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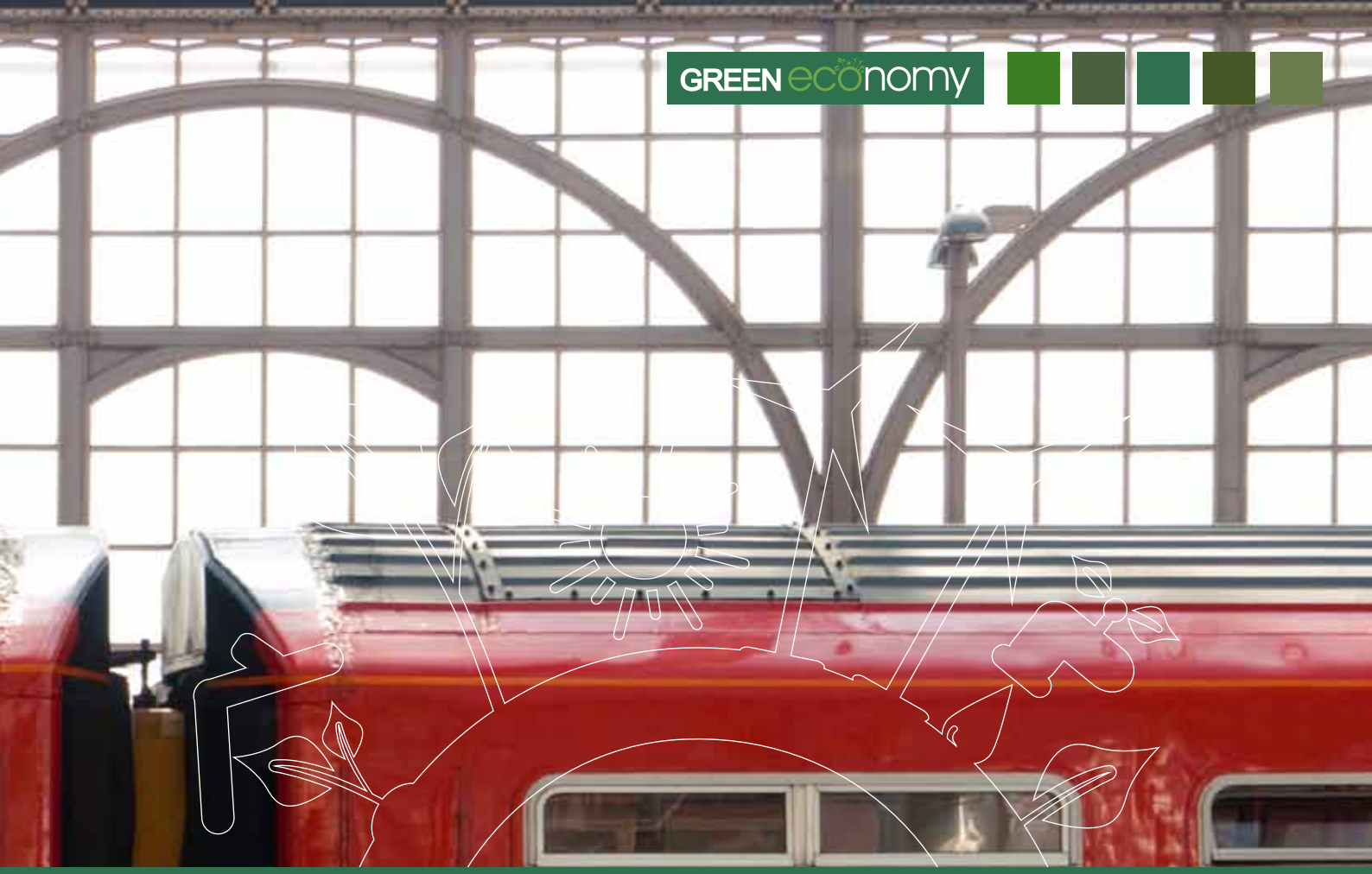
GREEN economy



Transport

Investing in energy and resource efficiency

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List of acronyms

BAU	Business-as-usual
BRT	Bus Rapid Transit
CAFE	Corporate Average Fuel Economy
CBD	Central Business District
CDM	Clean Development Mechanism
CIF	Climate Investment Fund
CO_2	Carbon dioxide
CTF	Clean Technology Fund
ECMT	European Conference of Ministers of Transport
ETS	Emissions Trading Scheme
FIA	Fédération Internationale de l'Automobile
G2	Green Scenario 2
GEF	Global Environment Facility
GDP	Gross Domestic Product
GFEI	Global Fuel Economy Initiative
GHG	Greenhouse gas
HC	Hydro Carbon
ICC	International Chamber of Commerce
IEA	International Energy Agency
IET	International Emissions Trading
IMO	International Maritime Organization
IQ	Intelligence quotient
ITF	International Transport Forum
JI	Joint Implementation
LDVs	Light-duty vehicles
Mtoe	Million tonnes of oil equivalent
NAMA	Nationally Appropriate Mitigation Action
NAFTA	North American Free Trade Agreement
NMT	Non-Motorised Transport
NO_x	Nitrogen oxide
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PKM	Passenger per kilometres
PPP	Public-private partnership
PT	Public transport
R&D	Research and development
SLoCaT	Partnership on Sustainable Low Carbon Transport
SOX	Sulphur oxide
SSA	Sub-Saharan Africa
T21	Threshold 21 model
TDM	Transport Development Management
TKM	Tonnes per kilometre
TNA	Technology Needs Assessment
TPK	Tonnes per kilometre
TRL	Transport Research Laboratory (UK)
UNEP	United Nations Environment Programme
VKM	Vehicle kilometres
VOC	Volatile Organic Compounds
VTPI	Victoria Transport Planning Institute
WHO	World Health Organization

Key messages

1. Present patterns of transportation – based mainly on petrol and diesel-fuelled motor vehicles – generate serious social, environmental and economic damage and are highly unsustainable. At present, transportation consumes more than half of global liquid fossil fuels; emits nearly a quarter of the world's energy-related CO_2; generates more than 80 per cent of the air pollution in cities in developing countries; results in more than 1.27 million fatal traffic accidents per year; and produces chronic traffic congestion in many of the world's urban areas. These costs to society, which can add up to more than 10 per cent of a country's Gross Domestic Product (GDP), are likely to grow, primarily because of the expected growth of the global vehicle fleet.

2. Business-as-usual (BAU) will significantly enlarge vehicle fleets and exacerbate their costs to society. If we continue on a BAU path, the global vehicle fleet is set to increase from around 800 million to between 2 and 3 billion by 2050. Most of this growth will take place in developing countries. Aviation growth is expected to increase exponentially in the coming decades, fuelled largely by income growth in developing countries. Carbon emissions from shipping could also grow by up to 250 per cent.

3. A three-pronged investment strategy is needed to transform this sector: promote access instead of mobility; shift to less harmful modes of transportation; and improve vehicles towards lower carbon intensity and pollution. A fundamental shift in investment patterns is needed, based on the principles of *avoiding* or reducing trips through integrating land use and transport planning and enabling more localised production and consumption. *Shifting* to more environmentally efficient modes such as public and non-motorised transport (for passenger transport) and to rail and water transport (for freight) is recommended. Investment in public transport and infrastructure that promotes walking and cycling generates jobs, improves well-being and can add considerable value to regional and national economies. *Improving* vehicles and fuels is a priority in order to reduce urban air pollution and greenhouse gas emissions (GHG). Green transport policies will also reduce road accidents and alleviate poverty by improving access to markets and other essential facilities.

4. Investment in public transportation and vehicle efficiency improvements generates exceptional economic returns. Several scenarios show that a green, low carbon, transport sector can reduce greenhouse gas emissions by 70 per cent without major additional investment. A reallocation of just 0.34 per cent of global GDP in support of public transport infrastructure and efficiency improvements to road vehicles would reduce the expected increase in travel volume of road vehicles by around one-third by 2050. It would diminish the use of oil-based fuel by up to one-third and promote strong and sustainable employment in the sector.

5. Enabling conditions for green transportation have to be wide-ranging in order to be effective. Such investments, among other measures, should be enabled via policies, including land use planning to promote compact or mass-transit corridor-based cities; regulation of fuel and vehicles; and the provision of information to aid decisions by consumers and industry. In addition, shifting financing priorities towards public transport and non-motorised transport, coupled with strong economic incentives such as taxes, charges and subsidy reform will also send a strong signal. Finally, developing and widely applying green transport technology; as well as setting up and building the capacity of institutions to foster greener transport will help ensure close cooperation with other key sectors.