



Minutes

Minutes date November 20, 2018 **Our reference** 11202147-004-ZWS-0010 **Project** 11202147-004 **Made by** Marcel Ververs

Meeting date November 6, 2018 **Number of pages** 5 **Classification** (n.v.t.) until

Meeting
Delft-FEWS CSB #12 (2018-4)

Present

Amy Tavendale, Marc Philippart, Martin Ebel, Trey Flowers, Roger de Crook, Chris Leahy, Stefan Laeger, Edwin Welles, Jan Verkade, Gerben Boot, Nadine Slootjes, Marcel Ververs,

Absent

Jeff Perkins, Bruce Quig

Introduction and attendance

On November 6th 2018 the 12th Delft-FEWS Community Strategy Board (CSB) meeting was held.

At the time of the meeting the CSB consists of the following members:

Organisation	Represented by	Present/Joining via?
Bureau of Meteorology in Australia (BoM)	Jeff Perkins	No, apology (filled in by Chris Leahy)
Bureau of Meteorology in Australia (BoM)	Bruce Quig	No, apology (filled in by Chris Leahy)
Dutch Waterboards (DWB)	Roger de Crook	Yes
Federal Office for the ENvironment in Switzerland (FOEN)	Martin Ebel	Yes
Rijkswaterstaat in the Netherlands (RWS)	Marc Philippart	Yes
Scottish Environment Protection Agency (SEPA)	Amy Tavendale	Yes
Deltares-USA	Edwin Welles	Yes
Deltares NL	Nadine Slootjes Marcel Ververs Gerben Boot	Yes
National Weather Service (USA)	Trey Flowers	Yes / via GoTo Live Meeting
Environment Agency	Stefan Laeger	Yes

Agenda

The agenda is as follows:

15:00 (CET)	Opening	
15:05	Introduction Stefan Laeger (Environment Agency)	
15:15	Minutes & Actions previous meeting	Minutes CSB #11
15:20	Feedback from the community	Input from all CSB members
15:25	Status update of the Delft-FEWS 2020 roadmaps	Presentation by Gerben
15:35	Preview new Delft-FEWS portal	Deltares
15:45	Ensemble forecasts	Dr Jan Verkade
16:55	Any other business	



Minutes

Date
November 20, 2018

Our reference
11202147-004-ZWS-0010

Page
2 of 5

	Summary, actions and closure	
--	------------------------------	--

Opening

Nadine Sloodtjes opens the 12th CSB meeting by welcoming everyone and especially Stefan Laeger from the Environment Agency and Jan Verkade from Deltares (as invited guests) and appreciates everyone's face-to-face presence or remote presence at an early hour of the day.

Nadine asks Stefan Laeger to introduce himself and the Environment Agency. He briefly explains the current status of Flood Forecasting in England, the services they are providing to the public and their current and future plans for their forecasting system (FFFS project based on Delft-FEWS) and their organisation. Stefan Laeger asked for feedback on his presentation and what he should bring back to and use in their FFFS project.

Marc P. made the following remarks: Rijkswaterstaat is also thinking about forecasting of impacts, at the same time a discussion is ongoing about using own hardware vs running in the cloud, interconnection between systems, and about introducing new models. They are trying to make the forecasting system simpler, not only for the water level managers. The application should become cleaner, more layered if possible.

Minutes & Actions previous meeting

Nadine Sloodtjes takes all participants through the agenda, action items and minutes. It was agreed to remove the completed actions. Below we will only highlight the actions that were discussed in more detail.

Remark: The names (Mr / Mrs) of participants in the minutes should be corrected as they are wrong or in Dutch.

Action 10.2: This action on Edwin Welles from Deltares-USA will be kept open for the next meeting.

Action 11.1: The topics gathered for this meeting will be used for the CSB meetings in 2019.

Action 11.2: Share information about what is being tested in December.

Feedback from the community

Dutch Waterboards (Roger):

Roger explains that in the coming months a new group of Delft-FEWS users is added their waterboard user group; the users of the decision support systems based on Delft-FEWS and Rijkswaterstaat are incorporated. The main ambition is to get to know each other far better than they do at this moment in order to be able to help each other better. The way forward is not just providing a technical solution, by obtaining data from the other side of the administrative boundaries and put that in your system, but by finding each other and working together on a problem. Otherwise the situation will be that one waterboard, which has a potential water problem, will start to pump water out of their system and the neighboring waterboard will receive that water and will potentially have an even bigger problem. The situation should be that by working together, one water board takes a little damage preventing bigger damages elsewhere. Other initiatives are organized like the development of a new API to exchange data with the Dutch national database for storage and dissemination of weather



Minutes

Date
November 20, 2018

Our reference
11202147-004-ZWS-0010

Page
3 of 5

related data. The National Rain Radar will potentially become the Dutch standard for the waterboards.

There will be a transition from each water board having their own system to a more national approach. What kind of information will be used? The focus will be more on centralised data sets. All waterboards are starting to use the exact same data sets as source for their operational systems. The shift is to operational decision support and a more close cooperation between waterboards and between systems. Performance indicators will be used for measuring how well the system performed and how well the waterboards did their jobs. Is the ambition to grow toward 1 central FEWS system for all the water boards? This will only happen when data, models etcetera are the same for all waterboards.

Australia (Chris):
No updates

UK (Amy):
No updates

Northern American Users (Edwin, Trey):
No updates

German Speaking countries (Martin)
No updates

Netherlands (Marc)
No updates

Status update of the Delft-FEWS 2020 roadmaps

A presentation was given by Gerben on the status of the development of the Delft-FEWS Roadmaps. He explained what has been delivered so far, what is planned and completed for 2018.01 and the plans for the 2018.02. Gerben mentioned that the 2018.01 will not be provided to clients. He also provided a status update of the finances.

Question: Is the targeted budget still required? Yes it is. So we still have to find some additional budget to be able to finance everything. We are trying to extend the TKI project and get some additional funding, but also still in contact with some clients.

Deltares will communicate to the community that we need some budget for the last part of the developments. Deltares will also communicate what will and will not be developed by the end of 2018. What are still interesting things to do? Deltares should make a round in the community to obtain feedback. Deltares should also provide info about what was spent on what and which features took more effort to implement than estimated. Amy asked if Deltares could also make an overview of what is coming after the roadmaps. How are we going to maintain [the back end] after this project has finished.

Presentation about use of ensembles in forecasting (by Jan Verkade)

Jan Verkade from Deltares gave a presentation as an introduction to a discussion about how to use ensembles and uncertainty in both forecasting as well as forecast informed decision making.

The following points were brought up during the discussion:

- Using the information about uncertainty in a forecast could help make users better decisions. This isn't trivial, however, and users may/will need guidance.



Minutes

Date
November 20, 2018

Our reference
11202147-004-ZWS-0010

Page
4 of 5

- A streamflow ensemble does not necessarily describe the ‘total uncertainty’ in a forecast. Rather, it is a single source of uncertainty only. It is only the sensitivity of the model in future weather after applying a weather model. Not the uncertainty in the models, the initial conditions, input.
- How could we make uncertainty estimation more robust to improve the decision making? Also important for the people in the field to be aware of this.
- When is the ensemble forecast “reliable” (in a statistical sense)? Would the ensemble forecast always be better than the deterministic forecast?
- Should we always include the probability in the decision making process?
- Do we verify the ensembles against observations to check how reliable the forecasts are?
- There could also be other observations than verifying with water level observations. You could also verify what the impact is e.g. the damage. However message verification isn't trivial: there are various aspects to verify on.
- Decision makers and hydrologists should work closely work together not to produce a lot of data.

Question to participants of CSB: Please take this with you and think about what it means for your organisation and how to take this further in the future. What kind of additional data sources are potentially interesting for decision makers besides the data already available in your forecasting system? How can we improve Delft-FEWS to support this process? Possibly, the “Decision making in Uncertainty lab”, a relatively new Deltares initiative, can be helpful in this respect also. Deltares would welcome contributions to this, through ‘problems’, in kind, or otherwise.

Any other business

There was nothing to report.

Summary, actions and closure

Nadine thanked everyone for their contributions. Next meeting will be in February 2019, potential dates will be announced in December.

Action list

Action			Due by	Completion Status	
			date		
10.2	Collate testing experiences into one document	Edwin Welles	September 2018		Open
11.1	Send around topics for the next meeting	Deltares	October 2018		Open
11.2	Share information about what is tested for each software release	Deltares	December 2018		Open
12.1	Communicate to the community that we need some budget for the last part of the developments. Deltares will also communicate what will and will not be developed by the end of 2018. What are still interesting things to do?	Deltares	January 2019		Open



Minutes

Date
November 20, 2018

Our reference
11202147-004-ZWS-0010

Page
5 of 5

Action		Due by	Completion	Status
		date		
12.2	Deltares should also provide info about what was spent on what and which roadmap features took more effort to implement than estimated	Deltares	January 2019	Open
12.3	Deltares should also make an overview of what is coming after the roadmaps. How are we going to maintain [the back end] after this project has finished.	Deltares	January 2019	Open
12.4	Think about what the use of uncertainty information in your forecasting process could mean for your organisation and how to take this further in the future.	All	February 2019	Open

Attachment(s)

1