

**SOUTH AFRICAN NATIONAL COMMITTEE
FOR THE
INTERNATIONAL UNION FOR QUATERNARY RESEARCH (INQUA)**

**ANNUAL REPORT FOR THE PERIOD
1 January 2007 to 31 December 2007**

1. Executive Summary

The membership of SASQUA and the SA-INQUA national committee were active during 2007. The XVII INQUA Congress was held during July/August in Cairns, Australia and attended by 13 members. The national voting delegate, Dr GA Botha, supported by Capacity Building Delegate R. Singh, attended the International Council meetings that elected the Executive for the 2007-2011 intercongress period. Mrs Singh was also awarded a “Best Student Poster” award. Dr M. Avery was re-elected as Vice President on the INQUA Executive Committee for a further four year period.

Members of the SA-INQUA committee were also appointed to the national committee of the International Year of Planet Earth (IYPE) and represented that committee at an international feedback meeting in Denver, USA. SA-INQUA and SASQUA members will contribute to a range of outreach oriented IYPE activities during 2008 and 2009. The ICSU ROA Science Plan was supported by delegates who attended the Workshop on Natural and Human-induced Hazards and Disasters in Africa”, from 21-22 July 2007 in Kampala, Uganda.

The XVII SASQUA biennial congress was held during April and attended by 50 delegates from 13 countries. The society attracted new student and overseas members during the event. To address the issue of outreach a scholar workshop was organised during the SASQUA congress. Learners and teachers from schools in the Pietermaritzburg – Howick area were provided with a series of lectures that introduced most of the important aspects of Quaternary research. In support of the inclusion of GIS in the Geography curriculum, the group were instructed in map making during an integrated GPS/GIS mapping exercise. The SASQUA Newsletter (attached) provides additional insight into activities of the Quaternary research community in South Africa.

Headings	Activities completed- January to December 2007		Activities planned- January to December 2008
2. Background & Composition of National Committee	Dr Greg Botha, Chairperson	Council for Geoscience (Quaternary geology)	
	Dr Margaret Avery, Deputy-	Cenozoic Studies, Iziko South African	

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<p>3. (Please indicate if any of the members of the committees have previously been capacity building candidates)</p>	chairperson	Museum, Cape Town (palaeontologist, Vice President INQUA)	
	Dr Marion Bamford	Bernard Price Inst., Univ. Wits, (archaeology, palaeobotany)	
	Amanda Esterhuysen	School Geography, Archaeology and Environmental Studies Univ. Wits. (archaeology)	
	Dr Ed February	Department of Botany, University of Cape Town (palaeobotany)	
	Dr Stefan Grab	School Geography, Archaeology and Environmental Studies, Univ. Wits. (geomorphology, cryogenic processes)	
	Prof Tim Partridge	Univ. Wits. & private consultant (palaeoclimatology, geomorphology, stratigraphy, sedimentology)	
	Prof Louis Scott	Department of Botany and Genetics; University of the Free State (palynology and palaeoclimate change)	
	Dr Francis Thackeray	Transvaal Museum (archaeology, palaeo-anthropology)	
	Dr Stephan Woodborne	Environmentek, CSIR (archaeology, radiometric dating)	
	Capacity Building Delegate Ms Rebekah Singh	Council for Geoscience (Quaternary geology)	
	Secretariat Ms Busiswa Mnyatheli	SA ICSU Secretariat, NRF	
	The previous Capacity Building Delegate, Dr A. Rau is now resident in Namibia		

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	and has not been able to take her place on the committee.		
4. Participation by South Africans in Union activities	Dr M. Avery attended meetings of the INQUA Executive Committee.		•
3.1. Size of local community	<p>The Southern African Society for Quaternary Research (SASQUA) has a multidisciplinary membership, some of whom contribute to the research efforts of INQUA Commissions.</p> <p>SASQUA presently has;</p> <ul style="list-style-type: none"> • 114 southern African members • 42 members overseas <p>Communication is through an annual newsletter, a website under construction and the biennial research conference.</p>		•
3.2 South Africans serving on Unions or its subsidiary bodies	<ul style="list-style-type: none"> • Dr M. Avery was re-elected to the Executive Committee of the International Union for Quaternary Research (INQUA) in the position of Vice-President for the 2007-2011 intercongress period. 		
<p>3.3 Attendance of International Congresses/Workshops</p> <ul style="list-style-type: none"> • Number of conferences attended • Number of South African delegates • Number of papers presented by South Africans (indicate any special invitations, e.g. keynote/ plenary talks) 	<ul style="list-style-type: none"> • XVII INQUA international congress, Cairns, Australia, 28 July to 3 August 2007. Attended by the following members, associated with number of oral/poster presentations in brackets. • G.A. Botha (2), R.G. Singh (1) , P. Holmes (3), B. Chase (5), D. Roberts (2), Z. Jacobs (5), M. Avery, J. Brink (1), ML Goedhart (2). Several overseas members of SASQUA also contributed; DSG Thomas (12), M. Bateman (6), A. Wintle (3), K. Heine (4). • Workshop on Natural and Human-induced Hazards and Disasters in Africa”, ICSU ROA, 21-22 July 2007, Kampala, Uganda attended by CA Willard who presented three papers on behalf of RG Singh, GA Botha. • VXII biennial SASQUA Congress, Howick, KZN. A total of 50 delegates attended and presented 41 papers and posters, representing the collaboration of 116 authors from 13 different countries and 34 different institutions. About 60% of all contributing authors were based in South Africa, with 11% from the United Kingdom, and about 9% from Australia. The significant international presence from the United Kingdom, Australia, Germany, Sweden, 		•

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	<p>Spain, France, Nigeria, the United States of America, Canada, Taiwan and Russia, highlights the strongly collaborative and interdisciplinary nature of Quaternary research in southern Africa.</p> <ul style="list-style-type: none"> • 7th International Symposium on Applied Isotope Geochemistry, International Association of Geochemistry, Stellenbosch, South Africa 10-14 September 2007 Compton, J.S. and Wigley, R.A. 2007. Deciphering the complex Cenozoic depositional history of the western margin of South Africa using the strontium isotope composition of phosphorite and biogenic carbonate. Abstract Volume, p. 45. Herbert, C. and Compton, J.S. 2007. Strontium and neodymium isotopic signatures recorded in terrigenous clays from the Holocene mudbelt on the western margin of South Africa. Abstract Volume, p. 71. • Magellan Workshop: Southern African Climates, Agulhas Warm Water Transports and Retroflexion, and Interocean Exchanges, Kiel, Germany, 11-13 October 2007. Compton, J.S. 2007. Continental margin dynamics on glacial/interglacial timescales. Invited talk for Magellan Workshop: Southern African Climates, Agulhas Warm Water Transports and Retroflexion, and Interocean Exchanges, Kiel, Germany, 11-13 October 2007. • 5th Annual Inkaba yeAfrica Workshop, Wild Coast Sun, South Africa, 22-23 October 2007. Compton, J.S., di Primio, R. and Uenzelmann-Neben, G. 2007. Living Africa: A critical overview and scientific advances. • Groundwater Conference 8-10 October 2007 Ilanga Estate, Bloemfontein, Free State Province. Vaeret, L., Haldorsen, S., Kelbe, B., Taylor R.H. and Botha G.A. 2007. Groundwater modelling and management of the Greater St Lucia Wetland Park. Prize for Best Oral Presentation. 	

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3.4 Capacity Building with regard to Membership of National Committee and involvement of young scientists in International Meetings	<p>Mrs Rebekah Singh of the Council for Geoscience was elected as the SA-INQUA Capacity Building Delegate to the XVII INQUA Congress in Cairns, Australia. She attended the International Committee meetings. Rebekah also presented the results of her MSc research project and was awarded one of the ten "Best student poster" prizes for her poster on "Landslide susceptibility modelling in KwaZulu-Natal". Her prize was a €150 book prize from Elsevier.</p> <ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
3.5 Organisation of Union related Conferences in South Africa	<ul style="list-style-type: none"> • The focus during this year was the INQUA Congress held in Australia. The International Council meetings were attended by voting delegate GA Botha with capacity building delegate RG Singh as observer. • SASQUA held its XVII biennial congress at the Umgeni Valley Nature Reserve in Howick, KwaZulu-Natal. 	<ul style="list-style-type: none"> • 3rd Southern Deserts Conference: Climate change and the peopling of the southern deserts. Molopo Lodge, Kalahari Desert, Southern Africa, 16th-19th September 2008. •
Contribution by members to key documents and publications (please indicate why they are regarded as key)	<p>Dr Margaret Avery assisted with the formation of the Eastern African Quaternary Association (EAQUA) during a meeting in Kampala. This organisation's Constitution is based on that of SASQUA.</p> <p>Dr Avery has now started the process of initiating a Western African Quaternary Association (WAQUA).</p> <p>SASQUA members including Partridge, Maud, Botha, Roberts, Haddon, Pether contributed to chapters in the new textbook of South African Geology.: M.R. Johnson, C.R. Anhaeusser, R.J. Thomas (eds.), The Geology of South Africa. Geological Society of South Africa and Council for Geoscience, This will be a reference work serving geology students locally and abroad for the next decade at least.</p> <p>L. Scott, M Meadows and others contributed to discussions of the Quaternary history of 4 biomes in the authoritative new book on Southern African vegetation: L. Mucina and C.M. Rutherford (eds). 2006. (appeared 2007). The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19:. 13.978-1-919976-21-1. South African National Biodiversity Institute, Pretoria. (Biome chapters: Fynbos Biome 4, Nama-Karoo Biome 7, Grassland Biome 8, and Savanna Biome 9).</p> <p>This is a key publication because it is the most recent and detailed on</p>	

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	the vegetation of Southern Africa.	
3.6 Report back on recommendations made during the in depth review (indicate what were the recommendations and what progress has been made to attend to them.)	<ul style="list-style-type: none"> No specific recommendations made. The committee responded to the call for greater outreach made in a previous review by holding the SASQUA Scholar Workshop in association with the XVII SASQUA Congress. 	<ul style="list-style-type: none">
4. Value to the Community and Benefit to South Africa	<ul style="list-style-type: none"> Members of the SA INQUA and SASQUA community continue to make significant contributions of great value to South Africa. Many years of research has been compiled into the new geological textbook that will serve geology and geography students for many years to come. Applied research in the sphere of Geohazards is contributing to the "Natural and Human-induced hazards and disasters in sub-Saharan Africa" theme of the ICSU ROA Science Plan which aims to address natural catastrophes that impact communities across the region. Presentation at the Groundwater Congress, Bloemfontein (above) was voted "Best oral presentation" by the delegates. 	
5. Public Society Interfaces and Outreach Programmes – self initiated or facilitated by ICSU	<ul style="list-style-type: none"> A scholar workshop was arranged for 10 April 2007, the day before the SASQUA congress to expose senior Geography and Science learners and their teachers from secondary schools in the Howick-Pietermaritzburg area to the broad field of Quaternary research. The event was arranged by Greg Botha and Rebekah Singh and sponsorship was received from the Council for Geoscience, GIMS and Umgeni Water. A series of lectures spanning a range of Quaternary themes was delivered by SASQUA members. The learners took part in an integrated GPS and GIS mapping exercise. These now form part of the new Geography Curriculum although few schools have the equipment or trained staff to provide the learners with meaningful instruction. Members of the SASQUA and SA-INQUA committees have been included in the SA national committee for the International Year for Planet Earth (IYPE) which includes a strong public outreach 	<ul style="list-style-type: none"> The IYPE programme will be implemented during 2008 with the official SA IYPE month being designated during September 2008. The IYPE theme will be introduced at the Grahamstown SciFest during April 2008.

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	<p>element.</p> <ul style="list-style-type: none"> An exhibition will be opened in November at the Transvaal Museum to mark the discovery of the hominid "Mrs Ples" (the most complete cranium of <i>Australopithecus africanus</i>) is 2.15 million years old. Replicas of Mrs Ples will be distributed to schools, with the objective of making casts available to every school in South Africa within the next 10 years. Waterkloof House Preparatory School (Old Boys Committee) has made a substantial and generous donation towards this goal, focussing initially on primary schools in Pretoria. 	
<p>6. Research Highlights/ New Initiatives in South Africa (indicate what benefits will these bring for SA)</p>	<p>There are several research projects that highlight the critical value of Quaternary research to the South African public.</p> <ol style="list-style-type: none"> The landslide mapping and susceptibility modelling in KwaZulu-Natal has highlighted the presence of large landslides. If such an event was to occur today the disruption to infrastructure would be significant. The presence of the large Kango Fault has been detected and mapped through the Cape Fold Mountains of the southern Cape. Reactivation of the fault has been recorded and this research is being considered in the context of large infrastructure development projects in the region. 	<ul style="list-style-type: none">
<p>7. Science Education (Any activities involving teachers, students, school curriculum development, graduate student development)</p>	<p>The SASQUA student workshop provided teachers and learners with an introduction to new aspects of the Geography curriculum.</p>	<ul style="list-style-type: none">
<p>8. Financial assistance received by South Africans direct from ICSU bodies during 2007</p>		<ul style="list-style-type: none">

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