

MEASURES TO REDUCE ENVIRONMENTAL IMPACTS OF GEM MINING

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Sri Lanka has reasonable endowments of mineral resources in relation to its size. Gems have been the most economically valuable resource accounting for more than 90% of all mineral exports in the country. Despite the relatively high economic and social benefits gem mining cause significant environment damages.

A field survey was conducted using a semi-structured questionnaire in selected assistant government agent divisions of Rathnapura district during the period August 1998 to November 1998 to identify the environmental damages and possible practical measures to minimise such problems. Discussions were held with officers involved in the gem mining industry and miners under different mining categories. Wherever possible, information was also collected from direct observation and field surveys.

Results of the study revealed that several environmental impacts are obvious in the Rathnapura district due to gem mining namely, natural soil erosion, sedimentation, water pollution, removal of vegetation cover, flooding, landslides, ground water depletion, risk and/or damage to wild life, reduction of irrigation efficiency, health problems such as malaria, reduction of potential of agricultural lands and other damages including cracking walls of houses and man made structures. Results also indicated that small and large scale illegal mining is fairly widespread even in rivers despite regulatory measures. License holders usually neglect the license rules to get high profit. Supervision of mining activities is very low due to corruption in low enforcement agencies and lack of officers.

Modern techniques should be used in gem prospecting, fines and security deposits should be effectively used to rehabilitate abandoned gem pits, issue of licenses to defaulters should be avoided, license should be issued as early as possible before wasteful methods are employed by illegal gem miners, digging too many pits in one place should be prohibited, proper management and monitoring must be maintained through careful planning, and participation of the local community to pressurise all gem miners to minimise environmental damages have been suggested as remedial measures.