

# SPECIAL PROJECT PROGRESS REPORT

All the following mandatory information needs to be provided. The length should *reflect the complexity and duration* of the project.

**Reporting year** 2023

**Project Title:** Future Weather: An Investigation of Storm Scenarios for Ireland

**Computer Project Account:** spieclan

**Principal Investigator(s):** Colm Clancy

**Affiliation:** Met Éireann

**Name of ECMWF scientist(s) collaborating to the project (if applicable)** N/A

**Start date of the project:** 1 January 2022

**Expected end date:** 31 December 2023

## Computer resources allocated/used for the current year and the previous one (if applicable)

Please answer for all project resources

		Previous year		Current year	
		Allocated	Used	Allocated	Used
<b>High Performance Computing Facility</b>	(units)	10M	77k	24M	0
<b>Data storage capacity</b>	(Gbytes)	10TB	0	20TB	0

### **Summary of project objectives** (10 lines max)

The objective of this project is to investigate the effect of a warming climate on extreme post-tropical storms impacting Ireland. The “future weather” framework will be used, employing the high-resolution HARMONIE-AROME NWP model to simulate storm events in hypothetical, but physically plausible, climate settings.

### **Summary of problems encountered** (10 lines max)

As originally planned, a post-doctoral fellow was to be recruited in early 2022 to carry out this research. Unfortunately this project has been severely delayed due to recruitment difficulties. Following the third attempt, a candidate is finally due to commence in September 2023.

### **Summary of plans for the continuation of the project** (10 lines max)

The work will properly begin in the second half of 2023. Recently our climate modelling team has been expanded, and with this increased capacity we hope to be able to quickly ramp up the work.

### **List of publications/reports from the project with complete references**

None

### **Summary of results**

If submitted **during the first project year**, please summarise the results achieved during the period from the project start to June of the current year. A few paragraphs might be sufficient. If submitted **during the second project year**, this summary should be more detailed and cover the period from the project start. The length, at most 8 pages, should reflect the complexity of the project. Alternatively, it could be replaced by a short summary plus an existing scientific report on the project attached to this document. If submitted **during the third project year**, please summarise the results achieved during the period from July of the previous year to June of the current year. A few paragraphs might be sufficient.

As part of our general work, both HARMONIE-AROME and HCLIM are successfully running on the Atos HPC and will be ready for simulations for the new researcher.