

## Experiences on the use of polymer coated steel net for the protection of dykes against the intrusion of beavers

P. Di Pietro

*Officine Maccaferri S.p.A*

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Recent studies show an increase in the population of beavers, nutria and other rodents in vast regions of central Europe over the last 15 years. Unfortunately, this caused in many instances considerable damage on large rivers along dykes and earthworks in the floodplain areas, leading to an increased risk of bank failures. However, most of these mammals belong to protected species. This work is aimed at showing positive experience in cooperation with universities, research institutes and environmental agencies regarding measures to permanently safeguard the banks using composite erosion control systems with polymer coated steel wire net (as flexible reinforcement component) and a geosynthetic (to promote vegetation growth). The steel mesh component works as an effective long-term barrier against the intrusion of mammals, discouraging them from digging inside the core of the dyke. An analysis of the sensitive areas to be protected led also to definition of the characteristics of these interventions (length, shape, escape ways, population areas, etc.). The study will present several additional benefits when using polymer steel nets along dykes, such as: high and durable erosion protection in overflow areas, promotion of fast and effective vegetation growth (increasing stability), surface protection against ice impacts (in northern regions), ease of installation, maintenance, ability to conform to irregular shapes of the slope. This work will also present the positive outcome of research studies along dykes in Germany, Austria and in Italy.