

SUSTAINABLE DEVELOPMENT FRAMEWORK FOR THE 21 CENTURY

**CLIMATE CHANGE AND ITS
ADVERSE EFFECTS
MOVING BEYOND THE “VICTIM”
SYNDROME**

CURRENT TENSIONS

- **LIMITATIONS OF INTERNATIONAL LAW : RESERVATIONS, EQUITY RESPONSIBILITIES/CAPABILITIES**
- **BURDEN SHARING CRITERIA: SCIENCE, ADAPTATION, SUPPORT**
- **MULTILATERAL SYSTEM: STATE/NON-STATE ACTORS**

THE CURRENT SITUATION

- **IN DEVELOPED COUNTRIES CONSUMPTION BY HOUSEHOLDS ACCOUNTS FOR TWO-THIRDS OF THE ELECTRICITY GENERATED**
- **IN DEVELOPING COUNTRIES THREE-QUARTERS IS USED IN INDUSTRIAL PRODUCTION**

TRENDS (1990-2004) IN DEVELOPED COUNTRIES

- **EMISSIONS FROM MANUFACTURING HAVE BEEN STEADY SINCE 1990, BUT FINAL ENERGY USE, AND EMISSIONS, HAVE EACH INCREASED BY 14%, EVEN AFTER HALF OF THE INCREASED DEMAND HAS BEEN MET THROUGH ENERGY EFFICIENCY**

TRENDS

- **ENERGY USE IN PASSENGER AND FREIGHT TRANSPORTATION INCREASED 25%**
- **PASSENGER TRAVEL INCREASED 31%; AIR TRAVEL INCREASED 61%**
- **BUSES AND TRAINS ACCOUNT FOR ONLY 5% OF PASSENGER TRAVEL**
- **CARS USED 88% OF THE ENERGY IN THE TRANSPORT SECTOR; ONE IN THREE PERSONS OWN A CAR; CAR OWNERSHIP HAS DOUBLED IN GREECE AND IRELAND**

TRENDS

- **APPLIANCES ACCOUNT FOR MORE THAN HALF THE ELECTRICITY USED IN HOUSEHOLDS, WITH A 48% GROWTH – HALF OF WHICH IS IN NEW SMALL APPLIANCES , LIKE COMPUTERS**
- **ELECTRICITY CONSUMPTION IN THE SERVICES SECTOR INCREASED 50%, AND IN HOUSEHOLDS 35%**
- **BUILDINGS ACCOUNT FOR 40% OF ENERGY USE**

TRENDS

- **TWO-THIRDS OF THE INCREASE IN ELECTRICITY USE IN THE EU BETWEEN 1978 – 2003 WAS ACCOUNTED FOR BY APPLIANCES**
- **THE INDIVIDUAL IS THE DRIVER OF EMISSIONS OF GREENHOUSE GASES**

STIGLITZ – JULY 2008

GLOBAL SOCIAL JUSTICE FOR SUSTAINABLE DEVELOPMENT

- **Key problem: how to allocate emission rights - major stumbling block in reaching global agreement**
- **Will require new economic model — changed patterns of consumption and innovation**
 - Only through changes in patterns of demand will adverse effects on developing countries be mitigated

ENERGY & INDUSTRY / ENERGY CONSUMPTION: US EMISSIONS

<u>FUEL TYPE</u>	<u>1990</u>	<u>2004</u>
• PETROLEUM	2180	2595
• COAL	1784	2090
• NATURAL GAS	1027	1203
• RENEWABLE	6	11
TOTAL	4997	5900
 <u>END-USE SECTOR</u>		
• RESIDENTIAL	954	1212
• COMMERCIAL	781	1024
• INDUSTRIAL	1692	1730
• TRANSPORTATION	1570	1934
TOTAL	4997	5900
 <u>ELECTRIC POWER</u>	 1803	 2299

THE CITIZEN AS THE DRIVER OF EMISSIONS – CARBON FOOTPRINT

(RE)FRAMING THE ISSUE

- **SHIFT TO A SERVICES DRIVEN ECONOMY**
- **CONSUMPTION/ PRODUCTION PATTERNS**
- **CHANGING NATURE OF COMMITMENTS**
- **BROADER VISION OF SUSTAINABLE DEVELOPMENT, THAN JUST ACHIEVING A LOW CARBON SOCIETY - ADAPTATION**

PATTERNS OF RESOURCE USE

- **RISE OF CHINA AND INDIA SHOULD NOT BE SEEN AS A ZERO-SUM GAME**
- **TRANSFORMATIONS: RESEARCH, ENERGY, URBANISATION, AGRICULTURE, INSTITUTIONS**
- **KEY ROLE OF TECHNOLOGY, BEHAVIOR CHANGE AND WAY WE MEASURE GROWTH**

SUSTAINABLE DEVELOPMENT FRAMEWORK

- **[RIGHT TO USE NATURAL RESOURCES:1970 - 2002]**
- **MODIFYING PATTERNS OF NATURAL RESOURCE USE TO PROVIDE SERVICES FOR HUMAN, NOT JUST NATIONAL, WELL-BEING**
- **RECOGNITION OF SERVICES PROVIDED BY THE ECOSYSTEM**
- **TECHNOLOGICAL AND FINANCIAL SERVICES FOR THE ALLEVIATION OF POVERTY AND CONSERVATION OF NATURAL RESOURCES**

FLASHBACK TO 1970

- **“Long range policy planning to cope with global environmental problems must take account of the total ecological burden.
.....Controlling that burden by systematic reduction in per capita production of goods and services would be politically unacceptable. A concerted effort is needed to orient technology towards making human demands upon the environment less severe”**
- Report by Task Force III of the Committee on International Environmental Affairs, Washington, December 1970. *Foreign Relations of the United States, Foreign Relations 1969-1976, Documents on Global Issues 1969-1972*

FAST FORWARD TO 2025

- **“ Resource issues will gain prominence on the international agenda
....continued economic growth will put pressure on energy, food and water resources.....climate change is expected to exacerbate resource scarcities”**

Report by the National Intelligence Council, Global Trends 2035: A Transformed World, USA, 2008

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STRATEGIC SHIFTS

- **BALANCE OF RIGHTS AND OBLIGATIONS**
- **“POWER WILL BE MORE DISPERSED WITH NEWER PLAYERS BRINGING NEW RULES OF THE GAME” – CONSUMPTION PATTERNS**
- **NEW VISION FOR THE (POSSIBLE) WORLD CONFERENCE IN 2012 – SOCIETAL OBJECTIVES, AND POLICY SPACE.**

GLOBAL TRENDS 2025

**INDIA LACKS STRATEGIC VISION, AND
WOULD PREFER TO BE A BYSTANDER
RATHER THAN LEADER IN THE
MULTILATERAL SYSTEM**