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About this document

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Table of content

1. Abstract /publishable summary	4
2. Conclusion & Results	4
3. Project objectives	4
4. Detailed report on the deliverable	5
4.1. Training and Gender Panel	5
4.2. Gender and equality strategy	6
4.2.1. Actions planned	6
4.3. Training strategy	6
4.3.1. Training activities	7
5. References (Bibliography)	9
6. Dissemination and uptake	9
6.1. Uptake by the targeted audience	9
6.2. This is how we are going to ensure the uptake of the deliverables by the targeted audience	9
7. Deliverable timeliness	10
8. Sustainability	10
9. Full track of dissemination activities	10
10. Full track of publications and IP	10
Appendix 1 – Gender and Equal opportunities resources at partner level	11

1. Abstract /publishable summary

This document describes the actions to be taken for implementing a Gender and Training Strategy during lifetime of the AQ-Watch project. These actions will contribute to the EU recommendation to promote the equality among all genders.

AQ-Watch has formed a Training and Gender Panel (TGP) that is responsible to manage the gender dimension and capacity building in the project. This will ensure that gender aspects and training of young specialists to fit for the business environment are fully considered and AQ-Watch acts to promote gender equality and capacity building wherever possible.

2. Conclusion & Results

Not relevant

3. Project objectives

This deliverable contributes directly and indirectly to the achievement of specific objectives indicated in section 1.1 of the Description of the Action:

NOTE: Given that gender equality and effective training impact every aspect of the project and is essential for its success, this strategy will provide guidance to all partners and encourage them to work with balanced teams and make efforts in providing training to young researchers. Therefore, we consider that it has a direct contribution to the overall objectives of the project.

Specific objectives of the project	Contribution of this deliverable?
[1] To design and produce new global and regional air pollution atlases that include the climatological distribution of chemical pollutants complemented by quantities such as the diurnal and seasonal variations, air quality and related health indices, premature mortality exceedance frequency, long-term trends, etc.	Yes
[2] To develop software packages with the capability to provide more accurate daily forecasts of air quality at the regional scale including tailored high-resolution fire smoke and wind-blown dust forecasts; downscaling of air quality forecasts to 2 km resolution in urban areas.	Yes
[3] To develop a source apportionment service to mitigate air pollution and hence increase the life expectancy of the population in different regions of the world, with special focus on the role of agricultural sources of air pollution and the potentially important effects of fracking operations.	Yes
[4] To develop a new tool-box that will be user-friendly and accessible to decision-makers to evaluate the efficiency of proposed mitigation measures in different industrial sectors on the resulting level of air pollutants in three different regions of the world. This will establish the basis for their wider adoption and generalization.	Yes

AQ-WATCH Deliverable

[5] To co-design, co-produce and co-evaluate for the first time prototype products and services with prime users in three regions of the world chosen for their specific level of economic, social and environmental development.	Yes
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This deliverable directly contributes to the achievement of specific objectives indicated in the description of the Work Package.

Objectives of WP8	Relevance in this deliverable?
8.1 Project management: Facilitating governance and strategic decision-making through project committees, boards, management procedures, and project management tools, performing technical, financial and contract management of the consortium, establishing and maintaining an effective working relationship between AQ-WATCH and the European Commission (EC).	Yes
8.2 Day-to-day scientific and innovation coordination: Carrying out the overall coordination necessary for reaching the scientific and innovation objectives, and elaborating research risk management.	Yes
8.3 Data management: Establishing data management linked to the Copernicus system (DIAS) at project level, fostering transparency and the promotion of data and meta-data standards, implementing open access data policies.	Yes
8.4 Implementing the innovation management, support dissemination and communication activities: Coordinating innovation management and monitoring the IPR relevant issues. Supporting WP6 and WP7 to deliver dedicated communication tools and materials, tailored dissemination and communication activities, and promotion of AQ-WATCH Toolkit and marketable products towards stakeholders and customers in several regions of the world outside Europe.	Yes

4. Detailed report on the deliverable

4.1. Training and Gender Panel

A Training and Gender Panel (TGP) will develop and oversee the training actions and gender equality questions associated with AQ-Watch. It will provide advice to the Project Executive Board (PEB) on its implementation. In addition to training activities to be provided to users, the consortium is aware of the significance of building capabilities throughout the society in climate science through proactive training activities, conferences and workshops. Through these, the project will provide scientific advice and guidance to post-graduate researchers and young engineers about future research on air quality and atmospheric composition analysis and forecasting and assessment by using space and in situ observation data. This will encourage young academics to consider job opportunities beyond the academic world, for instance conducting climate service to relevant sectors such as health and ecosystems. TGP will thus also contribute to the UN Sustainable Development Goal 13, among others (13.3 'Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning' through its outreach and dissemination activities).

At the project's kick-off meeting (Milestone 1), it was agreed by all participants that the panel would be formed by the following members:

- Dr. Gabriele Pfister (UCAR, USA)
- Dr. Renske Timmermans (TNO, The Netherlands)
- Dr. Nicolás Huneeus (UCHile, Chile)
- Dr. Nico Caltabiano (MPI-M, Germany)

4.2. Gender and equality strategy

The European Commission encourages to have a balanced participation of different genders in the research activities and to raise awareness on combating gender prejudices. In recent years the EC has defined not only recommendations but also a specific strategy to reduce the gap of different genders in research fields [1].

AQ-Watch partners are aware of the general women underrepresentation in some research disciplines thus in the project particular attention is given to woman's representation. This includes strong representation in leadership roles, including the Deputy Coordinator and several WP leaders.

4.2.1. Actions planned

The following actions have been planned:

- Raise awareness in the Consortium due to the involvement of women in the leadership team
- Collect information on equal opportunities policy and officers on each partner institution (Appendix 1)
- Encourage the recruitment of women at equal scientific or technical merit. All AQ-Watch related job ads should encourage women to apply by including a statement that demonstrates an "equal opportunities policy"
- Publish on the AQ-Watch website a dedicated section to "Equal opportunities" with:
 - Links to the equal opportunities officers and pages of each partner institution
 - Links to relevant EC pages
 - Links to special gender/equal opportunities initiatives
- Providing the consortium with statistics on the workforce in the project, to raise awareness on gender/equal opportunities. This information will be requested from all partners on a quarterly basis by the project manager to maintain an overview of the distributed efforts in the WPs and gender aspect. These statistics will be reviewed at every General Assembly in order to assess, detect any issues, and take appropriate action

4.3. Training strategy

AQ-Watch Training Strategy presents the project planned activities that will promote and train users to the products that will be developed, therefore contributing to the dissemination and exploitation of the project results. Also, through training and education programmes that institutional partners are part of,

the project aims to entrain young researchers in activities related to air quality issues. This section shows some of the training activities within the project, target groups and existing institutional programmes.

4.3.1. Training activities

Training material: With the development of the AQ-Watch toolkit, online documentation will be developed and tailored according to the skills of different types of users: partners, prime users and general public (D5.6 – M30). Users' manuals for each of the components of the toolkit will be developed in English to provide easy access to all the features of each prototype and to facilitate the commercialization of the products after the completion of the project. Short videos in English will be developed for training purposes and evaluated by the prime users. Updated versions will be developed based on the comments of the users. Where relevant, the videos will be subtitled in Spanish and Mandarin.

Workshops and Conferences: The Consortium will engage with external end-users (primarily public authorities, cities and municipalities) in regional workshops organized throughout the duration of the project in the countries where the pilot cases will take place. A final conference will be organized at the last project meeting (M35/36) targeting EU stakeholders. In the meantime, the consortium partners will identify relevant third-party conferences and working groups where the outputs of the project can be promoted, shared and discussed. Partners will leverage their respective networks to identify relevant projects, contributors, and communities of interest (both physical and virtual) with whom project findings and results can be shared and discussed. It is hoped that they will integrate the project's findings into their on-going research and commercial activities. Our networking efforts in this regard will serve as a "force multiplier", generating greater interest in and attention to the project and its outputs.

The AQ-Watch Project Office will also ensure that relevant workshops and conferences, in addition to those that are not directly organised by AQ-Watch or its partners, are listed on the project website.

Specialised training: IP awareness training will be available through MPG for personnel working on the project; and the partners' legal teams will be engaged to provide support and advice on IPR matters. This will be in support of the Project dissemination and exploitation plan (D7.1), with the overall aim to maximize the chances of effective exploitation of the project's research results.

Academic programmes: Partner institutions are linked to MSc and PhD programmes that enable young researchers to be entrained in activities linked to AQ-Watch. A list with the mentioned academic programmes follows below (and will also be available on the project website):

i) Max Planck Institute for Meteorology (MPI-M)

The MPI-M, jointly with the Universität Hamburg, runs the International Max Planck Research School on Earth System Modelling (IMPRS-ESM - <https://www.mpimet.mpg.de/en/science/imprs-esm/>). This programme manages the institute's contribution to doctoral training, a high-quality doctoral research into the Earth's climate system. The School conducts research in four primary research areas: atmosphere, land, ocean, and the human dimension. The IMPRS-ESM offers doctoral candidates prime research facilities, advanced academic training in the Earth system sciences, and a structured supervision programme. Candidates enjoy ample opportunities to participate in national and international conferences and publish their scientific results in high-impact scientific journals.

ii) National Centre for Scientific Research (CNRS)

CNRS has a mandate to disseminate information of scientific and technical culture to the public, and especially towards young people, by encouraging their participation in early training and life-long training, training by research, and quality in the research management. This is done mainly via the many Masters and PhD programmes that CNRS is part of, particularly with the University Paul Sabatier (<https://www.univ-tlse3.fr/>), and their Masters and PhD programmes (<https://www.univ-tlse3.fr/formation-doctorale>). CNRS also organises every year several summer schools (<https://www.insu.cnrs.fr/fr/ecoles-thematiques>), and some of the topics may be of interest to AQ-Watch partners.

iii) Barcelona Supercomputing Centre (BSC)

BSC offers the opportunity to study for a PhD in topics related to High Performance Computing and to its application to Life Sciences, Earth Sciences and Physical Sciences in a recognised Severo Ochoa Center of Excellence (<https://www.bsc.es/education/predocdoctoral-phd/phd-programmes>). PhD students are also able to take part in the annual BSC International Doctoral Symposium, which provides specialised training and represents a forum in which PhD students and postdoc researchers can present the results and findings of their research work through talks, poster sessions and discussions. BSC also offers a Professional Training Programme (<https://www.bsc.es/education/predocdoctoral-phd/professional-training>) based on a set of core courses from the PATC curriculum complemented by a myriad of ad-hoc courses that are provided both on and off BSC premises by BSC members for a variety of audiences.

BSC has also been involved in the organisation of training schools and workshops as part of international projects, the most recent and relevant ones related to the SDS-WAS (<https://sds-was.aemet.es/materials/training>) and inDust (<https://cost-indust.eu/events/indust-events>) projects.

iv) The Netherlands Organisation for Applied Scientific Research (TNO)

Every year TNO provides a course in the master programme at the Free University of Berlin (<https://www.fu-berlin.de/vv/de/lv/578251?m=169172&pc=62722&sm=528624>). It is an intensive course of 10 days with lectures and practical work providing a background understanding in atmospheric chemistry and the relevant pollutant cycles. TNO also organises an yearly LOTOS-EUROS workshop for anyone interested in LOTOS-EUROS and its applications (<https://lotos-euros.tno.nl/open-source-version/>).

v) University of Chile (UCL)

UCL is the oldest higher education institution in Chile, generating, developing, integrating and communicating knowledge in all the areas of knowledge and culture is the mission and basis of the activities of the University. It runs extensive Masters (<https://www.uchile.cl/portal/english-version/education/120210/master-programs>) and PhD (<https://www.uchile.cl/portal/english-version/education/120211/doctoral-programs>) programmes, with many courses related to AQ-Watch activities. UCL has also organised several summer schools in partnership with foreign institutions, the most recent one on behalf of the PAPILA project consortium (<http://papila-h2020.eu/index.php?id=5170>).

vi) University Corporation for Atmospheric Research (UCAR)

UCAR, as a nonprofit consortium of more than 115 North American colleges and universities, is focused on research and training in the Earth system sciences. It has a number of visiting programmes to foster

student collaborations, mostly led by the NCAR Advanced Study Program (<https://asp.ucar.edu/>). It also organises series of seminars and workshops on several areas (<https://ncar.ucar.edu/opportunities/workshops-conferences>), with a few of them linked to AQ-Watch areas of research, particularly the ones organised by the Atmospheric Chemistry Observations and Modelling Laboratory (<https://www2.acom.ucar.edu/events>).

It also organises a UCAR/NCAR Equity and Inclusion (UNEION) training, a 4-part training series over four months, covering various aspects of diversity and inclusion (<https://www.ucar.edu/who-we-are/diversity-inclusion/community-resources/uneion-101>). This award-winning course has been adapted for both internal and external use. It covers the following topics: 1) Identity, power and privilege; 2) Gender; 3) Race; 4) Bystander intervention techniques.

5. References (Bibliography)

[1] For a better integration of the gender dimension in the Horizon 2020 Work Programme 2018-2020 . Available from <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=28824&no=1>

[2] Promoting Gender Equality in Research and Innovation. Available from <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/promoting-gender-equality-research-and-innovation>

6. Dissemination and uptake

6.1. Uptake by the targeted audience

As indicated in the Description of the Action, the audience for this deliverable is

X	The general public (PU)
	The project partners, including the Commission services (PP)
	A group specified by the consortium, including the Commission services (RE)
	This report is confidential, only for members of the consortium, including the Commission services (CO)

6.2. This is how we are going to ensure the uptake of the deliverables by the targeted audience

Any training material produced by AQ-Watch will be made available via the project website and disseminated to all partners and users. The AQ-Watch Project Office will also ensure that relevant workshops and conferences, in addition to relevant academic training programmes are also listed on the website.

7. Deliverable timeliness

Is the deliverable delayed?

Yes No

Justification: in order to fully ensure that the internal review process has taken place in an appropriate way, we delayed the submission of the deliverable by a day.

8. Sustainability

Not relevant

9. Full track of dissemination activities

Not relevant

10. Full track of publications and IP

Not relevant

Appendix 1 – Gender and Equal opportunities resources at partner level

Partner No	Short name	Name	Country	Links and resources
1	MPG	MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V.	Germany	<ul style="list-style-type: none"> Focus on Equal opportunities https://www.mpg.de/equal_opportunities Central Gender Equality officer https://www.mpg.de/central-gender-equality-officer MPI-M Equal Opportunities https://www.mpimet.mpg.de/en/institute/equal-opportunities/
3	CNRS	NATIONAL CENTRE FOR SCIENTIFIC RESEARCH	France	<ul style="list-style-type: none"> Equal Opportunity Office http://www.cnrs.fr/mpdf/
4	FMI	ILMATIETEEN LAITOS	Finland	<ul style="list-style-type: none"> Equality and non-discrimination plan 2020 (Available on FMI's intranet only. English version available on request)
5	BSC	BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION	Spain	<ul style="list-style-type: none"> Gender and Diversity Equality Plan https://www.bsc.es/join-us/gender-and-diversity-equality-plan Gender and Diversity Equality Plan – Actions https://www.bsc.es/sites/default/files/public/actions_web.pdf
7	TNO	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	The Netherlands	<ul style="list-style-type: none"> Diversity Policy 2015-2020 (Available on request) – The 2021-2024 policy is under development
9	UCL	UNIVERSITY OF CHILE	Chile	<ul style="list-style-type: none"> Directorate of Gender Equality, University of Chile https://direcciondegenero.uchile.cl/ Certification project on gender equality standards with PNUD https://direcciondegenero.uchile.cl/generaigualdad/

AQ-WATCH Deliverable

				<ul style="list-style-type: none"> • Directorate for Diversity and Gender, Faculty of Physical and Mathematical Sciences http://ingenieria.uchile.cl/facultad/direccion-de-diversidad-y-genero/152132/presentacion
10	UCAR	UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH NONPROFIT CORPORATION	USA	<ul style="list-style-type: none"> • Diversity and Inclusion https://www.ucar.edu/who-we-are/diversity-inclusion • UCAR Diversity, Equity & Inclusion Strategic Plan https://www.ucar.edu/sites/default/files/documents/related-links/2020-01/UCAR%20DEI%20Strategic%20Plan%20Approved.pdf • UCAR/NCAR Equity and Inclusion (UNEION) training https://www.ucar.edu/who-we-are/diversity-inclusion/community-resources/uneion-101