



NAST

Climate Change Research Grant

Terms of Reference (ToR) for Researchers



1. Introduction

Nepal Climate Change Knowledge Management Center (NCCCKMC) is a NAPA extended program entrusted to NAST and undertaken in partnership with Government of Nepal. The NCCCKMC strengthening project, supported by Climate and Development Knowledge Network (CDKN) has a program of awarding research grant to interested young researcher (Master's second year students) of Nepal. The priority areas of the research are: (i) Agriculture & food security (ii) Wetlands & water resources (iii) Human health & population (iv) Biodiversity & ecosystem and (v) Livelihood & economics of vulnerable groups. Students of Master's second year from any affiliated university who have to conduct thesis for the partial fulfillment of their degree can apply for the research. An evaluation committee of experts will recommend successful candidates for the grant. The candidates after receiving comprehensive trainings on research methodologies will conduct the research under the direct supervisions of academic advisors and submit report to NCCCKMC.

2. Rationale

Since the climate change issues are predicted to be burning issues for next generation, research activities must target the young researchers and scientists. The university students are energy and efforts of the existing permanent institutions for conducting such research activities in a collaborative and cost effective manner. Also, for persistence research on climate change in a sustainable manner, it is imperative to award research grant for young researchers with representation from every section of society.

3. Objectives

By the end of the program

- 3.1 25 young researchers (university students) would have been provided research grant
- 3.2 The researchers would have been trained on research methodology and climate change science and its impacts
- 3.3 The researchers would have been prepared thesis and defend, publish the outcomes in journals and share with public through popular media outlets.

4. Methodology

An open call will be made by NCCCKMC requesting to submit proposal from interested young researchers (Master's second year students). All research institutions will also be well informed by endorsing letters of request by post, facsimile, e-mail etc.

An evaluation committee of experts will recommend for the grant on the basis of arrangement of the proposal (organization of the proposal, research objectives,

methodology, outcomes and scientific merit), academic credential (progress mark at SLC, Intermediate level and Bachelor level), qualification of proposed supervisor and proposal presentations (presentations skills and answers to experts' questions). Some provisions will be set for gender equality and social inclusion. The successful candidates will be given training course on research methodology and climate change science and its impacts. The candidates will work under the guidance of academic supervisors and joint supervisors where possible both from NAST/NCCKMC. At least one joint supervisor from NAST/NCCKMC is obligatory. The candidates will prepare original thesis and defend under their guidance.

5. Proposed Activities

The candidate will carry out the research in such a way that it will ultimately contribute to speed up research activities in coordinated manner. The proposed activities are given below upon which the candidate will have to focus.

- Completion of the trainings on research methodology and climate change science and its impacts.
- Carry out the proposed research works under the guidance of academic advisors, prepare original masters degree thesis and defend.
- Submit a mid-term progress report and a final report to NCCKMC.
- Publish outcomes of the research in journals
- Develop synopsis of reports in English and Nepali language and share with public through popular media outlets.

6. Expected Outcomes

Given below are the envisaged outcomes:

- Young researcher are capacitated, motivated and mobilized for the conduction of research on climate change related issues.
- Research outcomes of each candidate be important to build the capacities of local people to address the challenge posed by climate change
- A final report, thesis, journal articles and synopsis of the report.

7. Priority Research Area

Manasalu Conservation Area (MCA)

8. Total Budget and Time Frame: The budget ceiling of grant for this ToR is NPR 70,000 (including field expenses for research student, supervisor and joint supervisor), and will subject to TDS as per the Government's rule. The research has to be completed with in 7 months of agreement between the candidate and NAST/NCCKMC. The final report and outputs has to be submitted with in 8 months of the agreement.

Climate Change Research Grant Suggested Thesis Themes

The followings are suggested themes and topics prepared for the researchers to help them develop their proposals. Researchers can build ideas from the given themes, however, not necessary to be limited.

- A. Agriculture and food security**
 - i. Crop variety documentation
 - ii. Livestock and economy of household
 - iii. Household economic basis and educational status, priority and perception
 - iv. Agricultural calendar change
 - v. Agricultural productivity and food security
 - vi. Food scarcity and adaptation strategy
 - vii. Issues in food security

- B. Wetlands and water resources**
 - i. Carbon sequestration in high altitude lake and comparison with low altitude lake
 - ii. Drinking water sources, quality, accessibility (travel time) and water induced diseases
 - iii. Ecological services of wetlands
 - iv. Status and inventory of water resources

- C. Human health and population**
 - i. Demographic parameter study (since 1950) – growth rate, migration, economy linking climate change
 - ii. Study on different diseases occurred, their causes, treatments and results
 - iii. Development infrastructures and their impact (+/-ve) on society

- D. Biodiversity and ecosystem**
 - i. Vegetation shift and ecosystem
 - ii. Important Plant Area (IPM) delineation
 - iii. Regeneration of selected species
 - iv. Flora and Fauna inventory
 - v. Prey-Predation relationship
 - vi. Types and status of ecosystems
 - vii. Habitat analysis of key flagship species

- E. Livelihood and economy of vulnerable groups**
 - i. Tourism and livelihood
 - ii. Change in natural resources consumption before and after conservation area implementation
 - iii. Comparative study of economy, resource consumption (types of resources) between high and low altitude society
 - iv. Energy consumption pattern
 - v. Impact of climate change in settlement (particularly housing)
 - vi. Impact of climate change in routine activities (eg. Grazing, Harvesting, Storing, transhumance activities)
 - vii. Challenges in infrastructure development (housing) due to implication of climate change

Climate Change Research Grant Guidelines & Proposal Format

Instructions

1. Go through the priority areas of research and research site mentioned in Terms of Reference (ToR) before preparing the proposal. Also, go through the suggested themes/topics.
2. List the headings in your proposal in the same format and order they appear below. Proposal should be a maximum of 10 pages, exclusive of annexes.
3. Submit all supporting documents requested below as annexes to the proposal. (e.g., Annex 1 – Letter of Intent, Annex 2 – Letter of recommendation from supervisor, etc.).
4. Submit a cover letter listing all the documents that you are sending with your proposal. The letter should include complete contact information for the research student including address, telephone and email.
5. **Please submit the complete documents.**
6. The research student should register all required documents (hardcopy & digital copy) at NAST/NCKMC, Khumaltar, Lalitpur no later than 11 November 2011.

Proposal Format: Students should use the format for developing their proposal. Use font Palatino Linotype, font size 11 and line spacing 1.15.

1. Research Title	A concise and meaningful title for the research
2. Introduction	A short and clear description of the proposed research. Must be relevant to the study and stated with literature citations.
3. Research Statement and Justification	This section provides an overview of the context of the research and the issues it will address. Mention it precisely and concisely.
4. Objectives	What are the main and specific objectives of the research? The objectives must be specific, measurable and attainable.
5. Methodology	What methodologies and what activities will be used to achieve the objectives? State clearly, the methodology for each objective and describe standard methods.
6. Expected Results	What are the expected outputs and outcomes of the research? How will these results be used? Mention, how is it important for public?
7. Schedule	Identify the duration of each research step. Are there assumptions or constraints with respect to the start date (seasonality, potential risks, etc.)? Total duration should be of eight months.
8. Budget	State the approximate anticipated costs of the research project. Please refer to ToR.
9. References	Mention the references for all the citations. Illustration for writing the citations is given below: Bhujju, D.R., M. Carrer, N.P. Gaire, L. Soraruf, R. Riondato, F. Salerno and S.R. Maharjan. 2010. Dendroecological study of high altitude forest at Sagarmatha National Park, Nepal. In: <i>Contemporary research in Sagarmatha (Mt. Everest) region, Nepal</i> (Eds. P.K. Jha & I.P. Khanal). Nepal Academy of Science and Technology, Lalitpur, pp.119-130. Finney, D.J. 1971. <i>Statistical method in biological assay</i> . Second Edition, London. Grace, J., F. Berninger and L. Nagy. 2002. Impacts of climate change on the tree line. <i>Annals of Botany</i> 90: 537-544.
Annexes	<ol style="list-style-type: none"> 1. Letter of Intent indicating the researcher commitment to work for the duration of the research mentioned in ToR. 2. Letter of Recommendation indicating the academic supervisor confirmation to guide the research. 3. Researcher's Profile - Resume and academic progress reports 4. Resume of Supervisor 5. Additional Info - Any other relevant information the researcher wishes to include.

Annex 4: Resume of Supervisor

Format

Full Name:

Contact Details (Address, Contact no. and E-mail):

Academic Qualification:

Current Employment (Name of Institution, Address and Designation):

Experience of Master's and PhD Dissertations Supervision:

Latest Journal Papers (Max. 5):