

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|---|---|
| Experienced Climate change and Knowledge | I believe that weather conditions have changed (precipitation and temperature) compared to the past. | | | | | | | | |
| | I have heard the word Climate Change. | | | | | | | | |
| | I have heard the word Climate Change mitigation. | | | | | | | | |
| | I have heard the word Climate Change Adaptation. | | | | | | | | |
| | Climate change means to me Temperature rise . | | | | | | | | |
| | Climate change means to me decrease of rainfall. | | | | | | | | |
| | According to what I know Climate Change means) | | | | | | | | |
| | I believe there has been a decrease in rain compared to the past. | | | | | | | | - |
| | I believe that more drought, and other unusual weather events have occurred in recent years. | | | | | | | | |
| | I believe that the dry season in recent years is longer than in the past. | | | | | | | | |
| | Climate change is likely to have a big impact on farmers like me. | | | | | | | | |
| | I am sure global warming is taking place. | | | | | | | | - |
| | I am sure that climate change is happening or has happened. | | | | | | | - | |
| | Water resource has been reduced (rivers and wells, springs) due to climate change. | | | | | | | | |
| | I have seen a decrease in the quality of my crops due to climate change | | | | | | | | - |
| | I have seen decrease in the amount of my crops annually due to climate change. | | | | | | | | |
| I believe that burining system (A method of burning organic for land preparation) contributes to CC | | | | | | | | | |

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| | | | | | |
|--|--|--|--|--|--|
| I believe that deforestation contributes to CC | | | | | |
| I received climate change related training program from governmental agencies. (If Yes, Please specify the training subject:_____) | | | | | |
| We need technical and basic knowledge of CC adaptation and mitigation | | | | | |
| We have access to the latest agricultural technologies (machinery, irrigation system, etc.) | | | | | |
| We have strong communication with related stakeholders (Governmental Ministries and agencies such as ministry of Environment, forest, ministry of agriculture, and related departments) and organizations (WFP,FAO, UNEP... or any). | | | | | |
| We Know and learned how to implement climate smart agriculture (any practices to increase income, crop quantity, adaptation and mitigation to CC). | | | | | |

iii. Climate Change Adaptation Practices;

| Adaptation index | <i>Are you incorporating the following adaptation practices into your farm to reduce the potential impacts of climate change?</i> | Yes | No or Doing anything |
|------------------|---|-----|----------------------------|
| Adaptation 1 | Shifting planting dates | | |
| Adaptation 2 | Diversifying into other new crops | | |
| Adaptation 3 | Use of manure and compost | | |
| Adaptation 4 | crop variation | | |



| | | | |
|--------------|---|--|--|
| Adaptation 5 | Changing timing of chemical inputs | | |
| Adaptation 6 | Change amount of chemical inputs | | |
| Adaptation 7 | Water smart/ rain water/ harvesting water for irrigation purposes | | |

iv. Climate Change Mitigation Practices;

| <i>Are you incorporating the following Mitigation practices into your farm to reduce the potential impacts of climate change?</i> | | <i>Yes</i> | <i>No</i> |
|---|--|------------|--------------------------|
| | | <i>es</i> | <i>ot doing anything</i> |
| Mitigation 1 | Agroforestry | | |
| Mitigation 2 | Forest conservation (if available) | | |
| Mitigation 3 | Bio-Organic fertilizer usage | | |
| Mitigation 4 | Biological pest control technology | | |
| Mitigation 5 | Land use conservation (Prevent of changing natural land into the agriculture, commercial and other purposes) | | |
| Mitigation 6 | Soil organic matters protection | | |
| Mitigation 7 | Organic farming | | |
| Mitigation 8 | Land preparation (alternative for burning; ex, Biochar) | | |

Mitigation Index

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BIOGRAPHY

Esmatullah Khyber was born on 10th June 1993 in Wardak province of Afghanistan. The author completed his Bachelor's degree in Environmental Sciences from Kabul University in 2015. During his four years of study, he was selected for an exchange winter school program at Frieberg University of Mining and Technology in Germany through DAAD in 2015. Moreover, the author worked as an intern with the National Environmental Protection Agency in the last year of his B.Sc. studies.

Since graduation from his Bachelor's, Mr. Khyber has worked with United Nations Environment Programme (UNEP) as a project assistant at the Climate change and environmental resilience sector in Afghanistan 2016-2017. In 2017 he started working with Capital Region Independent Development Authority CRIDA as an Environmental Impact Assessment Officer in the Megaproject of New Kabul city. Furthermore, the author is an honorary executive member of a volunteer group working to enhance the Environmental Education and Outreach in Afghanistan at Green Way Society – Afghanistan since 2016. In mid of 2018, the author has been selected for KNB Scholarship to pursue his M.Sc. in Natural Resources and Environmental Management at IPB University, Indonesia.

The author has attended some international conferences, seminars, and workshops as a presenter and participant mainly:

The 2nd International Symposium on Transdisciplinary Approach for Knowledge Co-creation in Sustainability in 2020 at IPB University, Indonesia, where his research paper as a part of his M.Sc thesis entitled "Variability and Time Series Trend Analysis of Rainfall and Temperature in Dramaga Sub-district, Bogor, Indonesia" was published in IOP Conference Series of Earth and Environmental Science. Moreover, the author has attended the 2nd International Democracy Conference, Bali, in 2018.