

Libre Knowledge

and

Opportunity

Kim Tucker



(managed by the CISR in South Africa)

presented at



42nd Regional
Conference

Overview

- Why are we here? - Inspirations
- Making an Impact – why change the world?
 - What are the big issues?
- What kind of world do we want?
 - Who decides?
 - barriers to participation
- What knowledge is needed?
 - Collective knowledge. Libre Knowledge.



Why are we in this field?

A series of inspirations and questions ...

When we were young we wanted to

Make an impact!

Change the world!



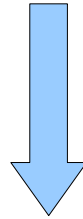
through what career?

- arts?
- sciences?
- medicine?
- social sciences?
- education?

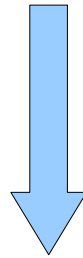
For many people in Africa

to get **any** job is a challenge

access to education



Knowledge



choices

(degrees of freedom
and quality of life)

Inspirations

This is just one thread
during these few days together
ask each other about the
insprations
which led you to where you are now
and your most positive learning experiences

Earth Summit

Rio 1992

One of the choices along the road I travelled:

Conservation Biology

... an environmental mission

Save the planet and the diversity of life upon it

Some of the “take home” messages

- Sustainable Development is
 - "development that meets the needs of the present without compromising the ability of future generations to meet their own needs"
(Brundtland Commission) [Long Term view]
 - Consider simultaneously all three of Economic, Social **and** Environmental (biophysical) aspects

Think Global, Act Local

The importance of Biodiversity

Bluefin Trevally and Coral
<http://flickr.com/photos/rling/438035973/>
CC BY SA Richard Ling



Welwitschia plant
<http://flickr.com/photos/squeakymarmot/134394329/>
CC BY - squeakymarmot



Panda
After:
<http://flickr.com/photos/myglesias/418914949/>
CC BY SA myglesias



Wildebeest
<http://flickr.com/photos/angela7/294703313/>
CC BY wayfaring stranger (Angela7)



Pair of rhinos
<http://flickr.com/photos/mister-e/393128281/>
CC BY - mister-e



Dolphin Crest
<http://flickr.com/photos/jurvetson/336157/>
CC BY jurvetson



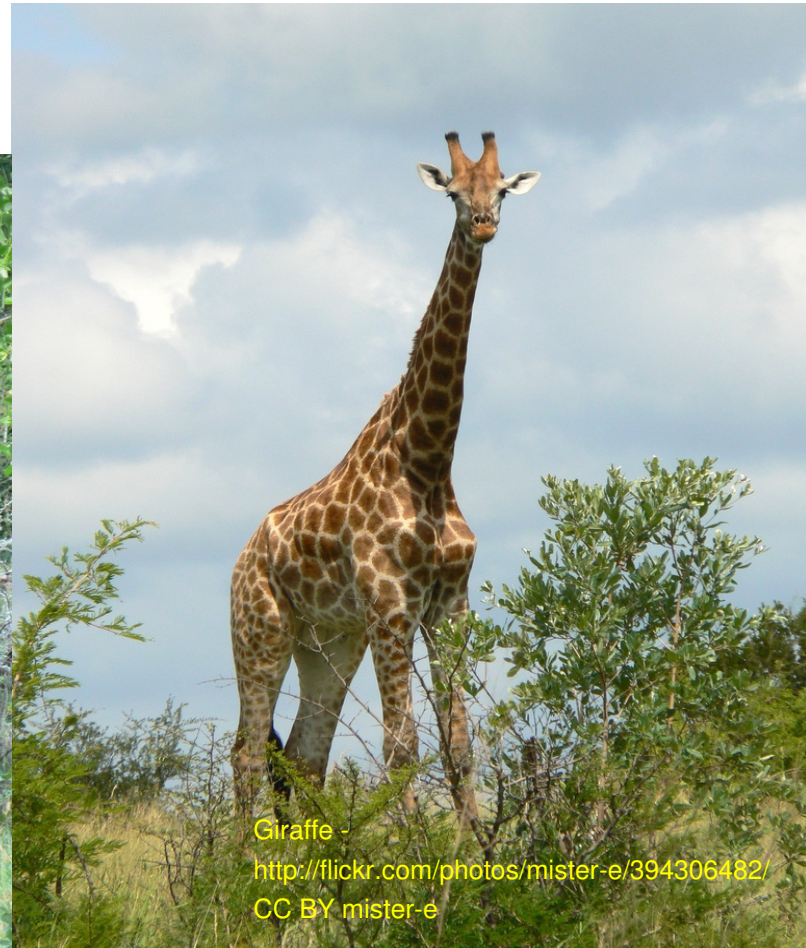
Impala
<http://flickr.com/photos/zest-pk/924783392/>
CC BY zest-pk



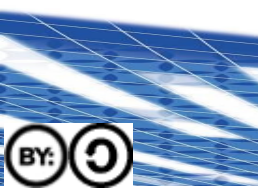
The Kings
http://flickr.com/photo_zoom.gne?id=435343670&size=l
CC BY - Ben Tubby



Elephant
<http://flickr.com/photos/mister-e/394312384/>
CC BY mister-e



Giraffe -
<http://flickr.com/photos/mister-e/394306482/>
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All life is connected

Sustainability only if

all individuals understand
their own impact on the
environment
and
act accordingly

a global collaborative effort is **required**

Collective knowledge (and action)

after years of campaigning ...

Disillusion

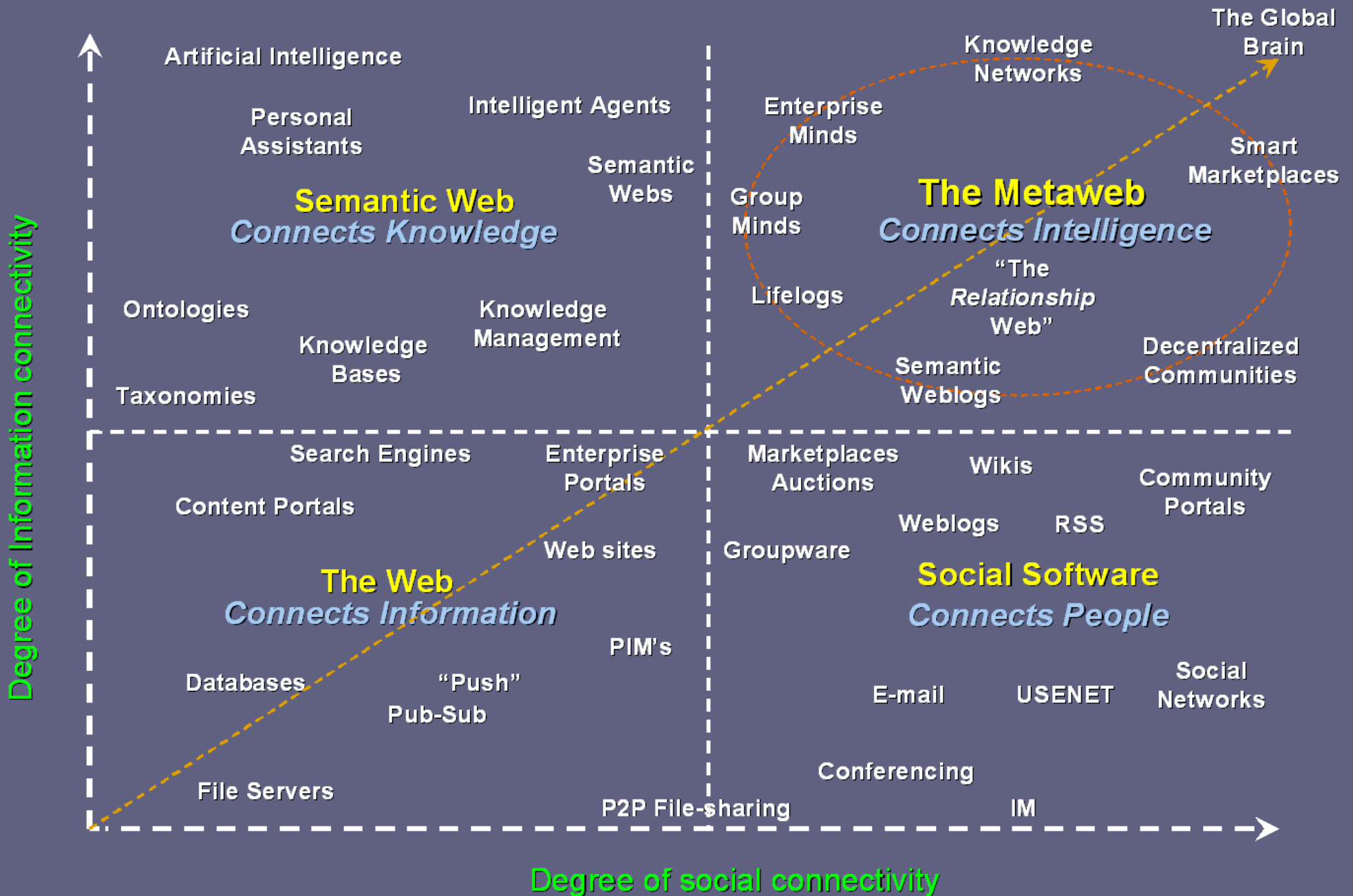
there was a lack of understanding of this connectedness
social and economic issues always dominated

there was no sense of urgency
people only responded to crises :-)

the world was dominated by the profit motive
competition dominated cooperation
at the expense of the environment

Life is too short ... where is the fun?

cool technologies ...



Inspiration

- GNU/Linux
 - and the FLOSS world: Apache, BSD, MySQL,
- Wikipedia, Wikispecies, WikiVersity, WikiEducator, ...
- Free Culture
- Conocimiento Libre/
Free Knowledge Foundation
- Social software

Commons based peer production

Wow !



What collaborating people can do!

Such Good citizens ! :-)

An inspiration to us all!

Global knowledge networking and
collaboration to produce some really
impressive work!

There is new hope

Sustaining our world will require global
collaboration



Why change the world?



Around Taplin Wildlife Sanctuary (Massachusetts)
<http://flickr.com/photos/shimown/21698148/>
BY SA shimown



Dune 45, Sossusvlei, Namibia
<http://flickr.com/photos/ibeatty/60086818/>
CC BY SA ibeatty

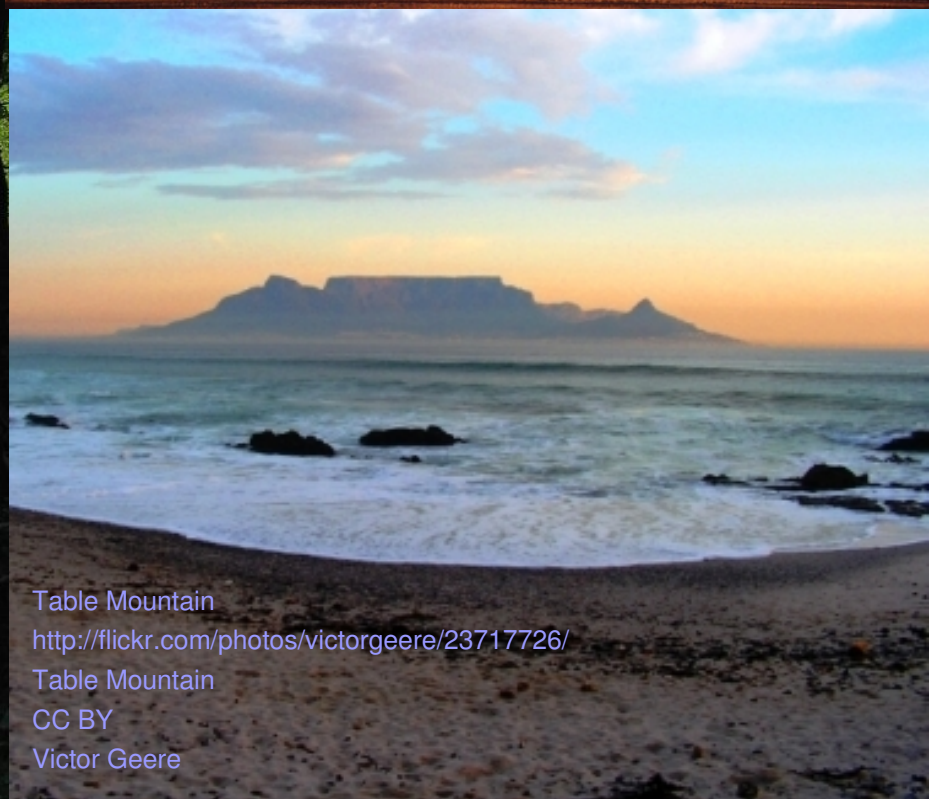


Table Mountain
<http://flickr.com/photos/victorgeere/23717726/>
Table Mountain
CC BY
Victor Geere

Well, like it or not, we are ...



EPA Documerica:
U.S. Steel Plants in Birmingham by Leroy Woodson, 1972
(NARA/EPA)
<http://flickr.com/photos/pingnews/450243888/>
CC BY SA, Uploaded on April 7, 2007
by pingnews.com



industrial waste
<http://flickr.com/photos/inquirer/351889812/>
CC BY
inquirer





Pilsen and Pollution

http://flickr.com/photos/senor_codo/352250460/

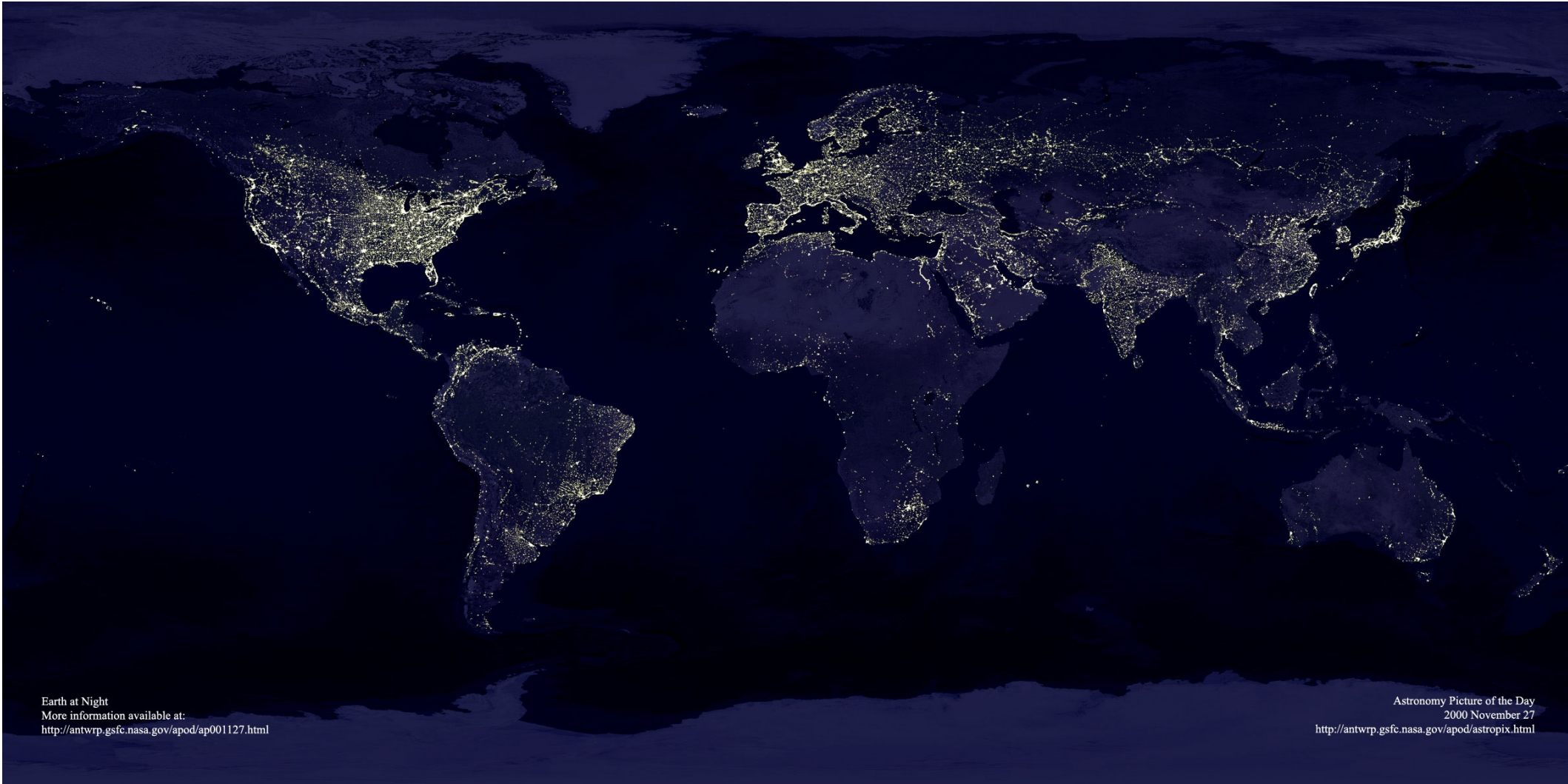
CC BY SA

Uploaded on January 9, 2007 by Señor Codo



and in more ways than this

Global Picture



Earth at Night
More information available at:
<http://antwrp.gsfc.nasa.gov/apod/ap001127.html>

Astronomy Picture of the Day
2000 November 27
<http://antwrp.gsfc.nasa.gov/apod/astropix.html>



We have the opportunity to

learn from the “developed” world
and **not**
repeat the mistakes

Global Issues – e.g. UNEP

- Biodiversity
- Climate Change
- Business and Industry
- Freshwater
- Land
- Sustainable consumption
- Energy
- Poverty and environment, etc.

MDGs

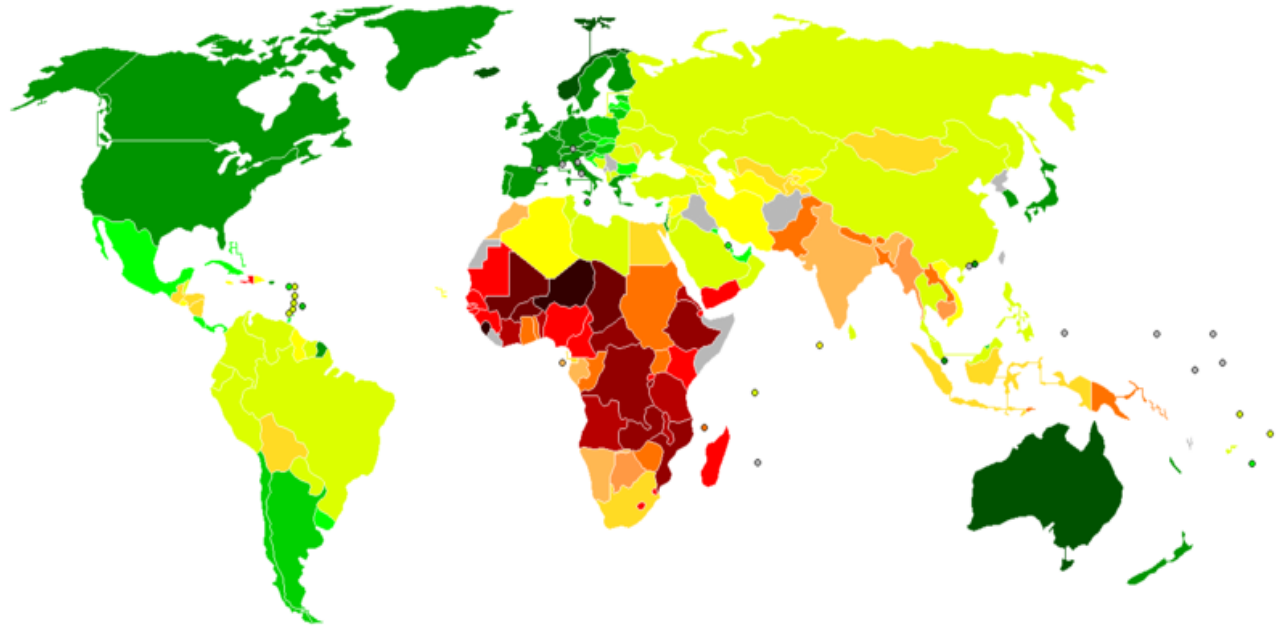
- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria, and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development.

Human Development Index

Human Development Index (HDI) is a comparative measure of poverty, literacy, education, life expectancy, childbirth, and other factors for countries worldwide. It is a standard means of measuring well-being, especially child welfare. It is used to distinguish whether the country is a developed, developing, or an under developed country, and also to measure the impact of economic policies on quality of life.

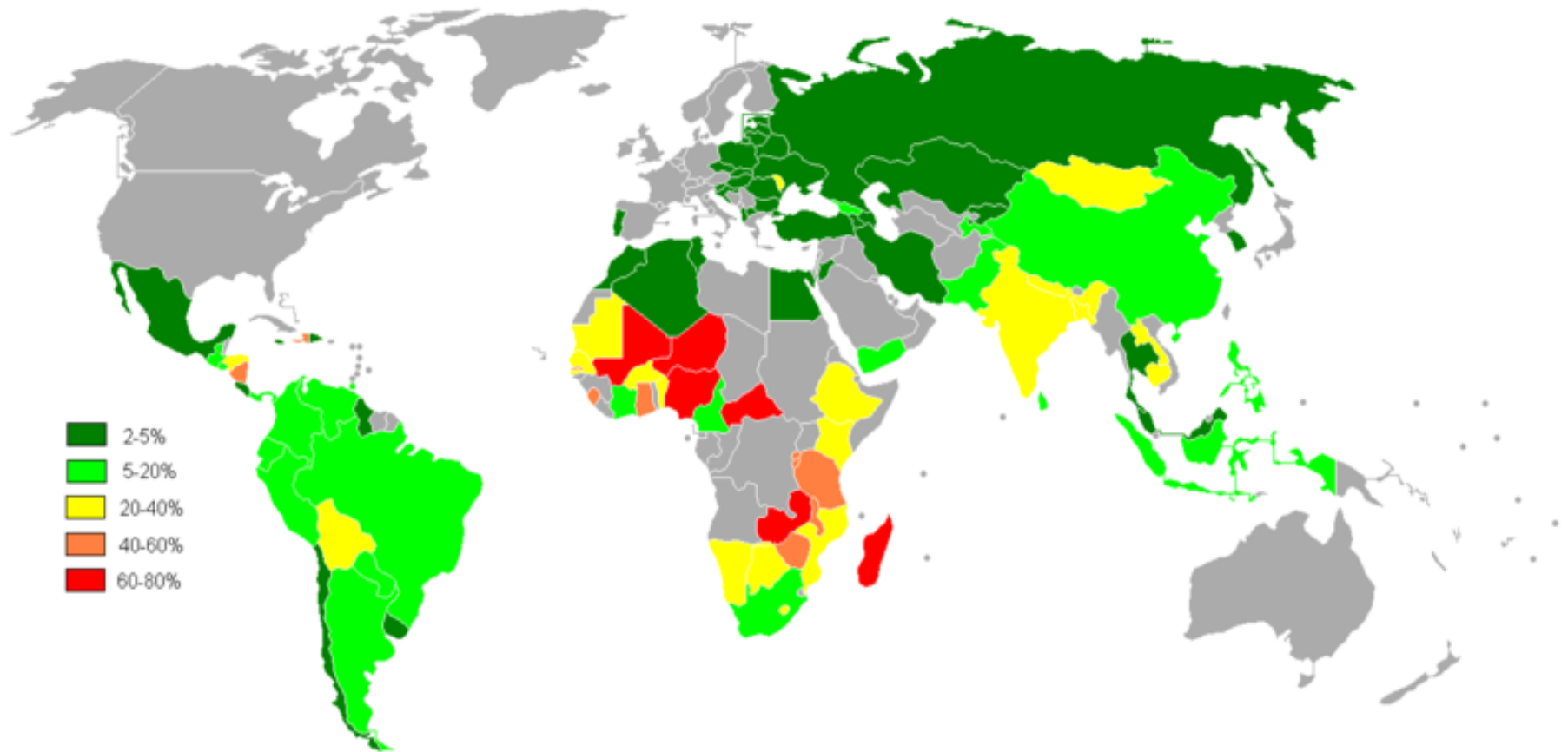
Human Development Index

- poverty
- literacy
- education
- life expectancy
- childbirth
- and other factors for countries worldwide.



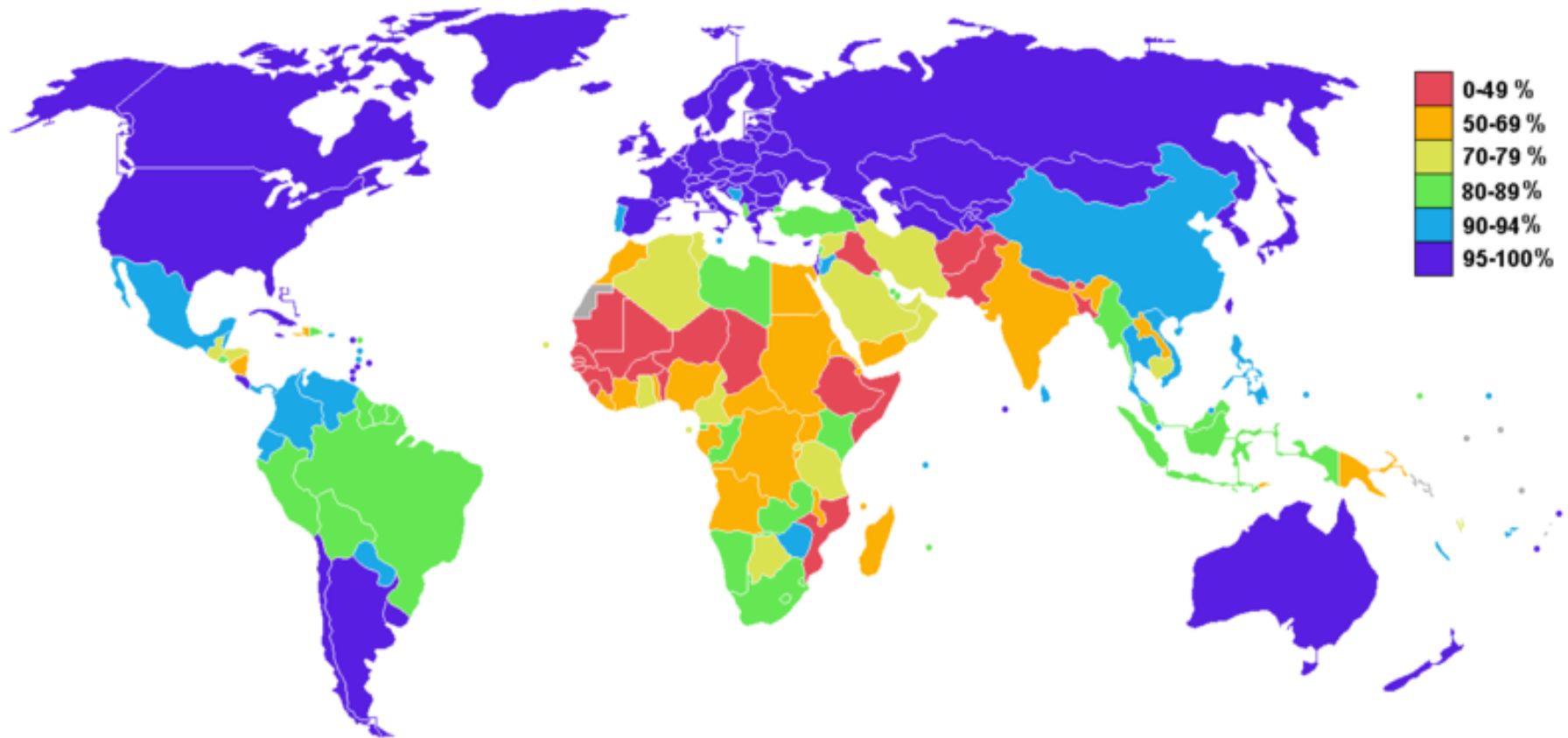
- http://en.wikipedia.org/wiki/Human_Development_Index

Poverty % < \$1/day



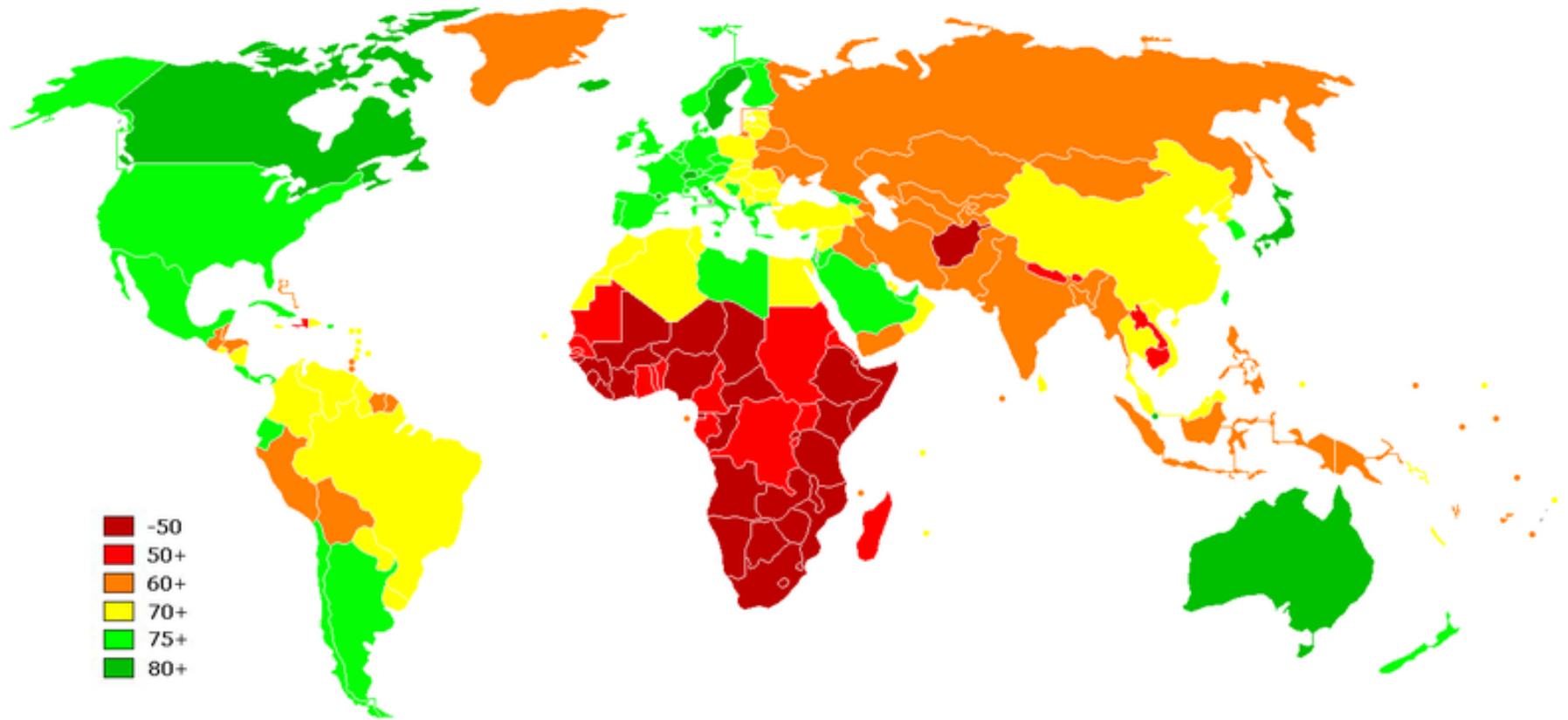
<http://en.wikipedia.org/wiki/Poverty>

Literacy

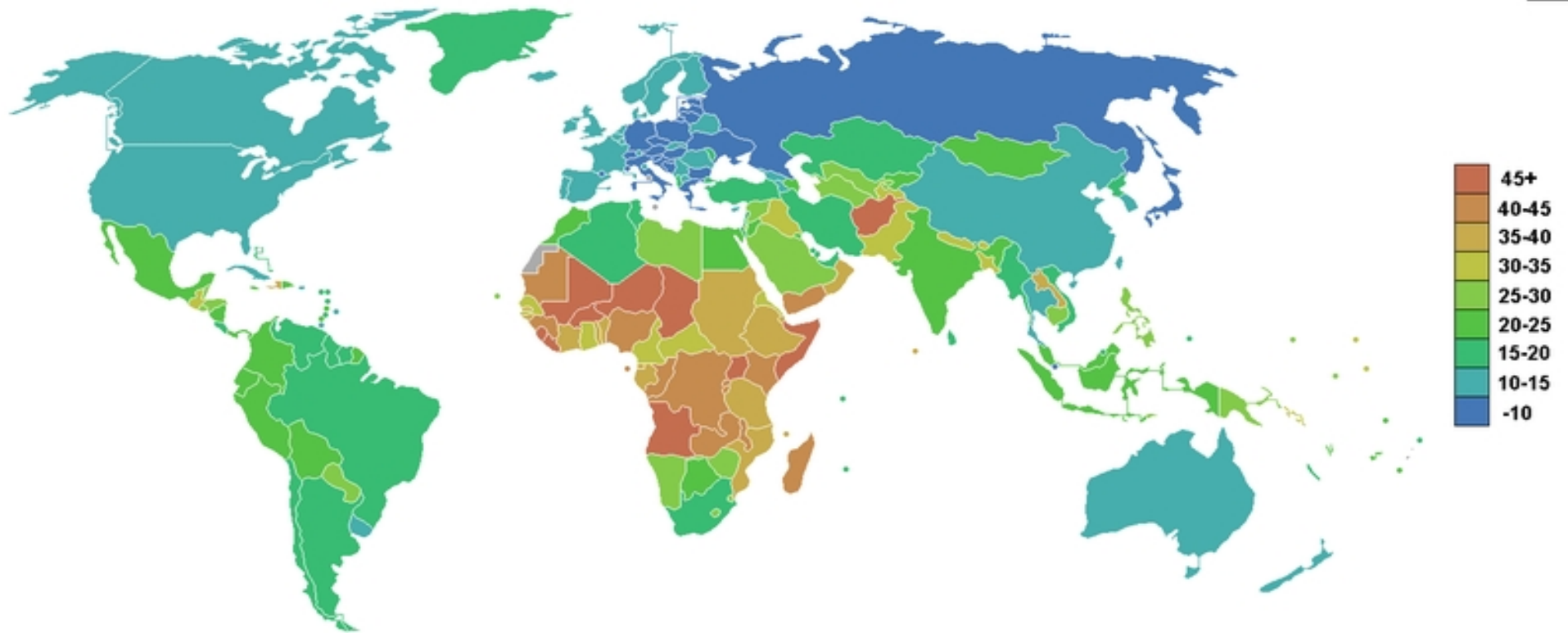


<http://en.wikipedia.org/wiki/Literacy>

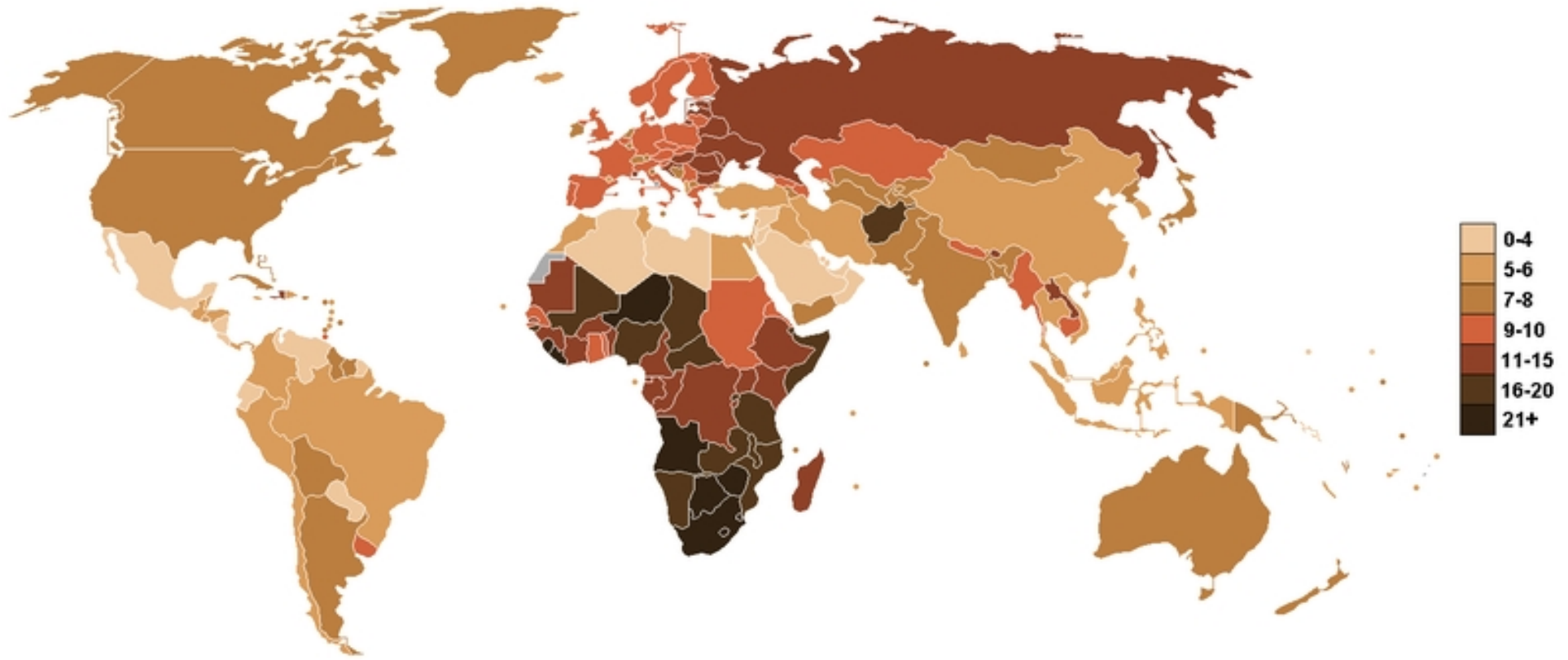
Life Expectancy



Births $n/1000$ of Population



Deaths $n/1000/pa$



The challenges are significant

we live in exciting times

Challenge breeds innovation ...

... there is incredible potential in Africa

a prominent member of this community

predicted

*the next major innovation in learning and
education will come from Africa* (Wayne Mackintosh)

Collective knowledge covering a wide range of disciplines is needed

Holistic

Check out ...

An inconvenient truth ...

(see <http://www.climatecrisis.net/aboutthefilm/>)

Perhaps the world is ready to consider

the third pillar of sustainability
the environment (the planet)



Earth atmosphere:

http://en.wikipedia.org/wiki/Image:Andes_et_Terminator.jpg

Wikimedia commons (NASA, PD).

Think global, act local

With global connectivity

we have the opportunity to

think **and** act global **and** local

to generate the required knowledge

... there are gaps ...

Access to Knowledge

enable communities to empower themselves
with knowledge

towards self-determination
with global collaboration

More challenges

closer to home

Access

– e.g. via Schools? - e.g. NEPAD e-Schools: 600,000 in Africa.

- to devices – computers - etc.
- to connectivity – and the Internet - bandwidth
- access to learning and knowledge resources
- being able to use the resources
 - literacy, translation, localisation/contextualisation
 - interact, produce, learn, participate.
- quality and relevance.

Reality:

many schools are still short of

- Buildings
- Tables/Desks
- Books
- Water
- Food
- Electricity
- Teachers

Acting local

some examples

Singazenzela

“we can do things for ourselves”

a relatively new project

and a general principle

WirelessAfrica.meraka.org.za



Digital Doorway



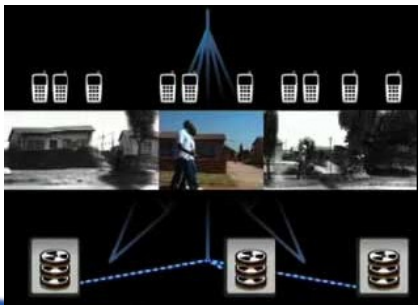
<http://www.digitaldoorway.org.za/>



MobilED.uiah.fi

The MobilED (mobile education) initiative is aimed at designing learning and teaching environments that are meaningfully enhanced with mobile technologies and services.

Technology



- Mobile devices: GSM phones, multimedia/smart phones, Internet tablets
- Wireless networks: GSM, 3G, WLAN
- Voice, speech and language technologies: speech interfaces, audio information systems etc.
- Social software: Mediawiki, blogs, Knowledge Building tools.
- Wikipedia: The Free Encyclopaedia.

Pedagogy

- Student and group-centred learning
- Project-based learning
- Problem solving
- Inquiry learning



Pilot 1

Stage 1

- A mobile audio wikipedia can be accessed by sending an SMS with a key word.



- The service calls back and plays the information, making use of text to speech conversion.

Pilot 1

Stage 2

- Learners could make their own audio castings on related topics.
- This information is added to the audio wikipedia for other people to listen to.



Pilot 2

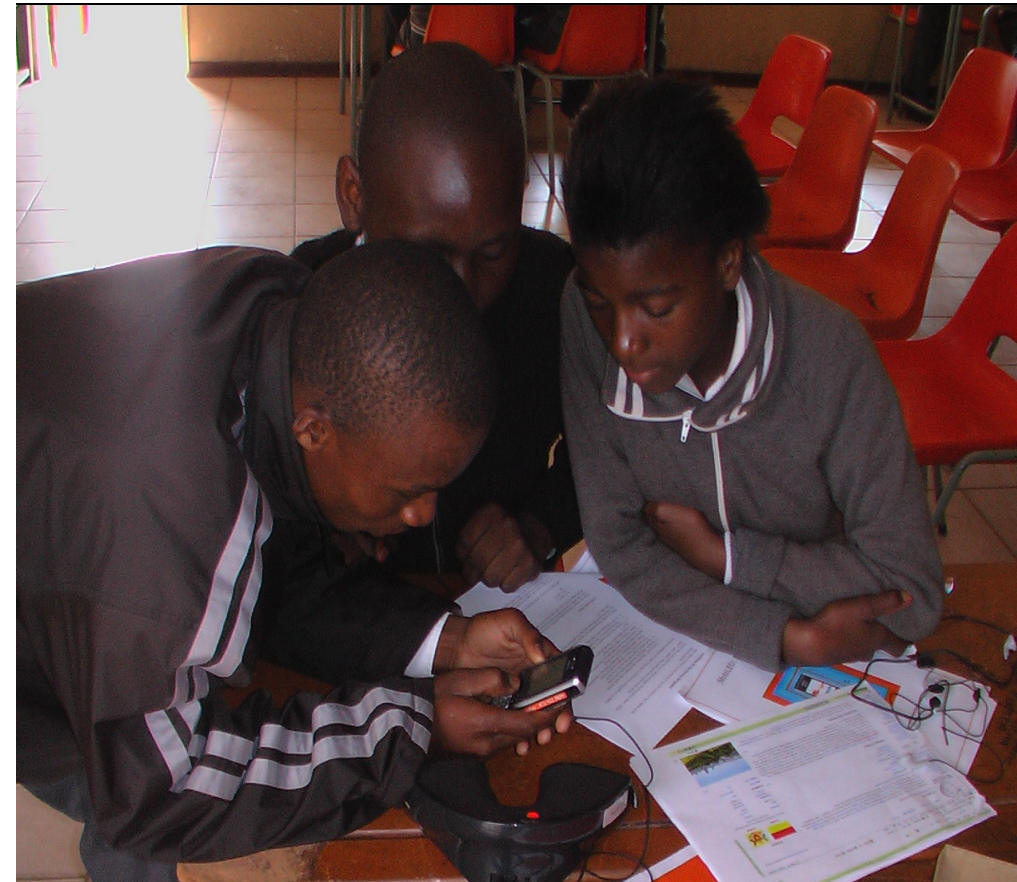
- Similar lesson about HIV/AIDS, different approach, building in the results of Pilot 1 (also Grade 8)
 - More time for learners to experiment (with the phones and technology)
 - Printouts of a Wikipedia webpage
- Improvement of the technology
 - Improved speakers
 - Different text-speech system
 - Fewer bugs



Note the relevance of the content localisation

Some results from Pilot 2

- Enthusiastic support from learners (once again)
- Issues like language a “non-issue”
- Learners happy to share the cell phones in the group
- Learners comfortable with the technology in a short period of time
- Spontaneous use of audio wikipedia for other learning areas



Next Steps

- Pilot 3
 - “Street Memory”
- Future
 - Multimedia interaction
 - the free software is already designed for this
- Similar pilots in Finland, Brazil, Colombia, India

Some great things are happening ...

- ICT in schools
 - Schoolnet Namibia: <http://www.schoolnet.na/>
 - tuXlabs: <http://www.tuxlabs.org.za/>
 - NetDay: <http://www.netday.org.za/>
- efforts towards Open Access in Universities, etc.: http://blogs.uct.ac.za/blog/gray_area
- efforts towards connectivity and access:
 - South African Research Network: <http://www.meraka.org.za/sanren.htm>
 - Wireless Africa <http://wirelessafrica.meraka.org.za>
 - Digital Doorway: <http://www.digitaldoorway.org.za/>
 - National Accessibility Portal: <http://www.meraka.org.za/nap.htm>
- Research
 - Human Language Technologies: <http://www.meraka.org.za/humanLanguage.htm>
etc. <http://www.meraka.org.za/>

etc.

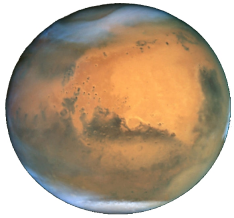
- Educational Wikis:
 - FLOSS4Edu: <http://wikieducator.org/FLOSS4Edu>
 - FLOSSLit: <http://wikieducator.org/FLOSSLit>
 - Social Entrepreneurship initiatives, etc.
- ICT4D initiatives
 - OLPC pilots,
 - ..., etc. ... in Africa and other developing countries.

critical success factors:

- Vision
 - Knowledge for all, freedom to learn, towards collective wisdom
- Process
 - Enabling communities to empower themselves with knowledge

[Libre Comunities vision - <http://communities.libre.org>]

What kind of world do we want?



and who decides?



City Lights 3
http://flickr.com/photos/wandering_angel/775133154/
CC BY - The Wandering Angel



Masiphumelele
<http://flickr.com/photos/framesofmind/544388629/>
CC BY Uploaded on June 13, 2007 by Frames-of-Mind



Rain forest
<http://flickr.com/photos/mscheltgen/63623530/>
CC BY - Michael Scheltgen

embrace the present

and

co-create the future

we all decide, and co-create the future
but there are inequalities

Development as Freedom (Amartya Sen 1999)

- “expanding the real freedoms that people enjoy”
 - assess development in these terms
- “expansion of freedom ... as the primary end and as the principal means of development” p4
- removing sources of unfreedom: poverty, tyranny, systematic social deprivation, neglect of public facilities, intolerance, oppression, ...
- “... of “sustaining economic life and countering poverty and insecurity in the contemporary world”

(Kofi Annan, Secretary-General of the United Nations, back cover)

Changing times

- industrial ... information ... knowledge revolutions
- democratic and participatory governance
- human rights and political liberty, longer life expectancy
- connectedness
 - “... trade, commerce, communication, ...
interactive ideas and ideals.
- [but ... we also have] ... deprivation, destitution, oppression.”

Sen, A. (2000). *Development as Freedom*.
New York: Anchor.

beyond measuring development in terms of

- growth of GNP
- individual incomes
- industrialisation
- technological advance
- social modernisation

(Amartya Sen 1999)

Libre Knowledge – is part of the means and the end

if only we knew ...

- what the future will bring ...
- the aspirations of future generations ...

- all we can do is the best we can with the knowledge available to us.

Libre Communities Vision

- Knowledge for all, freedom to learn, towards collective wisdom

we can only be wise together

- Enabling communities to empower themselves with knowledge

Libre Communities Manifesto (values)

- Libre communities value:
 - the members and their diverse perspectives,
 - the libre resources produced and the associated freedoms,
 - the ability of communities to collaborate on managing the quality of shared resources, and
 - the opportunity this freedom offers for networked communities to make a difference collectively, towards a sustainable world.

Knowledge

libre knowledge

So, let's (continue to) do it

- ... starting with stories of hope
and inspiration :-)

and continued contribution to the various
free knowledge initiatives.

Thank you :-)

Contact

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Libre Knowledge and Learning



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Acknowledgements

- MobileD Slides:
 - Meryrl Ford: mford@csir.co.za
- Globe icon via:
<http://antwrp.gsfc.nasa.gov/apod/ap960819.html>
 - (slide 2)
- Mars in opposition (slide 56)
 - <http://heritage.stsci.edu/2001/24/index.html>
- and many others referred to on the slides, etc.

the end :-)

Extras

Look at that!

- FLOSS
 - GNU/Linux, FreeBSD, distrowatch.com, ...
 - Apache – jakarta, xml, server, cocoon, lenya, etc.
 - OpenOffice, Eclipse, Hybernate, Spring, JUnit, ...
 - etc. - <http://sourceforge.net> & <http://freshmeat.net/>
- Free Knowledge, free culture
 - Wikipedia, communities.libre.org, plos.org, doaj.org, cnx.org, ocw.mit.edu, sciencecommons.org, dmoz.org, creativecommons.org, ccmixer.org, <http://www.free-culture.cc/>, ...

Links (definitions)

- <http://opensource.org>
- <http://gnu.org>
- http://en.wikipedia.org/wiki/Free_software
- <http://communities.libre.org/>
- <http://freedomdefined.org/>
- <http://blog.jimmywales.com/index.php/archives/2004/10/21/free-knowledge-requires-free-software-and-free-file-formats/>

Links

(just a few)

- <http://distrowatch.com/>
 - <http://www.ubuntu.com/>
 - <http://www.getopenlab.com/>
- <http://www.apache.org/>
 - <http://jakarta.apache.org/>
 - <http://xml.apache.org/>
- <http://www.wikipedia.org/>
- <http://www.elephantsdream.org/>
- <http://www.ktdms.com/>

FLOSS in Education Links

- <http://moodle.org>
- <http://avoir.uwc.ac.za/>
- <http://atutor.ca/>
- <http://wikieducator.org/> <http://exelearning.org>
- <http://fle3.uiah.fi/>
- <http://www.lemill.net/> and <http://www.lemill.org/>
- <http://oerwiki.iiep-unesco.org/>

FLOSS in Education Links

- <http://cnx.org/>
- <http://rhaptos.org/>
- <http://www.greenstone.org>
- <http://dspace.org/>
- <http://www.schoolforge.org.uk/>
- <http://educommons.org/>
- <http://eduforge.org>
- <http://www.edubuntu.org/>
- <http://www.tuxlabs.org/> and <http://www.schoolnet.na/>
- <http://www.netday.org.za/> and <http://www.getopenlab.com/>

Links

- Governments and FLOSS

- http://europa.eu.int/information_society/activities/opensource/cases/index_en.htm
- <http://www.openia.com/resources/open-source/governments>

- MDGs

- http://en.wikipedia.org/wiki/Millennium_Development_Goals

- Research

- <http://flossworld.org>
- <http://flosspols.org>

Readings

- <http://wikimania2006.wikimedia.org/>
 - Lessig and Benkler u. proceedings (video & audio)
- <http://www.benkler.org/>
 - The Wealth of Networks (PDF available)
- <http://www.free-culture.cc/>
 - Free Culture – various formats and variations
- <http://www.gnu.org/doc/book13.html>
 - Free Software, Free Society: Selected Essays of Richard M. Stallman



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- Ghosh, R. A. 2005. Cooking-pot markets and Balanced Value Flows. In Ghosh, R. (editor) CODE, MIT Press, 2005.
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- Johnstone, S. 2005. [Open Educational Resources and Open Content, for UNESCO IIEP discussion forum 24 October - 2 December 2005](#).
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- Lessig, L. 2006. Code 2.0, Basic Books, New York.
- Nov, O. 2007. What motivates Wikipedians, or how to increase user-generated content contribution. Communications of the ACM, (forthcoming). There is a growing body of research on what motivates free knowledge contributors. In this study, the top three motivators identified were fun, ideology and values.
- Sen, A. 1999. Development as Freedom, Anchor Books, New York.
- Sunstein, C. R. 2006. Infotopia: How Many Minds Produce Knowledge, Oxford University Press, USA.
- Wales, J. 2004. [Free Knowledge requires Free Software and Free File Formats](#). Blog posting.
- <http://blog.jimmywales.com/index.php/archives/2004/10/21/free-knowledge-requires-free-software-and-free-file-formats/>
- Wheatley, M. 2005. Preface for The World Café: [Shaping Our Futures Through Conversations That Matter](#), Berrett-Koehler Publishers, San Francisco.

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