

# **FLOOD & DROUGHT MANAGEMENT TOOLS**

Technical Training: Volta Basin Report (Burkina Faso)

> 11-13 April 2018 Bravia Hotel Ouagadougou, Burkina Faso







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### 1. Executive summary

There is a growing sense of urgency around the need to improve resilience within river basins, and for this to become a critical part of water management plans. The increased frequency and unpredictability of floods and droughts is a priority concern across scales from transboundary to local, along with the other multiple drivers that cause depletion and degradation of shared water resources.

The Flood and Drought Management Tools (FDMT) project (<a href="http://fdmt.iwlearn.org/">http://fdmt.iwlearn.org/</a>) is funded by the Global Environment Facility (GEF) International Waters (IW) and implemented by UNEP, with the International Water Association (IWA) and DHI as the executing agencies. The project is developing online technical applications which can be applied individually or together at the basin or local level to facilitate the inclusion of information about floods, droughts and future scenarios into Integrated Water Resources Management (IWRM) planning, Transboundary Diagnostic Analyses (TDA) and Strategic Action Plans (SAP), and Water Safety Planning (WSP). The project is being implemented from 2014 - 2018, and 3 pilot basins (Volta, Lake Victoria and Chao Phraya) are participating in development and testing.

The Flood and Drought (FD) Portal (<a href="www.flooddroughtmonitor.com">www.flooddroughtmonitor.com</a>) is the main output of the project and has a series of technical applications supporting stakeholders to carry out baseline assessments using readily available satellite data, impact assessments through the analysis of the data, planning options and a means for disseminating information to relevant groups or individuals. Understanding how to use these tools is an important aspect of the future operational use and sustainability of the FDMT project, therefore, capacity on the use and application of the flood and drought portal, as well as giving stakeholders an opportunity to provide feedback on the functionality of the portal will go a long way to achieving this.

The project therefore held a technical training targeted at technical staff and junior to senior level water resource professionals of Ghana Water Company Limited as they are one of the key stakeholders identified in the Volta Basin for testing the tools and methodology developed.

The purpose of the training was to provide a basis for bringing water utilities together around a common planning tool with a special focus on Water Safety Planning, while being able to test and validate the technical applications (tools) available on the FD portal. Feedback from the workshop is being gathered and will be included in the final development and refinement of the tools in the FD portal.

The objectives of the technical trainings are to:

- Enhance stakeholders understanding of the tools on the FD portal
- Provide the stakeholders with an opportunity to give feedback on the functionality of the tools on the FD portal
- Refine the development of the FD portal and the associated tools based on stakeholder feedback

The training in the Volta Basin held in Burkina Faso was a 3 day training from 11-13 April 2018 with representatives from different departments in ONEA such as Plant Manager, Lab Manager, Chemist, WSP focal representatives, Water Resource Manager, Environmental Manager, Production and Distribution Manager and Water Plant Lab Technician.

. . .

Il y a un sentiment croissant d'urgence quant à la nécessité d'améliorer la résilience dans les bassins fluviaux, et pour que cela devienne un élément essentiel des plans de gestion de l'eau. L'augmentation de la fréquence et de l'imprévisibilité des inondations et des sécheresses est une préoccupation prioritaire à travers les échelles, du niveau transfrontalier au niveau local, ainsi que les autres facteurs multiples qui provoquent l'épuisement et la dégradation des ressources en eau partagées.

Le projet Outils de gestion des inondations et de la sécheresse (FDMT) (<a href="http://fdmt.iwlearn.org/">http://fdmt.iwlearn.org/</a>) est financé par le Fonds pour l'environnement mondial (GEF) International Waters (IW) et mis en œuvre par le PNUE avec l'International Water Association (IWA) et DHI en tant qu'organismes d'exécution. Le projet développe des applications techniques en ligne qui peuvent être utilisées individuellement ou ensemble au niveau du bassin ou local pour faciliter l'inclusion d'informations sur les inondations, les sécheresses et les scénarios futurs dans la planification de la Gestion Intégrée des Ressources en Eau (GIRE), les Analyses Diagnostiques Transfrontalières (ADT) et Plans d'action stratégiques (PAS) et le Plans de Gestion de la Sécurité Sanitaire de l'Eau (PGSSE). Le projet est mis en œuvre de 2014 à 2018, et trois bassins pilotes (Volta, Lake Victoria et Chao Phraya) participent au développement et aux essais.

Le portail sur les inondations et la sécheresse (FD) (<a href="www.flooddroughtmonitor.com">www.flooddroughtmonitor.com</a>) est le résultat principal du projet et dispose d'une série d'applications techniques permettant aux parties prenantes d'effectuer des évaluations de base en utilisant des données satellitaires facilement disponibles, des évaluations d'impact par l'analyse des données. , des options de planification et un moyen de diffuser des informations aux groupes ou individus concernés. La compréhension de l'utilisation de ces outils est un aspect important de l'utilisation opérationnelle future et de la durabilité du projet FDMT, donc de l'utilisation et de l'application du portail sur les inondations et la sécheresse, de même que pour donner aux parties prenantes une possibilité de faire des retours sur la fonctionnalité du portail, ce qui prendra du temps.

Le projet a donc organisé une formation technique à l'intention du personnel technique et des cadres supérieurs de l'ONEA, car ils sont l'un des principaux acteurs identifiés dans le Bassin de la Volta pour tester les outils et la méthodologie développés.

Le but de la formation était de fournir une base pour rassembler les services d'eau autour d'un outil de planification commun avec un accent particulier sur la planification de la sécurité de l'eau, tout en testant et validant les applications techniques disponibles sur le portail FD. Les réactions de l'atelier sont en train d'être recueillies et seront incluses dans le développement final et l'affinement des outils du portail FD.

Les objectifs des formations techniques sont les suivants :

- Améliorer la compréhension des parties prenantes des outils sur le portail FD
- Fournir aux parties prenantes l'opportunité de donner leur avis sur la fonctionnalité des outils sur le portail FD
- Affiner le développement du portail FD et des outils associés en fonction des retours des parties prenantes

La formation dans le bassin de la Volta au Burkina Faso a été une formation de 3 jours du 11 au 13 avril 2018 avec des représentants de différents départements de l'ONEA tels que responsables d'usines, responsables de laboratoire, chimiste, WSP, responsable des ressources d'eau, responsable environnemental, responsables de la production et de la distribution, technicien de laboratoire des usines d'eau.

### 2. Project background

There is a growing sense of urgency around the need to improve resilience within river basins, and for this to become a critical part of water management plans. The increased frequency and unpredictability of floods and droughts is a priority concern across scales from transboundary to local, along with the other multiple drivers that cause depletion and degradation of shared water resources.

The Flood and Drought Management Tools (FDMT) project (<a href="http://fdmt.iwlearn.org/">http://fdmt.iwlearn.org/</a>) is funded by the Global Environment Facility (GEF) International Waters (IW) and implemented by UNEP, with the International Water Association (IWA) and DHI as the executing agencies. The project is developing online technical applications which can be applied individually or together at the basin or local level to facilitate the inclusion of information about floods, droughts and future scenarios into Integrated Water Resources Management (IWRM) planning, Transboundary Diagnostic Analyses (TDA) and Strategic Action Plans (SAP), and Water Safety Planning (WSP). The project is being implemented from 2014 - 2018, and 3 pilot basins (Volta, Lake Victoria and Chao Phraya) are participating in development and testing.

Understanding how to use the technical applications is an important aspect of the future operational use and sustainability of the FDMT project, therefore, capacity on the use and interpretation of the tool and their outputs, as well as giving stakeholders an opportunity to provide feedback on the functionality of the tools will go a long way to achieving this.

The project has been holding a series of technical trainings targeting technical staff and junior to senior level water resource professionals from key project stakeholder. Trainings intend to provide a basis for bringing the basin organisations and relevant basin level authorities, and water utilities together around a planning tool, while being able to test and validate the technical content of tools. Feedbacks from the trainings are integrated into the development and refinement of the tools.

The objectives of the technical trainings are to:

- Enhance stakeholders understanding of the methodology and tools developed under the FDMT project
- Provide stakeholders with an opportunity to give feedback on the technical content of the tools
- · Refine the development of the methodology and tools based on stakeholder feedback

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<sup>&</sup>lt;sup>1</sup> The term tools and technical applications are used interchangeably. Tools in this context are defined as the technical applications being developed by the project and are available at <a href="http://www.flooddroughtmonitor.com/home">http://www.flooddroughtmonitor.com/home</a>

### 3. Technical training

### 3.1 Overview of training

Technical trainings on the use of the tools are scheduled on a yearly basis throughout the project phase within each of the pilot basins. The technical training provides capacity building as well as an opportunity for different stakeholder groups (e.g. water utilities and basin organisations/water agencies) to give feedback on the functionality and use of the developed tools to date. The feedback is included in the further development and refinement of technical content of the tools.

The technical training provides a basis for bringing water utilities around a common tool which can assist in planning considering information on floods, droughts and future scenarios. The training in Burkina Faso was a 3 day training from 11-13 April 2018 with representatives from ONEA.

See Annex 1 for the agenda.

The training sessions reflected the developed functionality to date, using real data from the Volta Basin. Later trainings will include the functionality of additional tools available in the Flood and Drought portal (http://www.flooddroughtmonitor.com).

#### Objective

The objective of the technical training was to:

- Enhance stakeholders understanding of the methodology and tools developed under the FDMT project
- Provide stakeholders with an opportunity to give feedback on the technical content of the tools
- Refine the development of the methodology and tools based on stakeholder feedback

#### **Expected outcome of the workshop**

The expected outcome of the technical training is for key stakeholders to understand the functionality, how to use the tools, and how the output from the tools could be used in decision making around flood and drought management and planning.

For the project, it was also an opportunity to gather valuable feedback on the functionality and how the developed tools could be used in decision-making.

#### **Target group**

The target group of the technical training is the technical staff within ONEA, junior to senior level professionals as recommended by key stakeholders. The 3 day trainings focused on staff with the following designation, Plant Manager, Lab Manager, Chemist, WSP focal representatives, Water Resource Manager, Environmental Manager, Production and Distribution Manager and Water Plant Lab Technician. (See Annex 2 for full participant list).

### 3.2 Technical training

From 11-13 April, 2018, the FDMT project held a 3 day technical training at the Bravia Hotel with technical staff of ONEA. The training gave participants an overview of the latest developments of the methodology and associated technical applications, and the opportunity to try out the applications and provide feedback to be used in finalising the applications.

The following section will provide a brief overview of each day.

#### 3.2.1 Training Materials

All presentations, step-by step guides and additional material were made available for the training. The material was used to assist participants on the use of the portal and relevant technical applications.

\*all material (presentations, step-by step guides, etc.) can be accessed here

# Day 1. Overview of workshop, FDMT project, issues and indicators *Wednesday*, 11 April, 2018

The first day started with a welcome address and an overview of the workshop and FDMT project. A brief presentation on the status of <u>WSP implementation considering climate change scenarios</u> was presented by ONEA. This was followed by a presentation on the general functionality of the Flood and Drought Portal with an exercise on registering to the portal and setting up working groups. The working groups concept seeks to ensure that information is kept confidential or only shared with a specific group of users.

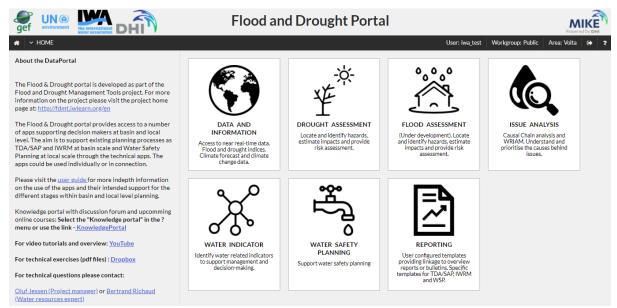


Figure 1. Flood and Drought Portal

The issue analysis application was presented in the morning session. The application aims at analysing environmental issues and the causes behind the impacts from the environmental issues. The application is based on the Causal Chain Analysis (CCA) method to identify the immediate, underlying and root causes behind the impact and the Water Resource Issues Assessment Method (WRIAM) is used to evaluate the key issues and prioritise the environmental impacts based on the a rapid assessment. Participants explored the application by identifying common environmental issues faced in their utility and assessed their impacts using the CCA and WRIAM methods. Some common issues identified by participants were water shortage and water quality degradation at the banks.

Towards the end of the day, the water indicator application was demonstrated to participants. The water indicator application is a library of indicators providing information about the indicators, the relevance of the indicator and how it can be used for planning and decision making. Default frameworks have been developed which users can use as a starting point when developing their own framework for their respective organisations, users are also able to start from scratch. Also the issue analysis has been linked to the water indicator application to allow users select appropriate indicators to measure the environmental issues identified. An opportunity was given to participants to test and explore the link between the two applications as well as provide an impression of how to add and remove indicators.

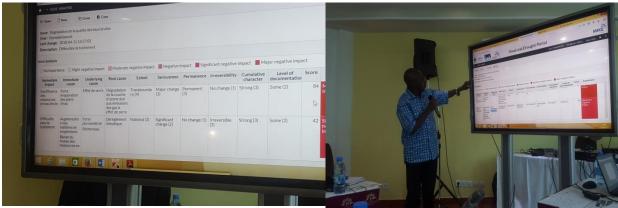


Figure 2. Display of assignment on assessing environmental impacts with the issue analysis application

Figure 3. Participant presenting during an assignment with the indicator application.

# Day 2. Data and Information application and WSP *Thursday, 16 April, 2018*

Day 2 focused on the Data and Information application which provides users with access to near real-time satellite data (freely available). The application provides climate information such as rainfall, temperature, information about flood and drought indices, climate hazard, climate forecast and climate change. With the onset of climate change, historical weather patterns which most utilities largely depend on to gauge future water supplies is expected to be disrupted bringing about uncertainty. For this reason, utilities need to understand how climate change affects water supply whiles ensuring continues supply to consumers. The information from this application can be used to inform long-term planning in which climate change impacts can be considered. There were demonstrations on the Flood and drought Portal to display some of these climate information and discussions on how to interpret such data together with how it can be applied by the utility.

Towards the end of the day the Water Safety Planning (WSP) application was introduced to participants to explain how the project is supporting utilities with their development and implementation of water safety plans (WSP). As part of the Flood and Drought Portal, a WSP supporting application has been included for development and documentation of the WSP process. The application is the main entry point for water utilities. Through the application, water utilities are prompted to think about climate change impacts on their supply system and for hazard identification in order to ensure their WSP are climate resilient.

The application supports the 11 modules (steps) identified in the WSP manual (<a href="http://www.wsportal.org/what-are-water-safety-plans/">http://www.wsportal.org/what-are-water-safety-plans/</a>), each representing a key step in the WSP development and implementation process. Each module contains a brief overview and provides assistant for each key step on the development of the WSP.

Module 1 of the WSP application was presented and participants assembled the WSP Teams according to the working groups that was created in Day 1.



Figure 4. Water Safety Planning supporting application



Figure 5. Participants explore the use of the Water Safety Planning supporting application

# Day 3. Water Safety Planning and Reporting Friday, 17 April, 2018

Day 3 was mostly spent on exploring modules 2-11 of the WSP application and group assignments on feeding the application with information from the different working groups created by the participants.

The reporting application concluded the training and this application provides configured templates that provide linkage to overview reports or bulletins. Reports are critical for easily disseminating technical information in a more accessible way. The applications allow users to generate automated reports (defined by the user) addressing key issues such as drought status, flood status, WSP status, etc.



Figure 6. Closing remarks from GWCL



Figure 7. Participants in a group photo at the end of the training

### 3.3 Next steps

The project is in its final stages and all the applications are being worked to completion based on feedback from participants. Learning materials and guidance documents will be provided to users. Tutorials, videos and a user guide will provide the required information on the tools to enable users to build their capacity around the use of the technical applications.

The knowledge portal (<a href="http://www.flooddroughtmonitor.com/knowledgeportal/">http://www.flooddroughtmonitor.com/knowledgeportal/</a>) is expected to serve as a platform for users to interact with other users through the online discussion boards and also provide relevant material and information about all the available application through the online courses.

Once all the applications are completed, the focus of the remaining time will be on consultation to ensure better uptake of the methodology and technical applications.

## Annex 1 – Agenda

## Volta Basin: Technical Training (Burkina Faso) 11-13 April 2018

| 11 April 2018 | 3 – Day 1: Full day  |
|---------------|--|
| Time          | Item   |
| 09:00-09:10   | Welcome and introduction   |
| 09:10-09:30   | Overview of workshop and FDMT project  |
| 09:30-10:00   | Presentation – ONEA (15 mins)  |
|               | WSP implementation in a context of climate change and future changes   |
|               | Q&A – 15 mins  |
| 10:00-11:00   | General functionality of the Flood and drought Portal  |
|               | Exercise1: Setting up a workgroup  |
| 11:00-11:30   | Break  |
| 11:30-13:00   | Flood and Drought – Causes and impact Presentation: Issue analysis application                                     |
|               | Exercise 2: Identify and prioritize the key environmental impacts from flood and drought events within the utility |
| 13:00-14:00   | Lunch  |
| 14:00-16:00   | Assessing the state with indicators Presentation: Water indicator application                                      |
|               | Exercise 3: Identify relevant indicators for the underlying causes if flood and drought in Burkina Faso            |
| 16:00-16:30   | Break  |
| 16:30-17:00   | Exercise 3 (continued)   |
| 17:00         | Wrap up and expectations for Day 2   |

| 12 April 2018 | 3 – Day 2: Full day  |
|---------------|--|
| Time          | Item   |
| TITLE         | ICIII  |
| 09:00-09:10   | Recap of Day 1 and reminder of expectation for Day 2               |
| 09:10-10:45   | Data and Information   |
|               | Presentation: Climate overview                                     |
|               | Exercise 4: View and evaluate climate data                         |
| 10:45-11:15   | Break  |
| 11:15-12:15   | Presentation: Climate hazard (temperature and rainfall)            |
|               | Exercise 5: Identify historic and current climate hazards          |
| 12:15-13:15   | Lunch  |
| 13:15-14:15   | Presentation: Rainfall forecast                                    |
|               | Exercise 6: Forecasting climatic conditions                        |
| 14:15-15:15   | Presentation: Climate change                                       |
|               | Exercise 7: Projecting climate change for long term planning       |
| 15:15-15:45   | Break  |
| 15:45-16:15   | Water Safety Planning and supporting application                   |
|               | Presentation: Climate resilient WSP and WSP supporting application |
| 16:15-16:45   | Exercise 8: Module 1 (assembling the team)                         |
| 16:45         | Wrap up and expectation for Day 3                                  |

| 13 April 2018 | 3 – Day 3: Full day  |
|---------------|--|
| Time          | Item   |
| 09:00-09:10   | Recap of Day 2 and reminder of expectation for Day 3                           |
| 09:10-10:10   | WSP supporting application  Exercise 9: Module 2 (design the supply system)    |
| 10:10-10:30   | Exercise 10: Module 3, 4, 5 (Hazards, control measures and improvement plans)  |
| 10:30-11:00   | Break  |
| 11:00-12:30   | Exercise 10 (continued)  |
| 12:30-13:30   | Lunch  |
| 13:30-14:00   | Exercise 10 (continued)  |
| 14:00-14:30   | Exercise 11: Module 6,7,8 (Monitoring, verification and management procedures) |
| 14:30-15:00   | Exercise 12: Module 9,10,11 (Supporting programmes and reviews)                |
| 15:00-15:30   | Break  |
| 15:30-16:00   | Reports and bulletins Presentation: Reporting application  Link with WSP       |
| 16:00         | Wrap up (next steps)   |

## Annex 2 – Participants

| First Name             | Organisation | Email                       |
|------------------------|--------------|-----------------------------|
| Staff                  |              |                             |
| Brenda Ampomah         | IWA          | Brenda.Ampomah@iwahq.org    |
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## **Annex 3 – Evaluation form**

## **Evaluation of Flood and Drought Management Tools Technical training**

| Name:   | Orga  | anisation:      |             |       |           |       |              |
|---|---|-----------------|-------------|-------|-----------|-------|--------------|
| What was your overall i                         | mpression of the training                                 | ?               |             |       |           |       |              |
| Excellent                                       | Good 🗌  | Acceptable [    |             |       | Below     | expe  | ctations 🗌   |
| Comments:                                       |   |                 |             |       |           |       |              |
| General   |   |                 | Too         |       | Accepta   | ahla  | Too          |
| General   |   |                 | high        |       | Ассери    | abie  | low          |
| How did you find the tech                       | nical content of the course?                              | )               | 1           | 2     | 3         | 4     | 5            |
|   |   |                 | Agree       | )     |           |       | Disagree     |
| There was sufficient hand                       | ls-on support during the trai                             | ning            | 1           | 2     | 3         | 4     | 5            |
| Comments (specifically                          | on the technical level of t                               | me training).   |             |       |           |       |              |
|   |   |                 | Too<br>long |       |           |       | Too<br>Short |
| The duration of the trainir                     | ng was  |                 | 1           | 2     | 3         | 4     | 5            |
| The time for discussions                        | and group work was  |                 | 1           | 2     | 3         | 4     | 5            |
| The time for hands-on us                        | e of the tools was  |                 | 1           | 2     | 3         | 4     | 5            |
| Comments (specifically o                        | n length of the training and                              | time provided t | o do ea     | ach ( | exercise) | ):    |              |
|   | monstration of Flood a                                    | and drought     | Agree       | )     |           |       | Disagree     |
|   | nderstanding of the Flood ct and what it is trying to acl |                 | 1           | 2     | 3         | 4     | 5            |
| The presentations of th                         | ne Flood and Drought Pore clear and understandable        | rtal and the    | 1           | 2     | 3         | 4     | 5            |
|   | ne Flood and Drought Po                                   |                 | 1           | 2     | 3         | 4     | 5            |
|   | d exercises for the Flood pplications were clear unde     | •               | 1           | 2     | 3         | 4     | 5            |
| What could be improved Which tool are you likel | d and made clearer when                                   | presenting an   | d dem       | ons   | trating t | he to | ols?         |

Would you use the climate data presented in the data and information tool? How would you use this data?

| Exercises and group work  | Agre | е |   | С | Disagree |
|---|------|---|---|---|----------|
| The exercises for each of the tools were easy to follow                         | 1    | 2 | 3 | 4 | 5        |
| The exercises helped increased my understanding of the technical applications   | 1    | 2 | 3 | 4 | 5        |
| I feel that I will be able to use the technical applications after the training | 1    | 2 | 3 | 4 | 5        |

What did you like or not like about the exercises for the tools?

What could be improved and made clearer?

| Course practicalities                            | Agree |   |   | Disagree |   |
|--|-------|---|---|----------|---|
| The venue was satisfactory                       | 1     | 2 | 3 | 4        | 5 |
| Lunch and refreshments were satisfactory         | 1     | 2 | 3 | 4        | 5 |
| The training was well organised                  | 1     | 2 | 3 | 4        | 5 |
| I received practical information well in advance | 1     | 2 | 3 | 4        | 5 |

### Comments:

## Annex 4 – Feedback

### Utility training

| General   |  |   |   |                       |           | n |
|---|--|---|---|-----------------------|-----------|---|
| 0   | Response   |   |   |                       |           |   |
| Questions   | Excellent  | Good  | Acceptable                                | Bellow<br>Expectation |           |   |
| What was your overall impression of the training  | 9  | 2   |   | ,                     |           |   |
| Comment   | . Bon outils d<br>. Après chaq<br>. Le problème<br>.Le niveau  | ant pour la pris<br>e planification<br>ue module, les<br>e de connexion<br>technique de<br>active de partic | exercices ont internet a per la formation | turbé le bon dé       |           |   |
|   | Too high   |   | Acceptable                                |                       | Too low   | n |
|   | 1  | 2   | 3   | 4                     | 5         |   |
| How did you find the technical content of the course?                                   | 8  | 2   |   |                       |           |   |
|   | Agree  |   |   |                       | Disagree  | n |
|   | 1  | 2   | 3   | 4                     | 5         |   |
| There was sufficient hands on support during the training                               | 10   | 1   |   |                       |           |   |
| Comment   | '. Very good<br>. Parfoit mat<br>. Un e grande   |   |   |                       |           |   |
|   | Too long   |   |   |                       | Too short |   |
|   | 1  | 2   | 3   | 4                     | 5         |   |
| The duration of the training was  |  | 1   | 5   | 3                     | 2         |   |
| The time for discussion and group work was  |  | 2   | 6   | 2                     |           |   |
| The time for individual hands-on exercises was  |  | 2   | 3   | 6                     |           |   |
| Comments (specifically on length of the training and time provided to do each exercise) | '. La qualite de laconnecxion internet a fait que les groupes sont devenous très grands et alor le temps n'a pas vraiment suffi . Le temps est acceptable pour chaque exercice, et c'est la connexion internet qui a affecte le temps . Le temps de formation en general etait court; un theme du genre en trois est souffisant . Le temp alloué pour chaque excercise était bien . Le temps pratique de formation et court et perturbé par l'instabilité de la connexion internet . Les appréciations auraient être autres si on avait une bonne fluidité de la connexion internet . Tous les supports et les exercise etant en anglais, il fallait plus de temps pour comprendre les excercise. Aussi la complexite des outils et leur richesse en donné necessitant plus de temps pour un meilleure appropriation |   |   |                       |           |   |

| Presentations and demonstrations  | of flood         | l and droug | ıht managen | nent tools |   |
|---|------------------|-------------|-------------|------------|---|
| Questions   | Respons<br>Agree | Disagree    |             |            |   |
|   | 1                | 2           | 3           | 4          | 5 |
| I have a good overall understanding of<br>the Flood and Drought Management<br>Tools project and what it is trying to<br>achieve |                  | 4           | 3           |            |   |

| The presentations of the Flood and Drought Portal and the technical applications were clear and understandable                        | 6  | 5   |   |  |                             |  |
|---|--|---|---|--|-----------------------------|--|
| The demonstration of the Flood and Drought Portal and the technical applications were clear understandable                            | 8  | 3   |   |  |                             |  |
| The written guidance and exercises for<br>the Flood and Drought Portal and the<br>technical applications were clear<br>understandable | 7  | 4   |   |  |                             |  |
| What could be improved and made clearer when presenting and demonstrating tools?  | <ul> <li>Traduction compréhension</li> <li>Acces interr</li> </ul>                       | net   | entation en   | français pour  | un meilleur                 |  |
|   | . Auvrez a as<br>un outil peda   | connexion inter<br>ssurer une bon<br>gogique pratiqu<br>la durée de la<br>oncrets                                   | ne disponibilit<br>ıe hors ligne                                |  |                             |  |
| Which tool are you likely to use and how?   |  |   |   |  |                             |  |
| Would you use the climate data presented in the data and information tool? How would you use this data?                               | Les donnee     elles seroni     peutetre des     Oui, les pre     retenue d'eau          | planification du<br>s de pluis et de<br>t utilises pour p<br>decisions si ne<br>écipitations pou<br>ser le donnée d | e temperature<br>planifier la se<br>cessaire<br>ur le dimension | et evaporation<br>ction de l'eau<br>onnement des             | du barage et ouvrages de    |  |
|   | et d'informait<br>mon lieu de c<br>. Oui. Portails<br>connaissance<br>eau<br>. Oui. Dans | on en le rappo<br>aptage<br>s d'information des donnes pour<br>s ce but de  | ortant sure le et d'echange pri la previsoin planifier les      | ficher climatique pour l'approfon de gestion de consommation | dissement de csp et qualite |  |
|   | chimiques de<br>demandd en   | ziga et eventu<br>eau   | ellement la pr  | oduction en pe   | riode de forte              |  |

| Exercises and group work  |  |  |   |   |   |
|---|--|--|---|---|---|
| Questions   |  |  |   |   |   |
|   | Response   |  |   |   |   |
|   | Agree  |  |   |   | Disagree  |
|   | 1  | 2  | 3   | 4   | 5   |
| The exercises for each of the tools were easy to follow                         | 4  | 6  | 1   |   |   |
| The exercises helped increased my understanding of the technical applications   |  | 6  |   |   |   |
| I feel that I will be able to use the technical applications after the training | 4  | 6  | 1   |   |   |
| What did you like or not like about the exercises for the tools?                | . J' ai plus changements . La connexic . Les exercica . La convi comprehensi francais pur u . Les temps eteiant practi | stion de la sécuapprecie plus siclimatique on a été un défaes m'ont permivialité d'utilis on cependent une meilleure ureserve pour que et contexts apprecie l'as | le niveau de aut s de bien com ation des c il serait dou utilisation les exerciceuels | prendre l'utilité<br>butils et leu<br>baritable del<br>etait court. I | e des outils<br>r facilite de<br>e traduire en<br>Les exercices |

|                     |       |         |     |      | phase avec nos realites. Neammoins, la langue reste une barrier   |
|---------------------|-------|---------|-----|------|---|
| What could clearer? | be in | nproved | and | made | '. Revoir la connexion pour les prochaines seances . Il faudrait necessairement traduire les outils en francais si non qulque temp apres, il sont difficile de les appliquer . La formation devrait être en francais pour une meilleure comprehension - la duree de la formation devrait être plus longe, au moins 5 jours . Les sources de données . Prévoir un mécanisme d'évaluation de mesures de contrôle envisagés . Traduire la plateforme en français si possible, et pour nous même, ameliore notre connaisance de l'anglais |

| Course practicalities                    |   |   |   |   |   |  |  |
|--|---|---|---|---|---|--|--|
| Questions                                | Response  |   |   |   |   |  |  |
|  | Agree   |   |   |   |   |  |  |
|  | 1   | 2 | 3 | 4 | 5 |  |  |
| The venue was satisfactory               | 9   | 2 |   |   |   |  |  |
| Lunch and refreshments were satisfactory | 5   | 4 | 1 | 1 |   |  |  |
| The training was well organised          |   |   |   |   |   |  |  |
|  | 8   | 1 | 2 |   |   |  |  |
| I received practical information well in |   |   |   |   |   |  |  |
| advance                                  | 3   | 6 | 2 | 1 |   |  |  |
| Comment                                  | '. Connexion internet tres faible et instable  Nous avons souhaite que cette formation puisse etre disponible pendant un longue periode, au moins 21 jours  En dehors de la connexion internet tout était bien  Merci de bien vouloir etaler le temps de formation sur cinq (5) jours. Et revoir l'acces intenret  Il est important qu'une approche intégrée de la formation soit envisagee. Prise au compte de autre acteurs: la DGRE et les autorite de bassins et l'environnement  La connexion a ete un facteur limitant pour la pratique des exercises |   |   |   |   |  |  |