WEISS

Quarterly Monitoring Reports

LIFE08 ENV/B/042

Greet Vos
2010-2014

Table of contents

Quarterly monitoring report

Report 1 – 31 March 2010

Progress per action

1. Realization of the project website

The project website is online (http://weiss.vmm.be)
At this stage of the project, the website contains a news page, the project description, the project progress, the after LIFE+ dissemination plan, the partnership description, documents concerning the local stakeholder consultation and useful links.

2. Local Stakeholder consultation

Not started

3. EU-wide Stakeholder consultation

Timing : the organization of the EU-wide Stakeholder Consultation will be postponed to the first quarter 2011.

4. Determination of the WEISS tool specifications

Not started

5. Design and architecture

Not started

6. Prototype implementation

The parties agree on the work plan, as described in the revised proposal.
In agreement with the project monitor, the development of prototype0 started in the first quarter of 2010 as part of action 4 and 5.

7. Data collection

Monitoring programme

A monitoring programme is set up for the UWWTPs in the Flanders region with a capacity exceeding 10.000 population equivalents. The pollutants considered are PAH (polycyclic aromatic hydrocarbons).
Flow proportional samples are taken at the inlet and outlet of the UWWTP at the same day in the period January 2010 till December 2010 on a monthly basis.

The sampling is executed by the coordinating beneficiary who has substantial means and a professional team for the monitoring of waste water. The extra analyses in the context of this project are granted to the PCM (Provinciaal Centrum voor Milieuonderzoek) under the umbrella of the existing framework contract with the Flemisch Environment Agency.

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Not started

10. Communication to the general public

Not started

11. Project management

11.2. Kick-off meeting with the project partners (13/1/2010)

The parties engage themselves to the objectives of the project :

- the elaboration of an innovative Water Emission Inventory Planning Support System to support the competent authorities with the implementation of the Water Framework Directive.
- the realization of an operational prototype applicable in the Flemish region of Belgium
- the consultation of the user requirements of local and EU-with stakeholders
- the provision of training material and a downloadable version of the prototype for its dissemination in Flanders and abroad.
- the communication to the general public trough a website, leaflets, Layman's Report and a geoview consultation of the results in Flanders.

Agreements are made about workload, timing, data availability and financing.

11.3. Meeting with the project monitor, Leen D'Hondt (Astrale) on 31 March 2010

11.4. The grant agreement is signed by the partners.

11.5. The partnership agreement is signed by the partners.

11.6. Participation in the LIFE08 kick-off meeting, by the project manager and communication manager (Den Haag, 11th March 2010) .

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M1 The public release of the website (action 1) – 31/3/2010

Quarterly monitoring report

Report 2 – 30 June 2010

Progress per action

1. Realization of the project website

Realized.

2. Local Stakeholder consultation

On the 28th of June 2010, the local stakeholder consultation took place at Novotel center Mechelen – Belgium. The meeting was attended by 29 persons, from different countries and regions, France, the Netherlands, the Walloon region and the Flemish region.
The profile of the attended organizations were : governmental agency, scientific institute, watershed manager, drinking water producer, port company..
The report of the local stakeholder organization is part of the User Requirements document.

3. EU-wide Stakeholder consultation

Timing : the organization of the EU-wide Stakeholder Consultation will be postponed to the first quarter 2011.

4. Determination of the WEISS tool specifications

The report of the local stakeholder organization will be part of the User Requirements document, descripting the desirable tool specifications of future users.

5. Design and architecture

Not started

6. Prototype implementation

Development of prototype 0

The advantages of starting the development of prototype0 at the beginning of the project, as a change of the schedule WEISS LIFE+ are motivated :

- The development process of WEISS LIFE+ is spread over the entire three years.
- The team members can be employed over a period of three years. This means a distribution of workload as well as improved process of acquisition of knowledge and skills.
- The visibility of results in the stakeholder consultations will be more convincing on the usefulness of the system.

- It quickly becomes clear what the possibilities and limitations of available data are, and where efforts should be made for additional data collection.
- The prototype0 contributes to a realistic interpretation of the requirement document and WEISS Product Specification document.

7. Data collection

The availability of GIS information for the sewer system in the Flanders region was explored. This region is chosen for the implementation of the WEISS prototype.

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Not started

10. Communication to the general public

Participation to the BALWOIS conference, 24-28 May, Ohrid, Macedonië gives visibility of the project in the Balkan States and other candidate countries.

11. Project management

Progress meeting
Date: 7/4/2010
Place: Aalst
Participants: Guy Engelen (Vito), Leen Van Esch (VITO), Inge Uljee (VITO), Stefaan Hermans (VMM) , Greet Vos (VMM)

Data collection (sewer system)
Date: 28/4/2010
Place: Aalst
Participants: Guy Engelen (Vito), Leen Van Esch (VITO), Inge Uljee (VITO), Stefaan Hermans (VMM)

BALWOIS conference (International Scientific Conference on Water Observation and Information System for Decision Support)
Date: 24 to 28/5/2010
Place: Ohrid - Macedonië
Participants: Leen Van Esch (VITO), Greet Vos (VMM)

Preparation stakeholder consultation
Date: 9, 14, 23/ 6/ 2010
Place: Mechelen

Participants: Guy Engelen (Vito), Leen Van Esch (VITO), Inge Uljee (VITO), Tim Op ‘t Eyndt (VITO), Stefaan Hermans (VMM) , Greet Vos (VMM)

12. Project monitoring

Follow up of the Gant Chart by the project monitor.

Milestones:

M2. The availability of the WEISS User Requirement Document Version 1(action 2) – 30/06/2010 (The report of the local stakeholder organization is part of the User Requirements document version 1)

Quarterly monitoring report

Report 3 – 30 September 2010

Progress per action

1. Realization of the project website

The website is up to date with the project information.
The WEISS Requirements Document version 1 is published on the website.

2. Local Stakeholder consultation

Realized (28/6/2010)

3. EU-wide Stakeholder consultation

Timing : the organization of the EU-wide Stakeholder Consultation will be postponed to the first quarter 2011.

4. Determination of the WEISS tool specifications

The report of the local stakeholder organization is part of the User Requirements document, descripting the desirable tool specifications of future users.

5. Design and architecture

Not started

6. Prototype implementation

Development of prototype 0 is started.

7. Data collection

Specific research work

Based on the needs for determining the sources of pesticides in the river basins Scheldt en Meuse, formulated on the local stakeholder consultation, research project is defined for the quantification and the geographical distribution of pesticide losses to the surface water. Conform the Belgium legislation, a call for tender applying the negotiated procedure is issued to 6 companies or agencies. (Soresma N.V.; Adminstration of agriculture; University of Gent, Laboratorium voor fytofarmacie; Arcadis; Grontmij; Technum; Haskoning Belgium nv:)

Agenda:
The tender is issued at the end of September.

Consultation of the Agency on agriculture and fishery about the availability of data on the use of PPP (plant protection products) on 10 September.

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Not started

10. Communication to the general public

Corporate style:

A tender was launched on the 16th of July for the Life+ project WEISS LIFE08/B/042 to 4 communication offices (Comith, Goekint Graphics, Cayman and Change Designers).

Change Designers and Comith informed us that they could not participate. Goekint did not react probably due to holiday period. Cayman responded and where chosen as their prices are conform to the market and the references appeared to be good.

Cayman assists us along the project for following tools:
Logo and corporate style, project leaflets, banners (notice boards), the layout and printing of the Layman's report and the USB-sticks for the dissemination of the Layman's report.
Price: total amount is approximately 13 000,- €

So far, no major problems have occurred with implementing the corporate house style. All partners use the templates and the logo is present in the WEISS system itself.

Communication:

Leen Van Esch gives a presentation of the project on the Flemish Geography Days, Leuven 22 October.

Leaflet

In the beginning of September, the first leaflet was designed and printed, and the house style was developed

11. Project management

Meeting with the project partners

30 August 2010; 6&7 September 2010; 20September 2010;

The partnership agreement (annex 1) is signed on the 28th September 2010.

The agreement defines the role and obligations of both partners (coordinating beneficiary, associated beneficiary) during the project period.

It clarifies the ownership of results generated during the project or in their possession before the project.

It determines the exploitation and ownership of the documents, the stand alone application for PC platform, the source code, and the result after the project.
It grants the future commercial valorisation of the results generated under the project towards third parties to the Associated Beneficiary (VITO).

Data collection (quantification of pesticide emissions – call for tender)
Date: 15/07/2010
Place: Aalst
Participants: Stefaan Hermans (VMM) , Greet Vos (VMM)

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Quarterly monitoring report

Report 4 – 31 December 2010

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized(28/6/2010)

3. EU-wide Stakeholder consultation

Timing : the organization of the EU-wide Stakeholder Consultation will be postponed to the first quarter 2011.

4. Determination of the WEISS tool specifications

With respect to the postponed stakeholder consultation the WEISS Product Specification Document will be finalized in March 2011.

5. Design and architecture

The WEISS Architecture and Design document will be available in April 2011.

6. Prototype implementation

Prototype 0 is under development:

The functional flowchart is implemented, with exception of the overflow calculation and paved/unpaved surfaces. Following steps are testing and improving , creation of the sewermask.

The losses in air and soil will not be reported in a map. Those losses (percentage) will be calculated in the gross emission.

WEISS will be created as a modular system, with separated model blocs.

The development is realized on a WINDOW 7 platform. The database will use ACCESS of SQLite. All the calculated maps are saved on the local hard disk.

7. Data collection

Emission caused by the use of plant protection plants

Specific research work has been started for the quantification of the PPP (plant protection products) in water, depending on the use of pesticides. The aim of the study is to develop a methodology for the calculation of the different emission processes depending on product characteristics, crop specifications and soil conditions. Due to the lack of available data on pesticide use for the entire region, the effort will focus only on the PPPs used in corn and winter corn.

Agenda:

- Kick off study on pesticides 28/10/2010
- Pesticide study – meeting of the steering group 26/11/2010
- Pesticide study – meeting of the steering group 23/12/2010

Emissions of PAH by sewer treatment plants

Action 7 provides for the organization of a monitoring programme for priority substances.
PAH was chosen as an important pollutant, causing major problems in water quality in Flanders and other European countries. PAH was also amongst the substances which are most frequently mentioned on the stakeholder consultation beside pesticides, nutrients and metals.

During 2010, 1.450 samples on 100 UWWTPs were taken for the analysis of PAH, in the Provincial Centre for Environmental Research (Provinciaal Centrum voor Milieuonderzoek, PCM).

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Presentation of the WEISS-project on the Belgian Geographic days (22/10/2010)

10. Communication to the general public

A documentation folder was designed and printed in the month of October 2010. These documentation folders are being used for every meeting within the framework of WEISS.

11. Project management

Meeting with the project partners on 16 November 2010 and 17 December 2010.
The Inception report is delivered to the EC and Astrale.

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M3. The availability of the WEISS User Requirement Document Version 2 (action 3) – postponed to March 2011.

M4. The availability WEISS Product Specification Document - – postponed to March 2011.

Quarterly monitoring report

Report 5– 31 March 2011

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

The EU-wide stakeholder consultation took place on March 17th 2011, at the Mariott Hotel in Brussels, Belgium. The meeting was attended by 22 persons, from 9 different countries and regions. The profile of the attending organizations were : governmental agency, scientific institute, watershed manager, drinking water producer, port company.
Due to the change in the schedule, the afternoon session " Interactive session 2 – technical user" was well documented with a first impression of the multiple window approach off the prototype.

4. Determination of the WEISS tool specifications

The WEISS Architecture and Design document will be available in April 2011.

5. Design and architecture

Design and architecture is a continuing process.
Work in progress:

- The functionalities and calculation steps of the existing EIW-system are studied
- Design of database structure for WEISS
- Design of calculation steps trough the mass flow scheme
- Design of a multi-window user interface

6. Prototype implementation

The development of WEISS system will follow the typical steps of the Evolutionary Delivery Model (EDM). The EDM is essentially a software implementation methodology which relies on prototyping: it delivers prototypes of growing complexity that evolve iteratively and eventually into the desired final product. Requirements and design phases are run through prior to engaging in the iterative implementation cycle. Every cycle (also named loop or iteration in this text) of the EDM goes through

an intensive implementation phase, end-user testing and assessment phase, revision of user requirements and system design phase.

The strength of the EDM resides in the fact that the functional and technical specifications can evolve with the advances made in the development process and the problems detected.

A very close collaboration between the end-users and the developers during the full implementation process is guiding this. The use of the EDM for the development of WEISS makes it clear that the numbers of the succeeding prototypes are a working definitions to facilitate the communication between the developer and the end-user.

The first working version of the prototype 0 will be presented to the project team on October 2011.

7. Data collection

Emissions of PAH by sewer treatment plants

A monitoring programme was set up for the UWWTPs in the Flanders region with a capacity exceeding 10.000 population equivalents. The pollutants considered were PAH (polycyclic aromatic hydrocarbons).
The results of the monitoring campaign are available and are being analyzed. They will serve as validation numbers for prototype 0.

Plant Protection Products : quantification and geolocation of the emission to water – Arcadis 2011

Specific research work has been started for the quantification of the PPP (plant protection products) in water, depending on the use of pesticides. The aim of the study is to develop a methodology for the calculation of the different emission processes depending on product characteristics, crop specifications and soil conditions. Due to the lack of available data on pesticide use for the entire region, the effort will focus only on the PPPs used in corn and winter corn.

Agenda:
Pesticide study – meeting of the steering group (24/03/2011)

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

No activities

10. Communication

Notice boards

In the beginning of 2011, two notice boards were printed and placed in the income hall of the VMM in Aalst and VITO in Mol.

11. Project management

Meeting of the project team on the 28 January 2011 (follow up of the functional requirements) and the 4th of March (preparation of the EU stakeholder meeting).

Advisory Board

The Advisory Board is the main external advisory body and consists of independent persons representing the stakeholders or stakeholder organizations, some of whom are participants in the workshops organized in actions 2 and 3 . The Advisory Board will have an advisory role on scientific and practical issues and will provide guidance on the direction of the research activities in relation to requirements and needs formulated by the stakeholders. The Advisory Board will also carry out an annual review of the progress of the project and preview the work for the next 12 months. The Advisory Board will meet with the Co-ordination Group members on four occasions in the course of the project.

The members of the advisory board are Grard Aline, ULG AQUAPOL, Belgium; Etienne Everbecq, ULG AQUAPOL, Belgium; Johan Van Cleemput, port of Antwerp, Belgium; Luc Gille, Water-link umbrella of drinking water suppliers, Belgium; Joost van den Roovaart, Deltares, The Netherlands; Aurelien Gouzy, Ineris, France.

The Advisory board was organized back to back with the EU stakeholder meeting (18/03/2011)

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M3. The availability of the WEISS User Requirement Document Version 2 (action 3) – available March 2011.

M4. The availability WEISS Product Specification Document –(action 4) postponed to April 2011

Quarterly monitoring report

Report 6– 30 June 2011

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

Realized.

4. Determination of the WEISS tool specifications

The determination of the WEISS tool specifications is postponed to July 2011.

5. Design and architecture

Design and architecture is a continuing process.

Work in progress:

- The functionalities and calculation steps of the existing EIW-system are studied
- Design of database structure for WEISS
- Design of calculation steps trough the mass flow scheme
- Design of a multi-window user interface

6. Prototype implementation

The first working version of the prototype 0 will be presented to the project team on October 2011.

7. Data collection

Plant Protection Products : quantification and geolocation of the emission to water – Arcadis 2011

Final report available (24/04/2011)

Geographical distribution of plant protection products: relation between the use in agriculture and the emissions in surface water - VITO 2012

VMM funded on own budget an extra and more detailed study on geographical distribution of plant protection products. By order of VMM, the use in agriculture and the emissions of 22 plant

protection products (PPP) were determined. The innovative aspect of research work is the geographical detailed estimation of the use - for each parcel of farm land and 12 crop types - and there emission to surface water. The intended result is improving the emission inventory WEISS for the theme of pesticides, as an instrument for supporting and evaluation of policy on priority substances.

Consultation of the Agency on agriculture and fishery about the availability of data on the use of PPP (plant protection products) (23/05/2011)

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Not started

10. Communication to the general public

The first newsletter was sent in May 2011, mentioning the EU-wide stakeholder consultation, the projects progress and the first advisory board meeting.

11. Project management

Meeting of the project team on 22 April 2011 (progress and planning).

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M4. The availability WEISS Product Specification Document –(action 4) postponed to July 2011

Quarterly monitoring report

Report 7 – 30 September 2011

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

Realized.

4. Determination of the WEISS tool specifications

The product specification document has been finished.
Together with the User requirements document, the Product specifications have been further developed. The document is available on the project website.

5. Design and architecture

Design and architecture is a continuing process.
Work in progress:

- The functionalities and calculation steps of the existing EIW-system are studied
- Design of database structure for WEISS
- Design of calculation steps trough the mass flow scheme
- Design of a multi-window user interface

6. Prototype implementation

The first working version of the prototype 0 will be presented to the project team on October 2011.

7. Data collection

No activities

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Not started

10. Communication to the general public

In December 2011 the second newsletter was sent out, containing information about the advisory board, which was held on 21 October 2011, and an explanation about the prototype O.

In addition, a poster was designed to inform professionals about WEISS on the ScaldWIN (an Interreg IVB project in which VMM is also Lead Partner) interim seminar. This poster was designed by employees of the VMM and printed by the printer of the Flemish Government, so no additional costs have to be taken into account.

11. Project management

No meetings of the project team.

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M4. The availability WEISS Product Specification Document –(action 4) available in July 2011

Quarterly monitoring report

Report 8 – 31 December 2011

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

Realized.

4. Determination of the WEISS tool specifications

Realized.

5. Design and architecture

Design and architecture is a continuing process.

Work in progress:

- The functionalities and calculation steps of the existing EIW-system are studied
- Design of database structure for WEISS
- Design of calculation steps trough the mass flow scheme
- Design of a multi-window user interface

6. Prototype implementation

The first working version of the prototype 0 is presented to the project team on October 2011.

This prototype implements the general technical framework within which the various modules are embedded to perform their precise tasks in a coupled manner. This framework provides the user-interface through which the user interacts with WEISS as well as the various technical interfaces and features enabling the coupling of the modules, the information passing from module to module, as well as the ingestion of the input data and the storage and visualization of the results.

The model consist of three modules : setup (substances, sources, emission explanatory variable (EEV), Run-off), compute and analyze. The information available from the existing EIW-system is already partly incorporated in the prototype 0.

The Prototypes will grow in complexity from the first till the third version. The developments on short and mean time are listed and prioritized. The steps in the iterative process of development define the prototypes 1, 2 and 3.

Prototype 1 : realized December 2011

- Algorithm for computing the EVV map for surface sources.
- Input of the technical parameters for de UWWTP's (purification efficiency, measurement of the inlet load)
- Mass balance computing in each node of the scheme
- Gross and net emission maps in each node of the scheme

7. Data collection

Geographical distribution of plant protection products: relation between the use in agriculture and the emissions in surface water - VITO 2012

kick off meeting on 12/12/2011.

Drugs monitoring programme on the outlet of the UWWTP's

- Investigation of the market : analysis of drugs (December)

8. Prototype application, calibration and validation

Not started

9. Dissemination and training

Not started

10. Communication to the general public

Not started

11. Project management

Meeting of the project team

- 7 October 2011 (Presentation prototype 0; Preparation advisory board)
- 24 November 2011 (Agreement about the test program for implementation prototype 1).

Advisory board

- 21 October 2011

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M6. The release of prototype iteration 1 –(action 6) : available December 2011

Quarterly monitoring report

Report 9 – 31 March 2012

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

Realized.

4. Determination of the WEISS tool specifications

Realized.

5. Design and architecture

This document aims to describe the precise technical design and software architecture of the WEISS system. This is part of Action 5 and fundamental for the practical implementation in Action 6 - Prototype implementation.

The functionalities of WEISS are already discussed in the previous user requirement documents and the product specification document, but as prototypes are becoming more and more complex, functionalities are now more elaborated and technically detailed.

This document describes the system architecture, together with the individual components such as algorithms, models and associated analytical tools for data management, visualization, reporting and assessment.
Structure:

- Conceptual framework
- General set-up
- Technical details
- Non-functional specifications

6. Prototype implementation

The Prototypes will grow in complexity from the first till the third version. The developments on short and mean time are listed and prioritized. The steps in the iterative process of development define the prototypes 1, 2 and 3.

Prototype 2 : realized March 2012

- Computing of mass balance in an arbitrary chosen region
- Import facility for point sources (E-PRTR and other big facilities)
- Define the relation between the point source and the sewer or surface water
- Algorithm for computing the EEV map for point sources.

7. Data collection

Drugs : relation between the human use of drugs and the emission in surface water.

The aim of the study is to quantify the use of drugs by individuals, health care institutions and hospitals. This inventory is the basis for the determination of the emissions of 20 important components to water due to the use, for each municipality of Flanders.

The work is granted to Grontmij and will start is September 2012.

Geographical distribution of plant protection products: relation between the use in agriculture and the emissions in surface water - VITO 2012

Meeting of the steering group (15/02/2012)

8. Prototype application, calibration and validation

The WEISS prototype resulting from Sub-action 6.1 is the first workable version of the WEISS tool. The tool is applied to the two cases: (1) Industrial estimated emission of small enterprises, and (2) Corrosion of building materials. Besides the analysis of the purely numerical output of the system, the operational characteristics of the system (such as: its user-friendliness, its transparency, the ease with which it can represent the sector and/or source, the way that it adapts to the available data, the speed with which it generates results, …) is critically evaluated. Based on this assessment, adaptations were made to the functional specifications and technical design to serve as an input to the second iterative loop to be implemented in Sub-action 6.2.

The validation report, with bug control and control of the numerical output of the system (mass balance control; comparison between the numerical output of WEISS and the former EIW-model) is available in annex D 16.

9. Dissemination and training

Not started

10. Communication to the general public

Presentation for the International Scheldt Commission, Antwerp, Belgium (17/01/2012)

Presentation for the Emission Symposium the Netherlands, Utrecht, the Netherlands (15/03/2012)

11. Project management

Meeting of the project team on 2 March 2012 (First Results of the testing program).

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M5. The availability WEISS Architecture and Design document –(action 5) available March 2012

M7. The release of prototype iteration 2 –(action 6) : available March 2012

M 11. The finalized application, calibration and validation of the WEISS level 1 (action 8) – available March 2012.

Quarterly monitoring report

Report 10– 30 June 2012

Progress per action

1. Realization of the project website
The website is up to date with the project information.

2. Local Stakeholder consultation
Realized.

3. EU-wide Stakeholder consultation
Realized.

4. Determination of the WEISS tool specifications
Realized.

5. Design and architecture
Realized.

6. Prototype implementation
Development of prototype 3 in progress.

7. Data collection

Geographical distribution of plant protection products: relation between the use in agriculture and the emissions in surface water - VITO 2012

VMM funded on own budget an extra and more detailed study on geographical distribution of plant protection products. By order of VMM, the use in agriculture and the emissions of 22 plant protection products (PPP) were determined. The innovative aspect of research work is the geographical detailed estimation of the use - for each parcel of farm land and 12 crop types - and there emission to surface water. The intended result is improving the emission inventory WEISS for the theme of pesticides, as an instrument for supporting and evaluation of policy on priority substances.

Meeting of the steering group (18/04/2012)

Drugs monitoring program on the outlet of the UWWTP's
Preparation of the public tender (June 2012)

Drugs : relation between the human use of drugs and the emission in surface water – Grontmij

The aim of the study is to quantify the use of drugs by individuals, health care institutions and hospitals. This inventory is the basis for the determination of the emissions of 20 important components to water due to the use, for each municipality of Flanders.

Opening and evaluation of the tender(s). (29/5/2012)

8. Prototype application, calibration and validation

In the prototype 2 , new functionalities were added. During the validation, the focus lies on the upload of point-source files, bug control and masse balance control. The validation report is available in annex D 17.

9. Dissemination and training

Not started

10. Communication to the general public

Presentation for the International Meuse Commission, Liège, Belgium (25/05/2012)

Life+ M3 workshop, Cologne, Germany(14/06/2012)

11. Project management

No meeting of the project team.
Advisory board : 3th May 2012

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M 12. The finalized application, calibration and validation of the WEISS level 2 (action 8) – available June 2012.

Quarterly monitoring report

Report 11– 30 September 2012

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

Realized.

4. Determination of the WEISS tool specifications

Not started

5. Design and architecture

Not started

6. Prototype implementation

7. Data collection

Geographical distribution of plant protection products: relation between the use in agriculture and the emissions in surface water - VITO 2012

The report of the study “Geographical distribution of plant protection products: relation between the use in agriculture and the emissions in surface water - VITO 2012” is available on the public website "Milieurapport Vlaanderen" .

Pharmaceuticals : relation between the human use of drugs and the emission in surface water.

The aim of the study is to quantify the use of drugs by individuals, health care institutions and hospitals. This inventory is the basis for the determination of the emissions of 20 important components to water due to the use, for each municipality of Flanders.

The work is granted to Grontmij and will started in September 2012.

Drugs monitoring program on the outlet of the UWWTP’s

Sampling activities by the VMM team and analyzing activities by Eurofins Pharmaceutical testing.

8. Prototype application, calibration and validation

The validation of prototype 3 will go on in the period July – November 2012.

9. Dissemination and training

Not started

10. Communication to the general public

In July 2012, VMM closed a contract with Flexmail to send out newsletters with a mailing program. Flexmail provides the possibility to report in an objective way about the reach of the mailing. The external communication department of VMM will pay all the invoices, so this will bring no additional costs for the WEISS project.

In the future, VMM will use this Flexmail account for mailings of the newsletter and the invitations for the final event.

iEMSs 2012 conference in Leipzig, Germany (1-5/07/2012)

11. Project management

Meeting of the project team on 28 September 2012 (Determination of the priority of functionalities)

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Quarterly monitoring report

Report 12– 31 December 2012

Progress per action

1. Realization of the project website

The website is up to date with the project information.

2. Local Stakeholder consultation

Realized.

3. EU-wide Stakeholder consultation

Realized.

4. Determination of the WEISS tool specifications

Realized.

5. Design and architecture

Realized.

6. Prototype implementation

Realized.

7. Data collection

Drugs monitoring program on the outlet of the UWWTP's
Kick off (2th December 2012)

Pharmaceuticals : relation between the human use of drugs and the emission in surface water.
Meeting of the steering group (4th October 2012).

8. Prototype application, calibration and validation

The validation of prototype 3 started in the period July – November 2012.

The elaboration and validation of the extra functionalities as part of prototype 3 (D18) did not influence the timely completing of the project according the new schedule.

In the period July – November 2012 the following features are tested and validated:

- Production of a drain hole map to calculate the run-of via paved surface via the

sewer system

- Production of the sewer mask based on the AWIS database
- Import facility for sewer data and drain hole map
- Computing the not explained load (UWWTP inlet)
- Management of the list of pollutants, add substances.
- Implementation of load units for pollutants and calculated results
- Definition of totalized pollutants (ex. PAH16)
- More algorithms EEV (area weighted distribution etc.)
- Import facility for estimated loads from small facilities

In October 2012 the mass balance validation was executed on the prototype with the features as described above. Two test cases where elaborated.

In the first case, the pathway and the BOD load of one facility discharging on a WWTP was compared with the results of the AWIS- tool.

In a second case, the pathway and BOD load for all the point sources in the Flanders region were calculated and compared with existing reports. This test led to an improvement of the pathway definitions of point sources and a correction of the comma separator.

In 2012 December the fourth an evaluation meeting took place to decide on the priority of the functionalities to be completed to ensure the applicability of the prototype in other European countries. The implementation and validation of these functionalities were completed at the end of December 2012.

9. Dissemination and training

Not started

10. Communication to the general public

Not started

11. Project management

Meeting of the project team on 8 November 2012 (implementation of the functionalities).

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M8. The release of the final prototype–(action 6) - available December 2012

M 13. The finalized application, calibration and validation of the WEISS level 3 (action 8) – available December 2012.

Quarterly monitoring report

Report 13– 31 March 2013

Progress per action

1. Realization of the project website
The website is up to date with the project information.

2. Local Stakeholder consultation
Realized.

3. EU-wide Stakeholder consultation
Realized.

4. Determination of the WEISS tool specifications
Not started

5. Design and architecture
Not started

6. Prototype implementation

7. Data collection
Pharmaceuticals : relation between the human use of drugs and the emission in surface water.
Meeting of the steering group (19 March 2013)

Drugs monitoring program on the outlet of the UWWTP's

Sampling activities by the VMM team and analyzing activities by Eurofins Pharmaceutical testing.

8. Prototype application, calibration and validation

During the period December 2012 till end of February 2013 the WEISS-model was filled with point sources 2010, estimations of the non-measured industry 2010 and diffuse sources. For most of the diffuse sources the data were copied from the former EIW-model, except for the sources atmospheric deposition (updated values), road traffic (EEV: values 2008) and corrosion of water mains (region specific EF in WEISS). For each source the gross and the net emissions of at least one

substance were compared to those of the former EIW-model, and input values or pathways were adapted were necessary. Afterwards a comparison was done between the WEISS-model and the former EIW-model for each substance on a sector level, validating the gross and net emissions.

9. Dissemination and training

Not started

10. Communication to the general public

Not started

11. Project management

Meeting of the project partners : organization of the final seminar (20th February 2013)

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Quarterly monitoring report

Report 14– 30 June 2013

Progress per action

1. Realization of the project website
The website is up to date with the project information.

2. Local Stakeholder consultation
Realized.

3. EU-wide Stakeholder consultation
Realized.

4. Determination of the WEISS tool specifications
Not started

5. Design and architecture
Not started

6. Prototype implementation

7. Data collection

Drugs monitoring program on the outlet of the UWWTP's

Sampling activities by the VMM team and analyzing activities by Eurofins Pharmaceutical testing.

8. Prototype application, calibration and validation
Not started

9. Dissemination and training

On the 14th of May 2013 a training session was given at VITO (Boeretang 200, 2400 Mol) for technical experts, possible end-users and stakeholders. The training session was mainly given by Leen Van Esch (VITO), supported by Inge Uljee (VITO).

Technical documentation and training material :

In order to increase the usability and application of the system, a complete technical documentation is published on the website and distributed by post (USB).

A final seminar was organized in May 2013 in Leuven. The presentations of final seminar are available on the project website. The transferability of the project was made clear by the fact that it is a generic software tool, applicable on different regions and different environmental problems. This was clearly shown in the last presentation "Future developments and potentials" where already existing applications of the WEISS-concept were shown by a project partner. The seminar was well attended (almost 50 participants, list of participants available in annex).

10. Communication to the general public

All documents and media produced for the dissemination of the project are in progress.

11. Project management

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M14. The organization of the Final seminar–(action 9) - May 2013

Quarterly monitoring report

Report 15– 31 September 2013

Progress per action

1. Realization of the project website
The website is up to date with the project information.

2. Local Stakeholder consultation
Realized.

3. EU-wide Stakeholder consultation
Realized.

4. Determination of the WEISS tool specifications
Realized.

5. Design and architecture
Realized.

6. Prototype implementation
Realized.

7. Data collection
Drugs monitoring program on the outlet of the UWWTP's
Final report (19th July 2013)

8. Prototype application, calibration and validation
Realized.

9. Dissemination and training
Realized.

10. Communication to the general public
Presentation for the International Meuse commission, Liège, Belgium (09/07/2013)

11. Project management

Meeting of the project partners : Finalization of the project deliverables (3th July 2013)

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones:

M9. The availability of the validated and approved samples–(action 7) - available July 2013

M 10. The release of the reports describing the quantification of the emissions (action 7) - available July 2013

Quarterly monitoring report

Report 16 – 31 December 2013

Progress per action

1. **Realization of the project website**
   The website is up to date with the project information.

2. **Local Stakeholder consultation**
   Realized.

3. **EU-wide Stakeholder consultation**
   Realized.

4. **Determination of the WEISS tool specifications**
   Realized.

5. **Design and architecture**
   Realized.

6. **Prototype implementation**
   Realized.

7. **Data collection**

   Drugs monitoring program on the outlet of the UWWTP's
   Presentation of the results to the stakeholders (25/11/ 2013)

8. **Prototype application, calibration and validation**
   Realized.

9. **Dissemination and training**
   Realized.

10. Communication to the general public

Creation of a WEISS CD-ROM:

Instead of producing a WEISS CD-ROM, a WEISS USB-stick was produced. This stick contains the Dutch and English version of the manual, the training material and the demonstration software together with a product leaflet and the Layman's report.

11. Project management

12. Project monitoring

Follow up of the Gantt Chart by the project monitor.

Milestones

M 15. The availability of all documents and media produced for the dissemination of the project (action 10) – available December 2013