

Working Session 1:

Introduction to spatial analysis for REDD+ planning at the provincial level in Viet Nam

Ha Noi, 16 – 27 June 2014

Working Session technical session plans

PART 2: Identifying potential zones for a REDD+ action - Maintaining existing forests (continued)

2D: Identify existing and future pressures on carbon stocks

DISCUSSION AND EXPLORATION OF DATA FOR LOOKING AT PRESSURES

When looking at pressures it will be useful to draw on the analysis of drivers of deforestation and forest degradation that are being undertaken in the different provinces

These drivers may include:-

- Conversion of forests to agriculture, both smallholder and commercial
- Harvesting of timber and other forest products
- Forest fires
- Population pressure and poverty, e.g. leading to overharvesting of fuelwood
- Concessions for mining, hydropower and other infrastructure

Objective: The purpose of this exercise is to identify and explore datasets which could be used to create individual or combined potential pressures maps or to identify areas at risk due to these pressures.

Datasets could include (but are not limited to):-

- Forest degradation/deforestation from land cover/forest cover change analyses
- Population density/human influence. Are there any data available on these from Census information down to sub-provincial level e.g. district or commune level?
- Poverty, e.g. poor districts and communes
- Future land-use plans. Are any spatial plans available or could agricultural suitability data in combination with other data help identify possible areas of future land use?
- Fire data. Are there any national or provincial-level data? Is there a particular fire season? Global datasets are available (Modis Global burnt areas raster data and fire intensity points)
- Location of mining concessions or other industries with impacts on forests

While exploring the data think about both identifying areas of existing pressure, and potential areas of future pressure. Think about the timescale for REDD+ planning, which affects how far into the

future the analysis should reach. Are there reference scenarios that make assumptions for the country / province on how much deforestation or forest degradation is expected over that time period without REDD+?

Although there are numerous datasets available to develop pressures layers (and at global, national and provincial levels), for the purposes of this exercise, we will be using the following:

- Forest cover change for Lao Cai (areas of deforestation/degradation)
- Road network for Lao Cai (using xx....)
- Poverty by district for Lao Cai (generated by linking statistical data to administrative boundaries)
- Population by commune for Lao Cai (generated by linking statistical data to administrative boundaries OR global population density data.....)
- Fire risk for Lao Cai (using Modis data)

When working at the provincial level in the future, it is important to remember that: a) some of these map layers already exist/better provincial data is available, e.g. poverty by commune; b) other pressures layers maybe more relevant, e.g. mining layer, and thus most appropriate data for a particular province to include as a key pressure.

There is also some thinking to be done on the relationship between the pressures. Are some pressures more significant causes of carbon emissions? Are some pressures more likely to be an issue than others over the time period being considered? Are some pressures already being tackled effectively by implementation of existing policies? These questions should influence whether specific datasets are used in the analysis, and how much emphasis is put on each.

Think about whether there are any pre-processing tasks required, e.g. you may want to buffer areas around recent deforestation or roads as one way of identifying areas of future risk of deforestation. If a dataset does not exist for a particular pressure or driver, is there an alternative data that could perhaps be used as a proxy?

We will be using these data in the next exercise when we start to explore the tools and methods for undertaking multi-criteria analysis, so it will be helpful to identify if the datasets exist and determine whether we have access to them.

When selecting pressures data, the same dataset considerations (on relevance and adequacy) need to be applied that were used for **Activity 2 on multiple benefits**.

Once data are identified there will be additional questions relating to the data that we will need to think about. These will be important considerations for the next exercise:-

- Are there criteria that can be used to categorise an area as at high risk of land-use change? For example, how to define high population density? What are the thresholds to define a parameter as 'high', 'medium', or 'low'?
- Should pressures be considered individually or as a combined composite layer? This will be determined by the precise objectives of the mapping exercise.

- For roads, you might wish to explore proximity either by defining a specific distance or generating a continuous surface of distance to roads (e.g. for proximity to areas of recent deforestation and to help highlight risks to areas of Natural Forest)