

**Code Number and Title:**

**LRI-ECO31:** Develop testing approaches / strategies to provide relevant abiotic and biotic half-lives and confidence around those rates.

**Background**

Abiotic and biotic degradation are key removal processes that reduce the burden and impact of a chemical in the environment. Degradation data are also used to determine the environmental persistence of a chemical. However, for most chemicals the degradation data used in exposure and persistency assessment are limited in number; in many cases these data are restricted to a single value, or a default rate constant, based on the outcome of a simple screening assay. The wider environmental relevance of this rate of removal, including the impact of key environmental variables such as temperature, is therefore unknown and little or no certainty or confidence can be assigned to it. In order to improve confidence in environmental exposure and persistence assessments laboratory and model-based approaches are required that provide information about the range of removal rates that are likely to be observed in the environment together with an indication of the key parameters that may govern these rates. Phase 1 of this RFP seeks to review the state of the science associated with degradation and persistence assessment in the environment to identify testing strategies that will provide greater confidence in degradation half-lives. A second Phase of work may be commissioned to develop and validate the experimental and model-based approaches identified within the review.

**Scope and Objectives**

- A detailed review of existing approaches for probabilistic degradation, persistence and exposure assessment. The review should include:
  - Abiotic and biotic degradation
  - Water, soil and sediment compartments
  - Regulatory and non-regulatory experimental approaches and model-based approaches
  - A critical evidence-based evaluation of the key factors that drive degradation rates in the each compartment.
  - A recommended experimental framework that considers the practical implications, pros and cons, of these approaches to general chemicals and, considering scientific knowledge, for considering variable degradation rates in general chemicals regulation.

***Deliverables***

The final report shall contain an executive summary (2 pages max), a main part (max. 50 pages) and a detailed bibliography. It is expected that the findings will be developed into at least one peer reviewed publication, following poster(s) and presentation(s) at suitable scientific conference(s).

***Cost and Timing***

Start in 2015/16, duration 1 years.

Budget in the order of € 100 000.

***Partnering/Co-funding***

Applicants should provide an indication of additional partners and any funding opportunities or concurrent existing research activities that can be leveraged as part of their proposal. Partners can include, but are not limited to, industry, government/regulatory organizations, research institutes, etc. Statements from potential partners should be included in the proposal package.

***Fit with LRI objectives/Possible regulatory and policy impact involvements/Dissemination***

Applicants should provide information on how their proposal is aligned with LRI objectives. Furthermore, an indication on how the results could influence regulatory and policy areas should be provided. Dissemination plans should also be laid down.

**DEADLINE FOR SUBMISSIONS: 6 Sept 2015**

Please visit [www.cefic-lri.org](http://www.cefic-lri.org) for general information about the LRI funding programme, guidelines for grant applications and links to application documents.