# Plans for irrigation development in JULES based on future requirements

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Over 324 million hectares of land are equipped for irrigation worldwide. 42% of this is located in only two countries: India and China (FAO 2014). These areas of high irrigation also coincide with hotspots in land atmosphere coupling strength (Koster et al. 2004), which highlights the importance of irrigation for land atmosphere coupling through the sensitivity of the atmosphere to soil moisture. This presentation outlines the work that is being done to develop an irrigation scheme for JULES which is suitable for future requirements. The existing irrigation scheme does not give us the necessary flexibility to enable future developments, in particular the ability to irrigate specific surface types or run with soil tiling. Exploiting soil tiling will allows us to have the correct physical representation of irrigation. However, the soil tiling functionality won't be available until after LFRic is implemented, therefore we will present an interim solution that uses a single soil. Preliminary results and evaluation from a regional coupled simulation using the new scheme will be shown and future plans for irrigation will be presented.