LAND COVER

Out of Myanmar’s 167,186,000 acres of land area, 43,871,000 acres were classed as reserved forests (26.24%; 2014/2015) and 36,409,000 acres as other woodland (21.78%); 29,617,000 acres consisted of net area sown (17.72%), 13,014,000 acres of cultivable waste other than fallows (7.78%) and the rest of other forms of land use, including village land (1,216,000 acres), 638,000 acres of irrigation systems (canals, reservoirs, tanks and embankments), transport (740,000 acres) and settlements (490,000 acres; all figures: MNPED 2015: 206-208).

Myanmar’s extremely species-rich forests have been studied and described in detail (e.g. Stamp 1924, Davis 1960, Blower et al. 1991). Broadly speaking, they contain evergreen and deciduous trees and may be divided into the following forest types: tropical (under 3,500 feet), subtropical (between 3,500 and 7,500 feet, mainly in Shan and Kachin State) and temperate (above 6,000 feet in northern Myanmar) (Bryant 1997: 226, Corlett 2005). The key commercial species for centuries are teak (Tectona grandis; in Myanmar: kyun) and iron-wood (Xylix dolabriformis; pyinkado); however, padauk (Pterocarpus macrocarpus), in (Dipterocarpus tuberculatus), kanyin (Dipterocarpus spp.), thitka (Pentace burmanica), thitkado (Cedrela toona), thingan (Hopea odorata), thitsi (Melanorrhoea usitata, tapped for lacquerware) and various species of pine (Pinus spp.; tinya) and fir (Abies spp.) are also in demand (Bryant 1997: 226).

Figures on Myanmar’s forest cover vary: according to MNPED (2015: 277), forest cover area has decreased from 51.54% (of total land area = 134,626 square miles, 2000-2001) to 45.04% (= 117,655 square miles, 2014-2015). Figures from the FAO indicate that forest cover area has decreased from 57.9% (1990) to 51.1% (2000) and then 47.6% (2005) (FAO 2009), with a loss of around 446,000 ha of forest between 2000 and 2005 (FAO 2006) and a simultaneous increase in the proportion of reserved forests from 15% (1990) to 23% (2005; Khin Htun 2009: 13). Leimgruber et al. (2005) refer to an estimated 0.3% of annual forest loss. A total figure of 44.2% is on record for 2015 (FAO 2015: 6), with annual loss of forest cover between 1990 and 2015 amounting to 1.2% (FAO 2015: 12). The largest percentage of forest losses (based on total land area) per year were recorded for Kayah State and the Ayeyarwady and Yangon Regions (2000-2005; Liu et al. 2015: 8) and are mainly attributed to forest clearance for road building and to anthropogenic and wild fires (Liu et al. 2015: 13-16).

The spatial analysis of MODIS Land Cover data (based on the IGBP Land Cover Classification Scheme) shows the predominant land cover types: 39.39% of the country – mainly in mountain regions – consists of evergreen broadleaf forest, while 23.96% is classed as woody savannas and 13.78% as cropland/natural vegetation mosaic. A further 9.12% is classed as mixed forest; these contiguous areas are located in the far northeast of Kachin, where there are also areas of snow and ice. Croplands account for 8.52% and are mainly located in the agricultural areas of Central Myanmar, the Ayeyarwady Delta, along the Ayeyarwady, Sittaung, Kaladan and Thanlwin Rivers and in coastal regions. Water and permanent wetlands, the latter mainly along the coasts and around the islands, account for 0.45% /1.15%, respectively (Davies/Sebastian/Chan 2004). Grasslands (0.89%) and savannas (0.59%) are also of relevance. Urban and built-up areas cover just 0.22% of national territory at present.

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The Chin hills have huge height differences. The few towns, like the capital Hakha, are usually located on upper mountain slopes and are connected by a far-reaching infrastructure network. Taungya culture, a traditional form of shifting cultivation, is often practised.

In Northern Shan State, the main transportation axis from Mandalay via Kyaukme and Hpakaw to Lashio and further to Muse partly stretches along rivers and valleys. Sedimentation frequently alters the landscapes of the floodplains.

Large-scale jade and gemstone mining projects characterise the area around Hpakant. Beyond mining activities, small towns with jade traders and migrants from all over the country emerged recently. The adjacent mountains are yet mostly undeveloped and covered by forests.

The Shan mountains, in large part still densely forested, are separated from Central Myanmar by steep slopes. Alluvial, nutrient-rich soils form the basis for intensive agriculture in the Ayeyarwady Basin of Central Myanmar. In the floodplains, rice is grown.

In the midst of the dry zone area with average annual mean precipitation below 400mm lies the volcanic zone of Mt. Popa. The steep flanks of the volcano are covered by dense forests with high biodiversity. Rain-fed or irrigated land cultivation is found in the plains.

The fertile areas along the coastline and rivers of Rakhine State are densely populated. A network of rivers, bays and plains contributes to good accessibility and intensive trade exchange between the settlements of Mrauk-U and the present capital of Sittwe.

Several north-south stretching mountain chains structure the Southern Shan States. On the gentle slopes and valleys with rich soils between Kalaw and Inle Lake one of the most intensively used agricultural regions for products from the temperate zone can be found.
The 15 photos, satellite images and land cover details show the highly diverse biogeographical characteristics and anthropogenic forms of land use in selected landscapes. This creates great potential for diverse forms of ecological and socio-economic usage.