Specific objective 4
Other geological issues

Activity 5.2
Geoheritage and geoconservation

EGS – OAGS Workshop
Cape Town 8-9.02.2015

Contribution from
Enrique Díaz-Martínez
(IGME, ProGEO, IUCN)
Missions of geological survey organizations:
- Collect data (national inventories)
- Store & manage (national custodians)
- Valorise (generate added value)
- Ensure availability (in paper & digital form)
- Contribute to sustainable use of non-renewable resources (attractiveness, development, etc.)

Geoheritage in Africa can contribute to financially benefit local communities and national GDP.
Relevance of geoconservation

- Social acceptance
- Education
- Geotourism
- Geoparks
- Land use planning
- Nature conservation
- Economic aspects
- Respect of Environment

Geoheritage
Relevance of geoconservation

- **Strategic planning**
  - Policies
  - Local, regional, national and international
  - Monitoring and enforcement

- **Legislation**

- **Inventory**
  - Identify, locate, classify, map and assess
  - Local, regional, national and international
  - Databases
  - Revise periodically

- **Geoconservation**

- **Public outreach**

- **Vulnerability and hazards**
  - Management planning
  - Restoration and rehabilitation
  - Zoning, protection and public use
  - Impact prevention and minimization
  - Preservation of values and services

- **Itineraries**
  - Guided tours
  - Workshops
  - Publications
  - ICTs
  - Education

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EuroGeoSurveys - The Geological Surveys of Europe
First International Conference on African & Arabian Geoparks
المؤتمر الدولي الأول للمنتزهات الجيولوجية الإفريقية و العربية
El Jadida, Morocco, 21-28 November 2011

Second International Conference on Geoparks in Africa & Middle East
Entitled
Geoheritage for local socio-economic sustainable development
Dakar, Senegal, 1-4 October 2014

Under the umbrella of
The Ministry of Higher Education and Research
The Ministry of Mines

Organized by

Aspiring Geoparks in Africa and Arab World
http://www.africangeoparksnetwork.org
Gap analysis – needs and expectations

- Only limited areas of the African continent have been inventoried for geoheritage, and no studies have been undertaken for geodiversity analyses.

- Most African geological surveys are not aware of:
  - geoconservation concepts and methodologies,
  - recent advances (since 1990s and continuing),
  - geoheritage management examples, and
  - use of geosites towards local socioeconomic development (geoparks and protected areas).

- Availability of staff (sufficient in number and well skilled on geoheritage studies) is a common problem. Shortage of funds and lack of staff to advise the public and special interest groups like local communities in using geosites and respecting geoheritage are also frequent.

- African geological surveys welcome international partner organizations to contribute to building up their capacities in geoheritage.
Gap analysis – needs and expectations

• Technical assistance and training are needed in:
  • geosite inventory (including mapping and value assessment).
  • geoconservation techniques towards short- and mid-term objectives, and
  • management (including planning, public use, restoration, etc.).

• Proper governance requires integration of these activities with national legislation and international conventions towards geoconservation.

• Conservation of geoheritage and geodiversity is compatible with mineral resource development and can effectively contribute towards the development of local communities.
Gap analysis from questionnaires

- Respondents’ knowledge and responsibilities regarding geoheritage varies significantly
- Some surveys are not aware of what has been done or what needs to be done
- Wide differences between countries:
  - some with no interest on the subject and no personnel dedicated to it
  - others with significant interest and inventories already done or on their way
- Overall interest towards geoheritage inventories and management

![Bar chart showing number of positive responses to specific questions regarding geoheritage analysis.]

<table>
<thead>
<tr>
<th>Questions</th>
<th>Number of positive responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Survey/Government Agency involved or plan to participate in geoheritage analysis?</td>
<td></td>
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<tr>
<td>2. Department/person(s) responsible for geoheritage analysis?</td>
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<td>3. Geoheritage inventory?</td>
<td></td>
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<tr>
<td>4. Other information sources on geoheritage? (universities, research centres, local stakeholders)</td>
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<td>5. Mining heritage?</td>
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<tr>
<td>6. Information/data on geoheritage used for land use/spatial planning?</td>
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<tr>
<td>7. Major needs /expectations in the field of geoheritage analysis?</td>
<td></td>
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<tr>
<td>8. Case study area for geoheritage analysis?</td>
<td></td>
</tr>
</tbody>
</table>

![Pie chart showing specific needs for geoheritage analysis.]

- Technical equipment: 57%
- Inventory of sites: 15%
- Training, coaching, capacity building: 14%
- Geosite conservation measures: 14%
A wealth of possibilities

- Collaborative network within OAGS and with EGS
- Participation in international geoconservation programs (IUCN, UNESCO)
- Geoheritage inventories and management
- Policy and legislation on geoconservation
- Education and public outreach
- Geoconservation in protected areas
- Support of geopark proposals
- Mining heritage and world-type mineral deposits
Training

OAGS: 10 – 15 trainees.
EGS-OAGS: 2-3 specialists +
Duration: 3 weeks
Location: OAGS country
Scope of training – lectures, exercises and field practice:

Part I
• Basic concepts and study of references, bibliography and documents of case studies areas.
• Methodology of inventory, including identification, classification, value assessment and mapping of geoheritage. Development and use of databases.
• Application to geodiversity characterization and its use in protected areas, protection of geosites, geopark proposals, and geotourism development.
• Consideration of geoheritage in land use planning and management, including geotourism and educational use.
• Field itinerary to visit local initiatives of geoparks, geotourism and geoheritage protection.
Part II

• Acquisition of databases and geoscientific maps.
• Identification of field study areas for practical exercises, and planning of field activities.
• Fieldwork to practice with the methodology, and itinerary to visit local initiatives of geoheritage valuing, geotourism development, etc.
• Visit to existing geoparks and practical learning on how geoparks are working.

General:
- Identify specific needs by country, and group towards planning of courses
- Practical courses based on case examples towards direct implementation
- Follow up and support later evolution of human resources and site development
Geological Survey organizations can also contribute to:

- Forensic geology
- Geoarchaeology
- Legislation
- Higher education
- Medical geology
- Public outreach and heritage interpretation
Merci de votre attention
Thank you for your attention
Obrigado pela vossa atenção

Ol Doinyo Lengai (the Mountain of God in Masai language), March 2008