**International innovation competition for university students in drainage water management and nutrient retention**

**Funding:** The innovation competition for university students (hereinafter - competition) is organized as part of NUTRINFLOW (Practical Actions for Holistic Drainage Management for Reduced Nutrient Inflow to Baltic Sea) project and is funded by The Central Baltic 2014-2020 Programme.

**About the project:** The project aims to reduce nitrogen and phosphorus losses from agriculture to local waterbodies and the Baltic Sea through implementing, demonstration and increasing the recognition of innovative water management measures in agricultural areas across the Central Baltic region. NutrInflow is implemented in three countries with eight partners across the Baltic Sea - ProAgria Southern Finland (Lead partner), Nylands Svenska Lantbrukssällskap, City of Loviisa, Zemgale Planning Region, Jelgava Local Municipality, Union “Farmers Parliament”, Latvia University of Agriculture, JTI-Swedish Institute for Agricultural and Environmental Engineering as well as County Administrative Board Östergotland.

One of the activities in this project is to interact with local students and organize international innovation competition. The topics of the competition include but does not limit to environmentally friendly drainage water management measures, e.g., sedimentation ponds, two-stage ditches, bottom dams, meandring, controlled drainage, constructed wetlands, etc.

**Rules and regulations**

The aim of this competition is to encourage students with engineering and natural sciences background to get involved in solving practical problems by developing innovative and environmentally friendly solutions for drainage systems.

**Participants:**

Target audience for the competition is engineering and natural sciences students. It is possible to participate in this competition either individually or in teams (max three participants). If the team has students from different fields of studies (interdisciplinary team), it receives additional points at the evaluation stage.

**Objectives and tasks for participants:**

1. Prepare a brief description about the idea that introduces innovative solutions in the field of drainage water management to reduce nutrient losses from agricultural land. Include the description of demonstration model which would display the innovation idea and its potential impact to the environment. A list of materials needed for practical preparation of the demonstration model should be included in the description.
2. Construct the demonstration model that supports the idea described earlier.

**Topic**

Participants can freely choose their theme and topic as far as it is related to environmentally friendly drainage water management measures, for example, sedimentation ponds, two-stage ditches, bottom dams, meandring, controlled drainage, constructed wetlands, etc.

**Stages of competition**

1. During the first stage, student/team submits the description of his/her/their idea, technical specification of the solution (images, blueprints, drawings, etc.) and the list of materials needed to prepare the scale model of his/her/their idea. The submitted ideas will be evaluated and three ideas that will receive the highest evaluation will continue the competition in the second stage.
2. During the second stage, three students/teams will receive the materials according to the given technical specification. Each student/team prepares the demonstration model and its description, which will be evaluated.

**Requirements for the description of innovative idea**

1. Text should be divided into consecutive chapters;
2. A list of references should present;
3. Images, blueprints or drawings should be included;
4. A list of materials needed for the preparation of demonstration model should be included.

**Advantages of participation**

* All contestants have a chance to participate in lectures given by local and international speaker related to innovations and environmentally friendly drainage solutions, and their potential effects on nutrient retention. All participants will receive a certificate approving the attendance.
* For increasing practical knowhow, all students/teams will have a chance to visit already existing environmentally friendly drainage solutions within the Zemgale Region.
* Each student/team competing in the second stage will have a possibility to attract a mentor who may provide consultations during the development process. Mentors cannot be representatives from the NUTRINFLOW project partnering organizations.

**Competition timeframe**

The competition occurs in two stages.

First stage will be held from February 5 until March 9, 2018. During this period students submit their ideas which then will be evaluated from March 12 until March 23, 2018.

Authors of three ideas that will receive the highest evaluation will be nominated to develop the demonstration model until June 1, 2018. Experts will evaluate these ideas and demonstration models from June 4 until June 15, 2018.

Organizers will announce the winner in the final seminar, which will happen on June 15, 2018.

**Application**

Students must submit the descriptions of ideas according to the requirements to Mrs. Linda Grīnberga (Faculty of Environment and Civil Engineering, Akadēmijas Street 19, room 409, Jelgava, LV-3001, Latvia) or electronically (linda.grinberga@llu.lv). The second stage applications can submit in person at Akadēmijas Street 19, room 409.

**Awarding the winners**

All second stage participants will receive encouragement awards. The winner will have a chance to participate in a fully paid trip to Finland where the innovative solutions developed during the competition will be presented internationally as a part of the final conference of the NUTRINFLOW project.