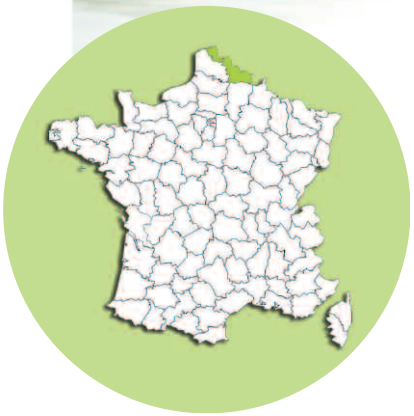

Water pennywort

(Hydrocotyle ranunculoides)

Management of water pennywort by the Union of sanitation boards in the Nord department

Union of sanitation boards in the Nord department

■ The union was first recognised as a public agency by prefectoral order dated 17 August 1966, then as a public board by prefectoral order dated 11 December 2007.

■ The union federates 7 intermunicipal agricultural enhancement boards with its headquarters in the town of Radinghem-en-Weppes, in the Nord department.

■ The main missions include:

- work on rivers not belonging to the State in order to reduce flood risks;
- the establishment of ecological management plans designed to organise comprehensive and rational maintenance work on rivers over five-year periods;
- administrative and accounting management of other organisations (an ASAD, a certified association for drainage and other land-consolidation organisations, various boards);
- agricultural drainage work in the framework of an agreement with the ASAD for Northern France;
- management of the pest-control group for Radinghem-en-Weppes;
- since 2012, management of invasive plants via the LUPIN (control of invasive plants) project that is part of the INTERREG IV France – Wallonia – Flanders programme. The purpose of the LUPIN project is to develop cross-border management methods for invasive alien plants.

■ Contact: Valérie Lorenski - vlorenski@usan.fr.

Intervention site

■ Management work on water pennywort (*Hydrocotyle ranunculoides*) was carried out on a 2-kilometre long section of the Vieille Lys River in the town of Haverskerque (59).

■ The Vieille Lys is a small river just 6.2 km long. It originates in the town of Aire-sur-la-Lys and flows into the Lys River (channelised) in the town of Saint-Venant.

■ The work constituted the initial management operations for invasive species conducted by the Union of sanitation boards in the Nord department (USAN). The interventions were carried out after observing the potential impacts of water pennywort and constituted the starting point for the LUPIN project.

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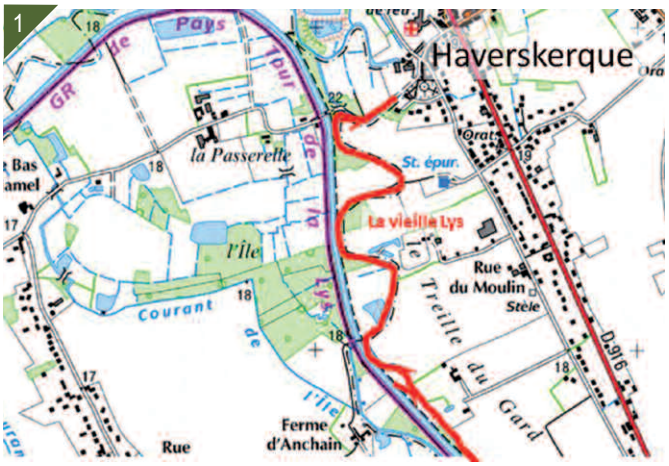


The river section where the work took place is shown in red.

Disturbances and issues involved

■ During the summer of 2005, the association *Agir ensemble pour notre environnement* alerted USAN about the presence of *Hydrocotyle ranunculoides* in the Vieille Lys River. Plant identification was confirmed by the botanical conservatory in Bailleul. In 2005, water pennywort had colonised two kilometres of the Vieille Lys River.

■ USAN decided to intervene in order to manage the effects caused by water pennywort.

■ Impact on ecosystems

■ The plants developed to the point of creating dense beds that consumed the available oxygen and deprived the environment of light, thus leading to the death of many native species, notably fish.

■ Impacts on human activities

■ The plants increased flooding risks in the village of Haverskerque by blocking installations and raising water levels.

■ Fishing became impossible, notably due to the lack of fish in the environment.

Interventions

■ In order to control water pennywort on the Vieille Lys River, USAN proposed mechanical uprooting with subsequent monitoring.

■ The authorities in charge of water regulations (the National agency for water and aquatic environments and the various water police forces) drafted specifications including precautionary measures to avoid propagation of the plants.

■ Barriers

■ Two barriers were installed downstream of the worksite, each comprising two screened sections.

■ Mechanical uprooting

■ The work was carried out during one week in February 2006.

■ The two tracked excavators used for the work were equipped differently:

- the first had a simple bucket to dig a ditch to bury the uprooted plants. The ditch was approximately 20 cm deep and 50 to 60 cm wide. It ran along the worksite (2 kilometres), approximately 5 metres distant from the river (outside the buffer zone);
- the second was equipped with a harvester bucket designed to uproot the beds of water pennywort and to place the plants in the ditch.

■ Following the work, USAN technical personnel inspected the site and manually collected any remaining cuttings.

■ Manual uprooting

■ During the summer of 2006, following the mechanised work, interventions took place every 3 weeks.

■ The team consisted of 3 technical personnel.

■ They used a boat to access the foot of the banks (riparian vegetation along the banks was abundant).

■ The plants were uprooted manually and placed in garbage bags in the boat.

■ The bags were subsequently transported to the waste-disposal centre.

Results and costs

■ Results

■ Following mechanical uprooting, the quantity of water pennywort on the surface of the intervention zone had been visibly reduced.

■ The remaining surface area requiring manual uprooting was estimated at 1%.

■ Human and financial aspects

■ The project was a success thanks to the constant monitoring of the river section following the work in 2006. The section was inspected every 2 months up to 2009 and then every 4 to 6 months until 2011.

■ No new colonisation by water pennywort had been noted as of the last inspection in 2011.

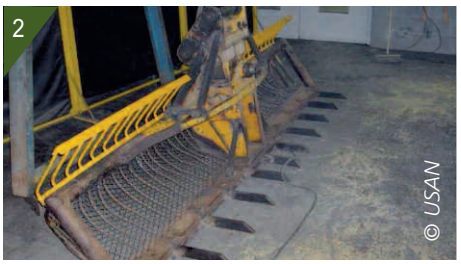
■ Burial of the plants produced no problems. No regrowth was noted in the ditches.

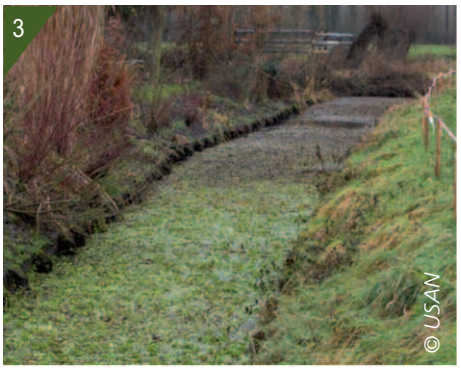
■ The work was done by in-house personnel, the costs were not calculated.

Outlook

■ The site will be monitored to avoid any new colonisation by water pennywort.

■ The LUPIN 2012-2014 project is intended to manage invasive species in aquatic environments following the work on water pennywort:





2. Harvester bucket with screen.
3. River section prior to the work.
4. River section after the work.
5. Mechanical uprooting.

- in conjunction with the pest-control group (GDON) for Maritime Flanders and the province of Western Flanders;
- targeting 5 invasive species present in both countries, namely Japanese knotweed, water pennywort, Himalayan balsam, giant hogweed and water primrose.

■ The main objectives are to:
- create a joint management unit for administrative and technical monitoring;
- inventory invasive plants along each side of the border;
- develop a joint management method and launch projects in test zones (identification of the test zones is currently under way).

■ Information on the project:
- information panels on the 5 species were set up in the town;
- a technical booklet was drafted for land owners, presenting the management techniques employed and the monitoring and inspection systems set up for the project;
- articles were published in the press.

Information on the project

■ The work was presented in the report on invasive alien species prepared by the Nord-Pas-de-Calais regional observatory for biodiversity in January 2013.

Authors: Sandra Fernandez, Irstea

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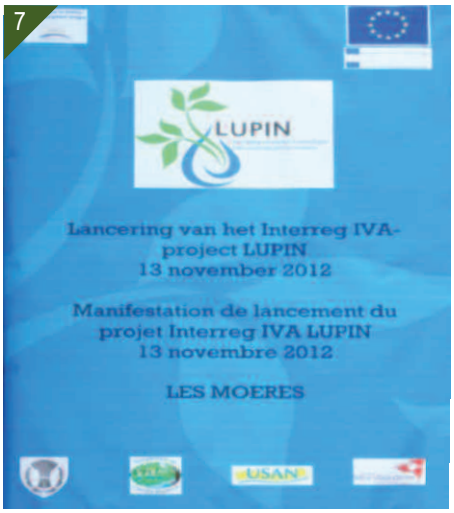

6. Manual collection of cuttings following the mechanised intervention.
7. Presentation of the LUPIN project.

For more information

■ USAN: www.usan.fr
■ USAN internet site presenting its activities: http://www.usan.fr/nosactions.html
■ Excerpt from the report on invasive alien species prepared by the Nord-Pas-de-Calais regional observatory for biodiversity in January 2013, 3 pp.
■ USAN. 2011. Synthèse sur les interventions : « Bilan et évolution de la lutte contre l'Hydrocotyle », 10 pp.
■ Press article published in the *Voix du Nord* newspaper on 18 November 2012.