

South Africa – Annex 2

Note : the most relevant actors (summarized in annex 3) are highlighted in green.

Name of institution	Principal activity	Capacity to conduct R&D on genetic resources	Sector covered	Contact with foreign actors	Website	Other information
International actors						
Southern African Development Community (SADC) plant genetic resource center	Plantae.	Unclear.	This center was created by the Southern African Development Community (SADC). It works in coordination with plant genetics centres in each of the Member States to conserve and preserve the genetic diversity and viability of Southern African plant stocks.	No	http://www.sadc.int/sadc-secretariat/services-centres/spgrc/	It works in coordination with plant genetics centers in each of the Member States of the SADC. It conserves and preserves the genetic diversity and viability of Southern African plant stock.
Public entities						

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Government of South Africa.		N.a.	All	Yes		It has a) A national bioeconomy strategy www.gov.za/speeches/view.php?sid=42968 . b) A national biotechnology strategy for South Africa 2001. National 10 years strategy plan on biotechnology that present the country's priorities. http://www.biotechnologie.de/BIO/Redaktion/PDF/de/laenderfokus/suedafrika-biotech-2001,property=pdf,bereich=bio,sprache=de,rwb=true.pdf c) The Role of the South African Government in Developing the Biotechnology Industry (interesting working paper to understand the complex South african biotechnology landscape www.ekon.sun.ac.za/wpapers/2012/wp192012)
Department of Education		N.a.	Education	Yes	www.dhet.gov.za/SitePages/Home.aspx	
Department of Science & Technology		N.a.	Science & technology	Yes	http://www.dst.gov.za	
Department of Trade and Industry (DTI)	Development of trade and industry.	N.a.	Trade and Industry	Unclear	http://www.dti.gov.za	

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Ministry of agriculture, forestry and fisheries.		Yes	Biodiversity	Yes	http://www.daff.gov.za	It has a strategic plan for agriculture and is considering to improve its sustainability by developing plant breeding strategies that maintain and enhance genetic diversity. It also houses the national plant genetic resources centre for South Africa (NPGRC) and focuses on plant genetic resources for food and agriculture. www.nda.agric.za/docs/sectorplan/sectorplanE.htm www.nda.agric.za/docs/geneticresources/Genebank/plant_genetic.htm
Technology Innovation Agency	The agency has for objective to stimulate and intensify technological innovation in order to improve economic growth and the quality of life of all South Africans by developing and exploiting technological innovations.	Unclear	Health, Agriculture, biotechnology	Yes	http://www.tia.org.za	Some of its 5 main areas include: Identifying and bridging gaps in the innovation value chain, linking technology developers to the market needs through partnerships with commercial players.
Academy of Science of South Africa (ASSAF)	Using science for the benefit of society.	Unclear	All scientific areas.	Unclear	www.assaf.co.za	

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<p>Department of Science and Technology (DST)</p>	<p>Conduct large-scale social-scientific projects for public-sector users, non-governmental organisations and international development agencies.</p>	<p>Yes</p>	<p>All</p>	<p>Yes.</p>	<p>www.dst.gov.za</p>	<p>It conducts large-scale social-scientific projects through the implementation of enabling policy instruments for all stakeholders. It has technology innovation programme that aims to promote the realisation of commercial products, processes and services from R&D outputs in diverse areas (e.g. energy, biotechnology, nanotechnology, robotics, photonics, indigenous knowledge systems, intellectual property management, technology transfer and technology commercialisation). It also has a research programme that promotes strategic development of basic sciences and priority science areas, through science promotion, human capital development, the provision of research infrastructure and relevant research support. Finally, it has a biosafety programme, in order to support innovation in biotechnology by ensuring the development of safe, sustainable biotechnological products.</p>
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Medical Research Council (MRC)	The South African Medical Research Council (SAMRC) was established in 1969 with the aim to deliver on a mandate to promote the improvement of the health and the quality of life of the population of our country through research, development and technology transfer.	Yes	Health	Yes	http://www.mrc.ac.za/	The scope of the SAMRC's research includes basic laboratory investigations, clinical research and public health studies. Research at the SAMRC focuses on the top ten causes of death in South Africa and includes TB, HIV, burden of disease, chronic diseases, alcohol and drug abuse, and women's health. There is one research unit on traditional knowledge www.mrc.ac.za/research/ourresearch.htm
South African Bureau of Standards (SABS)	SABS is a provider of standards, management systems, business improvement and regulatory approval information.	No	N.a.	Yes	www.sabs.co.za	
Industrial Development Corporation	It provides finance for industrial development projects, playing a catalytic role in promoting partnerships across industries within and outside our borders.	No	Agro-processing, Industrial innovation, Green energy and others...	No. However it supports companies that aim to develop international supply chains	http://www.idc.co.za	

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The National Intellectual Property Management Office (NIPMO)	It identify, disclose and manage the commercialisation of the IP referred to by a recipient of public R&D funds.	No	All sectors concerned by IP	No	http://www.nipmo.org.za	
National advisory Council on Innovation (NACI)	It advises the Minister of Science and Technology, and through him/her the Cabinet, on the role and contribution of innovation (including science and technology) in promoting and achieving national objectives.	No	All sectors concerned by innovation	No	http://www.naci.org.za	It organises an annual workshop : BIOPROSPECTING SOUTH AFRICA'S BIODIVERSITY: A DRIVER FOR THE NEW BIOECONOMY. An interesting document presenting the annual national seminar on biodiversity bioprospection (http://www.naci.org.za/wp-content/uploads/Position-Paper-on-Bioprospecting-in-South-Africa.pdf). Attendance list and organisations are available on the annex
Companies						
Solaltech	Specialises in healthy aging.	Yes	Neutraceutical	Unclear	http://www.solaltech.com/ing/ingsearch.php	
TSB sugar (south afrika)	Tsb Sugar is one of the largest muscovado and refined sugar producers. A group of investors linked to the company plan to re-launch the failed Procana biofuel project in Mozambic.	Unclear	Bio fuel	Yes	www.tsb.co.za	http://www.macauhub.com.mo/en/2011/11/23/south-african-investors-plan-to-re-launch-procana-biofuel-project-in-mozambique/

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Afriplex	Supplier, from source to shelf, of wellness product solutions based on indigenous African botanicals	Yes	Nutraceutical	Yes	http://www.afriplex.co.za	
Nativa	A pharmaceutical marketing and sales company that entered the alternative and natural health market in South Africa	Unclear	Nutraceutical	Unclear	www.nativa.co.za	
McNabs	It specialises in healthy food.	Unclear	Food, nutraceutical	Unclear	http://www.mcnabs.biz/	
ESSE	Production and marketing of organic cosmetics (skincare)	Unclear	Cosmetic	Yes, sourcing from southern africa.	http://esse.co.za	
EcoProducts	Production and marketing of disposable products (e.g. cups)	Unclear	Disposable	Unclear	http://www.ecoproducts.com	
Malee Natural Science	Malée has a range of premium bath and body care products made in South Africa with natural ingredients.	Yes	Cosmetic	Yes	http://www.maleeonline.com	

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AECI	AECI is a chemicals group domiciled in South Africa that often operates in niche markets and are supported by leading technologies which are developed in-house or are sourced from international partners.	Yes	All chemistry sectors (mining, agriculture, food, toiletries, cosmetics and pharmaceuticals)	Yes	http://www.aeci.co.za	
Bioventures	Bioventures is South Africa's niche Biotechnology and Life Sciences Venture Capital Fund	No	Biotechnology	Yes	webfactory.co.za	Bioventures invest in south african companies (http://webfactory.co.za/portfolio/bioventures/investments.htm)
Synexa Life Science	Synexa Life Sciences is a diversified biotechnology company.	Yes	Biotechnology - Pharmaceutical	Yes	http://www.synexagroup.com	On the Bioventure list
National biotechnology survey South Africa OECD 2003	National survey on south african biotechnology companies (OECD 2003)	N.a.	Biotechnology	N.a.		It provides an overview of the national biotechnology market and system. The document is dated back to 2004 and doesn't list the 106 companies surveyed.
Cosmetic Export Council of South Africa	A non-profit organisation that aims to facilitate and assist export opportunities for the South African cosmetic industry.	No	Cosmetic	No	http://www.cecosa.co.za/index.php/members	Further details are available on the member companies; classified by sector (e.g. make-up, perfumes, skin care, oils, health and wellness products).

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Trade associations						
PhytoTrade Africa	Phytotrade Africa members make a number of products using the species that are harvested by rural producers. Its purpose is to alleviate poverty and protect biodiversity in the region by developing an industry that is not only economically successful but also ethical, sustainable and Access and Benefit Sharing compliant.	No (but a specific project Phytotec is under development)	Agriculture, forest, NTFP	Yes	www.phytotradeafrica.com	It has expertise on ABS.
Southern Alliance for Indigenous Resources (SAFIRE)	Promotion of rural development through the sustainable utilisation, commercialisation and management of natural resources.	No	Agriculture, forest, NTFP	Unclear	www.safireweb.org	It retails cosmetic, beverage and nutraceutical products.
SA Essential Oil Producers Association (SAEOPA)	The website is under construction and there is limited information.	Unclear	Unclear	Unclear	www.saeopa.co.za	

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Biotechnology Regional Innovation Centers (BRIC)	Born from the National Biotechnology Strategy (2001), the BRIC aims to develop and commercialise the biotechnology industry.	Yes	Biotechnology	Yes	No Website available	The BRIC is structured into four divisions : BioPAD, CapeBio, EcOBio and PlantBio.
The Silicon Cape Initiative	A community of tech entrepreneurs, developers, creatives, angel investors, and VC's who are passionate about entrepreneurship and the roles we play in the future of South Africa.	No	All	No	http://www.siliconcape.com/	Bioentrepreneurs is an internet based group in Biotech related industry www.siliconcape.com/group/bioentrepreneurs
Universities						
Association of University Technology Managers (AUTM)					http://www.autm.net/Home.htm	
Cape Peninsula University of Technology	Education and research	Yes	Biodiversity	Unclear	http://www.cput.ac.za/	It has for instance research units for : environmental remediation, Molecular Pathogenic Microbiology, energy agrifood and functional food research units.

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Central University of Technology	Education and research	Yes	Biodiversity	Unclear	http://www.cut.ac.za/	It has a programme on Quality of Health and Living including : Applied Food, Safety and Biotechnology, Sustainable Farming Systems, Applied Health technology, Environmental Assessment and Management, Biotechnology.
Durban University of Technology	Education and research	Yes	Biodiversity	Unclear	http://www.dut.ac.za/	The Institute for Systems Science at the Durban University of Technology (DUT) has developed a dynamic systems simulation approach to studying a number of research questions in the fields of ecology, biology, engineering and science. It also does technology transfer.
Mangosuthu University of Technology	Education and research	Unclear	Unclear	Unclear	http://www.mut.ac.za/	
Nelson Mandela Metropolitan University	Education and research	Yes	Biodiversity	Unclear	http://research.nmmu.ac.za/Research/Institution-Research-Themes	A research theme is : Nanoscale Materials Characterization, New Materials and Processes
North-West University	Education and research	Yes	Biodiversity	Unclear	http://www.nwu.ac.za/	It has research centers on Nutrition and Pharmaceutical sciences.

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Rhodes University	Education and research	Yes	Biodiversity	Unclear	http://www.ru.ac.za/	Some research institutes include : Biomedical Biotechnology Research Unit (BioBRU)Biopharmaceutics Research Unit (BRU)Biotechnology Innovation Centre (BIC)Centre for Chemico- and Biomedical Research (CCBR) Unilever Centre for Environmental Water Quality
Tshwane University of Technology	Education and research	Yes	Biodiversity	Unclear	http://www.tut.ac.za/	It host the innovation support units. It is semi-independent from the Directorate of Research and Development. The responsibilities of this unit have escalated over time, partly to give effect to the explicit and implicit responsibilities and obligations imposed by the IPR Act.
University of Cape Town	Education and research	Yes	Biodiversity	Unclear		It has for instance a Biopharming Research Unit, Marine Research (MA-RE) Institute and a Nanosciences Innovation Centre.

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University of Johannesburg	Education and research	Yes	Biodiversity	Unclear	http://www.uj.ac.za/EN/Pages/Home.aspx	Research center within ght Faculty of Science include : . Centre for Catalysis Research . Paleoproterozoic Mineralisation Research Group . Sustainable Energy Technology Testing and Research Centre . Centre for Aquatic Research . Centre for Nanomaterials Science Research . Centre for Plant DNA-barcoding
University of KwaZulu-Natal	Education and research	Yes	Biodiversity	Unclear	www.ukzn.ac.za/Homepage.aspx	
University of Limpopo	Education and research	Yes	Biodiversity	Unclear	http://www.ul.ac.za/	
University of Pretoria	Education and research	Yes	Biodiversity	Unclear	http://web.up.ac.za/	Institutional Research Themes include : animal diseases, genomics, food nutrition and well being, energy.
University of South Africa	Education and research	Yes	Biodiversity	Unclear	http://www.unisa.ac.za/default.html	
University of Stellenbosch	Education and research	Yes	Biodiversity	Unclear	http://www.sun.ac.za/Home.aspx	Centres of excellence include : Centre of Excellence for Biomedical TB Research (CBTBR), Centre for Invasion Biology (CIB) .
University of the Free State	Education and research	Yes	Biodiversity	Unclear	http://www.ufs.ac.za/	Research divisions include : Advanced Biomolecular Research Materials and Nanosciences
University of the Western Cape	Education and research	Yes	Biodiversity	Unclear	http://www.uwc.ac.za/Pages/default.aspx	

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University of the Witwatersrand	Education and research	Yes	Biodiversity	Unclear	http://www.wits.ac.za/	A leading research university. It has a Molecular Biosciences centre of excellence.
University of Zululand	Education and research	Yes	Biodiversity	Unclear	http://www.uzulu.ac.za/	
Vaal University of Technology	Education and research	Yes	Biodiversity	Unclear	http://www.vut.ac.za/	
Walter Sisulu University	Education and research	Yes	Biodiversity	Unclear	http://www.wsu.ac.za/	
Research centers and science councils						
Council for Geoscience		Yes	Biodiversity	Unclear	http://www.geoscience.org.za/	
Council for Scientific and Industrial Research (CSIR)	The CSIR is committed to supporting innovation in South Africa to improve national competitiveness in the global economy. Science and technology services and solutions are provided in support of various stakeholders, and opportunities are identified where new technologies can be further developed and exploited in the private and public	yes	Biodiversity	yes	http://www.csir.co.za	It is a leading research organisation and has many bioprospection projects.

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	sectors for commercial and social benefit.					
Human Sciences Research Council					http://www.hsrc.ac.za/en	It has a Centre for Science, Technology and Innovation Indicators - See more at: http://www.hsrc.ac.za/en/departments/cestii#sthash.815GCKS2.dpuf
Medical Research Council		yes	Biodiversity	yes	http://www.mrc.ac.za/	
Mintek	Mining				http://www.mintek.co.za/technical-divisions/biotechnology-bio/	It has a biotechnology department.

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National Research Foundation (NRF)	The mandate of the NRF is to promote and support research through funding, human resource development and the provision of the necessary research facilities in order to facilitate the creation of knowledge, innovation and development in all fields of science and technology, including indigenous knowledge.	Yes	Biodiversity	Unclear	http://www.nrf.ac.za/	The Department of Science and Technology (DST) and the National Research Foundation (NRF) initiated a Funding Programme for Bioinformatics and Functional Genomics in 2009. The main purpose of the programme is to generate bioinformatics solutions and knowledge relevant to the South African biotechnology industry.
Water research commission					http://www.wrc.org.za/	
Southern African Research & Innovation Management Association (SARIMA)	The Southern African Research and Innovation Management Association (SARIMA) is a stakeholder organisation that provides a platform for the promotion and facilitation of best practice in research and innovation	Unclear	N.a.	Unclear	http://www.sarima.co.za/	

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	management in Southern Africa.					
Agriculture Research Center (ARC)	The Agricultural Research Council is a science institution that conducts research with partners, develops human capital and fosters innovation to support and develop the Agricultural sector. The principal agricultural research institution in South Africa	Yes	Agriculture	Yes	http://www.arc.agric.za/Pages/Home.aspx	ARC-Vegetable and Ornamental Plant Institute (ARC-VOPI) is a recognised in the field of plant biotechnology : http://www.arc.agric.za/arc-vopi/Pages/ARC-VOPI-Homepage.aspx

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South African National Biodiversity Institute (SANBI)	The South African National Biodiversity Institute (SANBI) leads and coordinates research, and monitors and reports on the state of biodiversity in South Africa.	Yes. Research Programme Activities such as : Biosystematics Research & Biodiversity Collections and The Molecular Ecology Programme	Biodiversity	Yes	http://www.sanbi.org/	many scientific databases and other resources developed by SANBI & partners are available here : http://www.sanbi.org/information
South African Institute for Aquatic Biodiversity	SAIAB serves as a major scientific resource for knowledge and understanding the biodiversity and functioning of globally significant aquatic ecosystems	Unclear	Aquatic biodiversity	Unclear	http://www.saiab.ac.za/	
Innovation Hub	The Innovation Hub - Africa's first internationally accredited Science and Technology Park and a full member of the International Association of Science Parks (IASP) - is a knowledge-intensive	Yes	Biosciences	Yes	http://www.theinnovationhub.com/index.php?option=com_content&view=article&id=160&Itemid=14	5 biosciences companies are hub residents : Africabio, Altis Biologics, eGoLiBio, Matayo Biofuels

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	business cluster in South Africa.					
NGOs						
Agribusiness in Sustainable Natural African Plant Products - ASSNAP	It helps to create and develop African agribusinesses in the natural products sector with a focus on addressing supply chain constraints.	Unclear	Agriculture and food	Unclear	http://www.asnapp.org.za/ www.asnapp.org	
The Licensing Executives Society of South Africa	The Licensing Executives Society of South Africa is an association of licensing and technology transfer professionals dedicated to the creation, promotion and implementation of business opportunities through equitable technology licensing, both locally and internationally.	No	N.a.	Unclear	http://www.licensing.co.za/	

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Biowatch	Biowatch South Africa was established in 1997 to publicise, monitor and research issues of genetic modification, and to promote biological diversity and sustainable livelihoods	No	Biodiversity	No	www.biowatch.org.za	
Other						
Online article on the regional concentration in the South African Biotech industry and its implication		N.a.	Biotechnology	N.a.	http://www.siliconcape.com/profiles/blogs/the-extent-of-regional	
Online article presenting the biotech innovation sector in South Africa		N.a.	Biotechnology	N.a.	http://web.up.ac.za/sitefiles/file/44/1026/2163/8121/Reality%20bites%20-%20biotech%20innovation%20in%20South%20Africa%281%29.pdf	
National intellectual property management office		N.a.	N.a.	N.a.	http://www.nipmo.org.za/links_page	The website offers interesting links with different institutions involved in R&D :

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National advisory Council on Innovation (NACI)	It advises the Minister of Science and Technology, and through him/her the Cabinet, on the role and contribution of innovation (including science and technology) in promoting and achieving national objectives.	No	All sectors concerned by innovation	No	http://www.naci.org.za/	An interesting document presenting the annual national seminar on biodiversity bioprospection (http://www.naci.org.za/wp-content/uploads/Position-Paper-on-Bioprospecting-in-South-Africa.pdf). Attendance list and organisations are available on the annex
Endangered Wildlife Trust (EWT)	The Endangered Wildlife Trust (EWT) is dedicated to conserving threatened species and ecosystems in southern Africa to the benefit of all people.	No	Biodiversity	Yes	www.ewt.org.za	A long list of south african biodiversity actors is available: http://www.ewt.org.za/links.html
List of bio innovation initiatives available in the bio economy report						e.g. biopharming, metagenomics, biodesign