

Sustainable Development and the MDGs

Luu Duc Hai

Faculty of Environment Sciences, Hanoi University of Science

Truong Manh Tien

Hanoi University for Natural Resources and Environment

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PART

1

Sustainable development

History of sustainable development

1972

Stockholm

Conference on
the Human
Environment

The first time that attention was drawn to the need to preserve natural habitats to produce a sustained improvement in living conditions

The need of international cooperation to solve environmental issues

Proclaimed 26 common principles to inspire and guide the peoples in the preservation and enhancement of the human environment

United Nations Environment Program (UNEP) and World Environment Day (June 5th) were established

History of sustainable development

1972

Stockholm

Conference on
the Human
Environment



History of sustainable development

1972

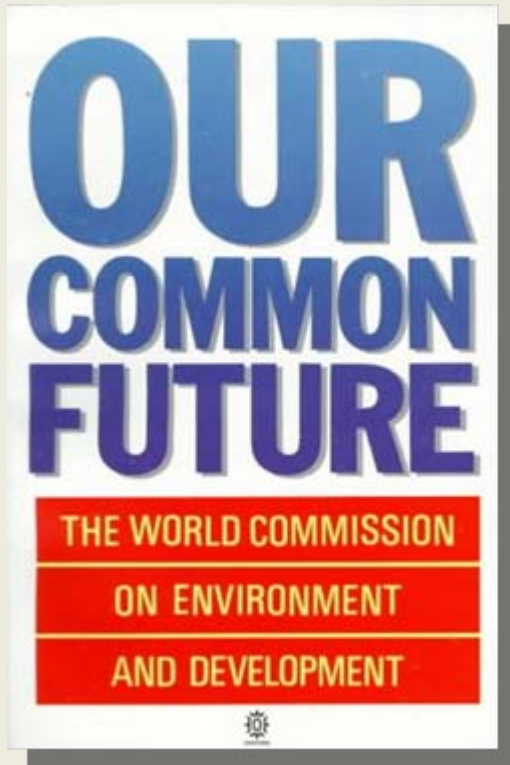
Stockholm

Conference on
the Human
Environment

“Man has a fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations”

Principle 1

History of sustainable development



1987

Brundtland
Commission

Our
common
future

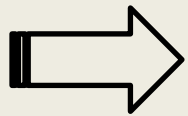
History of sustainable development

“Sustainable development is the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs”

1987

Brundtland
Commission

Our
common
future



SD is a development mode that maintains the equality among mankind generations.

History of sustainable development

Discuss about human environment and its relation with political and economic issues

Recommend governments on the vital need for sustainable development policies

Release the term sustainable development

1987

Brundtland
Commission

Our
common
future

History of sustainable development

1992

Rio de Janeiro

United Nations
Conference on
Environment and
Development



History of sustainable development

1992

Rio de Janeiro

United Nations
Conference on
Environment and
Development

Rio declaration on environment and development

Defines the rights of the people in the development of their economies, and the responsibilities of human beings to protect environment. Proclaim 27 principles as:

Human beings are at the centre of concerns for sustainable development

All States and all people shall cooperate in the essential task of eradicating poverty

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it

Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm 1972, and seeking to build upon it

History of sustainable development

1992

Rio de Janeiro

United Nations
Conference on
Environment and
Development

Was held at Rio de Janeiro from 3 to 14 June 1992 (20 years since the first conference at Stockholm in 1972)

Define the term of sustainable development that long-term economic progress needs to be linked with environmental protection and social equality

172 governments participated, with 108 sending their heads of state or government. Some 2,400 representatives of non-governmental organizations (NGOs) attended, with 17,000 people at the parallel NGO "Global Forum" who had consultative status

History of sustainable development

1992

Rio de Janeiro

United Nations
Conference on
Environment and
Development

AGENDA 21

Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment in order to achieve sustainable development in the 21st century

There are 40 chapters in the Agenda 21, divided into four main sections:

- *Social and Economic Dimensions*
- *Conservation and Management of Resources for Development*
- *Strengthening the Role of Major Groups*
- *Means of Implementation*

History of sustainable development

1992

Rio de Janeiro

United Nations
Conference on
Environment and
Development

Rio declaration on
Environment and
Development

The United Nations
Commission on
Sustainable
Development

AGENDA 21

Rio Forest Certification
Declaration

The
Convention
on Biological
Diversity

The United Nations
Framework Convention
on Climate Change

History of sustainable development

1992

Rio de Janeiro

United Nations
Conference on
Environment and
Development

The United Nations Framework Convention on Climate Change

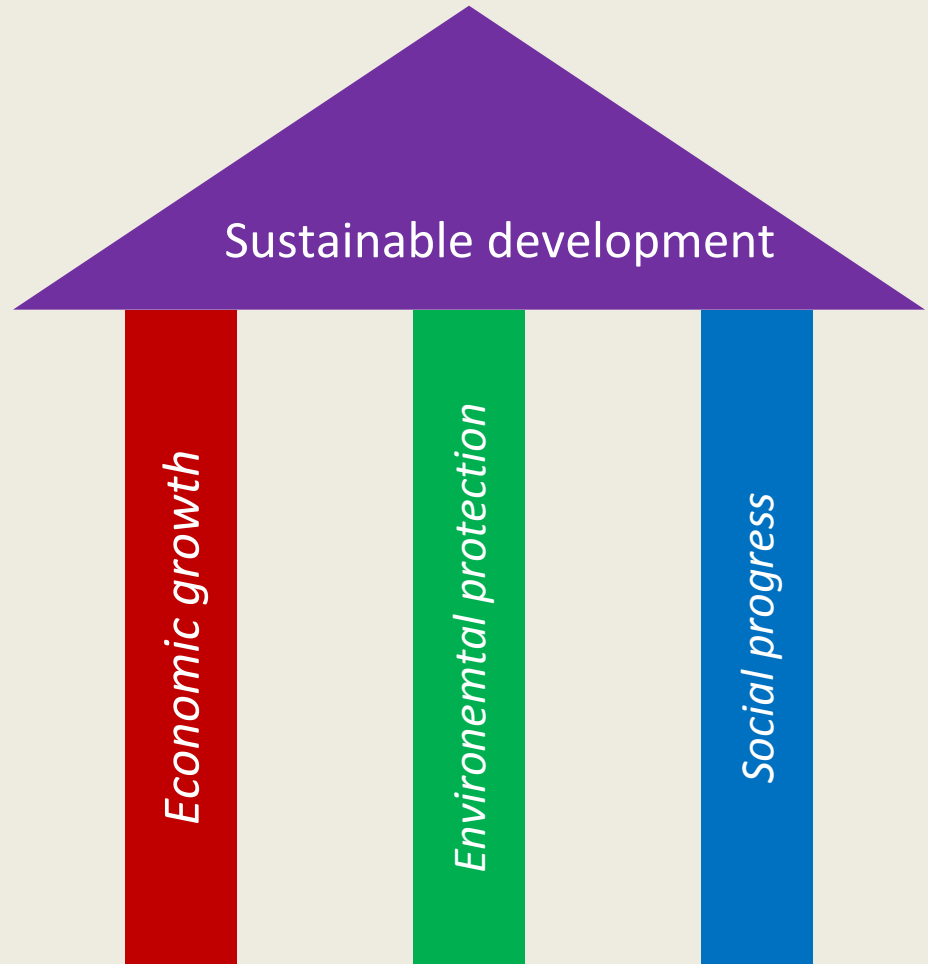
Was proposed by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) with The objective is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system

The UNFCCC was opened for signature on May 9, 1992 and has had 155 signatories (Vietnam included)

The convention is the premise of Kyoto protocol

Sustainable development models

People happiness and human life on the earth like a building with three piles (economic growth, environmental protection and social progress). If one of three piles is inclined or collapsed, the building, as a result, will be also inclined or completely collapsed

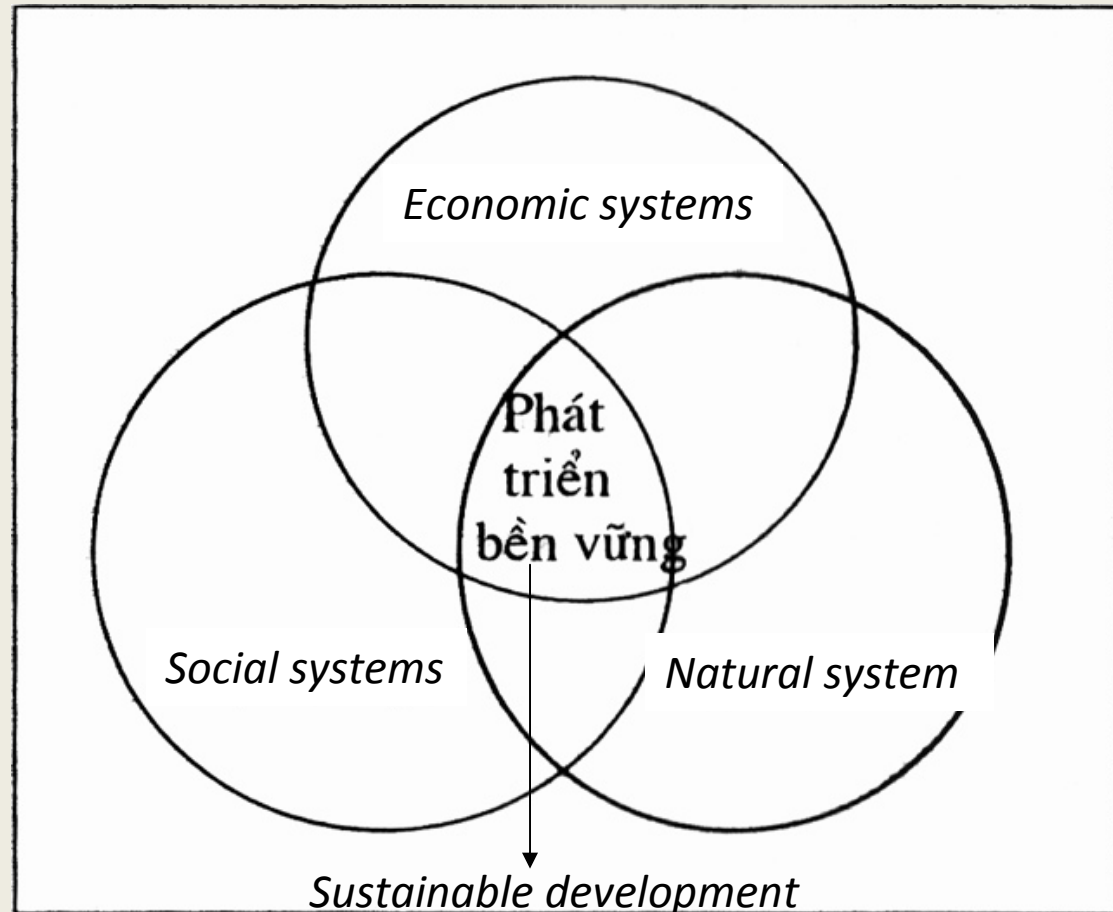


The three-pile model

Sustainable development models

The Jacobs and Sadler model 1990, sustainable development is the development that ensure the harmony of three sections (three circles): economics, society and environment.

If the three circles are equivalent, the overlap area is maximum then it is the optimum point of SD



The JACOBS and SADLER model, 1990

Sustainable development models

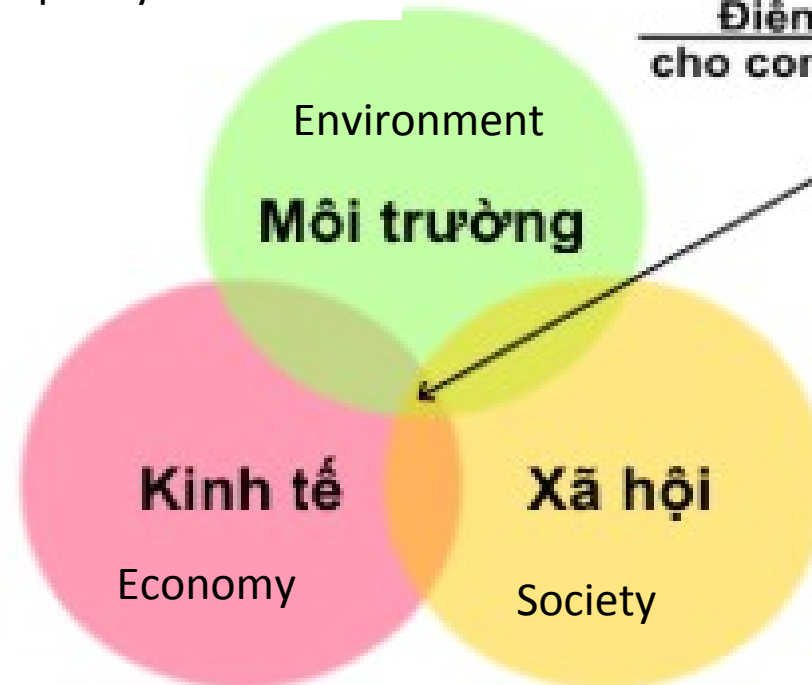
The
JACOBS
and
SADLER
model,
1990

Sustainable environment

United ecosystem
Biodiversity
Conversion capacity

*The optimum point
for human being*

Điểm tối ưu
cho con người



Sustainable economic growth

Effective growth and
development

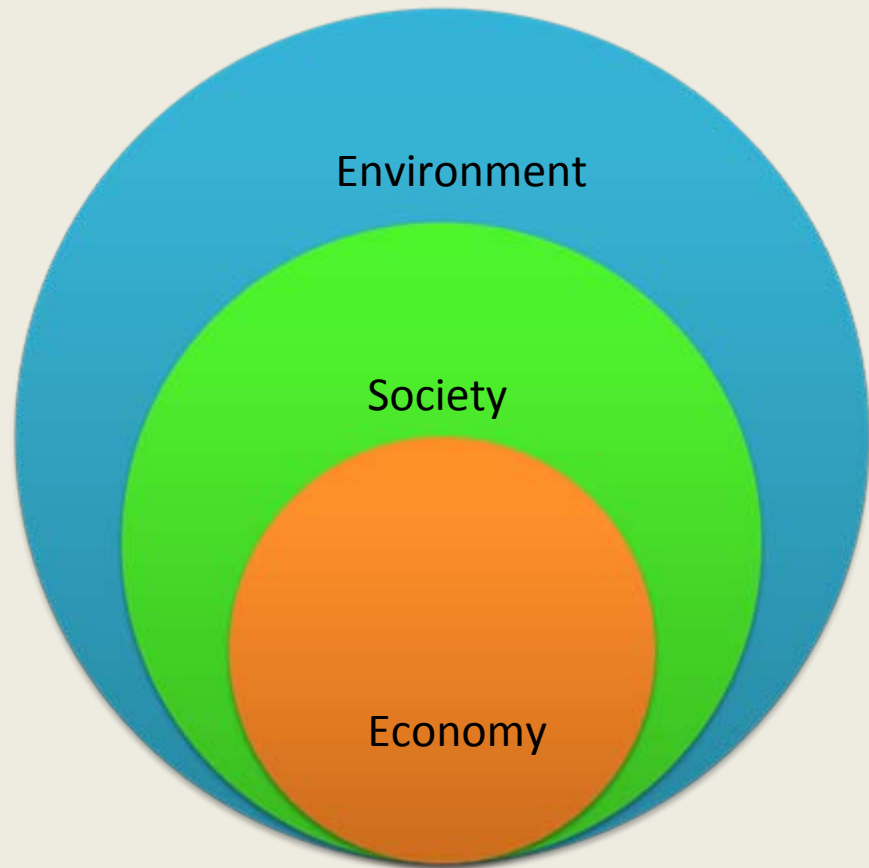
Sustainable society

Culture character
Access ability
Sustainability

Sustainable development models

The interdependence model: economy is a part of society and society is a part of environment.

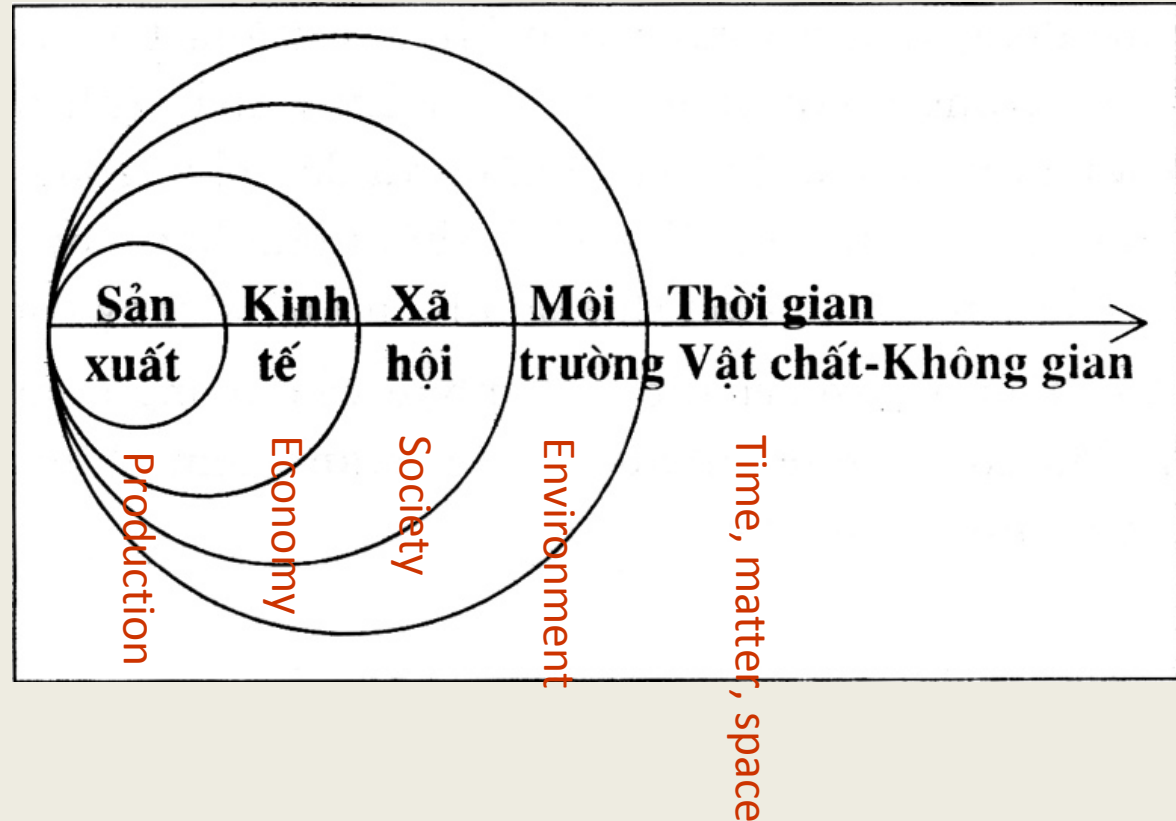
Economic growth is circumscribed by the supply of society and society development can not exceed the environmental resistance carrying capacity



The interdependence model

Sustainable development models

The spatial relation model is described in the figure. Production is a part of economy. Economic growth is circumscribed by the supply of society and society development can not exceed the environmental carrying capacity



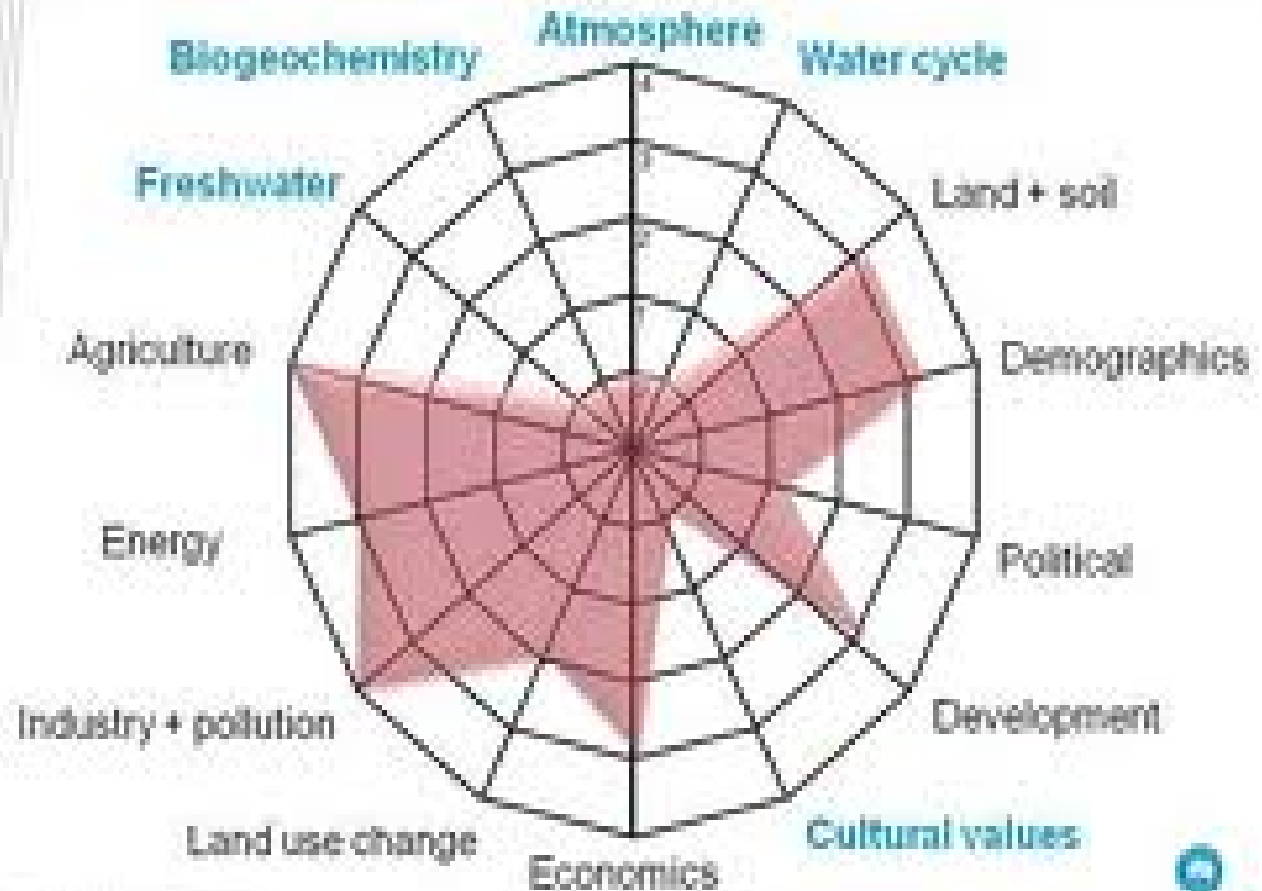
The spatial relation model

Sustainable development models

Human activity in a harmony relation with the environment

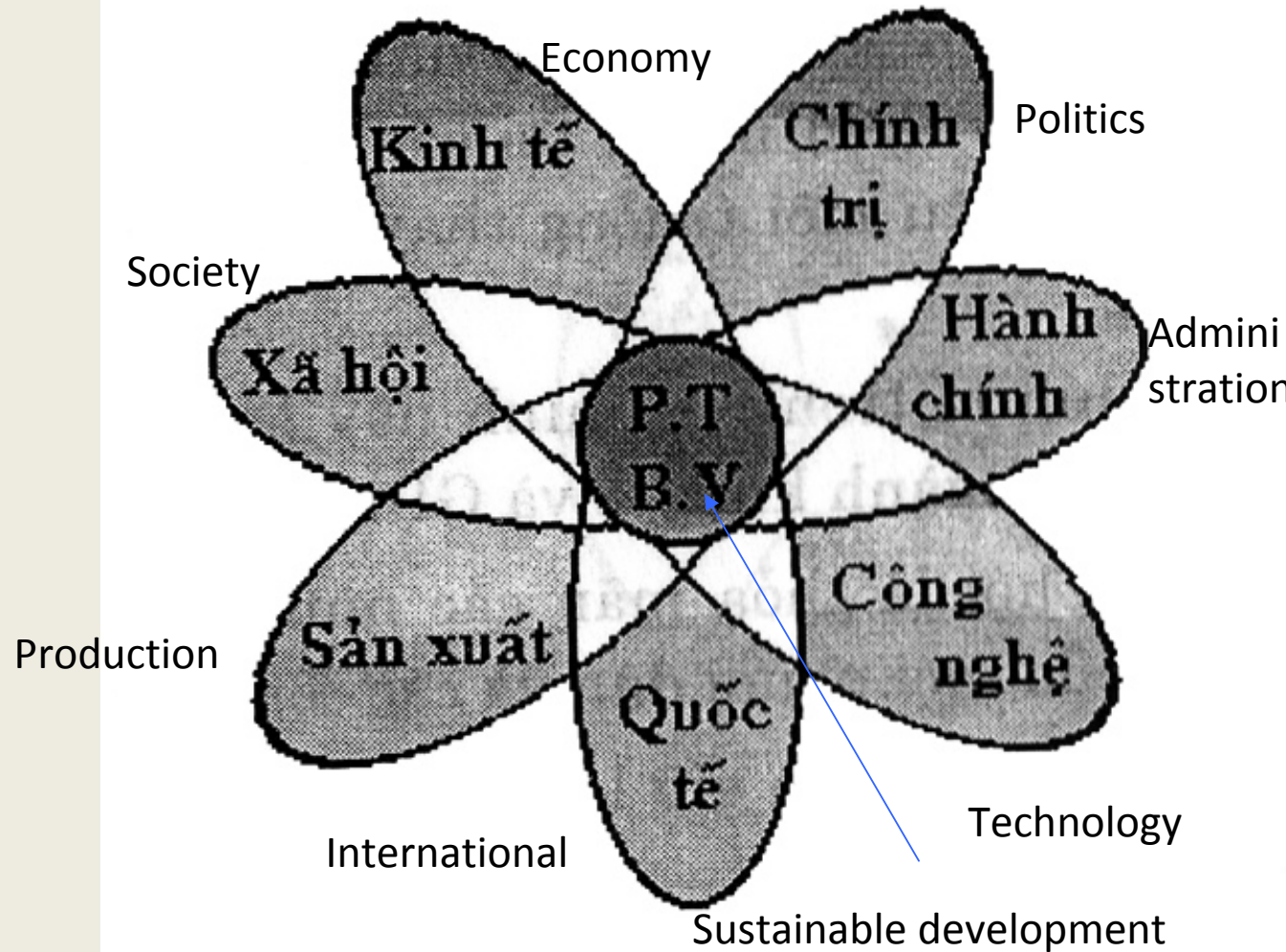
Existing integrated assessment

Existing tools miss important factors, such as water and atmosphere



Sustainable development models

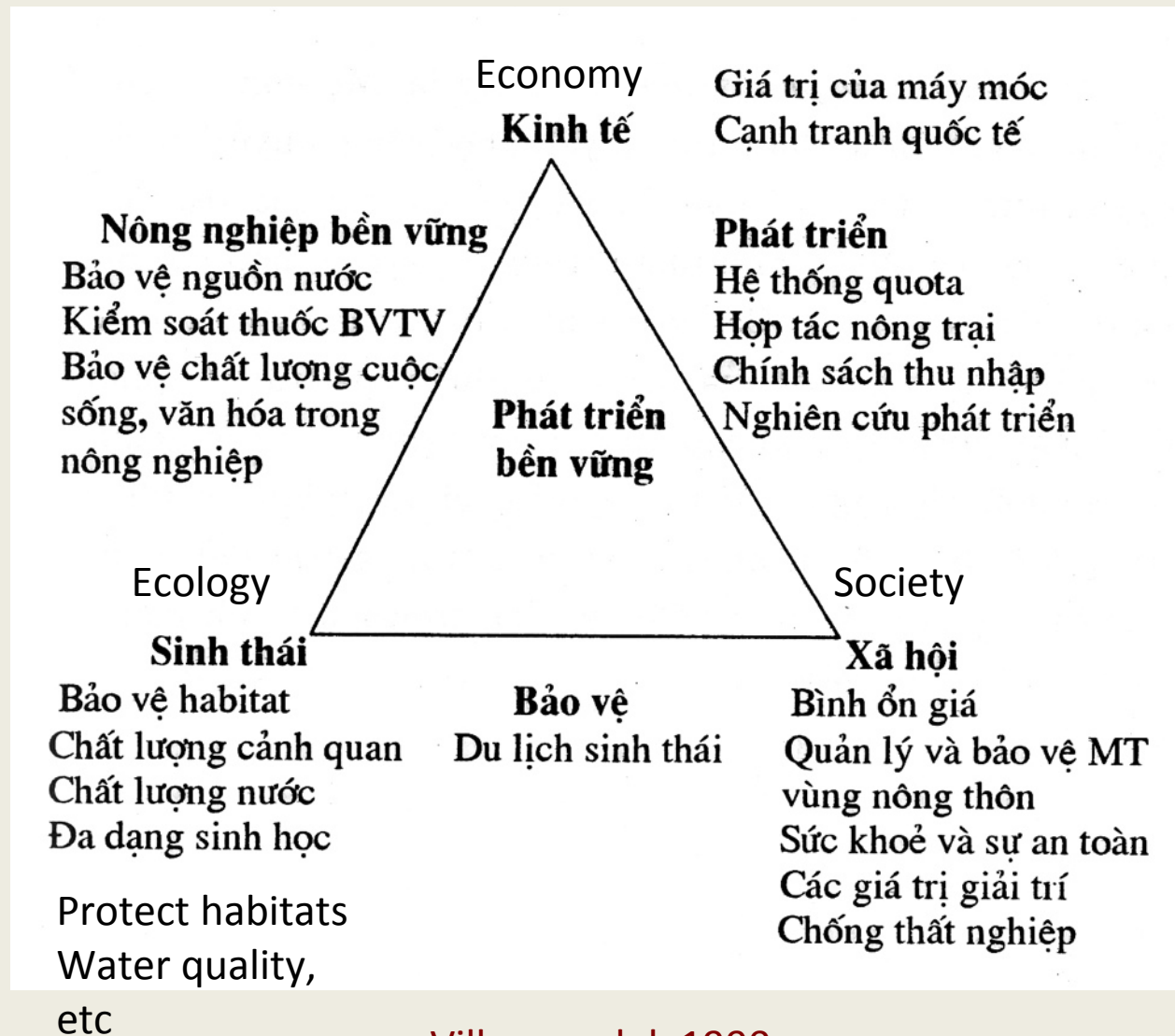
The WCED model, 1987: ensure the harmony of economy, society, production, etc.



The WCED model, 1987

Sustainable development models

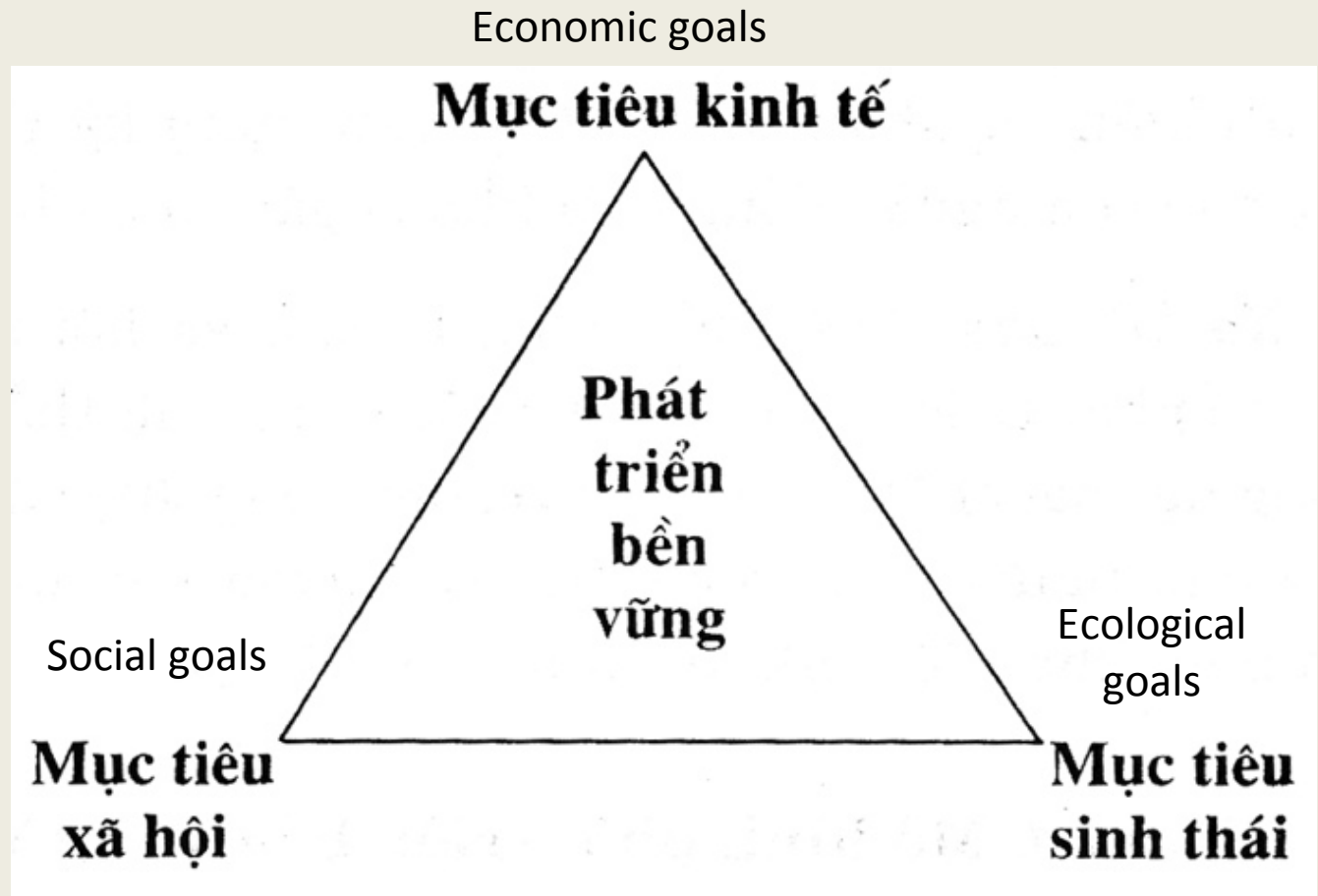
Villen model, 1990:
indicated the means to maintain the balance among economic, ecological and social goals



Villen model, 1990

Sustainable development models

The World Bank model, 1990 presented the economic, social and ecological goals to achieve SD



The WORLD BANK model, 1990

The indicators of sustainable development

Sustainable economy:
continuous growth without
causing degradation of
environment and natural resources

Sustainable society: a developed
society with a high quality of life
and social equity

Sustainable environment: the
environmental quality is
maintained, natural resources is
used sustainably

*SD is the state of development that
three above goals are
simultaneously achieved*



Principles of Sustainable Development

9 principles of sustainable development by UNDP

1. Recognize and duly support Indigenous people and their communities and other local communities
2. Improve the quality of life.
3. Protect biodiversity.
4. Properly manage and protect non-renewable resources.
5. Recognize environmental carrying capacity.
6. Change individual habits and life style
7. Support communities to manage their own environment.
8. Give a model sustainable development country and encourage other countries to follow
9. Promote global partnership and cooperation

Sustainable development in Vietnam

- Vietnam recognize early the importance of SD and promptly take action towards SD, sustainable natural resource use and adapt to global warming.
- Vietnam has agreed and signed in international treaties on environmental, SD, global warming adaption, etc.
- However, Vietnam is a developing country with low-technology, imperfect competition market, lack of proper policies, etc as a result, SD has not significantly achieved, natural resources have not been effectively utilized,...

Sustainable development in Vietnam

- 1980: Start a national-level research on “proper use of natural resources and environmental protection”
- 1985: Start “Nation-wise project on natural conservation” sponsored by IUCN
- 1991: Held a international conference on “Environment and sustainable development” supported by UNEP and UNDP
- Promulgate “national master plan on environment and development in period of 1991-2000”
- 1993: Promulgate “Environment Protection Laws”

Sustainable development in Vietnam

- 1995: Finish the draft of “National Environment Action Plan – NEAP”
- 1995: Prime Minister approved “BIODIVERSITY ACTION PLAN – BAP”
- 1994: Start making the report on “annual national environment status”
- 1998: Political bureau instructed “strengthening environmental protection in the period of industrialization and modernization”
- 2003: Prime Minister approved “National strategies on SD - AGENDA 21 in Vietnam”

Sustainable development in Vietnam

- 2008: National Assembly promulgated “Law on Biodiversity”
- 2010: Political bureau promulgated “Law on Environmental Protection Tax” by that Fossil fuels will be taxed.
- 2010: Political bureau promulgated “Law on energy use” in order to promote using energy effectively and economically.

Agenda 21 in Vietnam

- Agenda 21 is one of four important documents of Rio Earth Summit in 1992.
- Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment.
- Agenda 21 was approved by Prime Minister in 2003 under the decision No. 153/2004 QD-TTg “strategic orientation for SD in Vietnam” dated on 17/8/2004.
- Vietnamese government is going to promulgate “strategies for SD in Vietnam in the period of 2011-2020”

Agenda 21 in Vietnam

AGENDA 21 is divided into 5 parts:

Table of contents

Introduction

I.Sustainable development, Vietnam's inevitable path

II.Priority economic areas for sustainable development

III.Priority social areas for sustainable development

IV.Priority areas in natural resource utilization, environmental protection and pollution control for sustainable development

V.sustainable development implementation

Agenda 21 in Vietnam - Priority economic areas

1. Maintain rapid and sustainable economic growth rate
2. Transform production and consumption patterns towards environmentally friendly direction
3. Implement the “Clean industrialization” process
4. Agricultural and rural sustainable development
5. Sustainable development of regions and localities

Agenda 21 in Vietnam - Priority social areas

1. Great attempts should be made to eliminate hunger, alleviate poverty and speed up the implementation of social progress and equity
2. Continue to reduce population growth rate and create jobs for the working force
3. Orientate the process of urbanization and population migration towards the sustainable development of urban areas, appropriate allocation of population and labor forces for each region
4. Improve education quality in order to raise intellectual level, professional skills and qualifications and match requests of the country's development
5. Develop healthcare services in terms of quantity and quality, improve working conditions and living environment sanitation

PART

2

MDGs

History



2000

New York

Millennium
Summit,
New York

History

The Millennium Summit was a meeting among many world leaders. This meeting was the largest gathering of world leaders in history as of the year 2000 (189 member states of the United Nations)

Its purpose was to discuss the role of the United Nations at the turn of the 21st century

At this meeting, world leaders ratified the United Nations Millennium Declaration. Leaders agreed to help citizens in the world's poorest countries to achieve a better life by the year 2015

2000

New York

Millennium
Summit,
New York

The Millennium Development Goals



Targets of MDGs in Vietnam, 2007

1. Eradicate extreme poverty and hunger

- 1990-2015: reduce 50% rate of low income people (below 1USD/day)
 - 1990-2015: reduce 50% of the proportion of people who suffer from hunger
- Create job for all people



2. Achieve universal primary education

- Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling



Targets of MDGs in Vietnam, 2007



3. Promote gender equality and empower women

- Eliminate gender gap in primary and secondary education by 2005 and all levels by 2015



4. Reduce child mortality

- Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate



5. Improve maternal health

- Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.

Targets of MDGs in Vietnam, 2007



6. Combat HIV/AIDS, malaria and other diseases

- Slow down and halve the spread of HIV/AIDS by 2015
- HIV/AIDS patients will be treated (if they request)
- Slow down and halve the spread of Malaria and other diseases by 2015



7. Ensure environmental sustainability

- Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.
- Reduce loss of biodiversity by 2010
- Halve the number of people without sustainable access to safe water by 2015.
- Improve remarkably living standards of at least 100 million people living in slums by 2020.

Targets of MDGs in Vietnam, 2007

8. Develop a Global Partnership for Development.

- Develop further an open, rule-based, predictable, non-discriminatory trading and financial system.

- Address the special needs of the Least Developed Countries
Includes: Tariff and quota free access for LDC exports; enhanced program of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction.

- Address the special needs of landlocked countries and small island developing States .

- Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

- Cooperate with developing countries to formulate and implement appropriate and effective job creation strategies for young people.

- Cooperate with private sector to make new technologies, especially information and communication, more useful for people.



MDGs and Achievements of Vietnam

Overview

Vietnamese government signed in MDGs Declaration in 2010. Since then, the commitments made in the Declaration have been consistently upheld by Vietnam

According to the report of Vietnamese government, VN has achieved 5 goals and is going to fulfill 3 other goals by 2015. Realizing the Development Goals by 2015 has become one of the country's highest priorities.



The former president Nguyen Minh Triet presented achievements of Vietnam at the United Nations; New York, 2010.

Achievements



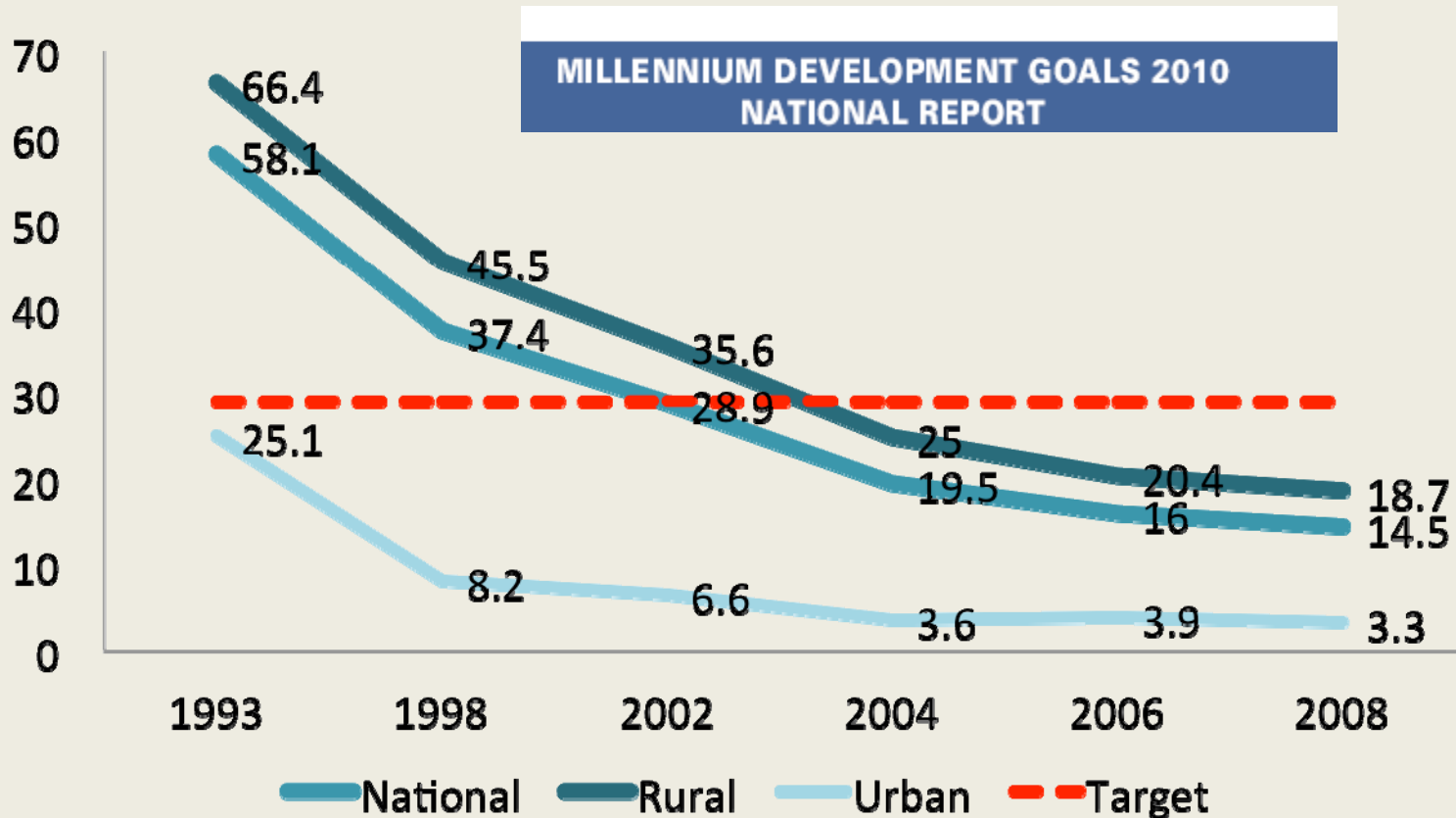
Achieved (5/8 goals met), fulfill the others (3 goals) by 2015

Eradicate extreme poverty and hunger

Targeted 1A

Rate of low income people (below 1USD/day), 1990-2015

Achieved



Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Eradicate extreme poverty and hunger

Sources of success

- Economic growth sustainably at quite high rate
- The National Target Program for employment and the Vocational Training Program has successfully created more jobs
- The policy of providing soft loan to poor households
- Improve rural infrastructure, community health and education

Challenges

- The poverty rate is still high among ethnic minority groups and in remote regions
- The risk of falling back into poverty is high
- The problem of urban poverty, especially among urban immigrants is growing
- Infrastructure does not satisfy the too fast urbanization process

Achieve universal primary education

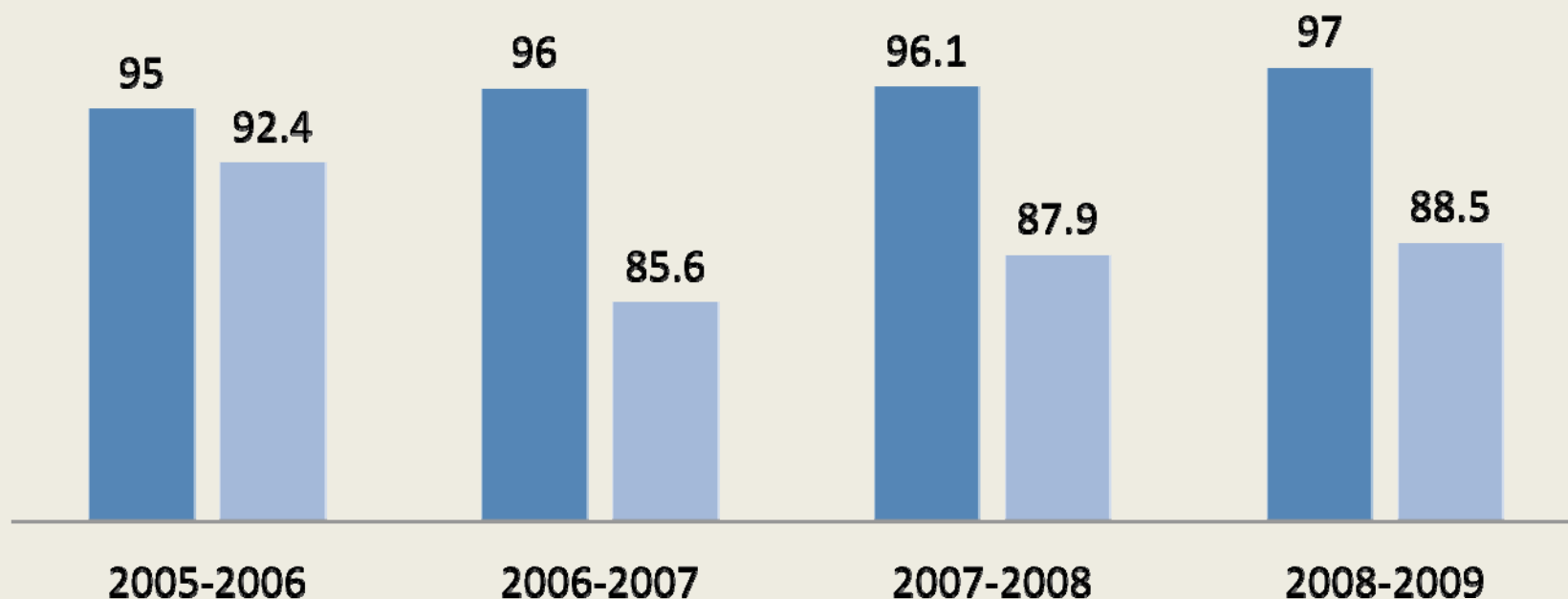
Targeted
2A

By 2015, primary education will be achieved

Achieved

■ Net enrolment ratio in primary education

■ Proportion of pupils starting grade 1 who complete last grade of primary



Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Achieve universal primary education

Sources of success

- The Government budget for education has increased (from 15.5% in 2001 to 20% in 2007)
- Financial support of tuition fee for poor and ethnic children
- International supports

Challenges

- Low education quality
- The primary school completion rate remains alarmingly low and differs significantly from region to region
- The primary school is difficult at remote areas

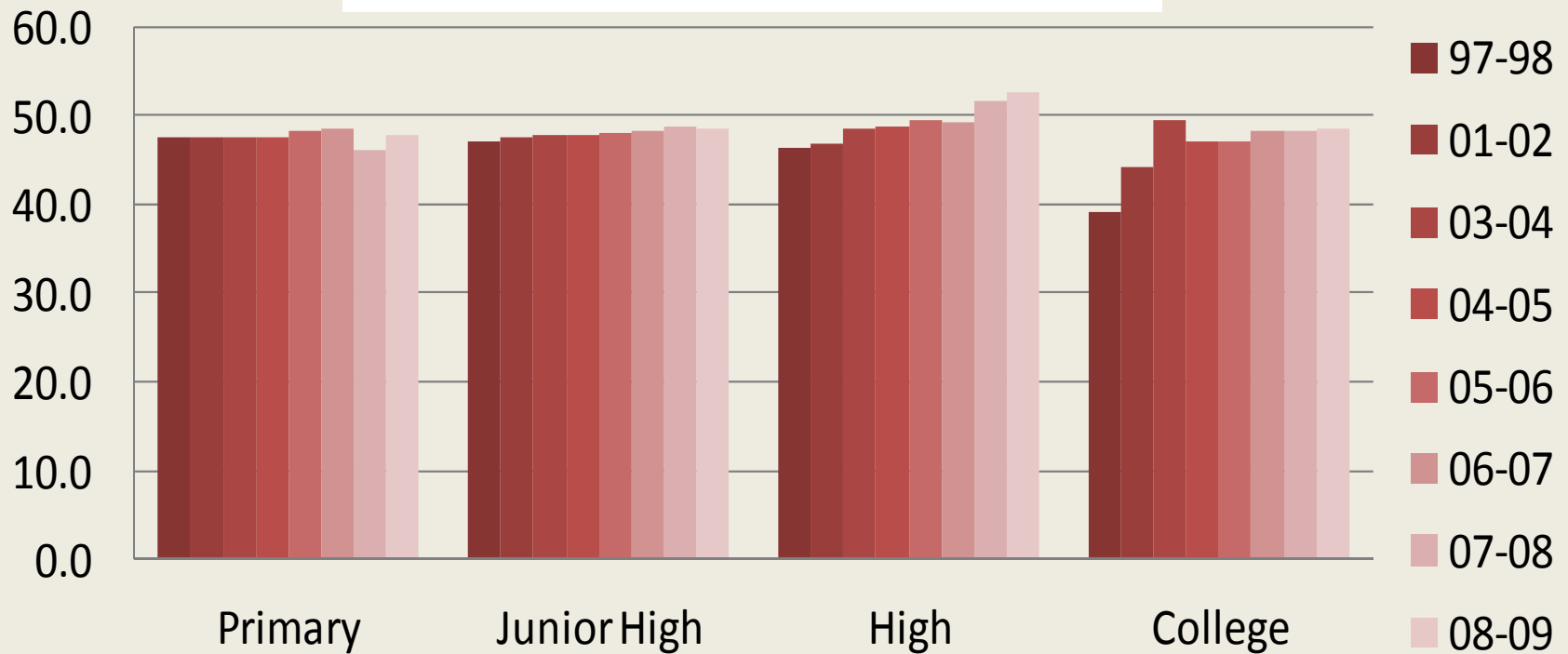
Promote gender equality and empower women

Targeted 3A

- Having no gender gap in education access by 2015
- Gender equality has witnessed remarkable progress in areas such as employment, leadership and management.

Achieved

The percentages of female students enrolled in school



Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Promote gender equality and empower women

Sources of success

- Progress in laws and policies
- Integrate gender equality into national strategies and programs

Challenges

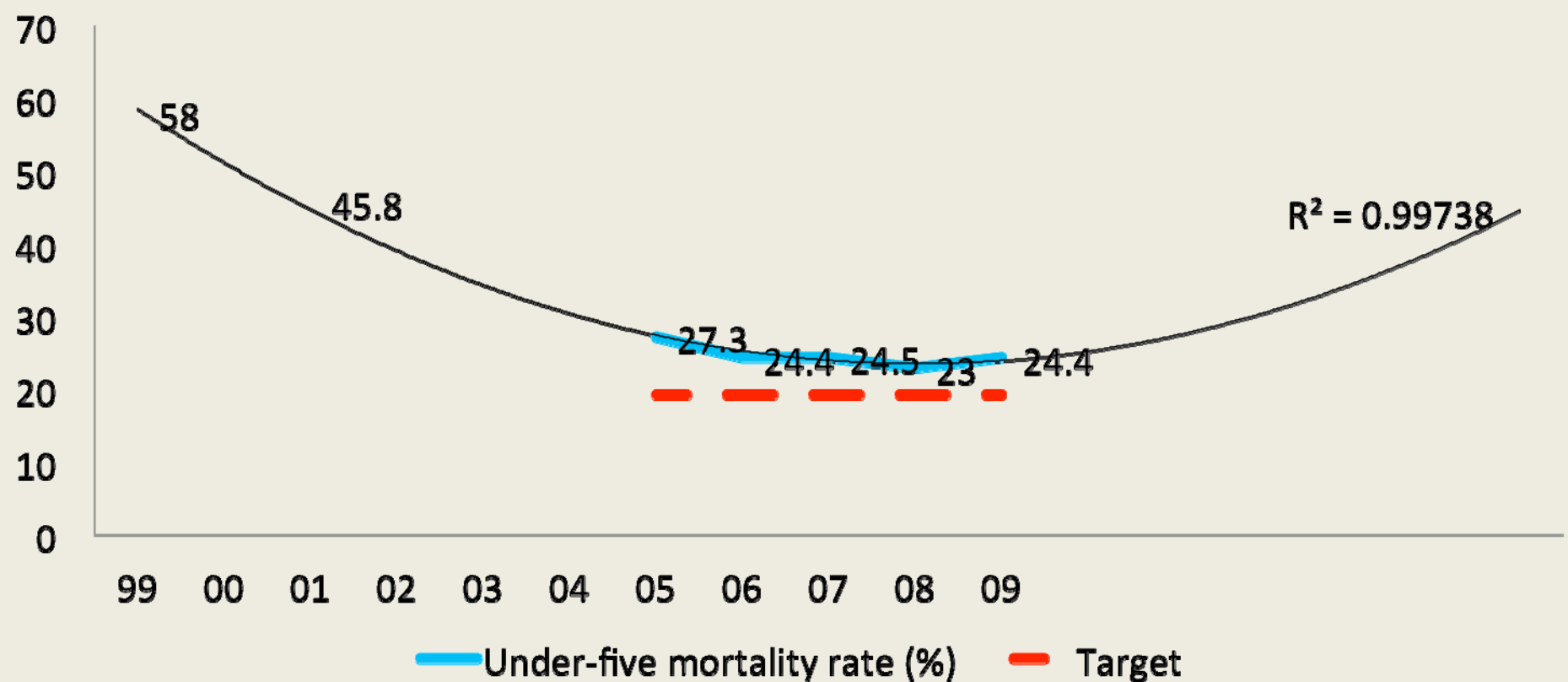
- Gender inequality still serious in rural areas
- In employment, women face certain disadvantages compared to men. The percentage of women employed in simple jobs remains higher than that of men
- Women spend twice as much time as men on household works
- Domestic violence, mainly against women and children remains a serious problem, particularly in rural mountainous and remote areas

Reduce child mortality

Targeted
4A

Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Un-
achieved



Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Reduce child mortality

Sources of success

- Vaccines is used nation-wise
- Improve hospital facilities in rural areas
- Health insurance for poor and ethnic people

Challenges

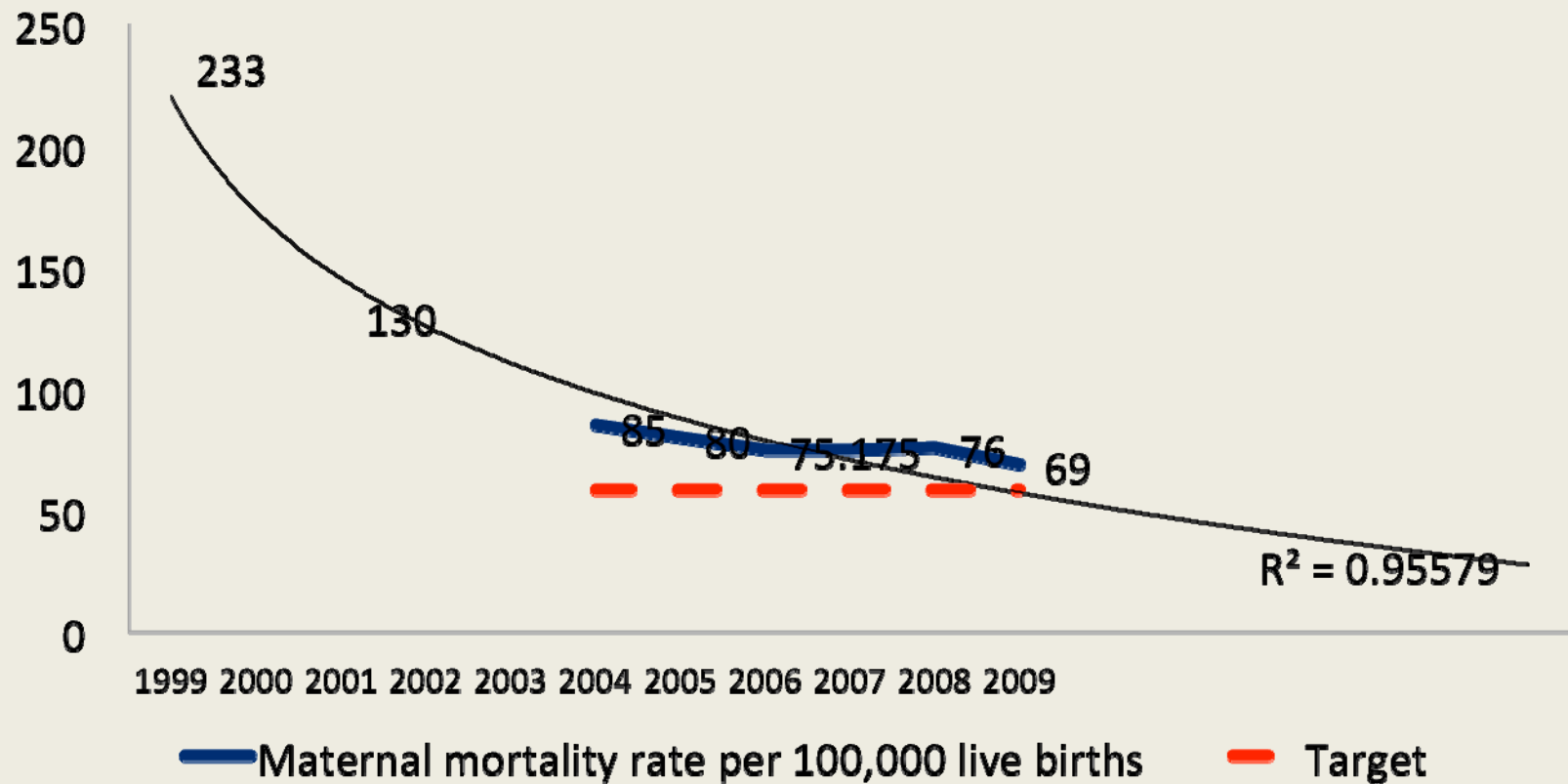
- Healthcare gap between rural and urban areas
- Big gap (31‰ to 39‰) on child mortality between the riches and the poor people.
- The tendency of re-increase child mortality in recent years

Improve maternal health

Targeted
5A

Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.

Un-
achieved



Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Improve maternal health

Sources of success

- The percentage of couples adopting contraceptive methods has increased over time
- The expansion of reproductive healthcare service network from central to provincial level
- Educate women on maternal healthcare, child-bearing, childbirth, etc.

Challenges

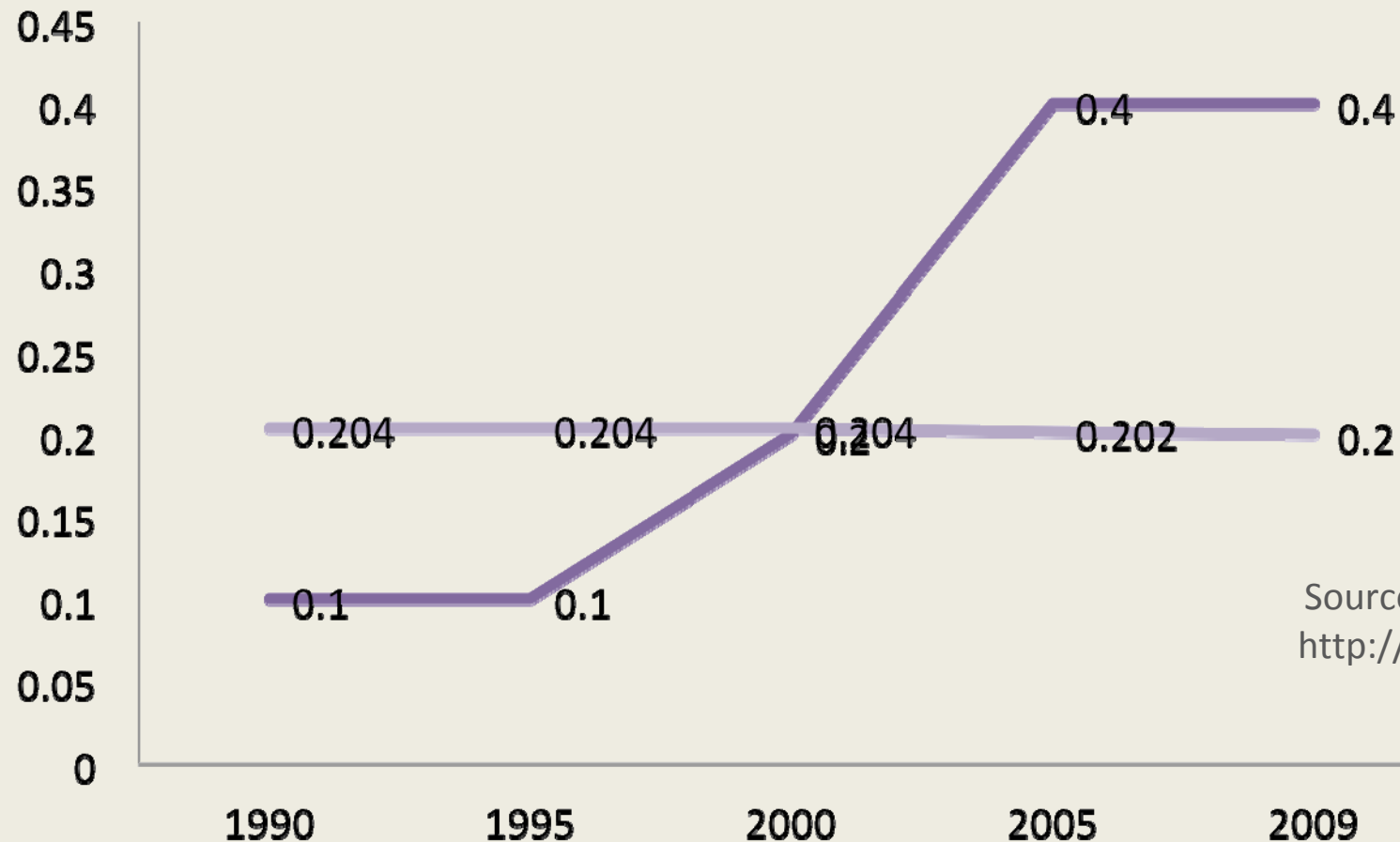
- Low education level of mothers and old-fashioned traditional practices in mountainous, remote areas
- Difficulties in accessing maternal healthcare services in disadvantage areas.
- Alarming rise in abortions among teenagers. Vietnam has a high abortion rate.

Combat HIV/AIDS, malaria and other diseases

Targeted
6A

Slow down and halve the spread of HIV/AIDS by 2015

Un-
achieved



Source: World Bank,
<http://goo.gl/sSMm9>

- Prevalence of HIV, total (% of population ages 15-49)
- Incidence of tuberculosis (%)

Combat HIV/AIDS, malaria and other diseases

Targeted
6B

By 2010 HIV/AIDS patients will be treated (if they request)

Un-
achieved

— Proportion of population with advanced HIV infection with access to antiretroviral drugs (%)



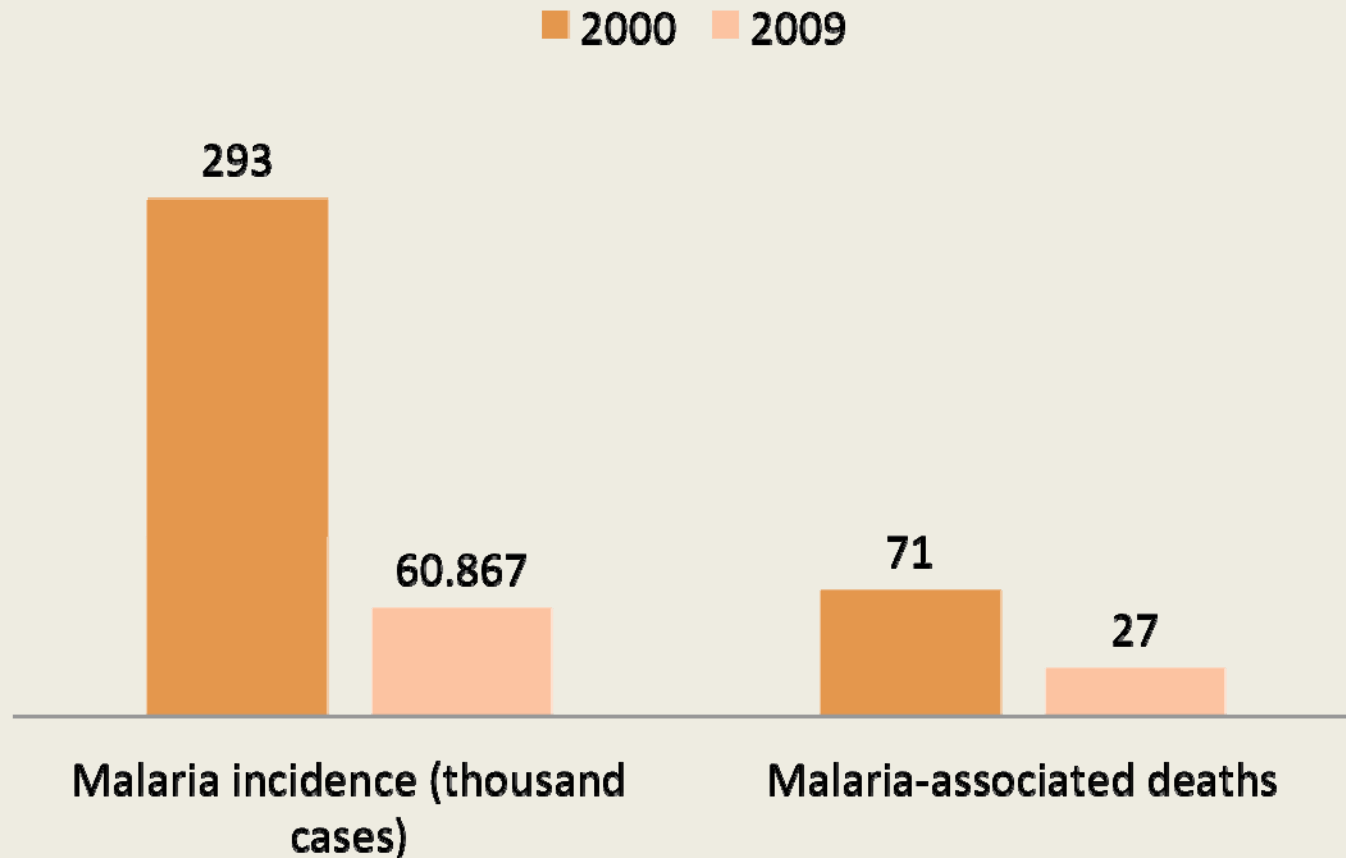
Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Combat HIV/AIDS, malaria and other diseases

Targeted
6C

Slow down and halve the spread of Malaria and other diseases by 2015

Achieved



Source: The Ministry of Planning and Investment, Millennium Development Goals 2010, national report

Combat HIV/AIDS, malaria and other diseases

Sources of success

- Prevention, treatment, care and support, and community integration of people living with HIV
- National program on training, peer education for key population at higher risk, direct counseling through hotlines, etc
- Establish more healthcare centers

Challenges

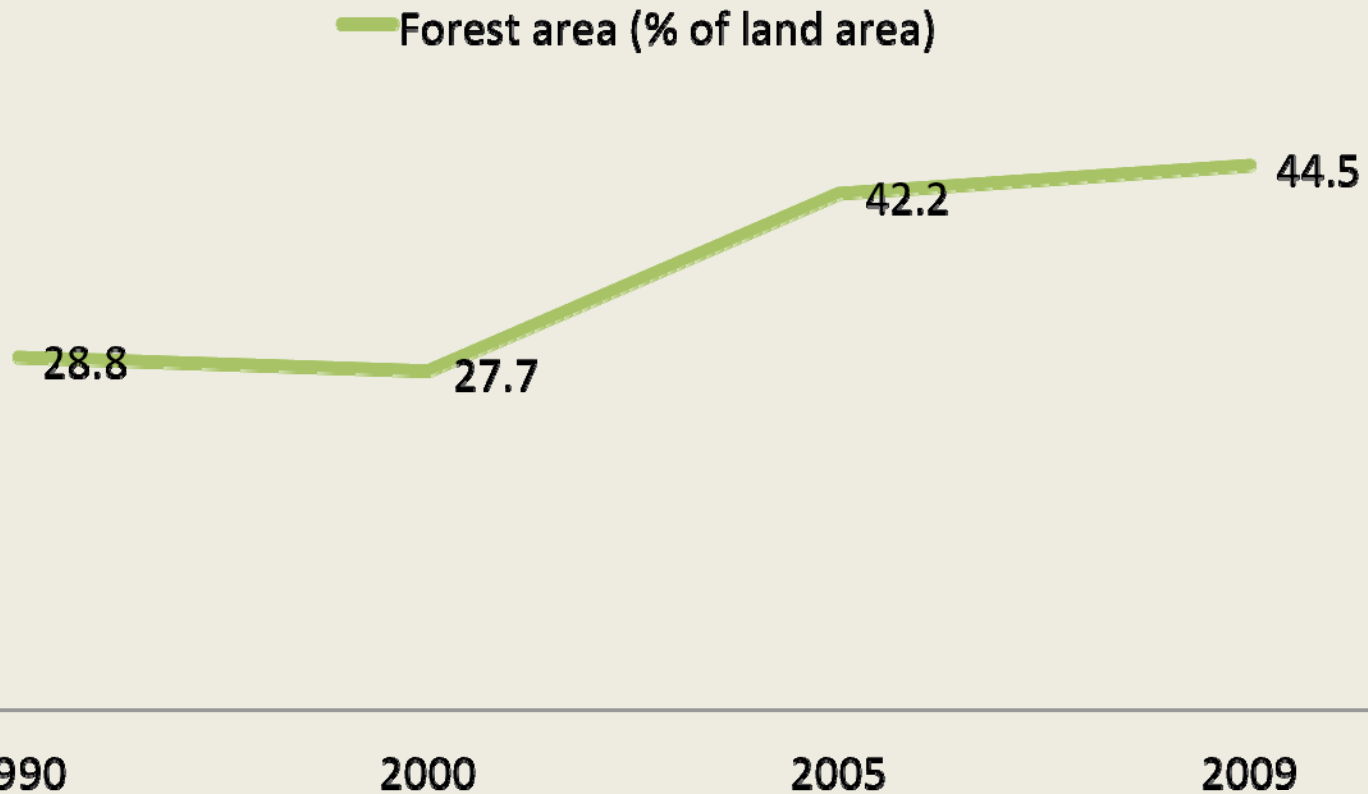
- Weak infrastructure and lack of financial sources
- Lack of healthcare and health check equipment
- High treatment cost
- Discrimination against HIV patients

Ensure environmental sustainability

Targeted
7B

- Reduce loss of biodiversity by 2010
- Increase the forest coverage area

?



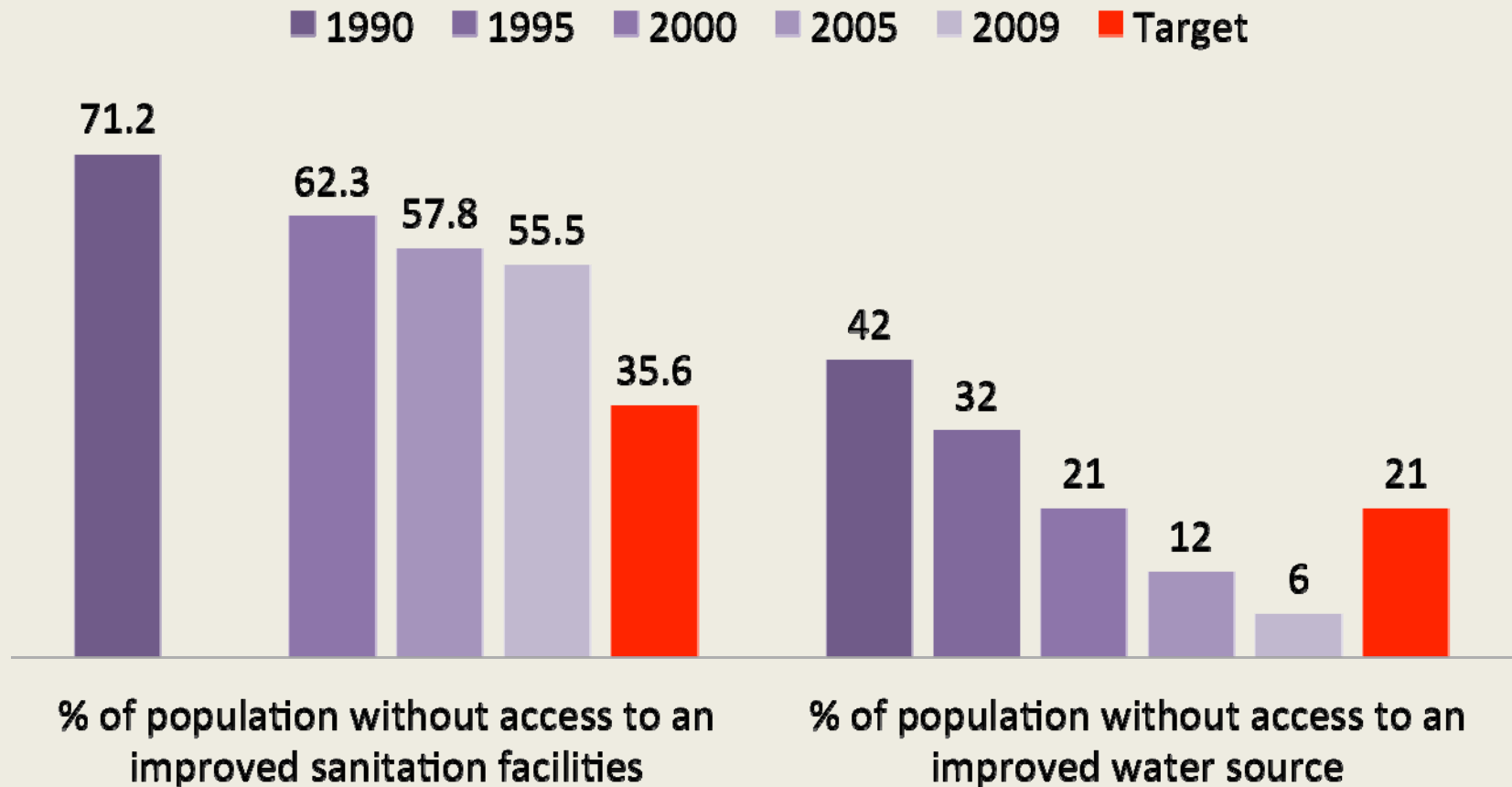
Source: World Bank, <http://goo.gl/sSMm9>

Ensure environmental sustainability

TARGET 7C

Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

ON-TRACK



Ensure environmental sustainability

Sources of success

- Implement protection, restoration and replanting programs
- Pollution control: encouragement of cleaner production and more active prevention and management of industrial pollution
- Implement the program on “safe drinking water and basic sanitation in rural areas”

Challenges

- Pollution in urban areas caused by the rapid urbanization without industrial and traffic pollution control
- Economic tools are not effective in environmental management
- Weak capacity for environmental research and data collection
- Environmental laws are not so effective

Develop a Global Partnership for Development

Achievements

- Have accessed to WTO
- Reorganize the business structure and international commercial law
- Attract foreign investment effectively
- Have made progress in paying international loan since 1990
- Putting considerable effort into modernization and expansion of telecommunication (telephone and internet) system

Challenges

- Commercial barrier from developed countries
- Global economic depression.
- Low rate of return of government investment
- High debt to GDP ratio
- Less developed economy

PART

3

Energy access and MDGs

ENERGY ACCESS: DEFINITION

Energy access

=

The ability to use energy safely and effectively (socio-economic development and residents)

Agriculture

Industry

Lighting

Public health

Media and communication

Education

Cooking

Transportation

ENERGY ACCESS: INDICATORS

An orange circle graphic containing the text 'ENERGY ACCESS INDICATORS'.

ENERGY ACCESS INDICATORS

Access to electricity: percentage of households connected

Access to modern energy for cooking: percentage of people

Access to mechanical power: Percentage of people using mechanical power for productive and non industrial use

Electricity access



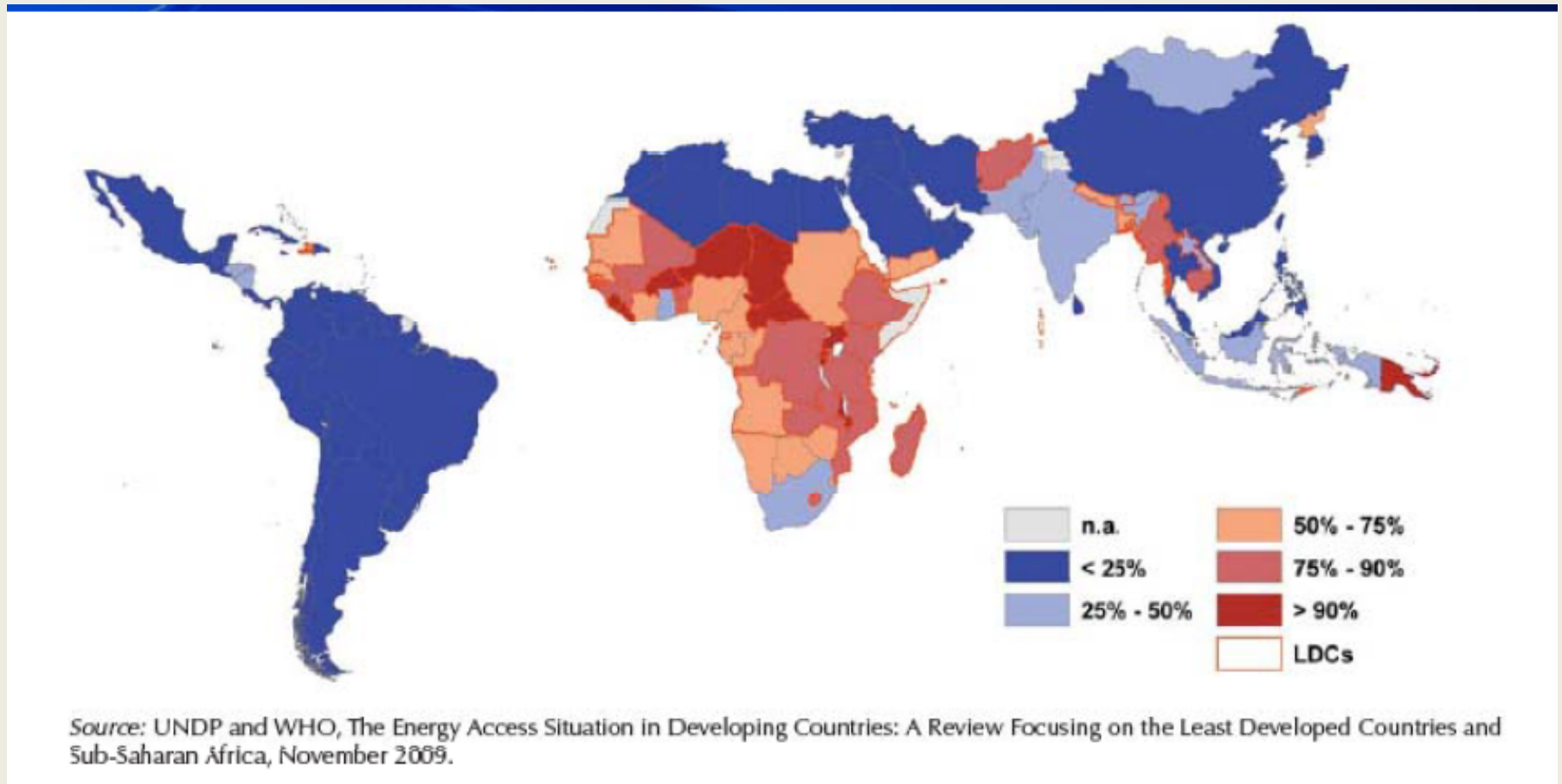
Common energy source, a very convenient form of energy.

Cleaner than biomass and fossil fuels

It helps in improving the living standards by providing lighting, clean water, health care and communication.

Electricity access

Share of population without access to electricity



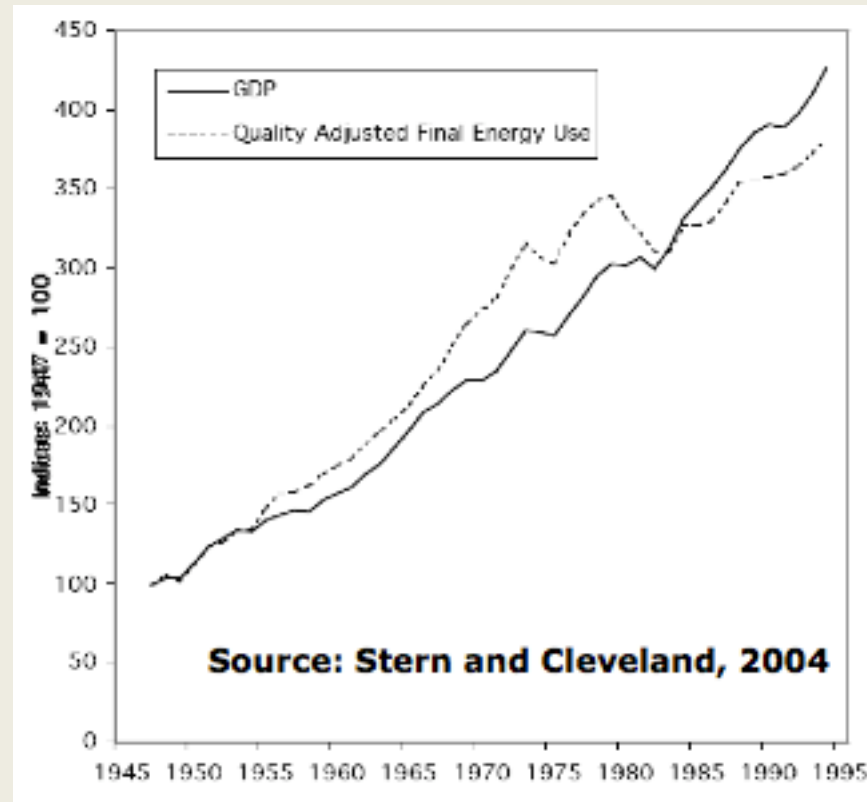
Electricity access and MDGs

Number of people lacking access to electricity 2009 (million)

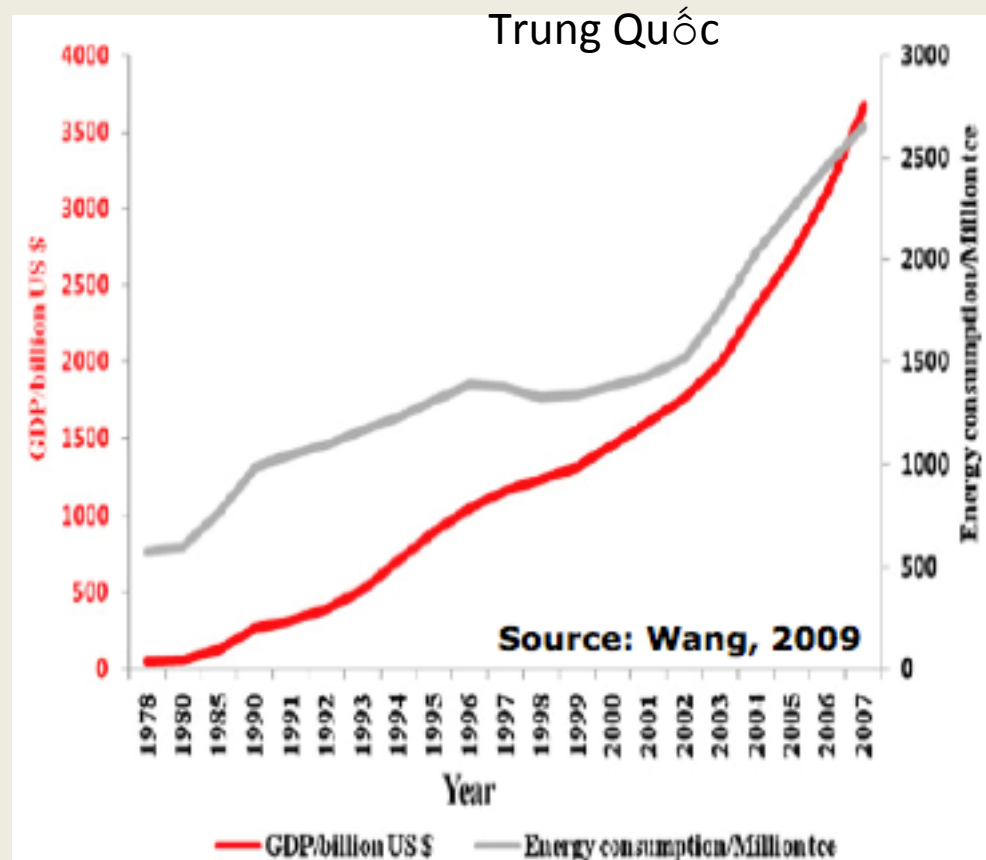
	Number of people lacking access to electricity	Number of people relying on the traditional use of biomass for cooking
Africa	587	657
<i>Sub-Saharan Africa</i>	585	653
Developing Asia	799	1 937
<i>China</i>	8	423
<i>India</i>	404	855
<i>Other Asia</i>	387	659
Latin America	31	85
Developing countries*	1 438	2 679
World**	1 441	2 679

*Includes Middle East countries. **Includes OECD and transition economies.

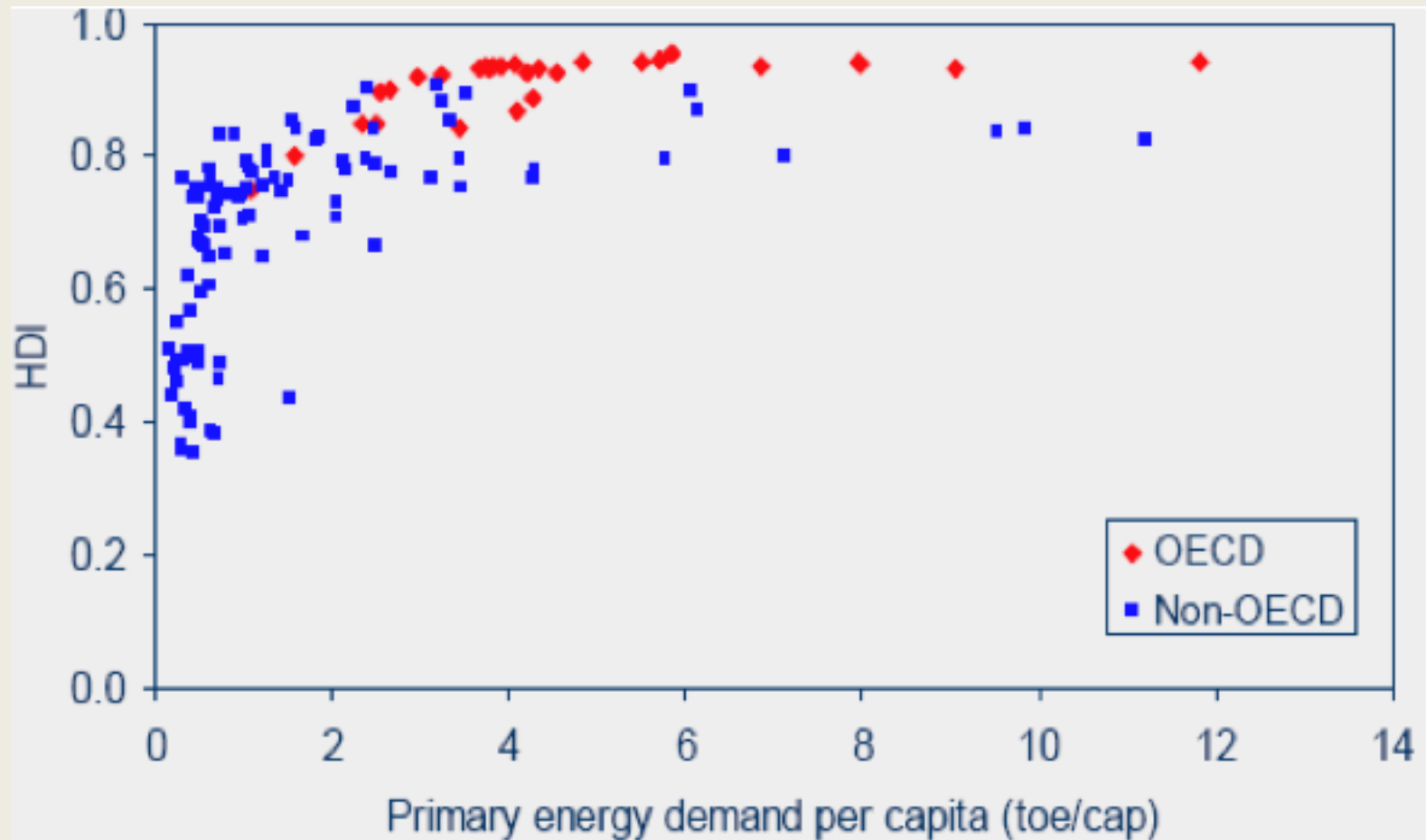
Energy use and economic growth - USA



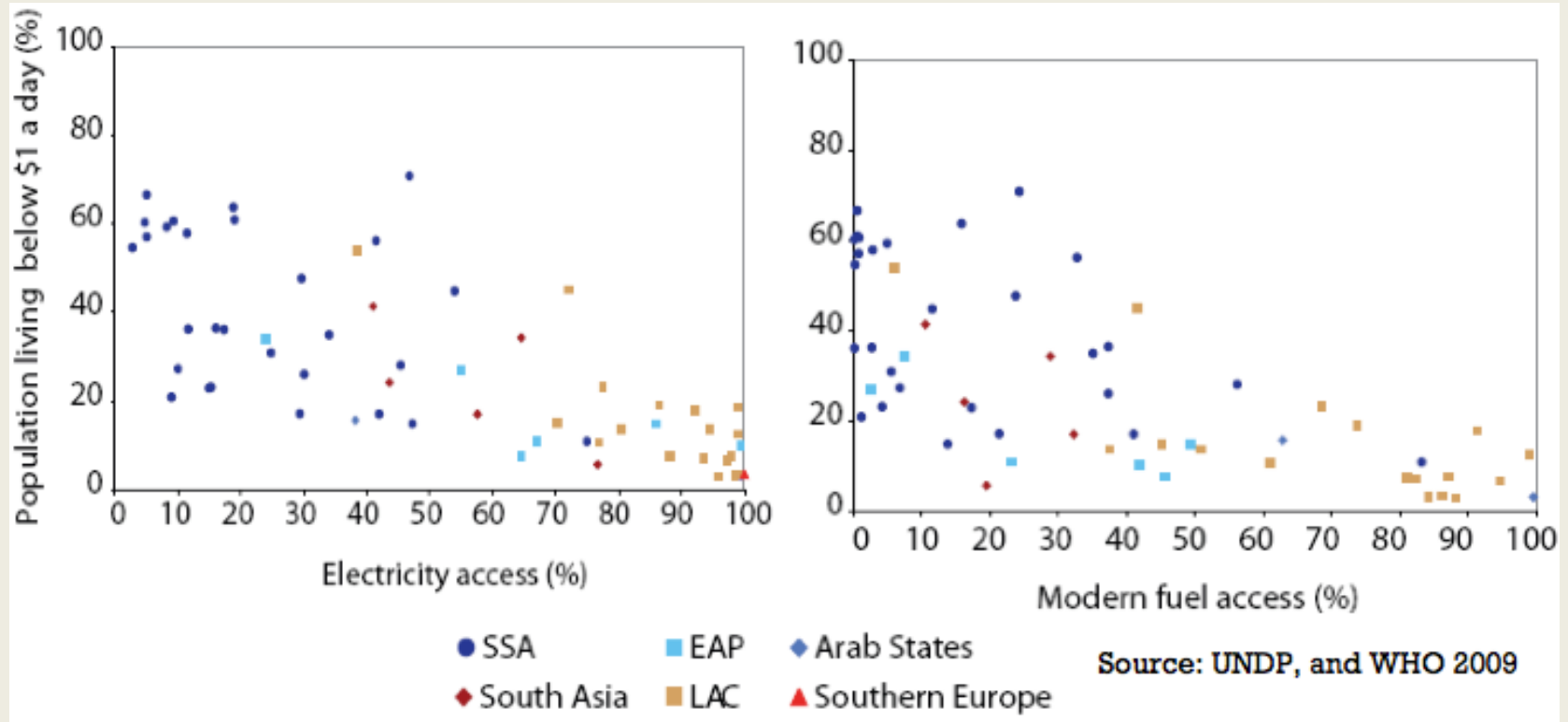
Energy use and economic growth - China



ENERGY USE PER CAPITA AND HDI

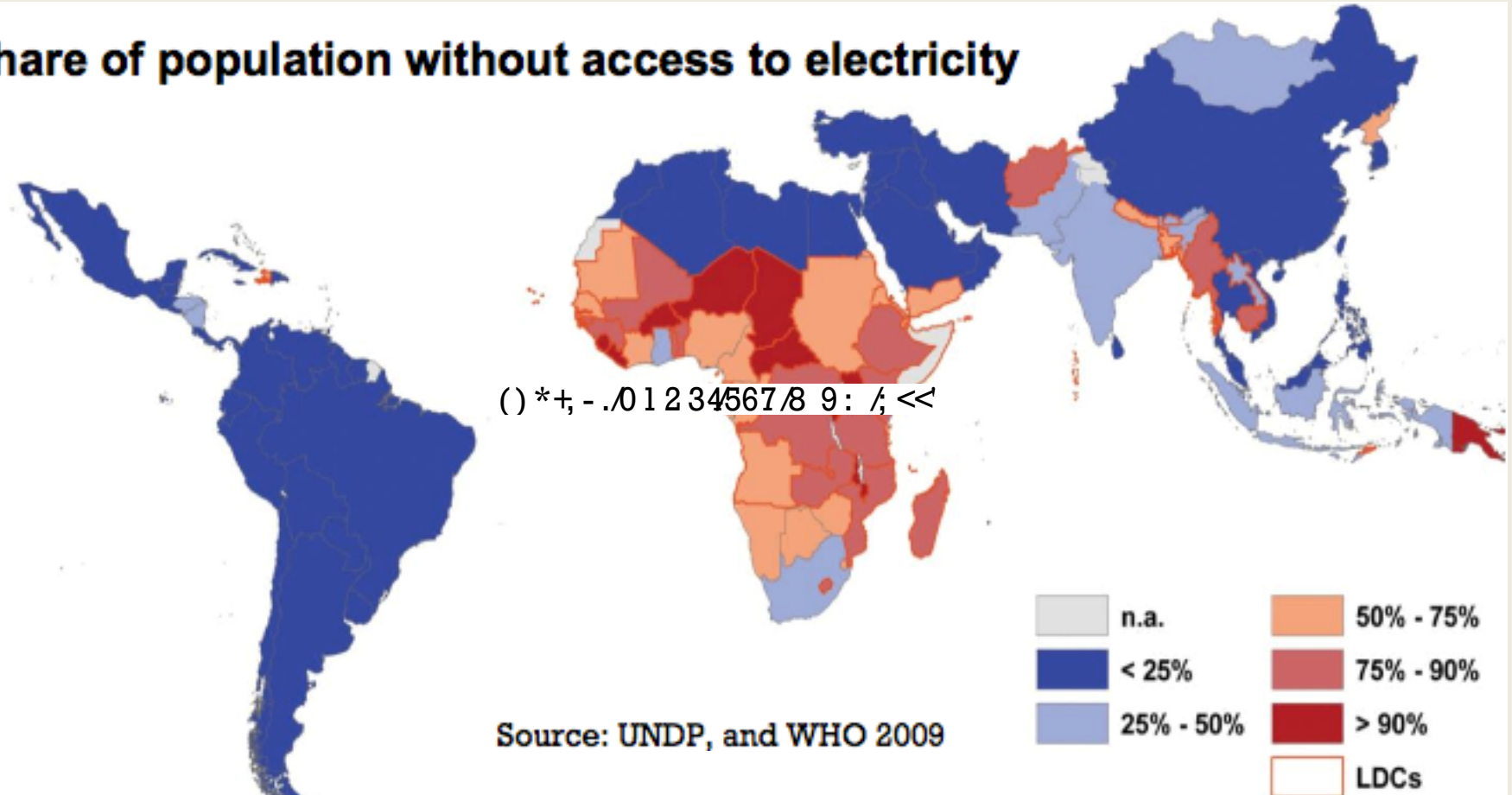


Energy access and economic growth



ACCESS TO ELECTRICITY, 2008

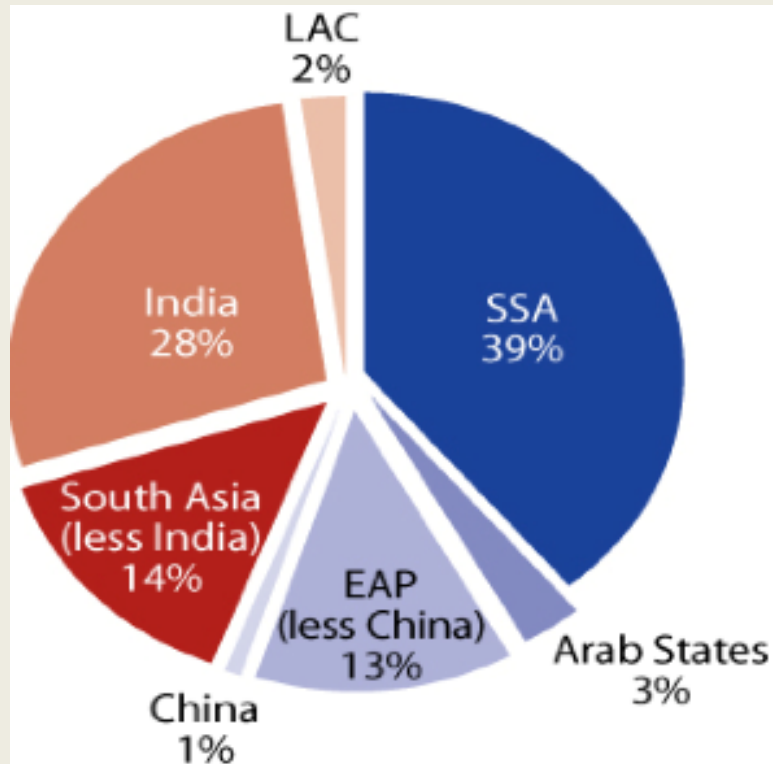
Share of population without access to electricity



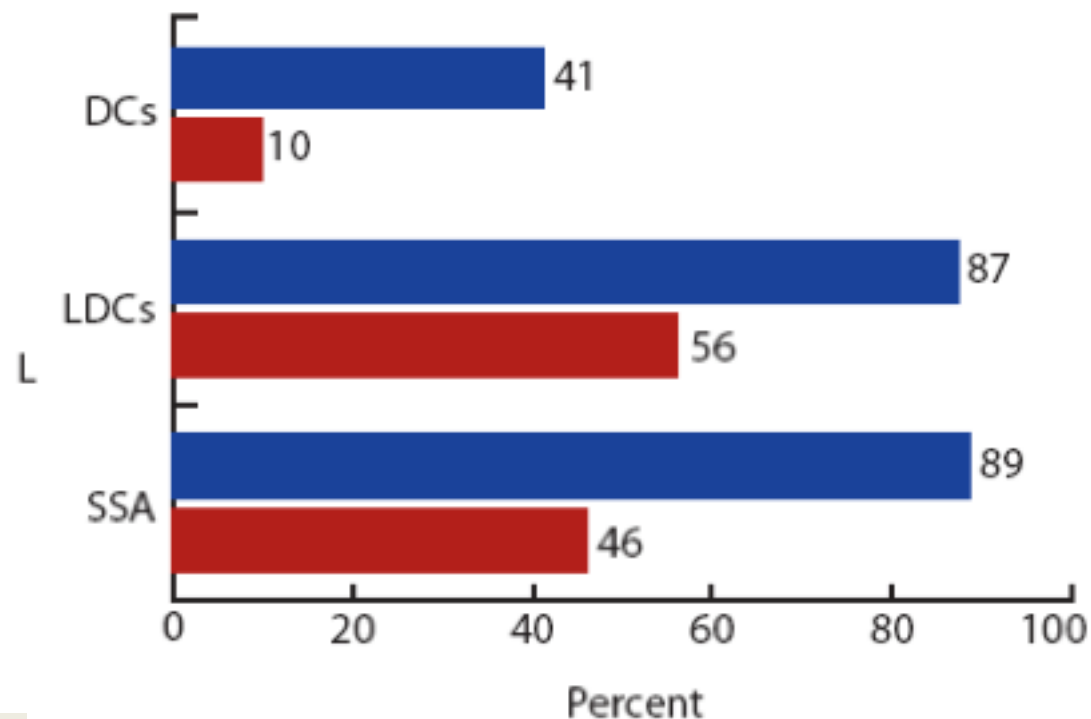
ACCESS TO ELECTRICITY, 2008

Percentage of population without access to electricity

Region wise

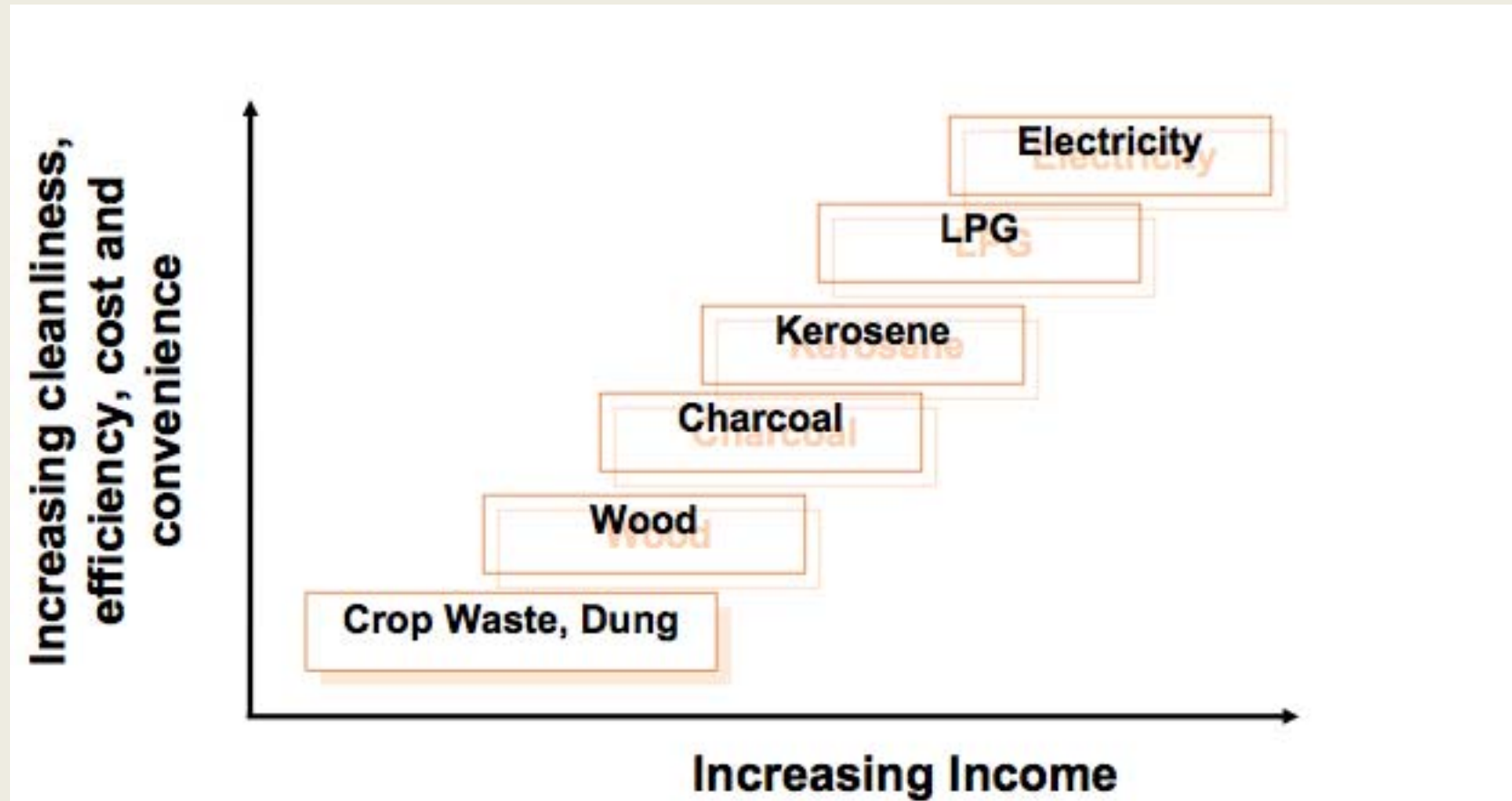


Urban – Rural wise

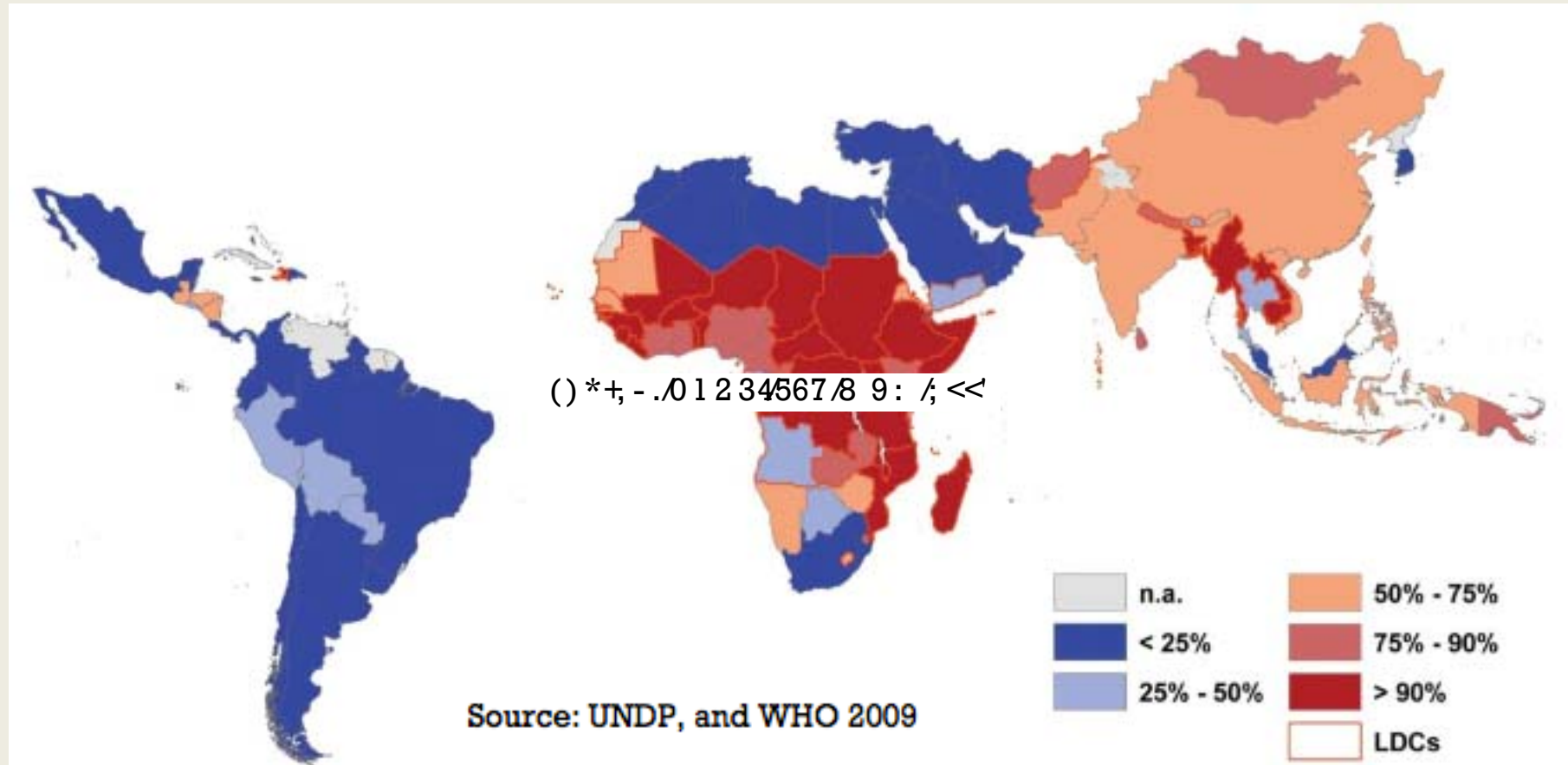


Source: UNDP, and WHO 2009

Relation between type of the type of cooking energy and income

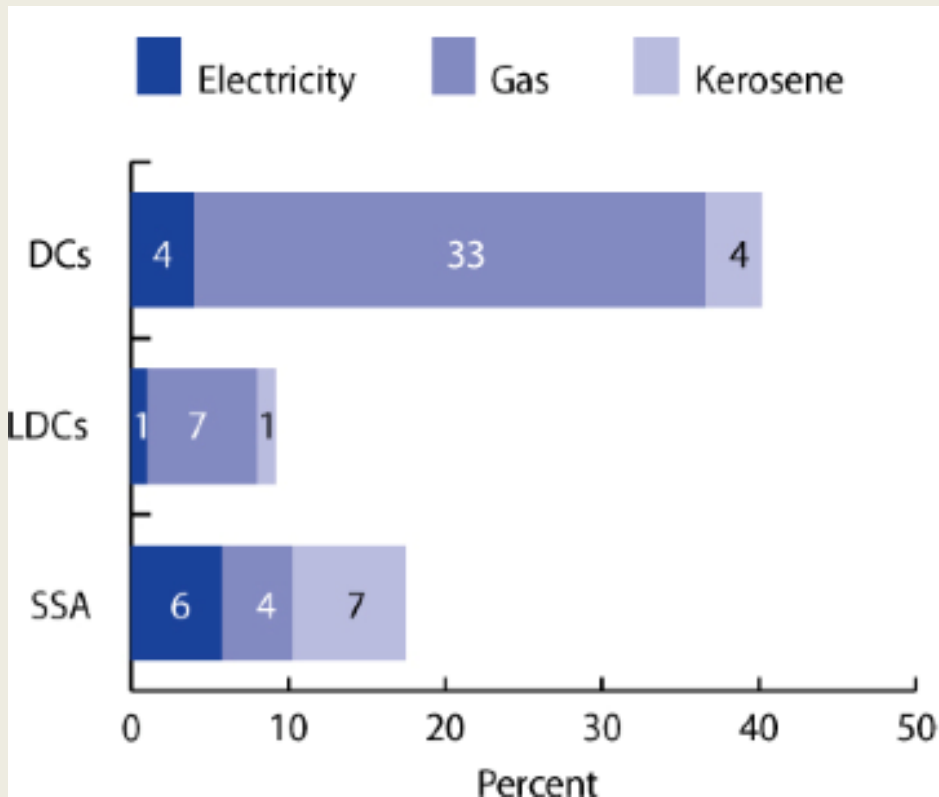


Access to modern fuels for cooking

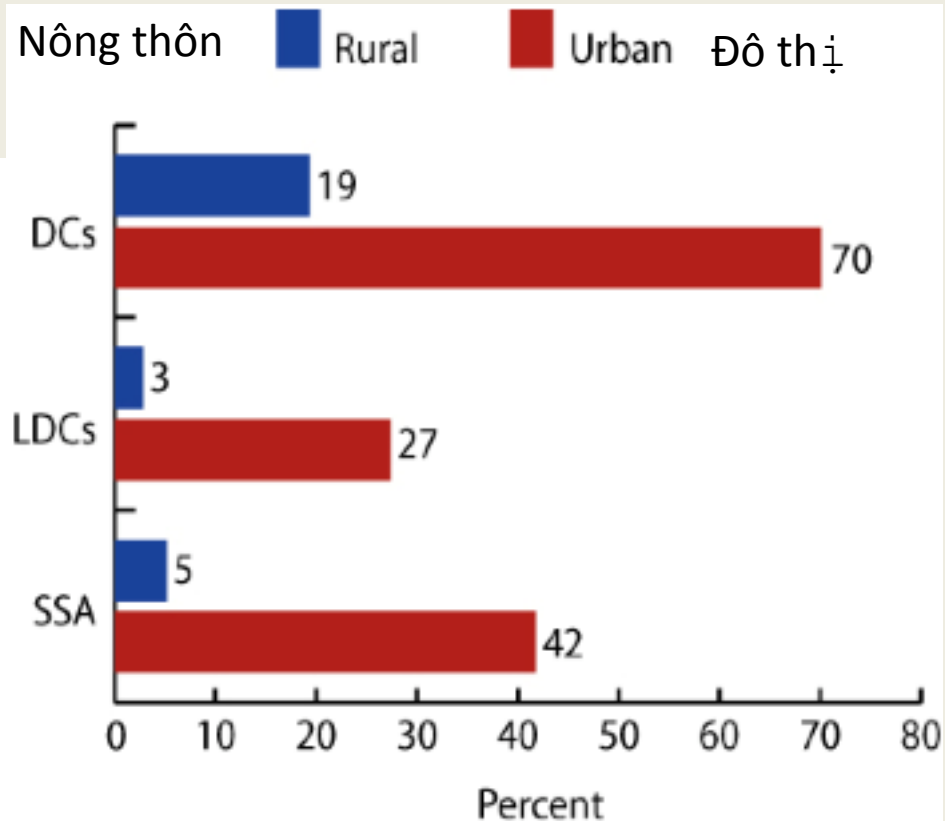


ACCESS TO MODERN FUELS IN DEVELOPING COUNTRIES AND URBAN/RURAL DIVIDE, 2007

Region wise

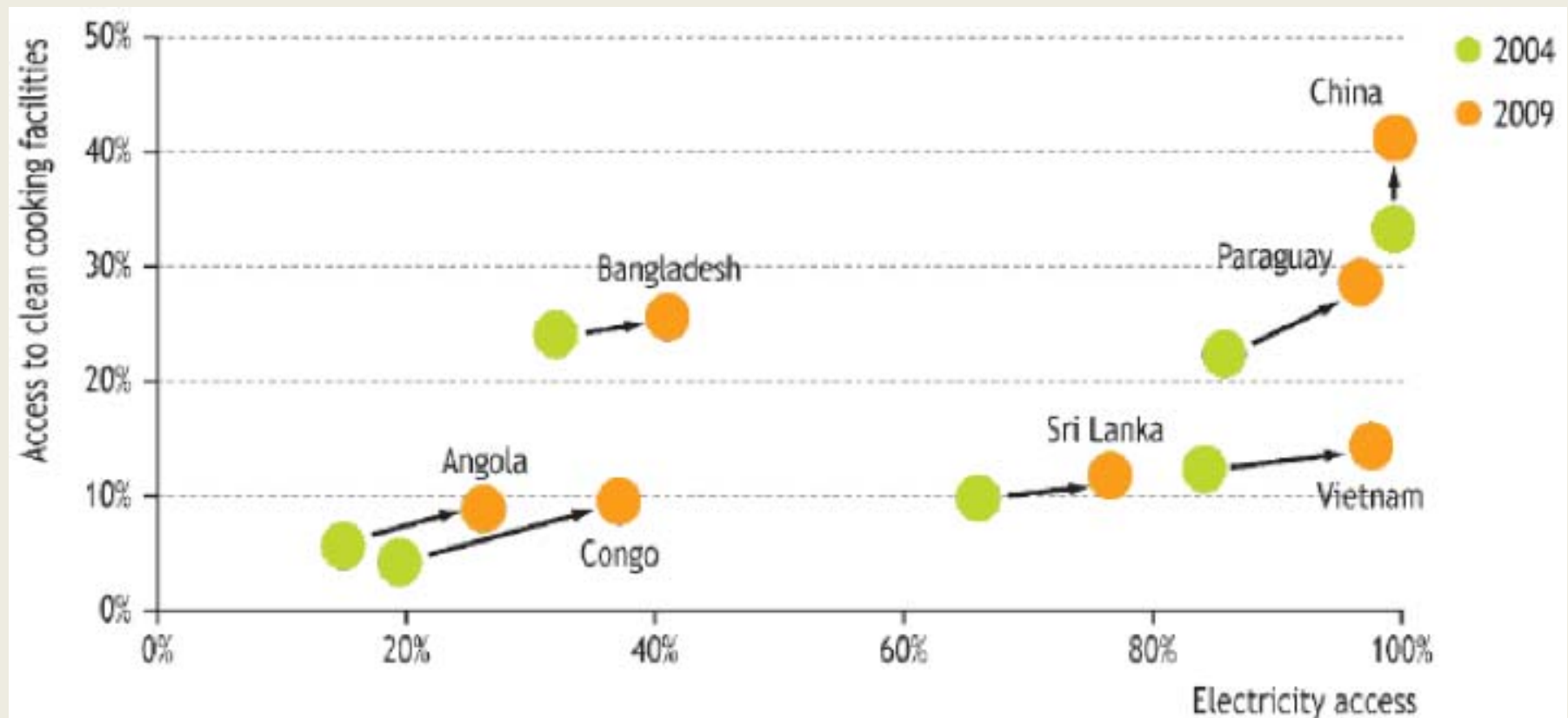


Urban – Rural wise



Source: UNDP, WHO, 2009

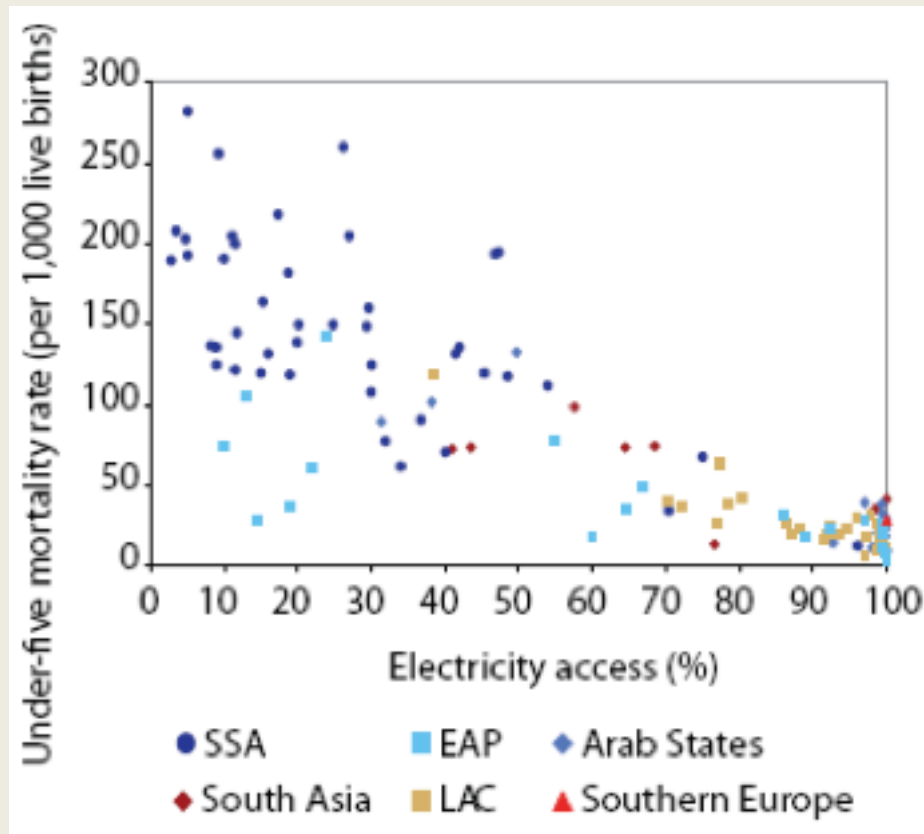
Household access to modern energy in selected developing countries, 2004 - 2009



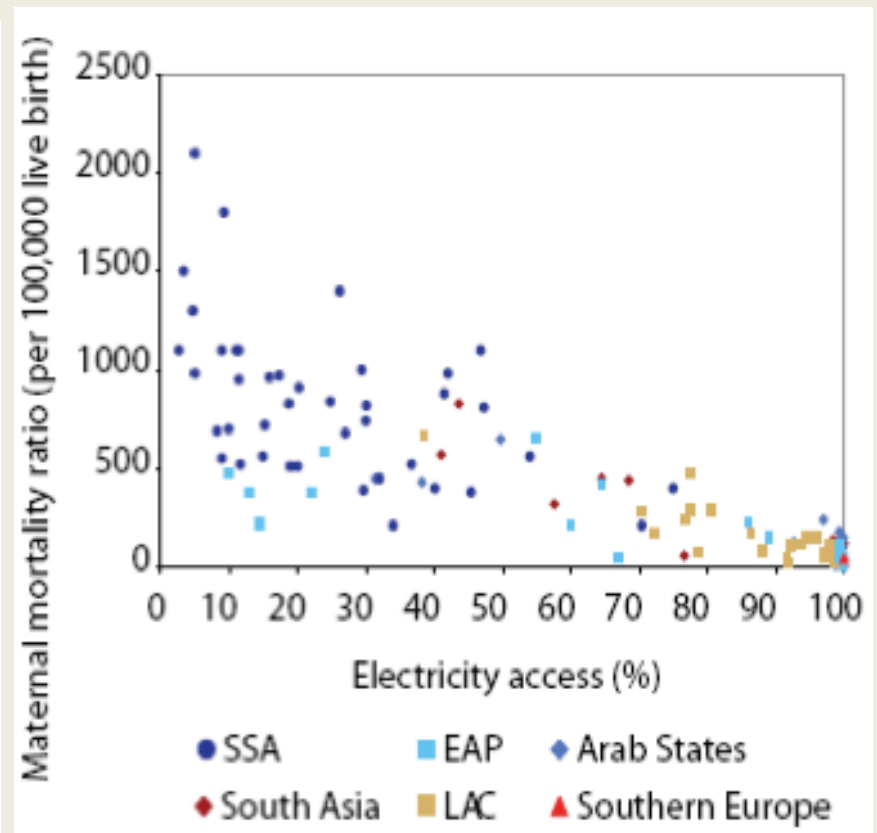
Source: IEA, 2010

ENERGY ACCESS AND CHILD/MATERNAL MORTALITY RATES

Child (under 5) mortality rates



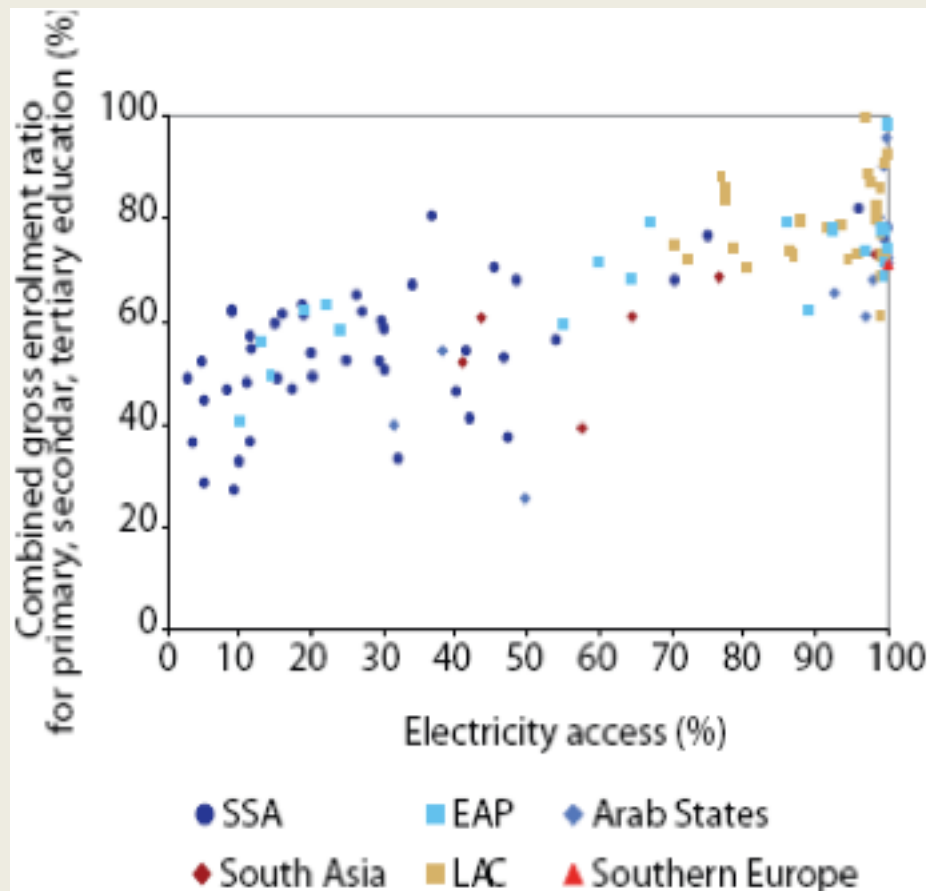
Maternal mortality rates



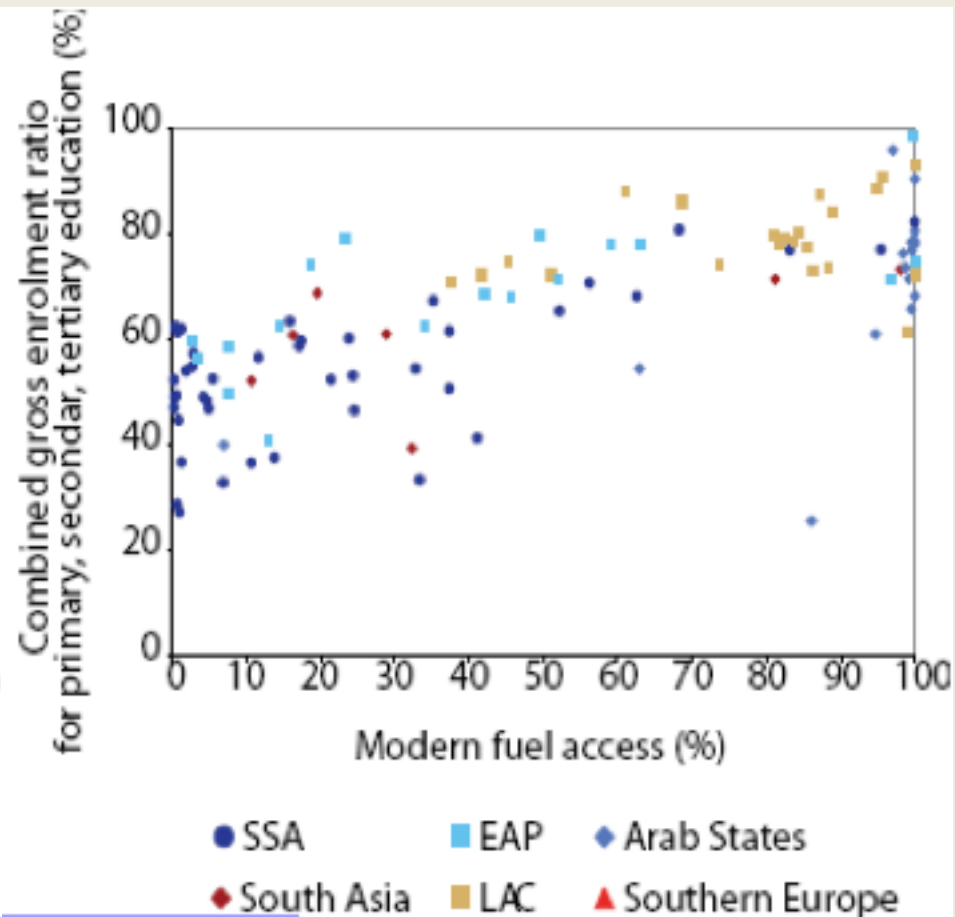
Source: UNDP and WHO, 2009

Electricity and modern energy access and education

Education enrollment ratio



Education enrollment ratio



PART

4

Energy access and MGDs in Vietnam

Electricity production in Vietnam

- Total installed capacity in 2010 was 20.000MW, 3.2 time higher than that of 2000. Electricity production was about 100 billion kWh, increased 3.7 and 1,88 times compared to 2000 and 2005.
- By the end of 2009, the 500kV national electricity grid had total length of 3.400km, 11 stations with total capacity of 7.500MVA. 250kV grid had a length of 8.500km and capacity of 19.000MVA
- 98% of districts and 97.9% of villages has been connected to the 110kV electricity grid
- 96% of family can access to national electricity grid

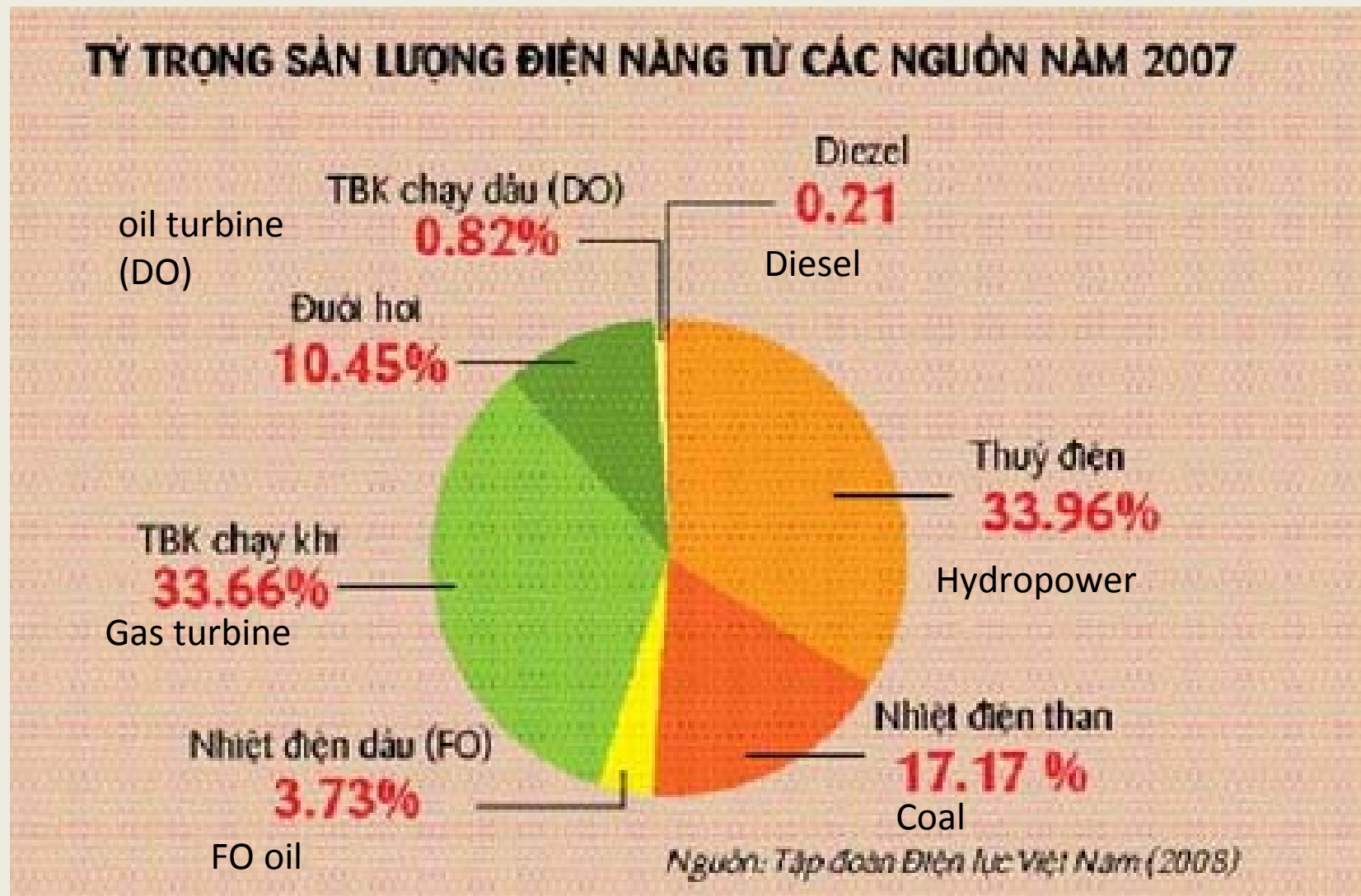
Electricity production in Vietnam

Electricity production by EVN

	<i>Năm</i>	2000	2001	2002	2003	2004	2005	2006
Million. kWh	<i>Tr.kwh</i>	26.683	30.673,1 15%	35.888 17%	40.546 13%	46.202 14%	52078 12,7%	59.050 13,4%
State- owned	"	24.972 93,6%	28.547,6 93,1%	33.777 94,1%	39.154 96,7%	44.655 96,7%	492.50 94,6%	55.911 94,7%
Non state- owned	"	11,0	5,4	7,0	7,0	9,0	9,0	11,0
ĐTNN	"	1700	2120,1	2104	1385	1538	2819	3127

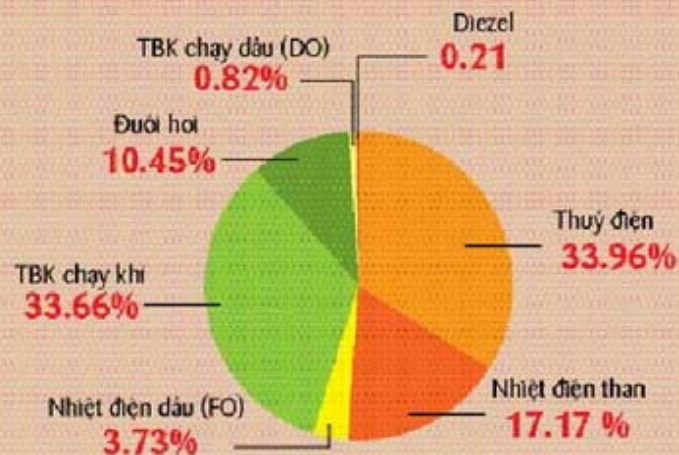
Source: Pham Duy Hien, 2004

Electricity production in Vietnam



Electricity production in Vietnam

TỶ TRỌNG SẢN LƯỢNG ĐIỆN NĂNG TỪ CÁC NGUỒN NĂM 2007



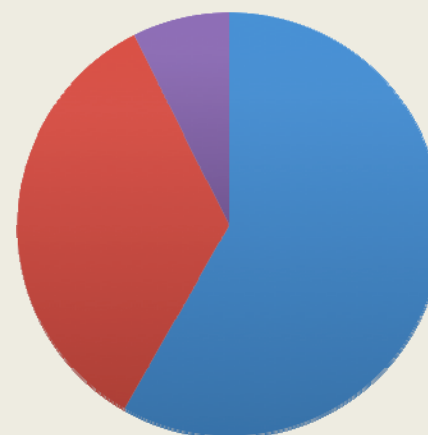
Nguồn: Tập đoàn Điện lực Việt Nam (2008)

■ Thermal power

■ Hydropower

■ Renewable

Năm 2020

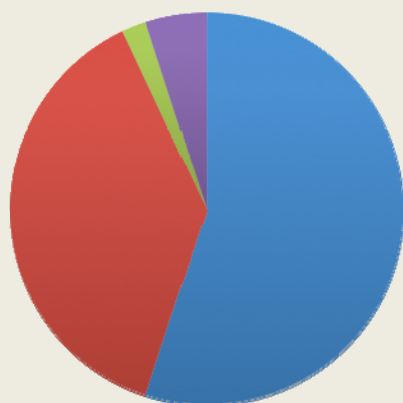


■ Nhiệt điện
55%

■ Thủy điện
32,5%

■ NL Tái tạo
4,5%

Năm 2011

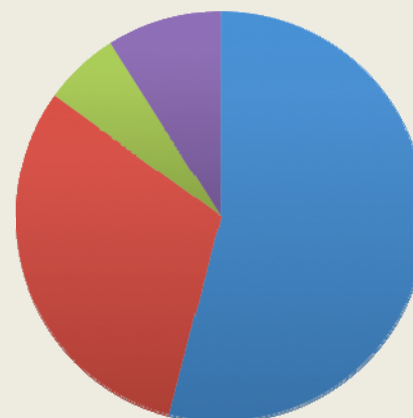


■ Nhiệt điện
55%

■ Thủy điện
38%

■ NL Tái tạo
2%

Năm 2030



■ Nhiệt điện
54%

■ Thủy điện
31%

■ NL Tái tạo
6%

Master Plan VII

- Sufficient supply of electricity for domestic demand with electricity production and import of about 194-210 billion kWh by 2015, 330-362 billion kWh by 2020 and 695-834 billion kWh by 2030
- Electricity for manufactory sections will be 194-211 billion kWh in 2015, 329 – 362 billion kWh in 2020 and 695 – 834 billion kWh in 2030
- Total capacity in 2015 is 42.500MW, twice as that of 2010. Thermal power plants will be developed at appropriate share, suitably to fuel supply resources and their distribution: natural gas, liquidized natural gas (LNG), coal and nuclear. By 2020, total capacity of power plants will be about 75000MW, of which: Hydropower accounts for 23.1%; pump storage hydropower 2.4%; coal fired power 48.0%; gas fired power 16.5% (of which LNG power 2.6%); renewable energy power 5.6%; nuclear power 1.3 % and imported power 3.1%. By 2030, structure of power resources is changed with increased share of coal fired power (to 51.6%), renewable energy, nuclear power and power import.

Master Plan VII

- Power transmission network: by 2020, the capacity of 500kV stations will be over 55.000MVA, 220kV is 90.000MVA; the total transmission length of 550kV line network is 7.700km, 220kV line is 17.000km, etc
- Total required investment capital for the whole power sector is about VND 929.7 thousand billion for the period 2011-2020 (about US\$ 4.88 billions/year on average), of which 2/3 investment for power generation development and 1/3 for power network development.
- Electricity cost (power generation, transmission and distribution) will increase to 8,5 US cent/kWh by 2020 in which power generation cost is 6 US cent/kWh

Energy consumption

Energy consumption, GDP, GDP per capita

Quốc gia	GDP (Billion USD)	Thu nhập đầu người (\$ 1,000)	Tiêu thụ điện (Billion kWh)	Tỷ lệ GDP/Tiêu thụ điện (USD / kWh)
Iran	105	1.5	99	1.1
Portugal	105	10.5	36	2.9
Israel	110	18.3	34	3.2
Greece	113	10.6	41	2.8
Finland	121	23.3	75	1.6
Venezuela	120	4.9	60	2.0
Thailand	122	1.9	85	1.6
South Africa	126	2.9	163	0.8
Indonesia	153	0.7	73	2.1
Poland	158	4.1	92	1.
Denmark	162	30.5	32	5.1
Norway	162	36.0	109	1.5
Hong Kong's	163	23.5	36	4.5
Saudi Arabia	173	8.5	96	1.8
Asia o	189	23.3	50	3.8
Turkey	200	3.0	93	2.1
Trung bình	143		73	2.4
<i>Vietnam 2020</i>	100 - 200	2	200 - 200	0.5 - 1.0

Source: Pham Duy Hien, 2004

Energy access in Vietnam

Energy consumption and GDP contribution of economic sections

Bảng 1. CƠ CẤU TIÊU THỤ ĐIỆN VÀ CƠ CẤU KINH TẾ NGÀNH

	1990	1995	2000	2005	2008
Cơ cấu sử dụng điện (%)	Energy consumption (%)				
<i>Tổng số</i> Total	100,0	100,0	100,0	100,0	100,0
1. Nông nghiệp Agriculture	9,5	5,6	2,0	1,5F	1,0
2. Công nghiệp Industry	45,0	41,3	40,6	45,4F	50,2
3. Sinh hoạt Residential	32,9	44,1	49,0	47,1F	45,2
4. Tiêu thụ điện khác Others	12,6	9,0	8,4	6,0F	3,6
Cơ cấu GDP (%)	GDP (%)				
<i>Tổng số</i> Total	100,0	100,0	100,0	100,0	100,0
1. Nông nghiệp Agriculture	38,74	27,18	24,53	20,97	21,99
2. Công nghiệp Industry	22,67	28,76	36,73	41,02	39,91
3. Dịch vụ Service	38,59	44,06	38,74	38,01	38,1

Nguồn: Tổng cục thống kê, Tập đoàn điện lực Việt Nam và xử lý của tác giả. F là nội suy

Energy access in Vietnam

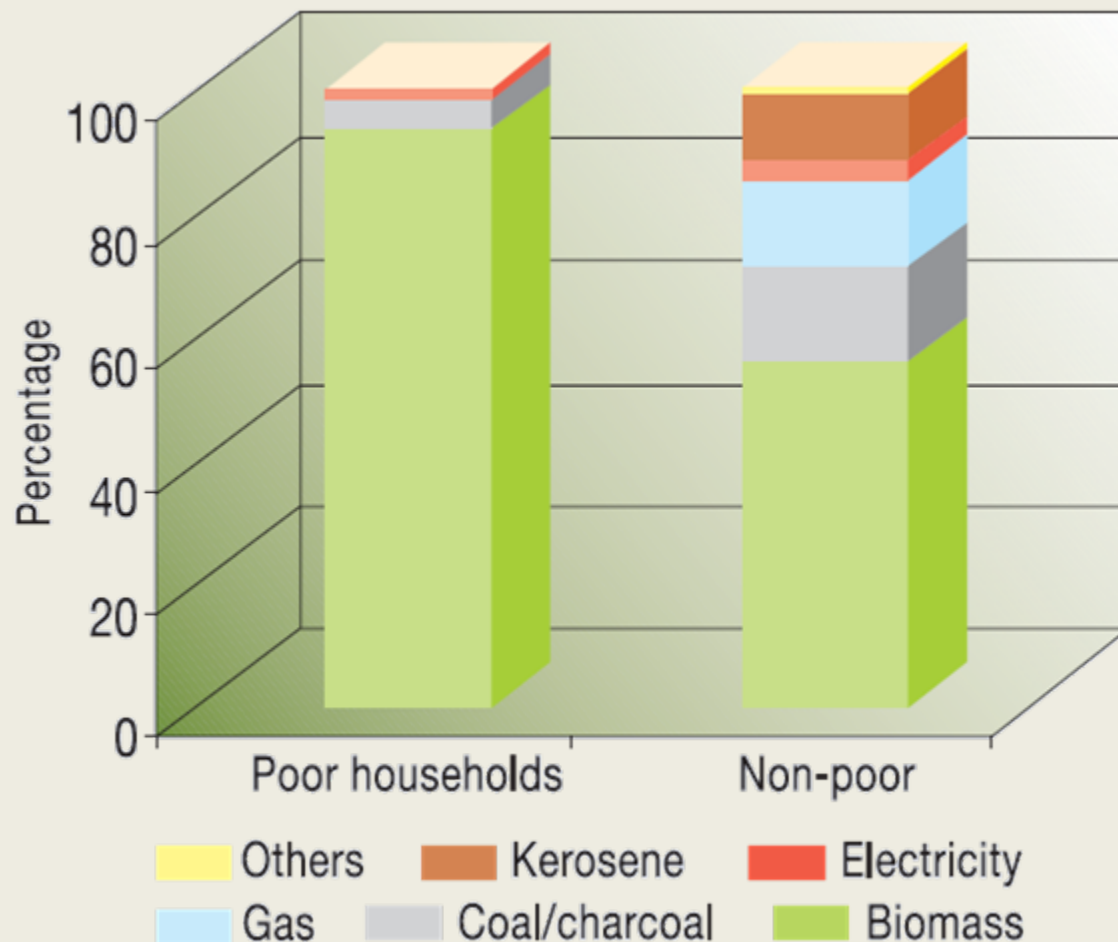
Regional economic structure transfer, 2011-2020

		TDMN phía Bắc		ĐBSH		BTB và DHMT	
		2010	2020	2010	2020	2010	2020
Total	<i>Chuyển dịch cơ cấu (%)</i>	<i>100,0</i>	<i>100,00</i>	<i>100,0</i>	<i>100,00</i>	<i>100,0</i>	<i>100,00</i>
Agriculture	- Nông nghiệp (%)	31,7	30,00	12,8	8,00	24,8	17,00
Industry	- Công nghiệp (%)	30,9	35,00	46,2	48,00	37,8	43,00
Service	- Dịch vụ (%)	37,4	35,00	41,0	44,00	37,4	40,00
		TN		ĐNB		ĐBSCL	
		2010	2020	2010	2020	2010	2020
Total	<i>Chuyển dịch cơ cấu (%)</i>	<i>100,0</i>	<i>100,00</i>	<i>100,0</i>	<i>100,00</i>	<i>100,0</i>	<i>100,00</i>
Agriculture	- Nông nghiệp (%)	50,4	42,00	4,3	3,50	37,5	30,00
Industry	- Công nghiệp (%)	20,3	26,00	68,0	63,00	27,1	32,00
Service	- Dịch vụ (%)	29,3	32,00	27,8	33,50	35,5	38,00

Nguồn: Dự báo của nhóm tác giả

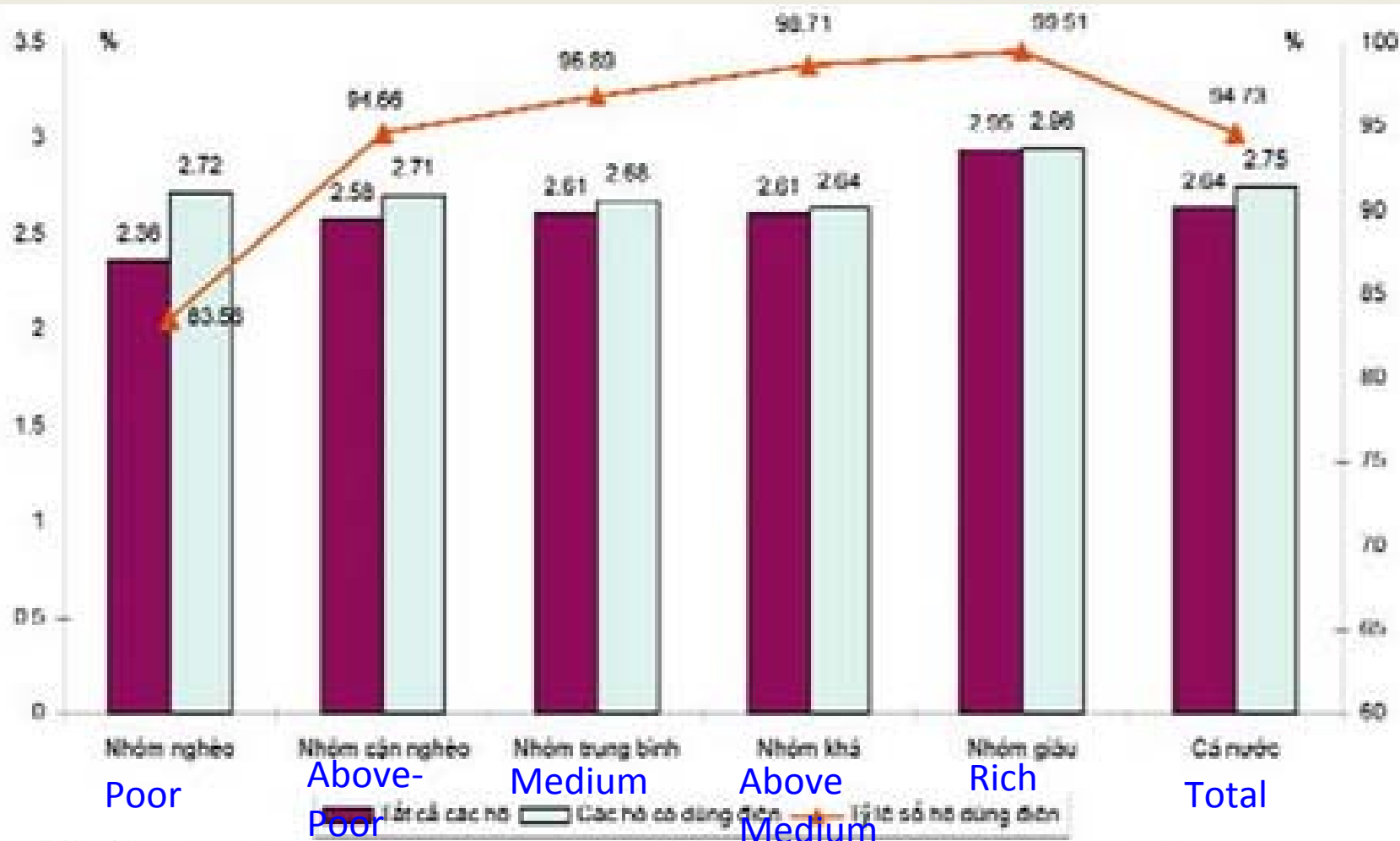
Energy access of Vietnamese people

- Low income people difficultly access to modern fuel, mainly use traditional biomass energy
- Traditional biomass are: firewood, tree leaf, agricultural by-product, etc.



Source: GSO, 2000, cited by UNDP, Energy and Poverty in Vietnam: Challenges and the Way Forward

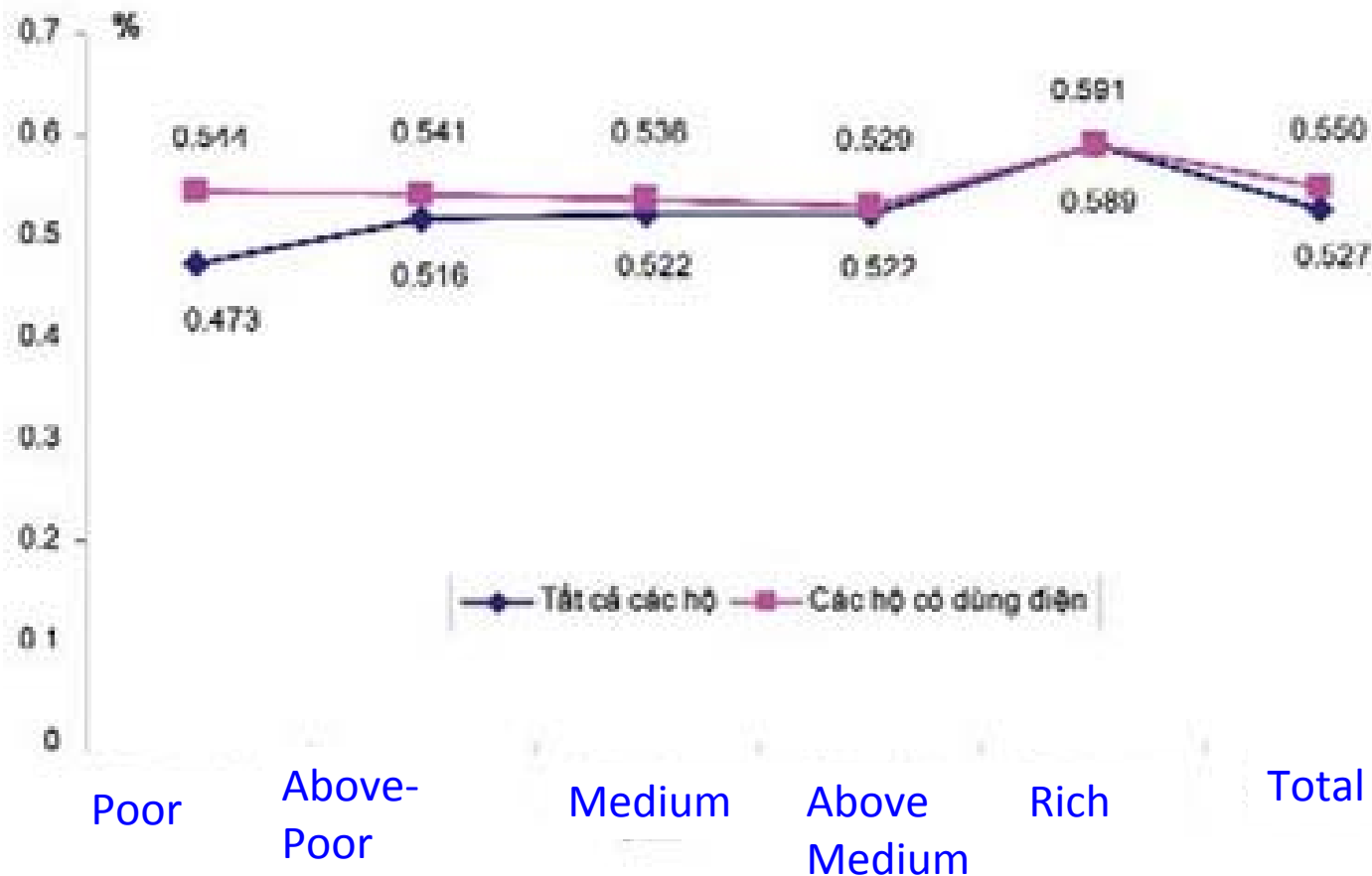
Energy access in Vietnam



Biểu đồ 3: Tỷ lệ chi tiêu cho điện và tỷ lệ số hộ sử dụng điện theo nhóm hộ gia đình

Nguồn: Tính toán của nhóm tác giả từ số liệu điều tra mức sống dân cư VHLSS2006

Energy access in Vietnam



Biểu đồ 4: Sự suy giảm sức mua của các nhóm hộ gia đình do tác động của tăng giá điện
Nguồn: Tính toán của nhóm tác giả từ số liệu điều tra mức sống dân cư VHLSS2006

Good purchasing of family influenced by electricity price

Energy access and MDGs

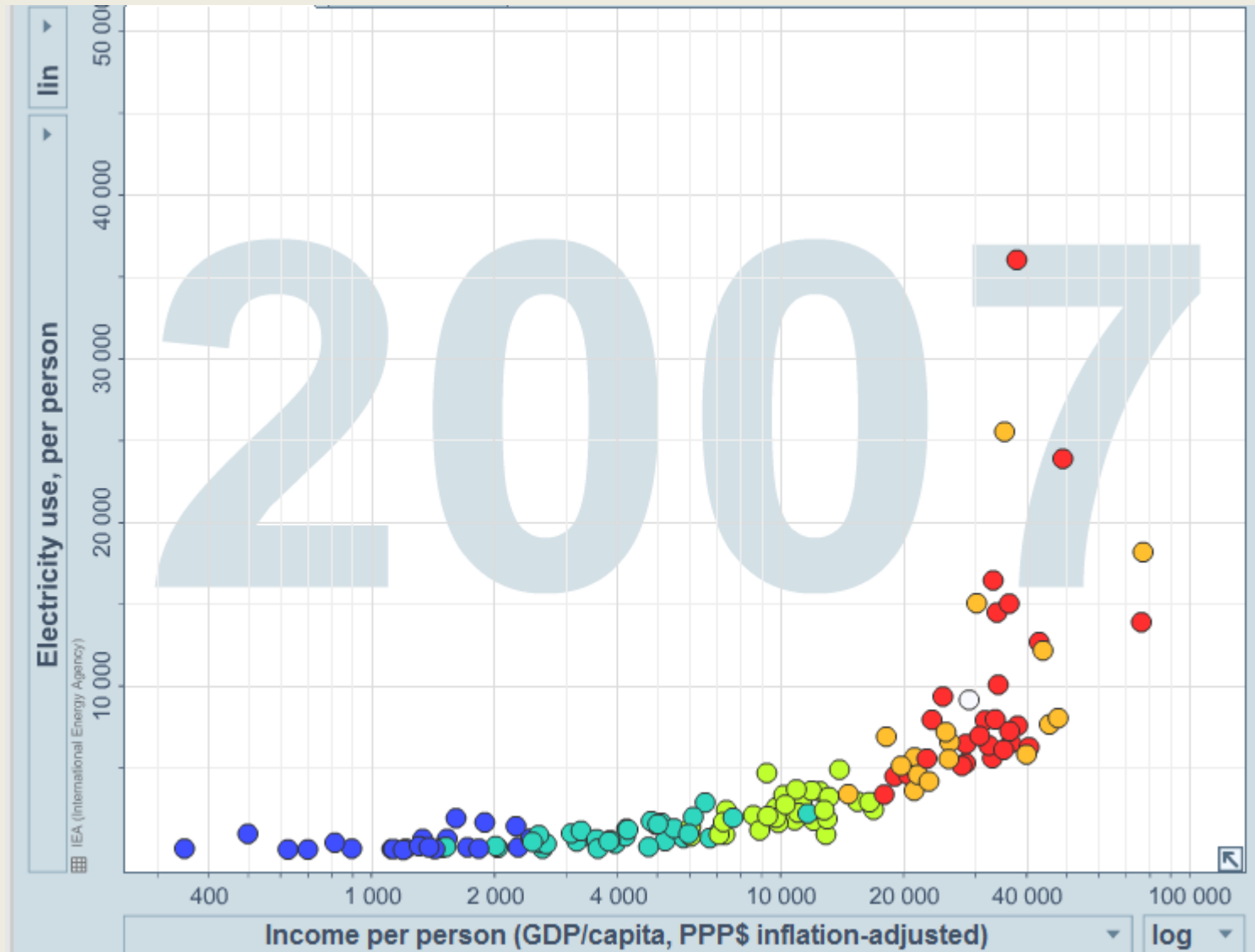


1. Eradicate extreme poverty and hunger

Access to
commercial
energy

- Reduce the large share of household income spent on cooking, lighting, save time spent on household work and other activities
- Water pumping, help providing clean water
- Increase agricultural productivity
- Local energy supplies provide businesses, creating employment

Correlation between electricity use and income per capita



Source: GapMinder, www.bit.ly/qVYpWJ

Energy access and MDGs



2. Universal primary education

Access to
commercial
energy

- Energy can help create a more child friendly environment (access to clean water, sanitation, lighting and space heating/cooling), thus improving attendance at school and reducing drop out rates.
- Lighting permits home study and allows evening classes. Access to energy provides the opportunity to use equipment for teaching
- Electricity enables access to educational media and communications in schools and at home that increase education opportunities and allow distance learning

Energy access and MDGs



3. Promote gender equality and empower women

Access to
commercial
energy

- Availability of modern energy services frees girls' and young women's time from survival activities (gathering firewood, fetching water, cooking inefficiently, crop processing by hand, manual farming work).
- Affordable and reliable energy services offer scope for women's enterprises.

Energy access and MDGs

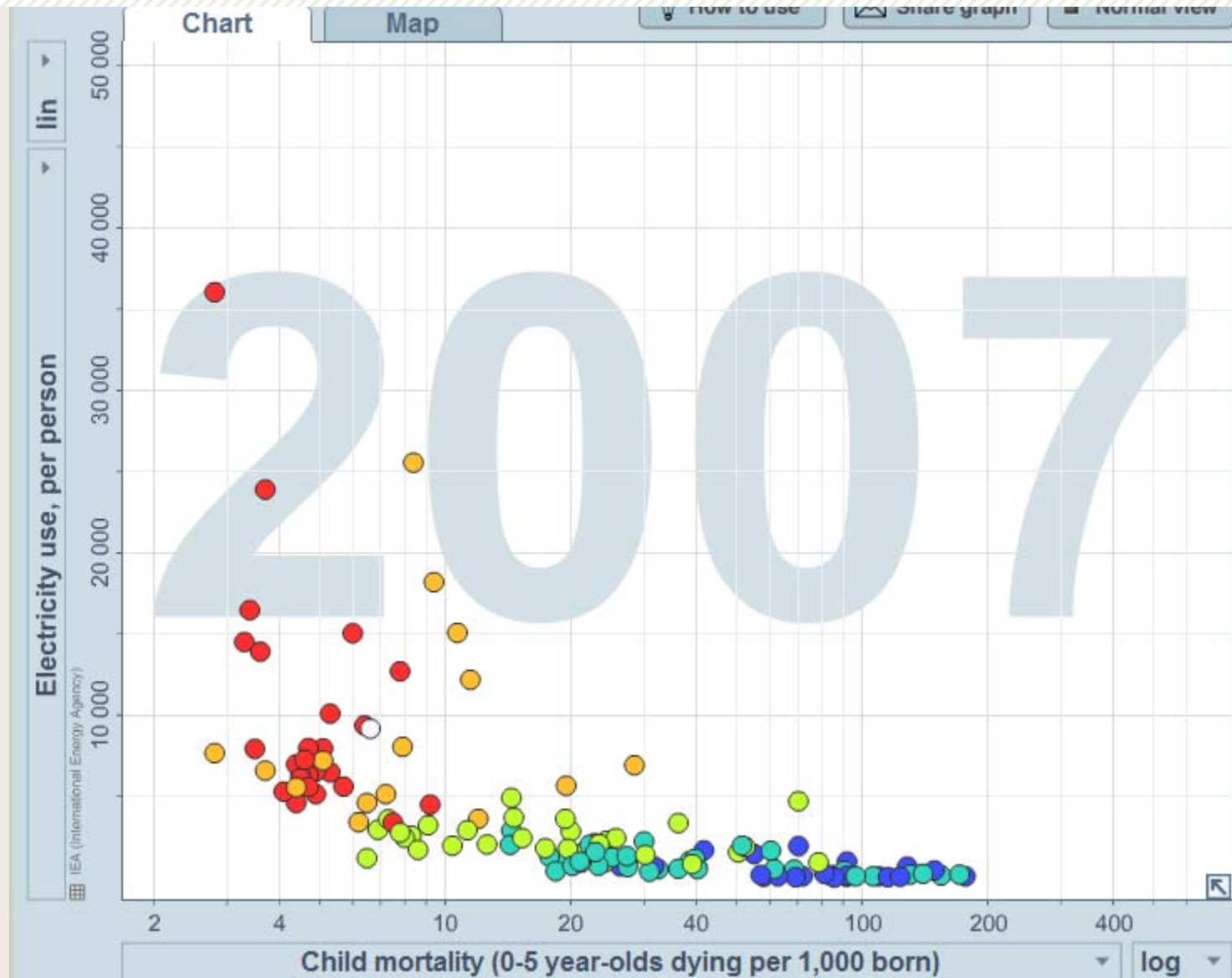


4. Reduce child mortality

Access to
commercial
energy

- Energy access help maintaining a healthy environment despite of the variety of natural environment, reduce disease
- Help improving healthcare, especially for children

Correlation between electricity use and child-mortality



Source: GapMinder, www.bit.ly/rfAWZA

Energy access and MDGs



5. Improve maternal health

Access to
commercial
energy

- Provide access to better medical facilities for maternal care, including medicine refrigeration, equipment sterilization, and operating theatres
- Excessive workload and heavy manual labor (carrying heavy loads of fuel wood and water) may affect a pregnant woman's general health and well being.

Energy access and MDGs



6. Combat HIV/AIDS, malaria and other diseases

Access to
commercial
energy

- Reduce factors that are harmful to human health, help preventing epidemic diseases
- Electricity enables access to health education media through information and communications technologies (ICT).

Energy access and MDGs

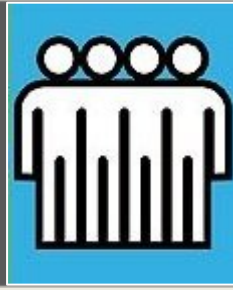


7. Ensure environmental sustainability

Access to
commercial
energy

- Reduces the need to expand quantity of land under cultivation, reducing pressure on ecosystem conversion.
- Traditional fuel use contributes to erosion, reduced soil fertility, and desertification. Fuel substitution, improved efficiency, and energy crops can make exploitation of natural resources more sustainable.
- Using cleaner, more efficient fuels will reduce greenhouse gas emissions, which are a major contributor to climate change
- Energy can be used to purify water or pump clean ground water locally, reducing time spent collecting it and reducing drudgery.

Energy access and MDGs



8. Develop a Global Partnership for Development

Access to
commercial
energy

- Access to energy promote communication among countries and nations
- Using renewable energy is the same point of view of countries on environmental protection

Q&A section

- Power generation and distribution: monopoly by state-owned companies
- High electricity price (to rural area residents)
- Lack of policies for renewable energy
- More education and training on renewable energy needed