

Sharing of Knowledge About Natural Environment Preservation Measures in Road Projects Across the Country

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1. Introduction

Although various investigations and environmental preservation measures have been implemented so far in road projects to preserve rare species of animals and plants, as well as the ecosystem, the results and backgrounds are rarely shared among business operators from the perspective of preventing poaching and illegal digging. Therefore, NILIM is working to collect and analyze cases of environmental preservation measures and disclose highly effective preservation measures to share such information among business operators.

2. Grasp of Current Situation of Investigations and Preservation Measures Related to Natural Environment

Among the road projects across the country under direct control, we have analyzed, categorized, and compiled the implementation status of investigations and preservation measures of 417 projects that were implemented between 1977 and 2014, and the contents of preservation measures could be confirmed (Figure 1).

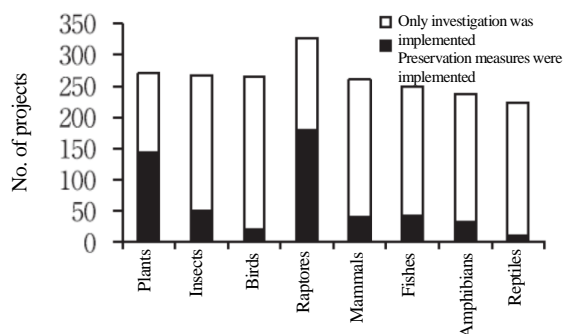


Figure 1 Implementation status of investigations and environmental preservation measures by category ¹

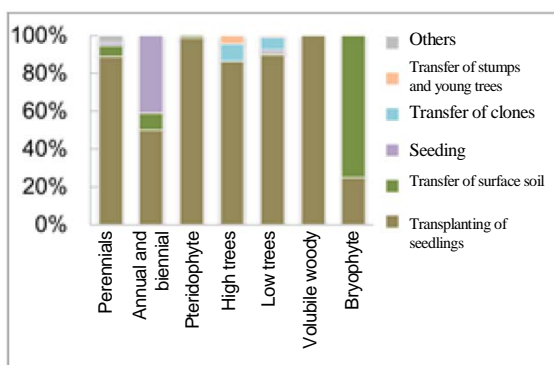


Figure 2 Implementation status of investigations and environmental preservation measures by category ²

3. Enhancement of the Certainty of Plant Conservation Method

For plant conservation, transplanting has been conducted in many cases. However, it is considered that there are cases where sowing seedlings obtained from seeds (seeding) and transferring surface soil including seedlings (transfer of surface soil) are more effective (Figure 2). Therefore, we organize and disclose case examples ³, as well as conduct verification tests for establishing preservation methods with higher reliability in the transplanting of seeds and surface soil that are challenging.

4. The way of working on sustainable environmental preservation

It is important that the preserved natural environment is maintained sustainably after preservation measures are taken during the construction of road. Therefore, we are investigating case examples and the future of environmental preservation considering operation and maintenance, such as a case example where students perform biotope maintenance work based on the agreement concluded between a road operator and a school as part of school curriculum and a case example of biotope maintenance on the premise of the management by a local NPO.

5. Future efforts

We will work to share the knowledge so that preservation measures can be implemented more effectively and efficiently based on our great deal of experience in investigations and preservation measures in the past.

For details, refer to the following:

- 1) "Follow-up of environmental assessment for animals, plants, and ecosystem," *Journal of the Japan Society for Impact Assessment*, 14 (2), pp. 45 - 50, 2016.
- 2) "Investigation on the implementation status of environmental preservation measures for plants in road projects," Abstracts of the 70th annual conference, VII-104, 2015.
- 3) NILIM document No. 906 "Case examples of the efforts for environmental preservation in [13. Animals, plants and ecosystem] of technical method for evaluating road environmental impact (2015 version)"

<http://www.nilim.go.jp/lab/bcg/siryou/tnn/tnn0906.htm>