Africa Alive Corridors  ‘Townhall Meeting’  - EGU, Vienna, May, 2010
Journeys through Africa’s autobiography with everyone a stakeholder
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Africa Alive Corridors

Journeys through Africa’s autobiography
with everyone a stakeholder
Africa, the world’s heritage colossus

Africa is the heritage colossus amongst the continents of the world. It is here that we emerged step-by-step from the primate world over the past 10-million years, and from here—as *Homo sapiens*—that we colonised the world. All 7-billion humans alive today are one close-knit family, born on African soil less than 200,000 years ago. It is here that our earliest cultures, languages and technologies arose.

Africa is the geological hotspot of the world. The largest, best-preserved fragment of the Earth’s earliest emerging continents, along with the earliest known life forms (micro-organisms), are found here. And the most prodigious mineral deposits anywhere are preserved here.

Africa is the biological hotspot of the world. The world’s top terrestrial plant (Cape Fynbos) and animal biodiversity hotspots (tropical Africa) occur here. Of all the continents of our planet, only Africa still supports intact ecosystems with their diverse megafauna (herbivores and carnivores).
• **International Africa, by its people for its people**

• The people of Africa join in telling the autobiography of their continent. Together they write and celebrate their epic 4-billion-year story along 20 ‘Heritage Corridors’. The corridors—averaging 2,000 to 3,000 km in length—criss-cross the continent taking in all 53 nations (including Madagascar).

• Heritage Corridors are international, with most linking three or more countries. They embrace two tightly related concepts. Each is a chapter in the African autobiography: archived in its rocks, minerals, fossils, extant plants and animals, archaeological and historical sites, and its living pulsating cities and rural communities. And each is a focus for international, holistic, sustainable management by all for the enrichment of all.
• But, place of greatest human suffering
• In spite of standing unparalleled atop Earth’s heritage podium, Africa’s people suffer the greatest spectrum of ills anywhere. Considering the UN Millennium Goals, addressing poverty, hunger, education etc, Africans are in the deepest grip of suffering. This is the most astonishing irony!
The size of Africa alone tells of the enormous task that lies ahead... are we ready for this?

Africa makes up 20% of the earth’s surface

<table>
<thead>
<tr>
<th>Continent</th>
<th>Area</th>
</tr>
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<tbody>
<tr>
<td>Africa</td>
<td>30,301,596 km²</td>
</tr>
<tr>
<td>United States of America</td>
<td>9,372,180 km²</td>
</tr>
<tr>
<td>India</td>
<td>3,166,830 km²</td>
</tr>
<tr>
<td>Europe</td>
<td>10,176,246 km²</td>
</tr>
<tr>
<td>Australia</td>
<td>7,701,651 km²</td>
</tr>
</tbody>
</table>

Total area of other continents: 30,416,907 km²
The 20 Heritage Corridors

Here follows a selection of four of 20 proposed corridors to give a sense of their international character and of their unmatched place in the unfolding story of Africa, indeed of the Earth.
• **Prime Heritage Nodes**

• Each corridor includes 20 prime heritage nodes (World Heritage Sites, Biosphere Reserves, biodiversity hotspots, Geoparks etc): pages in the chapters of the African story. The nodes might be seen as a string of pearls, each a priceless treasure.
1. **Cradle to Cradle Corridor** (South Africa)

3,500 million years-present

*Celebrating 3.5 billion years of life on Earth*

*Cradle of Humanity* WHS (3.5-1.0 Ma)—richest hominid deposits

- **Vredefort Dome** (2023 Ma)—oldest, largest meteorite impact
- **Witwatersrand Supergroup** (3,000-2714 Ma)—world’s greatest goldfield
- **Barberton Mountains** (3,570-3,060 Ma)—earliest fossil bacteria
2. Snowball Earth Corridor (Namibia)

1,000-500 million years ago and then to the present day
‘From a lifeless Snowball Earth to the biological big bang and then extinction’

- **Extinction (1900 AD)** — of the oldest humans and their culture
- **Cambrian Explosion (530-505 Ma)** — of marine life
- **Ediacaran fauna (580-543 Ma)** — first known animals
- **Snowball Earth (730-580 Ma)** — glacial Earth, poles to equator
- **Rodinia Supercontinent (to 730 Ma)** — breakup initiates glaciation
8. Eastern Rift Valley Corridor (Ethiopia to Malawi)

5 million years – 150,000 BP
‘Our hominid trail from Ardipithecus to Homo’

• ‘Lucy in the sky with Diamonds’ (Beatles to anthropology)
• A 4-million year **human trail**
• **Plate tectonics** & the East African Rift System
12. Saharan Paradise Lost Corridor (Niger to Chad)

22,000 BP – present

‘The rock-art gallery traces desertification’

• Rock art & fossils: from forest to desert
• The Sahara in global context (climate change)
• *Sahelanthropus*, the earliest known hominid
5. Colliding Continents Corridor (Morocco to Tunisia)

200 million years – present

‘Rifting, drifting, folding along the Atlas Mountains’

• **Atlas Mountains**: a geological gallery of continental drift
• A succession of **Civilizations & Empires** (Roman, Byzantine, British, French)
• **World Heritage Sites** & Biosphere Reserves (United Nations)
10. *Homo sapiens sapiens* Corridor (South Africa)

140,000-60,000 BP

‘The first half of our sojourn on Earth’

• *Fynbos Biome*—World’s richest flora (present)
• *Blombos cave*—earliest symbolic art (70,000 BC)
• *Klasies Rivier Mouth*—earliest skeletal remains (100,000 BC)
• *Langebaan*—earliest human footprints (117,000 BC)
• *Mitochondrial Eve*—our mutual ancestor (140,000 BC)
AEON’s Imizila – *finding a new way forward*

AEON has developed a new strategic board game - *Imizila* - for sustainable development along 21 geo-bio-cultural corridors across Africa (Africa Alive Corridors program). Imizila (‘*finding a new way forward’*) consists of a holistic set of 101 strategies aimed at stimulating debate seeking this path into a safer, kinder future. Teams of scholars— together with parents, teachers and others— play the game at workshops and at home. Imizila seeks togetherness; Ubuntu!

Imizila was introduced to the Africa-wide community in Arusha, Tanzania, at the Africa launch of IYPE (*International Year of Planet Earth*), in April 2008. The director of AEON and two AEON associate members took 10 young learners from South Africa to play the board game during the IYPE Africa discussions. The 10 selected South African learners met and challenged 10 Tanzanian counterparts in an exploratory IYPE competition. The game drew lots of attention, including participation by H.E. Mr Jakaya Mrisho Kikwete, President of Tanzania, and is presently being adopted, through AAC by UNESCO for further development.
Africa Alive Corridors  [strategic game] live-competition Arusha
What since Lisbon?
Africa Alive
Corridors
Structure and Opportunities
Corridor Themes – experience a unique chapter of Africa’s Autobiography

• Timelines & time capsules
• Continent Adrift
• Rock-systems and Landscapes
• Fossils and the deep history of life
• Flora, fauna, biodiversity & ecosystems
• Our human roots
• Culture and spirituality
• Climate change, footprints and 6th extinction
• Mega-hazards and their impacts
Corridor Content

• Each corridor has a team assigned
  – Script Team
    • Story and timelines
    • Specific themed focus
  – Production Team
    • Creating usable content
    • Graphic design
    • Outputs include timeline assets, posters, cards and themed booklets
  – Post Production Choreography Team
    • Real adventures & survival tours -Tourism Content Packages; DVD & virtual tours
Corridor Packs - Cards

• Tells the story of each corridor
• Collectors Cards – high quality
• Game Play possibilities
Tourism Options – Self Drive

• Content is collated and moulded for use by tourists
• Loaded onto GPS based navigator (e.g. Garmin Nuvi).
• Advantages:
  – Delivery of information specific to current location
  – Data storage capacity can provide audio, video and photo streams (no need to download)
  – GPS device is a guide, giving tourists options of destinations and plotting their course for them and signposts:
    • Tourism services
    • Attractions
    • Accommodation
    • Experienced guides
    • Experts
    • Local flavour
Card Examples

Cradle to Cradle Corridor

Corridors of Life
Time line
This Earth-history tapestry traces geological time from the oldest crust to the youngest ice sheets and from the earliest known life to the current activities of our human family.
Collect all of these cards and see the time line from the birth of the earth to our modern day!

Cradle to Cradle Corridor

Timeline 1 – Earth Creation
Scientists believe that about a hundred billion years ago the earth, the sun, and all the planets of the solar system were nothing but a cloud of cold dust particles swirling through empty space. Gradually, these particles were attracted to each other and came together to form a huge spinning disk. As it spun, the disk separated into rings, and the furious motion made the particles white-hot. The center of the disk became the sun, and the particles in the outer rings turned into large fiery balls of gas and molten-liquid. Then they began to cool and condense and take on solid form. And at last, some four or five billion years ago, they became Earth, Mars, Venus and the other planets.

Cradle to Cradle Corridor

Leopard
• The leopard Panthera pardus is the smallest of the four “big cats.”
• The greatest concentration of leopards now occurs chiefly in sub-Saharan Africa.
• Leopards are excellent hunters.
• They can run at speeds approaching 58 kilometres per hour.
• They have a notorious ability for stealth.

Cradle to Cradle Corridor

Grey Lourie
• The Go-away-bird Cassowaria casuarius, also known as the Grey Lourie.
• It is widespread in savanna woodland, a clumsy flier though extremely agile in climbing through tree crowns.
• It has a distinctive loud alarm call “quack”, fanfully sounding like “Go-away.” The crest is raised when excited.
Custom Collectors Box

Lid Design
The Game
• Easy to play - Fast and Fun
• Can be played on a board
• Can be played on a field
• Can be played by a few at home
• Can be played by an entire school
• Can be played at a conference
• Can be played virtualized - web and mobile
• Contains the best of the current Imizila
• Corridors can compete with each other...
1. Challenge results in a team putting in a new power station

1. Impact
   - People - electricity
   - Water – pollution
   - Birds –
   - Animals -

Water team moves back

Animal team moves back

Surprise impact may be ...

People team moves forward
Geosystem: the changing Earth

The Changing Earth

Global processes
monitor, quantify & predict

Geodynamics
understand the impact

Climate variability
reduce the risk

Natural disasters
develop the habitat

GeoEngineering

Future of Mankind

A brave new world
Inkaba ye Africa

An Holistic Evaluation of Planet Earth

To examine those natural phenomena which provide fundamental insights into the workings of Planet Earth, which impact the socio-economic development of both countries and add value...
Jared Diamond identified what he considered to be the 12 most serious environmental problems facing past (and future) societies, problems that often have led to the collapse of historical societies:

1) Loss of habitat and ecosystem services,
2) Overfishing,
3) Loss of biodiversity,
4) Soil erosion and degradation,
5) Energy limits,
6) Freshwater limits,
7) Photosynthetic capacity limits,
8) Toxic chemicals,
9) Alien species introductions,
10) Climate change,
11) Population growth, and
12) Human consumption levels.

More importantly, Diamond, and several other authors before him emphasized that the interplay of multiple factors is almost always more critical than any single factor. Systems that lose resilience are vulnerable to shocks from several sources.
In a full world context, what is “the economy” and what is it for?
The value of the world’s ecosystem services and natural capital

Robert Costanza, Ralph d’Arge, Rudolf de Groot, Stephen Farber, Monica Grasso, Bruce Hannon, Karin Limburg, Shahid Naeem, Robert V. O’Neill, Jose Paruelo, Robert G. Raskin, Paul Sutton & Marjan van den Belt

The services of ecological systems and the natural capital stocks that produce them are critical to the functioning of the Earth’s life-support system. They contribute to human welfare, both directly and indirectly, and therefore represent part of the total economic value of the planet. We have estimated the current economic value of 17 ecosystem services for 16 biomes, based on published studies and a few original calculations. For the entire biosphere, the value (most of which is outside the market) is estimated to be in the range of US$16–54 trillion (10^{12}) per year, with an average of US$33 trillion per year. Because of the nature of the uncertainties, this must be considered a minimum estimate. Global gross national product total is around US$18 trillion per year.
Ecosystem services are the benefits humans derive from ecosystem functioning.

<table>
<thead>
<tr>
<th>ECOSYSTEM SERVICES</th>
<th>ECOSYSTEM FUNCTIONS</th>
</tr>
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<tbody>
<tr>
<td>Gas regulation</td>
<td>Regulation of atmospheric chemical composition.</td>
</tr>
<tr>
<td>Climate regulation</td>
<td>Regulation of global temperature, precipitation, and other biologically mediated climatic processes at global, regional, or local levels.</td>
</tr>
<tr>
<td>Disturbance regulation</td>
<td>Capacitance, damping and integrity of ecosystem response to environmental fluctuations.</td>
</tr>
<tr>
<td>Water regulation</td>
<td>Regulation of hydrological flows.</td>
</tr>
<tr>
<td>Water supply</td>
<td>Storage and retention of water.</td>
</tr>
<tr>
<td>Erosion control and sediment retention</td>
<td>Retention of soil within an ecosystem.</td>
</tr>
<tr>
<td>Soil formation</td>
<td>Soil formation processes.</td>
</tr>
<tr>
<td>Nutrient cycling</td>
<td>Storage, internal cycling, processing, and acquisition of nutrients.</td>
</tr>
<tr>
<td>Waste treatment</td>
<td>Recovery of mobile nutrients and removal or breakdown of excess or xenic nutrients and compounds.</td>
</tr>
<tr>
<td>Pollination</td>
<td>Movement of floral gametes.</td>
</tr>
<tr>
<td>Biological control</td>
<td>Trophic-dynamic regulations of populations.</td>
</tr>
<tr>
<td>Refugia</td>
<td>Habitat for resident and transient populations.</td>
</tr>
<tr>
<td>Food production</td>
<td>That portion of gross primary production extractable as food.</td>
</tr>
<tr>
<td>Raw materials</td>
<td>That portion of gross primary production extractable as raw materials.</td>
</tr>
<tr>
<td>Genetic resources</td>
<td>Sources of unique biological materials and products.</td>
</tr>
<tr>
<td>Recreation</td>
<td>Providing opportunities for recreational activities.</td>
</tr>
<tr>
<td>Cultural</td>
<td>Providing opportunities for non-commercial uses.</td>
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</tbody>
</table>

Consider Us ‘Corridors of Africa’