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| Standard Operating Procedure 2 (Sop2): Response Design |
| Version | *Insert version number of the SOP. Use version log at the end of the SOP for version control* | **Date of Issue** | *Insert date on which this version of the SOP was issued* |
| Purpose | This SOP explains how to assign labels (e.g., a land cover / land use class) to a sample unit. The response design allows for the best available classification of change for each spatial unit sampled and contains all information necessary to reproduce the process of attribution of a label to the sample unit. The response design lays out an objective procedure that interpreters can follow and that reduces interpreter bias |
| Responsibilities | *Clarify the roles and responsibilities as the instruction will refer to these. For example* *‘Coordinator”: the coordinator will be responsible for discussing with the expert statistician the right sampling design,….”* |
| Prerequisites |  |
| Related documents | *Insert references to related documents, including other SOPs, standard forms and other materials that are part of your monitoring system* |

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| Procedure |
| Step 1: Specifying the classification scheme  | **Sub-step 1a.** The Coordinator in coordination with *if applicable insert other relevant staff involved* defines a classification scheme with detailed definitions and reviews it together with the interpreters. The classification scheme is consistent with the national land cover / land use definitions. In cases where the classification scheme definition is different from the national definition, a justification is provided. The Coordinator documents the classification scheme in a tree-diagram using form *indicate the possible standard form(s) to be used. Template 2 can be used as a basis to create a standard form*. The form shall be stored *indicate the appropriate place for storing the form in accordance with your requirements.* **Sub-step 1b.** The Coordinator documents the detailed definitions for each class using *indicate the possible standard form(s) to be used. Template 2 can be used as a basis to create a standard form*. The form shall be stored *indicate the appropriate place for storing the form in accordance with your requirements.*  |
| Step 2: Specifying the data sources | **Sub-step 2a.** The Coordinator in coordination with *if applicable insert other relevant staff involved* creates an overview of all satellite imagery used for the interpretation, including the data periods for each sensor and reviews it together with the interpreters. The overview is recorded using form… *indicate the possible standard form(s) to be used. Template 2 can be used as a basis to create a standard form*. The form shall be stored *indicate the appropriate place for storing the form in accordance with your requirements.*  |
| Step 3: Specifying the unit’s spatial support | **Sub-step 3a.** Based on the available data sources, the Coordinator in coordination with *if applicable insert other relevant staff involved* defines the assessment unit and documents it with an illustration using form *indicate the possible standard form(s) to be used. Template 2 can be used as a basis to create a standard form*. The form shall be stored *indicate the appropriate place for storing the form in accordance with your requirements.* |
| Step 4: Specifying the interpretation key | **Sub-step 4a.** The Coordinator in coordination with *if* *applicable insert other relevant staff involved* develops a visual guide to help the interpretation of each class of the classification scheme and to illustrate how the land cover or land use feature will look like in the images selected in step 2 and considering the sample unit’s spatial support defined in step 3. The visual guide includes examples for all classes and for all data sources used. The form shall be stored *indicate the appropriate place for storing the form in accordance with your requirements.* |
| Step 5: Specifying the decision tree | **Sub-step 5a.** The Coordinator in coordination with *if* *applicable insert other relevant staff involved* develops a set of hierarchical rules that help the interpreter assign an overall land use class when the sample is composed of mixed land cover features.**Sub-step 5b.** The Coordinator reflects the rules from sub-step 5a in a decision tree and documents the decision tree using a textual description of the observations that were basis for building the decision tree, including reference to previous work and illustrations of both the overall decision tree and each of the decisions in the tree. **Sub-step 5c.** The Coordinator reviews the decision tree together with the interpreters and adjusts as necessary.**Sub-step 5d.** The Coordinator stores the form with the final decision tree in *indicate the appropriate place for storing the form in accordance with your requirements.* |
| Step 6: Implementing the response design | **Sub-step 6a.** The Coordinator of the assessment chooses a software to be used for data collection and implements the response design by creating the necessary survey questionnaires. *Adjust/specify here in case a specific software is already chosen or in use, (e.g., Collect Earth or Collect Earth Online or other packages) and describe any processes associated with using it (for example how to gain access if an account already exists)***Sub-step 6b.** The Coordinator in coordination with *if* *applicable insert other relevant staff involved* includes an indicator of the confidence of the interpretation when implementing the response design and defines a level for the indicator (e.g., high / low, or high / medium / low or similar). This is defined in a way that all interpreters use the same criteria using *indicate the possible standard form(s) to be used. Template 2 can be used as a basis to create a standard form.* |

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| Quality management  |
| QA / QC procedures | **Sub-step Q1.** The Coordinator validates that the definitions in the classification scheme are comprehensive and unambiguous**Sub-step Q2.** The Coordinator ensures the decision tree provides clear instructions to classify heterogeneous plots. **Sub-step Q3.**  The Coordinator in coordination with *if* *applicable insert other relevant staff involved* defines code lists for the implementation of the response design for consistent data collection.**Sub-step Q4.** The Coordinator defines validation rules with impossible combinations of elements and transitions of classes. The impossible combinations and transitions are implemented in the survey questionnaire by providing error or warning messages when they are selected.  |

**Version Log**

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| Version | Author/s | Material changes from previous version | Release Date |
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