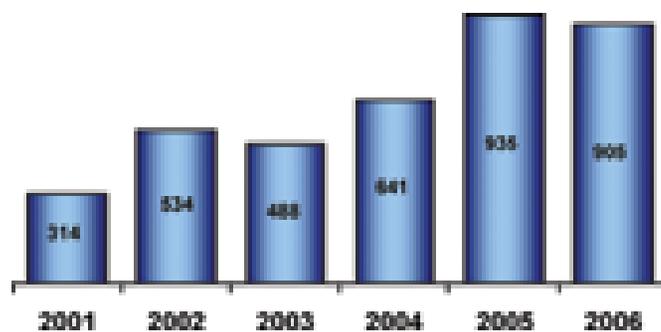


Freight Transportation
(millions of tons)

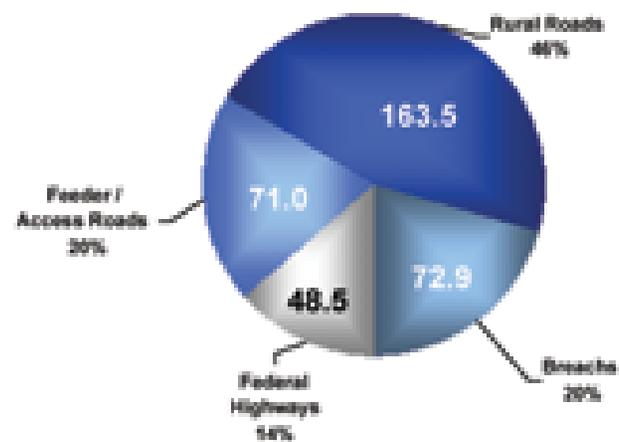


Note: Includes federal and state networks.

Construction and Modernization of Federal Highways^{1/}
(kilometers)

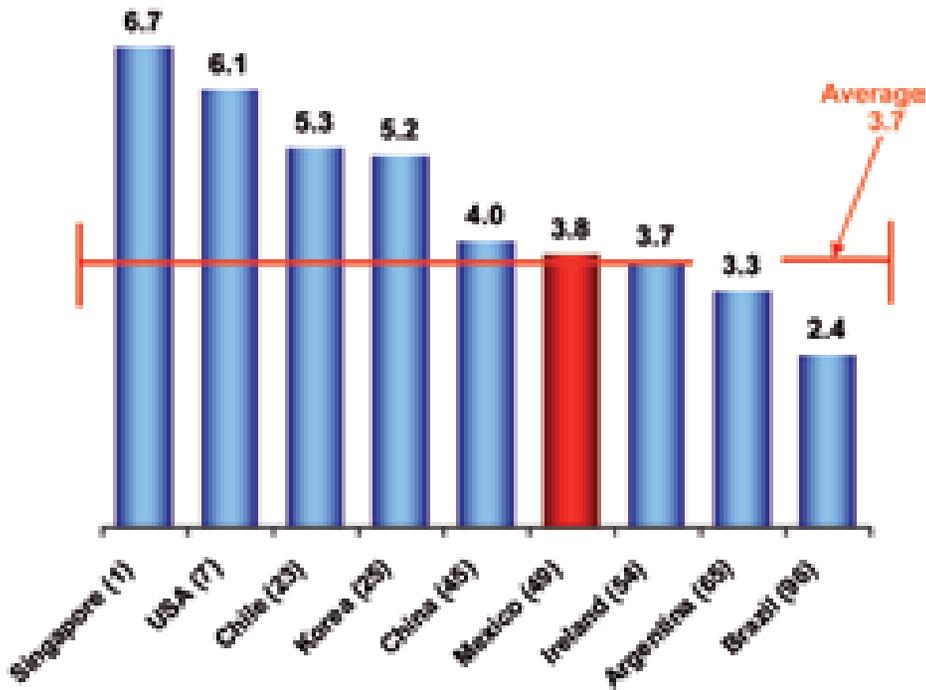


Highway Network (2006)
(thousands of kilometers)

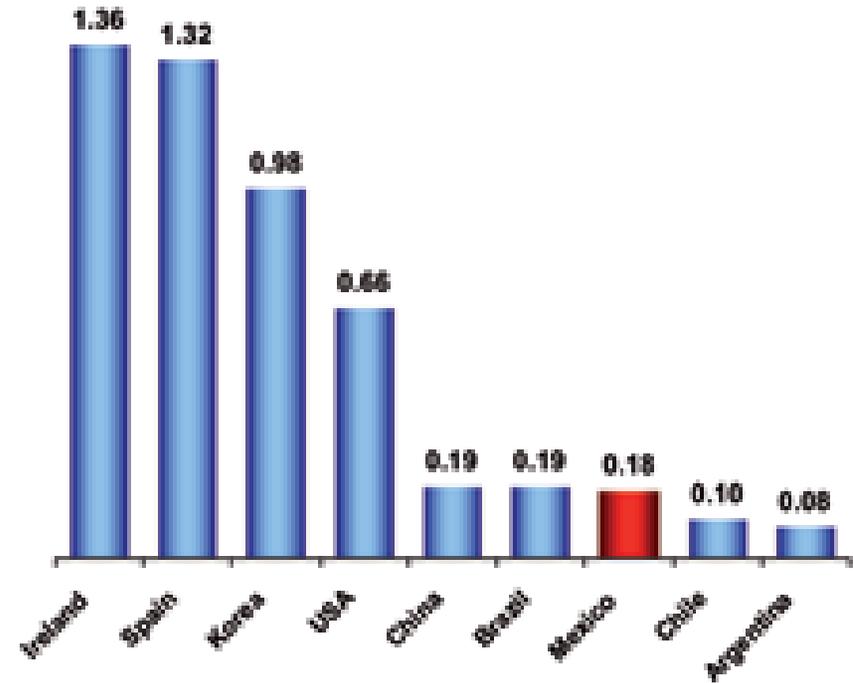


^{1/} Only includes the works carried out using public resources. Includes works finished and underway.

Quality of Roads (2006)
(World Economic Forum)



Highway Kilometers per Square Kilometer of Territory (2003)



Note: 1 = less developed or inefficient; 7 = among the best in the world

Strategies

- i. Complete the modernization of the transversal and longitudinal road network (national corridors) that communicate the country's main cities, ports, borders and tourist centers with high-specification highways.
- ii. Build inter-regional roads to improve communication among regions and improve connectivity of the highway network.
- iii. Place special emphasis on the construction of bypasses and access roads to facilitate the continuous flow of vehicles.
- iv. Improve the physical condition of all highway infrastructure and reduce the accident rate.

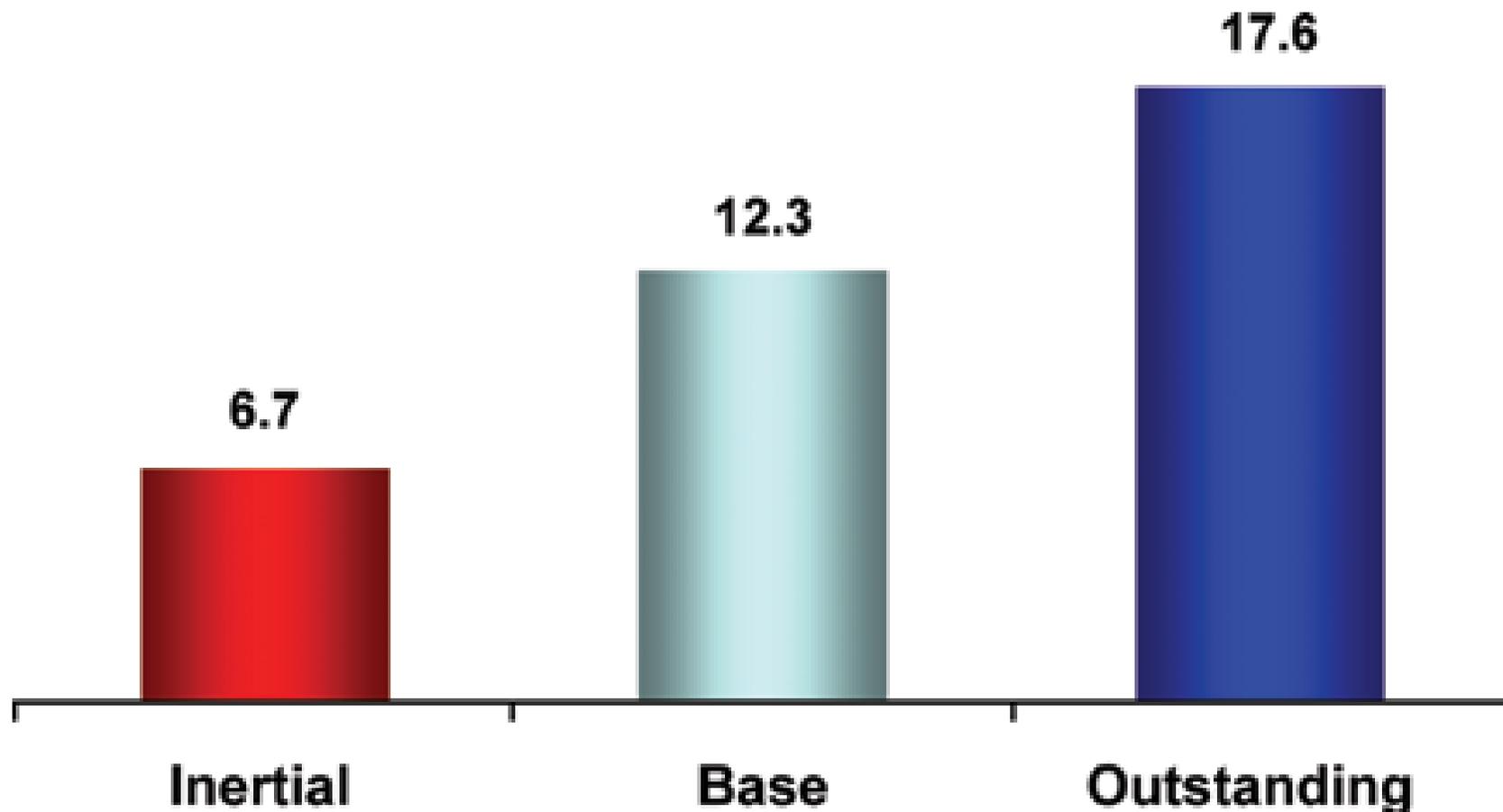
Goals for 2012

- Build or modernize 17,598 kilometers of highways and rural roads, including 12,260 kilometers of highways that are part of 100 projects that will be completed during this administration.

	Kilometers
National corridors	5,472
Outside national corridors	6,788
Complementary works	1,338
Rural and feeder roads	4,000

- Increase from 72 to 90 percent the federal highway network that is operating in good condition according to international standards.
- Reduce the accident rate from 0.47 to 0.25 per every million vehicles-kilometer.

Construction and Modernization of Federal Highways 2007-2012 (thousands of kilometers)



National Corridors in 2006



National Corridors in 2012



Infraestructure in 2012^{1/}



^{1/} Only highways supported by the Federal Government are taken into account.

Northwest Region



South-Southeast Region



Estimated Investment 2007-2012 (billions of US dollars)

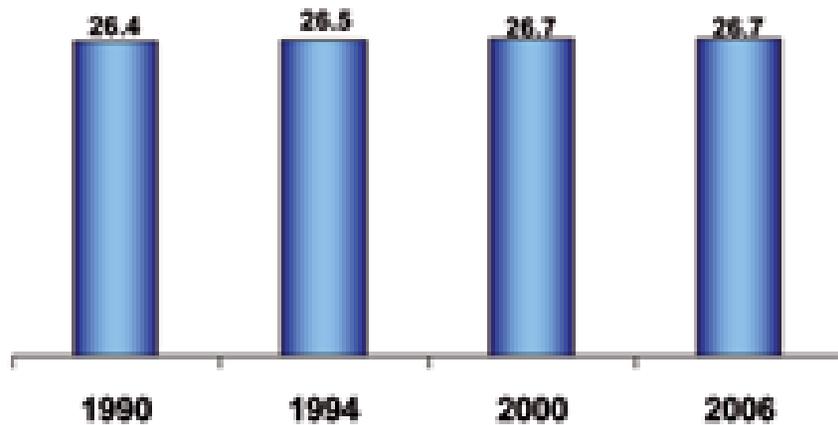
Concept	Public resources	Private resources	Total
National corridors	2	8	9
Outside national corridors	5	2	7
Complementary works	1	0	1
Rural and feeder roads	2	0	2
Conservation	4	NA	4
Studies, projects and rights of way	1	2	3
Total	14	11	26

Railways and Multimodal Infrastructure

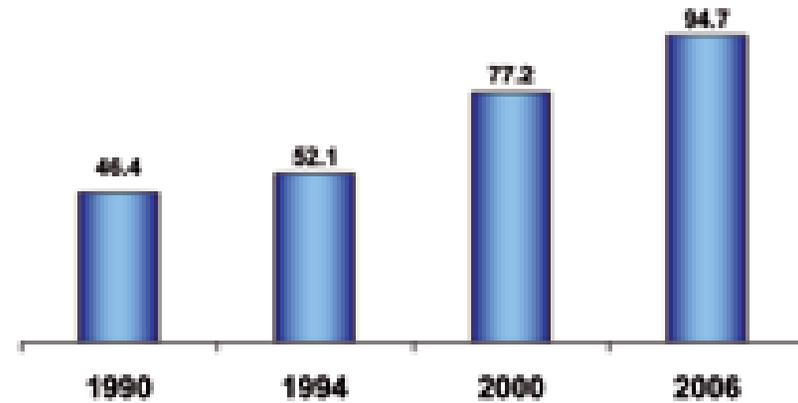


■ 3.2 Railways and Multimodal Infrastructure

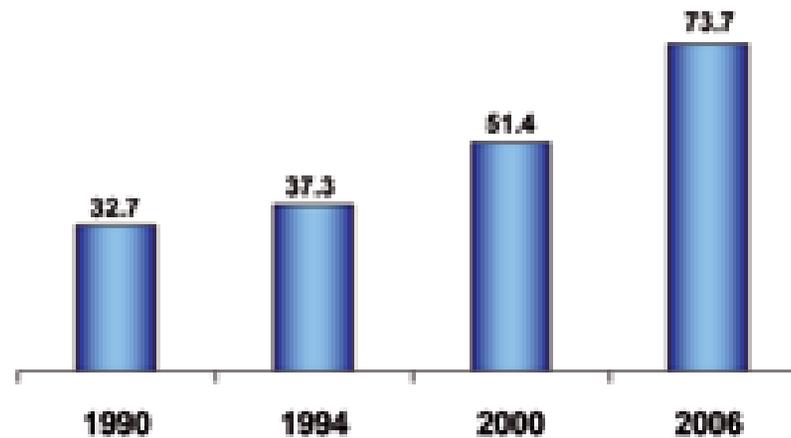
Railway Network
(thousands of kilometers)



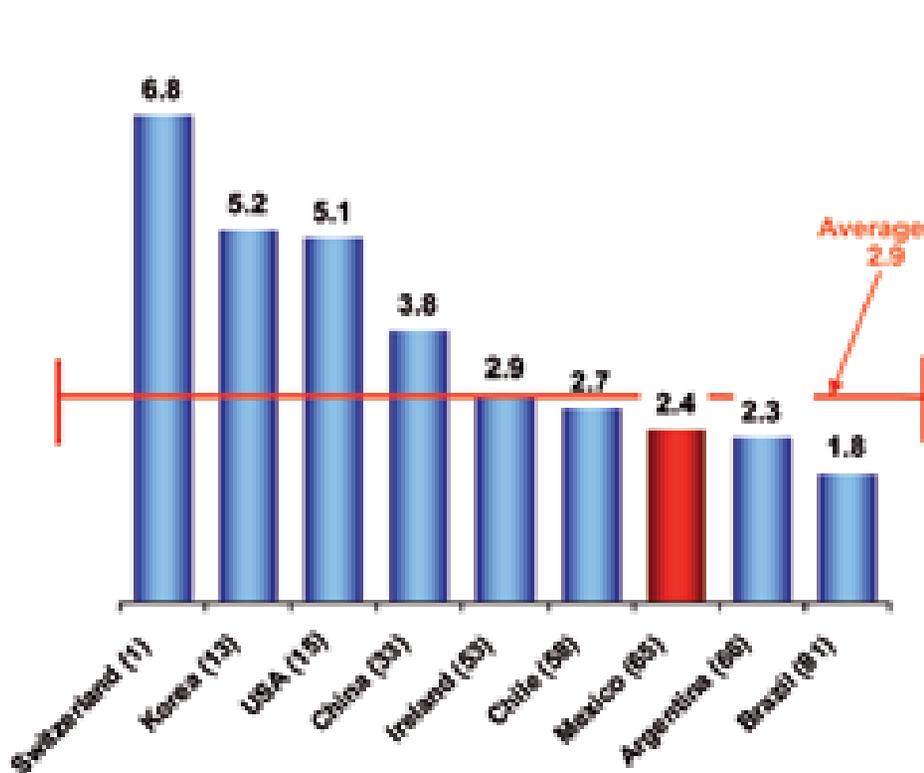
Freight Transportation
(millions of tons)



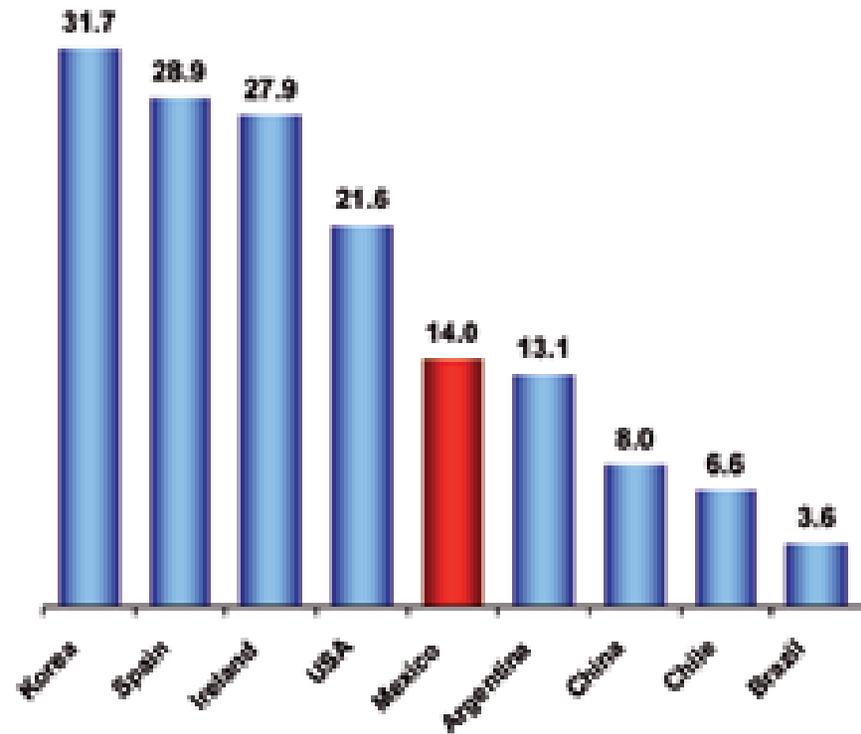
Freight Transportation
(billions of tons - kilometer)



Railroad Infrastructure Development (2006)
(World Economic Forum)



Kilometers of Railway Network for each One Thousand Square Kilometers of Territory



Note: 1 = less developed or inefficient; 7 = among the best in the world

Strategies

- i. Expand the railway system, promoting the substitution of the current radial structure for a network structure that improves connectivity.
- ii. Develop multimodal corridors to make the transportation of merchandise more efficient, paying special attention to corridors that join the Pacific ports with those of the Atlantic as well as to the borders.
- iii. Promote the development of suburban passenger trains to significantly reduce the amount of travel time for people between their homes and their places of work and study.
- iv. Resolve railway interconnection problems at ports, borders and metropolitan areas.
- v. Harmonize the integration of the railway in urban zones.

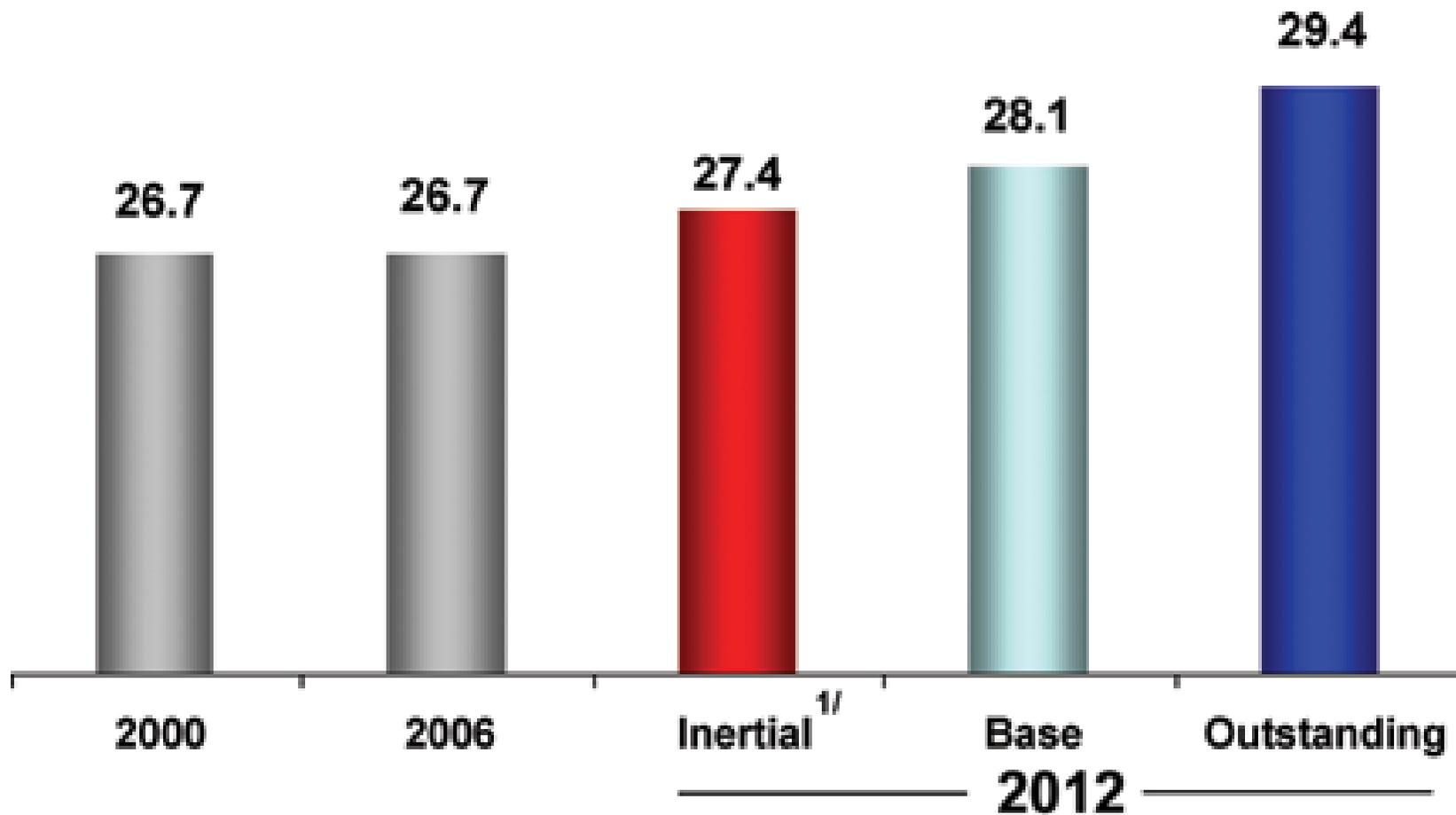
Goals for 2012

- Build 1,418 kilometers of railroad.

	Kilometers
Railroad construction	877
Railroad bypasses	187
Shorten railroad stretches	195
Passenger transportation	159

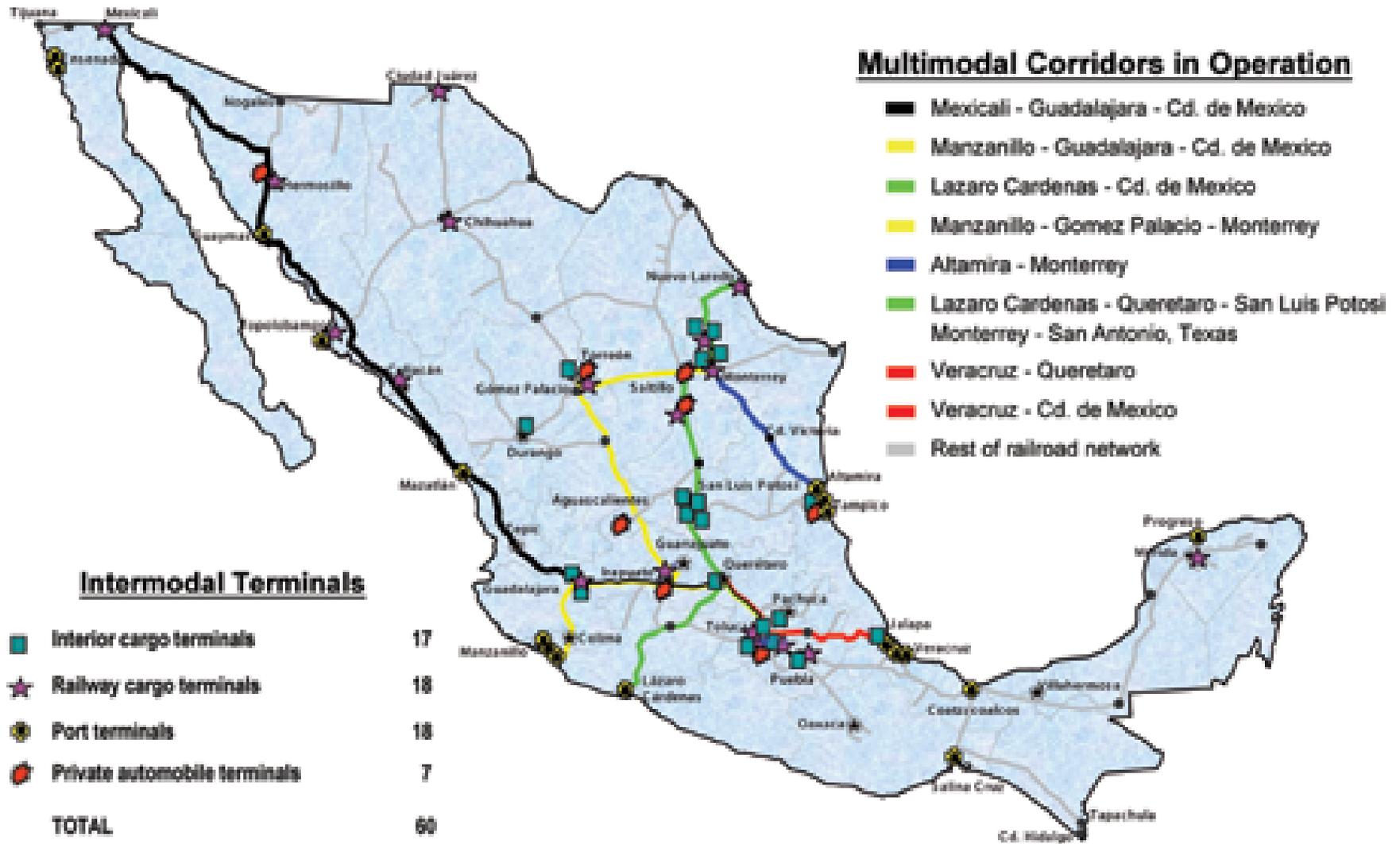
- Increase the average speed of the railway system from 24 to 40 kilometers per hour.
- Start up the first stage of Systems 1, 2 and 3 of the Suburban Train of Mexico City's Metropolitan Area.
- Build 64 overpasses and underpasses, build signage for 240 overpasses and underpasses and 256 crossings, develop 3 bypasses and build 4 border railway crossings with bypasses.
- Develop 10 new multimodal corridors, including the construction of 12 intermodal cargo terminals and the start up of the Punta Colonet project.

Railway Network (thousands of kilometers)

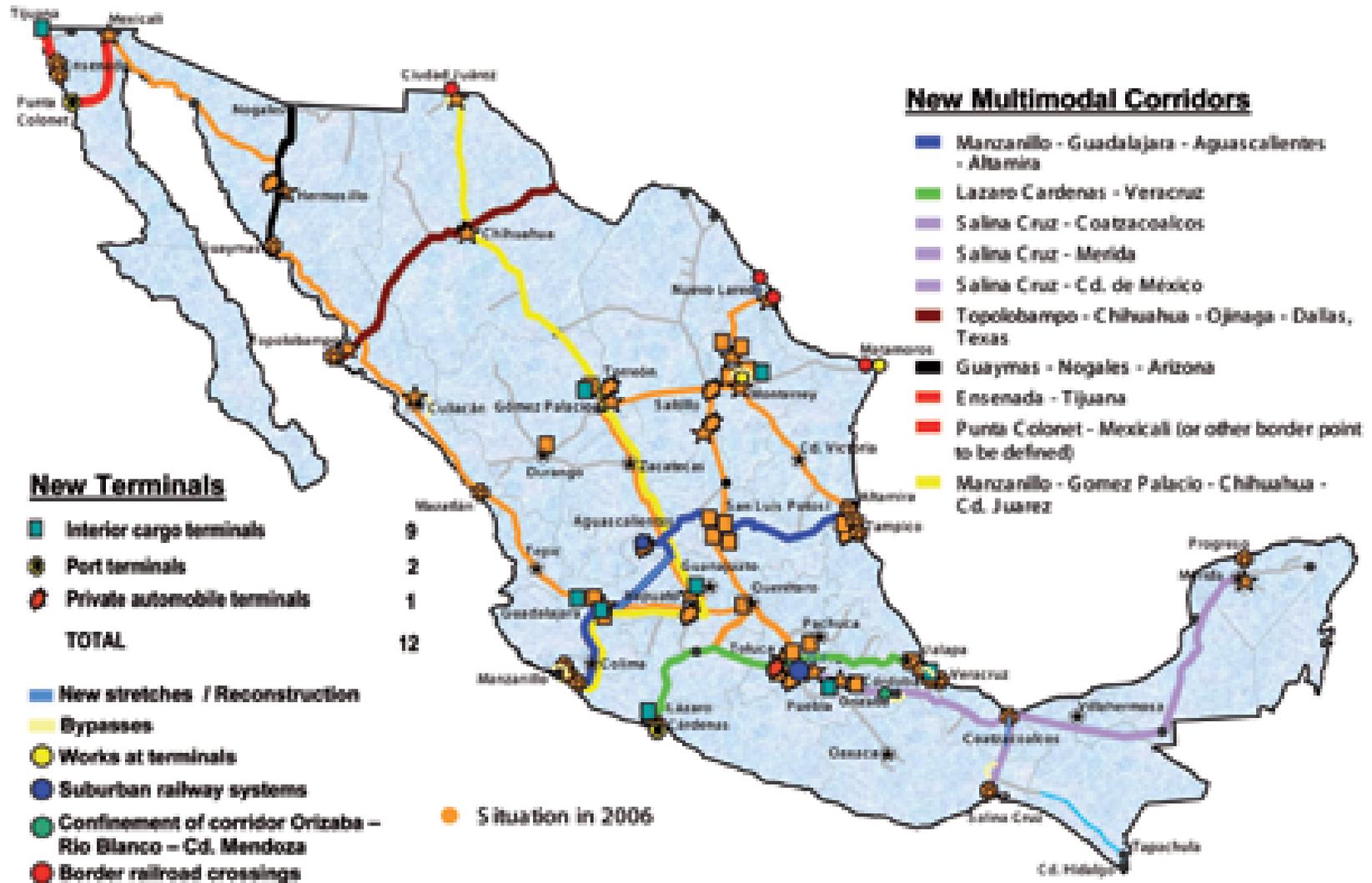


^{1/} Assumes that the Punta Colonet-Mexicali project will be carried out, being financed with private resources.

Infrastructure in 2006



Infrastructure in 2012



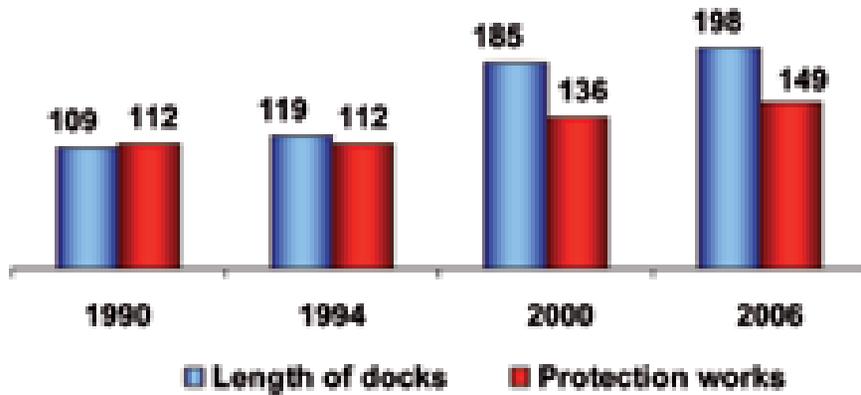
Estimated Investment 2007-2012 (billions of US dollars)

Concept	Public resources	Private resources	Total
Construction	2	1	3
Modernization	0	< 1	< 1
Conservation	0	< 1	< 1
Railways-urban areas harmonization program	< 1	< 1	< 1
Railway safety program	< 1	0	< 1
Intermodal cargo terminal	0	< 1	< 1
Total	2	2	4

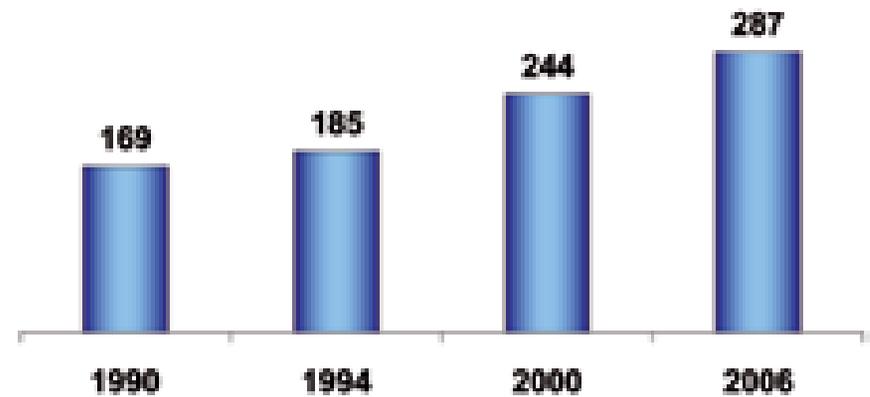
Ports



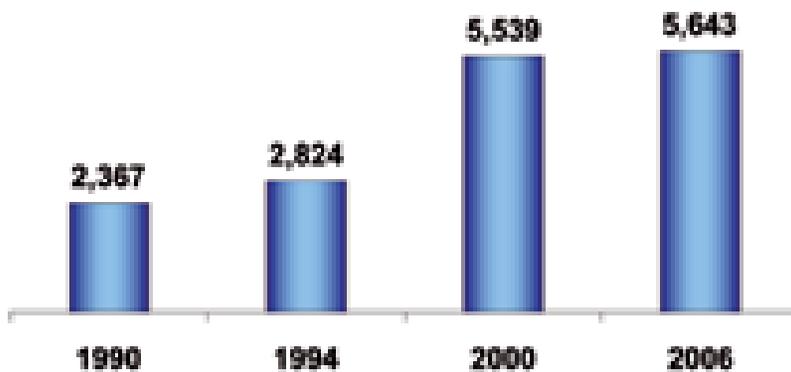
Length of Docks and Protection Infrastructure
(kilometers)



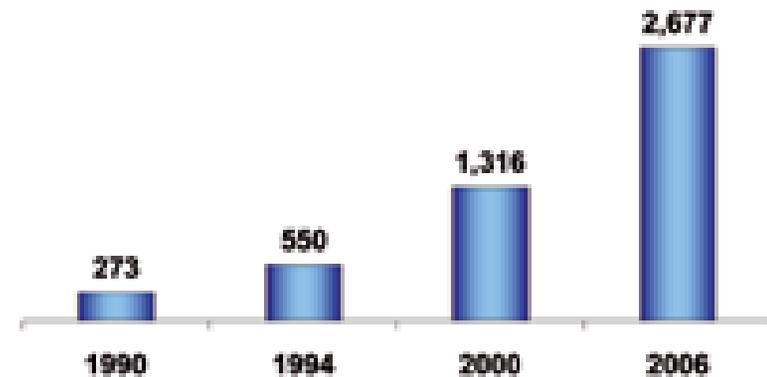
Cargo Transported
(millions of tons)



Storage Areas
(thousands of square meters)

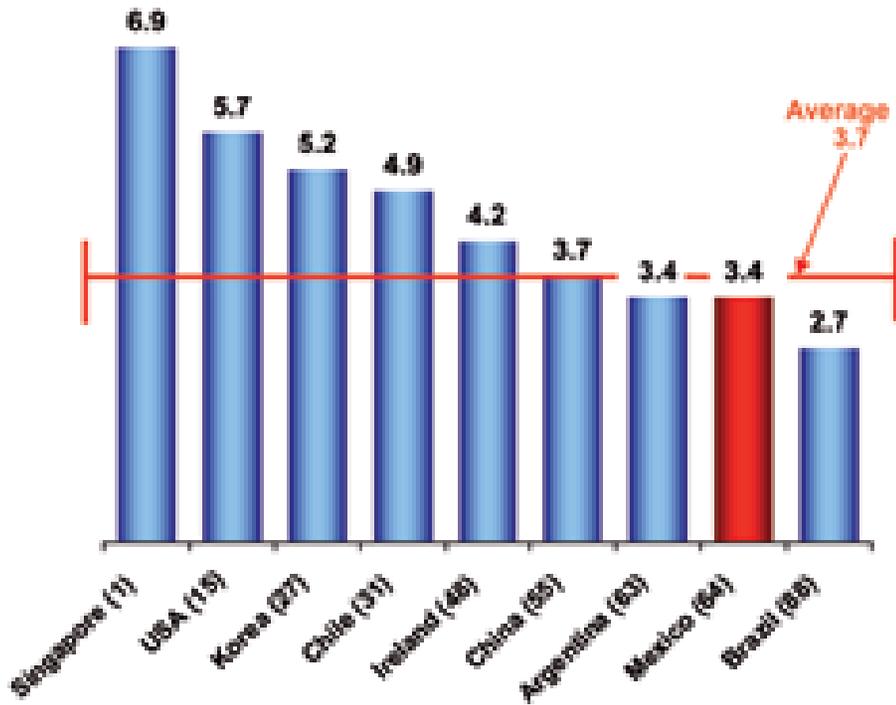


Management of Cargo Containers
(thousands of TEUS)



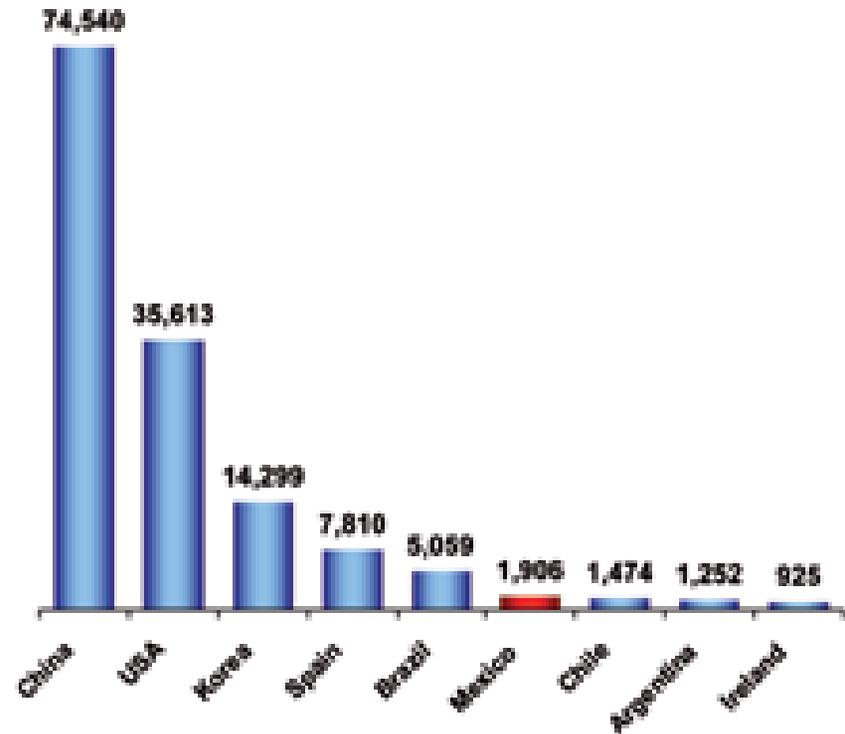
TEUS = twenty foot equivalent units.

Quality of Port Infrastructure (2006)
(World Economic Forum)



Note: 1 = less developed and insufficient; 7 = among the best in the world.

Management of Container Cargo, Selected Countries (2004)
(thousands of TEUS)



TEUS = twenty foot equivalent units.

Strategies

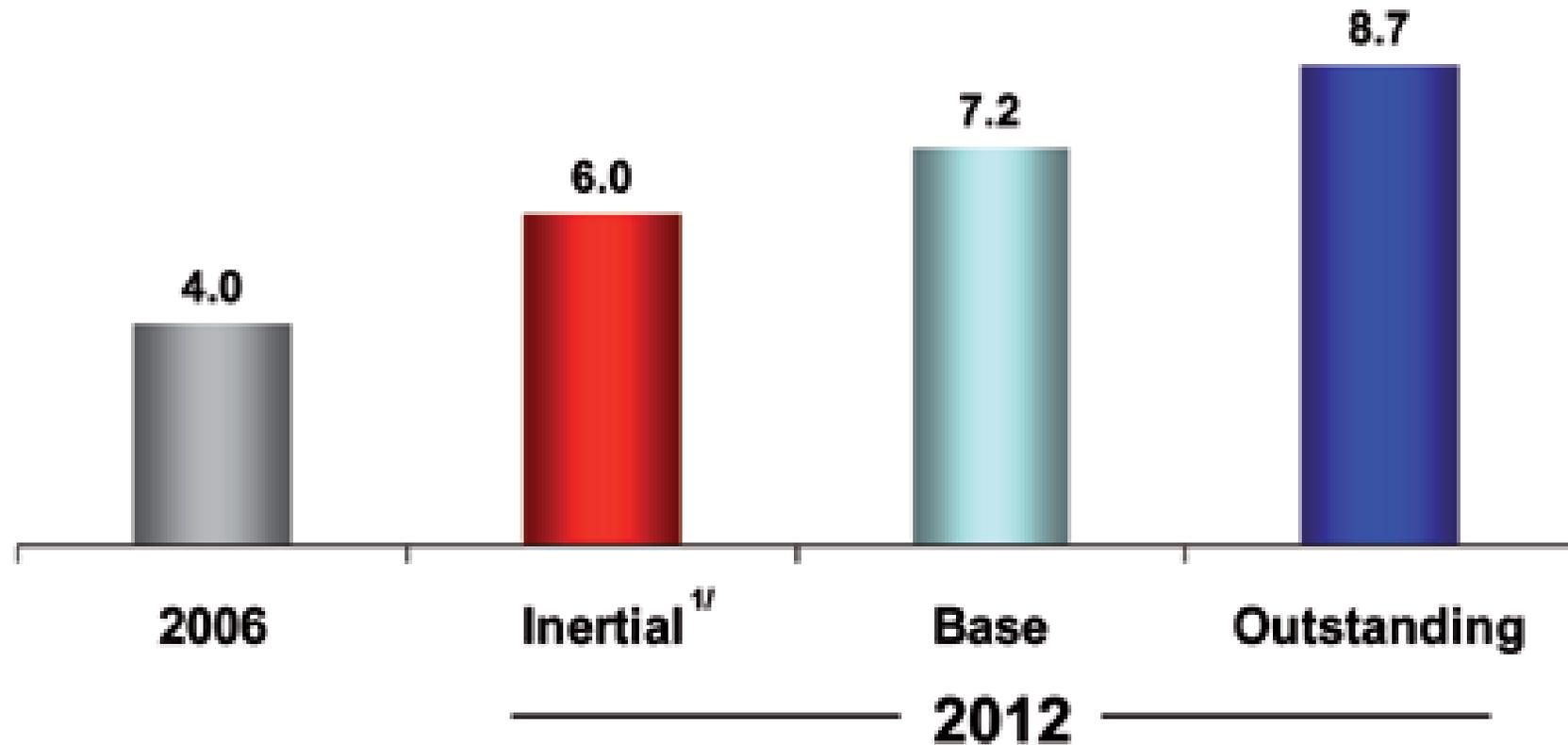
- i. Increase port infrastructure, especially container management capacity.
- ii. Develop ports as part of an integrated multimodal transportation system in order to reduce the cost of logistics for companies.
- iii. Promote the competitiveness of the port system to offer world class service.
- iv. Promote the development of cruise-ships docks.

Goals for 2012

- Build 5 new ports and expand or modernize 22 more.
- Increase the installed capacity for container management from 4 to 7 million TEUS.
- Increase the performance of operations at specialized container terminals from 68 to 75 containers per hour – vessel in operation.
- Build 13 cruise-ships docks.

TEUS= twenty foot equivalent units.

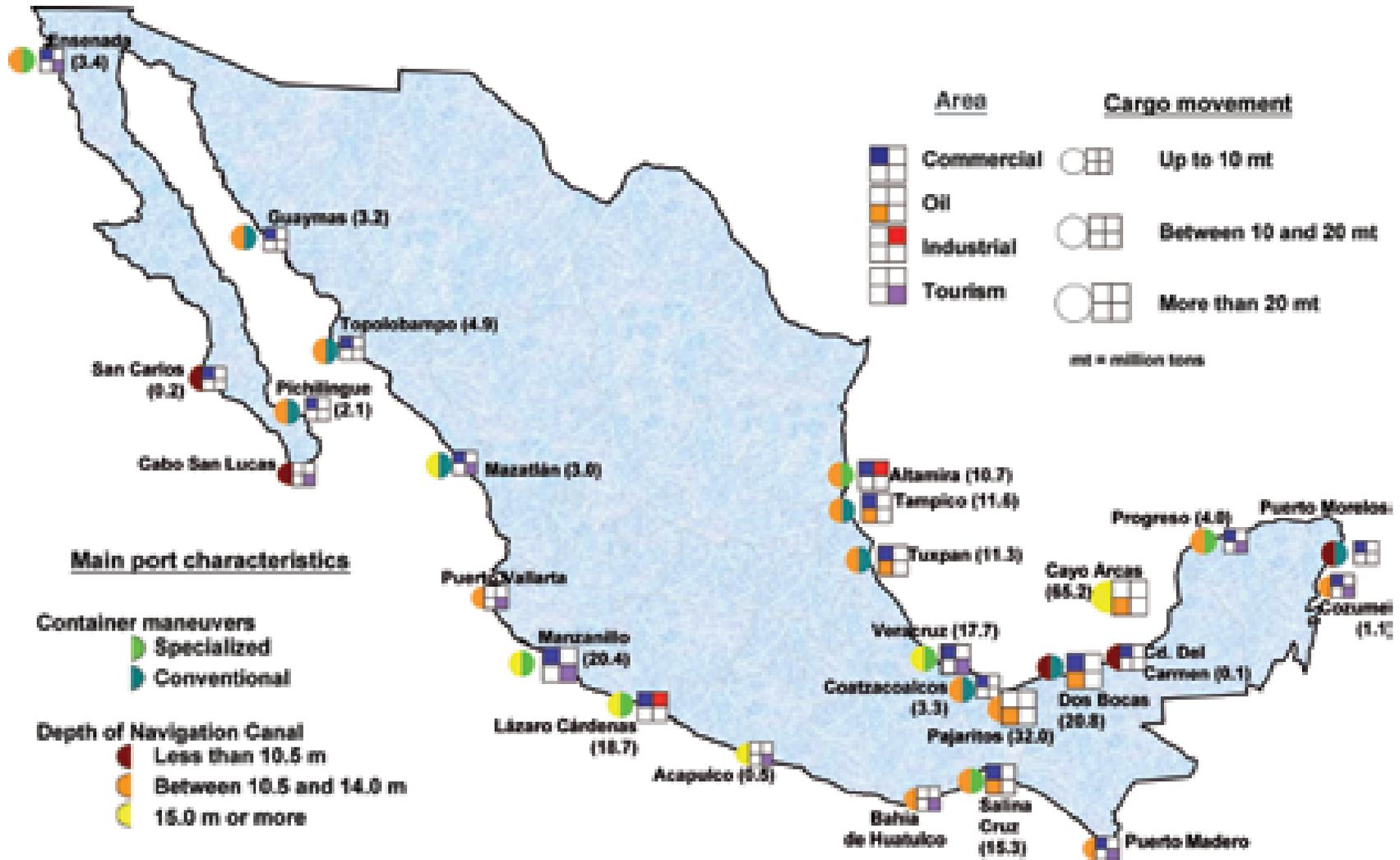
Cargo Container Management Capacity (millions of TEUS)



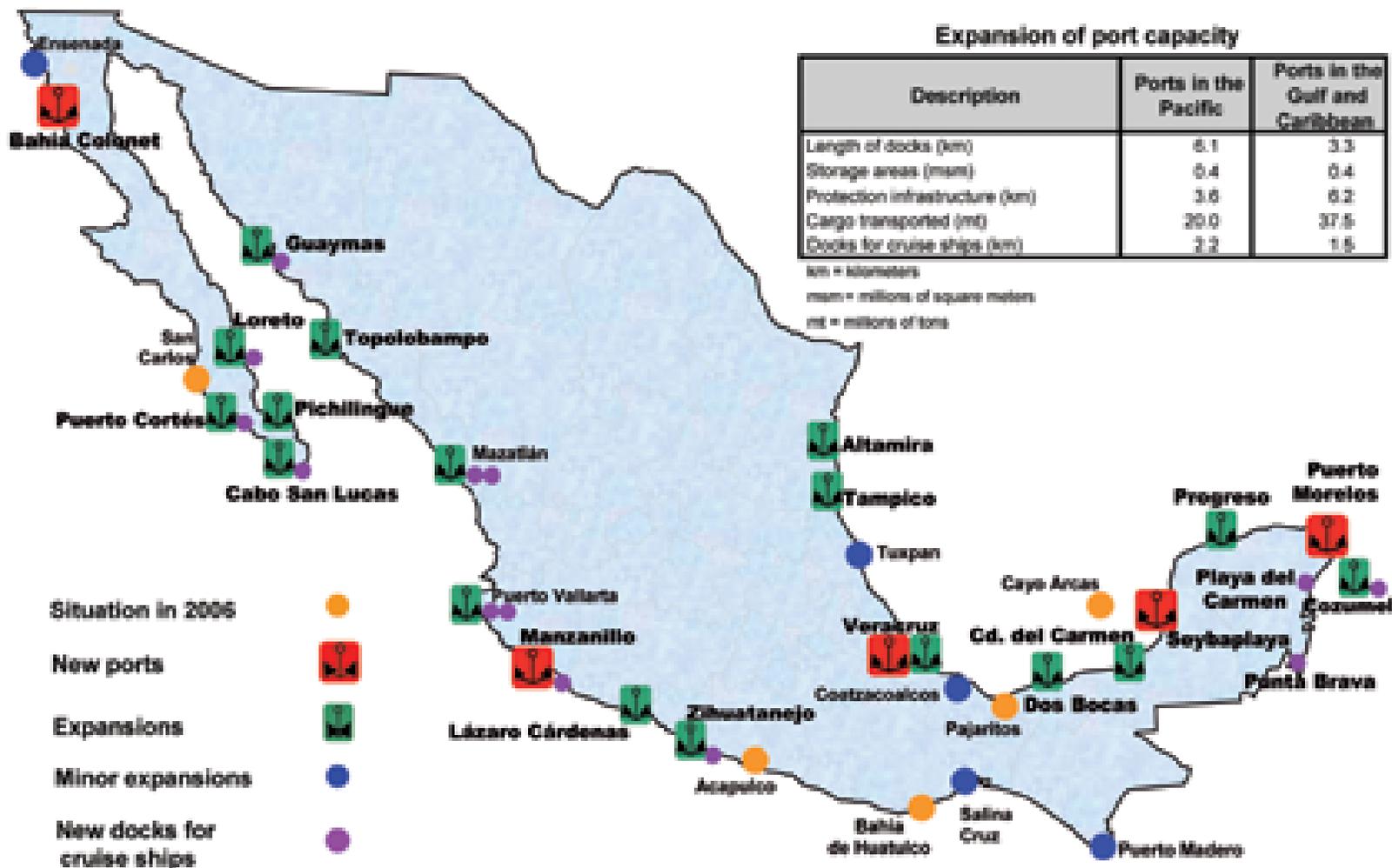
TEUS = twenty foot equivalent units.

^{1/} Assumes that the Punta Colonet project will be carried out, funded through private resources.

Infrastructure in 2006 (cargo transported in millions of tons)



Infrastructure in 2012



Estimated Investment 2007-2012 (billions of US dollars)

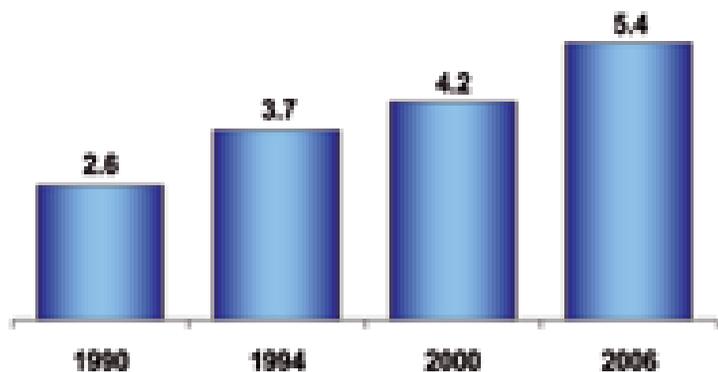
Concept	Public resources	Private resources	Total
New ports	< 1	2	2
Enlargement	1	3	4
Conservation	< 1	0	< 1
Total	1	5	6

Airports

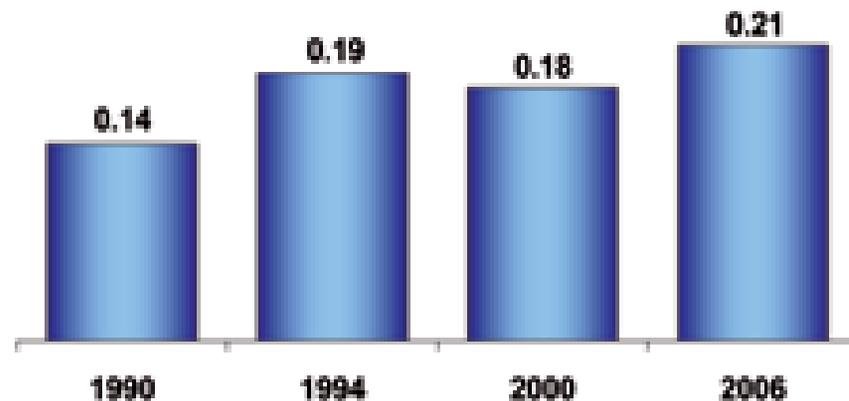


■ 3.4 Airports

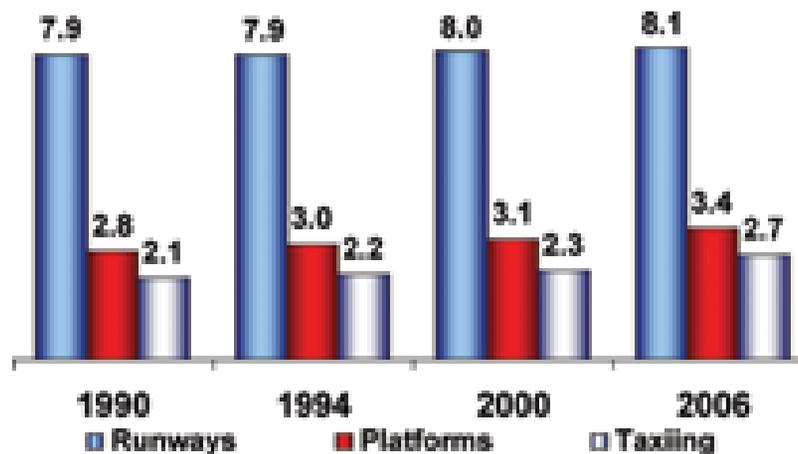
Passengers Transported per Square Meter of Runway per Year



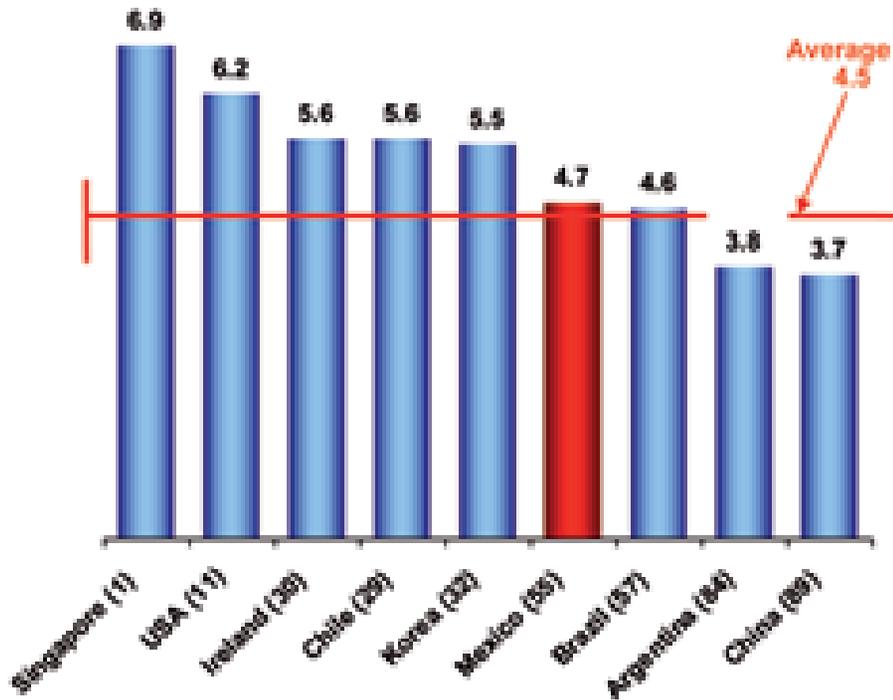
Annual Operations per Square Meter of Runway



Infrastructure
(millions of square meters)

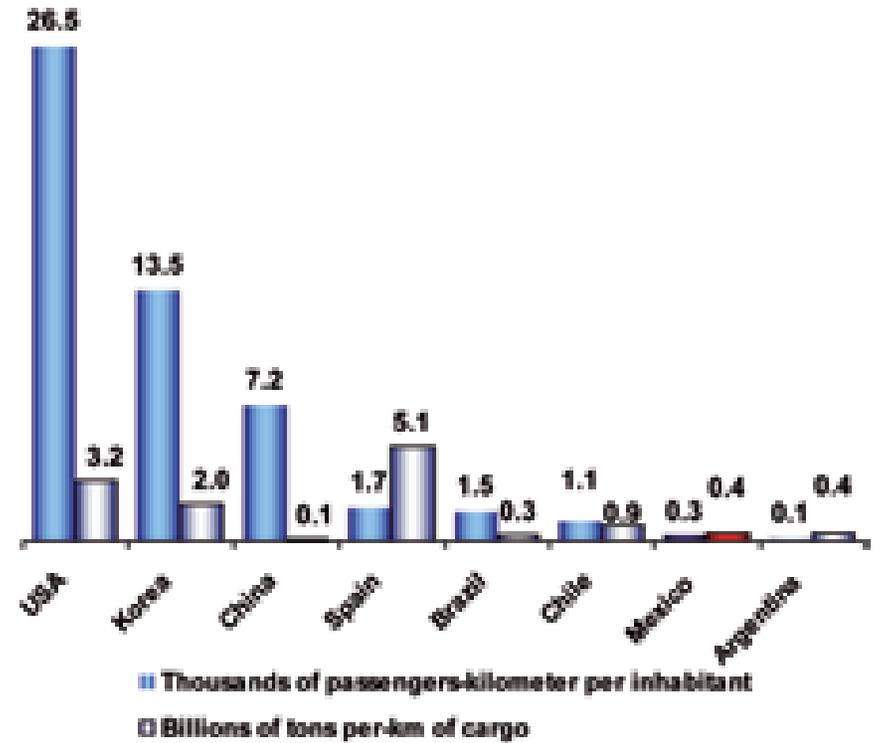


Quality of Air Transport Infrastructure (2006) (World Economic Forum)



Note: 1 = less developed or inefficient; 7 = among the best in the world

Air Traffic, Selected Countries (2005)



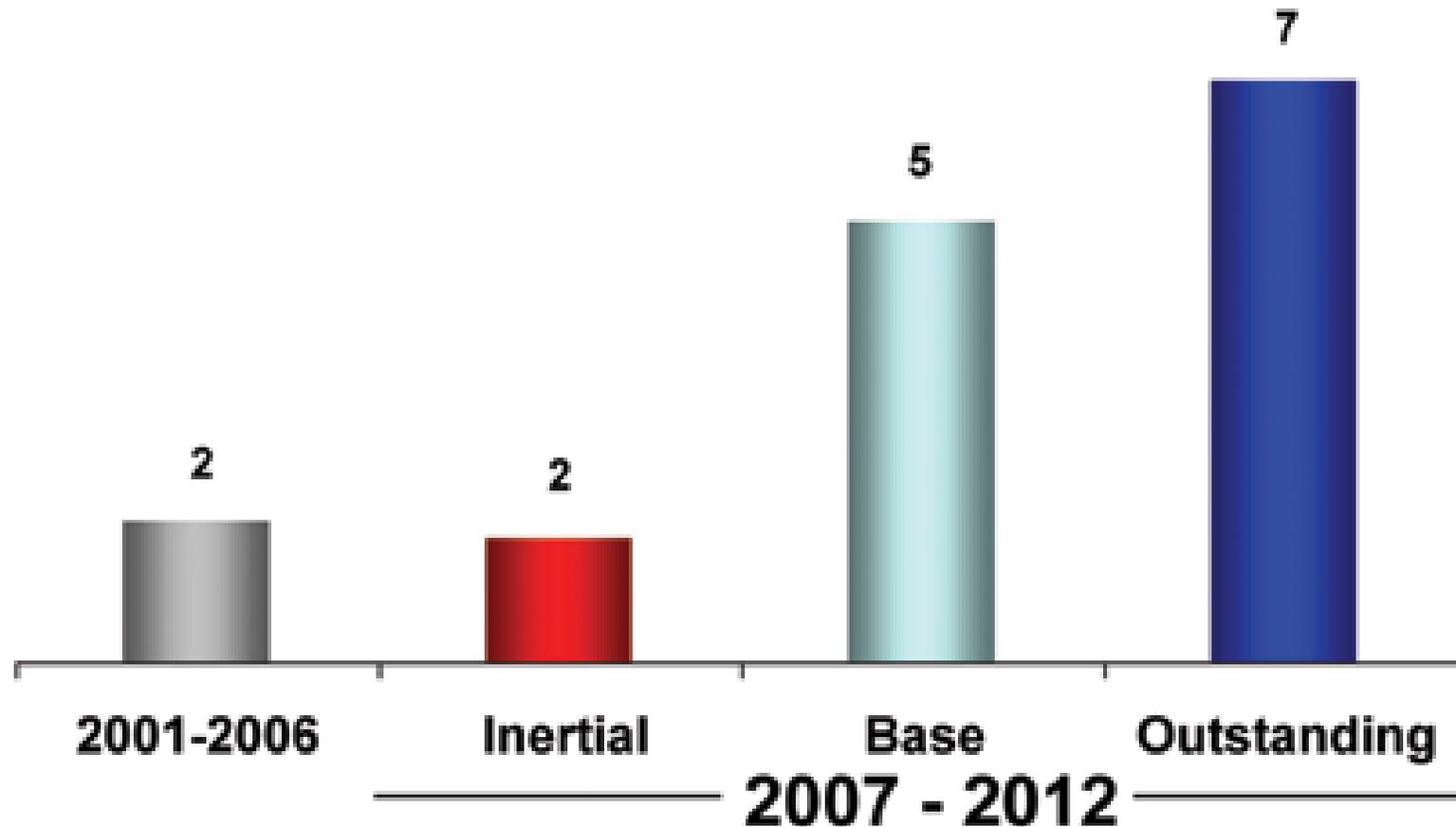
Strategies

- i. Expand and modernize infrastructure and airport services with a long-term vision.
- ii. Develop regional airports and improve interconnection.
- iii. Promote airport projects to maximize on the development of tourism corridors.
- iv. Promote the development of airports specializing in air cargo.

Goals for 2012

- Build at least 3 new airports and expand another 31.
- Offer a definitive solution to long-term growth of the demand for airport services in the Valley of Mexico and the central part of the country.
- Increase air cargo transport capacity by 50 percent.
- Promote that at least 50 percent of airports offer world class service.

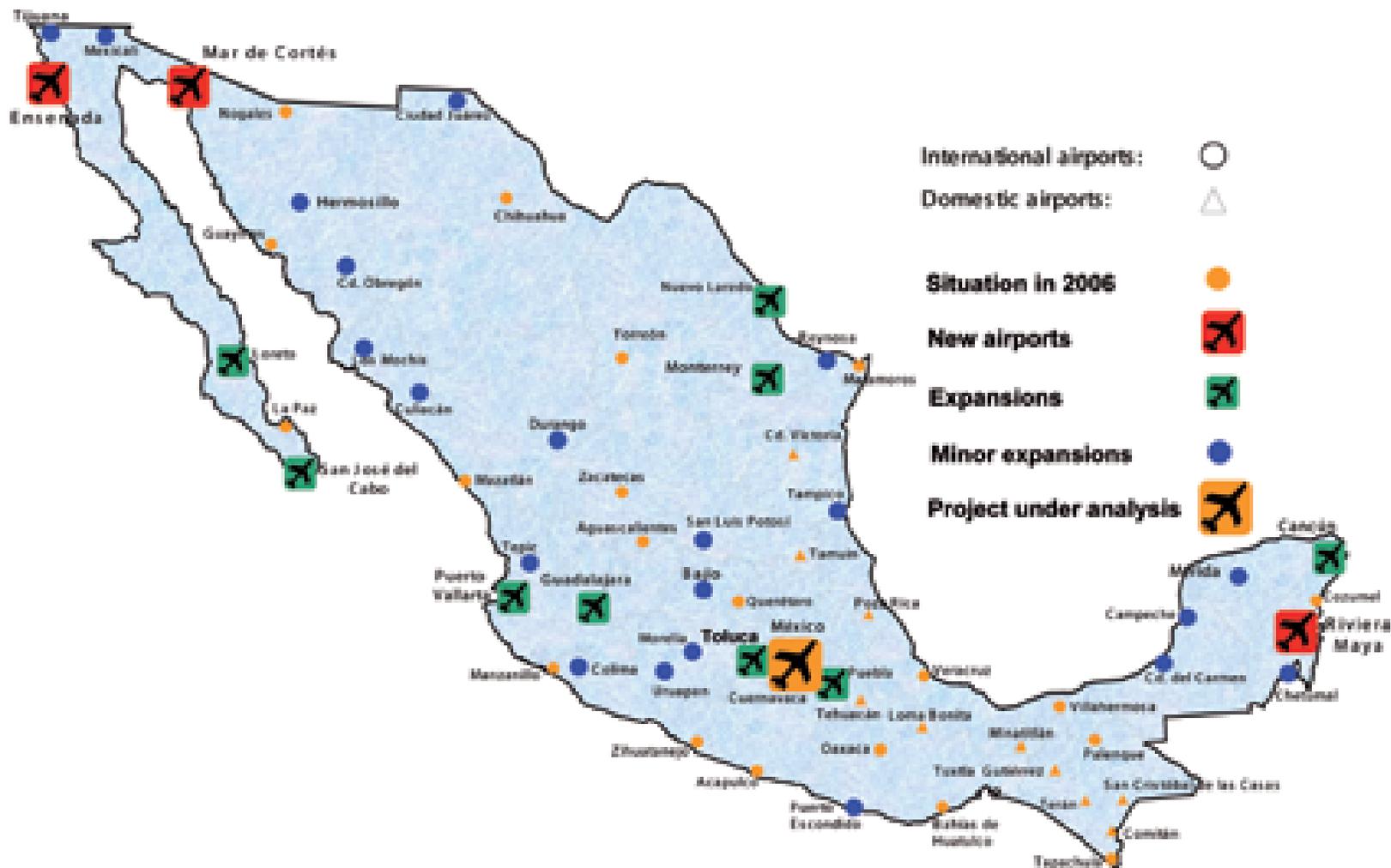
Investment in Airport Infrastructure 2007-2012 (billions of US dollars)



Infrastructure in 2006 (millions of passengers)



Infrastructure in 2012



Estimated Investment 2007-2012 (billions of US dollars)

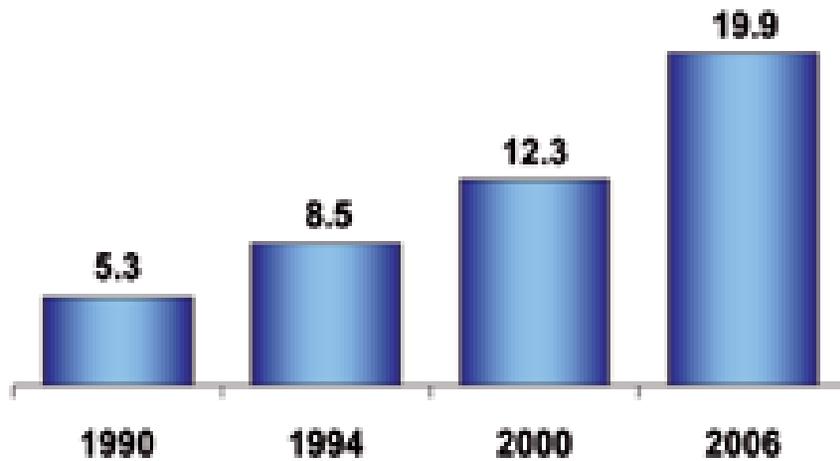
Concept	Public resources	Private resources	Total
New airports	1	2	3
Enlargement	1	< 1	1
Conservation	< 1	0	< 1
Other (equipment)	1	< 1	1
Total	3	2	5

Telecommunications

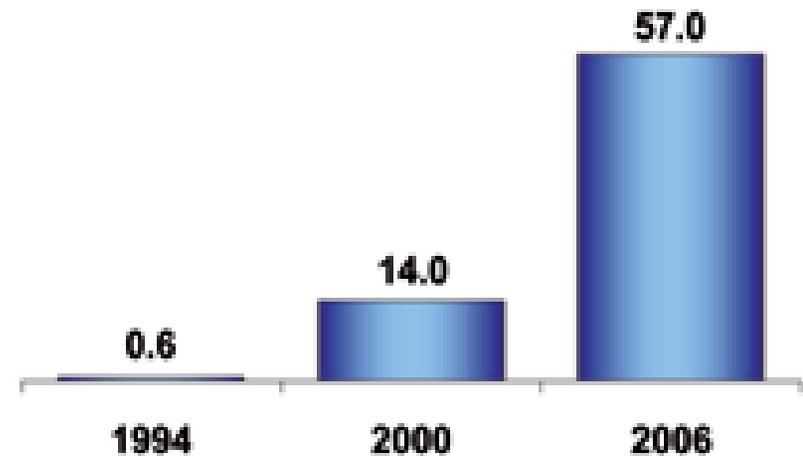


■ 3.5 Telecommunications

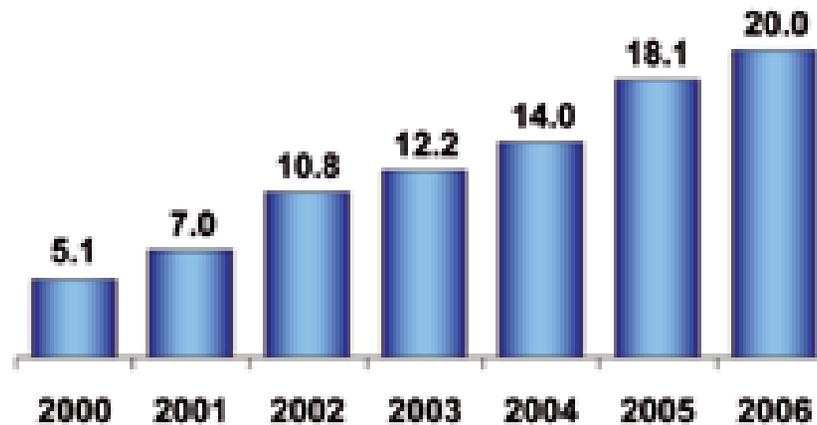
Fixed Telephone Lines in Service
(millions)



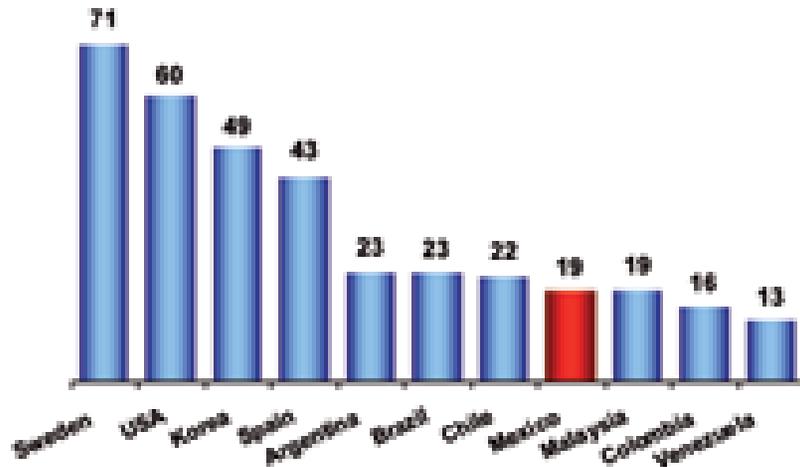
Mobile Lines in Service
(millions)



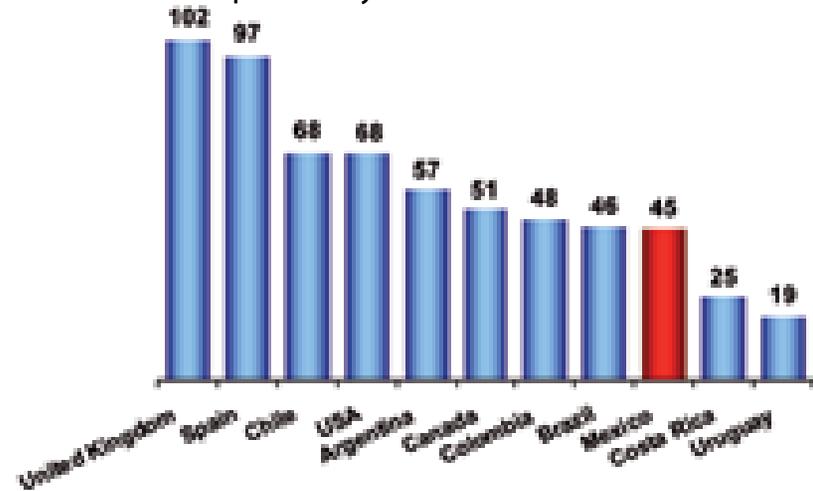
Internet Users
(millions)



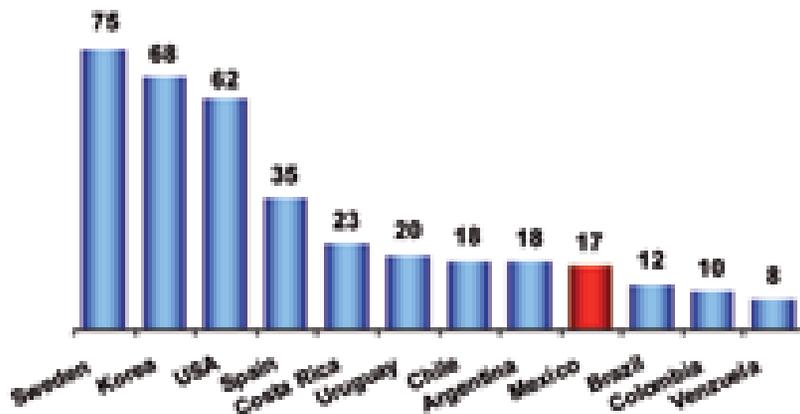
Fixed Telephone Lines Coverage, Selected Countries (2005)
(lines per every 100 inhabitants)



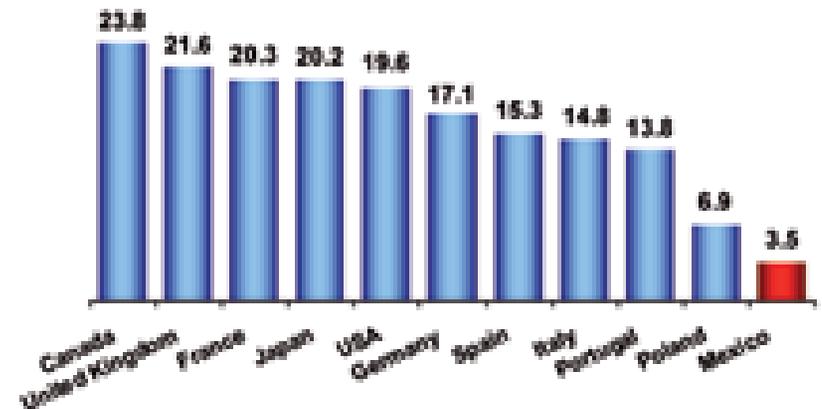
Mobile Telephones Coverage, Selected Countries (2005)
(lines per every 100 inhabitants)



Internet Service Coverage, Selected Countries (2005)
(number of users per every 100 inhabitants)



Broadband Access, Selected Countries (2006)
(number of users per every 100 inhabitants)



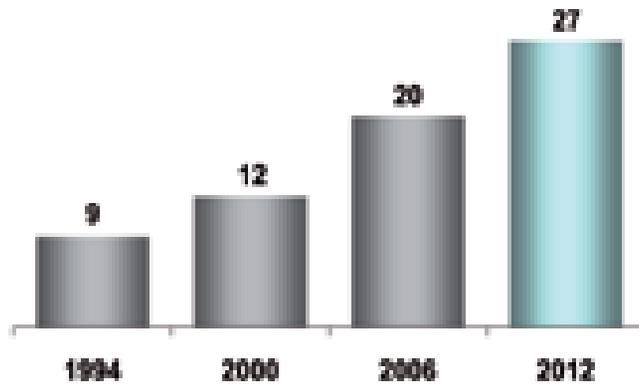
Strategies

- i. Increase investment in telecommunications infrastructure to achieve greater coverage of fixed and mobile lines.
- ii. Increase broadband coverage throughout the country, especially in areas of scarce resources.
- iii. Increase the number of Internet users and other communications services.

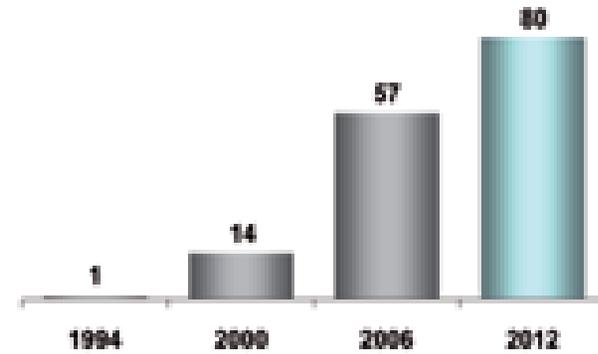
Goals for 2012

- Promote private investment in the sector to at least 25 billion dollars between 2007 and 2012.
- Achieve fixed and mobile line coverage of 24 and 78 lines per every 100 inhabitants, respectively.
- Increase broadband coverage up to 22 users per every 100 inhabitants.
- Increase Internet usage to 70 million users.
- Reach 5 million users of paging and trunking services and 10 million users of paid television.

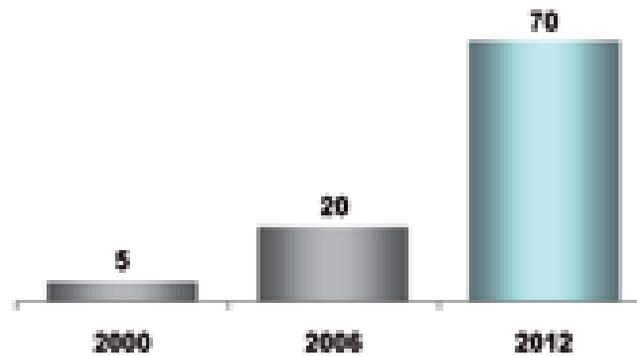
Fixed Telephone Lines in Service
(millions)



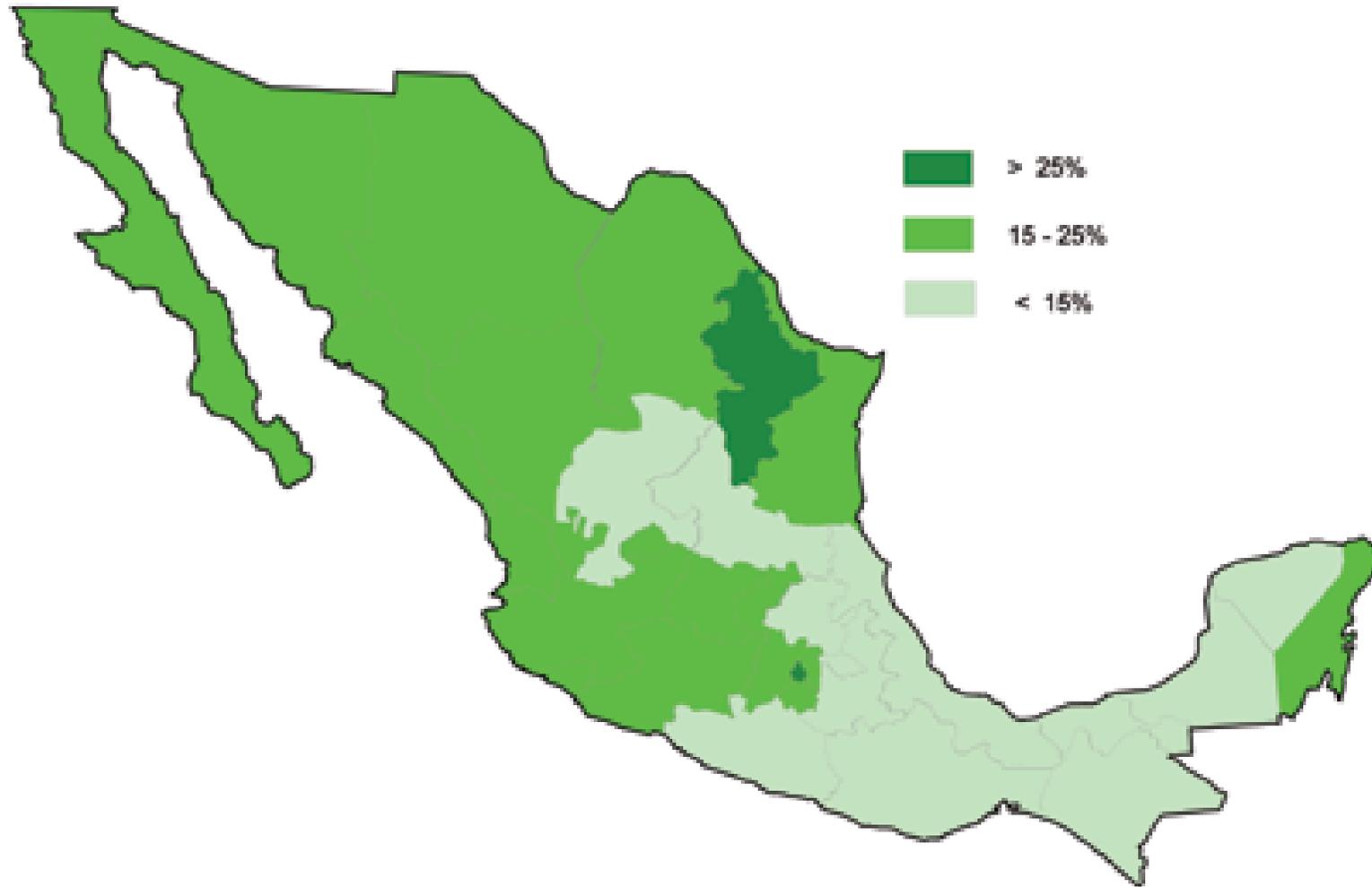
Mobile Telephones in Service
(millions)



Internet Users
(millions)



Fixed Lines in 2006 (coverage by state)



Mobile Telephones in 2006 (coverage by state)



Estimated Investment 2007-2012 (billions of US dollars)

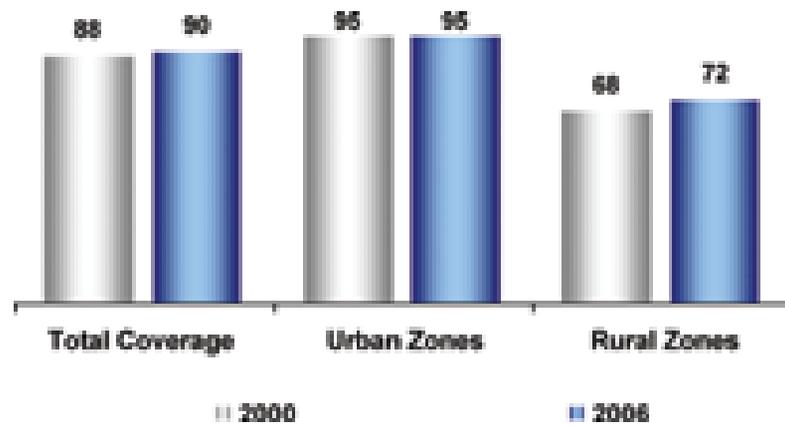
Concept	Public resources	Private resources	Total
Broadband and fixed telephony	0	10	10
Mobile telephony	0	9	9
Paid television	0	2	2
Paging and trunking	0	2	2
Other (public telephony and satellite services)	2	0	2
Total	2	23	25

Water Supply and Sanitation

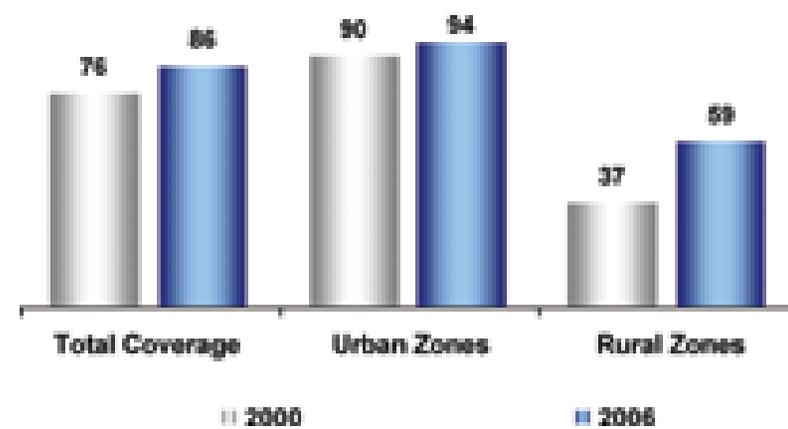


■ 3.6 Water Supply and Sanitation

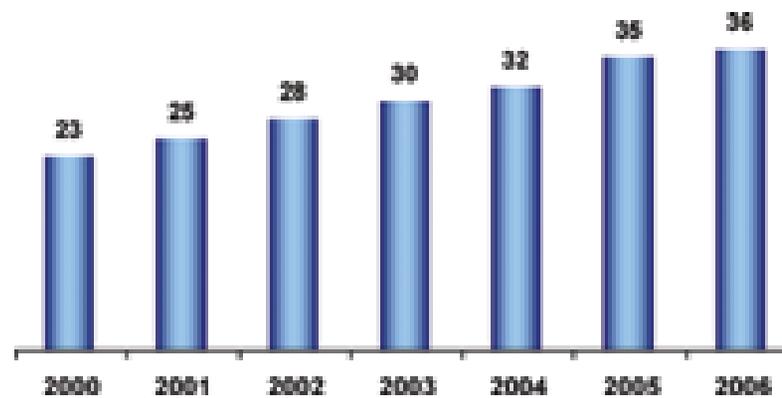
Drinking Water Coverage
(percentage)



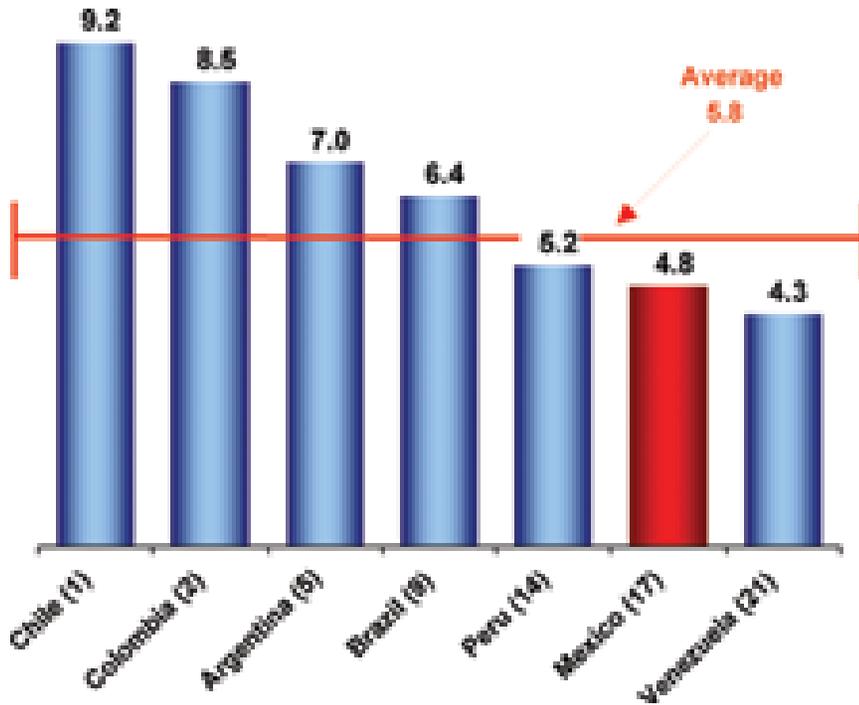
Sewerage Coverage
(percentage)



Wastewater Treatment
(percentage)

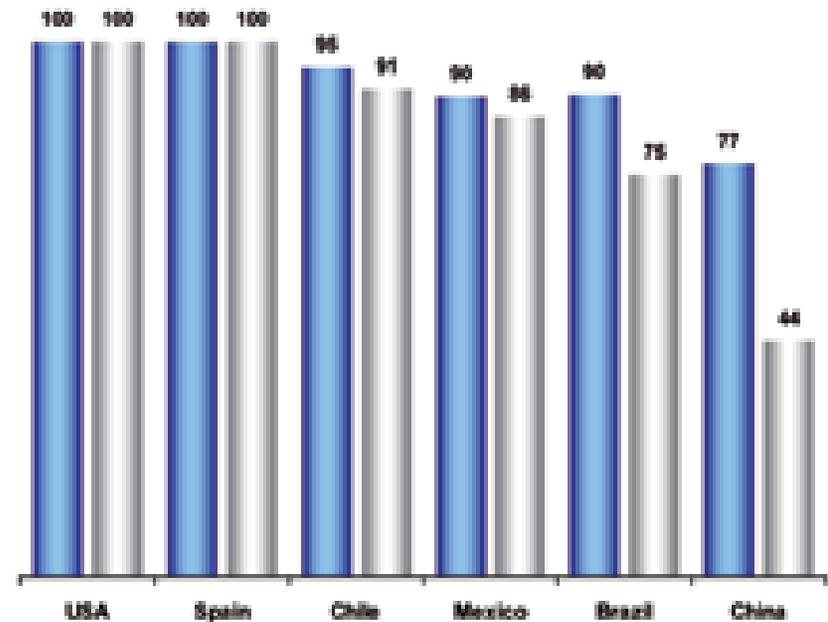


Competitiveness of Infrastructure in Water and Sanitation (2006)



Note: 9.2 = the best in the region; 1.05 = the less competitive.

Drinking Water and Sewerage Coverage (percentage)



Note: For Mexico, data is through 2006, for the rest through 2004.

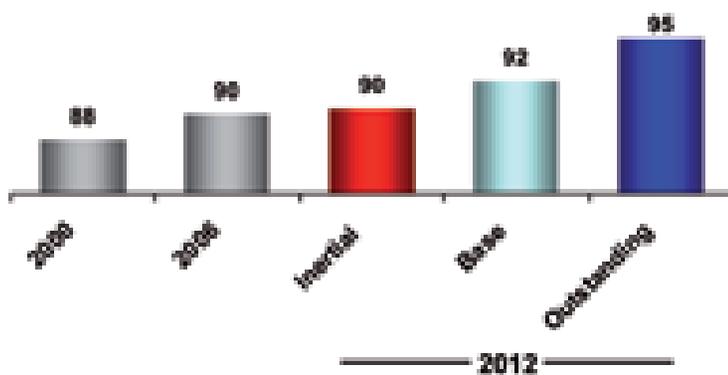
Strategies

- i. Increase coverage of drinking water and sewerage, particularly in rural communities.
- ii. Increase the overall efficiency of drinking water distribution systems.
- iii. Significantly raise wastewater treatment and promote its use and exchange.

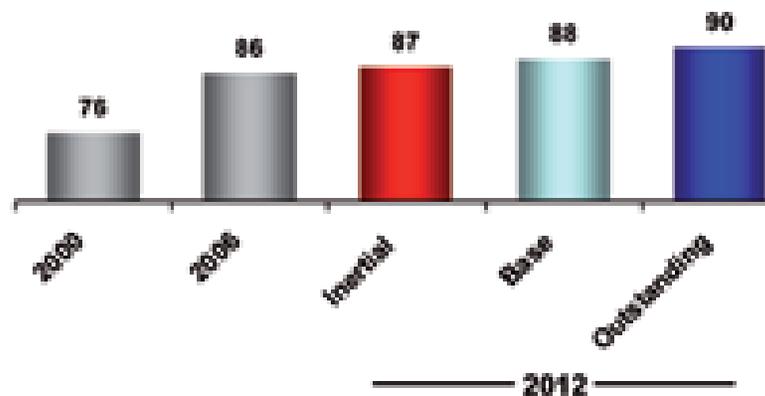
Goals for 2012

- Increase drinking water coverage to 92 percent (97 percent in urban zones and 76 percent in rural zones).
- Increase sewerage coverage to 88 percent (96 percent in urban zones and 63 percent in rural zones).
- Increase by 8 percentile points the overall efficiency level of 80 operators in locations of over 20 thousand inhabitants.
- Increase wastewater treatment to at least 60 percent of water collected.

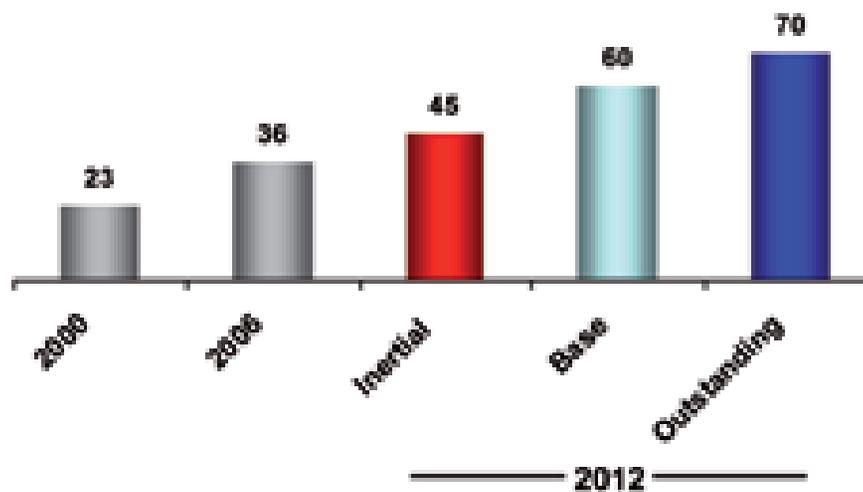
Drinking Water Coverage
(percentage)



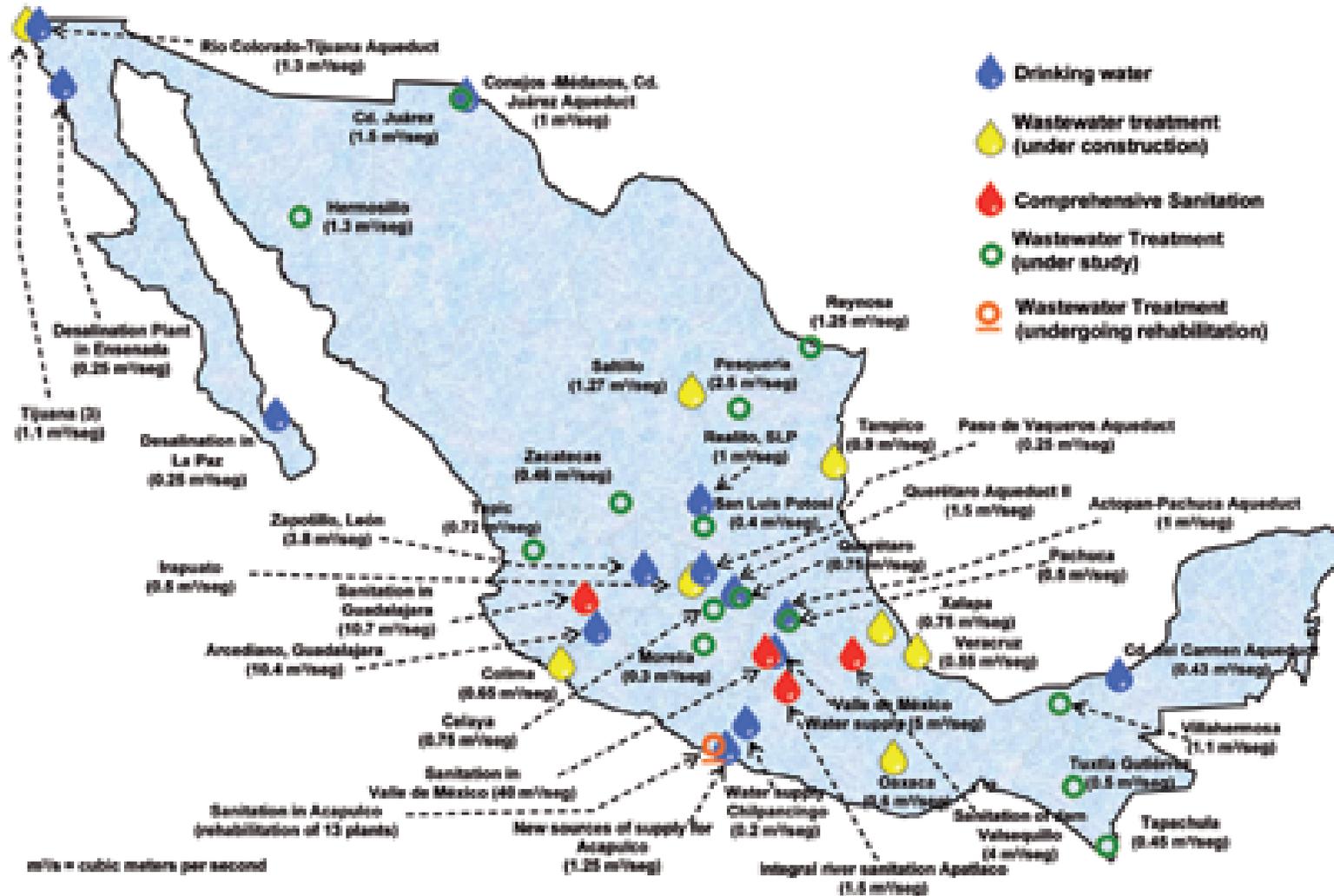
Sewerage Coverage
(percentage)



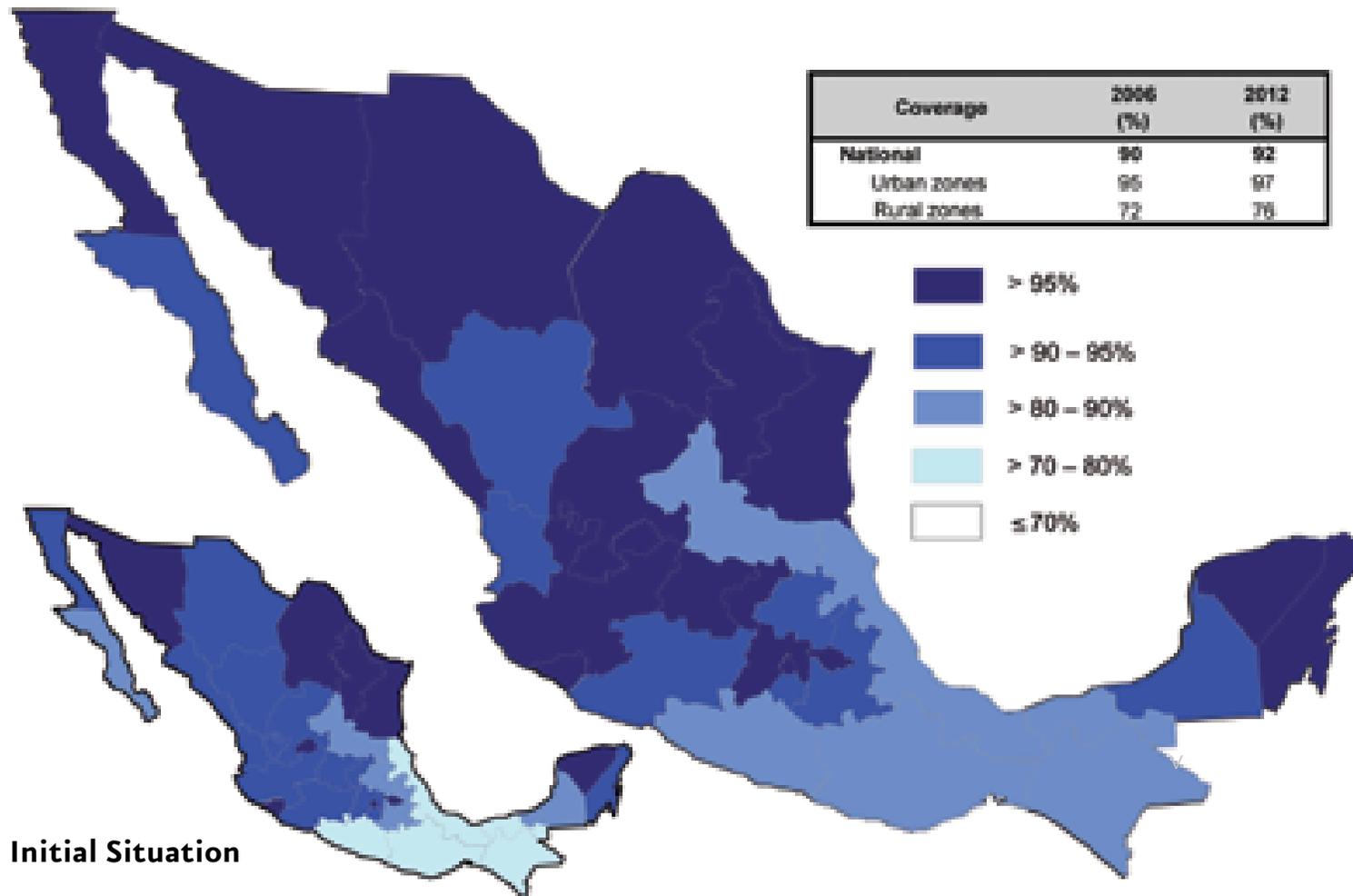
Wastewater Treatment
(percentage)



Main Projects 2007-2012

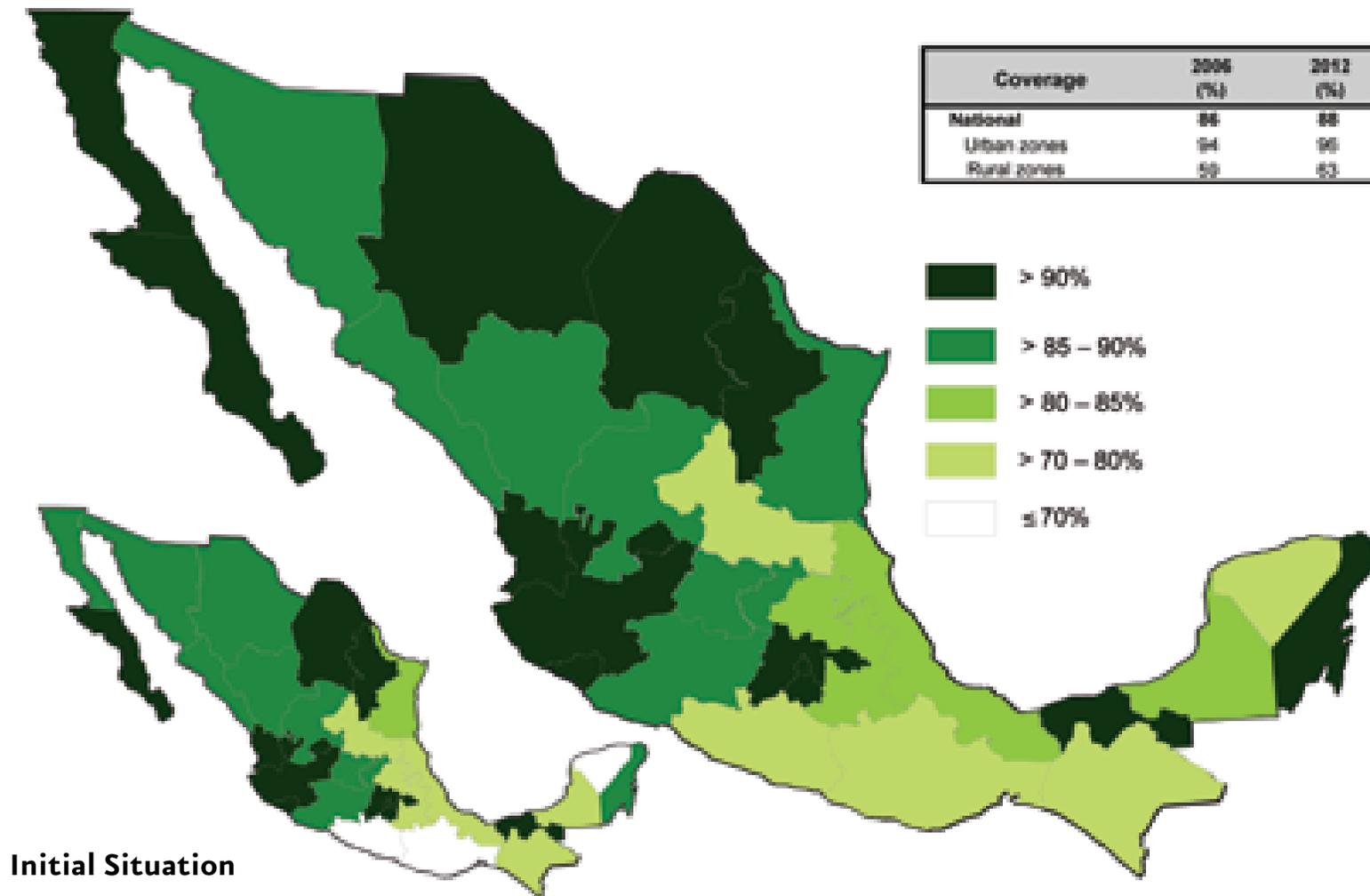


Drinking Water Coverage in 2012

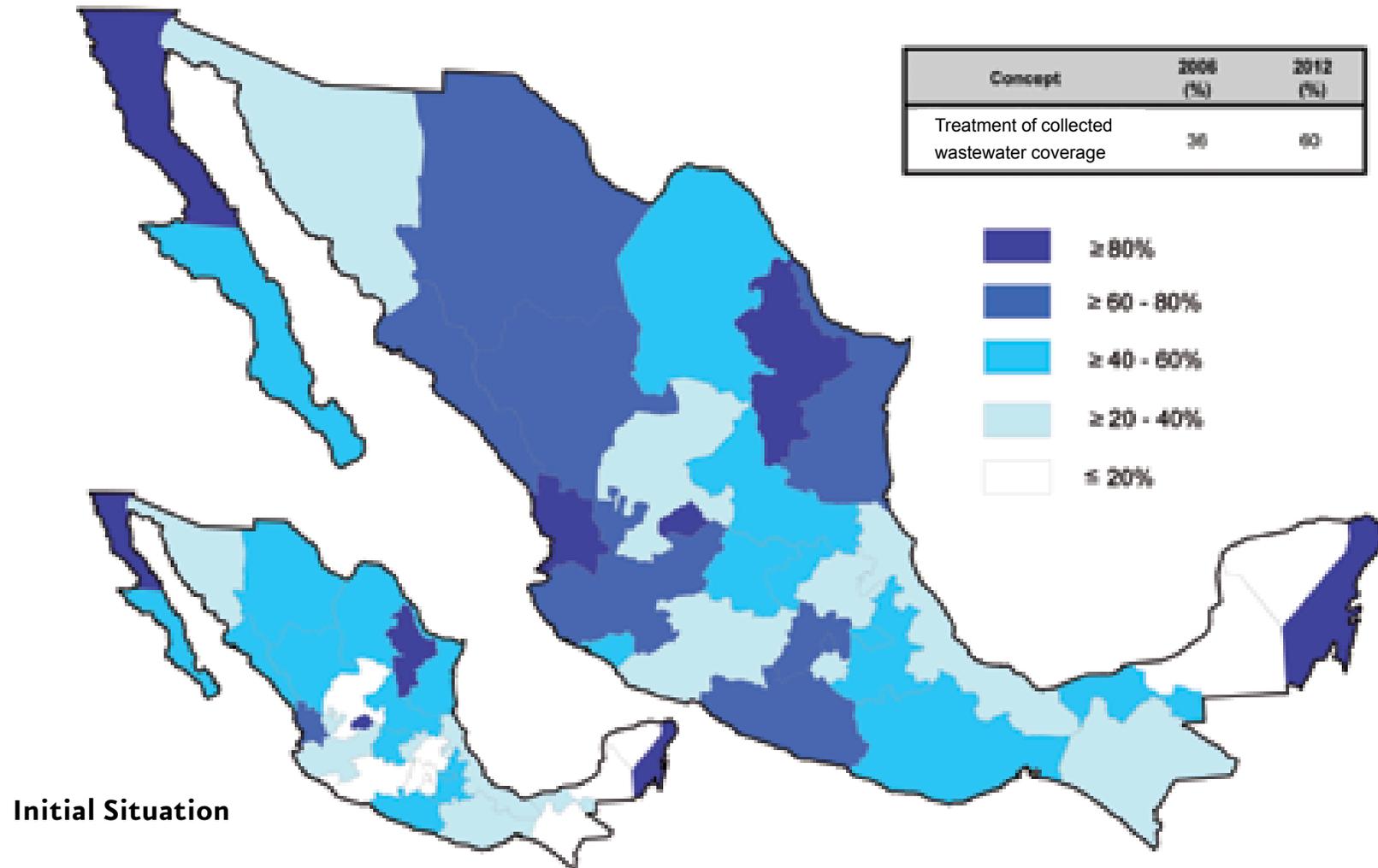


Initial Situation

Sewerage Coverage in 2012



Wastewater Treatment in 2012



Estimated Investment 2007-2012 (billions of US dollars)

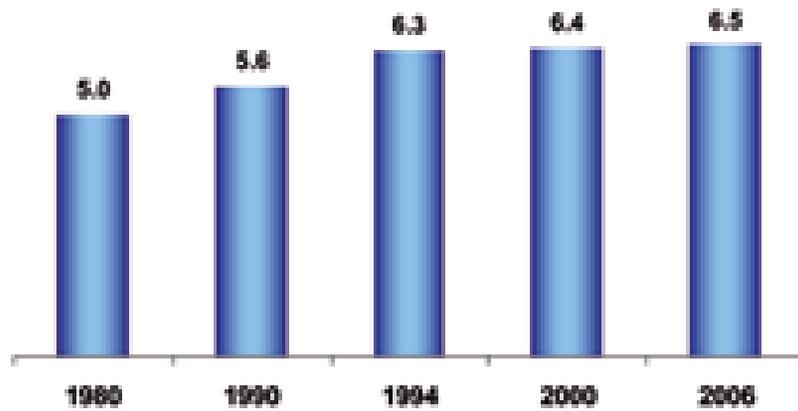
Concept	Public resources	Private resources	Total
Drinking Water Supply	6	2	8
Sewerage	2	1	3
Sanitation	2	1	3
Total	10	4	14

Irrigation and Flood Control Infrastructure

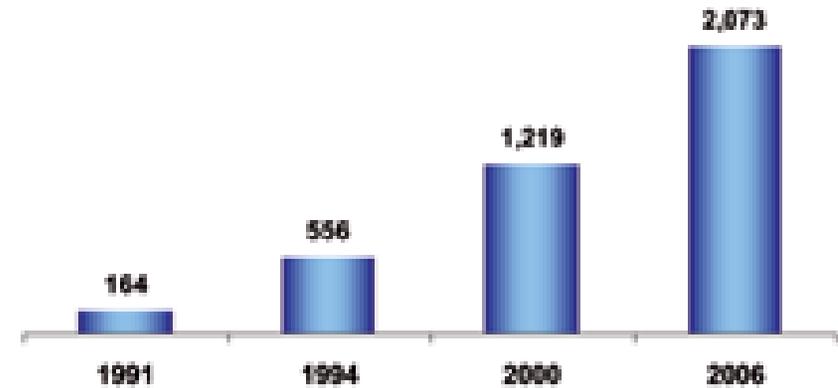


■ 3.7 Irrigation and Flood Control Infrastructure

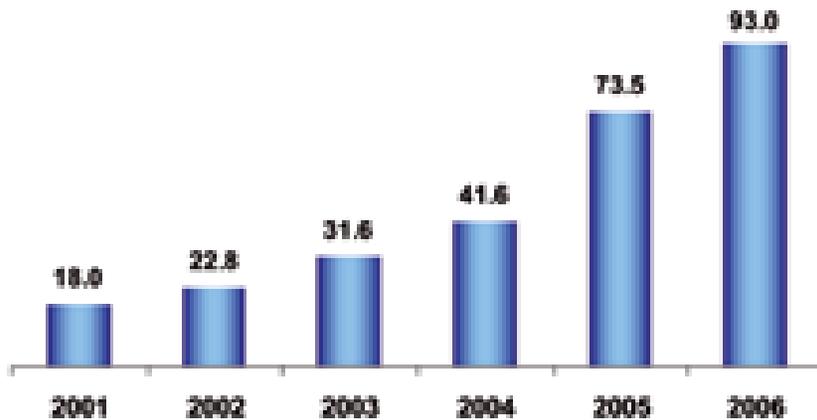
Irrigated Surface
(millions of hectares)



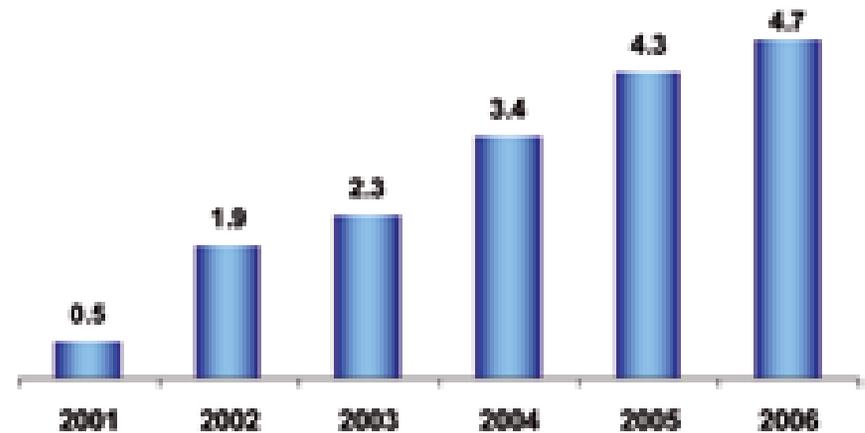
Rehabilitated, Modernized and/or Technified Surface
(thousands of hectares)



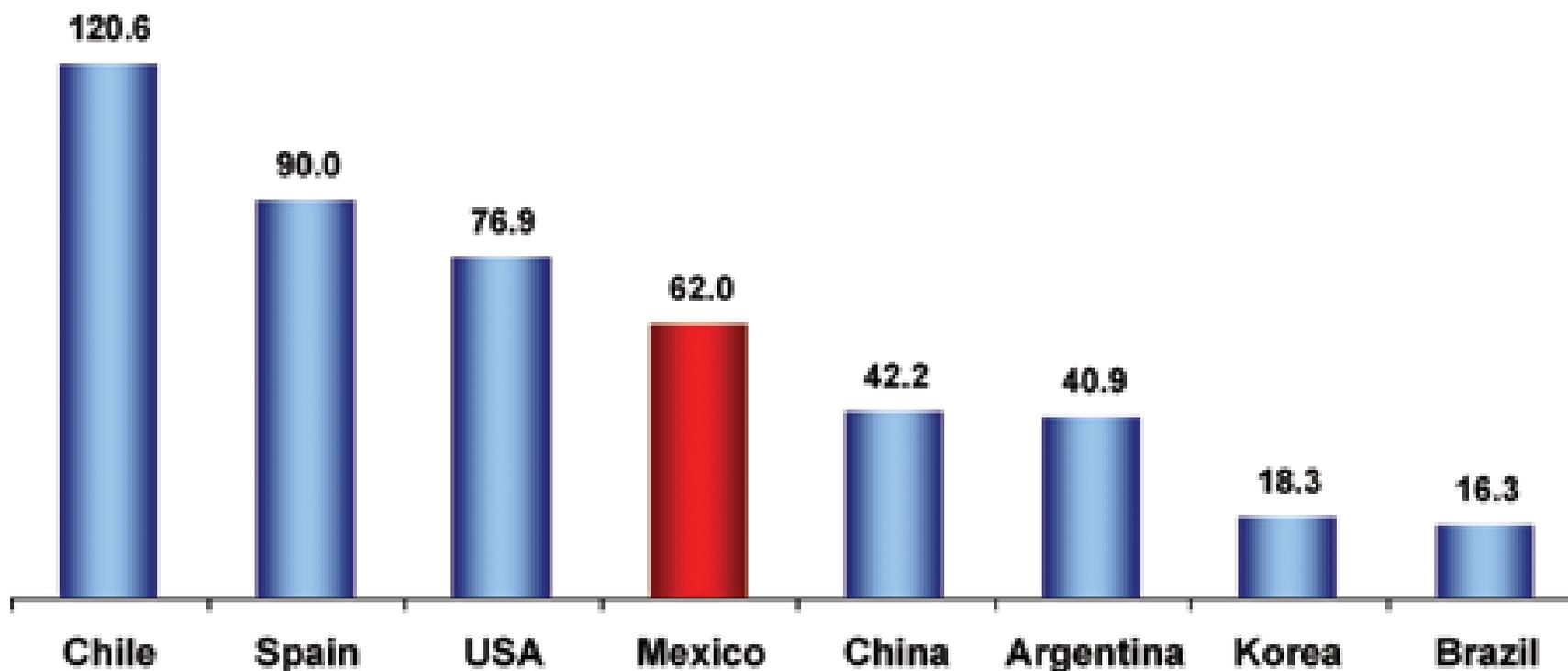
Protection of Productive Areas
(thousands of hectares)



Protection of Population Centers
(millions of inhabitants)



Irrigated Surface (hectares per every thousand inhabitants)



Note: For Mexico, information through 2006; for the rest of the countries, through 2003.

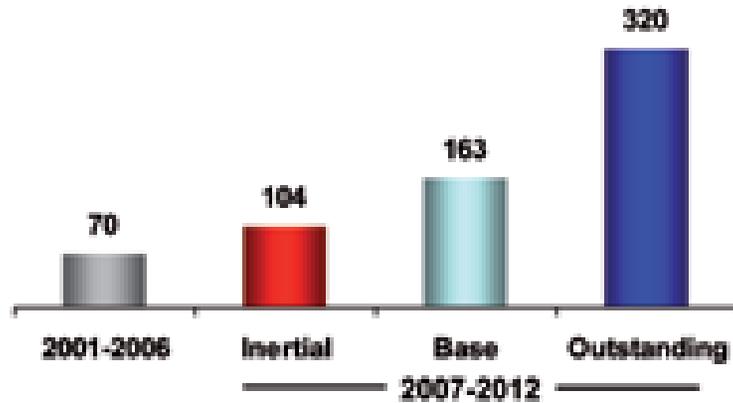
Strategies

- i. Modernize irrigation infrastructure and technify agricultural land, in coordination with users and local authorities.
- ii. Expand the irrigated agricultural surface and the technified temporal surface in areas with water availability, prior land ordinance.
- iii. Maintain, conserve and expand hydraulic infrastructure to protect population centers and productive areas.

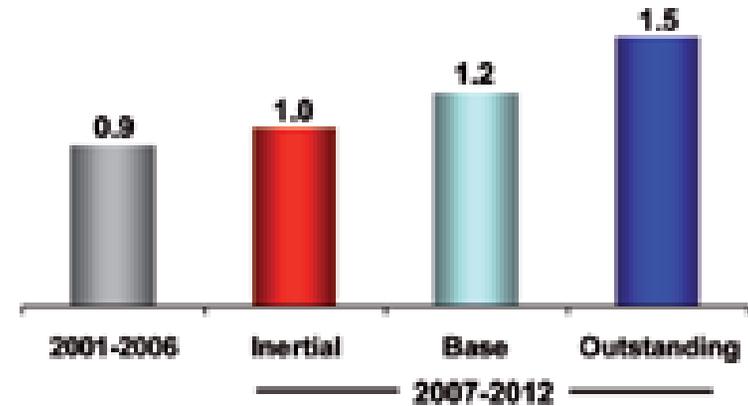
Goals for 2012

- Modernize and/or technify 1.2 million hectares of irrigatable agricultural land.
- Incorporate 160 thousand new hectares of irrigatable land and technified temporal land.
- Increase works to protect against floods to cover a population of 6 million inhabitants and 150 thousand hectares of agricultural production land.

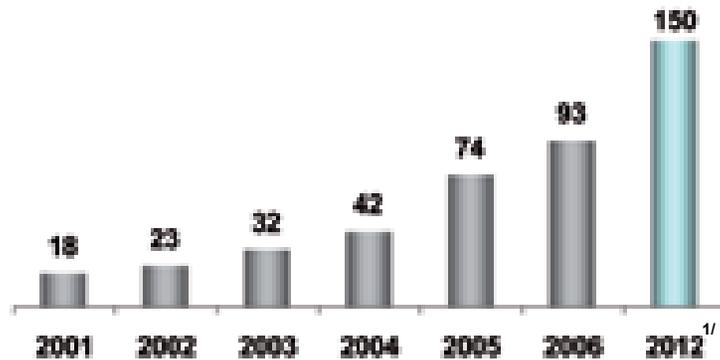
Expansion of Irrigated Surface (thousands of hectares)



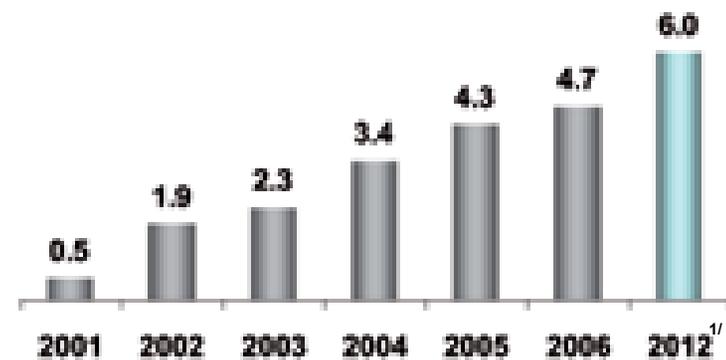
Increase Rehabilitated, Modernized and/or Technified Surface (millions of hectares)



Protection of Productive Areas (thousands of hectares)



Protection of Population Centers (millions of inhabitants)



^{1/} Goals are the same for all three scenarios.

Main Projects 2007-2012



Estimated Investment 2007-2012 (billions of US dollars)

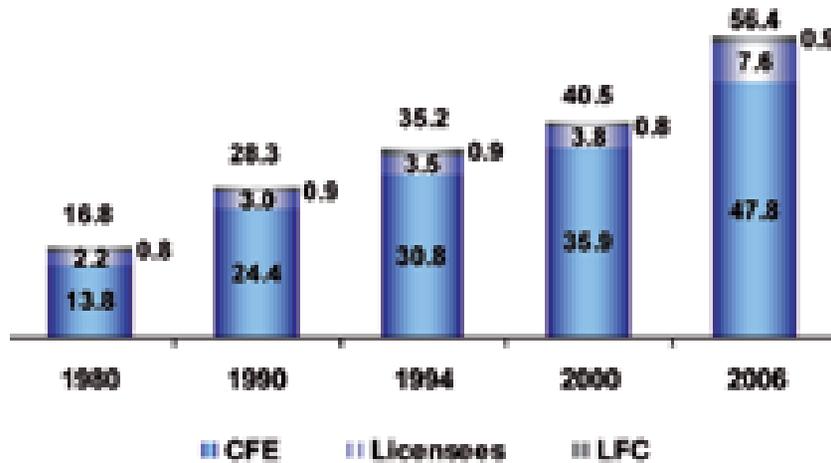
Concept	Public resources	Private resources	Total
Irrigation	2	1	3
Rehabilitation and modernization	2	1	2
Expansion of agricultural surface, both irrigated and technified temporal	< 1	< 1	1
Other	< 1	0	< 1
Flood Control	1	0	1
Total	3	1	4

■ 3.7 Irrigation and Flood Control Infrastructure

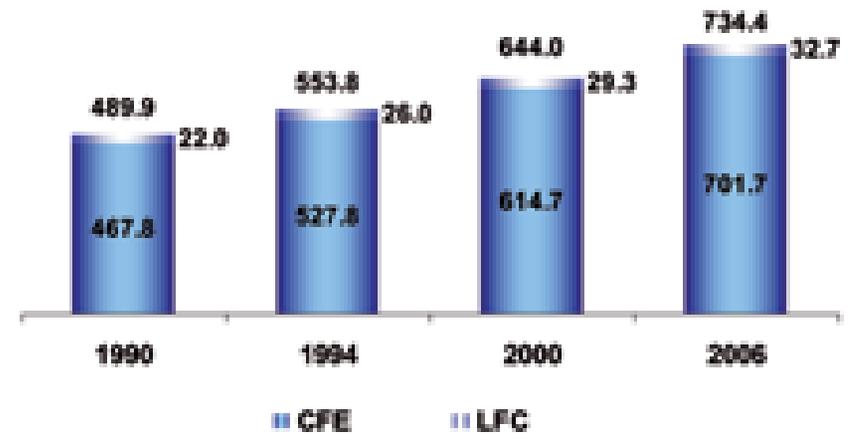
Electricity



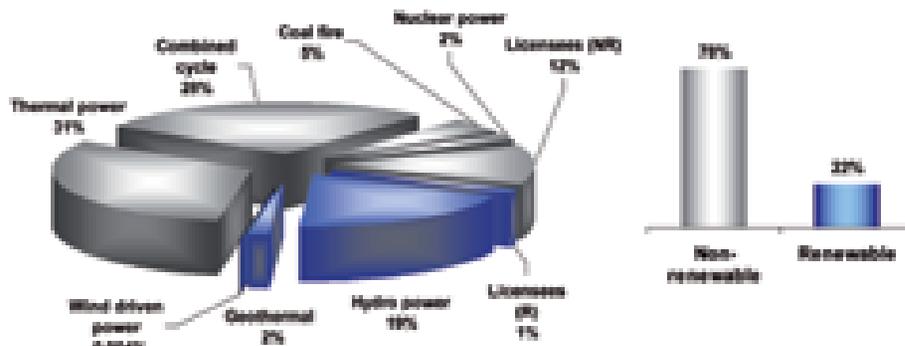
Generation Capacity
(thousands of megawatts)



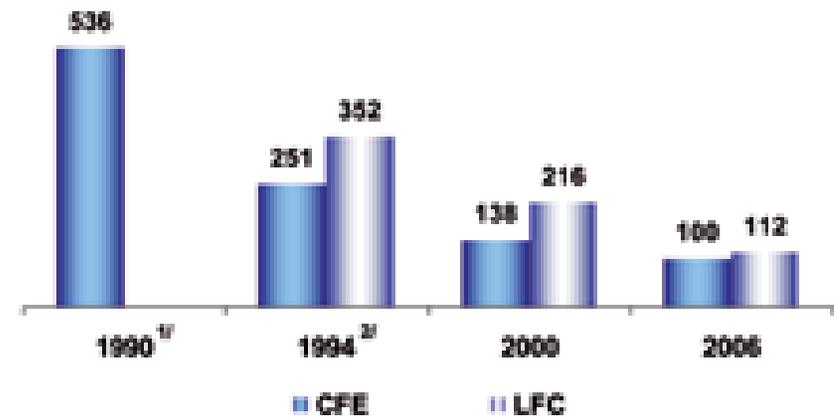
Electrical Network
(thousands of kilometers)



Generation Capacity per Type of Source (2006)



Service Interruption
(minutes per user / year)

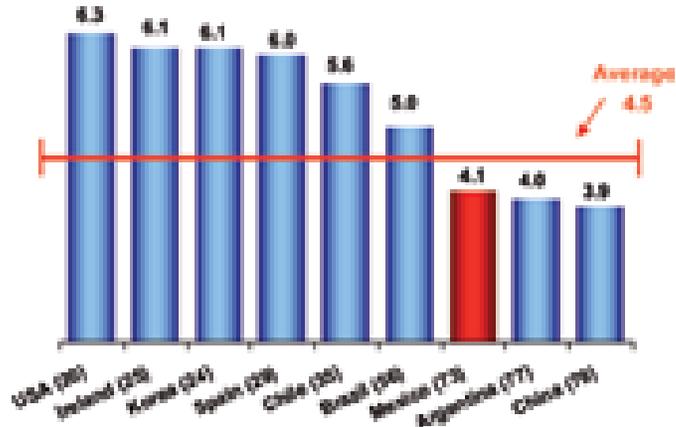


Note: Licensees comprise self-consumption and cogeneration
 CFE= Comisión Federal de Electricidad (Federal Commission of Electricity)
 LFC= Luz y Fuerza del Centro (Central Mexico Commission of Electricity)
 NR=non renewable
 R= renewable

^{1/} For LFC information is available only from 1997 on

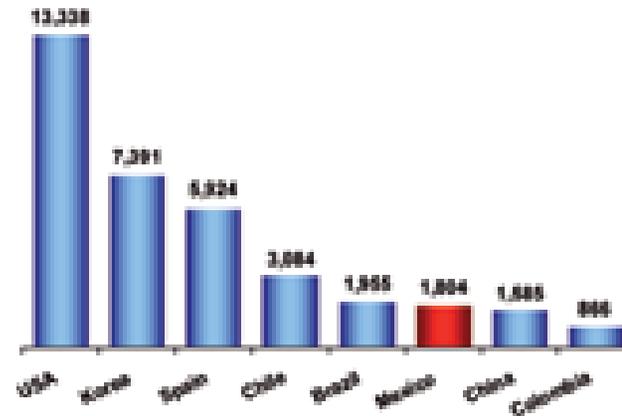
^{2/} Information for LFC corresponds to 1997

Quality of Electricity Supply (2006) (World Economic Forum)



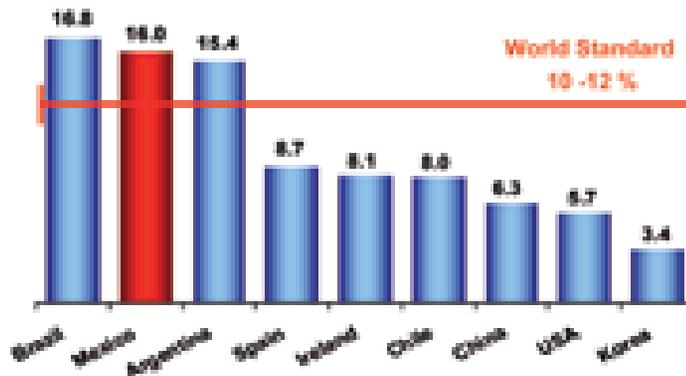
Note: Quality refers to lack of interruptions and lack of voltage fluctuations
1 = less developed or inefficient; 7 = among the best in the world

Electricity Consumption (kilowatts-hour per inhabitant per year)



Note: For Mexico, data through 2006 (CFE), for other countries, through 2004

Losses in Electricity Distribution (2004) (as a percentage of energy generated)



Strategies

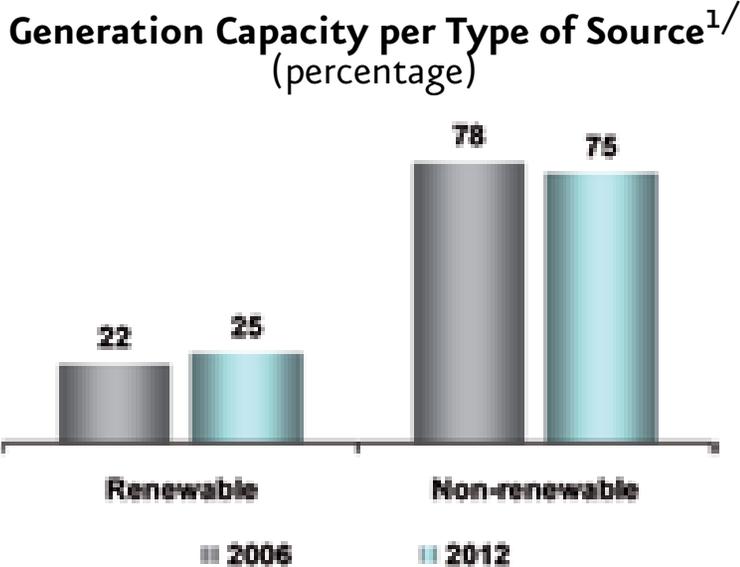
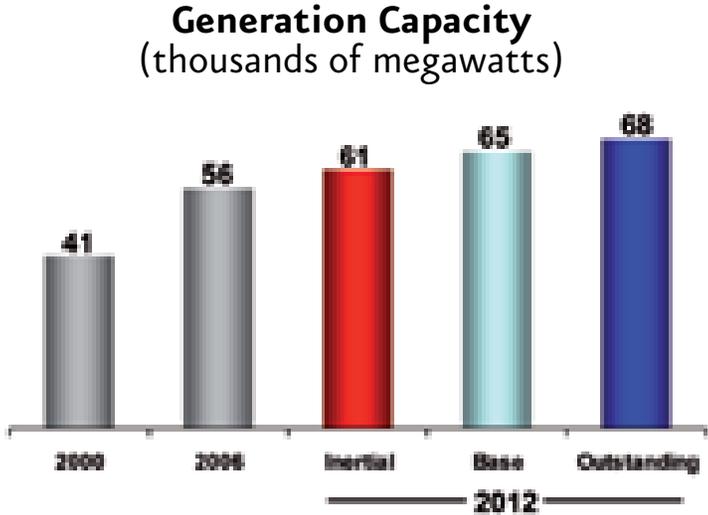
- i. Develop infrastructure for generation, transmission and distribution as needed to satisfy electricity demand at the lowest possible cost.
- ii. Diversify electricity generation sources, emphasizing the use of renewable sources.
- iii. Increase electricity service coverage, particularly in rural areas.
- iv. Improve public service quality regarding electricity supply.

Goals for 2012

- Maintain the reliability of the electrical energy supply, implementing in planning a reserve margin of 23 to 25 percent.
- Increase effective generation capacity to 9 thousand megawatts.^{1/}
- Strive for renewable sources to represent 25 percent of the effective generation capacity.
- Put into operation more than 14 thousand kilometers-circuit lines at the varying tension levels.
- Increase electricity service coverage to 97.5 percent of the population.
- Place Mexico in the top 40 percent of countries with the best evaluations according to the Quality of Electricity Supply Index of the World Economic Forum.

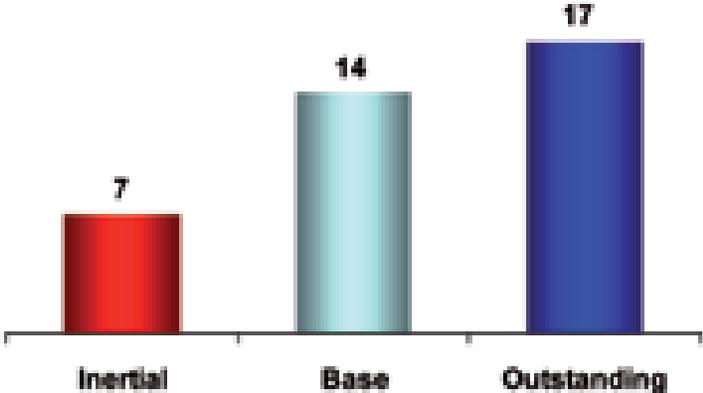
Note: The base scenario presented by the National Infrastructure Program is different from the base scenario considered in other official publications of the energy sector that have been drafted by both the Ministry of Energy and other entities, due to the differences in the provision of resources envisioned in each one of said documents.

^{1/} It considers the phasing-out of electricity plants that currently provide 3 thousand megawatts.

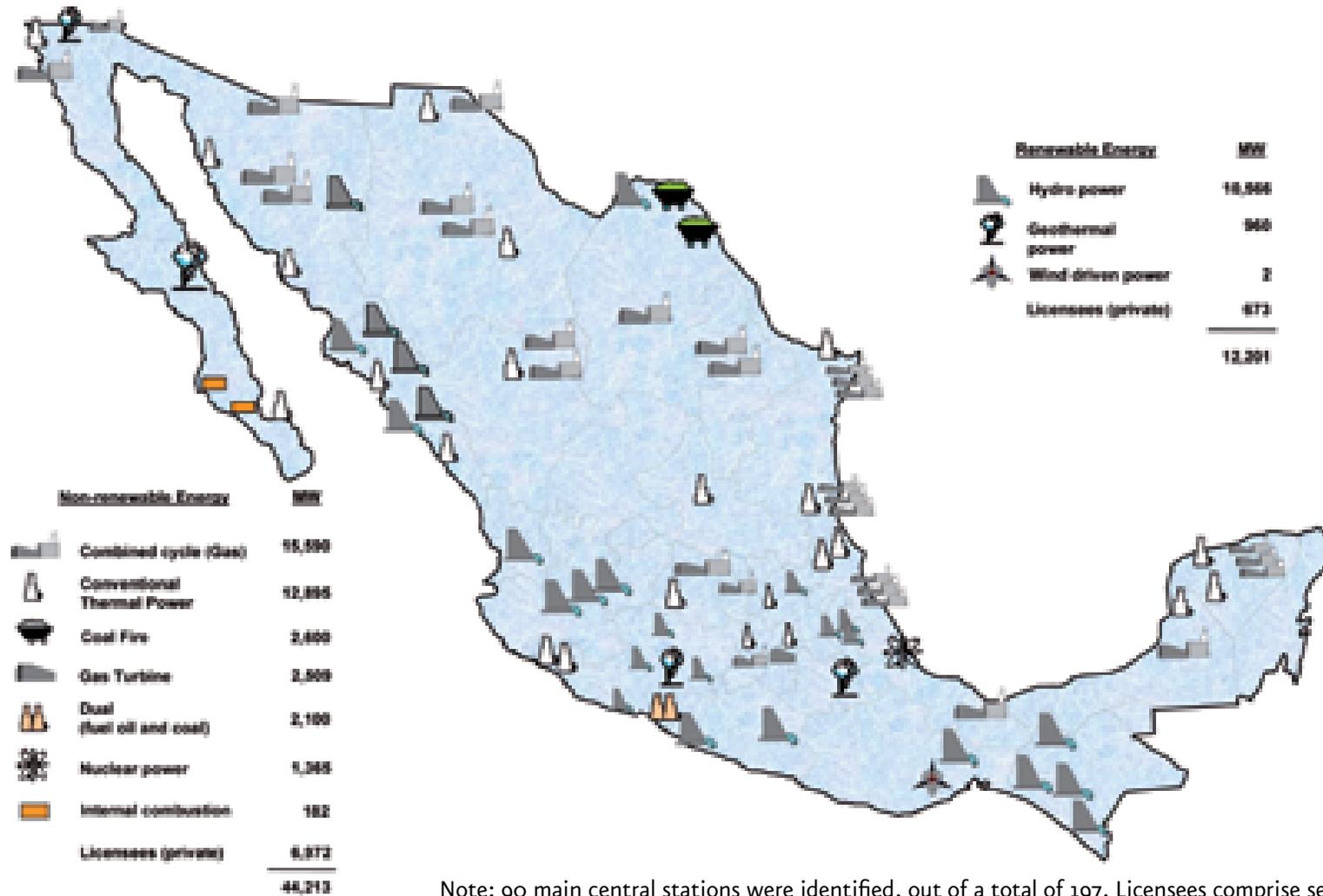


^{1/} Percentages per type of source are maintained throughout the three scenarios.

Increase in Transmission Lines 2007-2012 (thousands of kilometers-circuit)



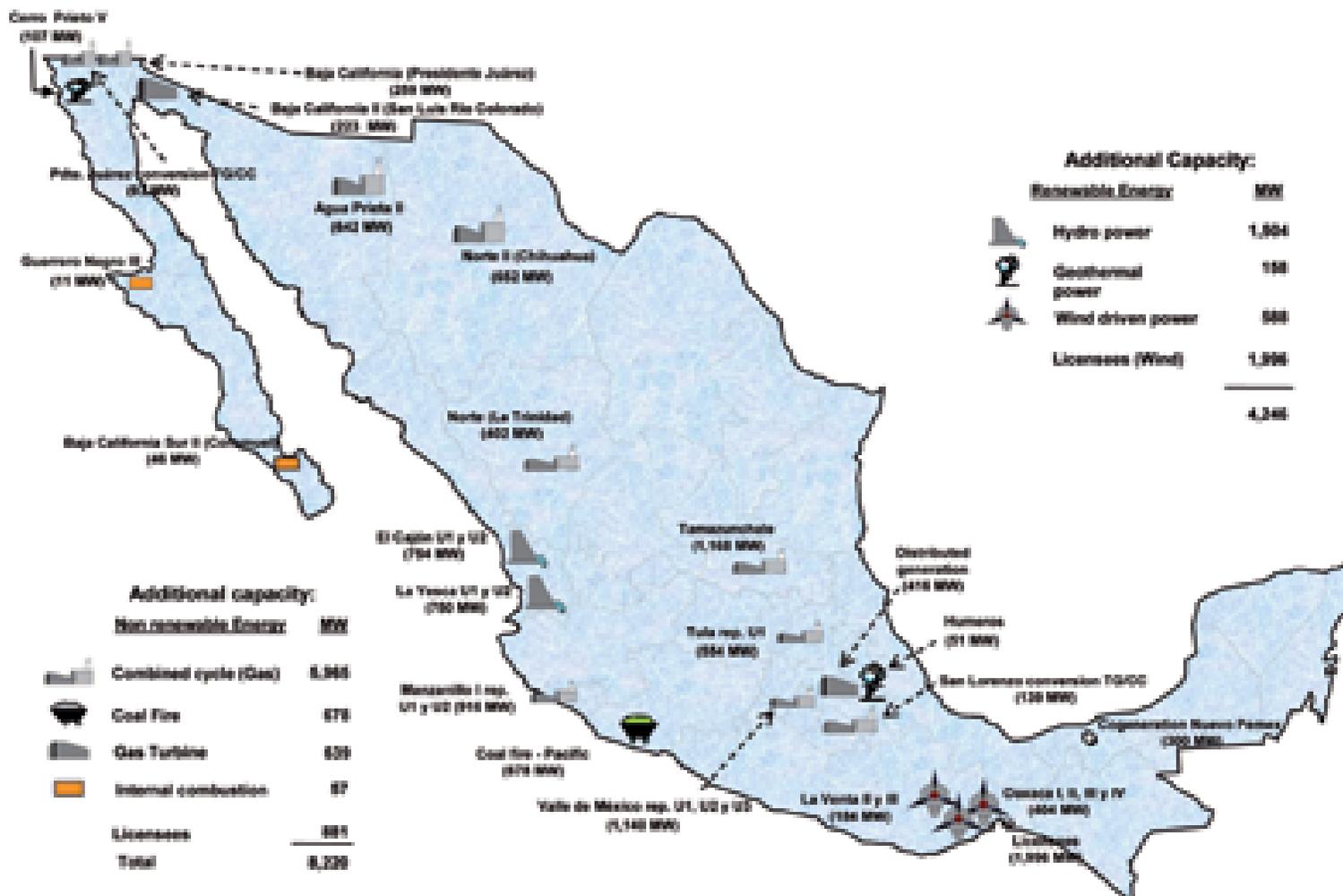
Generation Capacity in 2006



Note: 90 main central stations were identified, out of a total of 197. Licensees comprise self-consumption and cogeneration.

MW = megawatts

Main Projects in Generation 2007-2012

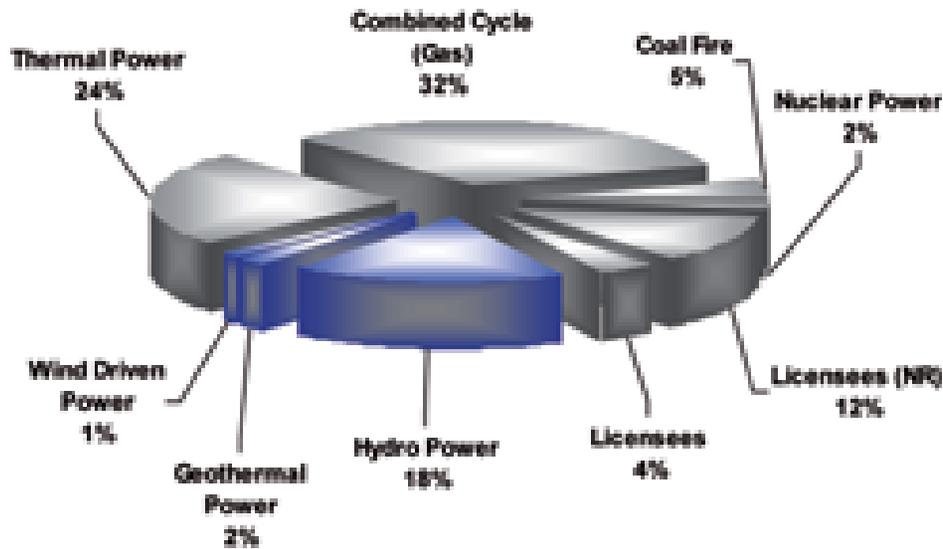


Note: Licenses comprise self-consumption and cogeneration.

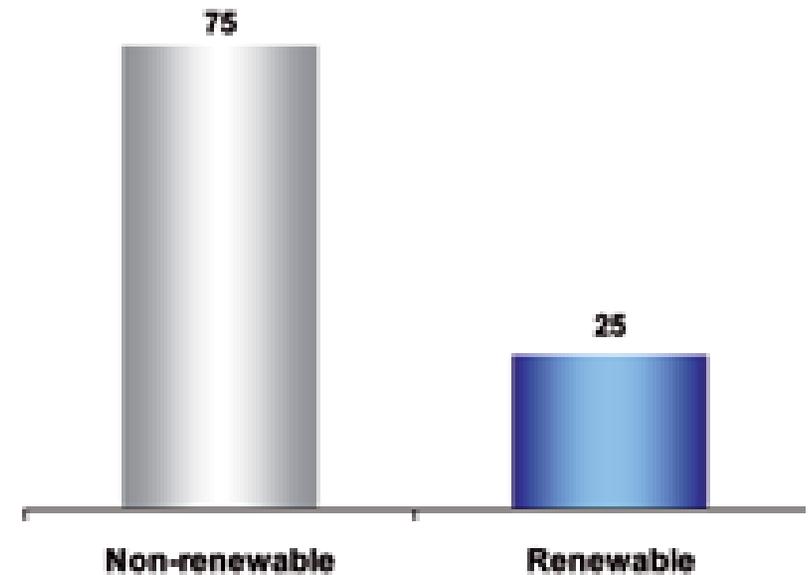
MW = megawatts

Generation Capacity in 2012

By Type of Technology (percentage)

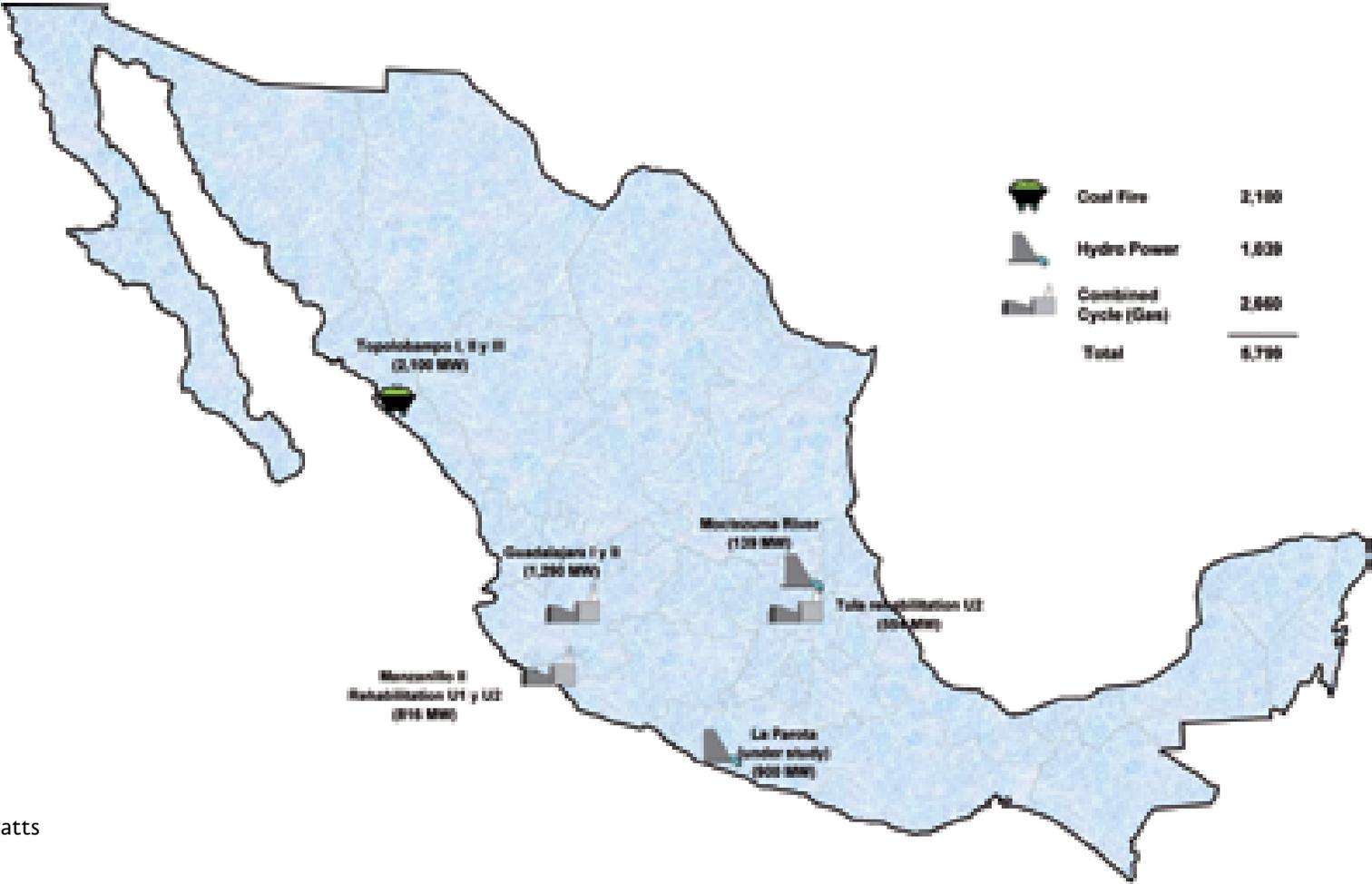


By Type of Source (percentage)



Note: Licensees comprise self-consumption and cogeneration.
MW= megawatts; NR= non-renewable; R= renewable

Projects to be Implemented After 2012

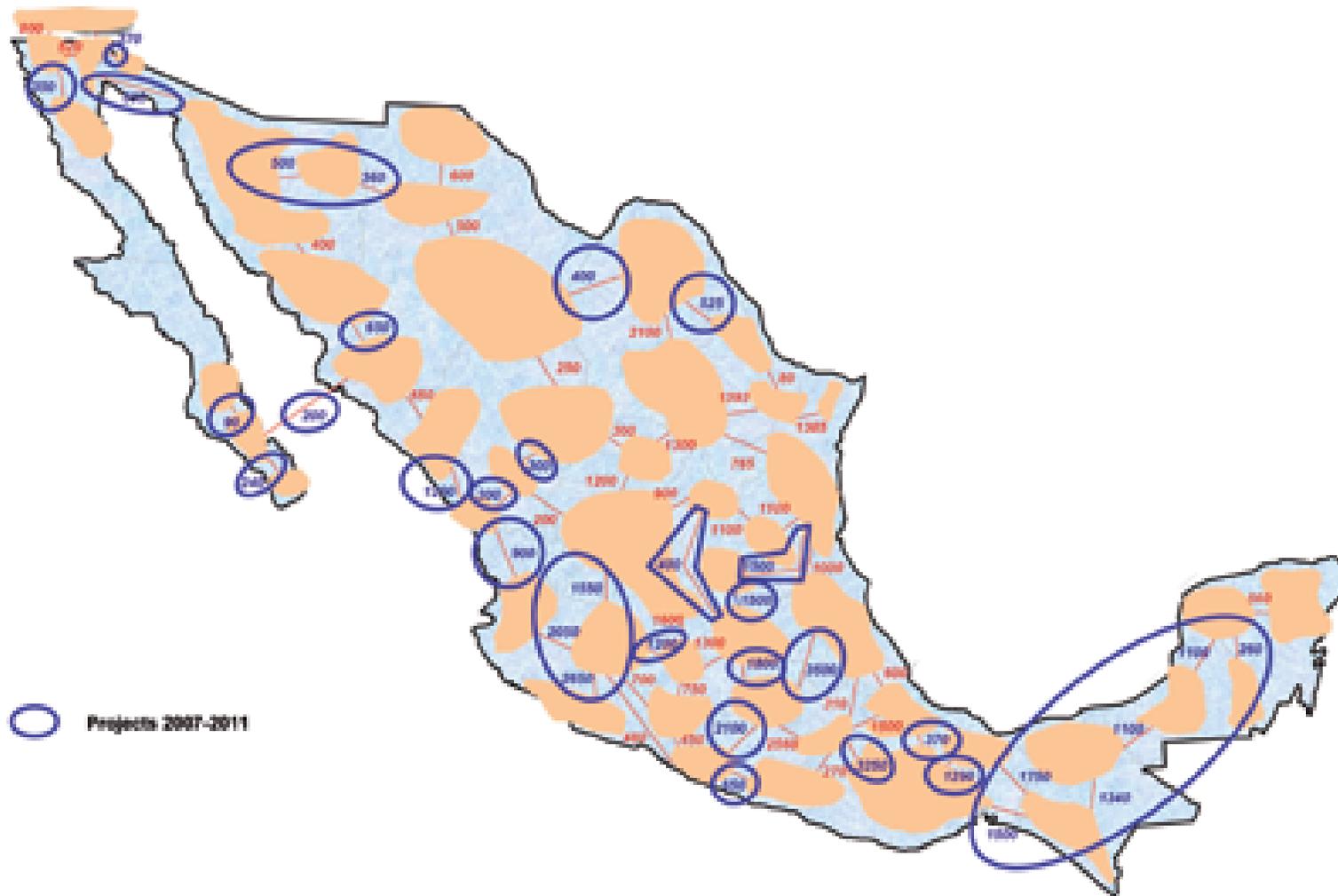


MW = megawatts

Transmission Network Among Regions in 2006 (megawatts)



Transmission Network Among Regions in 2011 (megawatts)



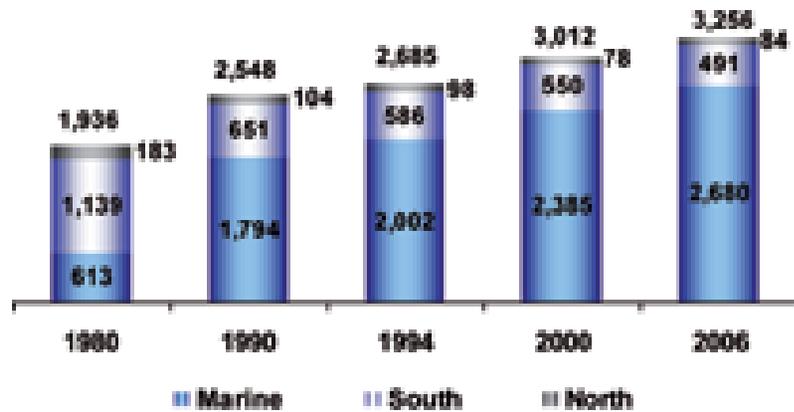
Estimated Investment 2007-2012 (billions of US dollars)

Concept	Total
Generation	14
Transmission	8
Distribution	7
Maintenance	4
Other	1
Total	34

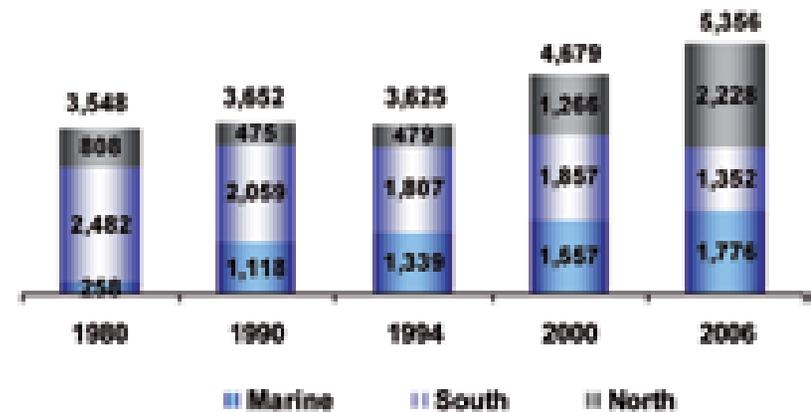
Oil & Gas Production



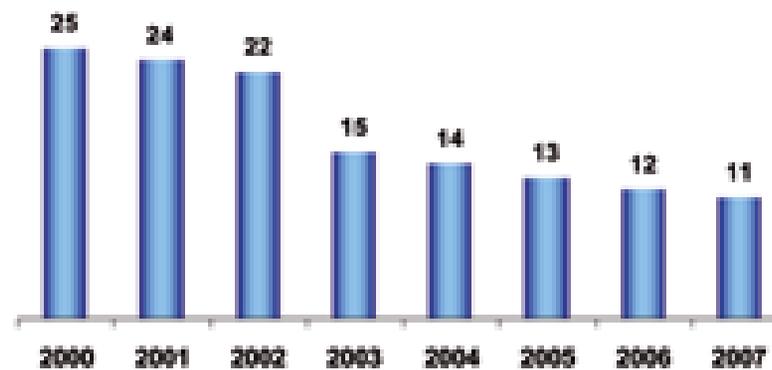
Production of Crude Oil per Region
(thousand barrels per day)



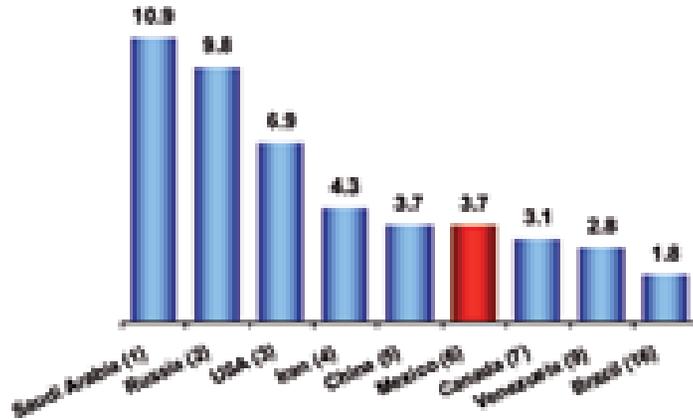
Extraction of Natural Gas per Region
(million cubic feet per day)



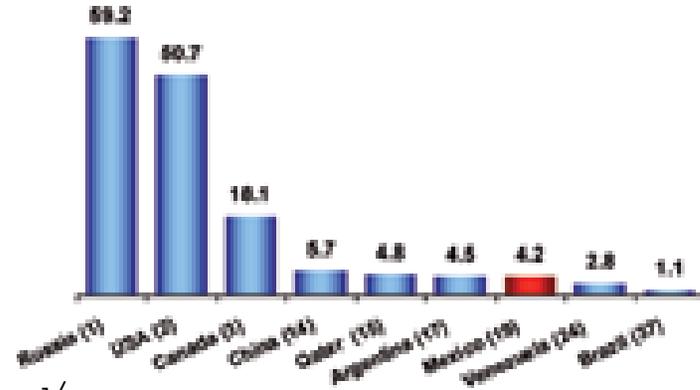
Proven Reserves of Crude
(billion barrels)



Production of Crude Oil and Gas Liquids (2006)
(million barrels per day)

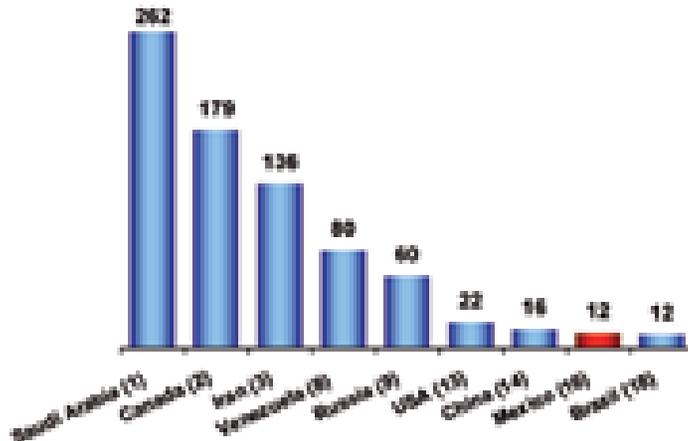


Production of Natural Gas (2006)^{1/}
(billion cubic feet per day)

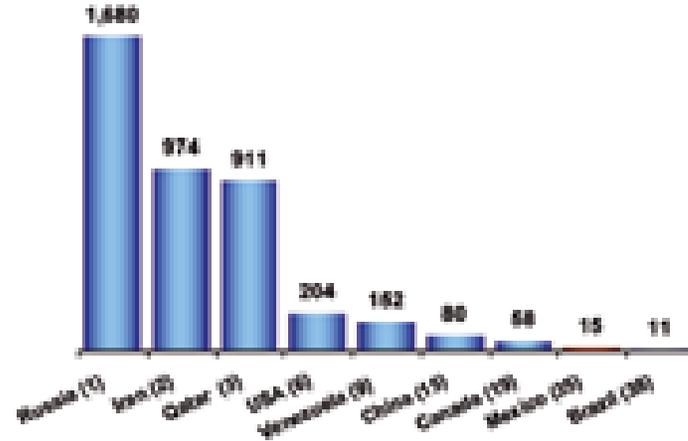


^{1/} Excluding gas flared or recycled

Proven Reserves of Crude Oil (2006)^{1/}
(billion barrels)



Proven Reserves of Natural Gas (2006)
(trillion cubic feet)



^{1/} Includes liquids

Strategies

- i. Reduce the imbalance between extraction of oil & gas and incorporation of reserves.

- ii. Promote exploration and production of crude oil & gas, establishing the groundwork to begin exploration and exploitation in deep waters, once the necessary resources are in place.

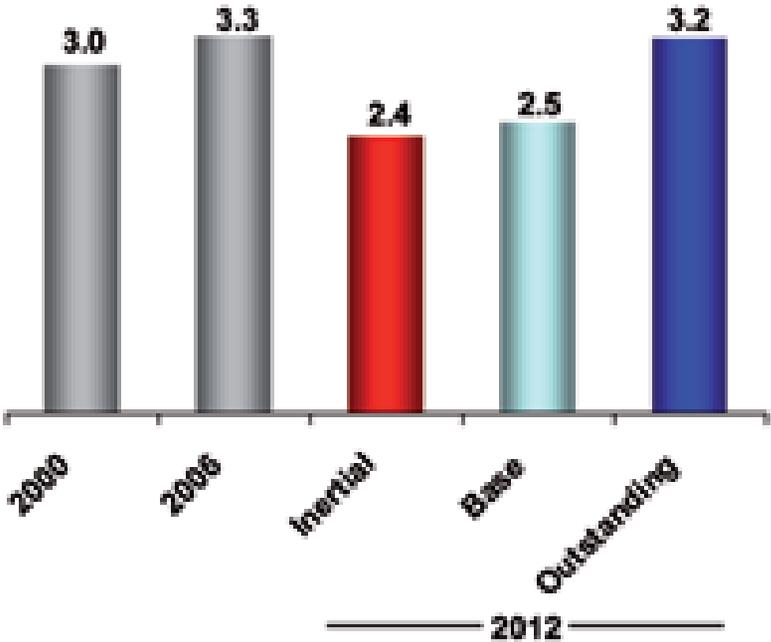
Note: The projects presented in this document are only indicative and in keeping with the planning scenarios in force, and can be modified or substituted by others once the corresponding financing schemes are defined.

Goals for 2012

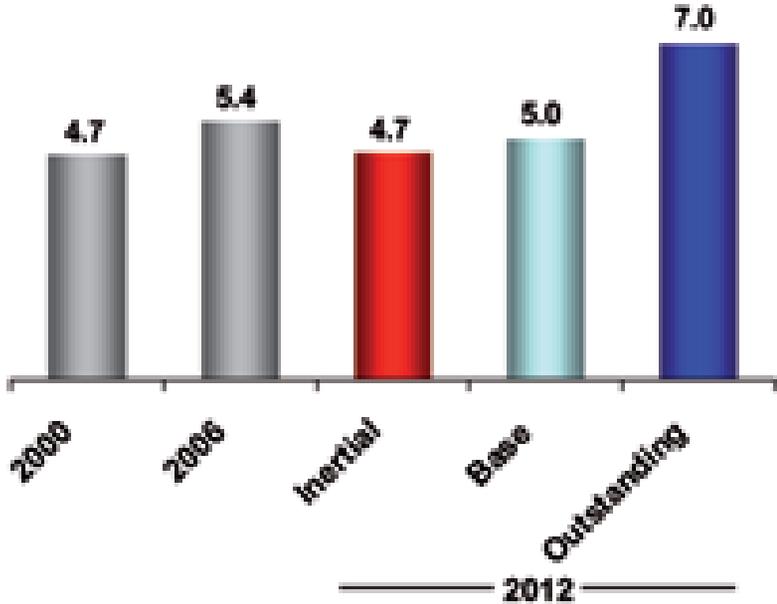
- Achieve an oil production of at least 2.5 million barrels per day.
- Maintain production of natural gas at around 5 billion cubic feet per day.
- Raise the rate of restitution of hydrocarbon reserves to 50 percent.

Note: The base scenario presented by the National Infrastructure Program is different from the base scenario considered in other official publications of the energy sector that have been drafted by both the Ministry of Energy and other entities, due to the differences in the provision of resources envisioned in each one of said documents.

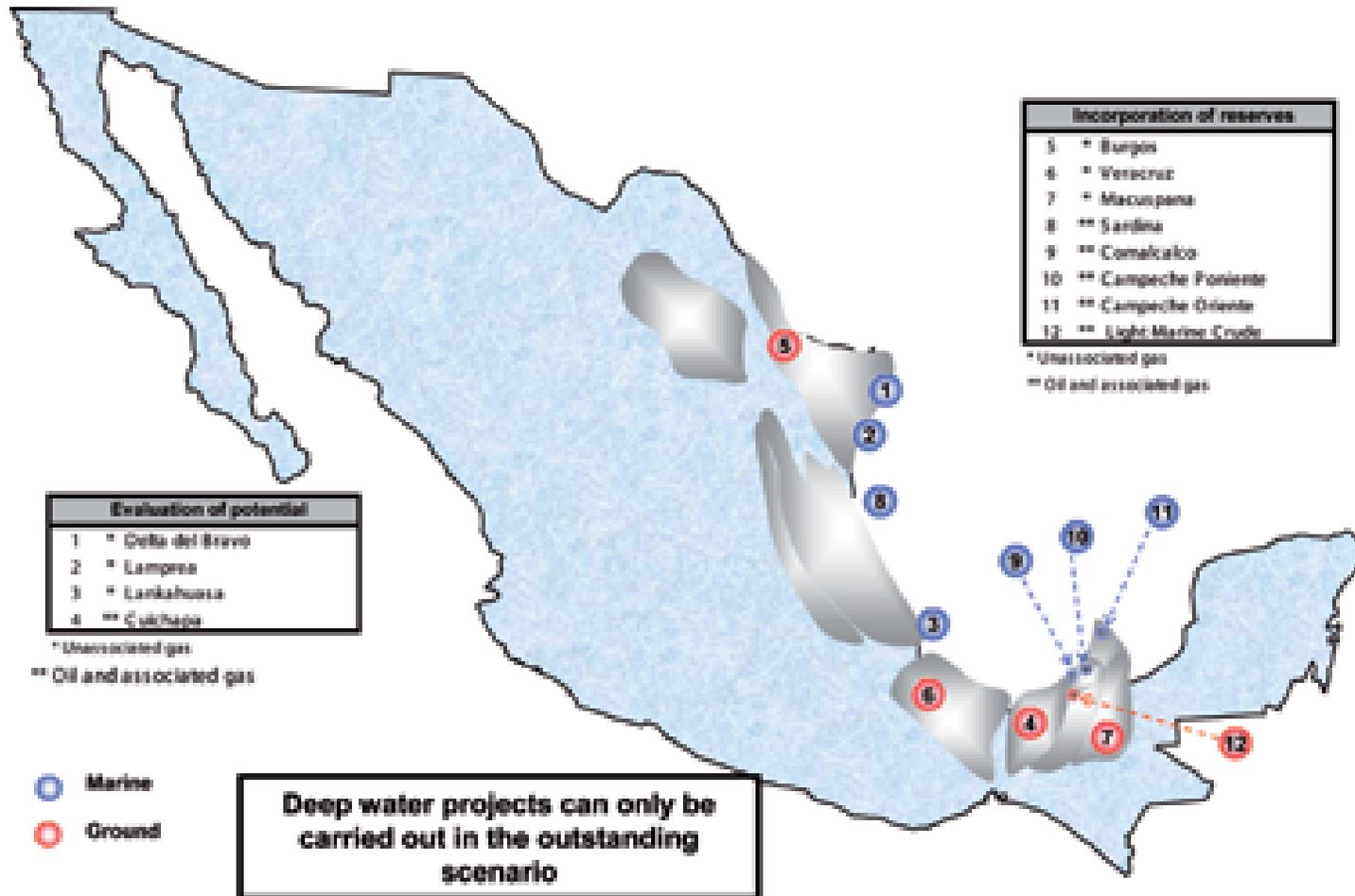
Production of Crude Oil
(million barrels per day)



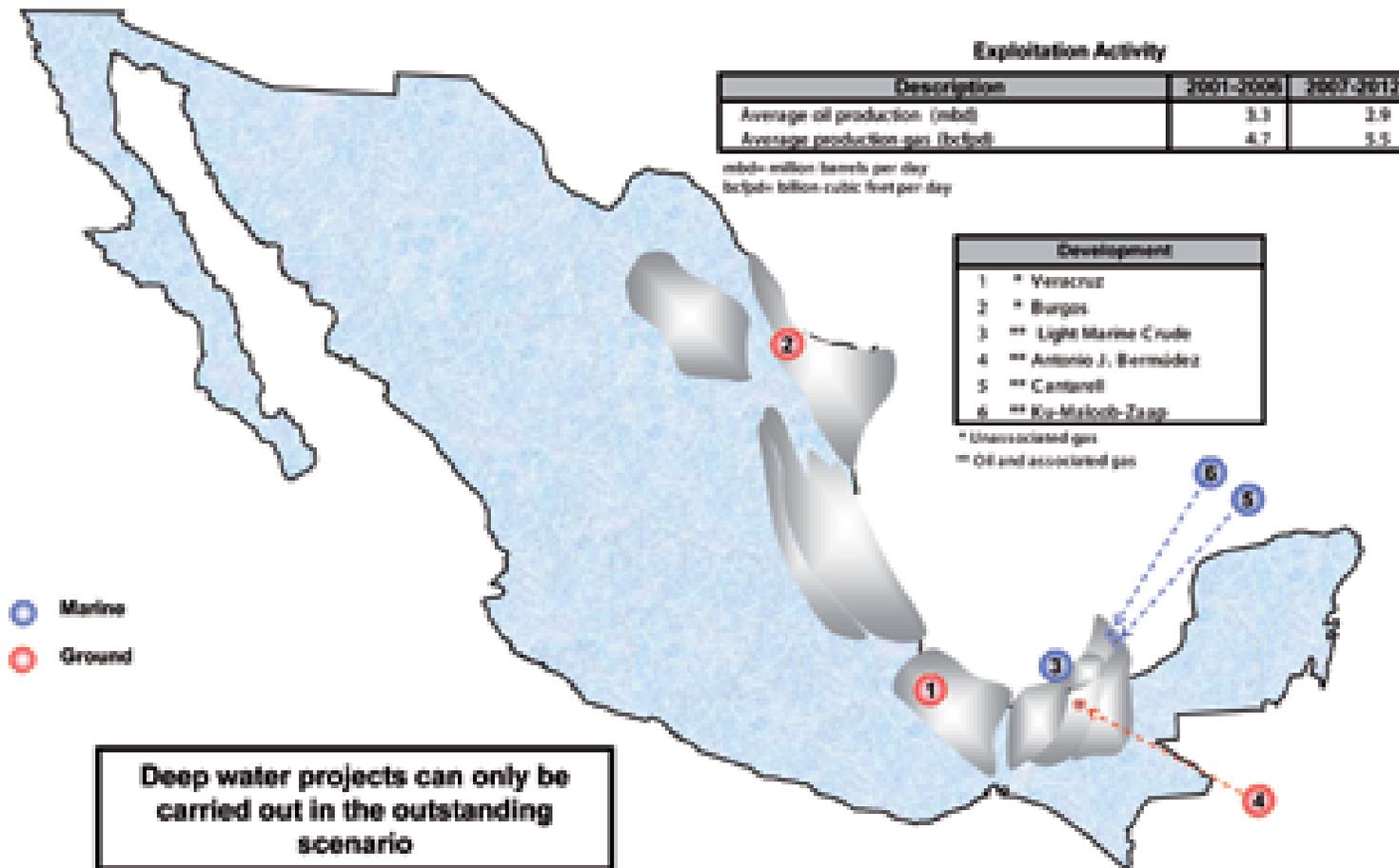
Production of Natural Gas
(billion cubic feet per day)



Exploration Projects 2007-2012



Production Projects 2007-2012



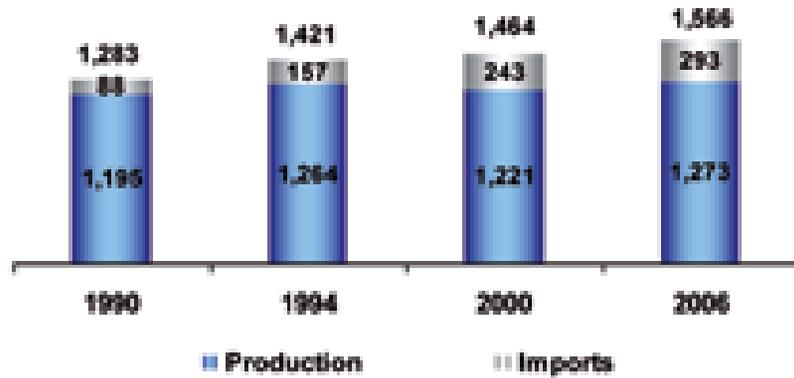
Estimated Investment 2007-2012 (billions of US dollars)

Concept	Total
Exploration and Production	73

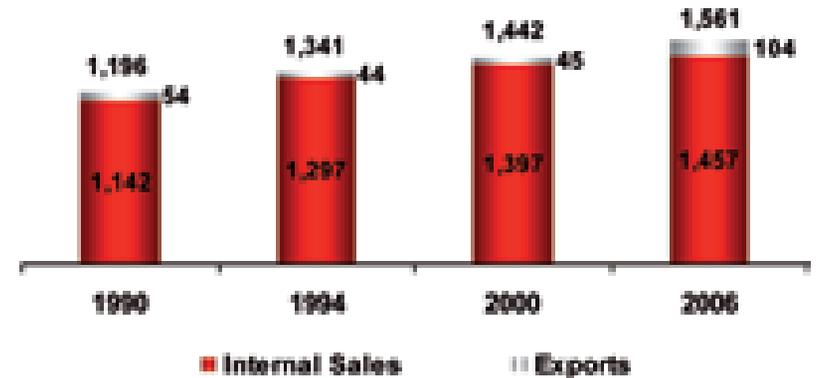
Refinery, Gas and Petrochemicals



Petroleum Products Supply (thousand barrels per day)

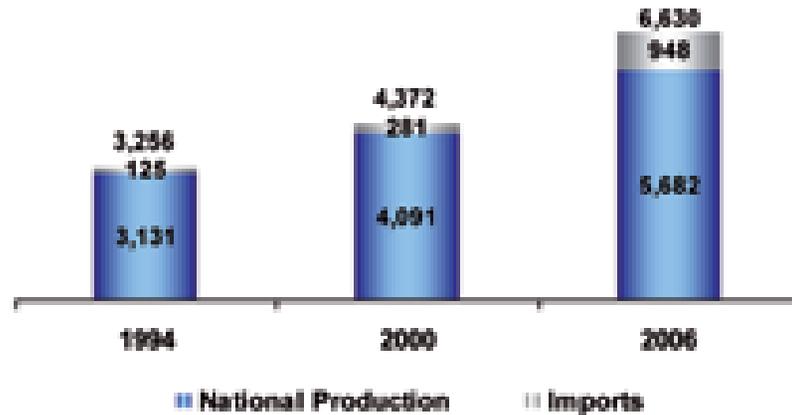


Petroleum Products Demand (thousand barrels per day)

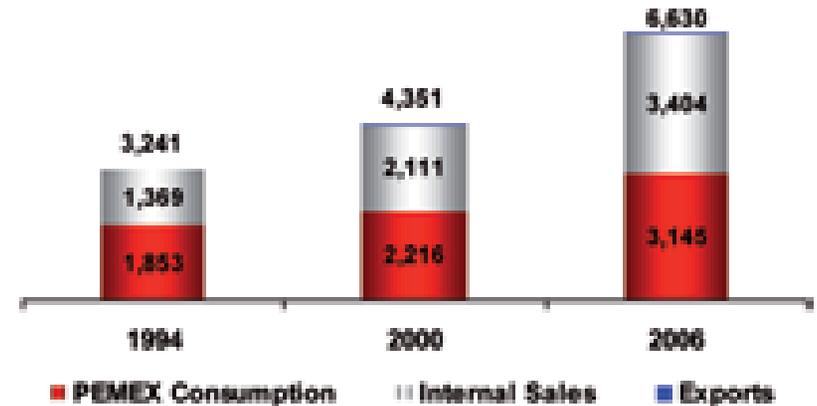


Note: The difference between supply and demand is due to variations in inventories.

Natural Gas Supply (million cubic feet per day)



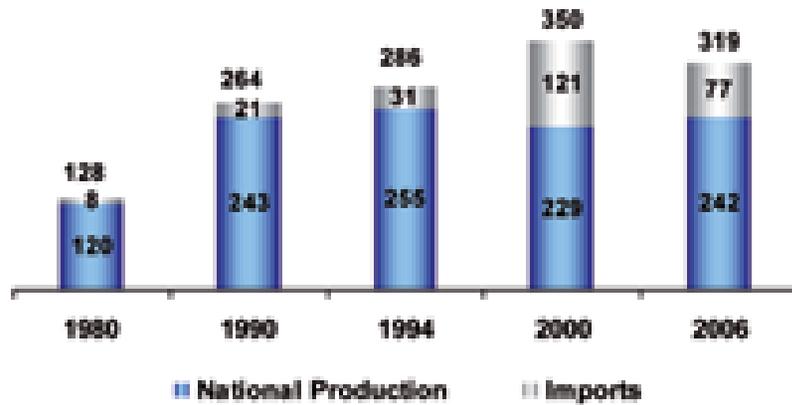
Natural Gas Demand (million cubic feet per day)



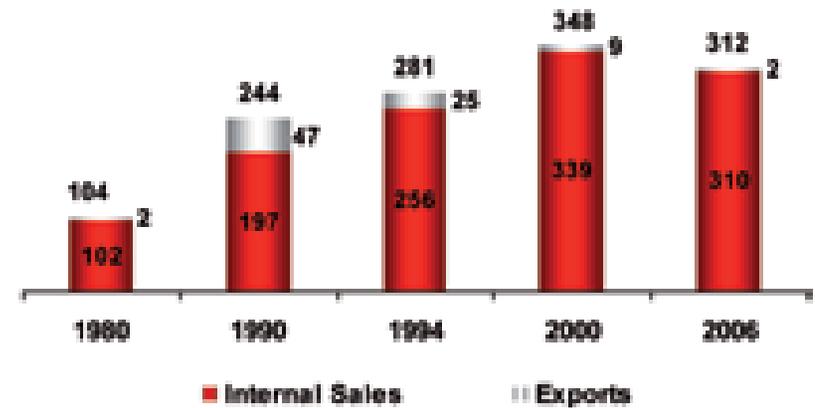
Notes: The difference between supply and demand is due to variations in inventories and statistical differences.

Supply refers to domestic production of natural gas from PEMEX Exploración y Producción to PEMEX Gas y Petroquímica Básica plus imports.

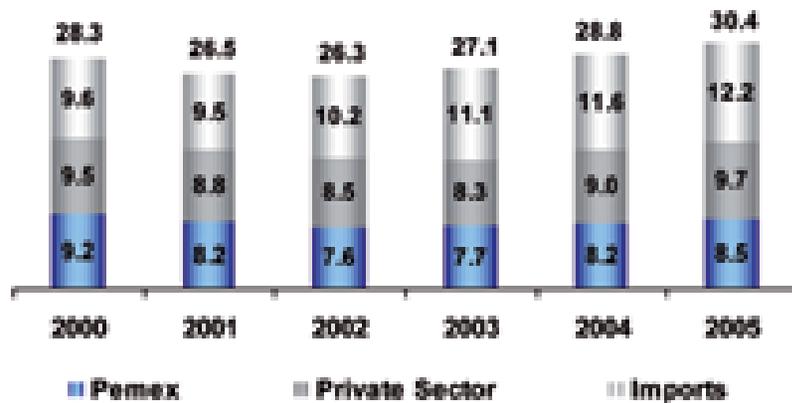
Liquefied Petroleum Gas Supply (LPG)
(thousand barrels per day)



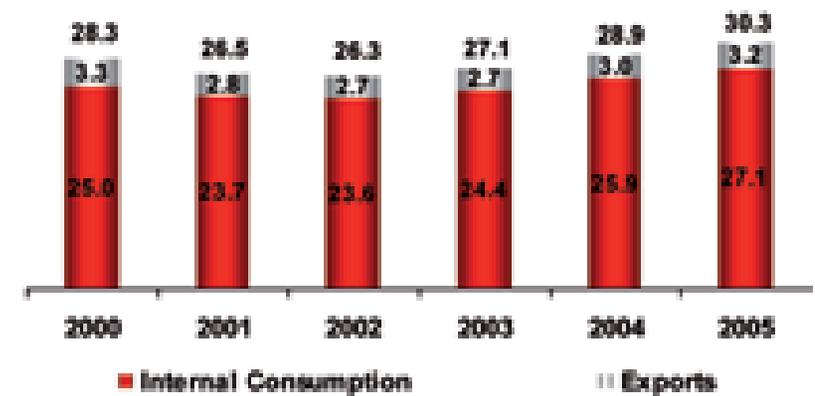
Liquefied Petroleum Gas Demand (LPG)
(thousand barrels per day)



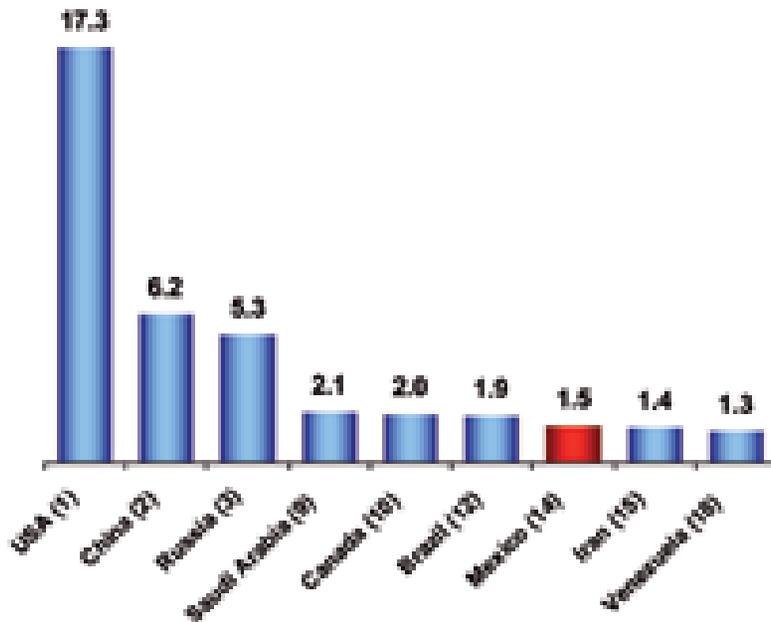
Petrochemicals Supply
(millions of tons)



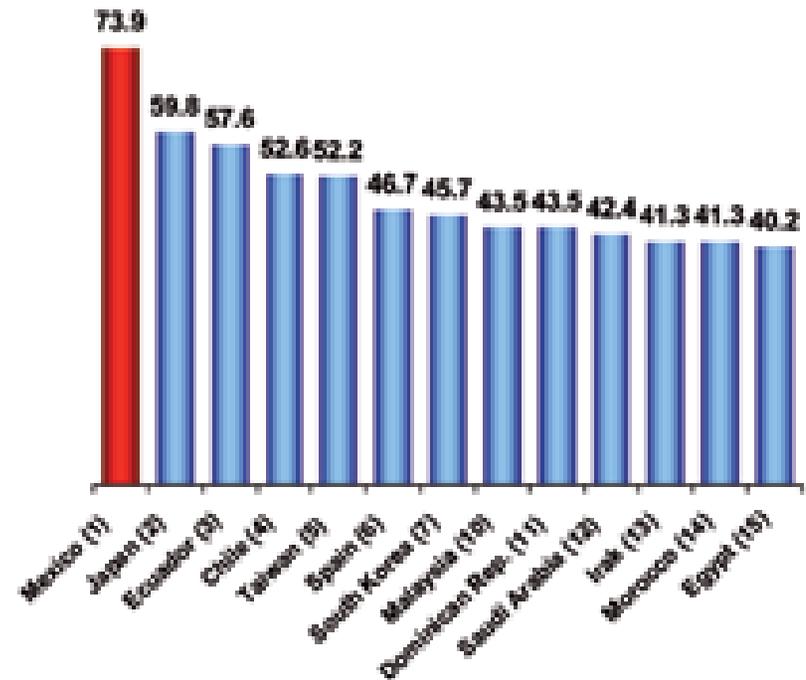
Petrochemicals Demand
(millions of tons)



Refineries Capacity (2006) (millions barrels per day)



Consumption per Capita of Liquefied Petroleum Gas (2005) (kilograms per inhabitant)



Strategies

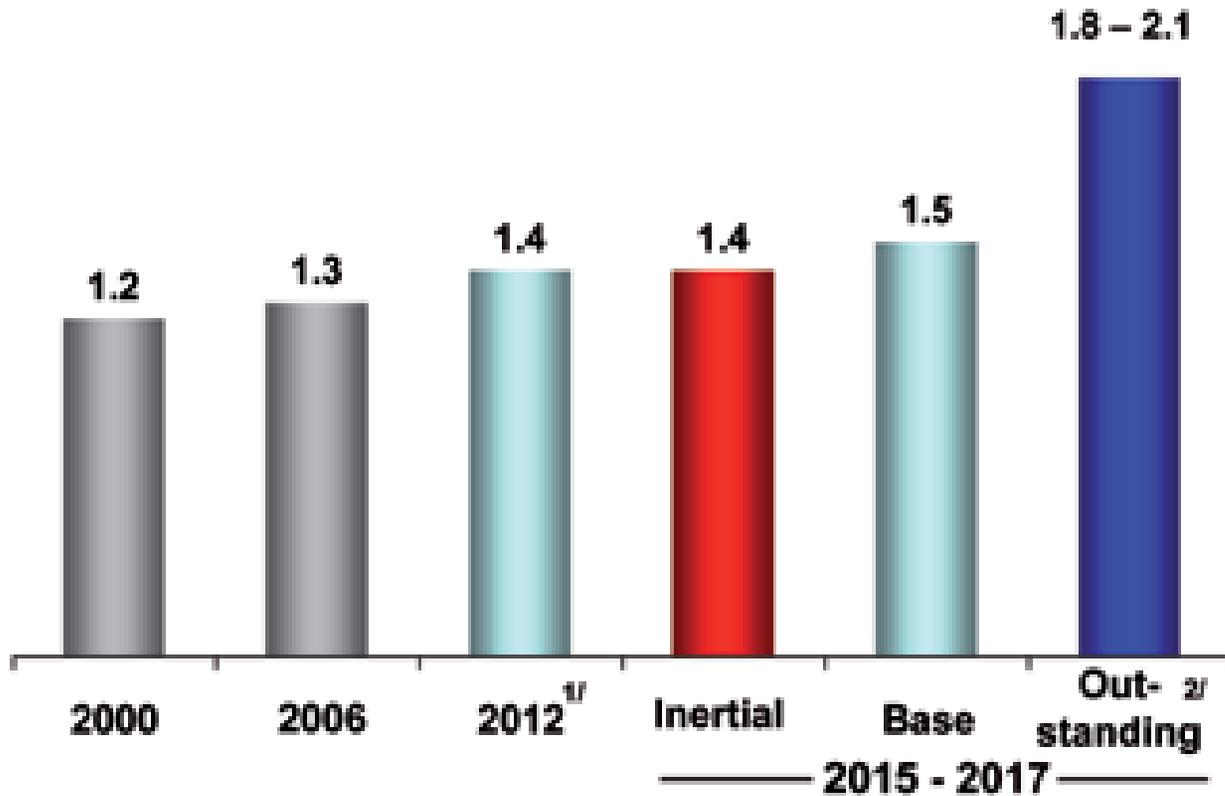
- i. Expand and modernize refinery capacity.
- ii. Increase capacity for storage, supply and transportation of oil products.
- iii. Strengthen maintenance tasks, as well as measures to mitigate environmental impact.
- iv. Increase capacity for processing and transporting natural gas.
- v. Promote complementary investment in petrochemicals, based on the legal framework and profitability analysis.

Goals for 2012

- Carry out necessary actions to increase the capacity to process crude oil to at least 1.4 million barrels per day in 2012.
- Maintain gasoline imports at no more of 40 percent of total sales.
- Reduce the content of sulphur in fuel to comply with environmental standards.
- Build at least 800 kilometers of pipelines for natural gas transport, using private resources.

Note: The base scenario presented by the National Infrastructure Program is different from the base scenario considered in other official publications of the energy sector that have been drafted by both the Ministry of Energy and other entities, due to the differences in the provision of resources envisioned in each one of said documents.

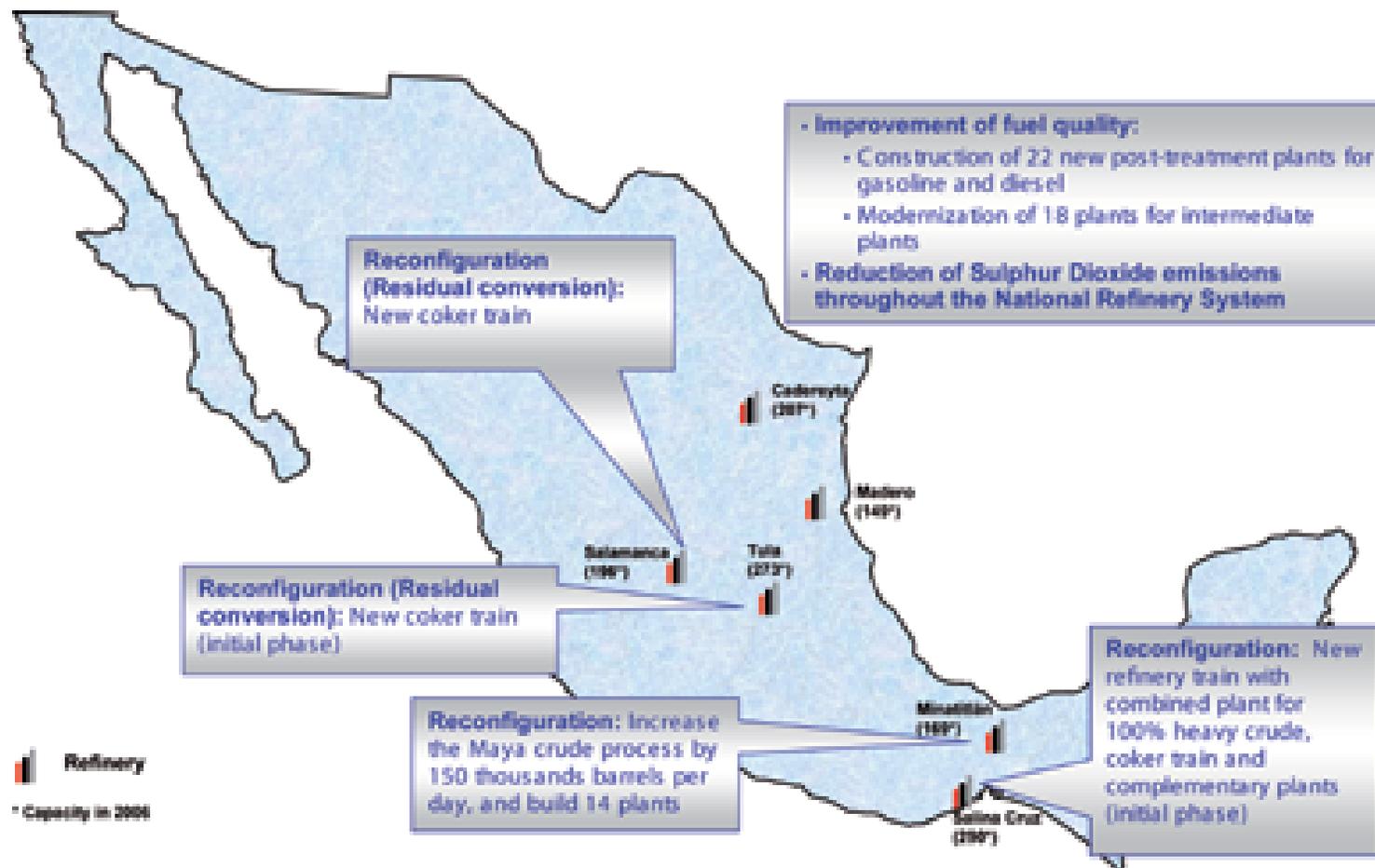
Crude Processing (millions barrels per day)



^{1/} The goal for 2012 does not vary significantly in the three scenarios.

^{2/} The outstanding scenario presupposes the construction of two refineries to begin operations in 2015 and 2017.

Main Refinery Projects 2007-2012^{1/} (thousands of barrels per day)

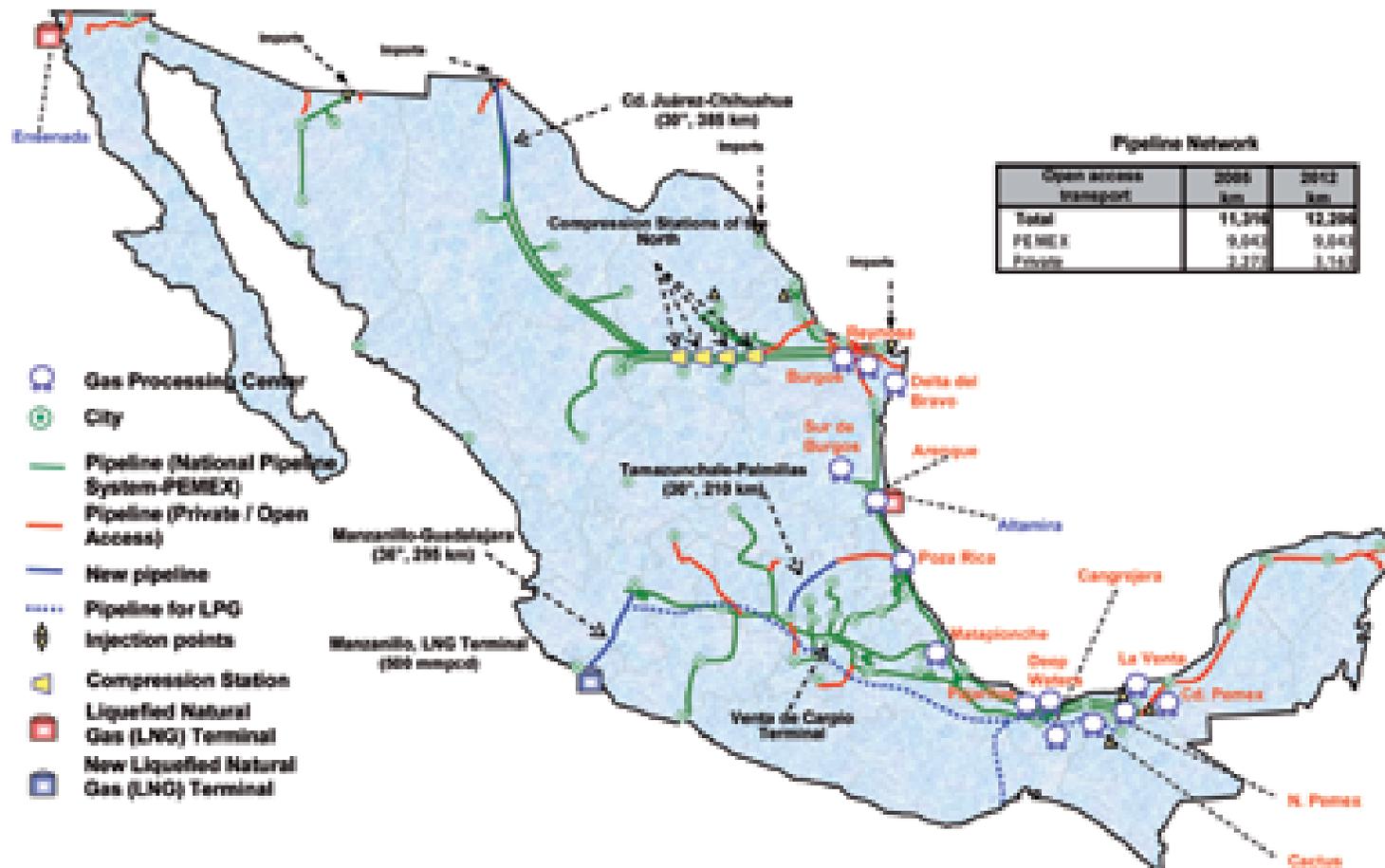


^{1/} Projects identified in keeping with the scenarios identified in force for planning, subject to change.

Transportation and Storage of Oil in 2012



Gas Processing and Transportation in 2012^{1/}

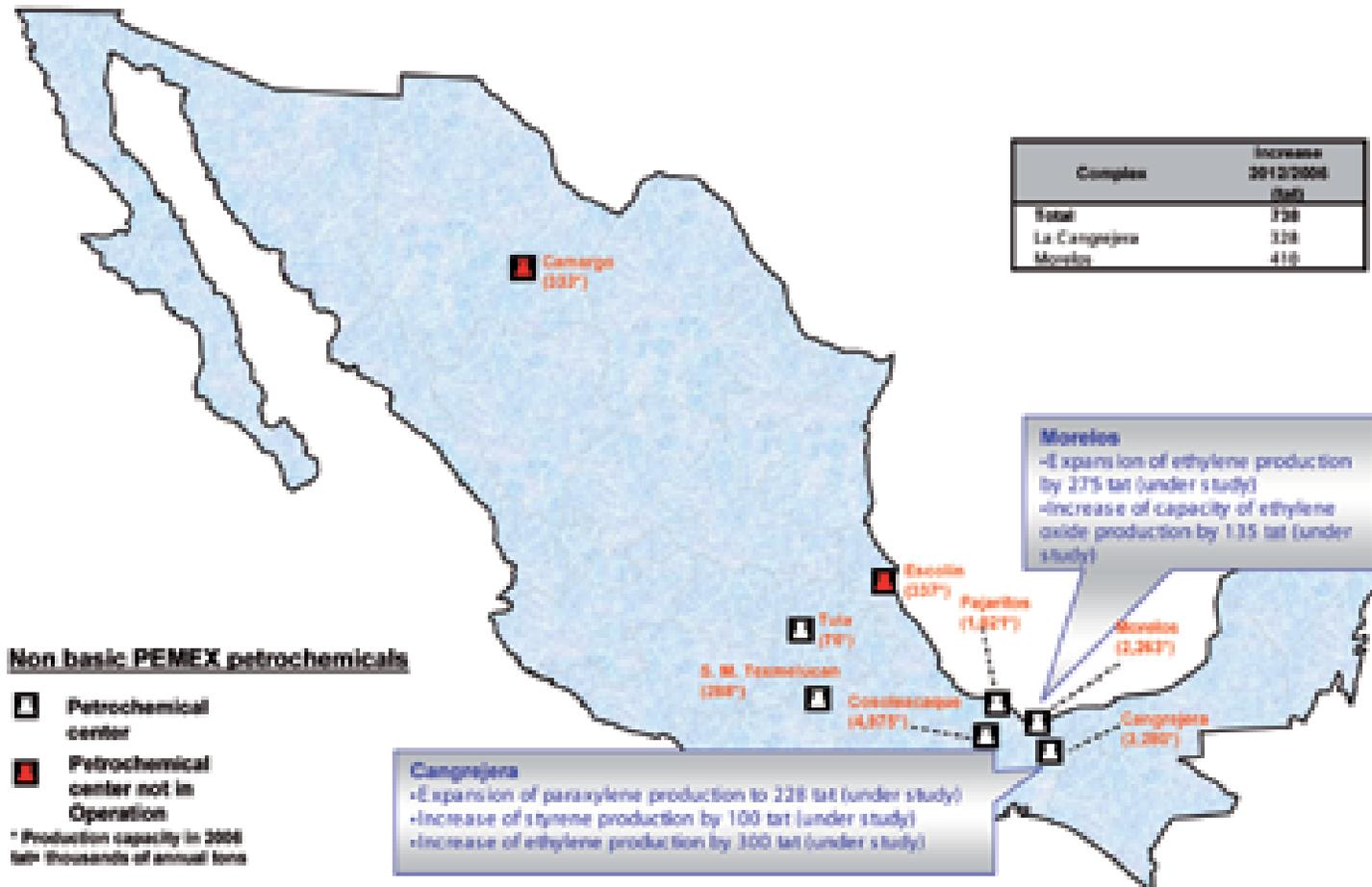


Matapionche: includes sulphur collection plant with capacity of 50 tons per day.

Cangrejera: includes cryogenic plant in Coatzacoalcos, 0.3 bcf per day.

^{1/}Projects identified in keeping with the scenarios identified in force for planning, subject to change.

Main PEMEX Petrochemical Projects 2007-2012^{1/} (thousands of annual tons)



^{1/} Projects identified in keeping with the scenarios identified in force for planning, subject to change.

Estimated Investment 2007-2012 (billions of US dollars)

Concept	Total
Refinery	27
Gas and Basic Petrochemicals	4
Non-basic Petrochemicals ^{1/}	3
Total	34

^{1/} Considers private financing sources to complement public investment on the basis of the current legal framework.

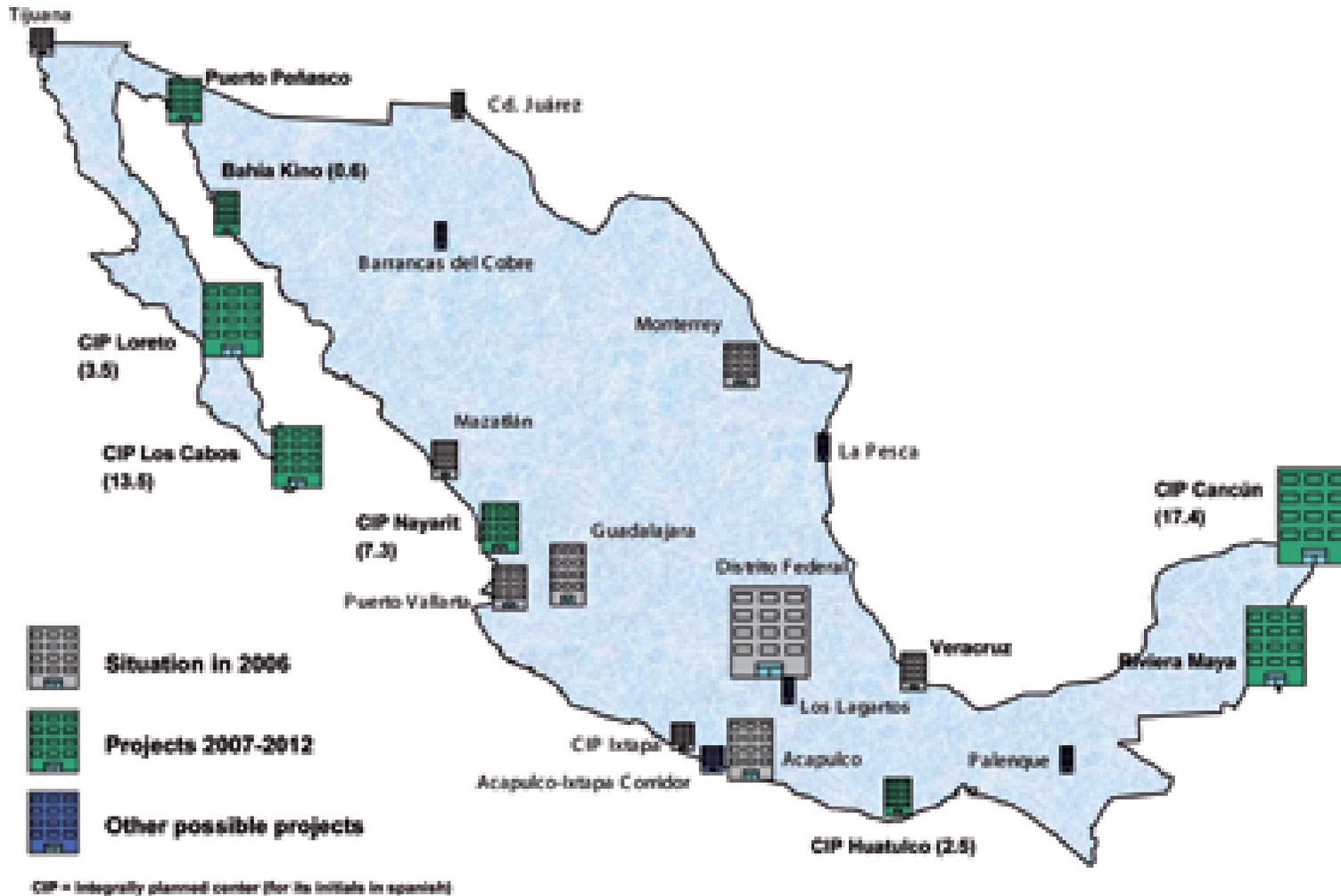
Infrastructure for Tourism Development



Investment in Tourism

- In the planning carried out for the National Infrastructure Program, diverse projects were included in transport and telecomm, water and energy, which will have a significant impact on tourism development.
- Hence, investment in infrastructure will support the development of various tourism corridors and poles, and will contribute to achieving an investment amount in the tourism sector of at least 20 billion dollars for the 2007-2012 period.

Main Tourism Centers in 2012 (thousands of additional rooms)



4

Investment Requirements

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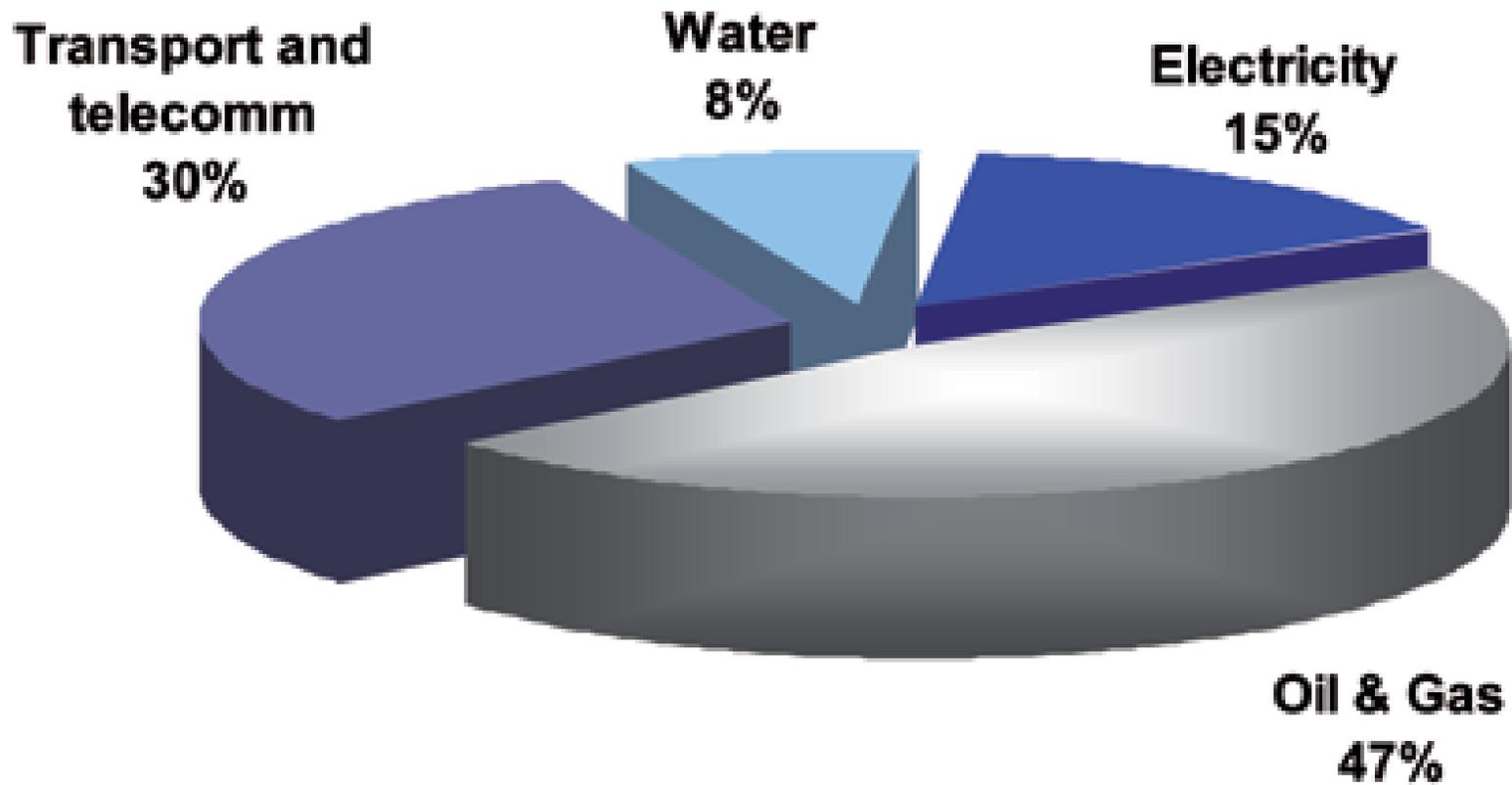
Estimated Investment per Sector 2007-2012 (billions of US dollars)

Sector	Total	Annual average
Highways	26	4
Railways	4	1
Ports	6	1
Airports	5	1
Telecommunications	25	4
Water supply and sanitation	14	2
Irrigation and flood control	4	1
Electricity	34	6
Oil & Gas Production	73	12
Refinery, Gas and Petrochemicals	34	6
Total	226	38

Estimated Consolidated Investment 2007-2012 (billions of US dollars)

Sector	Total	Annual average
Transport and telecomm	67	11
Water	18	3
Energy	141	24
Total	226	38

Investment in Infrastructure (percentile distribution)



Estimated Investment per Source of Financing 2007-2012 (without energy) (billions of US dollars)

Sector	Public resources	Private resources	Total
Highways	14	11	26
Railways	2	2	4
Ports	1	5	6
Airports	3	2	5
Telecommunications	2	24	25
Water supply and sanitation	10	4	14
Irrigation and flood control	3	1	4
Total	35	49	84

Sources of Financing for Investment in Infrastructure in Transport, Telecomm and Water (2007-2012)



Sources of Information

www.infraestructura.gob.mx

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Sources of Information

Page

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Este ejemplar se imprimió en julio de 2007
en los Talleres de Impresión de Estampillas y Valores (TIEV)
de la SHCP en la Ciudad de México.
Forros impresos en cartulina couché brillante de 250 gramos.
Interiores impresos en papel couché de 150 gramos.