

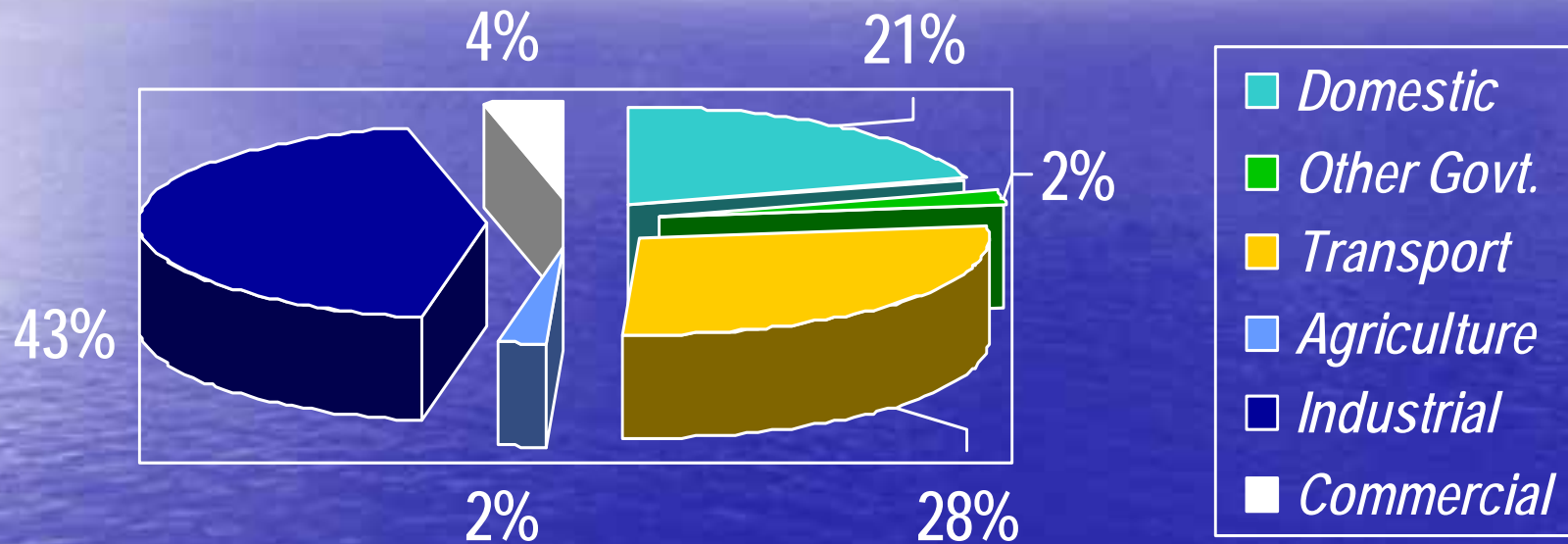


**4th REGIONAL ENVIRONMENTALLY
SUSTAINABLE TRANSPORT
(EST) FORUM**

24-26 February 2009, Seoul



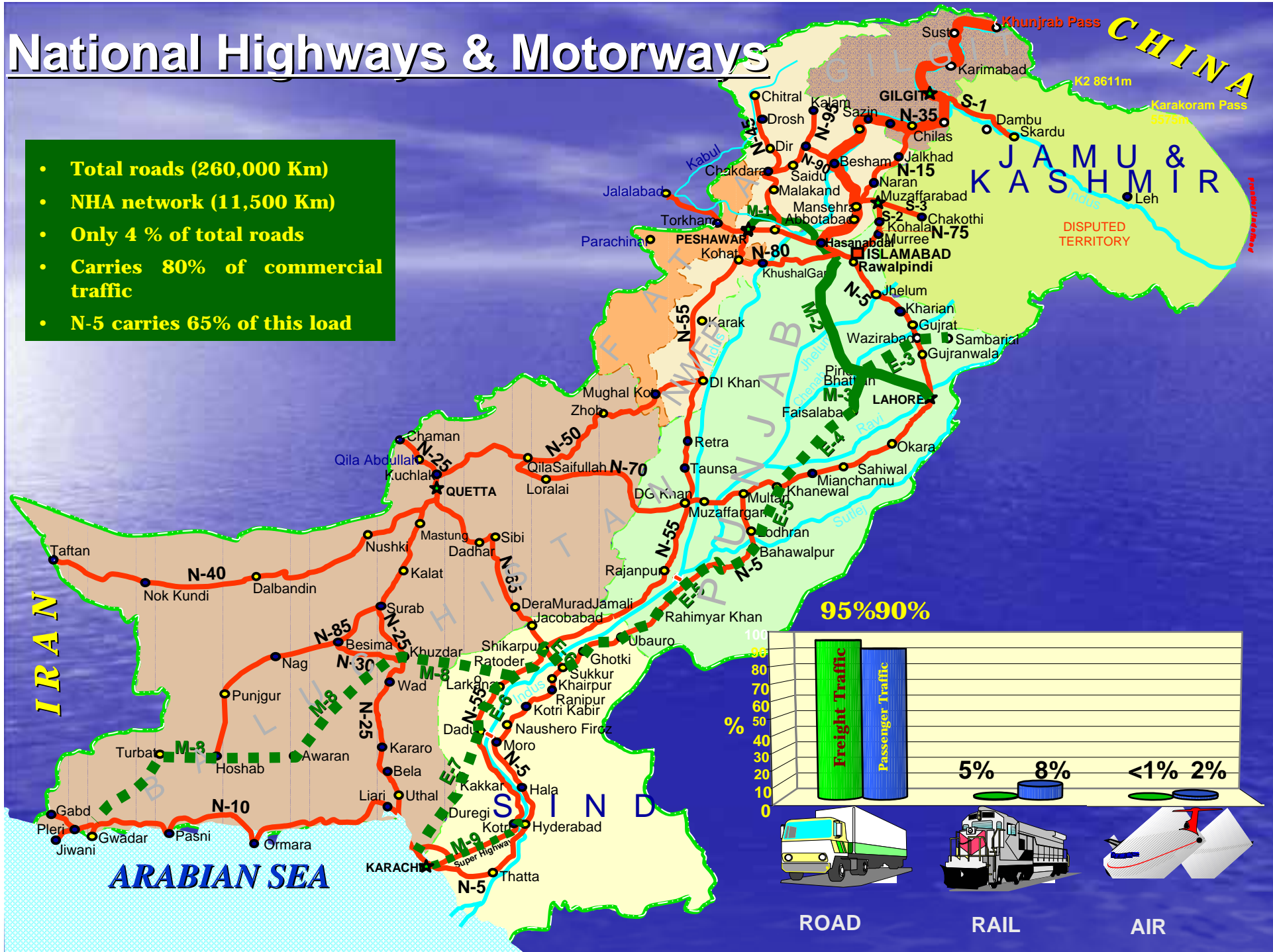
Energy Consumption by Sector (40+ Million TOE)



Industrial Sector takes the largest slice of national energy consumption closely followed by transport sector (28%) (Source: Pakistan Energy Year Book 2006)

National Highways & Motorways

- Total roads (260,000 Km)
- NHA network (11,500 Km)
- Only 4 % of total roads
- Carries 80% of commercial traffic
- N-5 carries 65% of this load



Broad National Transport Data

- Area = 796,096 Sq- km
- Population = 161 million (2007)
- Total Road Network = 260,000 kilometers
- National Highways & Motorways = 11,500 Kms
- Roads have dominant share in both transport of passengers (94%) and the Goods (97%) followed by railways.
- Total Number of Vehicles close to 10 million
 - 55.4% are two Wheelers and 44% four Wheelers (including Cars)
 - Annual growth rate is 9 %
- The country offers the most attractive transit route to the Central Asian countries.
- Gawadar port operationalized to further facilitate and enhance movement of transit-traffic.

EST Policy Goal

The National EST policy aims to protect, conserve and restore environment in order to improve the quality of life of the citizens through sustainable development

EST Policy Objective

Promotion of efficient, cheap & clean mass transit as the key to an environmentally sustainable transport system

Urban Transport Features

Public transport system largely owned and operated by the private sector.

Characterized by :

- A growing number of personal modes of transport: (Cars, motorcycles, etc.)
- Private Transport largely based on Mini Buses/Wagons.
- Serious Congestion
- Encroachments
- Infrastructure needs to be augmented (Quality & Quantity)
- Lack of Effective Enforcement

Environmentally Sustainable Transport (EST) - Action Plan

- Institutional Arrangement
- Vehicle Registration, Motor Vehicle Examination (MVE's), Driver Training
- CNG Buses (Mass Transit)
- Roadway Facilities
- Safety

Institutional Arrangement

- Government emphasis on regulatory role.
- Provincial Transport Departments to play the lead role (registration, licensing, vehicle fitness)
- Regional Transport Authorities (RTAs)/Executive District Officers (EDOs) are strengthened and manned by professionals
- Ministry of Communications looks after the subject of road and road transport & coordinates with the provincial governments

STRATEGIES TO CONTROL VEHICLE EMISSIONS

- Set emission standards
- Improve fuel quality
- Law against smoke emitting vehicles
- Require periodic inspections for in-use vehicles
- Educate and facilitate vehicle maintenance

Implementation Strategy- Transport

Interventions	Responsibility
Phased tune-ups of vehicles & other energy efficient driving practices among drivers, vehicle and fleet managers and operators	Transport/ Registration Authorities
Up-gradation of existing Motor Vehicle Examiners (MVEs) into credible monitoring and service providers to the transport sector	Provincial & district governments through PPP mode
Initiation of monthly Transport Energy Audits by all Municipal Corporations, PIA, Private Transporters, Railways and shipping, etc.)	Respective entities

Fuel Efficiency in Transport Sector

ACTION PLAN

- Motor Vehicle Examiners (MVE's) to be strengthened uniformly across the country through private public partnership (PPP) by Provincial Governments
- All road plying vehicles to be brought under ambit of MVE through legislation
- Phased installation of emission control/ tune up equipment on PPP basis at retail outlets of oil companies

Annual Average Levels of Different Category Pollutants for 1999, 2004, and 2006

Year	TSP Ug/m ³	PM ₁₀ Ug/m ³	No _x (PPB)	SO ₂ (PPB)	O ₃ (PPB)	CO (PPM)	Methane (PPM)
1999	210	164	16	11.7	11.2	4.4	0.5
2004	349	182	20.9	17.0	17.0	2.5	0.7
2006	374.5	194	28.8	24.0	18.8	3.6	6.5
%Increase/ Decrease	78.4	18.3	80	105	68	22	1300

Ambient Air Quality - Strategy

- Development of Pakistan national ambient air quality standards
- Implementation of Ambient Air Quality laws
- Improvement of fuel quality
- Development of effective motor vehicles testing, inspection and maintenance programs
- Encourage environment friendly practices like conversion of automobiles to CNG fuel with use of catalytic converter, Development of public transport infrastructure

TRANSPORTATION

Main Transition Strategies

- Minimize transportation. (Very Large Potential)
- Improve vehicle fuel economy. (Large Potential)
- Shift from fossil fuels. (Small Potential)
- Minimize commuting to work and school. (Major Saving)
- Minimize freight transportation. (Moderate Saving)

Desired Output

- Increase in use of cleaner fuels
- Increase in use of non-motorized or less polluting forms of transport
- Modal shifts towards more efficient transport such as bus rapid transit
- Demand side traffic management (urban planning, congestion taxes, traffic segregation)

Reduction of GHGs

- Reduce GHG emissions associated with urban transportation
- Greater reliance on public transport.
- Greater reliance on non-motorized transport
- Increased use of environmentally friendly vehicles and cleaner fuels

Officially subsidized Step Towards Sustainable Transport

- Dedicated CNG buses with minimal capital costs is being introduced with encouragement to local manufacturing
- Uniform standards for minimum bus specification
- In order to induce participation by Financial Institutions, Government of Pakistan (GOP) will serve as Guarantors

A Step Towards Sustainable Transport

- Debt Equity ratio 80:20
- GOP to provide upfront cash subsidy
- Fiscal incentives like exemptions/reductions on duties/taxes would be given under the scheme

■ Roadway Facilities

- Proper attention to
 - Road Geometry
 - Adequate roadway facilities
 - 'Walking' - a composite mode of transport
 - Continuous/ walking paths
- Traffic Engineering Units
 - Established with trained manpower

■ Safety

- Removal of Carriers on roof-top of Buses / Wagons
- Adequate pedestrian crossing facilities
- Preventive and curative measures to minimize road accidents

A Way Forward.

- Private-Public partnership is being promoted and Government will facilitate foreign investment
- Institutional capacity building and R&D activities will be undertaken with use of modern technology to enhance sector efficiency.
- Promotion of Bus Rapid Transit based on Private-Public partnership
- Establishment of Fast Filling CNG Stations



THANK YOU