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**Data Management Plan**

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### Summary

The main goal of the Data Management Plan is to describe how the research data will be handled during and after the end of the project, what kind of data will be collected, processed and/or generated, which methodology and standards will be applied, whether data will be shared/made open access and how data will be curated and preserved. In principle, each partner uses its own data management system, which ensures that all data will be properly curated after the project. All project deliverables are envisaged to be public and acquired project data will be proposed after consultation of all partners for curation to selected data banks (as OECD/NEA Data bank, JRC Knowledge Management system, etc.).

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## Table of Contents

1	Introduction .....	4
1.1	Purpose of the Data Management Plan .....	4
2	Description of the data .....	4
2.1	Type of study .....	4
2.2	Type of data .....	4
2.3	Format and scale of the data .....	4
3	Data collection / generation .....	4
3.1	Methodologies for data collection/generation .....	5
3.2	Data quality and standards .....	5
4	Data management, documentation and curation .....	6
4.1	Managing, storing and curating data .....	6
4.2	Data preservation strategy and standards .....	6
5	Data security and confidentiality of potentially disclosive information .....	6
6	Data sharing and access .....	7
6.1	Discovery by potential users of the research data .....	7
7	Conclusions .....	7
8	Annexes .....	8

## Index of Tables

Table 1: Data set template for each WP .....	8
Table 2: Data set for WP1 .....	8
Table 3: Data set for WP2 .....	9
Table 4: Data set for WP3 .....	11
Table 5: Data set for WP4 .....	12
Table 6: Data set for WP5 .....	13
Table 7: Data set for WP6 .....	14



## Abbreviations

ASME	The American Society of Mechanical Engineers
EC DG RTD	European Commission – Directorate General for Research and Innovation
DoA	Description of Action
ECCP	Electronic Collaborative Content Platform
ExCom	Executive Committee
GA	Grant Agreement
GB	Governing Board
PMO	Project Management Office
PQP	Project Quality Plan
PR	Periodic report
QA	Quality assurance
WP	Work package
WPL	Work package leader
SAC	Scientific Advisory Committee
SG	Stakeholder Group
DMP	Data Management Plan
OECD/NEA	Organisation for Economic Co-operation and Development/Nuclear Energy Agency
CEA	COMMISSARIAT A L' ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES, France
AMU	UNIVERSITE D'AIX MARSEILLE, France
CIEMAT	CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT, Spain
URN	UNIVERSITE DE ROUEN NORMANDIE, France
ENEA	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE, Italy
INFLPR	INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE PENTRU FIZICA LASERILOR PLASMEI SI RADIATIEI, Romania
IIT	FONDAZIONE ISTITUTO ITALIANO DI TECNOLOGIA, Italy
IRSN	INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE, France
JSI	JOZEF STEFAN INSTITUTE, Slovenia
KIT	KARLSRUHER INSTITUT FUER TECHNOLOGIE, Germany
LGI	LGI CONSULTING SARL, France
RATEN	REGIA AUTONOMA TEHNOLOGII PENTRU ENERGIA NUCLEARA – RATEN, Romania
SCK•CEN	Studiecentrum voor Kernenergie/Centre d'Etude de l'Energie Nucléaire, Belgium
TBM	Test Blanket Module
UKAEA	UNITED KINGDOM ATOMIC ENERGY AUTHORITY, United Kingdom
UNIPV	UNIVERSITA DEGLI STUDI DI PAVIA, Italy
UOP	UNIVERSITY OF PLYMOUTH, United Kingdom
DH PHE	Department of Health, United Kingdom
IFIN HH	INSTITUTUL NATIONAL DE CERCETARE -DEZVOLTARE PENTRU FIZICA SI INGINERIE NUCLEARA "HORIA HULUBEI", Romania



## **Summary**

The main goal of the Data Management Plan is to describe how the research data will be handled during and after the end of the project, what kind of data will be collected, processed and/or generated, which methodology and standards will be applied, whether data will be shared/made open access and how data will be curated and preserved. In principle, each partner uses its own data management system, which ensures that all data will be properly curated after the project. All project deliverables are envisaged to be public and acquired project data will be proposed after consultation of all partners for curation to selected data banks (as OECD/NEA Data bank and JRC Knowledge Management system).



## 1 Introduction

TRANSAT is a transdisciplinary project which combines expertise of international experts from material sciences, process engineering, biology, environmental sciences and modelling. The project combines multidisciplinary research activities to find solutions at multiple levels and be able to provide suitable innovative and complete answers to the major challenges that are: i) tritium release mitigation strategies, ii) waste management improvement, iii) refinement of the knowledge in the field of radiotoxicity, radiobiology, and dosimetry. To evaluate the scientific tasks to be covered by TRANSAT, all the open issues of the tritium cycle that are not yet tackled by European research activities or former studies have been determined. This general picture has been constrained to crosscutting fusion and fission activities. 18 Partners are participating in TRANSAT from all the European countries involved in tritium activities.

### 1.1 Purpose of the Data Management Plan

This document describes the data management plan, the life cycle of data produced within the TRANSAT project funded under Horizon2020. The purpose of this document is to determine and plan what kind of data will be collected, processed and/or shared and which methodology and standards will be applied.

## 2 Description of the data

### 2.1 Type of study

The main goal of the TRANSAT project is to improve knowledge on tritium management in fission and fusion activities. For this purpose, studies will be performed that will i) elaborate strategies to mitigate tritium release, ii) improve waste management and iii) improve the knowledge in the field of radiotoxicity, radiobiology and dosimetry.

### 2.2 Type of data

Within the project the research data needed to be managed are in the following terms: quantitative, qualitative; generated from surveys, images, tissue samples.. A number of research papers and presentations in recognized journals and conferences are envisaged as described in detail in Dissemination and Exploitation Plan D5.2. Some partners indicated the probability to deposit patents from the project activities. Periodic technical and financial reports and final reports will be produced during and at the end of the project.

### 2.3 Format and scale of the data

The project partners will share their data in the file formats such as scientific publications, abstracts for international conferences and presentations; project and scientific reports. Publishing of the scientific research in per-reviewed open access journals will be the methodology that will enable sharing the data and ensure long-term validity of the data.

The bibliographic metadata must be in a standard format and must include all of the following:

1. the terms "Euratom" and "Euratom research and training programme 2014-2018";
2. the name of the action, acronym and grant number;
3. the publication date, and length of embargo period if applicable
4. a persistent identifier.

## 3 Data collection / generation

Purpose of the data collection/generation within the TRANSAT project is to answer to all the open issues of the tritium cycle that are not yet tackled by European research activities or former studies have been determined. This general picture has been constrained to crosscutting fusion and fission activities. Concerning release mechanism, tritium migration/permeation in massive samples



are studied in dedicated rigs. Associated modelling takes place in the project in order to improve the level of confidence in predictive tools developed for tritium behavior in reactors. A special insight is also put in the release of tritium from tritiated particles coming from dismantling activities. Permeation barriers (active barriers and coating concepts) as well as treatment of the operational tritiated gases are assessed and their applicability to fusion and fission purposes is analyzed. Improvement in waste management is also covered by means of new concept studies for tritiated waste confining packages and by new accurate methodologies for tritium inventory assessment in metallic and soft house-keeping waste. Finally, a dedicated part of the project focuses on radiotoxicity, radioecology, radiobiology and dosimetry on tritiated particles produced during dismantling whose impacts have not yet been addressed. 18 Partners are participating in TRANSAT from all the European countries involved in tritium activities.

Common for all WP - data will be generated by:

1. Contributions – posters, abstracts, presentations – by partners at conferences to disseminate knowledge and results. Possible conferences are e.g. International conference on Tritium Science & Technology, International conference on Radiation Research, Symposium on Fusion Technology.
2. Scientific publications, including open access journals, free (online) journals, and online repositories. The online project website will also be used to archive and make accessible relevant publication.
3. Some project partners indicated the probability to deposit a patent resulting from the project activities.
4. Publication in AIR2 Bulletin and the incrementation of AIR2D2 database in order to increase of the visibility of infrastructures available for Tritium R&D.
5. The project will generate new international recommendations, rules, standards and regulations that will be provided to the Stakeholders.

### ***3.1 Methodologies for data collection/generation***

The data will be generated through scientific research (experimental, modelling and theory), in order to achieve the objectives of the individual work packages of the Transat project. The project is divided between six scientific work packages (WP).

The data will be collected by the work package leaders. In the Annex the objectives and deliverables are listed for the individual work packages and the nature of the data that will be surveyed.

The data will be collected on the ECCP TRANSAT portal. The generic project presentation materials will be collected in the TRANSAT website: <http://transat-h2020.eu>.

The peer-reviewed research publications will also be collected in the TRANSAT web page. Abstracts and presentations for international conferences to disseminate the research conducted within the project will be collected in the ECCP TRANSAT portal.

### ***3.2 Data quality and standards***

Quality of data collection / generation will be controlled and documented, through processes of calibration, repeat samples or measurements, standardised data capture or recording, data entry validation, peer review of data and publishing of scientific research in peer-reviewed journals. The



reports will be reviewed by the project partners and by the lead beneficiaries responsible for individual objectives.

## **4 Data management, documentation and curation**

In principle, each partner uses its own data management system, which ensures that all data will be properly curated after the project. All project deliverables are envisaged to be public and acquired project data will be proposed after consultation of all partners for curation to selected data banks (as OECD/NEA Data bank and JRC Knowledge Management system).

### **4.1 Managing, storing and curating data**

Within the partners local depository of deliverables, reports, meeting minutes and presentations will be available on the ECCP TRANSAT portal. The generic project presentation materials will be available in the TRANSAT website: <http://transat-h2020.eu>.

The peer-reviewed research publications will also be available on the TRANSAT web page. Abstracts and presentations for international conferences for disseminate the research conducted within the project will be available on the ECCP TRANSAT portal.

### **4.2 Data preservation strategy and standards**

The partners will decide and describe the procedures that will be used in order to ensure long-term preservation of the data sets. Long-term preservation of data sets will be ensured by archiving them for a number of years after the end of the project.

## **5 Data security and confidentiality of potentially disclosive information**

A consortium agreement, negotiated and signed by all the parties, inter alia specifies the terms and conditions pertaining to IPR, ownership, access rights, exploitation of background and results and dissemination of results, in compliance with the grant agreement and Regulation n°1290/2013 of December 11th, 2013. The consortium agreement is based on the DESCA (Development of a Simplified Consortium Agreement) Horizon 2020 Model Consortium Agreement with the necessary adaptations considering the specific context and the parties involved in the project. Information exchanged during closed consultation with external participants (e.g. SAC & SG meetings and reviews, 1:1 interviews), will be subject to a Non-Disclosure Agreement. The classification level of the information to be shared will be defined at Work package level (public or restricted) and monitored closely by the Coordinator.

The following provisions will apply in the TRANSAT Consortium Agreement:

- IP ownership: Results shall be owned by the project partner carrying out the work generating such results. If any results are created jointly by at least two project partners and it is not possible to distinguish between the contributions of each of the project partners, such work will be jointly owned by the contributing project partners. The same shall apply if, in the course of carrying out work on the project, an invention is made having two or more parties contributing to it, and it is not possible to separate the individual contributions. Such joint inventions and all related patent applications and patents shall be jointly owned by the contributing parties. Details concerning jointly owned results, joint inventions and joint patent applications is addressed in the Consortium Agreement.
- Access rights to background and exploitation of results: In order to ensure a good execution of the project, the project partners agree to grant each other access rights to selected background and results for the execution of the project. The Consortium Agreement defines further details concerning the access rights to background and results at the end of the project in order to ensure exploitation of the results.
- TRANSAT will fully embrace the open access policy of Horizon 2020 providing online access to scientific information that is free of charge to end-users and that is re-usable. In





the context of this project, scientific information refers to peer-reviewed scientific research articles (published in journals).

- Export control: Existing export regulations will be considered in all exploitation activities and cross-border material transfer.

## 6 Data sharing and access

Data will be shared ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials will be available in the TRANSAT website: <http://transat-h2020.eu>.

The beneficiaries must give each other access — under fair and reasonable conditions — to background needed for exploiting their own results, unless the beneficiary that holds the background has informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel). Access may be made — unless agreed otherwise — up to one year after the period of the project duration which is 48 months.

Each beneficiary must ensure open access to all peer-reviewed scientific publications relating to its results.

In particular, it must:

1. as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications. Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications
2. ensure open access to the deposited publication — via the repository — at the latest:
  - a. on publication, if an electronic version is available for free via the publisher, or
  - b. within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
3. ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

### 6.1 Discovery by potential users of the research data

TRANSAT has a complex list of stakeholders that contribute to the work and aim to profit from the project outcomes. From the long-term perspective the tritium production, storage, transport and other operations will need more specific framework. This project will bring major inputs to the existing technical and also legal framework in the area of tritium with the aim to assure the elaboration of appropriate rules, procedures, standards and legislation. The final project outcomes will bring new technical knowledge to the fission & fusion community and help the different public and private stakeholders to prepare appropriate global management and financial environment in the short, medium and long-term horizon.

The project will engage with academic, industrial peers and regulators through traditional conference presentations and manuscripts in open access journals once the experimental results have been generated. The consortium as a whole has a wide network of advisors and experts worldwide (e.g. USA, Canada, Japan) who will be regularly informed and who will contribute to the dissemination and exploitation of the project's results.

## 7 Conclusions

The purpose of this document was to provide the plan for managing the data generated and collected during the project; The Data Management Plan. Specifically, the DMP described the data management life cycle for all datasets to be collected, processed and/or generated by a research project. It covered:

- the handling of research data during and after the project
- what data will be collected, processed or generated.

- what methodology and standards will be applied.
- whether data will be shared/made open and how
- how data will be curated and preserved

Following the EU's guidelines regarding the DMP, this document may be updated - if appropriate - during the project lifetime (in the form of deliverables).

## 8 Annexes

**Table 1: Data set template for each WP**

<b>Data set reference and name</b>	<i>Identifier for the data set to be produced</i>
<b>Data set description</b>	<i>Description of the data that will be generated or collected, its origin (in case it is collected), nature and scale and to whom it could be useful, and whether it underpins a scientific publication. Information on the existence (or not) of similar data and the possibilities for integration and reuse. e.g. Data will be collected through a survey with key actors</i>
<b>Standards and metadata</b>	<i>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</i>
<b>Data Sharing</b>	<i>Description of how data will be shared, including access procedures, embargo periods (if any), outlines of technical mechanisms for dissemination and necessary software and other tools for enabling re-use, and definition of whether access will be widely open or restricted to specific groups. Identification of the repository where data will be stored, if already existing and identified, indicating in particular the type of repository (institutional, standard repository for the discipline). In case a dataset cannot be shared, please mention the reasons for this (e.g. ethical, rules of personal data, intellectual property, commercial, privacy-related, security-related). e.g. Data will be published in the website of the project. There will be no permission restriction placed on the data.</i>
<b>Archiving and preservation (including storage and backup)</b>	<i>Description of the procedures that will be put in place for long-term preservation of the data. Indication of how long the data should be preserved, what is its approximated end volume, what the associated costs are and how these are planned to be covered. e.g. To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</i>

**Table 2: Data set for WP1**

<b>Work package No. and Title</b>	<b>WP 1 - "Assessment and proposal for developments of barriers against tritium permeation and the treatment of the operational tritiated gases";</b>
<b>Data set reference and name</b>	<i>Transat Template Deliverable_ Transat_WP1_report_AuthorName_Title Transat_WP1_publication_AuthorName_Title</i>
<b>Partners</b>	<b>KIT, ENEA, IFIN HH, IIT, RATEN</b>

<p><b>Data set description</b></p>	<p>Data will be collected through a survey with key objectives:</p> <p>The review of the experimental activities concerning the development of the barriers against tritium permeation will be followed with the validation of the barrier(s) based on coatings that have potential for industrialization.</p> <p>Complementary, the partners will assess how an active barrier system could be implemented to prevent tritium migrating through surfaces, thereby minimizing clean side equipment contamination.</p> <p>The detailed examination of the manufacturing challenges associated with incorporating the active barrier into an ASME compliant component such as heat exchanger will be carried out.</p> <p>The treatment of the operational tritiated gases generated in the fission plants such as plenum gas purification, the purification in gas coolant reactor and the He purification system in the TBM from the fusion applications will be assessed and further developed. Also, a viable route for the separation of lithium isotopes will be proposed based on thoroughly assessment of the developments on this field.</p> <p>Deliverables:</p> <p>D1.1 : Report on the assessment of tritium term sources and on the different types of barrier against tritium permeation relevant for fusion and fission Reactors</p> <p>D1.2 : Report on the assessment of a viable route for the separation of lithium isotopes</p> <p>D1.3 : Report on review of gas treatment technologies -</p> <p>D1.4 : Report on active barriers that complement the coating technics -</p> <p>D1.5 : Report on experimental activities demonstrating transfer of technology under operating conditions of fusion/ fission -</p> <p>D1.6 : Report on experimental validation of permeation barriers based on coatings</p> <p>Foreseen publications:</p> <ul style="list-style-type: none"> <li>• Comparison of tritium release from massive and dust for different materials: cement and steel (CEA)</li> <li>• Development of new coating to control tritium permeation (KIT)</li> <li>• Assessment of term sources relevant for fusion and fission reactors (KIT)</li> <li>• Assessment of different types of barrier against tritium permeation (KIT)</li> <li>• Experimental validation of permeation barriers based on coatings (KIT)</li> <li>• Review of gas treatment technologies in both fission and fusion (ENEA)</li> <li>• Demonstration of transfer of technology under operating conditions of fusion/fission;</li> <li>• Assessment of a viable route for the separation of lithium isotopes (KIT)</li> </ul>
<p><b>Standards and metadata</b></p>	<p><i>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</i></p>
<p><b>Data Sharing</b></p>	<p>Data will be shared on the ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials and data will be published in the website of the project TRANSAT website: <a href="http://transat-h2020.eu">http://transat-h2020.eu</a>. There will be no permission restriction placed on the data.</p>
<p><b>Archiving and preservation (including storage and backup)</b></p>	<p><i>To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</i></p>

**Table 3: Data set for WP2**



<b>Work package No. and Title</b>	<b>WP2 - “Tritium inventory management and modelling”</b>
<b>Data set reference and name</b>	<i>Transat Template Deliverable_</i> <i>Transat_WP2_report_ AuthorName_ Title</i> <i>Transat_WP2_publication_ AuthorName_ Title</i>
<b>Partners</b>	CIEMAT, CEA, URN, INFLPR, JSI
<b>Data set description</b>	<p>Data will be collected through a survey with key objectives:</p> <p>Development of innovative methods for tritium contamination detection and tritium inventory measurement.</p> <p>Assessment and comparison of the prediction capabilities of tritium transfer models developed for fusion and fission. Both models will be tested in both nuclear technologies.</p> <p>Deliverables:</p> <p>D2.1: Review of the different techniques to analyse tritium;</p> <p>D2.2: Technical document: Data set about ASTRID design and operating conditions to be simulated;</p> <p>D2.3: Synthesis on the results obtained by the LIBS technique, autoradiography and Ion Beam Analysis to analyse tritiated samples;</p> <p>D2.4: Report on comparative analysis of simulation results obtained with KUTIM and ECOSIM PRO codes</p> <p>Foreseen Publications:</p> <ul style="list-style-type: none"> <li>• Measurement by laser techniques of low level concentration of deuterium in deuterated Al and steel under LIBS picosecond/femtosecond regime (CORIA/URN)</li> <li>• Measurement by laser techniques of low level concentration of tritium in tritiated Al and steel under LIBS picosecond/femtosecond regime (CORIA/URN)</li> <li>• Modelling of a LIBS double pulse of the experimental results obtained (CORIA/URN)</li> <li>• Tritium measurement by autoradiography (CEA)</li> <li>• Deposition of deuterium doped Al thin films and deuterium doped stainless steel thin film for development of the measurements techniques (INFLPR)</li> <li>• Deposition of deuterium doped stainless steel thin films layers characterization (INFLPR)</li> <li>• Development of new ion beam technique for tritium detection for fusion and fission applications (JSI)</li> <li>• Measurement of tritium inventory in fusion samples by nuclear reaction analysis method – comparison of retention to deuterium (JSI)</li> </ul>
<b>Standards and metadata</b>	<i>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</i>
<b>Data Sharing</b>	Data will be shared on the ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials and data will be published in the website of the project TRANSAT website: <a href="http://transat-h2020.eu">http://transat-h2020.eu</a> . There will be no permission restriction placed on the data.
<b>Archiving and preservation (including storage and backup)</b>	<i>To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</i>

**Table 4: Data set for WP3**

<b>Work package No. and Title</b>	<b>WP3 - "Impact of tritiated products on environment and human health"</b>
<b>Data set reference and name</b>	<i>Transat Template Deliverable_</i> <i>Transat_WP3_report_AuthorName_Title</i> <i>Transat_WP3_publication_AuthorName_Title</i>
<b>Partners</b>	CEA, AMU, DH PHE, IRSN, UNIPV, UOP
<b>Data set description</b>	<p>Data will be collected through a survey with key objectives:</p> <ol style="list-style-type: none"> <li>1. Identification of the relevant steel and cement particles generated during decommissioning process in both fusion and fission. Production of such particles in sufficient amount for eco and toxicology studies. Characterization of these particles in term of their physical and chemical stability. Tritiation of these particles.</li> <li>2. Ecotoxicological studies:             <ol style="list-style-type: none"> <li>a. Assessment of the deposition velocity and metabolism of tritiated aerosols in the environment, development and</li> <li>b. validation of an associated model of deposition of tritium in particulate aerosol form on grass.</li> <li>c. Environmental transformation of the released particle by-products using mesocosm scale studies</li> <li>d. Toxicity and genotoxicity studies of tritiated steel and cement particles studied in marine bivalve</li> </ol> </li> <li>3. Radiotoxicology / radiobiology studies:             <ol style="list-style-type: none"> <li>a. Acute and long-term toxicity and genotoxicity studies of these dusts on in vitro human lung models (cells and epithelium)</li> <li>b. Evaluation of the behaviour of the tritiated dusts in lung (release of tritium from particles in lung fluids)</li> <li>c. Investigation of the inhalation biokinetics of tritiated particles on rodent models</li> </ol> </li> <li>4. Dosimetry studies: Evaluation of the dosimetry of inhaled tritiated aerosols followed by the development of biokinetic models and dose coefficients.</li> </ol> <p>Deliverables:</p> <p>D3.1 : Report on production of steel particles  D3.2 : Report on production of cement particles and characterization of steel and cement suspensions  D3.3 : Report on tritiation of cement and steel particles  D3.4 : Report on model equations and comparison with generic models  D3.5 : Report on development of tools to study the environment fate of particles by-products  D3.6 : Report on ecotoxicological and genotoxicological impact on tritiated and untritiated particles on marine bivalves  D3.7 : Report on acute and long-term toxicities, epi/genotoxic studies and transepithelial transfer of untritiated and tritiated particles on in vitro human models.  D3.8 : Report on dissolution studies and in vivo inhalation studies  D3.9 : Report on predicted effectiveness of tritiated products  D3.10 : Report on biokinetic parameters and organ dose calculation</p> <p>Foreseen publications:</p> <ul style="list-style-type: none"> <li>• Particles production and characterisation for radiotoxicity studies (CEA, IRSN,</li> </ul>

	<p>CEREGE)</p> <ul style="list-style-type: none"> <li>• A paper providing details and results from the project, including model equations and model-model and model-(existing) measurements comparison could be foreseen (IRSN)</li> <li>• Environmental transformation of the released particle by-products using mesocosm scale studies Biokinetics of inhaled tritiated particles (DH PHE)</li> <li>• Toxicity, genotoxicity and behaviour of tritiated particles in human lung models (AMU, CEA, DH PHE)</li> <li>• UOP team will lead a series of publications dealing with the influence of physico-chemical factors (pH, salinity and humic content) on the release of tritium in the seawater from the supplied dust particles. We will also lead the publications pertaining to tissue-specific bioaccumulation and potential biological effects on a representative marine organism.</li> <li>• Modelling of radionuclide concentration/dose deposition at the cellular/tissue/organ level (UNIPV)</li> <li>• Development of specific biokinetic models (IRSN)</li> </ul>
<b>Standards and metadata</b>	<i>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</i>
<b>Data Sharing</b>	Data will be shared on the ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials and data will be published in the website of the project TRANSAT website: <a href="http://transat-h2020.eu">http://transat-h2020.eu</a> . There will be no permission restriction placed on the data.
<b>Archiving and preservation (including storage and backup)</b>	<i>To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</i>

**Table 5: Data set for WP4**

<b>Work package No. and Title</b>	<b>WP4 - "Tritium issues in waste processing and decommissioning"</b>
<b>Data set reference and name</b>	<i>Transat Template Deliverable_ Transat_WP3_report_AuthorName_Title Transat_WP4_publication_AuthorName_Title</i>
<b>Partners</b>	UKAEA, SCK•CEN
<b>Data set description</b>	<p>Data will be collected through a survey with key objectives:</p> <ol style="list-style-type: none"> <li>1. Development of tritium waste measurement techniques (for soft waste and characterisation of tritiated getters)</li> <li>2. Definition of new tritiated waste container packages by means of measurement of permeability of material for Geological Disposal Facility and tritium migration in waste container modelling</li> <li>3. Production of a decommissioning plan example for a tritiated fission industrial facility with fusion relevant components</li> </ol> <p>Deliverables:</p> <p><i>D4.1: Interim report on the state of the art. Completion of design of experimental study;</i></p> <p><i>D4.2: Final report;</i></p> <p><i>D4.3: Interim report concerning the state of the art. Completion of design of experimental study;</i></p> <p><i>D4.4: Final report 2;</i></p> <p><i>D4.5: Interim report containing research for disposal, reuse, neutralisation and</i></p>



	<p>partners, tritium inventory measurement; D4.6: Disposal or recycling plan for tritium ready. Foreseen publications:</p> <ul style="list-style-type: none"> <li>• Dismantling and disposal plan for the tritium getters (SCK CEN)</li> <li>• Assessment of the permeability of disposal facility container relevant materials to tritium at lower temperatures (UKAEA)</li> <li>• A review of different techniques for soft waste characterisation and experiments on the form of tritium in soft waste (UKAEA)</li> <li>• Tritium systems behaviour under transient/non-steady states (UKAEA)</li> <li>• Permeation model upgrade, validation and prediction capabilities (UKAEA)</li> <li>• Surface interface exchange rates of tritium in wet media (UKAEA)</li> </ul>
<b>Standards and metadata</b>	<p>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</p>
<b>Data Sharing</b>	<p>Data will be shared on the ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials and data will be published in the website of the project TRANSAT website: <a href="http://transat-h2020.eu">http://transat-h2020.eu</a>. There will be no permission restriction placed on the data.</p>
<b>Archiving and preservation (including storage and backup)</b>	<p>To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</p>

**Table 6: Data set for WP5**

<b>Work package No. and Title</b>	<b>WP5- “Dissemination, Communication &amp; Stakeholders Engagement”</b>
<b>Data set reference and name</b>	<b><i>Transat Template Deliverable_</i></b> <b><i>Transat Template Deliverable_ Summer School Proceedings</i></b>
<b>Partners</b>	JSI, CEA, AMU, CIEMAT, URN, DH PHE, ENEA, IFIN HH, IIT, INFLPR, IRSN, KIT, LGI, RATEN, SCK•CEN, UKAEA, UNIPV, UOP
<b>Data set description</b>	<p>Data will be collected through a survey with key objectives: to engage with stakeholders, to raise awareness on TRANSAT project and its achievements through specific communication actions. The activities in this WP will be to organize the dialogue with the Stakeholders group and other relevant actors. The <i>dissemination of knowledge acquired towards the scientific community and beyond includes publications in selected scientific journals and participation to conferences and other events. Two summer schools will be organised in order to bring closer the R&amp;D on Tritium to the young generation. The work package leader JSI will be supported by LGI for specific communication and networking tasks and all project partners will contribute to the wide scientific dissemination actions, led by CEA.</i></p> <p>Deliverables</p> <p><i>D5.1: Recommendations final report to stakeholders;</i></p> <p><i>D5.2: Dissemination and exploitation plan;</i></p> <p><i>D5.3: Data Management Plan;</i></p> <p><i>D5.4: 1st Summer School Proceedings;</i></p> <p><i>D5.5: 2nd Summer School Proceedings;</i></p> <p><i>D5.6: Communication Action Plan;</i></p> <p><i>D5.7: Project website;</i></p>



	<i>D5.8: Proceedings of final meeting</i>
<b>Standards and metadata</b>	<i>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</i>
<b>Data Sharing</b>	Data will be shared on the ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials and data will be published in the website of the project TRANSAT website: <a href="http://transat-h2020.eu">http://transat-h2020.eu</a> . There will be no permission restriction placed on the data.
<b>Archiving and preservation (including storage and backup)</b>	<i>To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</i>

**Table 7: Data set for WP6**

<b>Work package No. and Title</b>	<b>WP6- "Management"</b>
<b>Data set reference and name</b>	<b><i>Transat Template Deliverable_</i></b>
<b>Partners</b>	CEA, LGI
<b>Data set description</b>	<p>Data will be collected through a survey with key objectives: to achieve the project's objectives, in terms of scientific quality, timely delivery, and contribution to the expected impact of the project. WP6 aims at achieving: efficient progress monitoring; timely and detailed reporting to the EC; constitution and organisation of the WP management teams; proper scientific quality of the deliverables. In terms of consortium management, WP6 objectives are to guarantee sound management of contractual and financial issues, setting-up and maintaining project management tools, good communication in the consortium, proper quality assurance in the delivered reports, financial and contractual management, reporting to the EC. Consortium management and scientific coordination are placed under the responsibility of the coordinator. While being fully responsible towards the EC, CEA will be assisted by LGI, which has longstanding experience as Project Management Office in EU collaborative projects. This will allow the CEA to focus on strategic coordination while being supported for the operational and administrative project management by LGI.</p> <p>Deliverables</p> <p><i>D6.1: Project Quality Plan;</i></p> <p><i>D6.2: Detailed Work Plan;</i></p> <p><i>D6.3: Summary report on Scientific Advisory Committee activities</i></p>
<b>Standards and metadata</b>	<i>Reference to existing suitable standards of the discipline. If these do not exist, an outline on how and what metadata will be created.</i>
<b>Data Sharing</b>	Data will be shared on the ECCP TRANSAT portal, the repository of the TRANSAT project where all partners have access. The generic project presentation materials and data will be published in the website of the project TRANSAT website: <a href="http://transat-h2020.eu">http://transat-h2020.eu</a> . There will be no permission restriction placed on the data.
<b>Archiving and preservation (including storage and backup)</b>	<i>To ensure data safety we will store and regularly back up them in existing file server. We do not need additional resources for the preservation of data. Data will be archived in servers for 3 years after the end of the project.</i>