SAHARIN SEHE. An analysis of Suitability and Optimalisation of Dry Land Utilization Based on Agroforestry. Case Study: Sloping Dry Land on Upland area of Cikapundung Sub Watershed, North Bandung. Under Supervision of SANTUN R.P. SITORUS and NURHENI WIJAYANTO.

Sloping dry land is a marginal land, inappropriate utilization with its land suitability causes land degradation. This research was conducted using survey method. Purposes of this research were to analyze suitability of land utilization comparing its land suitability of slope 15 -30 % namely the first land unit (SLH-1) to 30-45 % namely the second land unit (SLH-2), to analyze farm of several Land Utilization Types (LUT), to predict erosion and to compose optimal LUT. Results of this research showed that 8 prominent LUTs i.e. LUT (cabbage), (chili), (orange), (avocado), (jackfruit), (orange + chili + cabbage), (avocado - cabbage) and (avocado + jackfruit - orange + chili + cabbage) in SLH-1 belongs to marginally suitable (S3) with limiting factors were slope, rainfall, pH, base saturation and erosion. The eight light LUTs in SLH-2 were considerent not suitable (N) with limiting factors are slope and erosion. Result of farming analysis of all LUT show that all LUT are feasible to carry on (BC-ratio = 1,38 - 3,41). The farmer income in SLH-1 ranged from Rp 3.478.500,- to Rp. 47.632.500,- / ha / year and in SLH-2 ranged from Rp.2.905.900,- to Rp 37.539.300,- / ha / year. The highest erosion were in LUT (cabbage), in SLH-1 = 107,7 ton / ha / year and in SLH-2 = 254,5 ton / ha / year. The lowest erosion were in LUT (avocado + jackfruit - orange + chili + cabbage), in SLH-1 = 43,9 ton /ha / year and in SLH-2 = 95,5 ton / ha / year. Optimum LUT based on the second scenario were LUT (avocado - cabbage) with income Rp. 71.826.156,- / ha / year. (in SLH-1 comprises cabbage = 0,43 ha and avocado 0,57 ha, in SLH-2 comprises avocado 0,83 ha and cabbage 0,17 ha). Optimum solution could reduce erosion in SLH-1 from average 71,8 ton / ha / year become 43,9 ton / ha / year and in SLH-2 from 156,9 ton / ha / year become 95,5 ton / ha / year.