Tropentag, October 6-8, 2009, Hamburg

"Biophysical and Socio-economic Frame Conditions
for the Sustainable Management
of Natural Resources"

The Cost of Invasion Control Measures Subtropical *Ailanthus altissima* (Mill) Swingle in Hesse

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Abstract

The introduction of species to Europe has a long history but in recent times the invasion of alien species has reach new levels due to globalisation. Vulnerable ecosystems and the increase of invasive alien species (IAS), which are favoured by the human-made climate-change have led to a change in the composition of ecosystems and are endangering local species, communities and biotopes. AIS introduce new pests and diseases previously unknown to the ecosystems.

Alien invasive species introduce pests and diseases, affect agriculture and forestry negatively and damage buildings and roads, thereby raising the costs for management and control. They burden the European economy to an ever increasing degree and therefore can be seen as a major challenge for biodiversity conservation in Europe. In this study we calculate the costs of different measures for controlling the invasive subtropical species *Ailanthus altissima* (Mill.) Swingle.

The genus Ailanthus (Simaroubaceae, Quassia family) is a native of India, eastern China, Thailand, Malaysia, Borneo, the Philippines, Sumatra, Java, Indonesia, the Solomon Islands, New Guinea and northern Australia. *A. altissima*, commonly known as "Tree of Heaven", is today a naturalized and invasive species in disturbed areas in Europe and North America, particularly in metropolitan areas.

During the winters of 2005 to 2007, data about management, salaries, equipment and facilities costs for the control of *A. altissima* in Hesse (Germany) were collected. Park-managers, hospital allergy doctors, private and public garden workers and the vegetation management director of Deutsche Bahn, section Baden-Württemberg and Hessen, were interviewed to obtain further information about investments, local management, new methods, actual researches and strategies used on the control of invasive species.

Especially for Hesse (Germany) it is estimated that the uncontrolled spread of invasive species may cause annual costs of several million of Euros to the public and the private sector.

Keywords: Aliens species, cost control, management

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