KOEAUK
재영한인과학기술자협회
THE KOREAN SCIENTISTS AND ENGINEERS ASSOCIATION IN THE U.K

I-Dream
Inclusive Development Research Association for Mankind

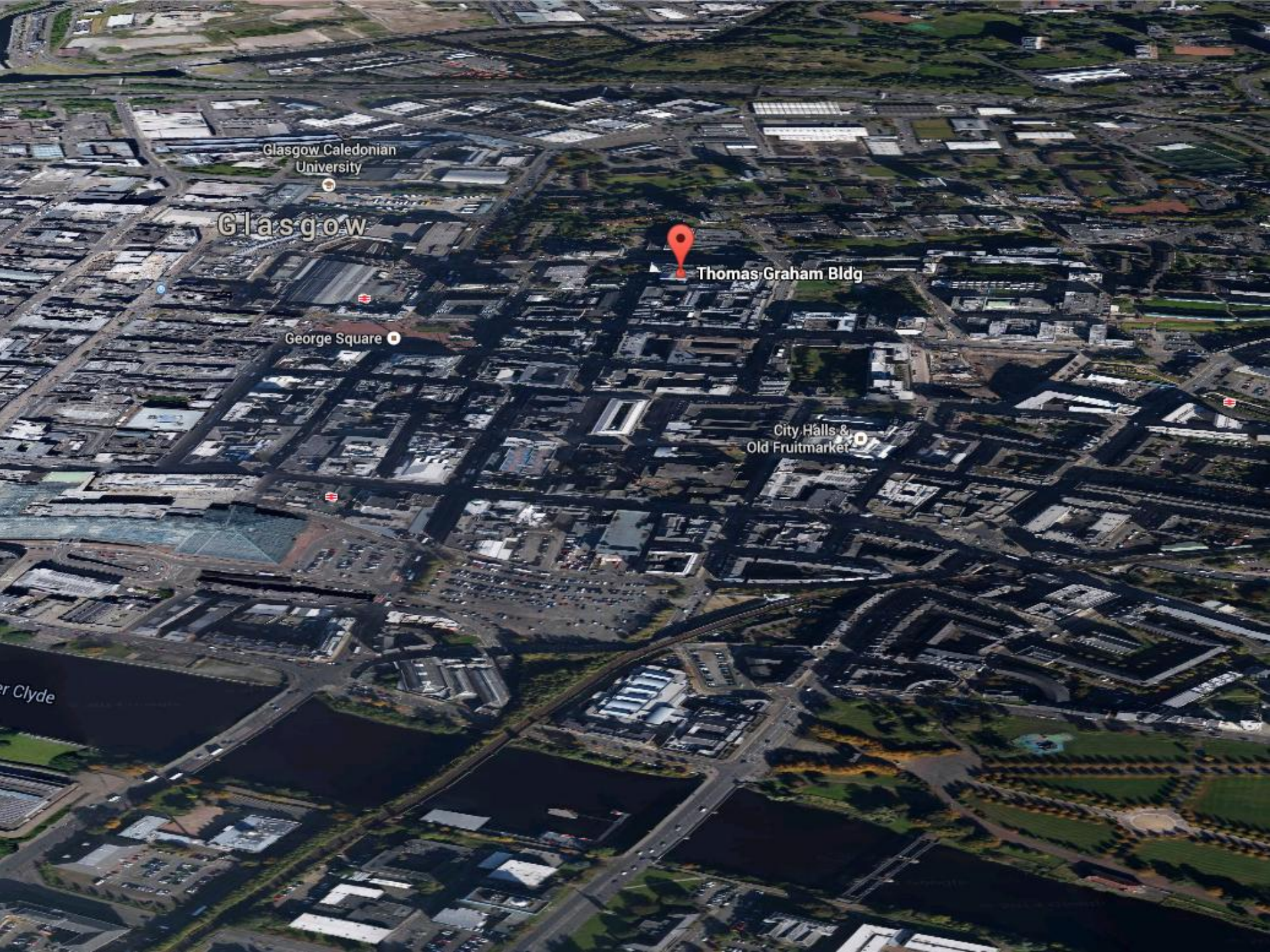
I-DREAM

Inclusive Development Research Association for Mankind

for Energy & Environment in Chad

18.10.2014

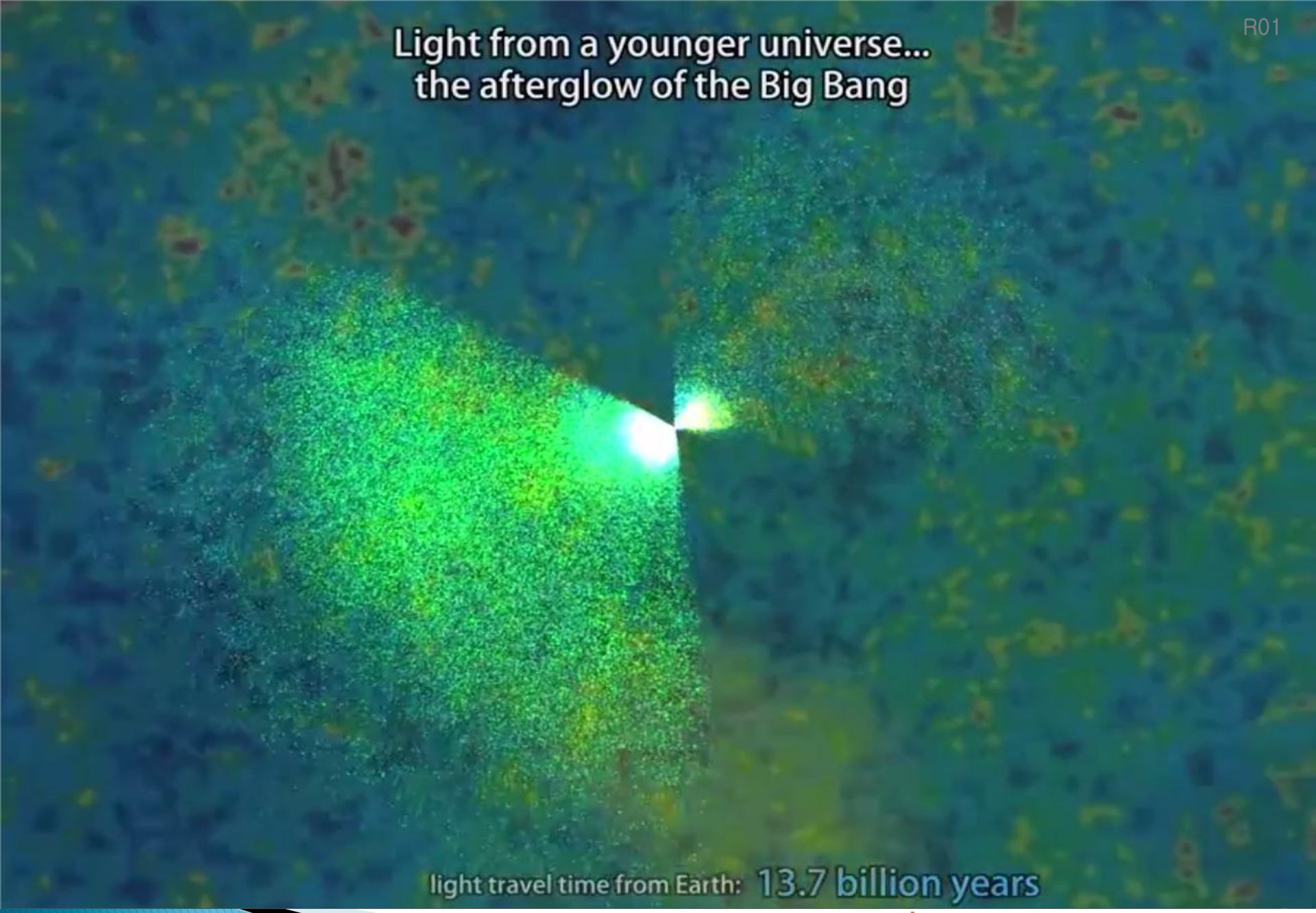
CHOI, Kevin Kyeong-il

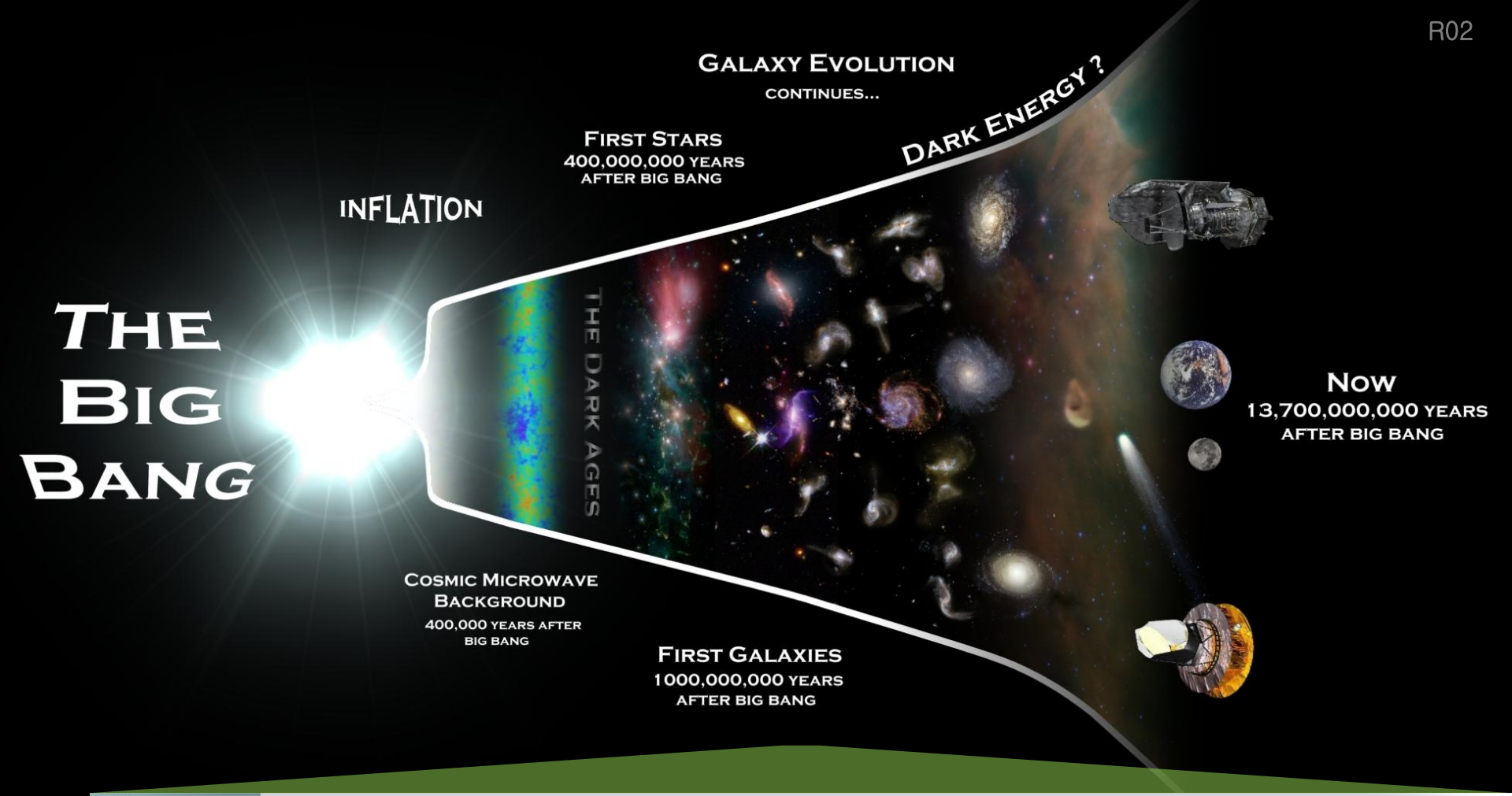

Glasgow Caledonian University
Glasgow
Thomas Graham Bldg
George Square
City Halls & Old Fruitmarket
r Clyde

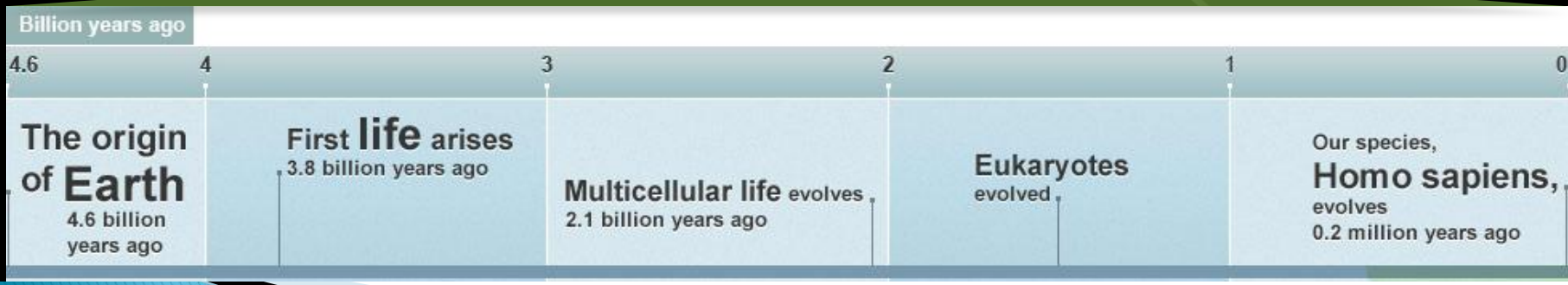

Cathedral St
Cathedral St
Cathedral St
Thomas Graham Bldg
Martha St
Strathclyde University
Student Union
Montrose St

The Milky Way Galaxy

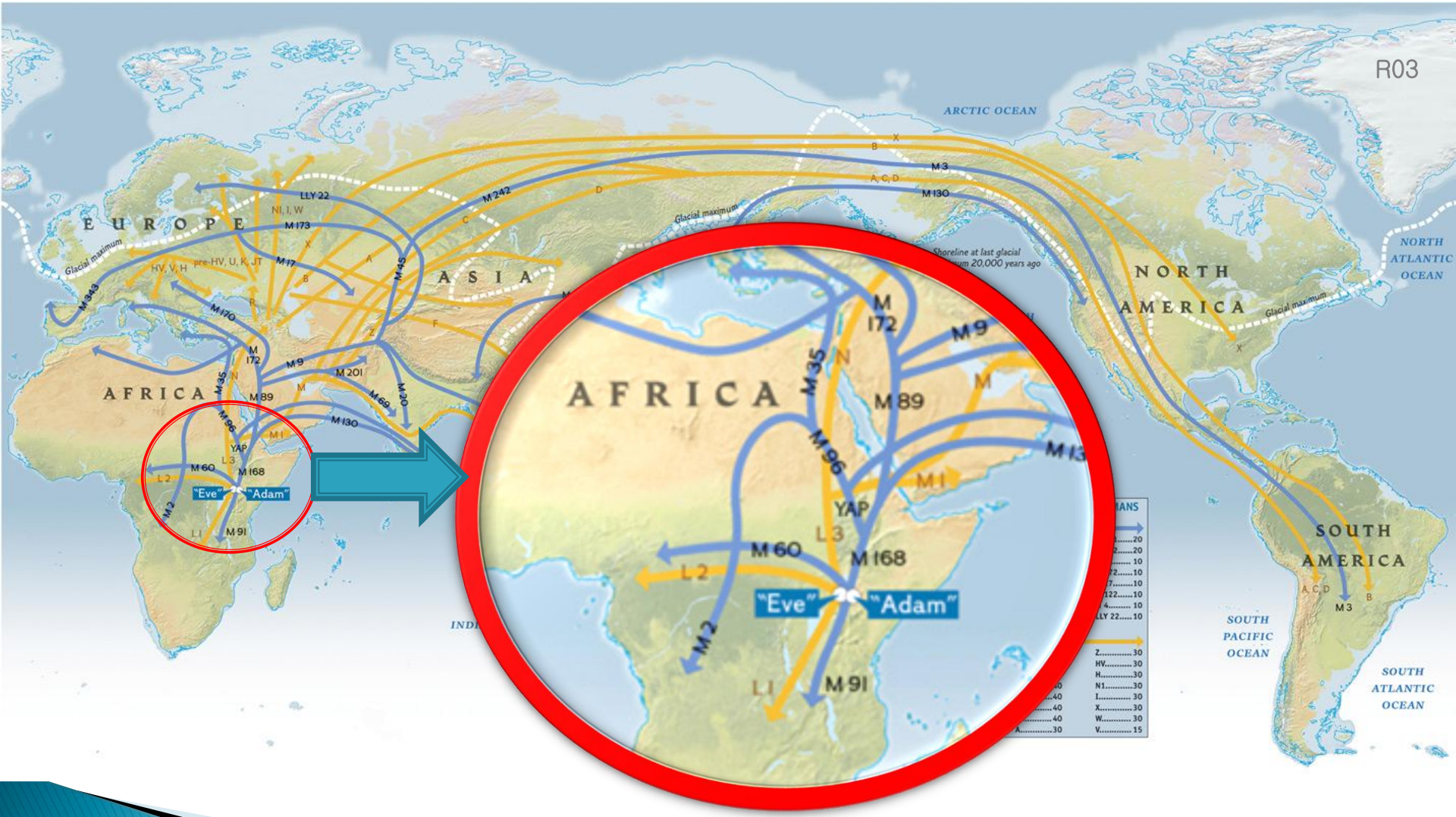



Light from a younger universe...
the afterglow of the Big Bang
light travel time from Earth: 13.7 billion years


GALAXY EVOLUTION
CONTINUES...
DARK ENERGY ?
FIRST STARS
400,000,000 YEARS
AFTER BIG BANG
INFLATION
THE BIG BANG
THE DARK AGES
NOW
13,700,000,000 YEARS
AFTER BIG BANG
COSMIC MICROWAVE
BACKGROUND
400,000 YEARS AFTER
BIG BANG
FIRST GALAXIES
1000,000,000 YEARS
AFTER BIG BANG

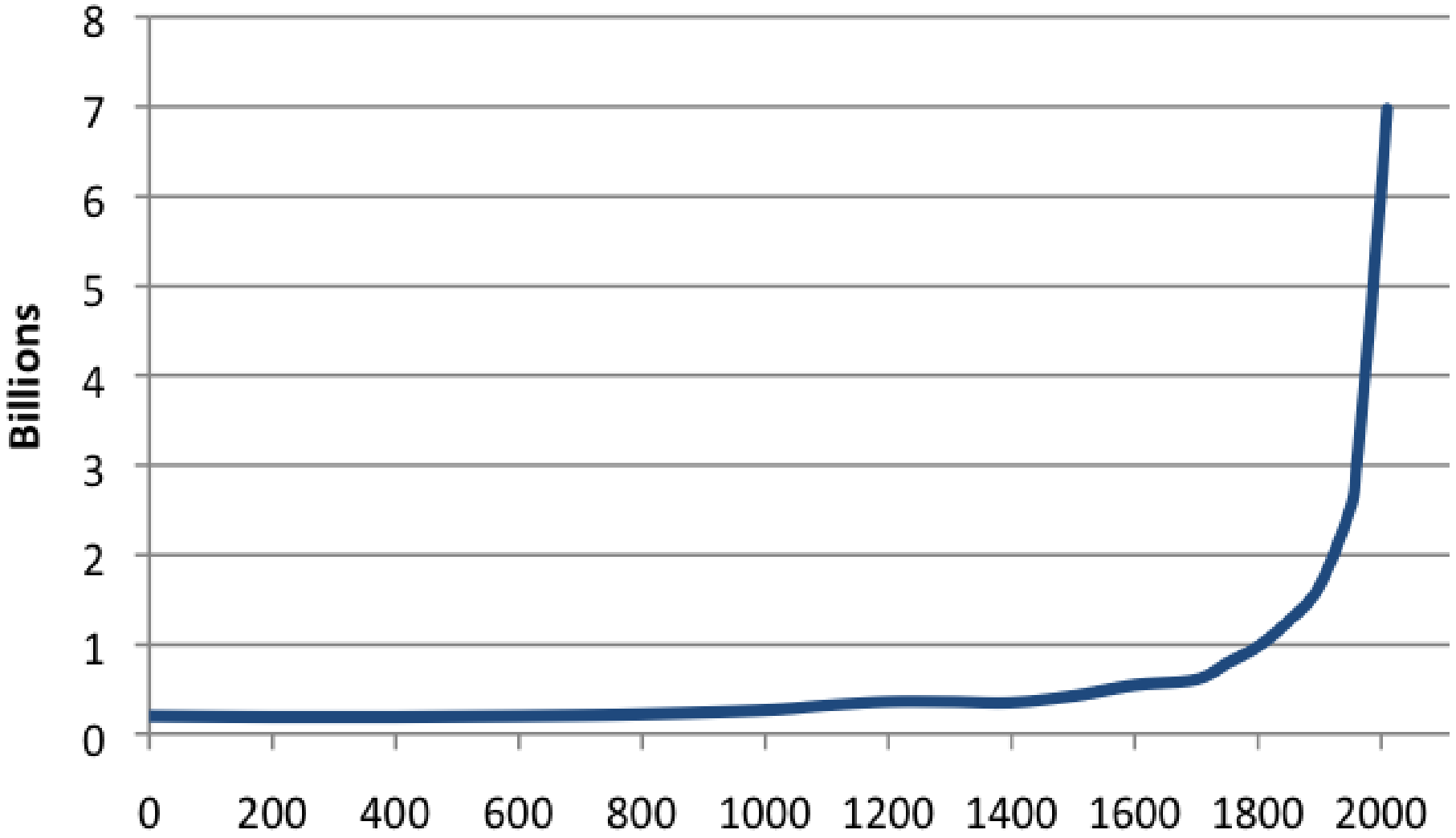

Billion years ago
4.6
4
3
2
1
0
The origin of Earth
4.6 billion years ago
First life arises
3.8 billion years ago
Multicellular life evolves
2.1 billion years ago
Eukaryotes evolved
Our species, Homo sapiens, evolves
0.2 million years ago

Humans from Africa

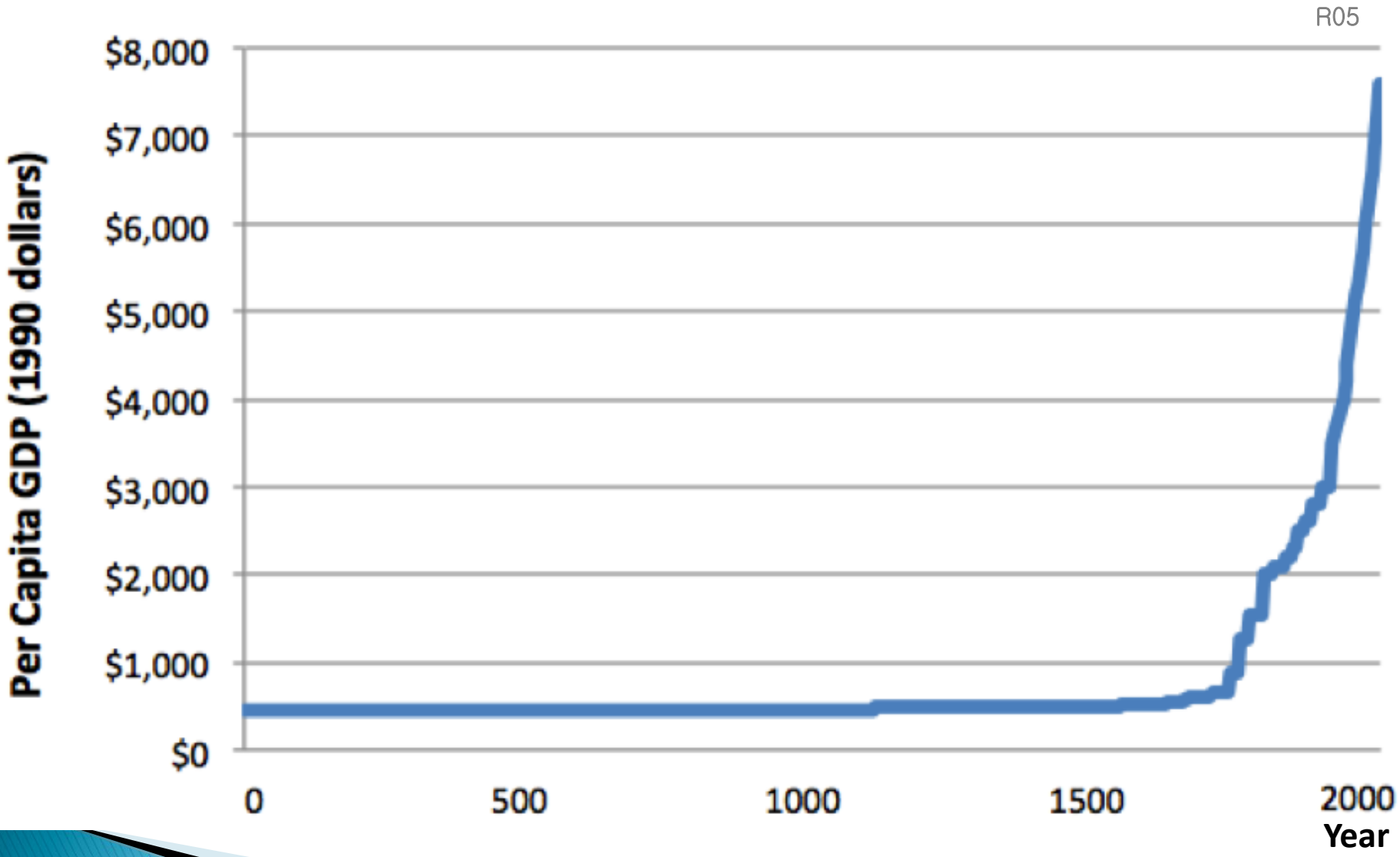


World Population Evolution

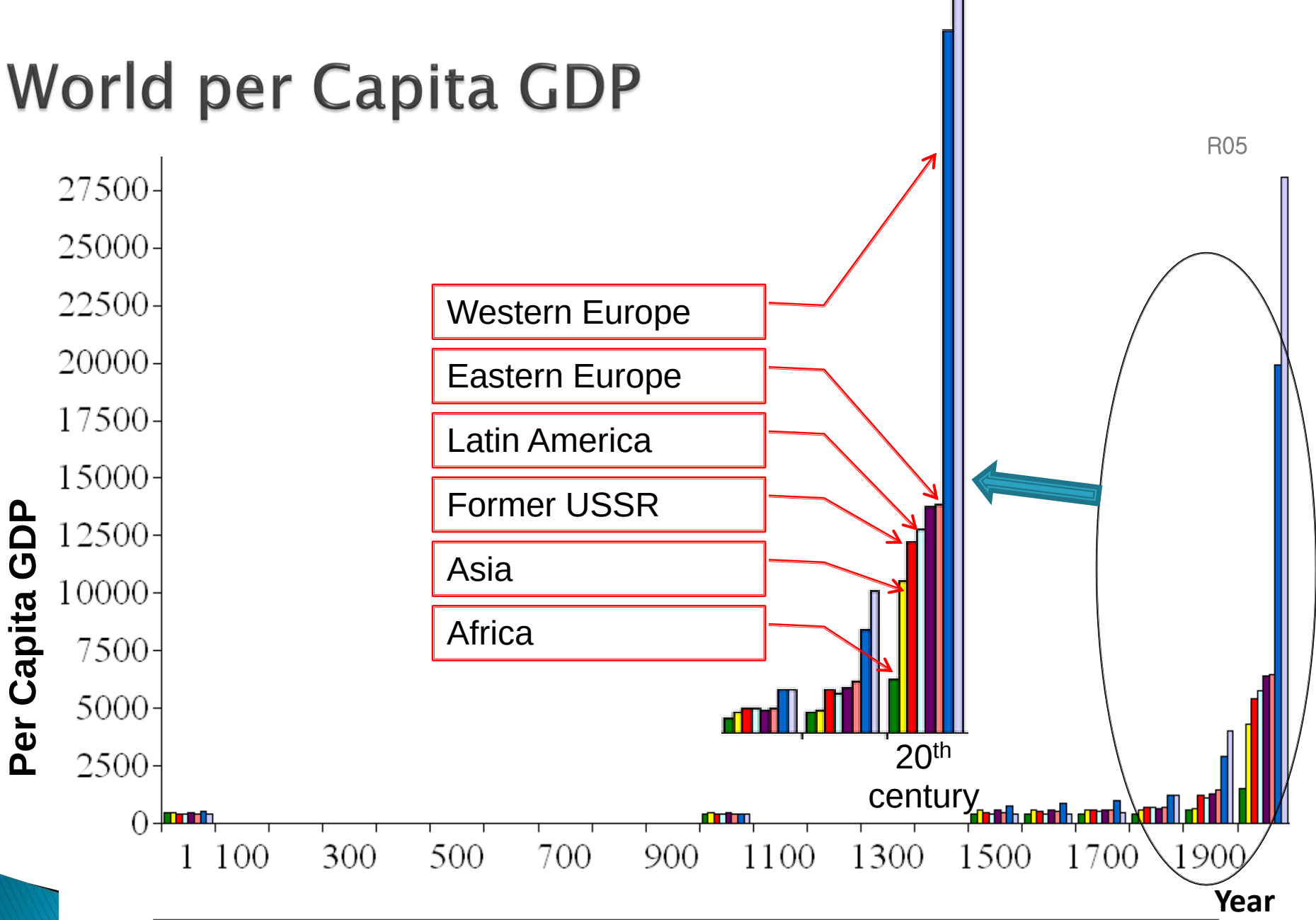
R04



World per Capita GDP

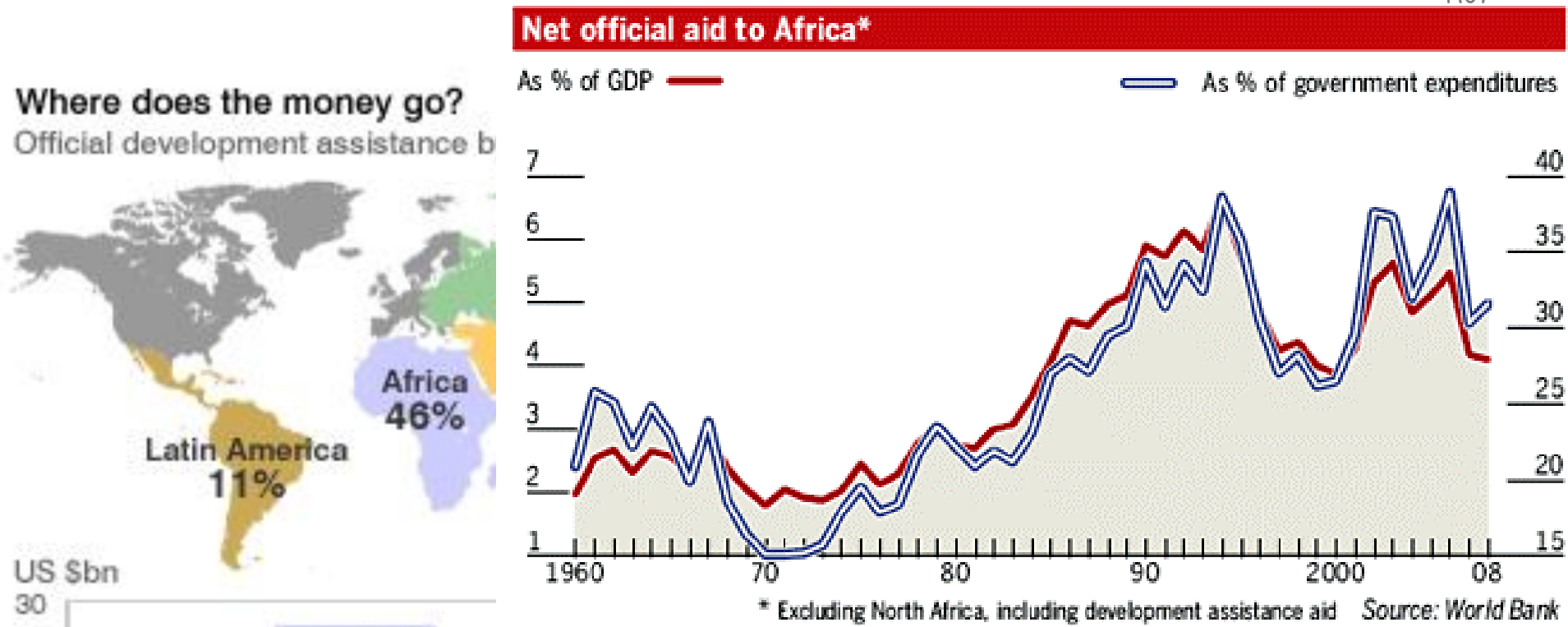


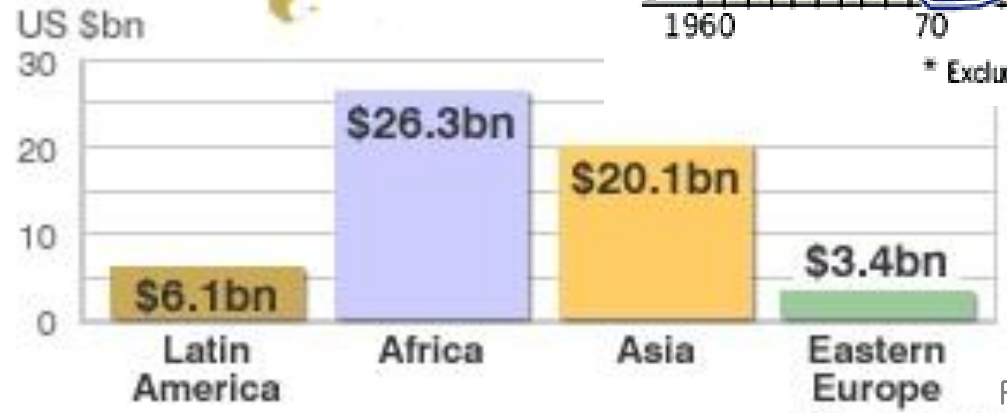
World per Capita GDP



Official Development Assistance (ODA)

R07





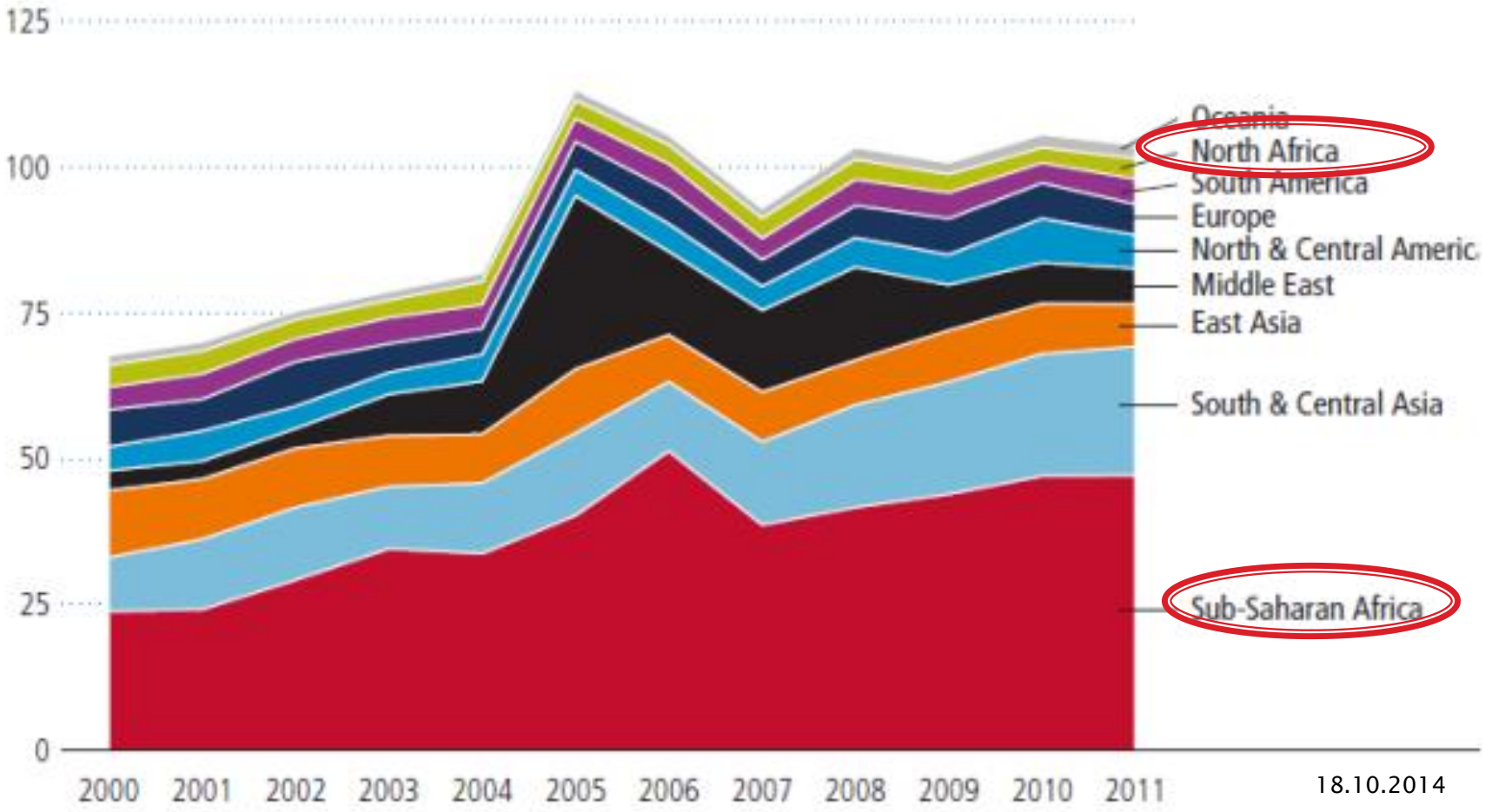
R07

ODA to Africa

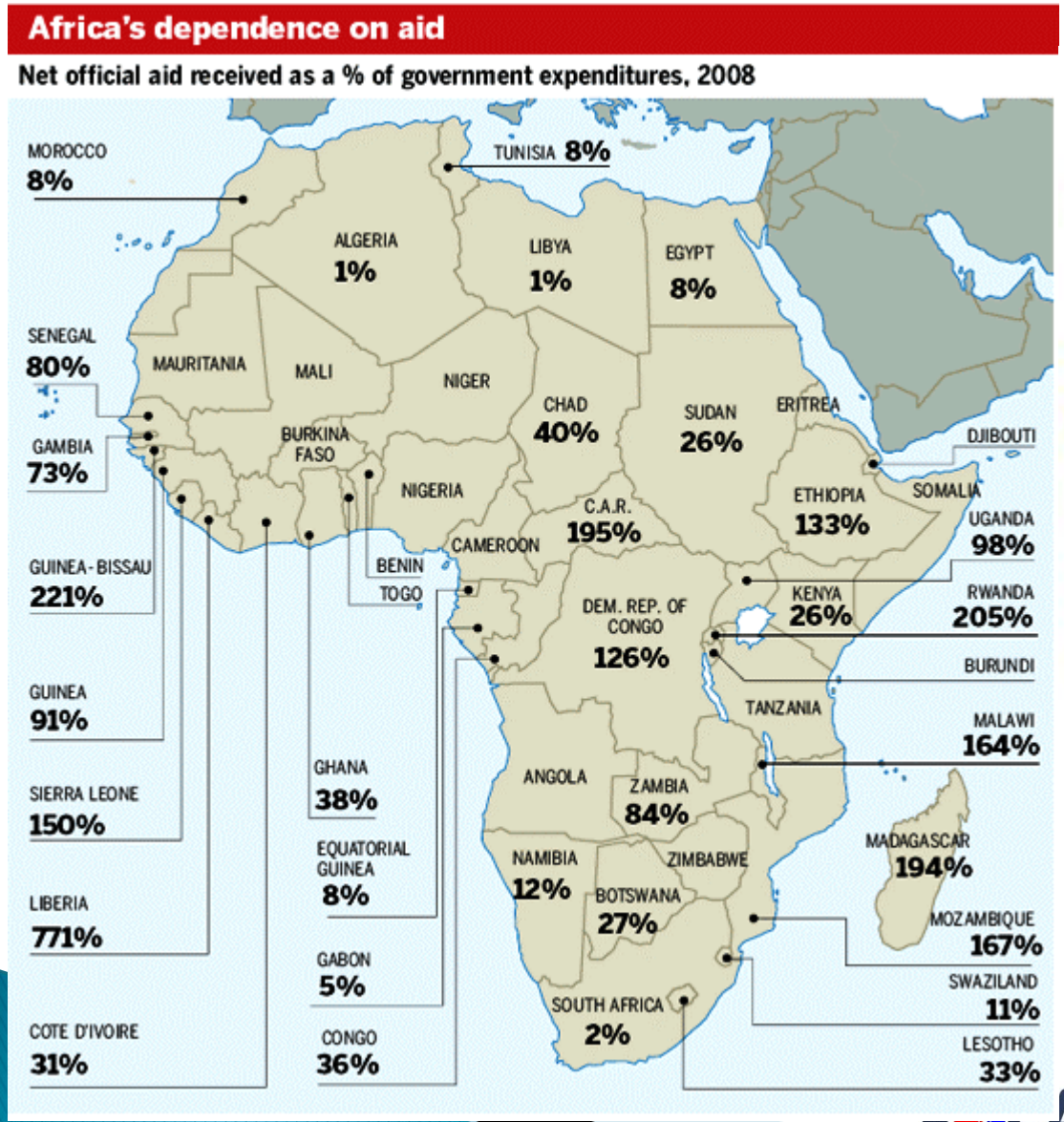
ODA to sub-Saharan Africa and South and Central Asia has risen in recent years; ODA to the Middle East and East Asia has fallen

2011 US$ billions, 2000–2011

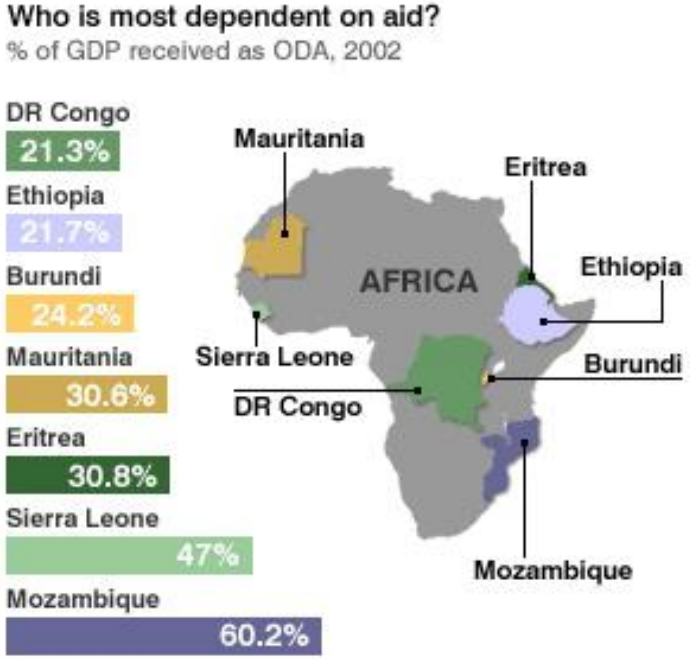
R08



Countries depending on AID



R07



R07

Millennium development goals (MDG)

- MDGs are 8 international development goals
  - Established from Millennium Summit of UN in 2000
  - All 189 UN member states + at least 23 Int'l Organisations committed
- Millennium Development Goals (2000 – 2015)



R11

MDG Progress in 2013

R12

Goals and Targets	Africa		Asia				Oceania	Latin America & the Caribbean	Caucasus & Central Asia
	Northern	Sub-Saharan	Eastern	South-Eastern	Southern	Western			
GOAL 1 | Eradicate extreme poverty and hunger									
Reduce extreme poverty by half	low poverty	very high poverty	moderate poverty*	moderate poverty	very high poverty	low poverty	very high poverty	low poverty	low poverty
Productive and decent employment	large deficit in decent work	very large deficit in decent work	large deficit in decent work	large deficit in decent work	very large deficit in decent work	large deficit in decent work	very large deficit in decent work	moderate deficit in decent work	moderate deficit in decent work
Reduce hunger by half	low hunger	very high hunger	moderate hunger	moderate hunger	high hunger	moderate hunger	moderate hunger	moderate hunger	moderate hunger
GOAL 2 | Achieve universal primary education									
Universal primary schooling	high enrolment	moderate enrolment	high enrolment	high enrolment	high enrolment	high enrolment	—	high enrolment	high enrolment
GOAL 3 | Promote gender equality and empower women									
Equal girls' enrolment in primary school	close to parity	close to parity	close to parity	parity	parity	close to parity	close to parity	parity	parity
Women's share of paid employment	low share	medium share	high share	medium share	low share	low share	medium share	high share	high share
Women's equal representation in national parliaments	low representation	moderate representation	moderate representation	low representation	low representation	low representation	very low representation	moderate representation	low representation
GOAL 4 | Reduce child mortality									
Reduce mortality of under-five-year-olds by two thirds	low mortality	high mortality	low mortality	low mortality	moderate mortality	low mortality	moderate mortality	low mortality	moderate mortality

MDG Progress in 2013

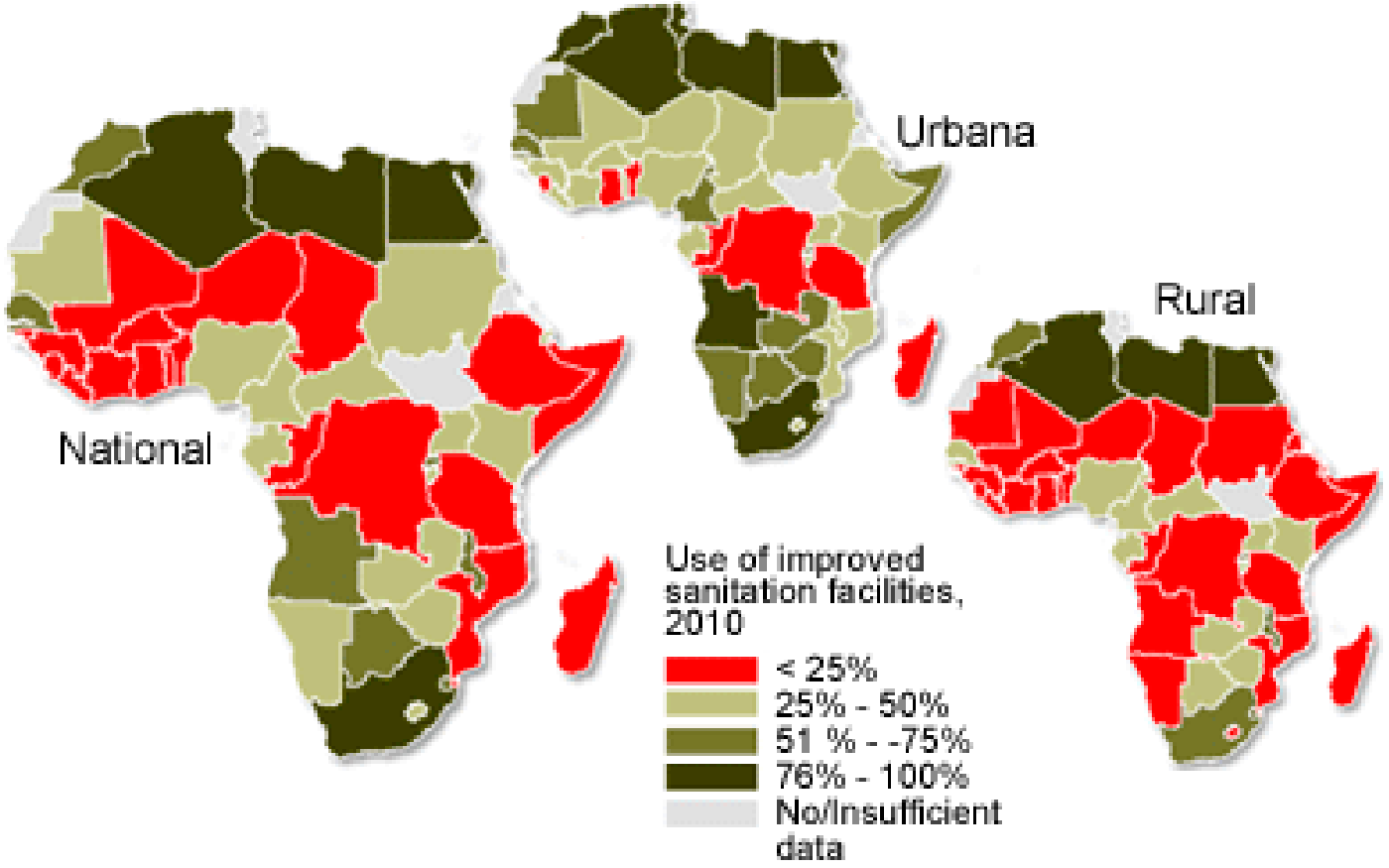
R12

Goals and Targets	Africa		Asia				Oceania	Latin America & the Caribbean	Caucasus & Central Asia
	Northern	Sub-Saharan	Eastern	South-Eastern	Southern	Western			
GOAL 5 | Improve maternal health									
Reduce maternal mortality by three quarters	low mortality	very high mortality	low mortality	moderate mortality	high mortality	low mortality	high mortality	low mortality	low mortality
Access to reproductive health	moderate access	low access	high access	moderate access	moderate access	moderate access	low access	high access	moderate access
GOAL 6 | Combat HIV/AIDS, malaria and other diseases									
Halt and begin to reverse the spread of HIV/AIDS	low incidence	high incidence	low incidence	low incidence	low incidence	low incidence	low incidence	low incidence	intermediate incidence
Halt and reverse the spread of tuberculosis	low mortality	moderate mortality	low mortality	moderate mortality	moderate mortality	low mortality	high mortality	low mortality	moderate mortality
GOAL 7 | Ensure environmental sustainability									
Halve proportion of population without improved drinking water	high coverage	low coverage	high coverage	moderate coverage	high coverage	high coverage	low coverage	high coverage	moderate coverage
Halve proportion of population without sanitation	high coverage	very low coverage	low coverage	low coverage	very low coverage	moderate coverage	very low coverage	moderate coverage	high coverage
Improve the lives of slum-dwellers	moderate proportion of slum-dwellers	very high proportion of slum-dwellers	moderate proportion of slum-dwellers	high proportion of slum-dwellers	high proportion of slum-dwellers	moderate proportion of slum-dwellers	moderate proportion of slum-dwellers	moderate proportion of slum-dwellers	—
GOAL 8 | Develop a global partnership for development									
Internet users	high usage	moderate usage	high usage	high usage	moderate usage	high usage	low usage	high usage	high usage

MDG Progress in 2013

R13

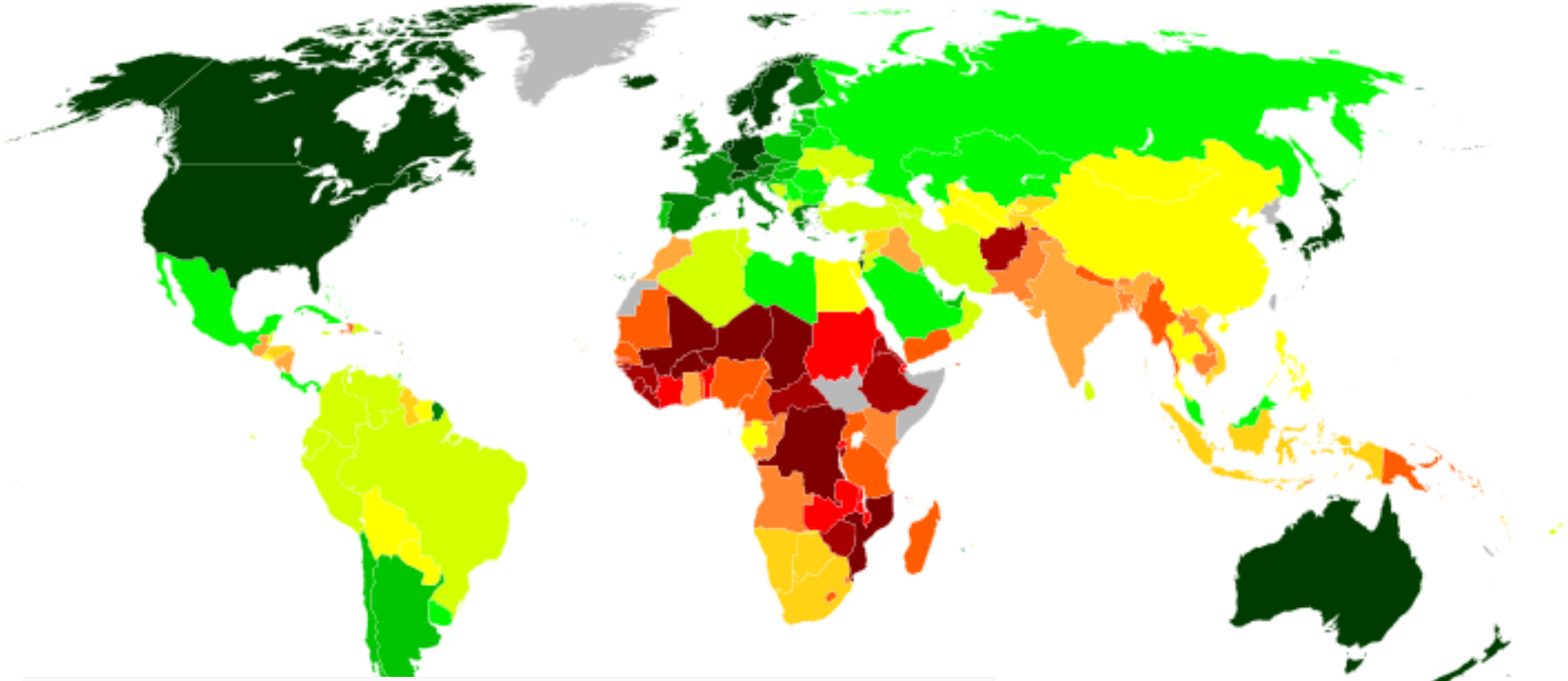
In 18 countries in sub-Saharan Africa a less than a quarter of the population uses and improved sanitation facility



MDG Progress in 2013

- Human Development Index Chart

R14



World map indicating the Human Development Index (based on 2012 data, published on 14 Mar 2013).[1]

0.900 and over	0.650–0.699	0.400–0.449
0.850–0.899	0.600–0.649	0.350–0.399
0.800–0.849	0.550–0.599	0.349 and under
0.750–0.799	0.500–0.549	Data unavailable
0.700–0.749	0.450–0.499	

All human has equal rights

- To seek for their wellbeing*;
  (1) Connected
  (2) Be active
  (3) Take notice
  (4) Keep learning
  (5) Give…

  * Happy Planet Index

R15



So, what to do, we Korean scientists?



From our own compassion

- We would like to exercise **responsible virtues**
  - Avoid blind aid
  - Contribute / Donate Talent, Time and Money as we can afford
  - Become a Good Neighbor, not a good parrain/dictator…

Love is to GIVE and to FORGIVE…

Selfishness is to GET and to FORGET…

Let's give them hope & smile



Organisations for the Appropriate Technology

- 나눔과 기술 : http://www. stiweb.org
- 굿네이버스: http://www.goodneighbors.kr
- KickStart : http://www. kickstart.org
- International Development Enterprise : http://www. ideorg.org
- Vestergaard Frandsen : http://www. vestergaard -frandsen .com
- IBCD : http://www. Ibcd.net
- 대안기술센터 : http://www. atcenter.org
- Centre for Appropriate Technology : http://www. icat.org .au
- The National Center for Appropriate Technology: http://www. ncat.org
- 국경없는 공학자 : http://www. ewb-usa.org, http://www. ewb-korea.org
- Antenna France: http://antenna-france.org

- And I-DREAM 유럽 한인들의 모임 동반성장 연구회

I-DREAM 동반성장 연구회

- Inclusive Development Research Association for Mankind
  - Afin d'améliorer la qualité de vie et d'augmenter l'indépendance économique des communautés régionales défavorisées dans le monde, l'association étudie et met au point des forums pour promouvoir l'échange des savoirs-faire, des ressources et des techniques des membres associés et les partenaires d'extérieurs.
  - 세계 각처 지역 공동체의 경제적 자립과 삶의 질 향상을 위하여 협회의 회원들과 외부 파트너 기관들이 가지고 있는 기술, 정보, 자원을 결집할 수 있는 장을 창출한다.

I-DREAM 동반성장 연구회

- Administration Council

Name	Address	Organisation
Ms KANG, Myung-Joo	Vienna, Austria	Appropriate Technology Research Center
Mr KIM, Dowon	Cambridge, UK	Sustainable Industry Consulting
Mr KIM, Byung Yoon	Marseille, France	ITER
Ms KIM, Eunjung	Pars, France	CNRS LAMSADE
Mr PARK, Wonsun	Kiel, Germany	IFM-GEOMAR
Mr JI, Hyo Chul	Frankfurt, Germany	JI Solution
Mr CHOI, Kevin Kyeong-il	Paris, France	Eutelsat S.A.
Ms CHOI, Youngok	Uxbridge, UK	Brunel University

- Members over Europe and in Korea

I-DREAM : Activities so far…

Date	Event	Place
07.2013	Inclusive Development Session	EKC 2013, Brighton UK
10.2013	Inclusive Development Session	VeKNI 40th Anniversary GA, Essen Germany
11.2013	Inclusive Development Keynote speech	KOSEAA GA, Vienna Austria
12.2013	Visit to Good Neighbors Int'l in Chad	N'Djamena, Chad
05.2014	Children Book Donation Campaign in Paris *(sent 14 boxes (250 kg) to GNI Chad)*	Paris, France
06.2014	Paris Seminar on Inclusive Development	OECD Korean Embassy, Paris, France
07.2014	Inclusive Development Session & Workshop Visit to GrAT on 26.07.2014	EKC 2014, Vienna Austria
10.2014	Presentation of Inclusive Development Conference for Energy and Environment in Chad 2015	KSEAUK 40th Anniversary GA, E&E Group Creation Ceremony, Glasgow, UK

I-DREAM : Activities so far…











Compassion and Virtue

for African Dreams…

ANTENNA
Research for progress

Spirulina :
a sustainable solution against malnutrition and a development tool







I-DREAM : Activities so far…

EU-KOREA CO



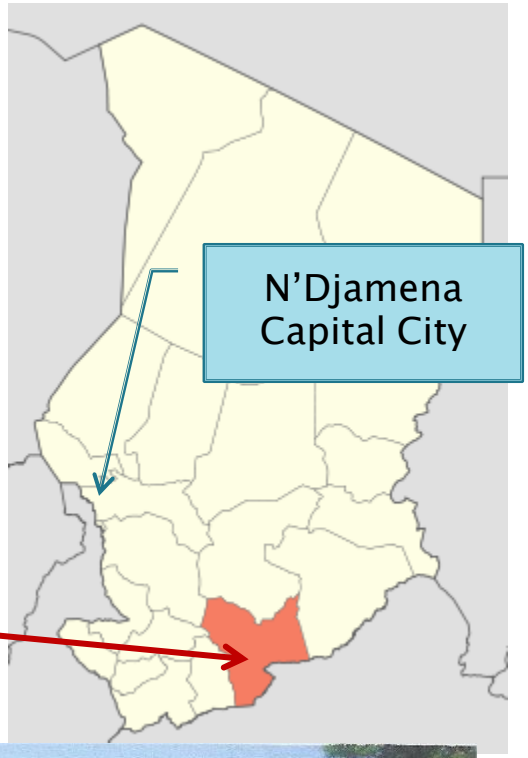
I-DREAM : Future Projects

- Upcoming events
  - **Inclusive Development Conference in Chad 2015**
    - venue: University of Sarh, Chad
    - date: 9 Feb. ~ 13 Feb. 2015 (TBC)
    - Satellite events:
      - Science Education Seminar in Chad
      - Appropriate Technology Exhibition
    - All are welcome, in particular, **Energy and Environment experts**

- New Projects being consolidated:
  - Regular and periodic **Book donation** to Chad (and to other communities)
  - **Scientific Education Program Development** for Africa
  - **And many more from your own ideas !!!**

Inclusive Development Conference

- Conference Info
  - venue: University of Sarh, Chad
  - date: 9 Feb. ~ 13 Feb. 2015
  - Satellite events:
    - Science Education Seminar in Chad
    - Appropriate Technology Exhibition
- Location
  - University of Sarh – Institute of Agronomic and Environmental Sciences





Inclusive Development Conference

- Audience:
  - University lecturers, students in Chad and neighboring countries
  - Local school teachers

- Expected Conference Lectures / Presentations
  - All areas of Science and Engineering Trend in Europe
  - Renewable Energy and its associated topics for African countries
  - Sustainable Development – Housing, Agriculture, Educations, ..
  - Field tests of any viable European Appropriate Technologies

- Science Education Seminar
  - Specific and personal science education programs / speaker
  - Destinated for giving an easy to explain science experiences & its principal background theory in science
  - Follow on program to be developed in time…

Inclusive Development Conference

- Université de Sarh



Inclusive Development Conference

UNIVERSITE DE SARH



Contacts :
Recteur : (+235 6621 27 11/(+235); mail : yakoussou@yahoo.fr
Vice-Recteur ens: (+235) 6628 14 14 ; mail : alimah@yahoo.fr
Vice-Recteur recherche (+235) 6629 6570 ; mail : @yahoo.fr
Secrétaire Général : (+235) 6249 33 44 ; mail : mohagir2003@yahoo.fr

Inclusive Development Conference

- Sarh Info
  - 3rd largest city of Chad (after N'Djamena & Moundou)
  - Coton industry center of central Africa.
  - Very mild to hot temperature

Climate data for Sarh [hide]													
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	37 (98)	38 (101)	40 (104)	39 (102)	36 (97)	33 (92)	31 (88)	30 (86)	31 (88)	33 (92)	36 (97)	37 (98)	35.1 (95.3)
Average low °C (°F)	17 (62)	18 (65)	22 (71)	24 (76)	24 (75)	23 (73)	22 (71)	21 (70)	22 (71)	22 (71)	19 (67)	17 (62)	20.9 (69.5)
Precipitation cm (inches)	0 (0)	0 (0)	0.8 (0.3)	3.8 (1.5)	10.4 (4.1)	14.2 (5.6)	22.6 (8.9)	31 (12.2)	22.6 (8.9)	8.1 (3.2)	0.3 (0.1)	0 (0)	113.8 (44.8)
Source: Weatherbase [3]													

  - IUSAES – Institut Universitaire des Sciences Agronomiques et de l'Environnement de Sarh, became University of Sarh in 2010
  - ISMEA – Institute of Science of Management and Economic Applied

Science Education Program

- Project of I-DREAM
  - 현지상황을 고려하여 실험을 위한 재료가 현지에서 구하기 쉽거나 저렴하게 제작 가능할 것.
  - 하나의 아이템에서 다양한 수준의 교육이 가능하면 좋겠다.
    - 예: 개구리 해부: 초등생용, 중학생용, 고등학생용..

- One project per Member
  - **개구리 해부** 해부해보기, 신체의 내부, 장기의 기능 등을 설명함
  - **발전기 만들기**
  - **종이컵 통신** 초급 - 간단한 종이컵 통신실험, 고급 - 통신의 원리…
  - **정수기** 만들어보기, 모세관 현상과 흡착현상 설명
  - **고무동력 자동차** 제작, 엔진의 원리 설명
  - **돋보기로 불붙이기** 광학의 기초 설명
  - **전지 만들기** 산성 물질을 이용한 전지 만들기, 전기 발생의 원리, 과일 이용?
  - **허브를 이용한 항균** 증류/추출법을 이용한 허브 성분 추출. 곰팡이 발생 비교, 항균 원리 이해
  - **비누 만들기** 간단한 화학실험
  - **비행물체 만들기** 종이나 나무를 이용해 가장 멀리 나가는 물체 만들기, 비행기 원리
  - **오리가미 (종이접기)** 3차원 설명
  - **입방체 만들기** 4면체, 6면체, 12면체, 등의 평면도로 부터 입방체 만들기, 혹은 그 역과정으로 공간적 사고 설명
  - **해시계 / 위도측정** 해시계의 원리, 위도 측정의 원리 등을 설명함
  - **물 냉장고** 기화의 원리, 냉장고의 원리, 직접 현지 제작
  - **다리 만들기** 종이, 나무 등을 이용해 효율적인 다리 제작, 무게를 감당할 수 있는 구조물의 이해

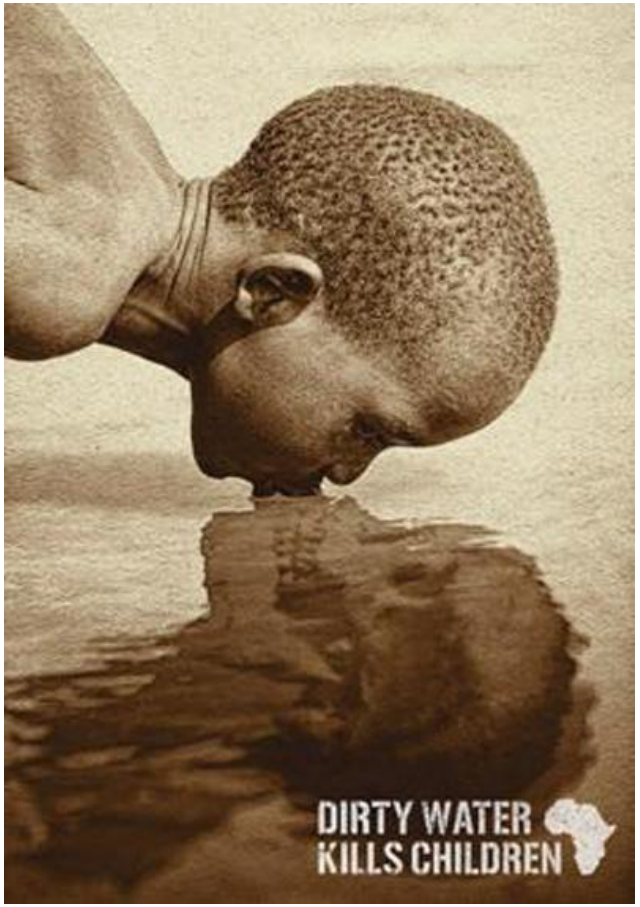
I-DREAM welcomes you…

- Visit our web site: http://idream4all.blogspot.com
- Membership is open to all who share the same compassion and virtue for mankind
- Thank you for your kind attention and donation



Appropriate Technology

R20



LifeStraw





Nam Seung Hoon
Grand Prize
11th Tri-annual International Political Poster Competition

Appropriate Technology



Appropriate Technology

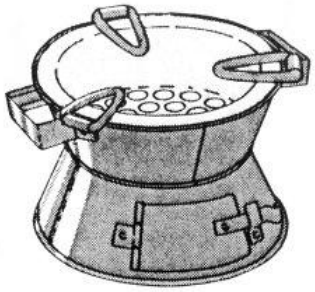
R20

Q Drum





Kenya Ceramic Jiko



Kenya Ceramic Jiko





References

Ref.	Source Description
R01	Snapshot from "The Known Universe", developed by American Museum of Natural History in partnerships with Rubin Museum of Art
R02	"The Big Bang", Rhys Taylor, Cardiff University, http://planck.cf.ac.uk/science/timeline/universe
R03	Human Evolution Album https://www.facebook.com/photo.php?fbid=525394910808822&set=a.475013075847006.128897.427481527266828&type=1&permPage=1
R04	McEvedy & Jones, “Atlas of World History”, Penguin Reference Books andWikipedia-World Population, http://peakoil.com/consumption/what-would-it-take-to-get-to-a-steady-state-economy
R05	Angus Maddison, World Population, GDP and Per Capita GDP, http://www.ggdc.net/maddison/Historical_Statistics/horizontal-file_03-2007.xls
R07	P.a.p-Blog / Human Rights Etc. http://filipspagnoli.wordpress.com/tag/international-development-aid/
R08	ODA Factsheet, iDevelopment Initiatives, http://devinit.org/factsheet/factsheet-oda/
R09	GNI per capita, Atlas method, The World Bank, http://data.worldbank.org/indicator/NY.GNP.PCAP.CD
R10	US Data.gov https://explore.data.gov/Foreign-Commerce-and-Aid/U-S-Overseas-Loans-and-Grants-Greenbook-/5gah-bvex
R11	KoFID, Issue Brief vol.10 - 국제개발협력의 관점에서 바라본 Rio+20의 결과와 전망, p09
R12	UN, MDG - 2013 Progress Chart
R13	International Decade for Action "Water for Life" 2005-2015, http://www.un.org/waterforlifedecade/africa.shtml
R14	Human Development Report, http://en.wikipedia.org/wiki/Human_Development_Report
R15	Nic Marks - The Happy Planet Index @TED http://www.ted.com/talks/lang/en/nic_marks_the_happy_planet_index.html
R20	장수영, Zeitgeist Appropriate Technology and STI case @EKC2013, Brighton, UK