Table 11 Vegetation Structure (Basal area)

	DATA OPTION 1: Radarsat, TerrsarX or ALOS Palsar	**DATA OPTION 2: Airborne Laser Altimetry**
Spatial Dimensions		
Area to cover	Up to 3600 km ^{2}	User defined
Mapping unit	5 m -60 m	0.5 m – 2.5 m
Positional accuracy	Dependent on Geo-referencing process	Sub metre vertical and horizontal
Temporal Dimensions		
When	Approx 11 am	User defined
How often	Minimum every 4 days	User defined (can be < 1 day)
Variable to map	Vegetation cover	Vegetation cover
Environmental Restrictions	Significant terrain distortions	Significant terrain distortions
Processing technique **(Output)**	Empirical or deterministic radiative transfer model of vegetation canopy to estimate basal area (Vegetation type map and Basal area) Note: The ability to map specific targets will depend on their growth form and extent.	Empirical or deterministic radiative transfer model of vegetation canopy to estimate basal area (Vegetation type map and Basal area) Note: The ability to map specific targets will depend on their growth form and extent.
Resources – Hardware and Software	PC Image processing software	PC Image processing software
Resource – Personnel	Trained in radar data processing Knowledge of area to be mapped	Trained Lidar data processing Knowledge of area to be mapped
References: Note these are some example references	Dobson et al. (1995)	Lefsky et al. (1999)

Dobson, M., Ulaby, F., Pierce, L., Sharik, T., Bergen, K., Kellndorfer, J., Kendra, J., Li, E., Lin, Y. and Nashashibi, A. (1995). "Estimation of forest biophysical characteristics in Northern Michigan with SIR-C/X-SAR." IEEE Transactions on Geoscience and Remote Sensing, 33(4), 877-895.

Lefsky, M., Harding, D., Cohen, W., Parker, G. and Shugart, H. (1999). "Surface Lidar Remote Sensing of Basal Area and Biomass in Deciduous Forests of Eastern Maryland, USA." Remote Sensing of Environment, 67, 83-98.