Bridge Maintenance through Asset Management Systems

Aomori Prefecture



Salt Damage on PC Structure Cold and wet series of the same in East Area Sea of Japan Padfic Ocean

[Maintenance & Inspection Manual]



Situation

Aomori Prefecture manages around 2,300 bridges (bridges that are 2m or longer), and as many of them were constructed during the period of rapid economic growth after WW2, it is expected that the need for repair and replacement on many will come about at the same time. Thus, the prefecture anticipates a possible shortage of funds for maintenance costs.

In addition, Aomori Prefecture is an extremely harsh environment for bridges. In this environment, in order to maintain the road network and ensure that the citizens of the prefecture can live safely and securely, there is a need to minimise and stabilise maintenance costs by shifting over from corrective maintenance management to preventative maintenance management.

Action

The Bridge Asset Management System is a total management system that involves treating roads as assets; objectively assessing and evaluating the condition of the structures on the road; predicting the mid-to-long-term condition of those assets; and deciding the best time, method, and place to carry out countermeasures under the budgetary constraints.

This project includes not only the development of IT system, but also the cultivation of human resources, the IT system, the manuals, and organisations.

Impact

Total Management System has enabled a shift over from corrective maintenance management to preventative maintenance management.

It is estimated that it will be possible to reduce total costs by 186 billion yen over 50 years, when compared with the conventional corrective maintenance management system.