



Characterisation of metadata to enable high quality climate applications and services

Deliverable 800.1

Communication strategy and plan

Partners providing input: Met Office, University of Reading, Infoterra, DWD, KNMI, SIH

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1 Introduction

CHARMe (Characterization of metadata to enable high-quality climate applications and services) is an EC FP7 research project whose aim is to develop and implement an online tool for characterising metadata to enable high quality climate applications and services. The project runs for two calendar years, ending in December 2014. There are four Work Packages (WPs) forming the technical and engineering core of the project in developing the CHARMe tool. The work of these WPs is supported by two other WPs whose purpose is to engage with users at all levels, in order to understand their needs to drive development of the tool, and to promote the use of the tool when it has been implemented.

The success of CHARMe therefore depends not only on creating a useful and easy to use system. It equally depends upon successful engagement with the wider climate research and user community to understand how their data needs can be better served by such a system, and to demonstrate them the value of CHARMe.

Work Package 800 'Outreach and Application', comprising of researchers from the Met Office, University of Reading, Airbus (Defence and Space), DWD, KNMI and Terra Spatium has the responsibility for the communications and outreach aspects of the CHARMe project.

2 Purpose and scope

This document is the **Communication Strategy and Plan** for the CHARMe project. It is an early deliverable in the project as it will guide the project engagement with stakeholders and users for developing the CHARMe system, and the subsequent promotion of said system to users of climate data. The Communication Strategy and Plan will be in use throughout the project. It is a 'live' document in that its progress against agreed milestones, and success, will be assessed throughout the project. In early 2014 it was revised and updated in the light of how well it has helped the project meet its goals.

This plan defines the strategy for making an inventory of users and stakeholders, characterising them by their data requirements, and by what CHARMe needs from them. It also describes the engagement strategy for institutes, projects, coordinating bodies, stakeholders, and users at all levels for promoting the acceptance and use of the CHARMe system. It presents a clear and detailed plan on how this strategy will be implemented, in accordance with the resources and timings laid out in the description of work¹.

¹ Available at <http://www.charme.org.uk>

3 Communication strategy for CHARMe

3.1 Stakeholder engagement strategy

This section describes the strategy driving the stakeholder engagement for developing the CHARMe system. In this context the term stakeholder is taken to include both data providers and data users from the broadest community with an interest in climate data, at national, European and global levels. The aim is to obtain the best possible input from them to help guide and inform development of the system, and to influence its take up by other organisations.

The stakeholder group includes those that produce, use or deal with climate datasets, scientists of various disciplines, policy makers, and members of the general public with an interest in climate (e.g. amateurs with an interest in phenology, meteorology etc). This description includes both observation data sets and modelled data sets. It is recognised that with the Copernicus Climate Change Services and the public's growing interest in climate, the number and diversity of climate data users will grow, and in addition, the number and variety of climate data products will increase. The stakeholder list continues to be updated periodically and checked to ensure that it is still valid.

Stakeholders for CHARMe include representatives from the following organisations (*italics indicates invitees to first stakeholder workshop*): *STFC, VegaSpace, UK Space Agency, NPL, UKEOF, ESA, Magellium, Aston University, Manchester University, KTN, DECC, Logica, Pixalytics, HNMS (Greece), NOA (Greece), Technology Strategy Board (UK), BMT ARGOSS, Oxfam, FERA (UK), Defra (UK), European Association of Remote Sensing Companies (EARSC), Stockholm Environment Institute, SeaZone Solutions Ltd, EUMETSAT, EEA, PIK, MPI, ECMWF, JRC, National Met Services (especially MétéoFrance, SMHI, CMI, DMI, BoM, FIM, INM, JMA, CMA, DWD), NASA, NCAR, NOAA, NCDC, JAMSTEC*, plus other research centres, universities and international institutes. Federal, national and European agencies are also included as well as relevant SMEs (i.e. those providing commercial climate services).

International coordinating bodies with an interest in the CHARMe system include: WMO, GCOS, CEOS, GFCS, WCRP, IPCC, NARCCAP, ACRE, CORDEX, GEWEX, WHO, Reanalysis.org and GEO (Geo data portal). Also, bodies that coordinate climate data set production or archiving at an international level should be included, such as CMIP, ESGF, the NetCDF group and Obs4MIPs.

There are a number of other initiatives which can be considered CHARMe stakeholders, and with whom there should be a level of interaction. These are data, infrastructure development or information projects for climate or other science research, such as: MetaFor, IS-ENES2, GeoViQua, GIOVANNI (DICCE), SAFE, EUMETGRID, OSCAR, SEIS, Earth System CoG, Climate Data Guide and Inspire (an EC Directive).

European climate research projects which should have an interest in the CHARMe system include: ERA-CLIM2, CM SAF, ESA-CCI, MyOcean2, GEOLAND2, MACC2, Ice2Sea, QA4ECV, CLIP-C, EUCLEIA, Cryoland, MAIRES and UERRA are the main ones.

Securing the inclusion of the CHARMe system in future EC H2020 research proposal invitations would be a major success, although this is dependent on the system working as planned, so could only happen after the end of the current project.

The success of the CHARMe project rests in part on productive engagement with stakeholders from these organisations. Stakeholders from the above named projects and institutes must be identified in person and then engaged in a timely and appropriate manner to secure their input for developing the CHARMe system. This contact will be through the range of communication tools available to the consortium (workshops, paper and electronic media, etc.), and also through other channels (peer reviewed journals). The methods and plan for implementing this is described in the **Communication plan** section of this document.

3.2 Communication strategy

Communication in the latter part of the CHARMe project is concerned with disseminating the results to implementers and users of the system. There is, obviously, overlap with the stakeholders identified in the previous section.

The strategy started with identification of key people who will be the implementers and potential users of the CHARMe system. These were drawn from the institutes, organisations, coordinating bodies, agencies and projects who are the national and international leaders in climate research and climate research data provision (both observation and modelled data). Many of the key organisations were also identified for the stakeholder list.

The outreach strategy for promoting the project's system is to disseminate the results directly to the identified key users through ongoing communications in a timely and appropriate manner. The outcomes of the project will be disseminated at European and international Level, as climate change is a global phenomenon that is researched worldwide. Emphasis will be given to those end-users of climate data (scientists & agencies), for whom the use of reliable data is of utmost importance.

It was established in the mid-term review of CHARMe that success depends on close interactions with (potential) users, reaching other communities (e.g. hydrology, marine) and major open-data initiatives such as the Research Data Alliance (RDA). The project must use outreach to help foster the use of the CHARMe concept and plug-in within the implementation plan and guiding principles of key climate initiatives, such as the GCOS and CEOS Working Group on Climate. The project must use outreach to help reinforce existing links, and build new links with relevant organisations and activities, in Europe (e.g. ESA LTDP – Long Term Data Preservation) and worldwide (e.g. NOAA), targeting in particular initiatives on Collaborative Data. The review also noted the merit for SMEs (Small and Medium Enterprises) in using the CHARMe tool for commercial climate services. As such SMEs should also be considered part of the CHARMe outreach audience.

In addition to the CHARMe stakeholders named in the preceding section there are other initiatives to whom the project should communicate information on the CHARMe system. This is in support of stakeholder engagement and in many cases is aimed at getting the CHARMe system implemented with specific datasets. These include data portals of the EEA (Climate-ADAPT), FP7 climate research projects (IS-ENES climate4impact) and other organisations (GEOSS portal, NOAA Environmental Visualisation Laboratory).

It is also important that the project measures, records, and reviews the effectiveness of its engagement, communications and outreach activity, so that it can be improved or made more effective.

The actions and activities for conducting this outreach are described in the next section.

4 Communication plan for CHARMe

4.1 Introduction

This section describes when and what steps will be taken by consortium partners in WP800 to realise the stakeholder engagement and communication strategies. It is consistent with the CHARMe description of Work dated 02-10-2012, and the agreed actions arising from the kick off meeting (Reading, UK, 13th March 2013, and outcomes from the mid-term review meeting and report). Within this communication plan the partners involved have specific tasks related to their area of involvement in climate research and geographical location. A proactive approach will be taken with representation of CHARMe through all relevant channels, backed up by the outreach material that will have been developed.

This Communication Strategy will be the core guidance document used by the consortium in order to ensure high quality and consistency for project outreach products. In the strategy, performance indicators are included, with which the impact of the strategy will be assessed.

Early on in the project key relevant stakeholders and users were identified and a database constructed of their contact details and area of interest for use as the basis for outreach. This database is kept up to date and is based on the entities named section 3.1 **Stakeholder engagement strategy**. The key contacts are described by organisation, interest, region and country, to allow stakeholders and users to be identified and contacted with project information in an efficient and targeted manner. It also allows prioritisation of stakeholders and users according to their wishes or perceived value to the project.²

4.2 Web based outreach

The website³ forms the main web presence for information about the project. It is managed by the Met Office with input from all WP800 partners and through coordination with the research and engineering WPs for their input as needed. The design gives the site an open and accessible appearance and all information is less than three links away. Information about the projects aims and goals, as well as results to date are presented and regularly updated, especially when the newsletters (quarterly), brochures and leaflets are renewed. The contact email address on the website is monitored during working hours on all working days and replies to queries are made, or at least acknowledged, within 24 hours. Information about project results and other highlights will also be presented through project partner institutional websites and other e-media (e.g. e-bulletins)

The web blog⁴ developed for stakeholders to be informed on a periodic (e.g. monthly/weekly) basis on project progress or relevant news and information should be promoted to increase the readership.

² The CHARMe stakeholder database is on the project wiki at:
<http://charme.pbworks.com/w/page/65917505/stakeholders> (password protected)

³ <http://www.charme.org.uk>

⁴ <http://charmeproject.wordpress.com/>

Project outreach should also be supplemented by use of social media (Twitter, LinkedIn skills)⁵. The web blog could also be extended to be a discussion forum for stakeholders to interact with the project researchers on topics relevant to the CHARMe project.

The project website will also be used to demonstrate science applications from WP700 which will include two demonstrations of dissemination web tools.

A CHARMe beta demonstration in video format is available on YouTube and will be promoted. It is envisaged that this could evolve in to a video user guide for the system. The current video⁶ is aimed at prospective users and early adopters of the CHARMe system to demonstrate its strengths and ease of use. The video will be promoted with the CHARMe blog, brochure, flyer and newsletters.

4.3 Communication and dissemination – Europe

Within Europe, the key stakeholders include, but are not limited to, those from the entities named in section 3.1 **Stakeholder engagement strategy**. These comprise the stakeholder interaction database maintained by the project.

Outreach material

Leaflets and brochures will continue to be developed and distributed to identified actors with information on the project activities and the results derived in the various phases of the project. Electronic newsletters will also continue to be written and distributed. In total 4 newsletters will be published. This material will also be of interest to the global network of stakeholders.

An information pack of useful outreach material (comprising brochure, newsletter and flyer) is available to CHARMe project partners for use within their organisations and also for when they attend external meetings where it would be appropriate to promote the project and its aims. This material is based on a set of CHARMe publication templates which is available to partners on the project wiki.

Project workshops

The project partners will organize two workshops with identified end-users and providers of climate datasets (both observational and model) which are in an early group of maturity to benefit from CHARMe. The first workshop will include consultations on the CHARMe metadata model, its current content and future development. The workshops will also have a wider application, presenting the project and its results to a more general science and user community who may benefit from CHARMe in the future. Invitees to the first workshop are likely to come from Europe. Invitations to the second workshop will be extended further to include a range of key stakeholders outside Europe (see below) and will link with relevant GEOSS Infrastructure strategic targets on Earth Data Sets.

The second workshop will be the last opportunity for the project to showcase the (near) final system to stakeholders and users. The timing and location of this meeting are key to its success and it will likely be held in the last quarter of 2014, possibly adjacent to an established international science meeting.

⁵ For example: <http://www.metoffice.gov.uk/news/releases/archive/2013>

⁶ <https://www.youtube.com/watch?v=BIL2NOJK6F8>

Organisation of this workshop is led by WP100 who will compile a steering committee to oversee the preparation of it.

Presentations

Where appropriate, and given suitable opportunities, presentations on project progress, outputs and results are made at symposia, conferences and workshops, at the invitation of their organisers. This is as resources allow, but allows the CHARMe peer group within the climate research scientific community to understand what is being achieved through 'show and tell' presentations. An information page on the CHARMe wiki⁷ holds information about past and future meetings, as does the CHARMe website.

Journal papers

The project intends to publish one or more papers for scientific journals describing the system and its benefits to users.

4.4 Communication and dissemination – global

International stakeholders include, but are not be limited to, GEO and the Societal Benefit Areas, CEOS WG on Climate, WMO IPCC / CMIP5 and WCRP, GCOS, GFCS, GOOS, GTOS. Attention will be paid to engaging with African projects and initiatives, in particular AMESD, SAGA-EO and MESA.

Link with NOAA/ US

The UREAD postdoctoral researcher has gathered information for WP300 (user requirements), drawing on NOAA/NCAR 's significant experience in this field as both data provider and data user. This coupled with the PDRA's visit has identified relevant activities on which we could collaborate and the gaps that remain currently unfulfilled. This visit will be repeated when the CHARMe system has been integrated in the consortium's archives, and science applications are underway (WP700). In particular this would be for collaboration on WP740 exploring future applications and tools based on the CHARMe system. A core objective of the CHARMe project is to build a system that users can write their own applications for, which are tailored to their needs. By spending time in the US and exploring the tools that the US scientists require, we can look forward to future collaborations and knowledge sharing building on the investment in the CHARMe system.

Link with JRC

Issues of trans-Atlantic collaboration are well-covered by aspects of the institutional work programme of the JRC group led by Mark Dowell. Mark Dowell has invited a member of the consortium (most likely from UREAD) to be seconded to the JRC for 4 weeks to work with JRC on specific issues related to ensuring that CHARMe is implemented in a way to involve the wider international community.

⁷ <http://charme.pbworks.com/w/page/65919559/Outreach%20meetings>

4.5 Monitoring of the plan

In addition to the management of the project in WP1 it is important that the stakeholder interaction is also managed effectively. When the efficacy of the stakeholder engagement and the outreach and dissemination activities are known, this knowledge can be used to revise and improve future activity as necessary. To this end regular feedback (post-meeting surveys, email questions, 'show of hands') is sought when engaging with users and other stakeholders for continual monitoring and described in the project reports back to the EC. Further, visitor statistics on the website are recorded on Google Analytics for systematic review to guide development of the website, and are reported to management in WP100.

5 Summary table of CHARMe communication plan

Action	Description	Lead	Due date
1	D800.1 Write communication strategy and plan	MO	03/13
2	D800.2 Set up first version of project website	MO	03/13
3	Set up project wiki	MO	03/13
4	Identify key stakeholders and conduct first workshop	UREAD	03/13
5	D800.3 Report for stakeholder workshop. Brief report on workshop outputs to act as input to user requirements document	MO	04/13
6	Teleconference 1 for D800. To discuss: the strategy, and items 7, 8, 9, setting up blog, tweet, forum, setting performance key indicators.	MO	04/13
7	Compile comprehensive database of stakeholders from section 3.1 of this document (Excel file with: name, organisation, area of interest, email, country). Upload to wiki site. Set up email group for stakeholders.		04/13
8	Define key subset of stakeholders for engaging with for development of CHARMe system		04/13
9	Set up blog, tweet and forum		05/13
10	D800.4 First Newsletter – electronic – content will be from requirements gathering Email newsletter to stakeholders	MO	06/13
11	D800.5 First leaflet and brochure – electronic – content will describe the project	MO	06/13
12	Report on WP800 at Project Meeting	UREAD	06/13
13	Update website – with info for stakeholders about requirements gathering, leaflet, brochure and newsletter		06/13
14	Teleconference 2 for D800. To discuss: the strategy, progress to date.	MO	08/13

15	D800.6 Second Newsletter – electronic – content will be from WP4, and perhaps 5 Email newsletter to stakeholders	MO	12/13
16	D800.7 Updated leaflet and brochure – will describe work done and results to date	MO	12/13
17	Update website – with info for stakeholders about ‘data model for commentary metadata’ leaflet, brochure and newsletter		12/13
18	Teleconference 3 for D800. To discuss: the strategy, progress to date.	MO	12/13
19	Stakeholder survey to judge progress and effectiveness to date – using online tool – using criteria defined in item 6.		01/14
20	Report on WP800 at Project Meeting	UREAD	01/14
21	D800.8 Revise communication strategy	MO	02/14
22	Teleconference 4 for D800. To discuss: the strategy, progress to date.	MO	04/14
23	D800.10 Third Newsletter – electronic – content will be from WP5 and 6 Email newsletter to stakeholders	MO	06/14
24	D800.11 Revised leaflets and brochures with research, results and outcomes to date - from WP5 and 6	MO	06/14
25	D800.9 Update website to v2 with research, results and outcomes to date and new outreach materials (D800.10 and D800.11)	MO	06/14
26	Together with the website a web portal will be also developed to disseminate science applications from WP700 which will include two additional dissemination web tools with different functionalities	MO	07/14
27	Teleconference 5 for D800. To discuss: the strategy, progress to date.	MO	08/14
28	D800.13 Fourth Newsletter – electronic – content will be from WP5 and 6 Email newsletter to stakeholders	MO	12/14
29	D800.14 Revised leaflets and brochures with final project results	MO	12/14
30	Final Workshop for stakeholders and users	UREAD	12/14
31	D800.12 Final Report	MO	12/14

6 Summary table of CHARMe engagement activity and outcomes

The following table will be used to report/record progress in our outreach (populated from strategy v1):

	Newsletter	Brochure / leaflet	Email	Presentation	Engagement with/by whom
ERA-CLIM					

An up to date version of this table will be maintained on the project Wiki.