



## Proposal Report

Report Date                      17/07/2012                      10:12

Comments                      This report lists the information captured on the Proposal

### Proposal Report

<b>Proposal</b>	0000004886	for the	2012 to 2013 Financial Year	
<b>Title</b>	Climate change and forestry			
<b>Long Title</b>	Plantation resource development, characterisation and deployment for rapidly changing environments			
<b>Proposal Status</b>	New			
<b>Proposer</b>	Hettasch,Marianne			
<b>Lead BU</b>	Natural Resources Environment			
<b>Amt Requested</b>	200 000.00		<b>Thrust Amount</b> 0.00	<b>Theme Amount</b> 200 000.00
<b>Continue/New</b>	Continue		<b>Previous Proposal ID</b>	

#### Possible Project Leaders

Hettasch,Marianne

**Proposal** 0000004886 for the 2012 to 2013 Financial Year

**Title** Climate change and forestry

## Proposal description

Give an overview of the nature of the work to be undertaken. Innovative aspects (novelty) of the project should be described. Include a description of the expected outputs from the project and how these will contribute to the Thrust, Theme and Offering focus.

This project aims to assist in improving the ability of the South African plantation forestry sector to deal with the changing climate.

## Potential benefits

Describe how benefit will be derived from the project. This may include commercialised IP or publications, contract research opportunities, potential for SMME creation or joint ventures, knowledge creation for further work, etc. Benefit to the community may also be included.

task 1: The maps will be available to the forestry sector but will be of particular relevance to plantation growers. It will assist them in deciding what species/hybrids to plant where under future climatic condition thereby reducing the risk of crop failure.task 2: The deliverable of this task will be relevant to the forest growers and plantation owners. It will assist in making recommendations regarding adaptation strategies to climate-proof the South African plantations but in particular regarding conservation of a broad germplasm base.  
task 3: The policy brief will be developed in collaboration with the steering committee on climate change and forestry and is to government departments including DEA and DAFF as well as SADAC.

The work will also help formulate South Africa's long-term adaptation plan for the sector.

## Activities/Tasks

Describe the key activities or tasks of the project at task levels of a minimum value of R100k

Task 1: Modelling climate change impacts on plantation species and hybrids

Task 2: Germplasm options for adaptation to larger scale changes

Task 3: Recommendations to plantation forestry sector and government

## Objectives

List the key objectives to be achieved

Understand what the climatic (and other) scenarios for the future are and what implications they will have for the forestry sector

To make recommendations on germplasm options (identify species and hybrids and provenances for conservation needs and deployment) for commercial plantation species based on regional climate change predictions/models

To make recommendations to the plantation forestry sector and government regarding adaptation strategies to ensure the resilience of the plantation forestry sector

## Background to proposal

Describe the background to the proposal: make reference to previous work undertaken, whether by the CSIR or known through the published literature. Information concerning the patent situation should be given to provide assurance that any pre-existing patent rights will not be infringed.

**Proposal** 0000004886 for the 2012 to 2013 Financial Year

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Forests are sensitive to climate change and as they have long life spans, they are more likely to be subjected to changing environmental conditions. Changes in climate that are likely to have an impact on natural and plantation forests include changes in air and soil temperatures, the amount and distribution of precipitation, the concentration in atmospheric CO<sub>2</sub>, changes in climatic variability as well as changes in the frequency and severity of extreme events such as severe droughts and high winds. In addition the frequency and intensity of fires are expected to increase as well as outbreaks of insects and pathogens as current boundaries of insect and pathogen populations are.

In South Africa plantation forestry is an important component of the economy, covering approximately 1.3 million ha of land, and supporting the pulp, paper, construction, energy and other industries. Given the long-term nature of forestry, it is particularly vulnerable to rapid changes the environment as well as land ownership, markets, and technologies. Whereas forest is widely recognized as having a potential role to play in mitigation, little research has been done on adaptation strategies in general and for South Africa in particular. This project aims to assist in improving the ability of the South African plantation forestry sector to deal with the changing climate.

### Proposal Milestone Investment Summary

<u>Financial Year</u>	<u>Investment Summary</u>	<u>Investment Amount</u>
2012 to 2013 Financial Year	Current Investment Year	200 000.00

### Proposal Milestone Investment detail for Current Financial Year

<u>Milestone Deliver Date</u>	<u>Milestone Investment Amount</u>
2013/01/31	70 000.00

#### Task 1: Modelling climate change impacts on plantation species and hybrids:

Maps of future species and hybrid suitability  
Draft publication (and handbook)

<u>Milestone Deliver Date</u>	<u>Milestone Investment Amount</u>
2013/01/31	65 000.00

#### Germplasm options for adaptation to larger scale changes:

position paper

<u>Milestone Deliver Date</u>	<u>Milestone Investment Amount</u>
2013/01/31	65 000.00

#### Recommendations to government and forestry sector:

policy brief

**Proposal** 0000004886 for the 2012 to 2013 Financial Year

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### Other Investment Sources

Description

Value of Investment

### Possible Bottlenecks

Bottleneck Information

project management  
availability of data

### Funding requested from the BU - Thrust - Thrust Investment Area

**Business Unit**

**% Split between Capability / Offering**

**Thrust**

/

**Thrust Inv Area**

**Amount Requested**

**% Split for Thrust Line**

**Total Amount Requested**

**Total Percentage**

### Funding requested from the Theme - Theme Investment Area

**Theme** 0000004685 NRE Adapting to and mitigating

**% Split between Capability / Offering**

**Theme Inv Area** 0000004686 climate change  
NRE Adapting to and mitigating climate ch

50.00 / 50.00

**Amount Requested**

200,000.00

**% Split for Theme Line**

100.00

**Total Amount Requested**

**200,000.00**

**Total Percentage**

**100.00**

**Proposal** 0000004886 for the 2012 to 2013 Financial Year  
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## Proposal's fit to the Criteria

### Criteria Description

### Proposal's Fit to this Criteria

SET HR Development

2  
 Little HR Development possible at this stage

R&D Outputs/Outcomes

7  
 the outcomes are relevant to the industry and the outputs have been planned to make maximum impact

Is the proposal clear and is it 'value for money' i.e. the research question and methodology are well defined, the deliverable are realistic and clearly stated, and the investment required is commensurate with the deliverables

6  
 clear research plan has been developed by the whole team and advisors (Emma Archer and Flic Blakeway)

Is the project likely to contribute to the S&T output, outcome and impact of the CSIR i.e does the potential exist and is there a good probability of technical success

7  
 There is a good probability of technical success as the data and models are available

Is the team well equipped to deal with the research tasks and challenges i.e. has prior track record in the same area, in a related area, has track record in research, has no track record

5  
 The main team has expertise in the forestry sector and is assisted by climate change experts and are working in collaboration with the ICFR

Is the research question and hence the proposed research novel to the global research community (1), the country (2), to the CSIR (3), to the unit (4)

2  
 It is of relevance to the forestry sector in the country and has not been addressed yet

Is the research topic aligned with the national R&D strategy (1), the CSIR strategy (2), the unit strategy (3) and the thrust or theme (4) strategy?

1  
 Climate change and adaptation are important to the national R & D strategy