

Please fill in the form in the grey spaces, by following the instructions in italic.

Requesting country:	<i>South Africa</i>
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Request title:	<i>The Development of Technology Needs Assessment at Subnational level.</i>
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Contact information:

{Please fill in the table below with the requested information. The request proponent is the organization that the request originates from, if different from the National Designated Entity (NDE).}

	National Designated Entity	Request Applicant
Contact person:	<i>Dr Henry Roman</i>	<i>Dr Timothy Fasheun¹ Mr Masupha Mathenjwa²</i>
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Technology Needs Assessment (TNA):

{Select one of the three boxes below:}

- The requesting country has conducted a TNA in 2007, (update in progress).*
- The requesting country is currently conducting a TNA*
- The requesting country has never conducted a TNA*

{If the requesting country has completed a TNA, please indicate what climate technology priority this request directly relates to. Please indicate reference in TNA/TAP/Project Ideas.}

Renewable Energy

CTCN Request Incubator Programme:

{Please indicate if this request was developed with support from the Request Incubator Programme:}

- Yes*
- No*

Geographical focus:

{Select below the most relevant geographical level for this request:}

- Community-based*
- Sub-national*
- National*
- Multi-country*

{If the request is related to the sub-national or multi-country level, please indicate here the areas concerned (provinces, states, countries, regions, etc.)}

KwaZulu-Natal Province and Ilembe District Municipality

Theme:

{Select below the most relevant theme(s) for this request:}

- Adaptation to climate change*
- Mitigation to climate change*
- Combination of adaptation and mitigation to climate change*

Sectors:

{Please indicate here the main sectors related to the request. e.g. energy, industry, transport, waste, agriculture/fisheries, forestry, water, ecosystem/biodiversity, coastal zones, health, education, infrastructure/human settlement, tourism, businesses, early warning/disaster reduction, institutional design and mandates, cross-sectorial}

Cross sectoral with a particular focus on energy.

Problem statement (up to one page):

{Please describe here the difficulties and specific gaps of the country in relation to climate change, for which the country is seeking support from the CTCN. Please only provide information directly relevant to this request, and that justifies the need for CTCN technical assistance.}

While climate change is a global problem influenced by an array of interrelated factors, climate change is also a local problem with serious impacts foreseen for South Africa as well as this Province of KwaZulu-Natal. Acknowledging the overall vulnerability of South Africa to climate change impacts, it will thus be necessary to carry out mitigation and adaptation measures in this country including the Province of KwaZulu-Natal.

The National Climate Change Response White Paper¹, which was released in October 2011, presents the South African Government's vision for an effective climate change response and the long-term, just transition to a climate-resilient and lower-carbon economy and society. The Kwazulu-Natal Provincial government is committed to lead the response to climate change in partnership with other spheres of government, research institutions, industry and the community of the Province. This commitment as clearly spelled out in the provincial climate change strategy entails minimizing or eliminating the risks to the impacts of climate change. This will be achieved by developing an action plan and hence ensuring its implementation. Both scientific and technological means shall be employed to define mitigation and adaptation measures. Capacity building and empowerment of all shareholders shall be undertaken as part of all climate change response activities.

At local level municipalities are expected to develop Low-Emissions, Climate-Resilience Development Strategies (LECRDS) that will seek to address climate change problems in their entirety and in an integrated manner. Therefore, a local level TNA will assist in the development of the LECRDS.

It is therefore clear that at both levels of government there is a requirement of implementing technologies that will seek to provide resilience especially for communities residing in more vulnerable areas as well as technologies geared towards ensuring that contributions to the greenhouse gas emissions from the province by different sectors are minimized through implementation of proper technologies.

The National TNA² has been undertaken by the Department of Science and Technology in 2007. However, the KwaZulu Natal Province has noted that the National TNA only provides high level information which lacks the Subnational based information that can assist the Province to assemble technologies needed to reduce impacts of climate change within its jurisdiction. Hence, KZN province proposes a regional TNA, which will help the province to facilitate the transfer of the climate related technologies required to deal with the impacts of climate change within the District and also to contribute to the country's objectives on technological transfer. The Ilembe District Municipality proposes a local level TNA, which will help the district municipality to facilitate the transfer of climate related technologies required to deal with the impacts of climate change within the District and also to contribute to the country's objectives on technological transfer. In addition it is proposed that Ilembe District Municipality be used as a pilot site to develop an energy audit to be implemented by graduates from the local TVET colleges, a model that would be replicated across the province in all district municipalities.

Past and ongoing efforts (up to half a page):

{Please describe here past and on-going processes, projects and initiatives implemented in the country to tackle the difficulties and gaps explained above. Explain why CTCN technical assistance is needed to complement these efforts, and how the assistance can link or build on this previous work.}

The National Climate Change Response White Paper, which was released in October 2011, presents the South African Government's vision for an effective climate change response and the long-term, just transition to a climate-resilient and lower-carbon economy and society. South Africa's response to climate change has two objectives.

1) Effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity;

2) Make a fair contribution to the global effort to stabilize GHG concentrations in the atmosphere at a level that avoids dangerous anthropogenic interferences with the climate system within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner.

The South African government has undertaken a number of projects to understand the opportunities that are available to reduce the greenhouse gas emissions intensity of the South African economy. These include studies at the national level (the Long Term Mitigation Scenarios (LTMS)³, the Mitigation Potential Analysis (MPA)⁴ and the work on the development of Desired Emission Reduction Outcomes (DEROs), Mix of Measures and carbon budgets) and the work to meet international reporting requirements (National Communications).

Assistance requested (up to one page):

{Please describe here the scope and nature of the technical assistance requested from the CTCN and how this could help address the problem stated above and add value vis-à-vis the past and on-going efforts. Please note that the CTCN facilitates technical assistance and is not a project financing mechanism.}

The technical assistance requested is to develop a provincial and local TNA that is aligned to the national TNA with a particular focus on the following:

- a) Understand a variety adaptation and mitigation technologies available in the market and affordable for various sectors as well as their suitability to be implemented.*
- b) Develop methods to diagnose and design a range of climate technology transfer projects accessibility and acceptability from the prioritized technology portfolio and linking them to climate finance mechanisms.*
- c) The work should involve detailing technological requirements for the diagnostic and design methods that refer to implementation (orgware and enabling factors), accessibility (access to financing & resources), availability (service reliability & resource security) and acceptability (social & ecological improvement).*

d) In order to fasttrack implementation of energy related technologies, assistance is required in developing methodologies for energy audits at local level, that can be replicated across the province.

Expected benefits (up to half a page):

{Please outline here the medium and long-term impacts that will result from the CTCN technical assistance, including how the assistance will contribute to mitigate and/or adapt to climate change.}

The undertaking of the TNA exercise is aimed at understanding the available technologies within the province and to determine the need to import some technologies outside of the region, province or country. Therefore, the Subnational TNA will assist the province to develop baseline information on the available technologies within the region as well as developing a strategy on how to transfer technologies (from within the region, province, country or internationally) into the District Municipalities, which is currently not available. This will assist the District Municipalities and its family of Local Municipalities, to reduce the emission of greenhouse gases whilst at the same time adapting to the impacts of change.

The Energy Efficiency Strategy for South Africa⁵ had set a national target for energy efficiency improvement which embraces the energy conservation of 12% before end of this year (2015). To achieve the goals set out in the Energy Efficiency Strategy, EDTEA as a lead agent on Climate Change issues in the Province proposes energy reduction programmes to achieve Government's intended reduction of energy consumption by 10% at all government owned buildings and work stations used by government institutions.

The Province believes the 10% reduction of energy will in the long term contribute to the conservation of the environment by reducing emissions. Renewable energy sources offer the potential for a clean, decentralized energy source that can significantly impact the countries greenhouse gas emissions.

Post-technical assistance plans (up to half a page):

{Please describe here how the results of the CTCN technical assistance will be concretely used by the applicant and national stakeholders, to pursue their efforts of resolving the problems stated above after the completion of the CTCN intervention (list specific follow-up actions that will be undertaken).}

The work will involve the development of energy audits for TVET colleges in the province, where students will be given hands-on training on how to conduct this process professionally for buildings. The next step will be the installation of PV solar panels and smart meters at each and every college, by students working with the service provider. After installation, the students will be trained on how to maintain the system technically as well as to monitor its benefits in terms of minimizing the amount of energy used by the colleges from the national grid (with reference to the audits conducted at the beginning). This exercise will be piloted at ILembe District Municipality with the aim of replicating the process across the province and ultimately across the country.

Key stakeholders:

{Please list in the table below the main stakeholders who will be involved in the implementation of the requested CTCN technical assistance, and what their role will be in supporting the assistance (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.). Please indicate what organization(s) will be the main/lead counterpart(s) of CTCN experts at national level, in addition to the NDE.}

Stakeholder	Role to support the implementation of the assistance
National Department of Energy	Responsible for energy policy
National Department of Environmental Affairs	Lead and support, inform, monitor and report efficient and effective international, national and significant provincial and local responses to climate change.

<i>National Department of Higher Education</i>	<i>Driver of TVET Colleges education and training</i>
<i>KZN-COGTA</i>	<i>Administration of local government infrastructure development programmes</i>
<i>SALGA-KZN</i>	<i>Administration of local government infrastructure development programmes</i>
<i>KZN Public Works</i>	<i>Responsible for providing accommodation and property management services to all the other ministries of the South African government</i>
<i>Economic Development, Tourism and Environmental Affairs department (EDTEA)</i>	<i>Co applicant</i>
<i>iLembe District Municipality</i>	<i>Co applicant</i>

Alignment with national priorities (up to half a page):

{Please demonstrate here that the technical assistance requested is consistent with documented national priorities (examples of relevant national priorities include: national development plans, poverty reduction plans, technology needs assessments (TNAs), LEDS, NAMAs, TAPs, NAPs, sectorial strategies and plans, etc.). For each document mentioned, please indicate where the priorities specifically relevant to this request can be found (chapter, page number, etc.)}

The KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) is mandated to coordinate climate change responses in the Province, both adaptation and mitigation. In response to National Climate Strategy on Climate Change, Department of Science and Technology Energy Grand Challenge as outlined in the Ten-Year Innovation Plan⁶, National TNA, LTMS, MPAs, DEROS and energy policies. The EDTEA achieves its mandate through putting in place mechanisms that provide Provincial baseline information to build upon such requirements. It further assists and supports municipalities to also put in place its own baseline information on which to base responses. Implementation is the next step once baseline data has been developed and a bulk of such implementation has to happen at the municipalities.

Development of the request (up to half a page):

{Please explain here how the request was developed at the national level and the process used by the NDE to approve the request before submitting it (who initiated the process, who were the stakeholders involved and what were their roles, and describe any consultations or other meetings that took place to develop and select this request, etc.)}

The NDE-RSA held a nationwide roadshow to inform the South African stakeholders of the CTCN and the technical facility being offered. Following the roadshow country requests were submitted by stakeholders of which this is one of those that have passed through the evaluation process of the NDE-RSA.

The request was first processed using the Evaluation Matrix developed for the NDE-RSA by the CSIR. Subsequently the request was evaluated by the National Advisory Committee (composed of National Government Departments with commitments to Climate Change) to the NDE-RSA. The request was presented for noting to the South African Intergovernmental Committee on Climate Change (IGCCC).

A further consultation was held with both the Economic Development, Tourism and Environmental Affairs department and ILembe District Municipality to refine the country request and re-submitted to the NDE-RSA.

Expected timeframe:

{Please propose here a duration period for the assistance requested.}

12 months

Background documents:

{Please list here relevant documents that will help the CTCN understand the context of the request and national priorities. For each document, provide weblinks if available, to attach to the submission form while submitting the request. Please note that all documents listed/provided should be mentioned in this request in the relevant question(s), and that their linkages with the request should be clearly indicated.}

1. National Climate Change Response White Paper
(https://www.environment.gov.za/sites/default/files/legislations/national_climatechange_response_whitpaper.pdf)
2. South Africa's Climate Change Technology Needs Assessment
(http://unfccc.int/tclear/misc_/StaticFiles/gnwoerk_static/TNR_CRE/e9067c6e3b97459989b2196f12155ad5/9ecba2a40fe04948859b9930a40be9f7.pdf)
3. South Africa's Long Term Mitigation Scenario's (LTMS)
(http://www.erc.uct.ac.za/Research/publications/07Scenario_team-LTMS_Scenarios.pdf)
4. South Africa's Greenhouse Gas Mitigation Potential Analysis (MPA)
(<https://www.environment.gov.za/sites/default/files/docs/mitigationreport.pdf>).
5. The Energy Efficiency Strategy of the Republic of South Africa
(http://www.energy.gov.za/files/esources/electricity/ee_strategy_05.pdf)
6. Innovation towards a knowledge-based economy: Ten-year plan for South Africa
(http://www.esastap.org.za/download/sa_ten_year_innovation_plan.pdf)

Monitoring and impact of the assistance:

{Read carefully and tick the boxes below.}

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the assistance provided by the CTCN. I understand that these processes will be explicitly identified in the Response Plan in collaboration with the CTC, and that they will be used in the country to monitor the implementation of the CTCN assistance.

I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

Signature:

NDE name: Henry Roman (PhD)

Date: 13 January 2016

Signature: 

THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

Need help? The CTCN team is available to answer questions and guide you through the process of submitting a request. The CTCN team welcomes suggestions to improve this form.

>>> Contact the CTCN team at ctcn@unep.org