

Battle between Gem Mining and Small Holder Agriculture Systems: A Case Study of Selected GN Division on Rathnapura District in Sri Lanka

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Gem mining is a sector that is inherently dependent on the natural environment and requires a natural conditions including habitable climate, access to water resources and supporting infrastructure to extract the resources. Over exploitation of these natural resources had led to disastrous consequences including climatic change and low agricultural productivity. It was deemed appropriate to study on the impact of gem mining on the agricultural sector and the small holders who are the immediate beneficiaries of the sector. The study attempted to find out the agricultural land availability, quality of lands, soil erosion, water quality and labour migration from agriculture to mining. The study was conducted in three GN Divisions of Rathnapura district including *Elapatha*, *Pallegedara* and *Dellaboda*. Sample consisted of 100 farmers collected through the convenience sampling. Focus group discussions and key informant interviews with farmers, field level instructors and gem miners were conducted to collect data. The data was analyzed using descriptive statistics and spearman correlation. Study revealed that all farmers believed that mining operations were one of the major reasons for the occurrence of frequent floods and landslides in the study area. Poor mining operations had led to soil erosion, sedimentation, removal of vegetation that resulting the reduction of availability of lands for agricultural, quality of land and water. The percentage of the barren paddy lands of *Pallegedara*, *Dellabada*, *Elapatha* are 7, 20 and 26 % out of the total paddy lands respectively. The average paddy yield of the study area for the year was around 50 bushels/acre in the *yala* season and 60 bushels/acre in the *Maha* season. The frequent floods had destroyed critical agricultural assets and infrastructure, disrupting production cycles, trade flows and livelihoods means of the study area. Further, small- and large-scale illegal mining is widespread despite of regulatory measures. The respondents believed that the license holders also neglect the license rules in the greed of earning high profit. This had affected the farming systems and causes additional disruptions throughout the value chains while shifting the labor away from the agriculture sector. However, the registered farmers out of the total population of the *Pallegedara*, *Dellabada* and *Elapatha* GN divisions counts as 4, 15 and 15 % respectively, emphasizing that the likelihood of people for farming is limited to a small percentage. Therefore, proper management and monitoring must be maintained by the relevant authorities to mitigate the aftermath impact of mining. Further, the local community should be empowered to raise their voice against gem miners who do not abide by the required regulations during the process of mining.

Keywords: Agriculture systems, Gem-mining, Small holder