

Guidance Note

Adapting the NEAT+ for specific organizational needs

The NEAT+ was designed to help humanitarian organizations and workers with little or no environmental expertise to obtain a quick analysis of the environmental sensitivities and risks of their projects. The NEAT+ is free, accessible online and offline for data collection and can be adapted depending on your needs.

The NEAT+ has been designed as an open-source resource which can be adapted by individual organizations for their particular needs. The back-end of the tool is accessible allowing those confident in the software to review and modify the logic and process that determine the output. This Guidance Note provides insights on how to adapt the NEAT+ to meet your exact needs.

Adapting the NEAT+ to meet your project's or organization's needs

The NEAT+ has been designed as an open-source resource which can be adapted by individual organizations and users for their particular needs. The NEAT+ relies on two commonly used software applications – Microsoft Excel and KoBo toolbox. The back-end of the tool is accessible allowing those confident in the software to review and modify the logic and process that determine the output.

A comprehensive library of risk statements and informational prompts/tips associated with environmental risks in humanitarian programming have been developed as part of this tool. The methodology used by the NEAT+ assess environmental risk and potential environmental impacts has been endorsed by numerous technical experts and has been tested and validated through pilots.

This guidance note provides an outline of the tool and the adaption possibilities for interested organizations. A sample technical profile to complete this adaptation is provided. This guidance note provides an introduction to the logic behind the tool but does not go into detail about modifying backend as this is complex and would be best accomplished by a person with the appropriate skillset exploring the tool themselves.

Possible Changes

In its current format, the tool has been designed for a generalist humanitarian based on the sector's main environmental resources and guidelines. The logic and processes to assess and categorize the risk is derived from these resources and guidelines and has been validated through field testing by the original project team.

However, individual organisations can adapt the NEAT+ for their own environmental guidelines or requirements. Potential changes could include:

- Addition of new environmental risk statements across both the sensitivity and activity sub-modules
- Modification to the logic behind the multi-criteria analysis of environmental risk or potential environmental impact (i.e. exacerbating and mitigation factors per issue of concern)
- Modification to the weighting, scoring and thresholds for the evaluation and categorization of environmental risk and potential environmental impacts
- Addition or modification to the sets of questions in the activity sub-modules to include or remove specific questions, or to modify prompts

- Modification of the language to reflect an organisation's specific choice of vocabulary (e.g. affected people/people of concern/disaster affected population etc.).
- Modification of emphasis on types of areas assessed – e.g. currently the tool focusses on camp/settlements but the language can be edited to make more general

It is not recommended to make substantial change the automated analysis process within the NEAT+ itself. This would involve substantial changes to the current design of the tool – in this instance it would be recommended to use the existing library database and build a separate analysis process from scratch.

It is difficult to estimate the amount of time required for organizational modification. This is dependent on the extent of the modification and the competencies of the individual doing the modification and particularly their capacity for troubleshooting if (when) any issues arise. To become familiar with the tool (changes not included), an individual with the suitable profile would need approximately three days.

Required Technical Profile

The bulk of the research has been done as part of the original development of the NEAT+. To make any changes, interested organizations would need to engage someone with competency in the advanced features of Microsoft Excel. A software developer, programmer or data science background would fit this profile. The technical skillset would need to include:

- Familiarity with Visual Basic for Applications (VBA) in Excel
- Familiarity with XLSForm in KoBo Toolbox
- Confident in using array formulas in Excel
- Confident with advanced functions embedded within each other (vlookup, index, match, countif, etc.)

An individual with this profile should be capable of understanding how the NEAT+ works by simply exploring the backend and following the logic within the Excel file. The following explanation does not comprehensively detail NEAT+'s logic and how the file works, but rather aims to assist that exploratory process.

Backend of the NEAT+

In the NEAT+ Excel file, you can unhide the various sheets to access the backend of the tool. Frontend sheets which show the introduction, questionnaire and summary (report) may be locked, but these can be unlocked without a password.

For information on the multi-criteria logic used in the automatic analysis process the calculation tab, please refer to the **explainer on the sensitivity analysis**. Changes can cascade to other tabs if modifications are made in one tab. It is important for any individual making changes to understand the dependencies between each tab.

Sensitivity Module

The sensitivity module consists of eight tabs:

- *Introduction* – This tab provides some background about the NEAT+ and how to use it. Here, the user also inputs basic information about the assessment (basic metadata) as well as which activity modules they would like to complete.
- *Questionnaire* – This tab contains all the questions for the sensitivity sub-module. A list validation is used for the dropdown menu. Not every question here is relevant, and Excel's logical functions is used to highlight which question should be completed. Validation input messages are used to provide hints.
- *Additional Information* – This is just a text sheet clarifying some technical questions in the questionnaire.

- *Summary* – This is where the automated report is generated. It pulls information from the statements and introduction tabs. The report is populated using array formulas that automatically populate specific columns based on specified criteria (e.g. high/medium/low risk). Conditional formatting is used for colouring.
- *Statements (hidden)* – This tab has all the potential environmental risk statements and text explainers. The tab pulls the calculated risk score from the calculation tab, categorizes it into high/medium/low, and filters this information for use in the summary tab. Thresholds for the bucketing into high/medium/low are defined here.
- *Library (hidden)* – This is a text only tab which includes all the questions and multi-choice options to be asked in the sensitivity analysis.
- *Logic Matrix (hidden)* – This is an informational tab which shows details the multi-criteria relationships between the questions and each environmental risk statement.
- *Calculation (hidden)* – This tab evaluates the multi-criteria calculation for each risk statement based on the relations defined in the logic matrix. The tab pulls information the questionnaire and library tabs through vlookup and index/match. Here, a score or weighting is assigned to each variable or multiple-choice response. An aggregation is then done for each risk statement.

Activity Modules

There are three activity modules (shelter, WASH, and food security and livelihoods). Each activity module consists of seven tabs:

- *Introduction* – This tab begins with some text about the environmental concerns of the sector. Here, the user is also required to select which sub-modules they would like to complete. Based on the selected sub-modules, baseline warnings are shown on this tab. The baseline warnings are pulled from the baseline calculation tabs.
- *Questionnaire* – This tab shows all the questions to be asked for each sub-module. A list validation is used for the dropdown menu. The questions are filtered based on which sub-modules are selected in the introduction tab. Logical statements are used to display the prompts (pulled from library) based on the selected multiple-choice response.
- *Summary* – This is where the automated report is generated. It pulls information from the baseline calculation, impact calculation and introduction tabs. The previously evaluated sensitivity risk is also pulled from the sensitivity module. The environmental sensitivity and potential environmental impact are multiplied in this tab to evaluate environmental risk. Conditional formatting is used for coloring. Thresholds for the bucketing into high/medium/low are defined here.
- *Library (hidden)* - This is a text only tab which includes all the questions, multi-choice options and prompts to be asked for each sub-module.
- *Logic Matrix (hidden)* – This is an informational tab which shows details the multi-criteria relationships between the questions and each potential environmental impact statement.
- *Impact Calculations (hidden)* – This tab evaluates the multi-criteria calculation for each risk statement based on the relations defined in the logic matrix. The tab pulls information the questionnaire and library tabs through vlookup and index/match. Here, a score or weighting is assigned to each variable or multiple-choice response. An aggregation is then done for each risk statement.
- *Baseline Calculations (hidden)* – This tab contains a library of all the possible baseline warnings per sub-module. This tab evaluates each baseline statement against values pulled from the statements and calculation tabs in the sensitivity module. The baseline warnings to be displayed are also filtered in this tab through array formulas.

KoBo Integration

The KoBo forms have been developed using [XLSForm](#). The form language should be intuitive for anyone with a basic programming background. The website has a comprehensive library and explainer on using the language.

The downloaded dataset from the KoBo server is integrated into the NEAT+ Excel file. The NEAT+ Excel document can read entries directly from the Excel questionnaire and also from the downloaded dataset from the KoBo server. Users have been instructed to download the dataset from KoBo in a specific format to ensure that the data is readable by the Excel file. There are planned activities to simplify the copy-paste process by automatically downloading the data into excel using KoBo's API.

The KoBo forms for Excel have been split into two separate projects to allow the same sensitivity entry to be used for activity submissions without the need for duplicate completion of the sensitivity questionnaire.

The KoBo-related tabs in the NEAT+ file are:

- *Paste KoBo sensitivity here* – Data downloaded from the KoBo sensitivity project needs to be pasted here. The questionnaire tab in the sensitivity module searches in this tab for the responses collected if using KoBo as the data collection method.
- *Paste KoBo activity here* – This tab functions similar to the previous tab, but for the KoBo activity modules.
- *Select Project (KoBo)* – Multiple data entries can be saved in a single KoBo dataset download. In this tab, users are asked to select which specific KoBo entry they would like to view. The selection in this tab is used for an index/match to populate the questionnaire and calculation tabs. This tab also serves as a check to make sure the data has been downloaded and copy-pasted correctly by displaying the metadata associated with the selected KoBo instance.
- *Kobo Responses (sector)* – These tabs pull data from the KoBo activity tab and presents it so the user can see what was inputted on KoBo and the prompts that were displayed. These tabs are largely a replica of the *Activity Questionnaire* tabs and use the same logic to show the prompts.

The Excel file uses embedded index/match functions to search the headers of the KoBo dataset and match this against the original question in the NEAT+. This matching is done in the hidden columns of the questionnaire tab for each module. The calculation tabs will then pull from either the directly inputted responses or copy-pasted dataset based as instructed in the Select Project (KoBo) tab. As the calculation tabs looks for matches in the KoBo dataset against the library tabs for each module, it is necessary that any updates to multiple-choice options be replicated in the KoBo XLSForm to retain compatibility.

For additional support and clarification on modifying the NEAT+, please contact the UN Environment/OCHA Joint Unit: ochaunep@un.org