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| **Student Name:** | Isabelle Rich |
| **Matriculation number:** | s1501956 |
| **Degree Programme:** | BSc (Hons) Ecological and Environmental Sciences |
| **Supervisor:** | Dr Isla Myers-Smith |
| Project Title: | Can land intensification and abandonment in Latvia be linked to key socio-political events? |
| **Brief Description of Project and Methods:**  The research regarding land use change will be conducted through use of satellite imagery of Latvia. Latvia provides an interesting research area due to the severe socio-political shifts it underwent, experiencing both the collapse of the Soviet Union (1991) and the joining of the European Union (2004). To examine the effects of such events, I will be using Google Earth Engine, which is an online GIS platform. Specifically, I will be creating a classification of land use types in Latvia to see whether key socio-political events can be detected. Using satellite data, I will first define land use types into several categories: extensive, intensive and abandoned. I will then create a classification for each year, allowing me to plot the overall trend in land use change. The time frame studied will be determined after researching which satellite data would be most beneficial to the study. Having a yearly classification will also permit me to consider time lags and differences between the two key socio-political events. I will test and train the classification with training datasets and assess the accuracy through estimating error with validation data. To detect and assess change, I will overlay each year and compute gain, loss and change on a pixel scale. Statistical analyses including mixed-effects models and figure production will be conducted in the programing language R. | |

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| **Please tick one or more of the following:** | | |
| The proposed project will involve fieldwork and / or overseas travel. I have assessed the risks using the appropriate form and this has been seen by my Supervisor. | |  |
| The proposed project will involve lab work. My Supervisor and I have completed the appropriate Lab Safety Forms. Lab work will not involve lone working. | |  |
| The proposed project will involve long periods of computer usage. I have taken note of the University guidance on the use of computers and will take appropriate rest breaks. | | X |
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| **Supporting forms must be submitted for review by the School Health and Safety Manager either electronically via LEARN or in hard copy to your Degree Programme Secretary.** | | |
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| **I agree to abide by the precautions noted on the submitted risk assessments and undertake to review the forms should the project parameters change or the control measures are shown to be inadequate.** | | |
| **Print Name (Student):** | Isabelle Rich | |
| **Signed (Student):** | Isabelle Rich | |
| **Date:** | 13/01/2019 | |
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| **I have reviewed the safety forms for this project and am satisfied that all reasonable steps have been taken by the student to ensure their health and safety during the project.** | | |
| **Print Name (Supervisor):** | **Isla Myers-Smith** | |
| **Signed (Supervisor):** |  | |
| **Date:** | **18 Jan. 2019** | |
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| **I have reviewed the safety forms for this project and am satisfied that all reasonable steps have been taken to ensure the health and safety of the student during the project.** | | |
| **Print Name (Health and Safety Manager):** |  | |
| **Signed (Health and Safety Manager):** |  | |
| **Date:** |  | |