

---

Provincial Project Proposal Development

**Project number/  
cost centre:  
16.9002.3 – 001.00**

---

## Contents

<b>0. List of abbreviations .....</b>	<b>2</b>
<b>1. Context.....</b>	<b>3</b>
<b>2. Tasks to be performed by the contractor .....</b>	<b>14</b>
<b>3. Concept.....</b>	<b>22</b>
Technical-methodological concept .....	22
Project management of the contractor:.....	23
<b>4. Personnel concept. ....</b>	<b>24</b>
Team leader/ Project Manager .....	24
Hydrologist/ Hydrogeologist - Expert 1 .....	25
Climate Change- Expert 3 .....	26
Financial Consultant- Expert 4 .....	26
<b>5. Costing requirements .....</b>	<b>28</b>
Assignment of personnel .....	28
Travel.....	28
Workshops, training.....	28
<b>6. Inputs of GIZ or other actors .....</b>	<b>28</b>
<b>7. Requirements on the format of the bid .....</b>	<b>29</b>
<b>8. Option .....</b>	<b>Error! Bookmark not defined.</b>

## **0. List of abbreviations**

AVB	General Terms and Conditions of Contract (AVB) for supplying services and work 2017
ToRs	Terms of reference
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
DEFF	Department of Environment, Forestry and Fisheries
NCCRP	National Climate Change Response Policy
IPCC	Intergovernmental Panel on Climate Change
PDMC	Provincial Disaster Management Centre
PMT	Project Management Team
CCRS	Climate Change Response Strategy

## 1. Context

### BACKGROUND & CONTEXT

Climate change impacts are felt throughout all sectors directly and indirectly; across various landscapes and regions. These impacts and vulnerabilities have been manifesting themselves at varying degrees from local to provincial level, and require actions and support to respond. The National Department of Environment, Forestry and Fisheries (DEFF) is the mandated authority for the implementation of the National Climate Change Response Policy (NCCRP). According to the NCCRP, the provincial departments are mandated authority for the maintenance and preservation of the environment within their boundaries, and are responsible for the development of their climate change response strategies, which evaluates provincial climate risks and impacts and identify key adaptation measures. DEFF has through the support provided by GIZ in collaboration with all nine (9) provincial departments (table 1 below), established the Provincial Climate Change Support Programme which led to the development and review of Provincial Climate Change Response Strategies (CCRS's).

Province	Department
Mpumalanga	Department of Agriculture, Rural development, Land and Environmental Affairs (DARDLEA)
Limpopo	Department of Economic Development, Environment and Tourism (LEDET)
North West	Department of Rural, Environment and Agricultural Development (READ)
Northern Cape	Department of Environment and Nature Conservation (DENC)
Eastern Cape	Department of Economic Development & Environmental Affairs (DEDEA)
Free State	Department of Economic Development, Small Business, Tourism and Environmental Affairs (DESTEA)
Gauteng	Department of Agriculture and Rural Development (GDARD)
Western Cape	Department of Environmental Affairs & Development Planning (DEADP)
Kwazulu Natal	Department of Economic Development, Tourism & Environmental Affairs (DEDTEA)

*Table 1: List of provinces and their Provincial Environment Departments*

The CCRS's were developed through an integrated and co-ordinated approach to advance the objectives of the NCCRP at the provincial level, and also contributing to the transition to a climate resilient society, through various measures that will promote alignment, co-ordination and capacity building in response to the impacts of climate change. The key sectors identified at provincial level includes water security, food production and security

(agriculture), ecosystems services (biodiversity), human health, human settlements, disaster risk reduction and infrastructure. The level of vulnerabilities were determined through the use of the methodology as per the Intergovernmental Panel on Climate Change (IPCC) endorsed framework 2007 Report (Old Paradigm) (Exposure + sensitivity = Potential Impact + Adaptive capacity = Vulnerability) which eventually led to the ranking of each sector vulnerability using the scale of low/medium/high. An extensive list of adaptation options and measures has been proposed for the various sectors in responding to climate risks, impacts and vulnerabilities which include climate smart agriculture, water and food security, etc.

In ensuring provision of entry points for effective implementation of the proposed adaptation options, further work is required in the form of this assignment i.e. developing a fully costed bankable project proposal for each adaptation measure proposed. The implementation of climate change adaptation responses and management of various measures arises from the intersection between social livelihoods, natural environment, economic and developmental growth. Every step taken with regards to climate change adaptation should take into account the costs associated with implementation, the multiple benefits provided within the sectors as well as the elements available for building the adaptive capacity associated with the various sectors. Therefore, measures looking to enhance adaptive capacities to climate change are imperatively needed in order to ensure transformational, efficient and effective adaptation responses.

As informed by the Situational Analysis and Needs Assessment report (SANAs 2015) as well as the identification of resources and capacities within the CCRS's, capacity deficit was high ranking on the skills required to develop project proposals that can be submitted to a variety of donor funders to fast-track project implementation. This initiative was therefore developed to address the gap.

In order to inform the approach and priority areas of interventions, adaptation options were prioritised from each of the nine (9) CCRS's by the Provinces and grouped per thematic areas in line with key outputs. The first phase of similar work focused on six (6) of the nine (9) provinces in the previous financial years where six project proposals were developed and funding sought for implementation. This assignment will therefore focus on one (1) additional Province and one province supported in the previous phase.

## **OBJECTIVE**

This project aims to assist two provincial governments (Eastern Cape and Gauteng) in addressing water and fire related climate risks by developing funding project proposals (technical and financial) with the following objectives

1. To undertake a background analysis through desktop review, interviews and site visits (where possible as per Covid-19 Lockdown Regulations) seeking to inform the development of project proposals for each intervention as proposed in each province.
2. To develop a project proposal (conceptual and technical) for each provincial intervention identified.

3. To provide cost benefit analysis for each identified intervention/project and to identify funding sources appropriate for each intervention/project concerned.
4. Finalise the proposal to fit requirements of identified funding source.

Due to Covid-19 Lockdown regulations, DEFF, Provinces and GIZ will determine how engagements will take place. The service provider is to consider both physical and online engagements in their proposal and budget.

## **WORK PROGRAMME 1: GAUTENG PROVINCE – DISASTER RISK REDUCTION AND RESPONSE (FIRE MANAGEMENT)**

### **Context**

Gauteng is the economic heart land of South Africa and has observed drastic temperature increases of more than 2°C / Centaury since 1931 to 2010. The number of hot days has also been increasing during the same time period. The Intergovernmental Panel on Climate Change (IPCC) has identified two simplified climate change scenarios associated with: i) higher fire frequency (air temperatures increase which increases the severity of heat waves and drought and causes vegetation to desiccate at a more rapid rate, which leads to drier fuel loads and more fires); and ii) higher fire intensity (rainfall increases, which leads to heavier fuel loads and increased rates of spread when fires do occur). These scenarios apply to the South African context, especially Gauteng due to its particularly fire-prone landscapes of the grasslands, savannas and fynbos. Climate trends strongly suggest a link between increased temperatures and increased fire incidence. Gauteng may plausibly experience temperature increases of 3-4 °C during the period 2040-2060 under low-mitigation scenarios, with associated drastic increases in the annual number of very hot days, heat-wave days and high fire danger days. In last few years the fires in the GDARD managed nature reserves, particularly Suikerbosrand already show increased fire risks.

### **Problem statement**

Gauteng Province has in the recent years been battling with Wildland, Informal Settlement and high-rise building fires. Due to the factors mentioned above such as persistent drought conditions and higher temperatures contributing to increase in fuel for fires, under challenges such as a spark from lightning, electrical failures, human error or planned fires can quickly get out of control making the Province to be more vulnerable. Since Gauteng is the most developed and urbanized province the fires could carry very high financial and human costs. The Gauteng Provincial Disaster Management Level 1 Plan (GDCOGTA, 2017), lists several natural phenomena amongst the highest priority risks – flooding or severe storms, weather-related incidents (winds & lightning), landslides and fires. Veldfires are considered to have high probability and moderate severity, whereas flooding has high probability and catastrophic severity. The Gauteng City Region Over-arching Climate Change Response Strategy and Action Plan (2019) thus indicate the need for a review and enhancement of early warning systems for Agriculture, Flooding, Fire and Heat waves.

The Province has identified response measures to respond to these challenges and are as follows:

**Construction of high- technology, environmentally friendly “Green” Fire Stations.**

**Background**

A key component of the Gauteng Provincial Disaster Management Centre (PDMC) strategic approach to climate change response is the “mainstreaming” of climate change adaptation throughout the relevant institutional structures and process as it relates to disaster risk reduction. The Gauteng PDMC and its local counterparts have a crucial role to play in facilitating climate resilience through the performance of mandated responsibilities. These include the integration of risk reduction in human settlement planning, urban development, provision of municipal infrastructure and basic services, water and energy demand management and local disaster management.

The mainstreaming of climate change adaptation implies that the Province adopt, expand and enhance the measures that factor climate change risk into their normal decision-making and planning processes and the integration thereof with the departmental/sectoral risk reduction processes. Climate change considerations should feature in the everyday disaster risk reduction activities of provincial and local government and addressed cohesively in development planning instruments such as Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs). This includes building resilience through various structural improvement measures.

**Construction of green fire stations as a disaster management structural measure to improve Community Based Adaptation (CBA).** CBA in Gauteng entails measures primarily aimed at improving the capacity of local communities to respond to climate change risk and associated impacts thereof. CBA, similar to community-based disaster risk reduction, requires integrated approaches that are cognisant of traditional knowledge and aims to address current vulnerabilities, but also build communities’ resilience to cope with future challenges.

To effectively build adaptive capacity on a community level, the Gauteng PDMC would consider the following four inter-related strategic priorities, on a community level:

1. Promotion of climate-resilient livelihoods, including income diversification and capacity building for planning and improved risk management;
2. **Disaster risk reduction to reduce the impact of hazards, particularly on vulnerable households and individuals;**

3. Capacity development for local civil society and governmental institutions so they can provide better support to communities, households and individuals from their adaptation efforts; and
4. Advocacy, social mobilisation and empowerment to address the underlying causes of vulnerability of a community and the subsequent exposure to the impacts of a changing climate.

These strategies can be achieved through promoting change on the community level as well as through integrated through the provincial and local disaster management structures.

## **SCOPE OF WORK GAUTENG PROVINCE**

**Develop a costed project proposal for the Construction of High- technology, environmentally friendly “Green” Fire Stations to respond to disaster risk and promote climate change adaptation. The following activities are required in the proposal in order to ensure the deliverables are achieved after funding has been sought mentioned below:**

The delivery of fire services normally originates from fire stations. As the population grows the number of fire stations will have to increase as well. The current fire stations in the province are not coping with the increasing demands for service, in both the range of services expected and the ability to respond to climate induced and man-made disasters. Funds are required to construct at least three (3) high technology “Green” Fire Stations in three (3) municipalities within the province. The design of the fire stations should be groundbreaking and provide an innovative way of dealing with fires in the Country. The “green” fire stations must amongst other things portray the following features:

- Be constructed using sustainable materials;
- Have water-saving features such as onsite rainwater capture/reuse system;
- Energy efficient systems such as enhanced use of natural lighting, energy-producing solar photovoltaic (PV) arrays, energy-saving PV water heating systems, and LED lighting systems.

The following are the equipment to be included in the fire stations:

### **1. Firefighter Drones**

Procurement of Drones that are equipped with thermal cameras. Drones equipped with thermal cameras can see in the low light-dark conditions, detect irregularities on various infrastructure i.e. solar panels, inspect insulation on buildings, and even check for hot spots in burning buildings. The Drones will be used for both wildland firefighting and buildings because thermal drones can see through smoke and dark to detect the location of hotspots and firefighting crew.

## 2. Rescue Equipment

Fire and Rescue Services are responsible for rescuing people and animals. This is a task that requires specialist equipment, it is thus crucial for Fire and Rescue Services in Gauteng to have access to rescue equipment including swift water rescue equipment such as boats, wet suits, helmets, stretchers etc.

It must be noted that Gauteng has established an Urban Search and Rescue Team of South Africa (USAR- SA) which is a Special Operations Response Team that was established in Gauteng Province to respond to major emergency incidents and disasters both locally and internationally in order to provide assistance to victims trapped in collapsed structures. These have undergone International Search and Rescue Advisory Group (INSARAG) External Classification (IEC) process and in the third team to be classified in Africa. Although it is geared up to respond to major incidents such as fires and structural collapse, it is in dire need of equipment.

## 3. Early Warning Systems

Investments in early warning systems are amongst the most cost-effective measures the province and the country can undertake. An integrated warning system which consists of scientifically designed and located detection sensors, a data analysis and warning decision-making facility.

The Service provider will be provided with the following information during the inception meeting:

Data such as maps, site selection, and vulnerability assessments related to identified intervention. Regarding site selection, members of the project management team will make final decisions on which sites (location of fire stations) informed by available data. However, the service provider can input into the decision-making process.

**Deliverable 1:** *Detailed specifications of what constitutes a High- technology, environmentally friendly “Green” Fire Station and itemised costing including labor costs.*

**Deliverable 2:** *Detailed specifications of firefighter drones and itemised costing including cost for training / capacity building on utilisation (skill transfer)*

**Deliverable 3:** *Detailed specifications of rescue equipment not limited to items mentioned above and itemised costing including cost for training / capacity building on utilisation (skill transfer).*

**Deliverable 4:** *Detailed project proposal of a Fire Early warning and response systems, including equipment listed in the deliverables 2 &3, that seeks to improve preparedness and adaptive capacity of firefighters and local communities drawing on and integrating scientific and local knowledge. This should be informed by the guidance from institutions that have undertaken similar processes e.g. SAWS*

**Deliverable 5:** *A how-to guide/manual for developing project proposals for similar or associated interventions should be developed, including methodologies for the various assessments that should be undertaken in order to arrive at a technical proposal.*

All of the above should form part of a fully costed project proposal ready for submission with recommendation on available funding sources.

**WORK PROGRAMME 2: EASTERN CAPE PROVINCE –Develop a project proposal for ‘BLUEPRINT FOR MAINSTREAMING CLIMATE CHANGE INTO THE WATER SECTOR’**

**Context**

The Eastern Cape consists of a land mass of 169 000 km<sup>2</sup> with a population of over six million inhabitants. The Eastern Cape gets progressively wetter from west to east. The Climate is highly variable which attests to the diverse biomes. The west is mostly semi-arid Karoo, except in the far south, which is temperate rainforest in the Tsitsikamma region. The coast is generally rugged with interspersed beaches. Most of the province is hilly to mountainous between Graaf- Reinet and Cedarville which includes the Sneeuberg, Stromberg, Winterberg, Amatole and the Drakensberg. Mountain ranges. The highest point in the province is Ben Macdhui at 3001 m.

The Eastern Cape Province houses seven (7) of the eight (8) biomes which occur in South Africa. These include Coastal Tropical thicket, Forests, Grasslands, Savanna, Nama, Forest and Deserts ecosystems. The Indian Ocean borders the coastline with a dominant current which starts in the east and moves south westward, creating shores and influencing weather and climate.

The Province is comprised of six (6) district and two (2) metropolitan municipalities with the agricultural and motor vehicle manufacturing sectors driving the economy. Global warming is expected to have a serious impact on the climate. In the medium term temperatures are expected to increase by 2 to 3 degrees along the coast line while increasing by 3 to 4 degrees inland. Rainfall patterns are also expected to change which will in turn impact the water availability and threaten the livelihoods of its inhabitants unless measures are taken to build resilience.

Studies and analysis have already demonstrated the declining rainfall trend throughout the years between 1970 and 2010 in places like Grahamstown, Uitenhage and Bathurst (Zengeni et al, 2016) while others have shown significant increases in rainy days across the southern Drakensberg and southern coastal areas (MacKellar et al., 2014) with significant increase in temperatures in the interior and karoo. Groundwater is depleted and some rivers have dried up while others are at critically low levels threatening irrigation of commercial crops and domestic water

use. Rainfall intensity and distribution is expected to change with more dry spells predicted across the whole province. These trends predict significant water challenges in the province. Increased evaporation rates, longer dry spells, changes in stream flow patterns will ultimately impact on the water storage infrastructure, agriculture and economy of the Province.

The Constitution of South Africa assigns responsibility for water management to both the national and local spheres of government. With the national sphere responsible for natural resource management and construction of bulk infrastructure and local government responsible for water treatment and distribution to local communities. Within these two spheres of government there are different bodies with varying responsibilities. These institutions include the National Department of Human Settlements, Water and Sanitation, Water Catchment Agencies, Water Boards, Water Service Providers and Local Municipalities.

These various structures mean that greater alignment is required by these institutions as it has been evident that Municipalities (Water service authorities) are vulnerable to the impacts of Climate Change and threatening their water security. Climate change is a cross boundary risk. Impacting both water quantity and quality. For both Nelson Mandela Bay Metropolitan Municipality (NMBM) and Buffalo City Metropolitan Municipality (BCMM) (the biggest regional municipalities as well as economies) their water is derived from catchments outside of the municipal boundaries. This gives rise for the need for a seamless blueprint to guide the regional and local role players and other departments in addressing issues which impact on water security.

The Department of Human Settlements, Water and Sanitation has developed a Sector National Adaptation Strategy, however because this document is of a National scale its emphasis and applicability is unclear at the subnational level.

### **Problem Statement**

In recent years government has been battling with delivering water management services and infrastructure to inhabitants and communities in the Eastern Cape while battling the impacts of drought. Climate Change is expected to continue undermining these activities while making communities vulnerable and undoing the achievements of the developmental state.

### **SCOPE OF WORK EASTERN CAPE**

The Province has identified response measures to respond to these challenges and are as follows:

A refined blueprint is required to ensure that local role players understand their roles and relevance in mainstreaming climate change into their day to day activities. The blueprint is required to highlight those local risks and ensure that local resilience is built against the impacts of climate change for communities and institutions.

The service provider should develop a fully costed project proposal for a seamless and integrated blueprint to mainstream climate change considerations into the water sector in the Eastern Cape. It aims to provide a roadmap for local role players to:

1. Define and refine the roles, responses and responsibilities of water management institutions in terms of governance, operations and maintenance as well as management;
2. Define what needs to be done to enhance the Governance of the water management institutions around the question of climate change;
3. Determine how to improve institutional Data Systems, procedures and processes so as to ensure that climate change considerations are mainstreamed into operational and strategic management activities;
4. Develop clear actions for the Water Catchment Agencies, Water Service authorities, other government institutions and civil society to build resilience to climate change impacts in the water sector;
5. Define how Community Resilience in the water sector will determined and measured; and
6. Integrated and aligned activities across and within the Spheres of Government.

Activity	Deliverables
<p><b>Activity: 1:</b> Define and refine the roles, responses and responsibilities of water management institutions in terms of governance, operations and maintenance as well as management;</p>	<p>1. Governance</p> <ul style="list-style-type: none"> <li>• Determine a clear Vision and Mission which incorporates the role of Climate Change in the governance role.</li> <li>• Determine how institutions refine roles, responses and responsibilities into the institutions culture so as to mainstream climate change into the institution so that the institution becomes responsive and adaptive to the influences of climate change.</li> <li>• Clearly provide a roadway, inclusive of roles, response and responsibilities on how water institutions can build resilience and reducing vulnerability to the impacts of climate change.</li> <li>• Identify and guide institutions on who and how they should conduct Intergovernmental relations and collaboration to ensure that climate change is mainstreamed into their institutional relationships and communications.</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify and guide institutions on who and how they should create awareness and communicate messages of climate change to their internal and external stakeholders as well as who should be responsible for this role.</li> <li>• Provide guidance on how research and development should be mainstreamed into the institutional governance.</li> </ul> <p>2. Management and Maintenance</p> <p>Determine who and how to incorporate the impacts of Climate Change into Management and Maintenance action plans in order to:</p> <ul style="list-style-type: none"> <li>• Increasing water supply</li> <li>• Flood protection measures</li> <li>• Infrastructure safety</li> <li>• Hydro-geo-meteorological monitoring systems.</li> <li>• Groundwater development &amp; management.</li> </ul> <p>2. Management Activities</p> <p>Determine what and how the climate change should be incorporated into the following management aspects:</p> <ul style="list-style-type: none"> <li>• Data and information management.</li> <li>• Risk, Vulnerability Assessments.</li> <li>• Sanitation Management.</li> <li>• Planning and Response Strategies.</li> <li>• Water allocation and authorization.</li> <li>• Water Conservation and Demand Management.</li> <li>• Water quality management.</li> </ul>
--	--

	<ul style="list-style-type: none"> <li>• Resource management and protection.</li> <li>• Disaster management.</li> </ul>
<b>Activity 2:</b> Define what needs to be done to enhance the Governance of the water management institutions around the question of climate change;	<ul style="list-style-type: none"> <li>• Clear actions and costing of what Governance activities are required.</li> <li>• Clear actions and costing of what operational and maintenance activities are required.</li> <li>• Clear actions and costing on what management activities are required.</li> </ul>
<b>Activity 3:</b> Determine how to improve institutional Data Systems, procedures and processes so as to ensure that climate change considerations are mainstreamed into operational and strategic management activities;	<ul style="list-style-type: none"> <li>• Clearly define which, what and how water management parameters will be affected by climate change.</li> <li>• Determine how this data can be utilised to inform operational and strategic management activities.</li> <li>• Determine how best this data can be institutionalised into the data systems.</li> </ul>
<b>Activity 4:</b> Develop clear actions for the Water Catchment Agencies, Water Service Providers, other government institutions and civil society to build resilience to climate change impacts in the water sector;	<ul style="list-style-type: none"> <li>• Based on information as determined in Activities 1,2,3 &amp; 5 provide a clear and concise blueprint on how and what institutions should do to mainstream climate change into their organisations in order to develop Community Resilience to the impact of climate change.</li> </ul>
<b>Activity 5:</b> Define how Community Resilience in the water sector will be determined and measured; and	<ul style="list-style-type: none"> <li>• Determine an indicator which captures and conveys <b>community resilience</b> to the dynamics of climate change on their water security.</li> <li>• Clearly define this indicator inclusive of limitations.</li> <li>• Determine what information will be required to determine this indicator.</li> <li>• Determine how this indicator will be calculated.</li> </ul>

All of the above should form part of a fully costed project proposal ready for submission with recommendation on available funding sources. In addition, a how-to guide/manual for developing project proposals for similar or associated interventions should be developed, including methodologies for the various assessments that should be undertaken in order to arrive at a technical proposal.

## 2. Tasks to be performed by the contractor

This section depicts and describes the envisaged phased process to complete the assignment

### Project Management (ongoing)

A project of this size requires proactive project management to ensure that tasks are initiated on time, executed with professionalism and that outputs are of a superior technical quality and delivered within budget. It is envisioned that three (3) project management team (PMT) meetings will be held in Pretoria or virtually.

The proposed steering committee support to the development of priority focus area for provincial climate change adaptation interventions will be made up of the several national departments as shown in Figure 1. The DEFF is the programme manager (including GIZ) supported by the lead sectors and Provincial departments through the Provincial Support Programme.



Figure 1: Project Management Team (PMT) for the consultancy

The Project Management Team will consist of the project manager from DEFF, advisor from GIZ, provincial climate change “champions” and lead Sector department in the Province.

Overall project management principles and tasks	Expected Outputs
Project Management Team (PMT) Interaction	Ongoing liaising with the project management team and provincial and local government officials and other stakeholders where necessary to

	gather information, present findings and to provide guidance on project progress.
Project monitoring	<ul style="list-style-type: none"> <li>• Establish and update a project monitoring plan</li> <li>• Quarterly progress reports formally / as and when required informally</li> <li>• Quarterly financial reconciliation</li> </ul>
Communication and information dissemination	<ul style="list-style-type: none"> <li>• On-going stakeholder database management.</li> <li>• On-going update of the PMT</li> </ul>
Project management Deliverables	<ul style="list-style-type: none"> <li>• Participate and record minutes of three (3) project management meetings. As well as any other meetings which may arise.</li> <li>• Inception meeting report and updated project plan.</li> <li>• Updated project monitoring plan</li> <li>• Three (3) progress reports</li> <li>• Three (3) financial reconciliations</li> <li>• Updated stakeholder database of key contact points that might be established across each province during the course of the consultancy.</li> <li>• Close-out report.</li> </ul>
Outcomes and quality indicators	<ul style="list-style-type: none"> <li>• Proactive: the service provider is proactive in managing the project process and ensuring that expectations are met and the objectives are achieved.</li> <li>• Flexible: service provider is flexible in adjusting the project approach to meet the specific needs of the provinces</li> <li>• Responsive: stakeholder database is timeously updated.</li> </ul>

### **Activity 1: Project Inception (January 2021)**

This phase aims to orientate the service provider and ensure that the requirements of the assignment and needs of the provinces are understood. An inception meeting will take place with project management team members in Pretoria. During this meeting a plan for each Province needs to be discussed, including a deeper understanding of scope of work; stakeholder engagement plans and other working arrangements where necessary.

#### Tasks

- Participate and note minutes at the inception meeting and develop an inception report.
- The service provider must develop a project plan which details the following:
  - A clear approach for conducting stakeholder engagements in each concerned province,
  - The allocation of human resources,
  - Timeframes required to achieve deliverables, and
  - Tentative dates for workshops and dates for the completion of all deliverables.
- The project focus is outlined to the service provider
- Project management members reach an agreement on the project plan.

#### Deliverables:

- Inception report and minutes.
- Clear and endorsed project plan.

### **Activity 2: Understanding the local context (February 2021 - March 2021)**

During this phase the service provider meets (virtually) with key stakeholders to gain a deeper understanding of the site-specific requirements and prevailing dynamics in the province. In doing so, the service provider will collect important information that contributes to the origination and rationale for the funding proposal.

### Tasks

- Conduct preliminary site visits (if possible, subject to lockdown regulations and the DEFF decision)
- Conduct bilateral (virtual) meetings with key stakeholders; follow-up meeting to be undertaken if necessary.
- Draft site description, background and rationale sections of the proposal.

### Deliverables

- One presentation to the Project Steering Committee on findings from the site visits.
- Minutes of virtual meetings
- Situation report for the two (2) provinces, which include draft site description, background and rationale section for comment.

### Outcomes and quality indicators

Detailed intervention approach as informed by site visit (if possible) findings

*The Service Provider should not limit themselves from updating the provincial context as and when information emerges from activities other than activity two.*

### **Activity 3: Feasibility, situational analysis and technical conceptualisation (April – May 2021)**

During this phase a concept note which will inform the technical proposal is developed for the province. The concept note should detail the implementation approach, relevant implementers, target audience, geographic scope, timeframes, co-benefits, mitigation strategies for risks identified and targets. A rough/high-level costing of this project should accompany the concept note.

### Tasks

Develop a Project Concept note for Gauteng Province as well as a high-level costing (budget), as per the Scope of work in pages 7 & 8.

Develop a Project Concept note for the Eastern Cape as well as a high-level costing (budget), which will satisfy the Scope of work in pages 10-13.

### Deliverables

**Gauteng Province: A concept note of a of High- technology, environmentally friendly “Green” Fire Stations detailing the following:**

- *Specifications of what constitutes a High- technology, environmentally friendly “Green” Fire Station and itemised costing including labor costs.*
- *Specifications of firefighter drones and itemised costing including cost for training / capacity building on utilisation (skill transfer)*
- *Specifications of rescue equipment not limited to items mentioned above and itemised costing including cost for training / capacity building on utilisation (skill transfer).*
- *ToR’s or project proposal of a Fire Early warning and response systems that seeks to improve preparedness and adaptive capacity of firefighters and local communities drawing on and integrating scientific and local knowledge.*
- *A how-to guide/manual for developing project proposals for similar or associated interventions should be developed, including methodologies for the various assessments that should be undertaken in order to arrive at a technical proposal.*

**Eastern Cape Province: A concept note of a seamless and integrated blueprint seeking to mainstream climate change considerations into the water sector in the Eastern Cape detailing how to undertake the following:**

- *Define and refine the roles, responses and responsibilities of water management institutions in terms of governance, operations and maintenance as well as management;*
- *Define what needs to be done to enhance the Governance of the water management institutions around the question of climate change;*
- *Determine how to improve institutional Data Systems, procedures and processes so as to ensure that climate change considerations are mainstreamed into operational and strategic management activities;*
- *Develop clear actions for the Water Catchment Agencies, Water Service Providers, other government institutions and civil society to build resilience to climate change impacts in the water sector;*
- *Define how Community Resilience in the water sector will determined and measured; and*
- *Integrated and aligned activities across and within the Spheres of Government.*

Quality indicators and outcomes

- Specifications, ToR's and concept notes are well thought-out, well researched, well referenced and endorsed by the provincial climate change champions.

**Activity 4: Finalisation of technical and financial proposal (June -August 2021)**

During this phase the service provider should give guidance on the most suitable funding agencies/ sources to pursue. These should include recommendations of fiscal mechanisms that could be motivated for such interventions. The Steering Committee will decide on which funding agency/ source would be best suited for the project. Based on the chosen funding agency/ source, the concept notes developed in activity 3 are further developed into a thorough technical project proposal, with a comprehensive budget. This costed technical project proposal should be drafted in accordance with the proposal requirements of the chosen funding agency/ source using the applicable template where possible. The service provider should take into consideration the requirements from each funding agency e.g. market assessment, gender sensitivities etc. and provide this list to DEFF/GIZ with a description of the work involved for each.

Tasks

- Develop a thorough technical proposals and comprehensive budgets for each Province (which are tailored to the chosen funding agency).

**(Additional costs to consider in relation to activity 4)**

The following costs are important for consideration when arriving at a detailed financial proposal, as per adaptation intervention.

<b>Adaptation intervention</b>	<b>Costs to consider</b>
<i>High- technology, environmentally Friendly "Green" Fire Station</i>	<ul style="list-style-type: none"> <li>• Labour costs</li> <li>• Mechanical costs</li> <li>• Green technology e.g. rainwater harvesting, Solar panels costs</li> <li>• Constructions costs</li> </ul>
Firefighter drones	<ul style="list-style-type: none"> <li>• Equipment costs</li> </ul>

	<ul style="list-style-type: none"> <li>• Operational costs</li> <li>• Maintenance costs</li> <li>• Training costs</li> </ul>
Rescue equipment	<ul style="list-style-type: none"> <li>• Training costs</li> <li>• Equipment costs</li> <li>• Standardisation / accreditation costs</li> </ul>
Early Warning System	<ul style="list-style-type: none"> <li>• Data access costs</li> <li>• Infrastructure costs</li> <li>• Operational costs</li> <li>• Maintenance costs</li> </ul>
Blueprint for mainstreaming climate change considerations into the water sector in the Eastern Cape.	<ul style="list-style-type: none"> <li>• Data access costs</li> <li>• Policy review costs</li> <li>• Personnel costs</li> <li>• CAPEX / OPEX</li> </ul>

#### Deliverables

- A technical project proposals and comprehensive budget (detailing each component of the green fire station)

#### Quality indicators and outcomes

- Technical and financial aspects of the proposals are well thought-out, well researched, well referenced and endorsed by the provincial climate change champions. Technical project proposals comply with the requirements of the chosen funding agency/source.

#### **Activity 5: Stakeholder engagement (September – October 2021)**

This phase aims to promote ownership and provide support in accessing funds for the proposals developed. In addition, workshops held during this phase aim to optimise knowledge transfer and share lessons gained throughout the project. The how- to guide / manual for developing project proposals for similar or associated interventions that will be developed for each intervention will enable provincial government and local government to conceptualise climate change adaptation related projects in the future for related sectors. It should include guidance on developing a project proposal as well as how to gain support from relevant stakeholders, how to design a project concept, how to structure a proposal, how best to present ideas, how to propose a budget, how to develop indicators, how to monitor a project etc. One workshop will be held in each province. The workshop logistics will be guided by Covid-19 regulations. The service provider must make recommendations on how this can be approached/achieved. It is envisioned that there will be at least 30 participants at the workshop.

### Tasks

- Develop a project implementation support guideline/ how –to guide or manual for the development of proposals for each of the interventions across the two provinces.
- Present project implementation support guideline at provincial workshop.
- Present final technical and financial proposal to stakeholders
- Provide advice on accessing funds for the proposal developed
- Close-out meeting with PMT

### Deliverables

- Project implementation support guideline
- Delivery of a provincial workshop (agenda, facilitation plan, presentations, invites and other logistics as guided by Covid-19 regulations etc).
- Guide-pack on steps to undertake when identifying a suitable funding source.
- PMT Minutes
- Close-out report.

### Quality indicators and outcomes

The project implementation support guideline details the step-by-step process of conceptualising a climate adaptation project, key adaptation areas of focus and including lessons learnt during this assignment. There should also be a close-out report with recommendations on how further work can be undertaken to support other Provinces on various interventions.

**Activities detailed in page 5, 6 and 8 to 11 should form part of a fully costed project proposal ready for submission with recommendation on available funding sources. In addition, a how-to guide/manual for developing project proposals for similar or associated interventions should be developed, including methodologies for the various assessments that should be undertaken in order to arrive at a technical proposal.**

### PLACE WHERE WORK WILL BE CARRIED OUT

This work will be carried out in South Africa. DEFF and GIZ are based in Pretoria and it is expected that the consultant would travel to Pretoria to meet with both organisations; at the inception, during consultations through DEFF structures and project closeout. Further engagements will take place at that selected Provinces/sites.

Period of assignment: From January 2021 until October 2021.

### **3. Concept**

In the bid, the bidder is required to show how the objectives defined in Chapter 2 are to be achieved, if applicable under consideration of further specific method-related requirements (technical-methodological concept). In addition, the bidder must describe the project management system for service provision.

#### **Technical-methodological concept**

**Strategy:** The bidder is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1). Following this, the bidder presents and justifies the strategy with which it intends to provide the services for which it is responsible (see Chapter 2).

The bidder is required to present the actors relevant for the services for which it is responsible and describe the **cooperation** with them.

The bidder is required to present and explain its approach to **steering** the measures with the project partners and its contribution to the results-based monitoring system.

The bidder is required to describe the key **processes** for the services for which it is responsible and create a schedule that describes how the services according to Chapter 2 are to be provided. In particular, the bidder is required to describe the necessary work steps and, if applicable, take account of the milestones and contributions of other actors in accordance with Chapter 2.

The bidder is required to describe its contribution to knowledge management for DEFF and GIZ and promote scaling-up effects (**learning and innovation**).

#### **Project management of the contractor:**

The bidder is required to explain its approach for coordination with the GIZ project.

- The contractor is responsible for selecting, preparing, training and steering the experts (international and national, short and long term) assigned to perform the advisory tasks.
- The contractor makes available equipment and supplies (consumables) and assumes the associated operating and administrative costs.
- The contractor manages costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ.

The contractor reports regularly to GIZ in accordance with the AVB of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH from 2017

The bidder is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the bid; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

#### COORDINATION AND PROJECT MANAGEMENT

This consultancy will be coordinated by DEFF on the technical aspects of this project, assisted by GIZ, through a Technical Advisor of the project and the project's responsible (AV). The approval of the deliverables and the payment authorisations will be given by the head of the programme of GIZ (AV) after discussion between DEFF and GIZ. One-hour project management meetings should be held via Skype every month for the entire duration of the contract and face-to-face (provided Covid-19 Lockdown Regulations allow) 3-hour project management meetings to be held in Pretoria with minutes submitted by the service provider 3 days after the meeting.

#### PARTNERS

The Department of Environment Forestry and Fisheries (DEFF), Gauteng Department of Agriculture and Rural Development, Gauteng Department of Cooperative Governance and Traditional Affairs, Eastern Cape Department of Economic Development, Environment and Tourism, Department of Human Settlements, Water and Sanitation and Eastern Cape Regional office as well as, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, are the main partners in this piece of work.

The bidder is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the bid in accordance with section 5.4 of the AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between GIZ and field staff
- Contractor's responsibility for seconded personnel
- Process-oriented technical-conceptual steering of the consultancy inputs
- Securing the administrative conclusion of the project

- Ensuring compliance with reporting requirements
- Providing specialist support for the on-site team by staff at company headquarters
- Sharing the lessons learned by the contractor and leveraging the value of lessons learned on site

#### **4. Personnel concept.**

The bidder is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points.

A consortium may be formed with other service providers who have more knowledge, experience and skills with regards to either the province or required tasks.

#### **Team leader/ Project Manager**

##### Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- Regular reporting in accordance with deadlines
- Responsible for the overall project management including liaising with DEFF and GIZ relating to project progress, project monitoring etc.
- Provides overall quality assurance and oversight for the project team.
- Report any changes to approach and activities to complete the assignment and personnel.

##### Qualifications of the team leader

- Qualifications (2.1.1): A Master's degree in Environmental Sciences/ Management, Geography or related degrees, with a focus on hydrology and hydrogeology, ecology and botany
- Language (2.1.2): Good business language skills and good communication and report writing skills in English; and data collection and research skills.
- General professional experience (2.1.3): 10 years' experience in managing and working in projects relating to hydrology and hydrogeology, ecology, Disaster management and fire and climate change adaptation;
- Specific professional experience (2.1.4): 5 years' experience of project proposal development in the relevant area of expertise as well as climate finance knowledge. Professional experience in stakeholder engagement, the associated processes as well as stakeholder management in the field of climate change adaptation, with a focus water and disaster management.
- Leadership/management experience (2.1.5): 5 years' experience in Project Management and Leadership
- Regional experience (2.1.6): n/a
- Development Cooperation (DC) experience (2.1.7): n/a

- Other (2.1.8): Disaster management and fire and knowledge on climate change adaptation. A very good understanding of water-sector related policies, laws and strategies governing the sectors, particularly integrated catchment management

### *Technical Experts*

#### Tasks:

Responsible for the execution of technical tasks and outputs described in the Scope of Work above.

### **Hydrologist/ Hydrogeologist - Expert 1**

#### Qualifications of expert 1

- Qualifications (2.2.1): a post graduate qualification in hydrogeology, environmental geology, engineering geology or equivalent.
- Language (2.2.2): Good written and verbal communication in English and report writing skills.
- General professional experience (2.2.3): 8 years' experience in the field of hydrogeology, and hydrology or environmental engineering
- Specific professional experience (2.2.4): 5 years' experience in the following- Wetland design and management, with good understanding of chemical and mechanical structuring; Borehole drilling and management for both confined and unconfined aquifers; Groundwater management and access, rainwater harvesting and related fields; Working on as well as managing aquifer and/or Karst systems; Analysing hydrological pollution as well as the development of solutions; Good understanding of demand-side as well as supply-side management measures; Water harvesting technologies, their applicability to various environmental set ups and for both residential and industrial scales.
- Leadership/management experience (2.2.5): n/a
- Regional experience (2.2.6): 5 years' experience in water governance in National, Provincial and Local spheres of government
- Development Cooperation (DC) experience (2.2.7): n/a
- Other (2.2.8): A very good understanding of biodiversity and water-sector related policies, laws and strategies governing the sectors, particularly Integrated catchment management. 3 years' experience of project proposal development in the relevant area of expertise as well as climate finance; experience in feasibility studies will be an added advantage

### **Disaster Management Expert 2**

#### Qualifications of expert 2

- Qualifications (2.3.1): Post-graduate degree in Disaster Management or Development Studies or Fire Technology. Registered at Engineering Council of South Africa Fire protection systems categories or relevant category
- Language (2.3.2): Good written and verbal communication in English.
- General professional experience (2.3.3) 10 years' experience in the field of disaster management or Fire and Rescue Services.
- Specific professional experience (2.3.4): 5 years' experience in developing fire protection designs; Knowledge of relevant SANS standards and building codes; Experience in disaster risk assessment processes; Experience in coordinating the preparation of hazard-specific (fire) contingency and response and recovery

operational plans; Understanding of the process for integration of risk reduction plans, projects, programmes and practices into Integrated Development Plans (IDP)s; Knowledge of hazard warnings of significance to fire services; Ability to provide technical advice and make recommendations regarding the construction of fire stations;

- Leadership/management experience (2.3.5): n/a
- Regional experience (2.3.6): n/a
- Development Cooperation (DC) experience (2.3.7): n/a
- Other (2.3.8): 4 years in disaster management planning process; Knowledge and experience of project proposal development in the relevant area of expertise as well as climate finance

### **Climate Change- Expert 3**

#### Qualifications of expert 3

- Qualifications (2.4.1): post-graduate degree in Natural Resources, Environmental Sciences/Management, Ecology or equivalent. Post-graduate degree or research niche with focus on climate change adaptation or related.
- Language (2.4.2): Good written and verbal communication in English as well as report writing skills.
- General professional experience (2.4.3): 6 years' experience in the field of climate change adaptation
- Specific professional experience (2.4.4): 4 years in climate change analysis, risk and vulnerability analysis, climate resilience and related fields; Extensive knowledge and experience of project proposal development in the relevant area of expertise, in climate finance, and in DRR and Water sectors.
- Leadership/management experience (2.4.5): n/a
- Regional experience (2.4.6): n/a
- Development Cooperation (DC) experience (2.4.7): n/a
- Other (2.4.8): Good understanding of South Africa's environmental based legislation, particularly climate change policies and other related sector policies. Very good client relation understanding, stakeholder coordination, consultation and management for both non-governmental and governmental stakeholders. Understanding of socio-economic dynamics related to climate change, particularly climate change adaptation;

### **Financial Consultant- Expert 4**

#### Qualifications of expert 4

- Qualifications (2.5.1): post-graduate degree in economics, finance, business administration or equivalent thereof, with a focus on (local and international) climate finance.
- Language (2.5.2): Good written and verbal communication in English as well as report writing skills.
- General professional experience (2.5.3): 5 years' working experience in financial modelling and conducting economic assessments
- Specific professional experience (2.5.4): 5 years of experience in compiling costed proposals/concept notes and budgets to be utilised for relevant funding agencies/sources and, experience in climate finance management and/or coordination.
- Leadership/management experience (2.5.5): n/a
- Regional experience (2.5.6): n/a
- Development Cooperation (DC) experience (2.5.7): n/a

- Other (2.5.8): Good financial data collection and analysis skills – Statistical Compilation and analysis.

The Project Team should have:

- Very good project management, data collection, analysis and coordination skills.
- Very good client relation understanding, stakeholder coordination, consultation and management for both non-governmental and governmental stakeholders.
- Knowledge and understanding of South Africa's research on climate change adaptation.

**Project Intern**

The Climate Support Programme (CSP) has a project-based intervention, which aims to enhance capacities within the field of climate change and related topics in South Africa. As a means of implementation, it is required that the appointed service provider takes onboard an additional capacity in the form of an intern, to capacitate and expose them to various tasks during project implementation. The training should range from meeting attendance and participation, data collection, support project management and conducting research activities. The intervention targets individuals from a previously disadvantaged background in the context of South African history (i.e. African, Coloured and Indian), who possess an undergraduate and/or postgraduate qualification or equivalent in a similar field as the project in question. The appointment period is always recommended to be linked with the project period in question. Below are the requirements for the project intern, in reference to this particular project:

- Qualifications (2.6.1): undergraduate/postgraduate degree or equivalent thereof in environmental management/science, or similar.
- Language (2.6.2): Good comprehension and communication in English language. Proficiency in an Nguni or Sotho language is an advantage.
- General Professional Experience (2.6.3): Basic computer skills and communication skills, with English language as a medium of communication.
- Specific professional experience (2.6.4): N/A
- Regional experience (2.6.5): South African based training is an asset.
- Development cooperation experience (2.6.6): N/A
- Other (2.6.7): A previously disadvantaged individual in the context of South African history.

The service provider must cost for the inclusion of the intern as part of this project into their financial project proposal. As part of their technical proposal the service provider must also outline the potential candidate(s) as well as the appointment process of the intern, in the event that the contract is awarded.

The Service Provider/s must guarantee the presence of a senior technical person in charge throughout the duration of the contract. If the senior person has to leave the project, a period of at least a month is required, in which the senior person must work parallel with the next

person (senior consultant with similar expertise and equal years of experience) appointed to be able to transfer skills and knowledge.

The service provider is expected to budget according to the tasks and deliverables. It is expected that the SP will provide a COVID-19 response stakeholder engagement plan in the technical proposal, which considers lockdown regulations, and outlines how this could affect stakeholder engagement, and therefore propose an alternative which suits these restrictions.

In the event that the service provider cannot travel between provinces (as per restrictions), methods of continuing work should be explored such as telephonic interviews, virtual platforms for outreach, and postage of training material.

The service provider should be flexible to address the needs and opinions expressed by the project partners and GIZ.

## **5. Costing requirements**

### **Assignment of personnel**

All Experts: Assignment in country of assignment for 200 expert days

Project Intern: Assignment in country of assignment for 25 days

### **Travel**

The bidder is required to calculate the travel by the specified experts and the experts it has proposed based on the places of performance stipulated in Chapter 2 and list the expenses separately by daily allowance, accommodation expenses, flight costs and other travel expenses.

COVID responses:

In the event that the service provider cannot travel between provinces (as per restrictions), methods of continuing work should be explored such as telephonic interviews, virtual platforms for outreach, and postage of training material.

### **Workshops, training**

The contractor implements the following workshops/study trips/training courses:

- Preliminary site visits for each of the two provinces
- One provincial workshop for each of the two provinces.

## **6. Inputs of GIZ or other actors**

N/A

## 7. Requirements on the format of the bid

The structure of the bid must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) is to be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). It must be legible (font size 11 or larger) and clearly formulated. The bid is drawn up in English.

The complete bid shall not exceed 10 pages (excluding CVs).

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages. The CVs must clearly show the position and job the proposed person held in the reference project and for how long. The CVs must also be submitted in English.

If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment.

Please calculate your price bid based exactly on the aforementioned costing requirements. In the contract the contractor has no claim to fully exhaust the days/travel/workshops/ budgets. The number of days/travel/workshops and the budget amount shall be agreed in the contract as 'up to' amounts. The specifications for pricing are defined in the price schedule.

## 8. Other requirement

- Please submit your proposal (technical and price proposal) in separate files/folder to [ZA\\_Quotation@giz.de](mailto:ZA_Quotation@giz.de) no later than 15<sup>th</sup> January 2021, 23h00 all documents must be in PDF.
- Please do not mention any price for this measure on your cover letter/Technical proposal.
- Please submit your tax clearance certificate with the bidding documents.
- Please submit your price proposal in ZAR currency
- Our General Terms of Conditions (attached) shall not be changed/amended should you be the winner of this tender. These General Terms and Conditions will form part of the contract should you be awarded this contract. By submitting your proposal we will conclude that you have read and accepted these terms and conditions.
- Participating more than once in same tender is not allowed and it will lead to your proposal as well as that of the company where you appear more than once being disqualified. The responsibility rests with the companies to ensure that their partners/experts are not bidding/participating more than once in same tender.
- **Bidders are not allowed to communicate directly with any other person regarding this bid other than the procurement official/s. Failure to comply with this requirement may lead to your bid being disqualified.**