DELIVERABLE 1.2

"Project Management Guide"

Interreg – IPA CBC
EUROPEAN UNION
CCI 2014 TC 16 I5CB 009
TRAP

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DOCUMENT PRODUCED BY

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Contributing Partners

MoF – Municipality of Florina

ERFC – European Regional Framework for Cooperation

CCC – Center for Climate Change

MoEPP – Ministry of Environment and Physical Planning

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The views expressed in this Guide do not necessarily reflect the views of the European Union, the participating countries and the Managing Authority

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1. About the Project

Information on real time air pollution levels is now more necessary than ever before. Today, air pollution is one of the most significant factors posing threat to the health of population worldwide. It is associated with a range of diseases, symptoms and conditions that impair health and quality of human life. According to the WHO, outdoor air pollution was responsible for the deaths of some 3.7 million people under the age 60 around the world in 2012, representing 6.7% of the global disease burden while outdoor air pollution combined are among the largest risks to health worldwide. Apart from population air quality impacts natural environment and biodiversity. The main sources of air pollution at both Republic of Greece and Republic of North Macedonia are mainly industrial activities, transportation and heating.

Air Pollution has been recognized as of the most pressing problems in both Greece and the Republic of North Macedonia, following the economic and social development of the two countries the sources of air pollution are mainly industrial activities, transport and central heatings. The major challenges of transport in urban areas are the rising number of vehicles, their increased average age and traffic congestion. Air quality degradation from industrial sources mainly concern areas with thermo-electrical power stations and industrial units located close to residential areas. Air quality is strongly influenced by pollutants trapped due to thermal inversions caused by land local breezes and thermal internal boundary layers.

TRAP project developed on the necessity for creating ICT application's concerning environmental protection, monitoring and managing the Program eligible areas. Environmental initiatives are a privileged field for developing cooperation in the cross-border area contributing significantly to economic and social development of the population and public health, therefore, the opportunity for mutual cooperation and understanding between public authorities, scientific institutions and residents of the area. The major challenge is the development of an integrated approach including air quality monitoring with providing health indicator for vulnerable groups of the population. Through TRAP project a series of issues will be addressed:

- Identification of the emission sources and development of regional and Cross Border emission inventories for vulnerable groups of the population

- Assessment of each emission source
- Development of air quality plans
- Monitoring data, validation and analysis
- Basic demographic, health and public health profile
- Air quality and Health Indicators
- Joint Cross Border comparative analysis on air quality
- Capacity Building at user level (Health and authority stakeholders)
- Air quality and health sensitization campaigns
- Protection of human health
- Citizen involvement
- Implementation of air quality directives

Through TRAP project partners will improve management and protection of areas at both countries by establishing air quality monitoring network. The measurements of all monitoring stations in areas involved in this project will create a system that will display real-time measurements through the internet. Moreover, epidemiological indicators and indicators of air quality, based on the effects of air pollution on human health, will be calculated and displayed on the web. The best way for someone to use an Air Pollution Health Indicator (APHI) is to regularly check the current index value, to pay attention to personal symptoms and self – calibrate to personal symptoms and self-calibrate to the report current APHI value. Therefore, the strategic objective of TRAP project is the creation of an ICT application integrating Air Quality Monitoring with Air Pollution Health Indicator (APHI) in Cross Border area.

The specific sub-objectives of the project are to:

- Develop and evaluate emission inventories at partners areas
- Assess the health risk related to air quality measurements
- Create integrated ICT tool including air quality information correlated to possible health impacts and providing emergency mechanism to policy makers and vulnerable groups
- Evaluate the conditions regarding air quality and transported pollution in Cross Border area

- Engage relevant stakeholders in order to inform them on the created tool operation and indexes
- Disseminate and communicate the project results to key stakeholders as well as to the general public and vulnerable groups.

TRAP project results will positively affect and contribute to the program result indicator for ecosystems with improved protection status for the eligible areas of Florina, Bitola and Gevgelija where the monitoring stations will be placed. The innovative character of TRAP is served by its approach that favor's the interaction and exchange of ideas as well as the knowledge diffusion and integration among the targeted stakeholders. Many of the project's activities will be jointly implemented creating unified framework for problem resolutions and providing added value to the CB area as a total. The expected results are focused on the development of an ICT tool for better air quality monitoring integrated with Air Pollution Health Indicator.

More information about the project are available at:

http://www.ipa-cbc-programme.eu/approved-project/75/

https://trap-project.eu/

https://www.facebook.com/ProjectTRAPpage/

https://www.facebook.com/TRAPproject/

2. Objectives of the Deliverable 1.2

The Deliverable 1.2 "Project Management Guide" establishes the management plan for the TRAP project. The guide includes all the processes and articulates the responsibilities at person/partner level in order to ensure the production of high-quality results in line with the project plan as described in the approved Application Form. It establishes also the quality plan and risk management and contingency plan.

The different bodies of the project are identified, the working plan is confirmed, and the different work packages and work package leaders are nominated.

The deliverable defines all the documents to be used during the project, both the internal consortium documents and the rest of required documents as specified in the program and implementation manuals and guidelines.

The quality assurance chapters expose the way the consortium will face the document's generation process, especially the project's deliverables, in order to guarantee the required quality and focus of the released documents. It establishes the different processes and responsible persons together with an estimated timing of each phase of the process. In these chapters the information process for the quality Assurance issue is also established.

The guide includes all the processes and their responsible person/body that will ensure the management and the preventive and curative actions and decisions' taking for each of the identified risk, foreseen or happened at any phase of the project implementation.

3. Coordination Committees

Purpose of project management is to establish common objectives, clear principles, transparent processes and effective monitoring of the project.

TRAP according to approved Application Form created the following structures:

Steering Committee (SC): is consisted by 1 member of each Partner. SC is responsible for the approval of key decisions, such as re-allocation of resources and improvements and modifications in planning and methodology.

Technical Committee (TC): consisted by 1 member of each WPL and external advisors. TC is responsible for the scientific integrity of the project.

Project Manager (PM): already appointed by Lead Beneficiary. PM is responsible for the overall coordination, the internal and external communication and the implementation of the Management Guide.

Financial Manager (FM): already appointed by Lead Beneficiary. FM is responsible for administrative and financial management of the project.

Communication Manager (COM): appointed after suggestion by MA/JS. Represents the partnership to MA/JS meetings.

The different bodies have been constituted as follows:

Table 1. Coordination Committees constitution

Partner	SC	TC	PM	FM	COM
KEPE	Theodoros STAVRAKAS	Stamatis ZORAS TERO IKE	Theodoros STAVRAKAS	Pavlos TSOTSOS	Theodoros STAVRAKAS
MoF	Nicoletta VOGLI	Nicoletta VOGLI LEVER SA			
ERFC	Nikolaos PETROPOULOS	Antonios BOURDALAS HYDRAULIS ANAPTIKSIAKI LTD			
CCC	Bojana STANOJEVSKA PECUROVSKA	Filip STOJANOVSKI			
MoEPP	Svetlana GJORGJEVA	Aneta STEFANOVSKA			

4. Work Package Leaders

The management responsibility for each work package is attributed to the appointed partner, who nominates an individual as Work Package Leader. The WPL is responsible for coordinating the work done by all participants in the work package. The WP Leader submits the Progress Reports and presents the work package progress when required by the SC or TC and at the external reviews. WP Leader reviews all deliverables of the WP, being responsible for their quality. The initial activity of the consortium was to nominate the corresponding Work Package Leaders, as the highest level of technical responsibility within each WP. WP Leader Organizations assigned during the submission of the proposal.

The Work Package Leaders have been constituted as follows:

Table 2. Work Package Leaders constitution

WP	Partner	WPL
1. Project Management and Coordination	KEPE	Theodoros STAVRAKAS
2. Communication and Dissemination	MoF	Nicoletta VOGLI
3. Air Quality Impact Assessment	MoEPP	Svetlana GJORGJEVA
4. Air Monitoring Mechanism	KEPE	Stamatis ZORAS
5. Public Health Impacts and Index	CCC	Bojana STANOJEVSKA PECUROVSKA
6. Cross Border Networking	ERFC	Nikolaos PETROPOULOS

5. Working Plan and Resources

The working plan is following the Application Form both in terms of activities and scheduling. The different outcomes are also identified in the list of deliverables, in the mentioned document.

As described in the approved AF the activities of the project are structured in **5 semesters.**

Table 3. Work Plan

1st SEMESTER	3/08/2018- 31/12/2018
2nd SEMESTER	1/1/2019- 30/06/2019
3rd SEMESTER	1/7/2019-31/12/2019
4th SEMESTER	1/1/2020-30/06/2020
5th SEMESTER	1/7/2020-3/08/2020

Table 4. Timetable

	2018					2019											2020							
	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
WP1																									
WP2																									
WP3																									
WP4																									
WP5																									
WP6																									

Table 5. List of Deliverables

Work Package	Deliverable
WP1 Project Management and Coordination	1.1 Preparation Activities
	1.2 Project Management Guide
	1.3 Steering Committee Meetings
	1.4 Progress Reports
	1.5 IPA Audit
WP2 Communication and Dissemination	2.1 Communication Plan
	2.2 Project Identity
	2.3 Promotional Material
	2.4 Layman Report
	2.5 Final Conference
WP3 Air Quality Impact Assessment	3.1 Identification of the emissions sources
	3.2 Development of regional inventory
	3.3 Contribution assessment of emissions
	3.4 Development of air quality plan
WP4 Air Monitoring Mechanism	4.1 Specifications of monitoring equipment
	4.2 Tender procedures
	4.3 Installation of the stations
	4.4 Measurements
	4.5 Monitoring data validation and analysis
WP5 Public Health Impacts and Index	Assessment of basic health profile
	Air Quality and Health Risk Assessment

		ICT tool for Air Quality and Health Indicators
		Air Quality Public Health Index
WP6 Cross Border Networking		Joint Comparative Analyses on Air Quality
		Training Workshops on Air Quality and Health
		Air Quality and Health Sensitization Campaigns

Related to the resources, the following break-down was approved after project approval and after negotiation with MA/JS.

Table 6. Project Resources / Deliverable and Cost Category

	Staff Costs	Office and Administration	Travel and accommodation	External Expertise and Services	Equipment	Infrastructure and Works	Total
Del 1.1	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	**0,00 €**
Del 1.2	4.105,00 €	0,00 €	0,00 €	500,00 €	0,00 €	0,00 €	4.605,00 €
Del 1.3	11.890,00 €	480,00 €	7.791,00 €	5.400,00 €	0,00 €	0,00 €	25.561,00 €
Del 1.4	21.450,00 €	4065,00 €	0,00 €	7.000,00 €	0,00 €	0,00 €	32.515,00 €
Del 1.5	0,00 €	0,00 €	0,00 €	11.000,00 €	0,00 €	0,00 €	11.000,00 €
Total WP1	**37.445,00 €**	**4.545,00 €**	**7.791,00 €**	**23.900,00 €**	**0,00 €**	**0,00 €**	**73.681,00 €**
Del 2.1	4.850,00 €	900,00 €	0,00 €	3.000,00 €	0,00 €	0,00 €	8.750,00 €
Del 2.2	5.200,00 €	390,00 €	0,00 €	1.000,00 €	0,00 €	0,00 €	6.590,00 €
Del 2.3	2.550,00 €	390,00 €	0,00 €	4.550,00 €	0,00 €	0,00 €	7.490,00 €
Del 2.4	1.250,00 €	450,00 €	0,00 €	6.670,00 €	0,00 €	0,00 €	8.370,00 €
Del 2.5	6.640,00 €	420,00 €	3.199,00 €	5.140,00 €	0,00 €	0,00 €	15.399,00 €
Total WP2	**20.490,00 €**	**2.550,00 €**	**3.199,00 €**	**20.360,00 €**	**0,00 €**	**0,00 €**	**46.599,00 €**
Del 3.1	3.850,00 €	1.060,00 €	300,00 €	6.400,00 €	0,00 €	0,00 €	11.610,00 €
Del 3.2	700,00 €	360,00 €	0,00 €	15.800,00 €	0,00 €	0,00 €	16.860,00 €
Del 3.3	3.200,00 €	0,00 €	0,00 €	14.000,00 €	0,00 €	0,00 €	17.200,00 €
Del 3.4	1.750,00 €	380,00 €	0,00 €	20.670,00 €	0,00 €	0,00 €	22.800,00 €
Total WP3	**9.500,00 €**	**1.800,00 €**	**300,00 €**	**56.870,00 €**	**0,00 €**	**0,00 €**	**68.470,00 €**
Del 4.1	0,00 €	0,00 €	0,00 €	5.400,00 €	0,00 €	0,00 €	5.400,00 €
Del 4.2	0,00 €	0,00 €	0,00 €	1.850,00 €	0,00 €	0,00 €	1.850,00 €
Del 4.3	0,00 €	0,00 €	0,00 €	0,00 €	430.000,00 €	0,00 €	430.000,00 €
Del 4.4	3.800,00 €	750,00 €	756,00 €	91.750,00 €	0,00 €	0,00 €	97.056,00 €
Del 4.5	2.150,00 €	125,00 €	0,00 €	13.500,00 €	0,00 €	0,00 €	15.775,00 €

The project is co-funded by the European Union and by National Funds of the participating countries

Total WP4	**5.950,00 €**	**875,00 €**	**756,00 €**	**112.500,00 €**	**430.000,00 €**	**0,00 €**	**550.081,00 €**
Del 5.1	12.850,00 €	0,00 €	0,00 €	20.400,00 €	0,00 €	0,00 €	33.250,00 €
Del 5.2	17.700,00 €	0,00 €	0,00 €	28.000,00 €	0,00 €	0,00 €	45.700,00 €
Del 5.3	12.850,00 €	0,00 €	0,00 €	15.500,00 €	0,00 €	0,00 €	28.350,00 €
Del 5.4	7.700,00 €	50,00 €	0,00 €	18.700,00 €	0,00 €	0,00 €	26.450,00 €
Total WP5	**51.100,00 €**	**50,00 €**	**0,00 €**	**82.600,00 €**	**0,00 €**	**0,00 €**	**133.750,00 €**
Del 6.1	26.000,00 €	420,00 €	0,00 €	17.800,00 €	0,00 €	0,00 €	44.220,00 €
Del 6.2	7.000,00 €	360,00 €	510,00 €	18.400,00 €	0,00 €	0,00 €	26.270,00 €
Del 6.3	7.000,00 €	530,00 €	230,00 €	18.500,00 €	0,00 €	0,00 €	26.260,00 €
Total WP6	**40.000,00 €**	**1.310,00 €**	**740,00 €**	**54.700,00 €**	**0,00 €**	**0,00 €**	**96.750,00 €**
Total	**164.485,00 €**	**11.130,00 €**	**12.786,00 €**	**350.930,00 €**	**430.000,00 €**	**0,00 €**	**969.331,00 €**

Table 7. Project Resources / Deliverable and Partner

	LB – KEPE	P2 – MoF	P3 – ERFC	P4 – CCC	P5 – MoEPP	Total
Del 1.1	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Del 1.2	1.000,00 €	500,00 €	555,00 €	1.450,00 €	0,00 €	3.505,00 €
Del 1.3	6.650,00 €	3.835,00 €	4.146,00 €	6.990,00 €	1.100,00 €	22.721,00 €
Del 1.4	11.000,00 €	7.000,00 €	6.000,00 €	4.710,00 €	3.940,00 €	32.650,00 €
Del 1.5	5.000,00 €	3.000,00 €	3.000,00 €	0,00 €	3.805,00 €	14.805,00 €
Total WP1	**23.650,00 €**	**14.335,00 €**	**13.701,00 €**	**13.150,00 €**	**8.845,00 €**	**73.681,00 €**
Del 2.1	0,00 €	3.000,00 €	500,00 €	5.250,00 €	0,00 €	8.750,00 €
Del 2.2	2.000,00 €	1.000,00 €	1.500,00 €	1.810,00 €	280,00 €	6.590,00 €
Del 2.3	0,00 €	3.000,00 €	1.500,00 €	2.260,00 €	730,00 €	7.490,00 €
Del 2.4	0,00 €	2.000,00 €	3.000,00 €	2.760,00 €	610,00 €	8.370,00 €
Del 2.5	2.460,00 €	4.440,00 €	2.824,00 €	4.755,00 €	920,00 €	15.399,00 €
Total WP2	**4.460,00 €**	**13.440,00 €**	**9.324,00 €**	**16.835,00 €**	**2.540,00 €**	**46.599,00 €**
Del 3.1	3.000,00 €	0,00 €	3.000,00 €	4.510,00 €	1.100,00 €	11.610,00 €
Del 3.2	3.000,00 €	0,00 €	3.000,00 €	7.860,00 €	3.000,00 €	16.860,00 €
Del 3.3	5.000,00 €	0,00 €	5.000,00 €	5.000,00 €	2.200,00 €	17.200,00 €
Del 3.4	8.000,00 €	0,00 €	5.000,00 €	7.420,00 €	2.380,00 €	22.800,00 €
Total WP3	**19.000,00 €**	**0,00 €**	**16.000,00 €**	**24.790,00 €**	**8.680,00 €**	**68.470,00 €**
Del 4.1	2.000,00 €	0,00 €	0,00 €	0,00 €	3.400,00 €	5.400,00 €
Del 4.2	1.000,00 €	0,00 €	0,00 €	0,00 €	850,00 €	1.850,00 €
Del 4.3	80.000,00 €	100.000,00 €	0,00 €	0,00 €	250.000,00 €	430.000,00 €
Del 4.4	32.940,00 €	3.716,00 €	0,00 €	10.400,00 €	50.000,00 €	97.056,00 €

Del 4.5	7.000,00 €	4.800,00 €	0,00 €	2.450,00 €	1.525,00 €	15.775,00 €
Total WP4	**122.940,00 €**	**108.516,00 €**	**0,00 €**	**12.850,00 €**	**305.775,00 €**	**550.081,00 €**
Del 5.1	10.000,00 €	0,00 €	10.000,00 €	12.650,00 €	600,00 €	33.250,00 €
Del 5.2	15.000,00 €	0,00 €	12.500,00 €	17.700,00 €	500,00 €	45.700,00 €
Del 5.3	10.000,00 €	3.000,00 €	5.500,00 €	9.250,00 €	600,00 €	28.350,00 €
Del 5.4	5.000,00 €	0,00 €	10.000,00 €	10.950,00 €	500,00 €	26.450,00 €
Total WP5	**40.000,00 €**	**3.000,00 €**	**38.000,00 €**	**50.550,00 €**	**2.200,00 €**	**133.750,00 €**
Del 6.1	15.000,00 €	3.000,00 €	15.000,00 €	10.000,00 €	1.220,00 €	44.220,00 €
Del 6.2	0,00 €	2.500,00 €	10.500,00 €	11.660,00 €	1.610,00 €	26.270,00 €
Del 6.3	0,00 €	3.000,00 €	10.000,00 €	11.790,00 €	1.470,00 €	26.260,00 €
Total WP6	**15.000,00 €**	**8.500,00 €**	**35.500,00 €**	**33.450,00 €**	**4.300,00 €**	**96.750,00 €**
Total	**225.050,00 €**	**147.791,00 €**	**112.525,00 €**	**151.625,00 €**	**332.340,00 €**	**969.331,00 €**

Table 8. Project Resources

	Total Partner Budget	Office and administrative (O&A) expenditure	Staff Cost	Percentage % O&A	Percentage % Staff Cost	WP1 Management Total Costs without audit	Percentage %
LB (PP1)	**225.050,00 €**	3.200,00 €	77.400,00 €	1,42%	34,39%	18.650,00 €	8,29%
PP2	**147.791,00 €**	0,00 €	0,00 €	0,00%	0,00%	11.335,00 €	7,67%
PP3	**112.525,00 €**	1.000,00 €	33.055,00 €	0,89%	29,38%	10.701,00 €	9,51%
PP4	**151.625,00 €**	6.040,00 €	36.250,00 €	3,98%	23,91%	13.150,00 €	8,67%
PP5	**332.340,00 €**	890,00 €	17.780,00 €	0,27%	5,35%	8.845,00 €	2,66%
Total Project Budget	**969.331,00 €**	**11.130,00 €**	**164.485,00 €**	**1,15%**	**93,03%**	**62.681,00 €**	**6,47%**

6. Quality Assurance

Quality can be defined as meeting or exceeding the recipients' expectations achieved by way of outputs and deliverables and/or activities performed to produce those outputs and deliverables. The Quality Assurance is an integral part of the Project Management Guide. Under WP1 Project Management and Coordination, the consortium decided to establish a dedicated task devoted to ensure that the project processes will be executed and the deliverables generated with the required high quality level, obtained by monitoring and assessing the progress and results provided by the different work packages in a continuous way and

following established processes and rules. The implementation of this quality assurance activity is normally defined through a Quality Plan, where operational aspects are stated and regulated.

The TRAP Quality Plan can be defined as a set of activities planned at the beginning of the project that helps achieving the requested quality during the Project's execution. The purpose of the Quality Plan is to define these activities/tasks intended to ensure the production of concrete, focused and high-quality results that will be aligned with the project plans and fulfilling the contractual commitments of the Project and the Partners, while focusing on achieving recipients' quality expectations. The TRAP Quality Plan includes the implementation of Quality Events (peer reviews, checklist execution…) by using various Quality Materials (templates, checklists…) available within the Consortium documents' repository. Thanks to that plan the project participants are aware of all quality-related rules to be applied all along the project and in any phase of the works carried out. The Quality Plan covers the related quality aspects of the activities of the work packages, with a detailed definition of rules and procedures concerning managerial and technological aspects of the works, resulting in the generation of a number of processes and tools that will help in achieving the project objectives.

7. Quality Responsibilities

The Quality Plan, that includes different rules, processes, document templates and conventions, is envisioned to check, validate and eventually approve the appropriateness of all the different actions of the project in terms of structure, substance and quality, focus, alignment and fulfilment of the envisaged purposes. WP1 Project Management and Coordination will include the management of Quality Assurance. The rules and procedures stated in this plan will be deeply used in the Consortium, and particularly by the PM as management tools that will help in assuring the goals of the project. The Quality Plan compliance is the result of a cooperative collaboration between the different persons, organizations and bodies such as the researchers, the partners, the PM, COM, FM the WPLs, the TC and the SC, who are accountable for applying all the rules and processes established in order to secure the highest possible quality of the project execution and results.

The overall responsibility for quality lies with the Lead Partner and PM. It is their role to ensure that the required quality criteria are applied and that appropriate quality reviews of activities and reports progress are carried out. Apart from the day-to-day responsibility to ensure that appropriate processes and templates are applied at all parts of the project, the Lead Partner has also the authority to:

• request progress update on quality;

• identify any non-conformity and recommend action to Work Package Leaders or any other party;

• verify and monitor the implementation of any solution;

• carry out checks or preventative action where a potential deviation is likely to occur.

All partners are responsible for the quality of the reports and activities they are in charge of. Work Package Leaders are responsible for the completion of the tasks in due time and the convening of a peer review to assess compliance against quality criteria. Within the activities they are responsible for, they can request updates on quality and take preventative actions in case of potential deviation from the approved Application Form.

The Lead Partner will also assess the project progress with a number of internal and external controls to ensure that the outputs and results expected will be achieved.

8. RACI Matrix Methodology

The RACI Matrix is a system that brings structure and clarity when assigning the roles people play within a team. It is a simple grid system used to identify people's Responsibilities intended to ensure that everything the team needs to do is taken care of.

The RACI defined roles are:

§ **R - Responsible:** Each action in the project has a specific responsible, in charge of its execution/generation. The responsible may be a concrete person/partner or a group of persons/partners as this role can be shared, the scope and degree of responsibility is to be defined by the accountable person. A typical case for this responsibility would be a work package leader, responsible for the execution of a specific task within one WP of the project.

§ A - Accountable: Despite the action is executed by the nominated responsible(s), it will have finally a unique accountable person which is the one that will approve or reject the final results of the action. This includes "yes" or "no" authority and veto Power. Only one accountable person can be assigned to an action. A typical case of accountable person is the Work Package Leader (WPL) who should secure the correct execution of the WP under his/her responsibility despite the works are directly carried out by the different tasks leaders.

§ C - Consulted: Each specific action of the project may require some inputs from other persons/partners/WP prior to a final decision or action. This may represent requirements for the works, or validation of the results. This is a predetermined need for two-way communication where input from the designated position is required. A typical case for this role is the TC and its members that manage the different technological issues during the project.

§ I - Informed: People that need to be kept updated and/or informed on progress or after a decision or action is taken, but they do not need to be formally consulted, nor do they contribute directly to the action. They may be required to take action as a result of the outcome. It is a one-way communication. A typical case for this role is the SC and its members that must be regularly aware of the project progress.

The person nominated as Accountable is responsible for generating the RACI matrix related to any specific action, assigning all the roles and responsibilities. This RACI Matrix facilitates the definition of responsibilities and, in this respect, it should be used in a way that any action executed during the project should be identified with its responsible nominated as well as its accountable person/partner and, where appropriate, defining who needs to be consulted for the purpose of the action as well as who must be informed of it.

9. Document Conventions and Procedures

All partners shall ensure that complete and correct issues of specifications, drawings, technical requirements, test and validation instructions, and project reports are available as applicable at the time and place of design, manufacture, inspection, test, and installation along the life of the project.

9.1 Project Deliverables

Deliverables are official documents constituted as contractual commitments for the project. These Deliverables serve as the basis for periodic reviews. As such, beyond being the substantial outcomes of the project they also serve as content-oriented reporting towards all the partners. Their production and delivery processes should particularly follow the quality processes rules conditions established in the present document, as their importance is crucial both for the project team itself and for the review to be made regularly.

The beneficiary will nominate an accountable person inside the organization that will be in charge of the production of the deliverable. This accountable person will be the owner of the document.

The deliverables implemented within the specific reporting period. Deliverables started in one and finishing in another Reporting Period should be declared in all respective periods.

9.2 Project Reports

The Lead Beneficiary (KEPE) is responsible for the submission to the Joint Secretariat (JS) of progress reports on project implementation activities. In order to follow the implementation of the project, a progress report has to be submitted periodically. The progress report is a core document because it constitutes an important channel of information between the projects and the program. It includes both activity and financial information related to the project's implementation. The progress report is also a main source of information to demonstrate the programme's achievements and usefulness. In particular, it provides the raw material that is used as the basis for producing the analysis of the programme's achievements, which is to be included in the reports to the European Commission. Projects should therefore not consider the progress report only as an administrative and compulsory task for obtaining the EU funds reimbursement, but it should be used as a means to share the stories about the project's results and successes with the joint secretariat.

The reporting procedure for projects can be summarized as follows:

a) Each partner sends a report to the lead partner before the deadline agreed with the lead partner and ensures that its part of the reported activities and expenditure has been

independently verified by a controller in compliance with the country specific requirements for first level control. The report must be accompanied by

- the independent first level control certificate
- the first level control report (incl. control checklist) and
- the list of expenditure

b) On the basis of the individual partners' reports, the lead partner compiles the joint progress report for the whole partnership.

c) The lead partner confirms that the information provided by the partners has been verified and confirmed in compliance with the respective country specific control requirements, that the partners' information has been accurately reflected in the joint progress report and that the related costs result from implementing the project as planned and set out in the application form and described in the progress report.

d) For the audit trail, the lead partner retains possession of the inputs used for the progress report received from the partners.

e) The lead partner submits the progress report to the joint secretariat. The joint secretariat checks the report and if necessary, sends clarification requests to the lead partner. Once all points have been clarified, the progress report is approved.

Certificates of verified expenditures must be sent to the JS when they become available and must be always re-submitted with the relevant Progress Reports. All reports must be submitted in English, which is the official language of the Cooperation Programme. As dictated in the implementation manual, the Lead Beneficiary will submit a progress report to the JS every six months in accordance with the following schedule:

August- December 2018 submitting report in January 2019

January – June 2019 submitting report in July 2019

July – December 2019 submitting report in January 2020

January – June 2020 submitting report in July 2020

July – August 2020 submitting report in August 2020

As indicated in the above table, the deadline for the submission of the Progress Report is 20 days from the end of the perspective Reporting Period.

In addition to the progress report, the program will use other tools to monitor the progress of the project implementation on a continuous basis. Among others, the program can use:

- the project's website
- communication exchanges with the lead partner and partners if necessary (by phone and email, skype)
- meetings with the lead partner and partners if necessary (e.g. on site, at the joint secretariat).

Interim progress reports may be requested by the MA/JS of the Program for financial management reasons at any stage.

The Final Report of the project will be submitted to the JS/MA for approval, two months after the issuance of all certificates of verified expenditure. In any case, the Final Report must be submitted no later than six months after the official end date of the project.

After the issuance of all certificates there still may occur deviations from the budget tables of the Application Form. The beneficiary must justify these deviations in the Final Report before acceptance by the JS/MA. After approval, the Final Report will reflect the final modification of the project. A Project Closure Manual will be issued with all the necessary details regarding the Final report and the Project Closure Procedures.

The reporting procedure will be done through the MIS. The relevant guide is published on the MIS website. The following information is just supportive and mainly refers to the 1st Progress Reports that will be submitted while MIS was not fully functional.

The Lead Beneficiary of the project is responsible for the submission to the Joint Secretariat (JS) of the progress Reports on project implementation activities, according to the timetable

referred to in the approved Application Form and the Project Implementation Manual as in force.

Each WP leader is free to establish its own internal deadlines in line with the official delivery dates but giving enough time to all parties for their contribution and review. All reports should include rich content, a clear structure and a professional presentation.

9.3 Internal Documents

Internal documents are consortium working documents that can be considered as instrumental for the daily management of the project execution. These documents are intended to help following up the progress of the project, keeping control on the resource allocation and budget distribution and are aimed at mitigating and resolving risks that can appear during the project implementation. There are a number of identified internal documents for the purpose of the project:

- ✓ Internal discussions and reports
- ✓ Partners' progress reports
- ✓ Meeting Minutes
- ✓ Project presentations

9.4 Meeting Minutes

In order to disseminate the outcomes and results of any project meeting and related to a Deliverable or a WP, to a WPL, a TC or a SC meeting, meeting minutes will be generated as soon as possible. The minutes will include agreements and decisions taken and will state the next steps. The minutes will be distributed to and confirmed by all the meetings' attendees, distributed to all relevant recipients that should be aware of the results of the meeting and stored in the corresponding shared repository folder.

- ✓ A template is delivered and will stay available to participants in the shared documents' repository.
- ✓ The responsible person for the generation of the minutes is the person that have called the meeting.

9.5 Internal discussion minutes

During the life of the project a certain number of internal discussions will be necessary to exchange information and to settle and agree on the different technological issues that may arise in the different tasks, especially between WPs. These discussions may be addressed by e-mail, Skype for Business (or any other equivalent system) call conferences, in face to face meetings or by phone calls between the relevant researchers. For this reason, no special template is established for the discussion activities and reports. All relevant decisions and agreements may be included in the next SC Meeting Minutes, whatever is appropriate. The dissemination level of internal discussions is strictly confidential as it is relevant only to the Consortium members.

9.6 Project Presentations

Presentations not only serve as meeting documentation, they are also an important building block for dissemination purposes (workshops, conferences, presentations…). A template taking into account the project's general layout and graphical image is delivered and will stay available to participants in the shared repository. The responsible person for the generation of the presentation is the person that will present the document in the related event.

10. Risk Management and Contingency Plan

The purpose for the TRAP project to define a Risk Management and Contingency Plan is to guarantee the required assessment of potential risks, therefore allowing the Consortium to take appropriate, preventive, realistic, on time and effective remedial actions. The Risk Management and Contingency Plan is an instrument at the service of the entire TRAP Consortium, and as such any partner having identified a potential risk is entitled to declare its existence and initiate the specified process for its appropriate characterization and eventual resolution. The Risk Management Plan supports the management activities of both the PM and the TC and constitutes the baseline for all decisions concerning anticipated or already identified risks that could result in significant impacts on the TRAP project execution. The Consortium establishes the Risk Management and Contingency Plan as a continuous process that will be executed throughout the whole life cycle of the project. The methodology proposed aims to identify the potential risks of the project and to calibrate their likelihood and possible impacts

in terms of technological challenges, allocated resources, budget or time scheduling. All identified risk will be analyzed, and an individual contingency plan will be designed. If a risk occurs its mitigation actions will be activated. This Risk Management has to be a reiterative process as new and unexpected risky situations or events may appear at any time during the project.

10.1 Risk Identification

A risk cannot be controlled nor mitigated if its proper identification is not carried out first. The different steps of the identification are the risk discovering, the qualification and the communication before it becomes a problem and may adversely affect the project. The different steps designed to execute a proper risk identification are described below:

At partner's level

Initially, and at partner level (partners involved in each WP), individual brainstorming sessions may be held on any aspect of the partner's involvement in the project and on the whole project itself. The partners may identify the different situations or events in a particular area of the project that can lead to the occurrence of a determined risk. This work will benefit from the collection of information that each member of the brainstorming sessions has obtained through its experiences and lessons learnt in previous national or international projects, considering also the risk lists elaborated in similar projects or situations.

At WP level

After the brainstorming at partner's level is made, the identified risks may be communicated to the WPL in order to share suggestions and to spread the perspective of the exercise. Being the person responsible for the WP, the WPL will summarize and analyze the different risks identified by all the partners involved in the WP and determine the final risks that will be submitted to the consideration of the PM, the TC and the SC. The risks should be presented in some Meeting Minutes (MM) or in Projects Progress Report towards MA/JS.

At decision body's level

At consortium level and under the supervision of the PM, the TC and/or the SC (depending on the risks' specificity) will take the decision to include or not each submitted risk into their programming. Starting from that moment, the included risk is considered a potential risk of the project and will be managed following the rules stated in the present document. The TC or the SC will qualify the identified risks and assign a risk "owner".

10.1 Risk Analysis

The corresponding decision body (TC or SC) will be in charge of analyzing each risk. The analysis results will include at least the following information:

- Risk description

This will be a short and concise description of the risk nature and characteristics, with clear indication on the part of the project work plan that could be affected by its consequences.

- Risk impact

For each risk identified, assess the risk event in terms of its effect on project objectives, if the risk event occurs. Each risk may be qualified as Very high, High, Medium, Low or Very low impact.

Table 9. Risk impact scale and consequences

Impact	Technical performances	Schedule
Very high	Severe degradation. Cannot meet KPI or key technical or supportability threshold. It will jeopardize project success.	Cannot meet key project milestones.
High	Significant degradation or major shortfall in supportability. It may jeopardize project success.	Project critical path affected.
Medium	Moderate reduction with limited impact on project objectives.	Minor schedule slip. Able to meet key milestones with no schedule float..
Low	Minor reduction, can be tolerated with little or no impact	Able to meet key milestones.

Very low	Minimal or no consequence.	Minimal or no impact.

- Risk owner

The corresponding decision body (TC or SC) will determine the best partner/person to be in charge of managing each concrete risk within the Consortium.

- Risk likelihood

For each risk identified, assess the risk event in terms of its likelihood of occurrence. Each risk may be qualified according to the scale shown below. The expected consequences should also be defined in accordance with this.

Table 10. Risk likelihood scale

Likelihood		Probability
Near Certain	Very High	<90%
Highly Likely	High	<70%
Likely	Medium	<50%
Low likelihood	Low	<30%
Unlikely	Very Low	<10%

- Risk trigger

The identification of symptomatic events that may contribute to the appearance of the risk is considered of high value for the risk management.

10.2 Risk contingency planning

For each identified risk that could be qualified as a threat, the SC/TC will select an appropriate strategy among the following.

Table 11. Risk mitigation strategy

Mitigation strategy	
Accept	Recognizing residual risks and devising responses to control and monitor them.
Avoid	Seeking to eliminate uncertainty.

Mitigate	Reducing the probability and/or severity of the risk below a threshold of acceptability.
Transfer	Passing ownership and/or liability to a third party.

Additionally, three response strategies will also be considered in those cases where risks could be transformed opportunities:

Table 12: Risk mitigation strategy in case of opportunity

	Mitigation strategy
Exploit	Eliminating the risk uncertainty by making the opportunity definitely happen in those cases where its occurrence would have a positive effect on achievement of project objectives.
Share	Allocating ownership to a third party who is best able to handle it, both in terms of maximizing the probability of occurrence, and in increasing potential benefits should the opportunity occur.
Enhance	This strategy is aimed at modifying the "size" of the risk to make it more acceptable, by increasing probability and/or impact, and by identifying and maximizing key risk drivers.

The contingency planning will especially include an understandable and objective description of the chosen strategy and adopted countermeasures or actions, with clear indications of the responsible persons involved. This way the risk owner will be able to follow a clear guide during the risk mitigation

10.3 Risk Mitigation

The risk mitigation implementation aims at ensuring the adequate mitigation of the occurring risks. In this sense, the specific tasks to be executed by the Risk Owner are:

- To determine the different actions to be executed by each partner, WPL and/or other stakeholders involved in the defined and approved risk mitigation plan.
- To determine the resources needed to execute the specified actions and tackle the risk (human resources, time demanding, budget allocation and/or contractual requirements).
- To specify the risk reporting needs for an appropriate on-going monitoring.

10.4 Risk Tracking

The risk tracking aims to monitor how the risk mitigation process is implemented and to evaluate the results. In this sense, the specific tasks will be:

- To communicate the risk to all the involved parties in the risk mitigation plan and execution.

- To monitor the risk mitigation implementation and update appropriately the Risk assessment.

- To report to the PM and the involved parties when a risk mitigation plan has to be modified due to on-going progress and conditions.

- To report to the PM of the risk mitigation evolution and completion.

- When requested, the Risk Owner may support the PM in technical meetings and reviews where the risk mitigation implementation and results have to be exposed.

10.5 Risk identification reiteration process

Initially, at proposal phase, the Consortium already identified some specific risks. During the project kick-off meeting, a specific time slot was dedicated to a brainstorming session where additional risks were also identified. This summarized list is the starting point for the brainstorming works to be conducted by each partner once the D1.2 is released. During the execution of the project, risk assessment must be modified with updating information from the risk mitigation activities carried out, from new internal circumstances of the project and/or from external conditioning factors. This is considered an on-going activity that will be coordinated by the PM in the different projects meetings held every regularly or ad-hoc.

11. Risk Assessment

The following table gives an overview of possible risks identified beforehand, at the time of proposal and confirmed at the kick-off meeting, indicating the remedial and mitigation strategy to prevent them or to reduce their impact in the project in case they happen.

Table 13: Identified risks

No	Description	Action	WP Affected
1	Beneficiary risk: Partner under performance or leaves the consortium	Partnership Agreement and Subsidy Contract describe measures to be taken	ALL
2	Project implementation risk: Key milestones and deliverables delayed or bad quality	TC will identify risk in early stages. SC will be aware in advance about delays. Critical Milestones and Deliverables will be handled with priority and special attention.	ALL
3	Monitoring equipment: Delayed procurement or installation	Specifications and procurements will be priority. Meeting with policy makers informing them about project.	WP4, WP5,WP6
4	Air Quality Data processing: Collecting processing and sharing air quality data	Open data access policy, respecting regulations and in spirit of collaboration between partners. Establishing trustworthiness between partnership.	WP5
5	TRAP application: Common ICT application for air quality and health impact fails due to varying standards, policies and regulations of the participating countries	Full chain of stakeholders' involvement to address different regulatory issues. Broadening workshops to gain maximum expertise. Intensifying pilots from the beginning of the project.	WP5
6	Air Quality Plan: The quality plan does not generate sufficient interest of relevant authorities and stakeholders	Policy makers involvement from the beginning of the project, face to face communication and invitation to every project event. Workshops implementation and sensitization campaigns	WP3
7	Dissemination: Participants numbers in final events, workshops and sensitization campaigns are small. Low interest from stakeholders and low activity in web site and social media	Professional and scientific networks of beneficiaries will be used. Awareness on social networks. Searching for suitable dates and venues for events. Re-evaluating dates and location of events.	WP2, WP6
8	Regulatory and policy changes	N/A	ALL