



2019-IPR-D-000-011468

**High-resolution remote sensing to support measures against tree pests**

**Position for:**

Trainee

As the science and knowledge service of the Commission, the mission of Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <http://www.jrc.ec.europa.eu>

To support the fight against particularly harmful plant diseases and pests in Europe, a team at the JRC monitors tree health in at-risk areas using remote sensing. Currently, the work focuses on the outbreak of *Xylella fastidiosa*, an exotic pest causing extensive damage to trees in multiple European countries and at risk of spreading further. We use very high resolution hyperspectral and thermal remote sensing images, aerial photographs (ie orthophotomosaics), and standard ground-level photographs, and satellite images to evaluate the health of individual trees over large areas. This approach requires automated analysis methods applied to big remote sensing data sets. These analyses are regularly evaluated and refined based on comparisons with measurements and inspections on the ground. See also <https://forest.jrc.ec.europa.eu/en/activities/forest-and-tree-pests/>

We seek a trainee with scientific programming experience to support this work, and particularly in algorithm development and GIS-tasks. The trainee will have the opportunity to participate in a remote sensing team that both performs research and provides direct support to the European policy makers coordinating the fight against exotic plant pests in Europe.

**Qualifications:**

**Essential:**

The ideal candidate must have:

- Background in data science with a good knowledge of writing code in R and/or Python.
- Good knowledge of spoken and written

	<p>English (Level B2)</p> <p><b>Advantage:</b></p> <ul style="list-style-type: none"> <li>• Knowledge of remote sensing concepts, particularly passive optical remote sensing, be it from satellite or airborne data applied to vegetation.</li> <li>• Familiarity with handling big, gridded, data sets with machine (and particularly deep) learning algorithms and bash scripting.</li> </ul> <p><b><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></b></p> <p><a href="https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees">https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</a></p>
<b>Unit /Directorate</b>	Directorate for Sustainable Resources Bio-Economy Unit
<b>Indicative duration</b>	5 months
<b>Preferred starting date</b>	As soon as possible
<b>JRC Site</b>	Ispra
<b>Country</b>	Italy
<b><u>JRC contact details</u></b>	<p><b>For any technical problems with your application, please contact:</b></p> <p><a href="mailto:HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu">HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</a></p>