

Soil transplants boost nature worldwide

Areas in need of nature recovery can benefit from a soil transplant. That applies not just in the Netherlands but worldwide.

Ecologists at the Netherlands Institute of Ecology (NIOO) had already shown that in the Netherlands nature revives faster if it gets an injection of healthy soil with the associated soil life and plant seeds. Now an

Loamy soils perform better

international team has studied the effect worldwide, with 46 experiments

in 17 countries. This week, an article on the study appeared in the *Journal of Applied Ecology*, with Wageningen PhD candidates Gijs Gerrits and Rik Waenink as the lead authors.

The conclusion: soil transplants work everywhere, 'from the tropics to the tundra'. In the test locations, the diversity and mix of species in the vegetation grew faster after soil translocation than when plant seeds were introduced through seeding or the addition of hay. To give one figure, plant growth was 40 per cent closer to the intended result after soil translocation than after only adding hay.

The bigger, the better

There were however large differences between sites, which became more striking over time: either they became increasingly more successful or they became less and less successful. The researchers identified various key factors, such as the soil composition – loamy soils perform better – and the surface area – plots of more than 180m² did better than smaller plots.

While further research is needed on the factors determining the success of soil transplants, these findings already provide pointers for nature conservation, concludes the research coordinator Jasper Wubs (NIOO). 'Ecological recovery is a tricky and often unpredictable process. This study shows the basis for success lies beneath the surface.' ME