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HDS27-P01

Room:Convention Hall

Time:May 24 16:15-17:30

Relationship between slope failures and height and density of trees brought by LIDAR data

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Authors showed that tree height can be supposed from LIDAR data and number of trees and area of tree timber at breast height can be presumed in case of plantation of ceders by previous study in Izumozaki district, Niitaga prefecture. Authors analyzed relationship between form of trees and probability of slope failure occurrence. Less probability of slope failure occurrence is pointed in case of higher tree areas from study in Izumozaki district. Authors will show results of further analysis about the relationship.

Keywords: LIDAR Data, Height and Density of Trees, slope failures

8	Slope angle at each 30m x 30m cell (2004)											
Aaximum tree height at each 30m x 30m		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-(m)	average
	0-5 (m)	0.4%	7.8%	10.5%	-/-	= - :	= -		-		-	2.1%
	5-10	0.8%	7.6%	14,1%	19.0%	-	-	41.7%	- '	1	-	8.2%
	10-15	0.9%	1.7%	6.2%	16.2%	23.5%	33.8%	51.3%	26.3%	- 1	-	12.1%
	15-20	2.1%	3.3%	4.6%	11.8%	13.0%	- 223%	24.7%	22.7%	31.0%	-	11.8%
	20-25	2.2%	2.3%	4.8%	6.0%	10.6%	12.5%	18.0%	13.7%	15.6%	-	9.8%
	25-30	0.0%	2.0%	3.6%	6.8%	8.9%	11.8%	14.3%	15.0%	8.3%	-	10.1%
	30-35	- 1	0.0%	4.9%	6.3%	9.0%	12.1%	11.1%	16.3%	16.3%	-	10.3%
	35-	= "		12.5%	6.1%	12.1%	8.6%	16.3%	10.3%	-	-	11.2%

(%): ratio of slope failure area in each cell