Bringing together the technical, cultural and human capital in Earth sciences

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Theme 5 contains the work packages on Training and Staff Exchange. This theme builds on the work being done in the Technical Innovation and Data for Science Themes.

From a *technical capital* point of view, Theme 5 will work on dedicated technical training in the use of reference models in data management, as well as cloud/grid e-infrastructure, and on the complex issues in time series analysis. Both within the project and in individual Research Infrastructures (RI), people will be trained in the use of these e-infrastructure services and the application of reference models for data management in the broadest sense of the word. This should directly benefit technicians and researchers in the use of products developed by Themes 1 and 2. It should also contribute to foster comparable and interoperable ways of working with data among the environmental RIs.

From a *cultural capital* point of view, the staff exchange programme offers a unique opportunity for RI staff to 'peek into the kitchen' of RIs in other domains, thus encouraging cross-domain collaboration and knowledge exchange with Earth science as the 'bigger picture'. In the same spirit, an e-learning platform will offer training material from different RIs. TED-like talks will enhance this joint endeavour. Last but not least, from this point of view, Theme 5 will develop training material in Earth science for use in secondary schools. This material will present the RIs to a future generation of scientists and technicians, promoting a joint and multidisciplinary scienceto study the Earth as one -complex- model.

The *human capital* point of view is of course obvious in a theme that touches on training and staff exchange. It is important to mention that outside the immediate scientific and technical skills, Theme 5 will also offer training for the managerial and administrative staff of the RIs, most notably by connecting to the RITrain project. This H2020 project will develop a training programm for research infrastructure managers, enabling professionals across scientific domains to gain expertise on governance, organisation, financial and staff management, funding, IP, service provision and outreach in an international context. ENVRIplus aims at developing a dedicated session focused on the particularities of environmental RIs, especially the distributed character and e-Science intensive applications.

Theme 5 actively contributes by bringing together the technical, cultural and human capital in earth sciences.

In this sense, Theme 5 contributes to the core ambitions of ENVRIplus: bringing the environmental sciences together as a coherent and collaborative discipline, studying the processes that establish the planet Earth. These processes are all interlinked, and constitute the most complex of models. Envrironmental RIs can all contribute to a better understanding of the Earth model, by combining this Technical, Cultural and Human Capital. The ENVRIplus theme on Training and Staff Exchange intends to deliver its little piece of the puzzle in pursuit of this endeavour.
scientists can reproduce them independently.