

Appendix A – Challenge trees

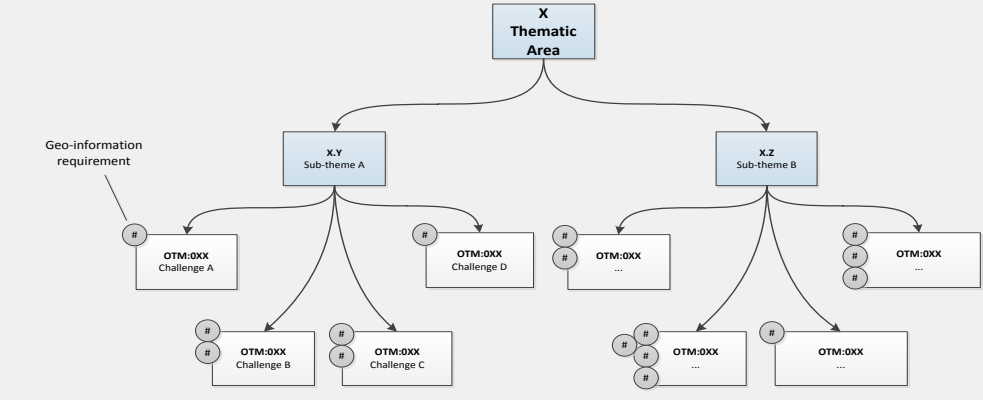
Introduction
The following diagrams, hereafter referred to as *challenge trees*, should be read in conjunction with the OTM master challenge spreadsheet produced for the EO4OG projects and summarising report. The challenge trees depict the relationship between each of the O&G challenges and the thematic areas through which the investigation was carried out.

Each challenge has a unique ID (OTM:XXX) which can be used to locate the challenge on the master spreadsheet.

Each challenge has been allocated to at least one of the five thematic areas and within each of these, to at least one sub-theme as shown in Figure 1.

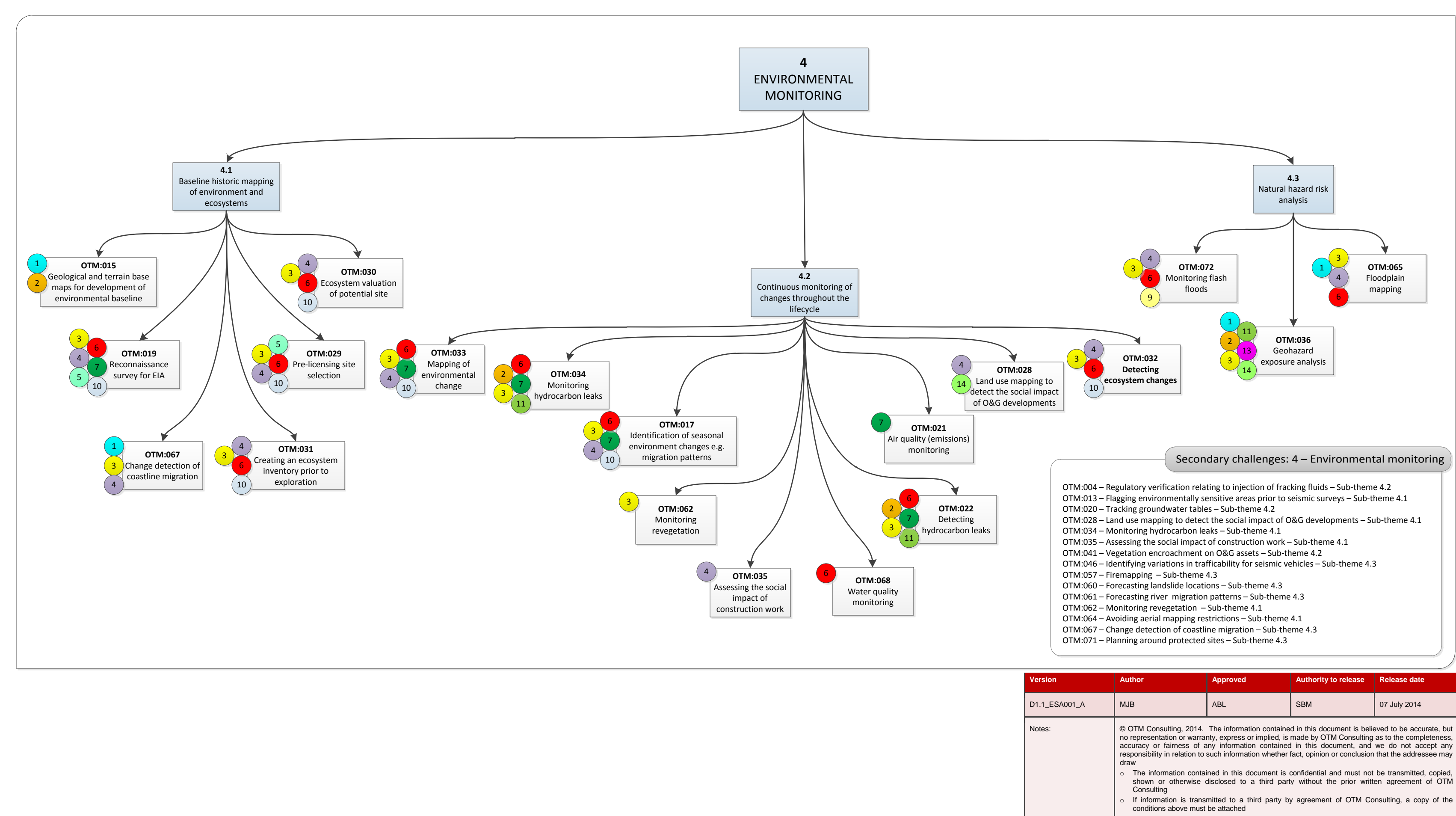
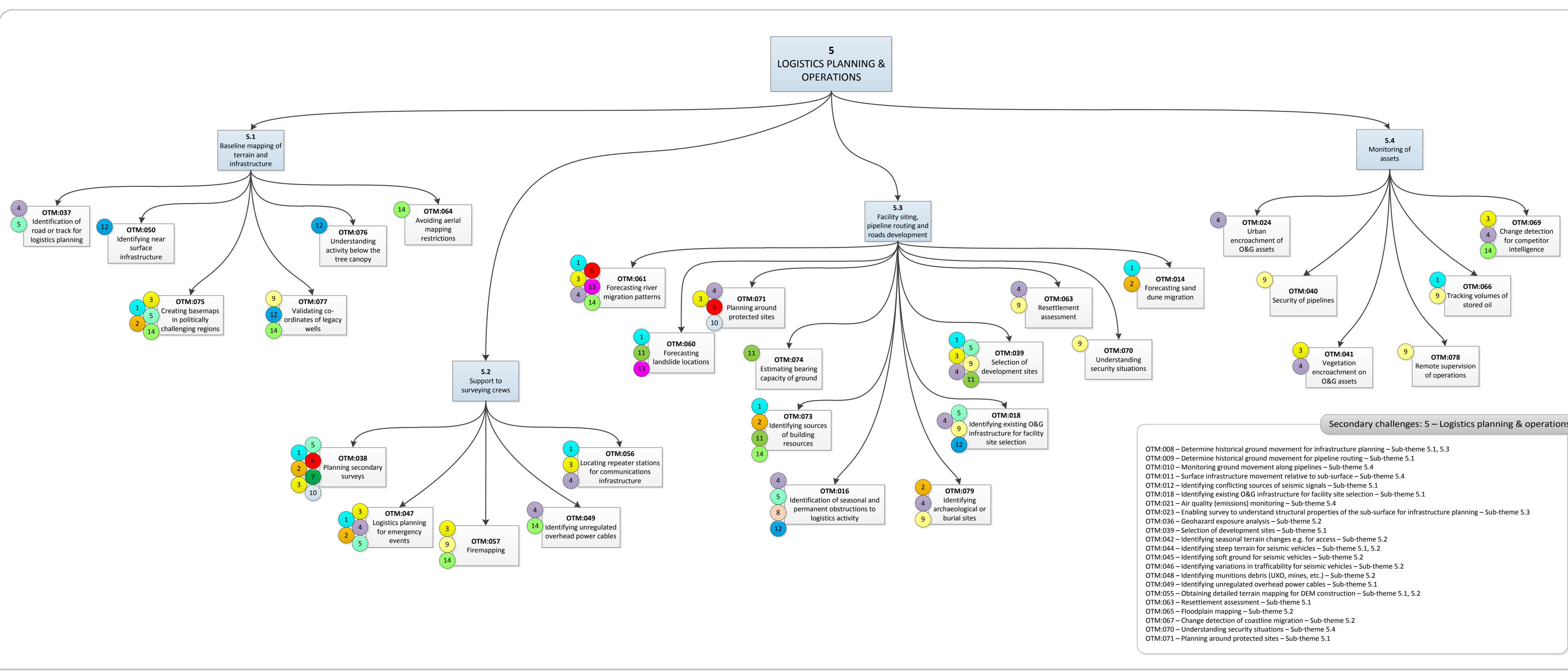
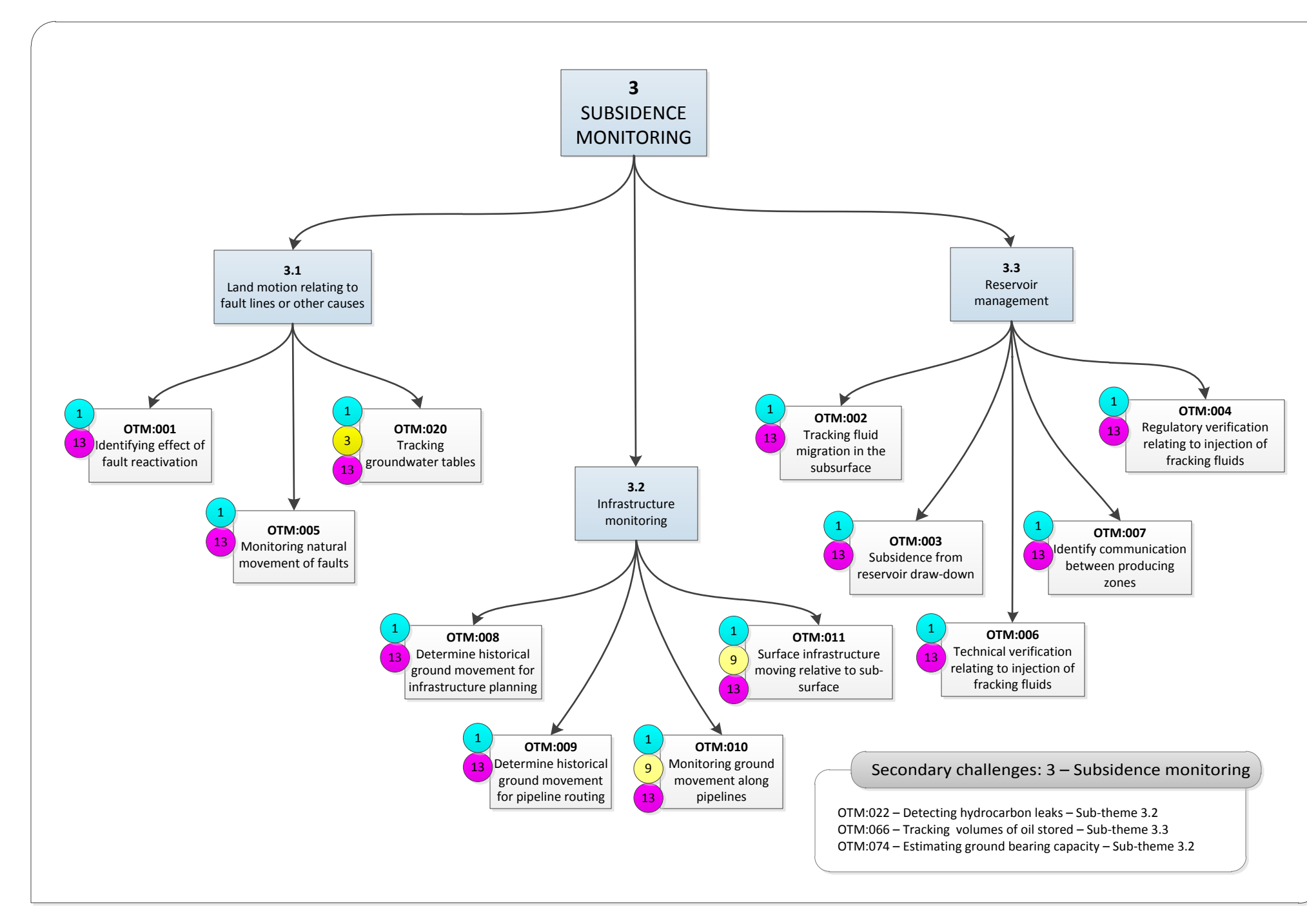
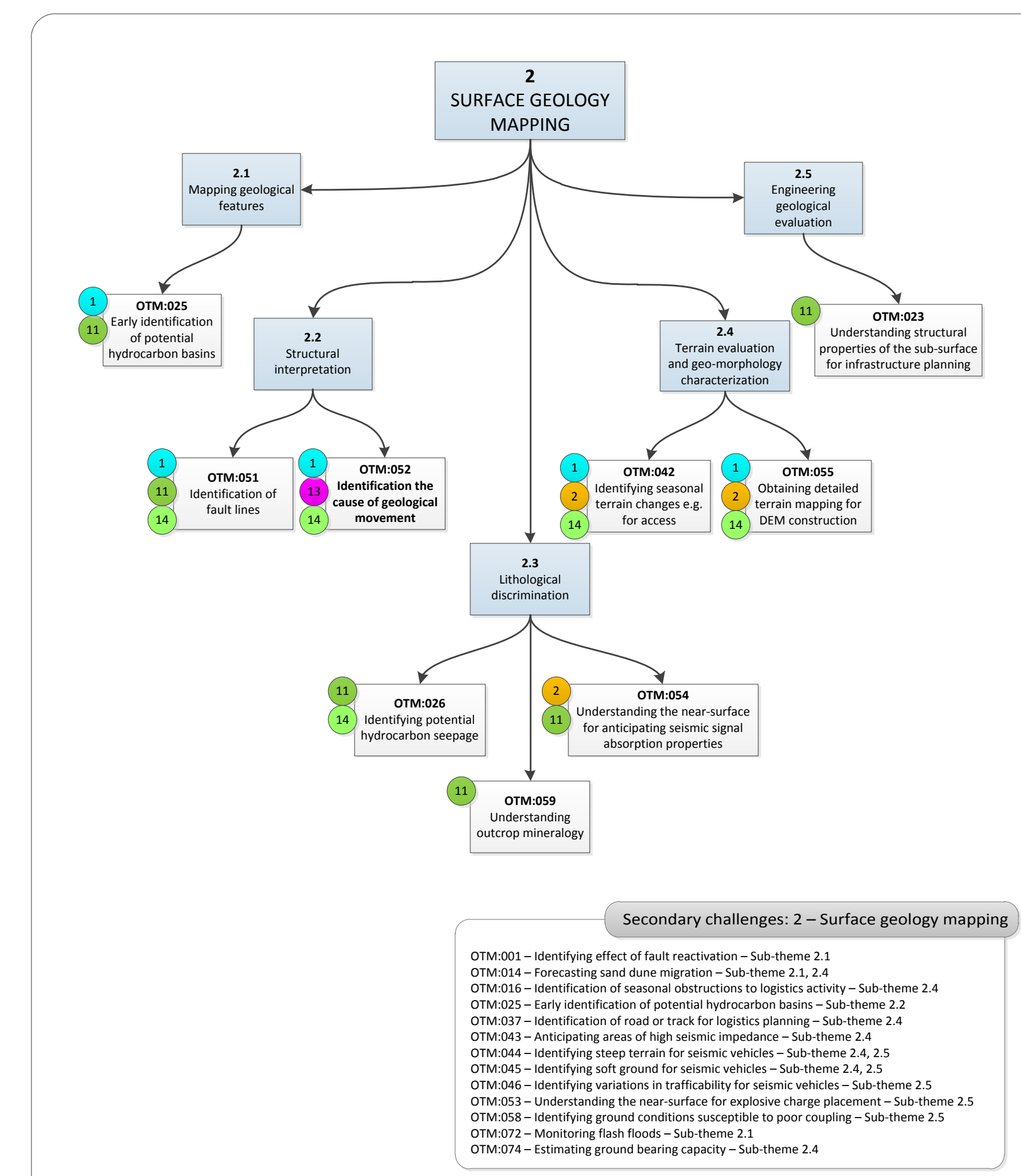
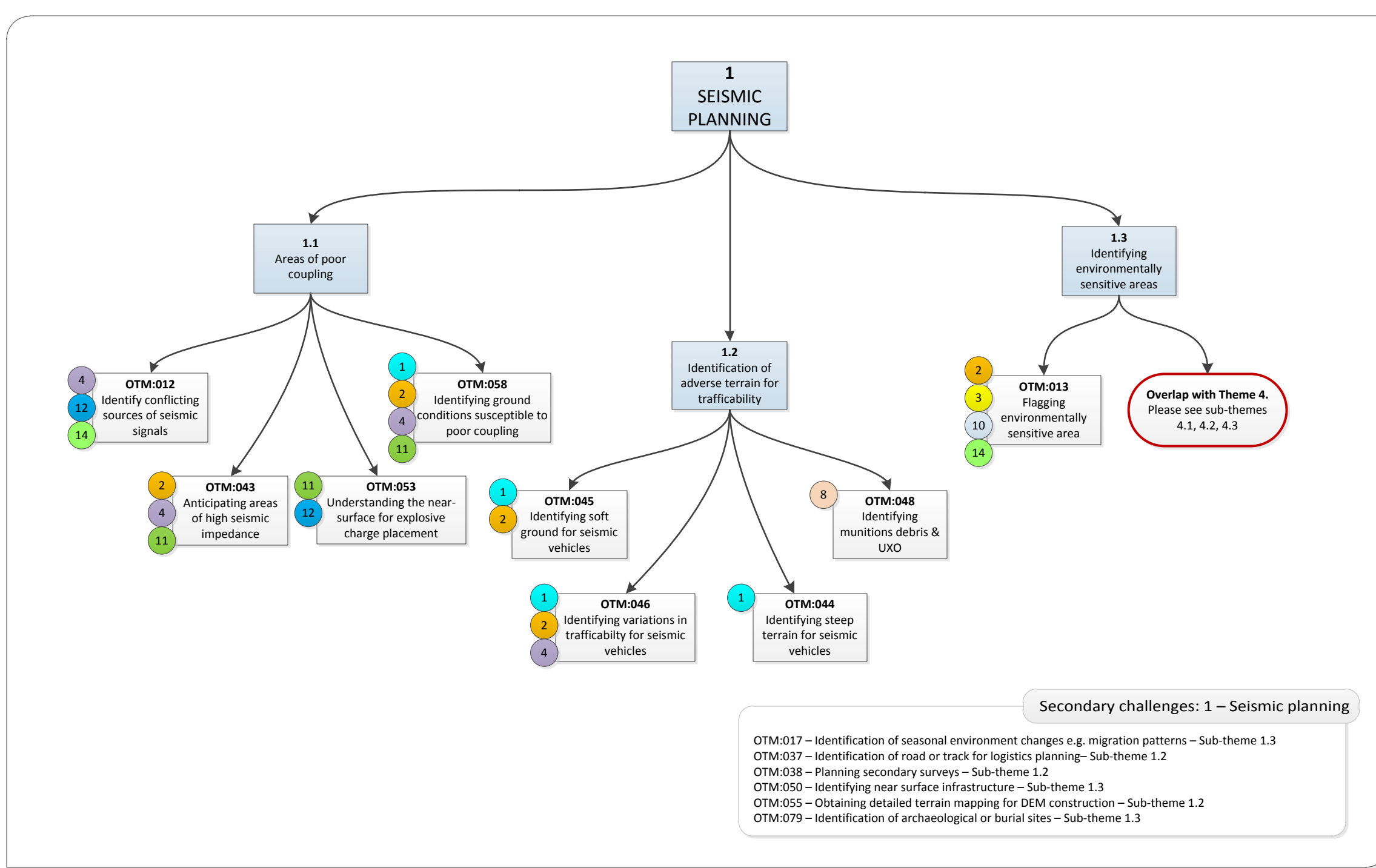
Challenges that bridge multiple thematic areas have been attributed to these respective themes as *secondary challenges*. For clarity, secondary challenges have not been displayed on the challenge trees. However, reference has been made to them at the base of the tree in a separate figure.

The geo-information requirements that may be required to satisfy a particular challenge are indicated by coloured and numbered bubbles. Each bubble colour and number corresponds to a specific geo-information requirement, as indicated in the key, titled: *Geo-information requirements*.



KEY: Geo-information requirements

- 1 Obtain detailed topographic characterisation
- 2 Obtain detailed terrain characterisation
- 3 Obtain detailed information about vegetation and flora
- 4 Obtain detailed land-use information
- 5 Identify location and condition of transport infrastructure
- 6 Identify inland water bodies and determining water quality
- 7 Determine air quality
- 8 Identify the presence and location of UXO
- 9 Obtain detailed imagery of assets
- 10 Identify fauna presence and patterns
- 11 Determine lithology, mineralogy and structural properties of the near surface
- 12 Identify the presence of sub-surface or covered infrastructure
- 13 Monitor ground movement (horizontal and vertical)
- 14 Obtain detailed imagery of the surface



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D11_ESA001_A	MJB	ABL	SBM	07 July 2014

Notes:

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