

# An overview of SA participation in FP7 Environment along with insight into the global change grand challenge



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SA National Contact Point FP7: Environment  
Kogilam Iyer

# South African FP Participation Statistics

- 41% success rate 82 participations in 69 projects (across all themes)
- FP6 - 23 projects in environment
- FP7 -10 projects in environment to date

## Top 10 partners

UK, France, Germany, Italy, Belgium, Netherlands, Spain, Sweden, Switzerland and India

# FP7 Environment (2007-2013)

**Objective: To promote sustainable management of the natural and human environment and its resources**

- through advancing our knowledge on the interactions between the climate, biosphere, ecosystems and human activities and
- developing new technologies, tools and services, in order to address in an integrated way global environmental issues.

# Horizon 2020 Societal challenge - Climate Action, Resource Efficiency & Raw Materials

**Objective: to achieve a resource efficient and climate change resilient economy and a sustainable supply of raw materials**

- Fighting and adapting to climate change
- Sustainably managing natural resources and ecosystems
- Ensuring the sustainable supply of non-energy and non-agricultural raw materials
- Enabling the transition towards a green economy through eco-innovation
- Developing comprehensive and sustained global environmental observation and information systems

# SA Policy Environment

Enablers

Technology Development and Innovation

Grand Challenges

Farmer to pharma

Space Science

Energy

Global Change

Human and Social dynamics

Cross-cutting enablers

Human Capital – *Youth into Science initiatives, Centres of Excellence, South African Research Chairs Initiative, Professional Development Programmes*

Knowledge Infrastructure – *Universities, Science Councils, State-Owned Enterprises, Global Projects*

Careful sequencing of decisions ensure decline of legacy sectors balanced by growth in green economy sectors

Co-ordinated planning /investment in infrastructure that responds to climate change and environmental pressures

Adaptation strategies as part of national development strategies

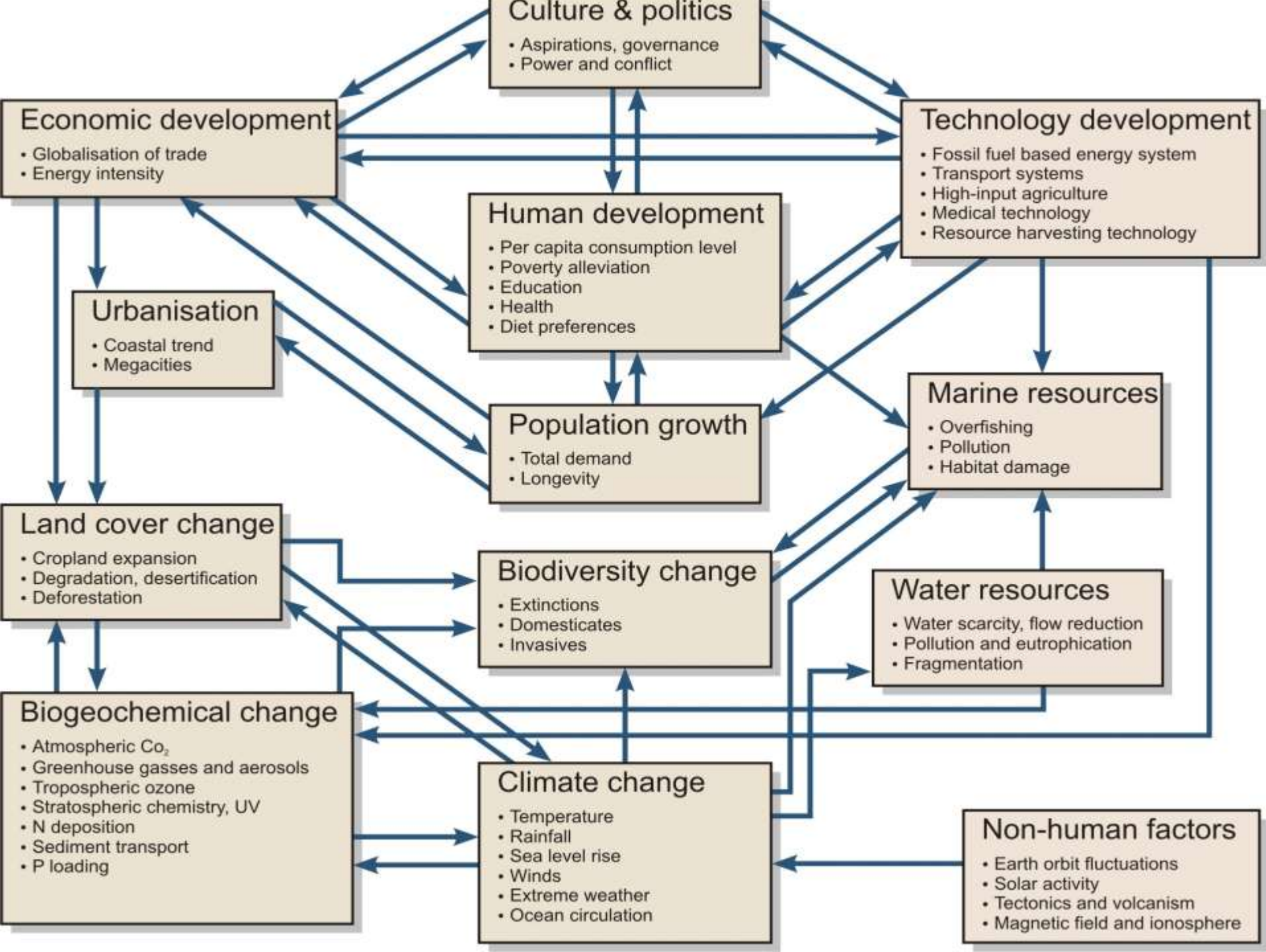
National Development Plan Vision 2030  
Towards a lower carbon and climate resilient society

Jobs created in domestic manufacturing of renewable energy technologies

Growth in the renewable energy sector

Reductions in CO2 emissions, while maintaining competitiveness





# Primary indicators



The extent to which scientific understanding of global change has improved as a result of South African research efforts (**improving the science**)



The extent to which decision-makers have used improved scientific understanding and technological development to achieve sustainable development goals in South Africa and Africa (**bridging the science policy interface**)



The extent to which South Africa has contributed to the development and deployment of innovative technologies that support appropriate responses to the negative impacts of environmental changes, particularly climate change (**technology and innovation for responses (adaptation and mitigation)**)



<b>KT1: Understanding a changing planet</b>	<b>KT2: Reducing the Human Footprint</b>	<b>KT3: Adapting the way we live</b>	<b>KT4: Innovation for Sustainability</b>
<ol style="list-style-type: none"> <li>1. Observation, monitoring and adaptive management.</li> <li>2. Dynamics of the oceans around southern Africa.</li> <li>3. Dynamics of the complex internal earth system.</li> <li>4. Linking the land, the air, and the sea.</li> <li>5. Improving model predictions at different scales.</li> </ol>	<ol style="list-style-type: none"> <li>1. Waste minimization methods and technologies</li> <li>2. Conserving biodiversity and ecosystems services</li> <li>3. Institutional integration to manage ecosystems and the services they offer</li> <li>4. Doing more with less</li> </ol>	<ol style="list-style-type: none"> <li>1. Preparing for rapid change and extreme events</li> <li>2. Planning for sustainable urban development in a South African context</li> <li>3. Water security for South Africa</li> <li>4. Food and fibre security for South Africa</li> </ol>	<ol style="list-style-type: none"> <li>1. Dynamics of transition at different scales - mechanisms of innovation and learning</li> <li>2. Resilience and capability</li> <li>3. Options for greening the developmental state</li> <li>4. Technological innovation for sustainable social-ecological systems.</li> <li>5. Social Learning for sustainability, adaptation, innovation and resilience.</li> </ol>



# Programmes & initiatives



**SAEON**  
South African Environmen....  
Observation Network



Global change,  
Society and  
sustainability  
research programme



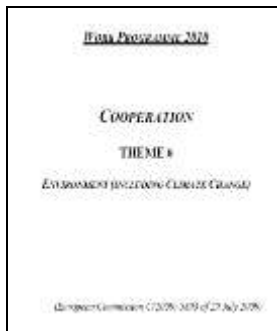
Integrated  
Biodiversity  
Programme

*Not limited  
to these...*

# Opportunities

- GC Research Partnerships
  - Joint research projects
  - Regional and international networks
- Risk & Vulnerability
  - Development of a customized spatial database system & technical support
  - Capacity building and training in risk and vulnerability identification and analysis
- Technology Development
  - Identification of appropriate technologies and innovations for low-carbon economy
  - Possible support for
- Human Capacity Development
  - Student exchange programmes
  - Participation of scientists/researchers in joint projects

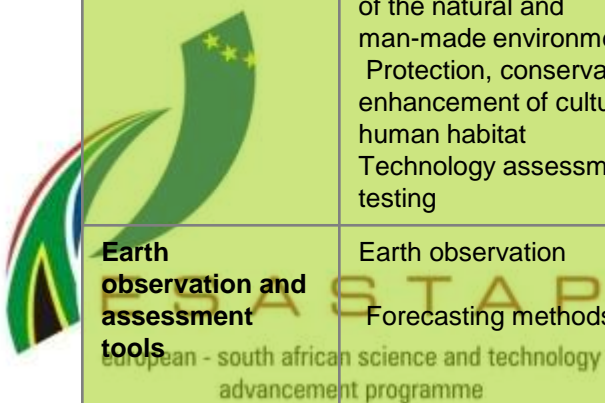
# EU FP7-ENV-2012 Work programme Priority areas



# SA Global change Research Plan Priority areas

Activity	Sub activity
<b>Climate Change, pollution and risks</b>	Pressures on environment and climate  Environment and health  Natural Hazards
<b>Sustainable Management of Resources</b>	Conservation and sustainable management of natural and man-made resources and biodiversity  Management of marine environments
<b>Environmental Technologies</b>	Environmental technologies for observation, prevention, mitigation, ..., of the natural and man-made environment Protection, conservation and enhancement of cultural heritage, incl. human habitat Technology assessment, verification, testing
<b>Earth observation and assessment tools</b>	Earth observation Forecasting methods and assessment

Knowledge challenges	Research themes
<b>Understanding a changing planet</b>	Observation and monitoring Dynamics of the oceans around southern Africa Dynamics of the complex internal earth systems Linking the land, air and sea Improving model predictions at different scales
<b>Reducing the human footprint</b>	Waste minimisation methods and technologies Conserving biodiversity and ecosystem services Institutional integration to manage ecosystems and ecosystem services Doing more with less
<b>Adapting the way we live</b>	Preparing for rapid change and extreme events Planning for sustainable urban development in a South African context Water security for South Africa Food and fibre security for South Africa
<b>Innovation for sustainability</b>	Dynamics of transition at different scales - mechanisms of innovation and learning Resilience and capability Options for greening the developmental state Technological innovation for sustainable social-ecological systems. Social Learning for sustainability, adaptation, innovation and resilience



Thank You

[Kogilam.Iyer@dst.gov.za](mailto:Kogilam.Iyer@dst.gov.za)

0128436526



ESASTAP

european - south african science and technology  
advancement programme