### Exercise: Workflow for importance of forest for tourism and recreation in Khovsgol and Tov

This exercise will help us to define workflows for mapping the importance of forest for tourism and recreation in Khovsgol and Tov aimags. We will split into two groups - one to look at Khovsgol and one to look at Tov. The exercise has two main parts:

- 1. Identify input layers
- 2. Prepare workflow

#### PART 1: IDENTIFY INPUT LAYERS

**Step 1: In your group, discuss the concept that you need to define in order to make this map.** There are a number of concepts or topics that need to be defined before you can identify the necessary input layers. What kind of tourism do we mean? International and local? What counts as recreation? Will you include all forest?

**Step 2:** In groups, discuss and fill in the input layers or data that are needed to understand which areas in the aimag are important for tourism and recreation. When doing multi-criteria analysis, input layers are similar to different criteria in your analysis. There is no requirement about the number of criteria or layers you can include, but the more layers you have, the more complicated the analysis. What are the most important factors? Are there any factors that can't be mapped? Don't forget the participatory results from the workshop either, these could be an important input.

**Step 3: Discuss and fill in how you would use that input layer.** How do you plan to use the input layers that you have identified? For example, if you decide protected areas are an input layer, why are you using them and how? Would you include all protected areas or just some?

**Step 4: Discuss and fill in whether the data is available:** Do we have the dataset? If so, where/who has it? Is it in the form we need? For example, we may have a land-cover dataset but lack information on crop types. Are there any international datasets that we could use in conjunction with the provincial or national level data e.g. use provincial level data to downscale something that has been generated at a coarser resolution?

**Step 5: Discuss and fill in any values or thresholds we need to be aware of.** This refers to numbers that affect how the dataset is used. For example, if we are using data showing population density to figure out which areas have high population density, then how do we define 'high density'?

#### **PART 2: DEVELOP WORKFLOW**

Based on the input layers and output map identified, prepare a flow chart showing the workflow you could use to create the map. The workflow should specify the input layers, including vector and raster layers, and the steps or processes you will use to combine them. It should clearly show how they will be processed in order to reach your output map.

Think about what QGIS geoprocessing tools you could use and in what order? What are the inputs and outputs to these tools? For example, if you look at proximity to roads your input layer might be "vector layer of roads", the geoprecoessing tool might be "buffer", there might be an Input value of "1000" (E.g. for a 1km buffer around roads) and the output would be a vector layer of 1km buffer from roads.

Prepare your workflow on the large paper provided; coloured pens can be used to show the different inputs, outputs and processes. Some example workflows are provided on p. 5.

# **OUTPUT MAP: Importance of forest for tourism and recreation in Khovsgol / Tov**

STEP 1, DEFINITIONS:		
Tourism:		
Recreation:		
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# PART 2, INPUT LAYERS / CRITERIA:

Input layer	How to use	Availability	Values/thresholds
Criteria / type of dataset, e.g. <i>roads</i>	Why or how it will be used, e.g. To areas with access to tourists; buffer up to 10 km	Do we have the data? And is it in a form we can use? E.g. <i>Yes, but only main roads</i>	Are there any important values or thresholds we need to use? E.g. <i>need to define buffer</i>

**Example workflows**. These are examples of a workflow developed in other countries, in order to identify areas suitable for particular REDD+ interventions. These may be more complicated than the map we are developing for tourism and recreation. However, they can give you a picture of what these workflows may look like.



### Workflow for mapping areas using for strict management of cardamom crops

