



МОНГОЛ УЛСЫН  
ЗАСГИЙН ГАЗАР

БАЙГАЛЬ ОРЧИН, НОГООН ХӨГЖИЛ,  
АЯЛАЛ ЖУУЛЧЛАЛЫН ЯАМ

**UN-REDD**  
PROGRAMME



Food and Agriculture  
Organization of the  
United Nations



# Working session on spatial planning for multiple benefits of forests and potential for REDD+ action in Mongolia

## Agenda

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UN-REDD PROGRAMME

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7 – 16 March 2016

## Introduction

The working session outlined below is part of a joint activity under the UN-REDD Programme, being implemented by the Mongolia Ministry of Environment, Green Development and Tourism (MEGDT), the Institute for Research and Information on Meteorology, Hydrology and Environment (IRIMHE), and the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC).

This proposed working session builds on a first technical working session held by the IRIMHE and UNEP-WCMC in Ulaanbaatar in October 2015. The initial working session introduced concepts and techniques for the use of spatial analysis to support REDD+ planning using QGIS, a free and open-source geographic information system. This second working session will extend this technical support and capacity building to develop spatially explicit decision support tools, such as maps, relevant to REDD+ planning. The results of this activity are expected to assist in an analysis that takes into account the conservation of natural forest, biodiversity and the multiple functions of forest, especially with regard to multiple benefits from forests and potential for REDD+ action.

This working session will be delivered in a collaborative manner, with all materials in Mongolian and English. The participants will gain capacity in map-based analysis by conducting spatial analysis at two different scales: one covering all Mongolian *aimags* with a significant forest cover, in order to provide a 'big picture' view of the main forest-related trends occurring at the national scale; and another focusing only on the *aimags* of Khovsgol and Tov, and the priority benefits from forests identified for further analysis by locally relevant stakeholders in consultation workshops carried out in Murun (Khovsgol) and Zuunmod (Tov) in November 2015.

The expected outcome of this working session is that the participants will be better able to interpret and tackle REDD+ planning questions spatially and to prepare spatial analyses to effectively support aspects of REDD+ planning.

## Objectives

- To provide technical support to IRIMHE, staff from other key national organisations and representatives from Khovsgol and Tov in the development of a set of maps to support spatial planning for REDD+ and explore areas with potential relevance for implementing REDD+ actions, with a focus on the multiple benefits prioritized by aimag-level stakeholders in November 2015.
- To build further technical capacity of GIS staff on spatial analysis in the use of spatial information and analysis for policy land-use planning support using open-source GIS software.

## Expected Outputs

- A preliminary set of maps to support aspects of REDD+ planning that takes into account multiple benefits of forest and potential for REDD+ action are produced for all forested aimags of Mongolia, with a special focus in Khovsgol and Tov.
- National and aimag-level capacity is built in the use of spatial information and analysis relevant to land-use planning and REDD+ planning.

## Proposed dates and venues

7 to 12 March 2016: Joint working session at the Institute for Research and Information on Meteorology, Hydrology and Environment (IRIMHE), Ulaanbaatar.

14 to 16 March 2016: Follow-up working analysis with a smaller team to refine and finalize the work, at IRIMHE, Ulaanbaatar.

## Participants:

The working session will include up to 12 participants; places in the session will strictly be for:

- Spatial planning staff in IRIHIME and other national organisations, who must have attended the previous working session in 2015.
- 2 places available for the representatives of each of the two aimags considered for more detailed analysis.

## Agenda

### Part 1: Joint working session on spatial analysis for multiple benefits of forests and potential for REDD+ action using QGIS

Time	Activity	Presenter
<b>DAY 1 – 7 March</b>		
9:00 – 9:10	Welcoming remarks	Mr Khishigjargal, Programme Manager, UN-REDD Programme Mongolia
9:10 – 9:30	Introductions & ice-breaker	Charlotte (UNEP-WCMC)
9:30 – 10:00	Overview of objectives and agenda of session	Charlotte/Xavier (UNEP-WCMC)
10:00 – 10:30	Re-cap: objectives and activities of the project	Charlotte (UNEP-WCMC)
10:30 – 11:00	<i>Coffee/tea break</i>	
11:00 – 11:30	Overview of the maps to be produced and the data to be used this week <i>This presentation will focus on discussing the maps to be produced and the reasons why they have been selected. Participants will have the opportunity to start exploring the datasets that will be used during the analysis</i>	Xavier (UNEP-WCMC)
11:30 – 12:00	Designing map templates – Making simple, informative maps that communicate	Xavier (UNEP-WCMC)
12:00 – 12:30	Distribution of USB sticks	
12:30 – 13:30	<i>Lunch</i>	

	<ul style="list-style-type: none"> <li>Mapping forest cover change and its relationship with protected areas and mining concessions in all forested aimags:</li> </ul>	
<b>13:30 – 15:30</b>	<i>In this activity participants will produce preliminary maps showing the most up-to-date forest status in Mongolia and its associated carbon content, as well as recent forest cover change in relationship with mining concessions and protected areas</i>	Xavier (UNEP-WCMC)
<b>15:30 – 16:00</b>	<i>Coffee/tea break</i>	
<b>16:00 – 17:30</b>	Continue work on mapping forest cover change	Xavier (UNEP-WCMC)
<b>8 March – PUBLIC HOLIDAY</b>		
<b>DAY 2 – 9 March</b>		
<b>9:00 – 9:15</b>	Recap of previous day	Charlotte (UNEP-WCMC)
<b>9:15 – 10:30</b>	<i>IF prior day's activities not finished:</i> Finalization of mapping forest cover change analysis	Xavier (UNEP-WCMC)
<b>10:30 – 11:00</b>	<i>Coffee/tea break</i>	
<b>11:00 – 12:30</b>	<ul style="list-style-type: none"> <li>Mapping threatened species richness in all forested aimags in Mongolia in relation to biomass carbon:</li> </ul> <p><i>This activity will consist in processing and combining biodiversity and carbon density information to produce maps showing important areas for both biodiversity and carbon using a matrix legend.</i></p>	Xavier (UNEP-WCMC)
<b>12:30 – 13:30</b>	<i>Lunch</i>	
<b>13:30 – 15:30</b>	Continue work in the threatened species richness and carbon mapping	Xavier (UNEP-WCMC)
<b>15:30 – 16:00</b>	<i>Coffee/tea break</i>	
<b>16:00 – 17:30</b>	Continue work on the threatened species richness and carbon mapping <i>IF times allows:</i> Defining spatial logic and creating workflows: Mapping importance of forest for tourism and recreation in the aimags of Khovsgol and Tov	Charlotte/Xavier (UNEP-WCMC)
<b>Day 3 – 10 March</b>		
<b>9:00 – 9:15</b>	Recap of previous day	
<b>9:15 – 10:30</b>	<i>IF prior day's activities not finished:</i> Finalization of mapping importance of forest for tourism and recreation in the aimags of Khovsgol and Tov	
<b>10:30 – 11:00</b>	<i>Coffee/tea break</i>	

<b>11:00 – 12:30</b>	<ul style="list-style-type: none"> <li>Mapping forest extent and state in the aimags of Khovsgol and Tov</li> </ul> <p><i>In this activity, participants will process forest inventory and taxation data from all the soums of Khövsgöl and Töv to produce maps showing detailed information of forest state in both aimags.</i></p>	
<b>12:30 – 13:30</b>	Lunch	
<b>13:30 – 15:30</b>	<ul style="list-style-type: none"> <li>Mapping biomass carbon density in the aimags of Khovsgol and Tov</li> </ul> <p><i>In this activity, participants will process data from soums of Khovsgol and Tov to produce maps showing the spatial distribution of biomass carbon in both aimags.</i></p>	
<b>15:30 – 16:00</b>	Coffee/tea break	
<b>16:00 – 17:30</b>	<ul style="list-style-type: none"> <li>Mapping the importance of forest for timber and firewood provision.</li> </ul> <p><i>Working session participants will split in groups to use statistical and proxy data to map the relative importance of forests for both timber and firewood provision in Khovsgol, and solely firewood in Tov.</i></p>	
<b>DAY 4 – 11 March</b>		
<b>9:00 – 9:15</b>	Recap of previous day	
<b>9:15 – 10:30</b>	<ul style="list-style-type: none"> <li>Mapping importance of forest for water supply</li> </ul> <p><i>In this activity, participants will use WaterWorld, a web-based software system to produce maps showing the importance of forests for hydrological services in the rivers of Khovsgol and Tov</i></p>	
<b>10:30 – 11:00</b>	Coffee/tea break	
<b>11:00 – 12:30</b>	Continue mapping forest hydrological services	
<b>12:30 – 13:30</b>	Lunch	
<b>13:30 – 15:30</b>	Continue mapping forest hydrological services	
<b>15:30 – 16:00</b>	Coffee/tea break	
<b>16:00 – 17:30</b>	Continue mapping forest hydrological services	
<b>DAY 5 – 12 March</b>		
<b>9:00 – 9:15</b>	Recap of previous day	
<b>9:15 – 10:30</b>	<ul style="list-style-type: none"> <li>Mapping potential opportunity areas for forest restoration in Tov</li> </ul> <p><i>In this activity, participants will combine a diverse range of spatial datasets to identify areas of particular interest for forest restoration action in Tov. The datasets and the spatial logic and GIS process</i></p>	

	<i>used to identify such areas will be decided together in a collaborative exercise.</i>	
<b>10:30 – 11:00</b>	<i>Coffee/tea break</i>	
<b>11:00 – 12:30</b>	Continue mapping opportunity areas for forest restoration	
<b>12:30 – 13:30</b>	<i>Lunch</i>	
<b>13:30 – 15:30</b>	<ul style="list-style-type: none"> <li>• Mapping the importance of forests for the provision of non-forest timber products in Khovsgol</li> </ul> <p><i>Different proxies relating to extraction of NTFP will be combined to map the relative importance of forests for the provision of important NTFP in Khovsgol</i></p>	
<b>15:30 – 16:00</b>	<i>Coffee/tea break</i>	
<b>16:00 – 17:00</b>	Wrap-up session: <ul style="list-style-type: none"> <li>- Discussion of next steps</li> <li>- Evaluation forms</li> <li>- Closing remarks</li> </ul>	

## Part 2: Follow-up working analysis

The working session outputs will be further refined by a smaller group of participants between 14 to 16 March. A draft agenda of this second part of the working session will be drafted based on the results of the first part of the session.