Feedback Session

11:00 – 13:00

Session Agenda

1. Feedback from hands-on analysis

2. Agree configuration of EDERA products

3. Work during 15-month demonstration phase
   a) Setting up notification service
   b) Providing feedback

Feedback from Hands-on Session

- Which products did you find useful?

Whiteboard exercise…

Useful	Somewhat Useful
Product 1 Product 3	
Not useful	**Not used**
Product 4	Product 2

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EDERA Product Configuration

- What products are you most likely to use during the 15-month demonstration phase?

- How could these products be improved?

  - e.g. visualisation – spatial / temporal aggregation

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Guidance to Analysts - Checklist

What guidance can be given to analysts on how to analyse the products on the web viewer? – Checklist?

Steps		EDERA Forecast Product(s)	Actions
1.	Forecast overview	Flash flood summary • Flash flood impact over sub-catchment • Seamless precipitation accumulation	• Select latest forecast date • Are any sub-catchments showing risk of flash flooding over next 0-6 hours in your area of interest? • Is any heavy rainfall expected in your area of interest over the next 0-6 hours? • If no = **no further action** • If yes = **follow next steps**
2.	River flash flood risk	Animated flash flood nowcasting: • Flash flood impact over river network • Flash flood impact over sub-catchment	• Use the time slider to view each hourly timestep • Identify the catchment(s) and timestep(s) when river flash flooding is possible
3.	Urban flash flood risk	Storm Impact: • **Storm Impact EDERA** • **Hourly precipitation**	• Use time slider to view each hourly timestep

Stakeholder Participation during 15-month demonstration phase

Demonstration Phase

Duration: Now – Oct 2024

During this time, we would like EDERA stakeholders to:

- Routinely check the realtime EDERA forecasts

  - **Notification service** can help tell you when to look at the platform

  - Or look after an event to see what EDERA would have shown

- Provide feedback to FMI/ ECMWF/ UPC about the products:

  - Accuracy, usefulness, lead time

How can we encourage your analysts to routinely check the EDERA forecasts?

Viewing the Forecasts

How would your analysts prefer to view the EDERA forecasts?

1. **Using the EDERA web viewer**

2. **Using web services to visualise forecasts in their own platform**

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When to Check Forecasts - EDERA Notification Service

During 15-month demonstration we can send notifications based on the EDERA flash flood catchment summary forecast product

EFAS Flash Flood Notification*

NOTIFICATION DETAILS:
- Country(ies): **United Kingdom**
- Administration Region(s): **Bridgend and Neath Port Talbot, Derby**
- Likely start of event: **Friday, 13th of October 2023 - 06:00**
- Probability to exceed a 5-year flash flood return period threshold: **37 %**
- Probability to exceed a 20-year flash flood return period threshold: **17 %**
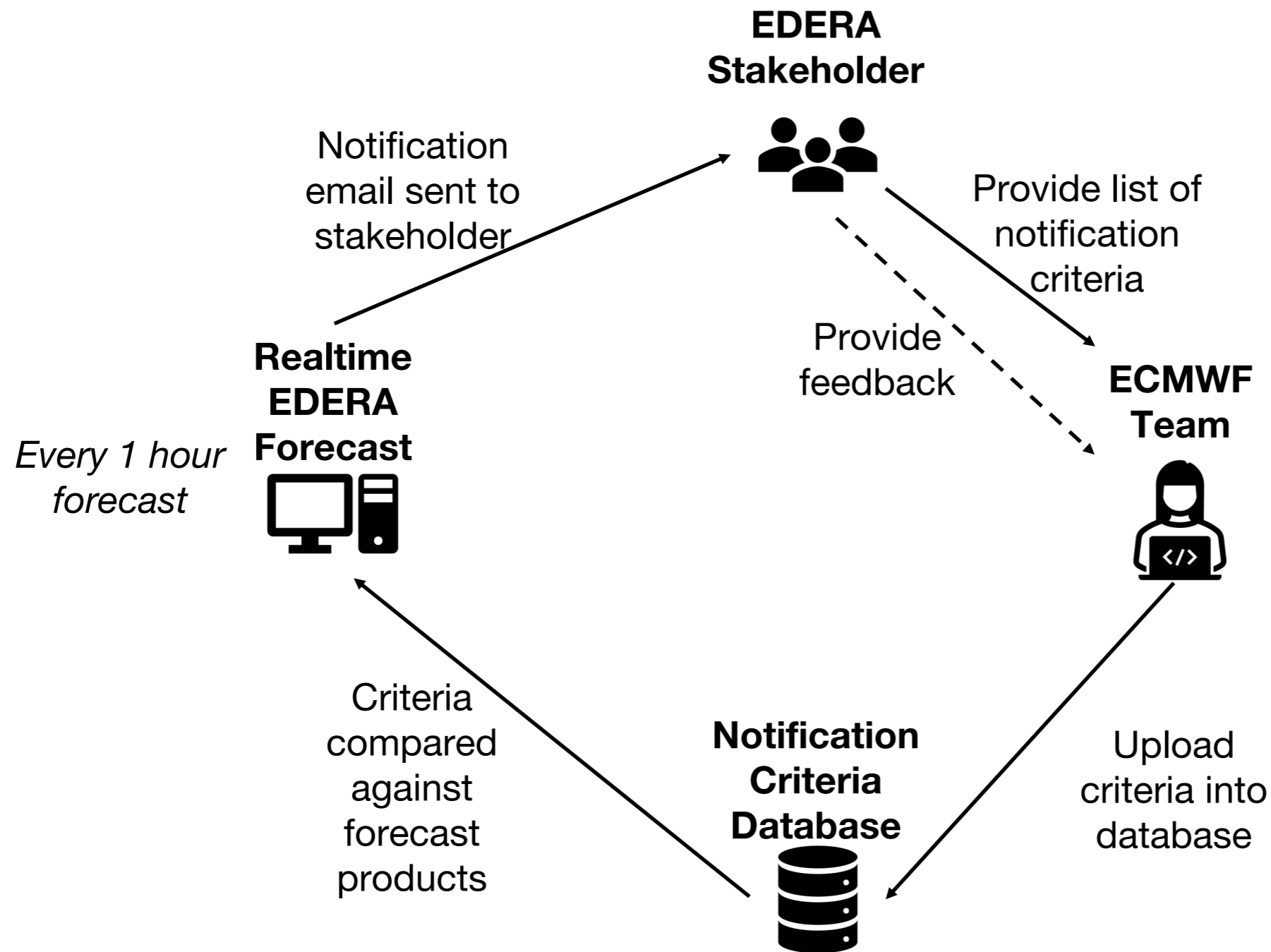
ADDITIONAL INFORMATION:
- Forecast date: 2023-10-12 00 UTC
- Affected area susceptible to landslides: Very High: 15 km², High: 15 km², Moderate: 60 km²
- Forecaster Comments: -

This is the only notification you will receive for this event! Please follow the evolution of the event on EFAS.

More information about the EFAS flash flood notifications is available on the EFAS wiki

These will be similar to EFAS Flash Flood Notifications

EDERA Notification Service

EDERA Stakeholder

Notification email sent to stakeholder

Provide list of notification criteria

Provide feedback

Realtime EDERA Forecast

Every 1 hour forecast

ECMWF Team

Criteria compared against forecast products

Notification Criteria Database

Upload criteria into database

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EDERA Notification Service - Criteria

You can provide us (by email) with criteria for sending notifications:

Mandatory criteria

- *Area of interest* – specific regions/rivers, or provide a shapefile
- *Lead time of interest*
    - e.g. 0-24 hours

Optional: Choose 1 or more of these

- *Exceedance probability*
    - *x%* probability of exceeding 2 year return period
- *Impact category*
    - Only send notifications for red/purple catchments
- *Population affected*
    - *y* number of people potentially affected in your area of interest

Send criteria to: *edera@lists.ecmwf.int*

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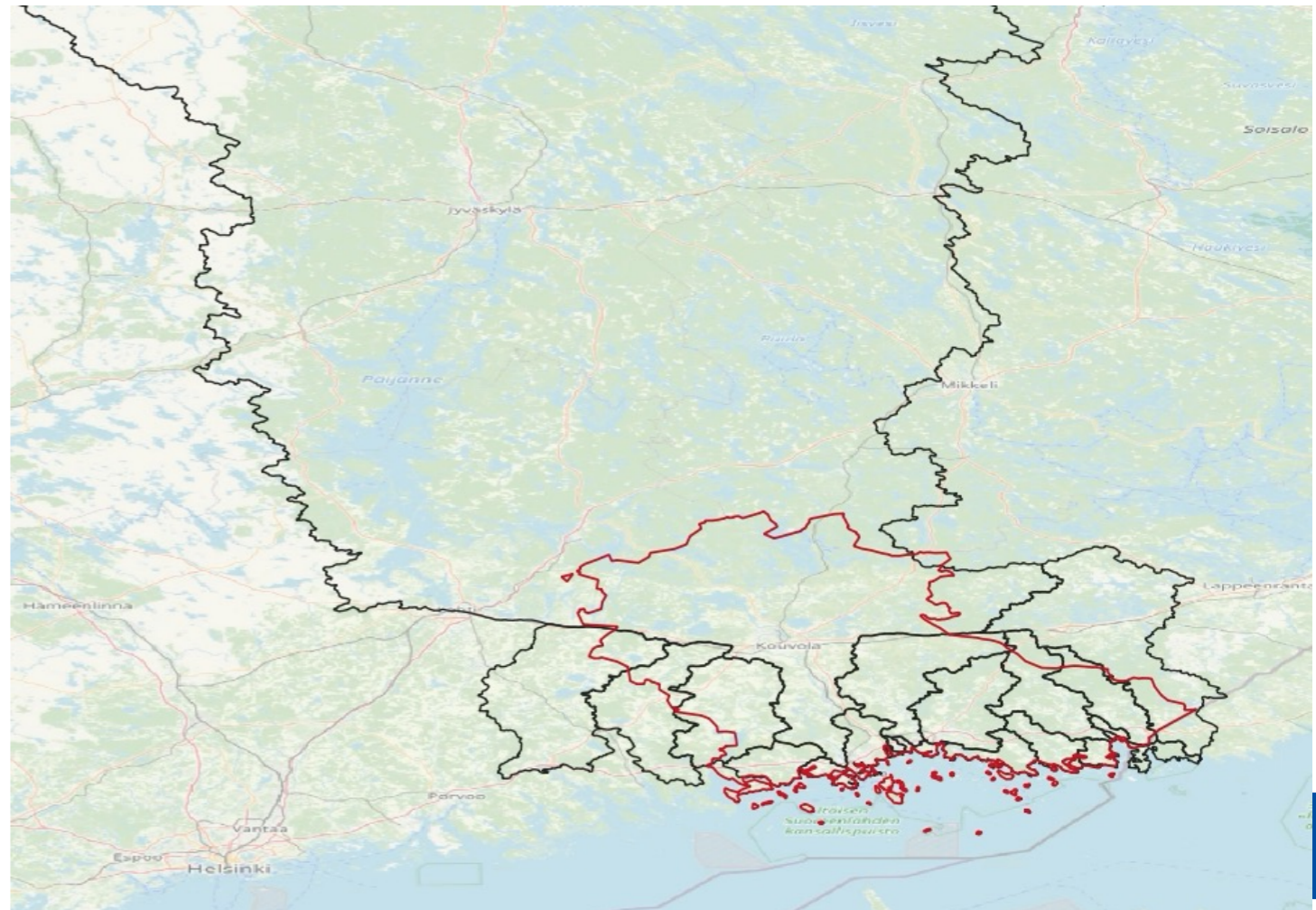# EDERA Notification Service - Criteria

Defining Area of Interest – example of Kymenlaakso

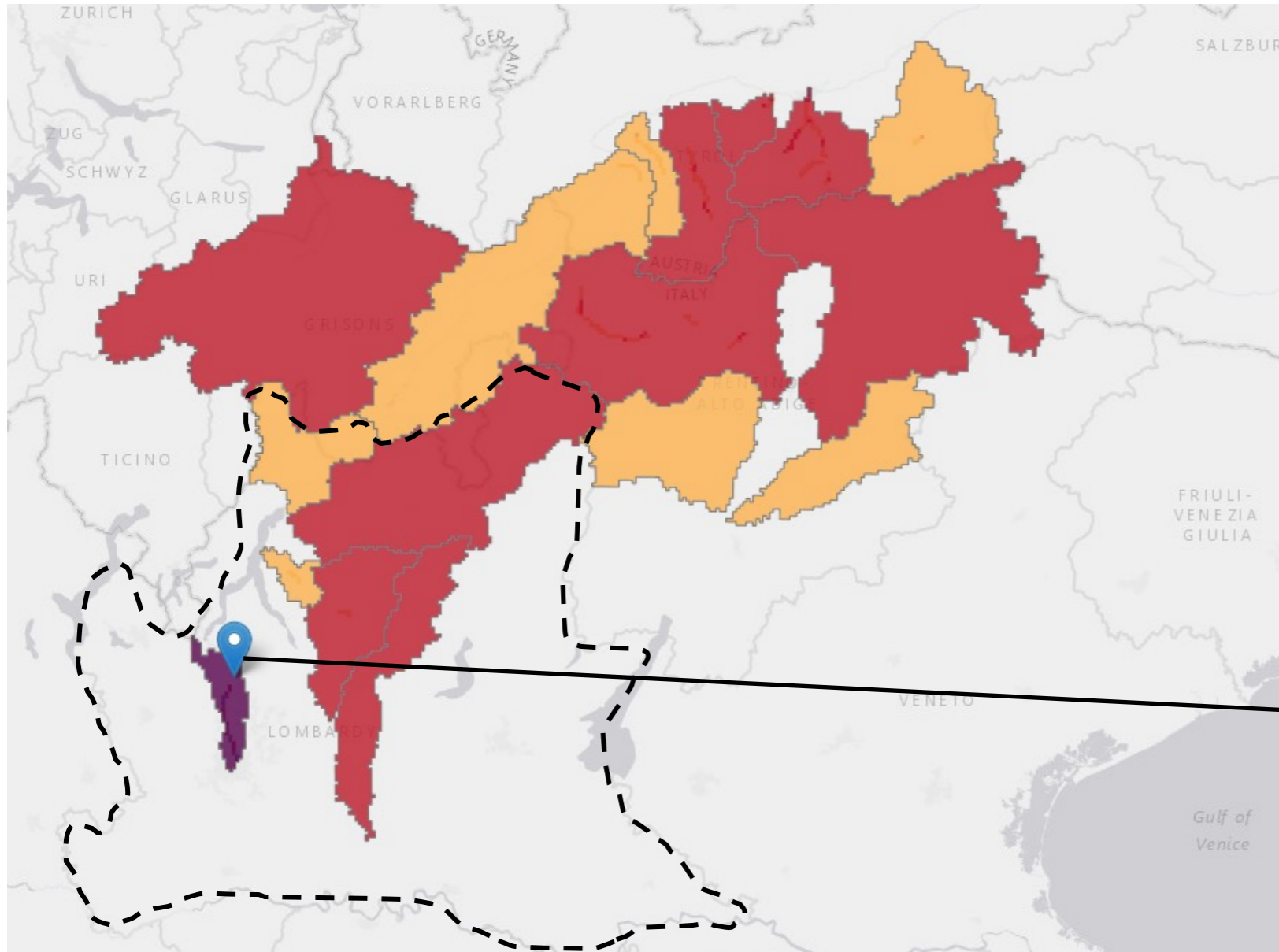Stakeholder provides their area of interest

Option 2: Receive notifications for flooding in any river catchment which intersects your region?

Option 1: Do you only want notifications within this area?

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EDERA Notification Service - Example

Notifications generated from Catchment Summary layers

Criteria:
- *Area of interest* – dashed line
- *Lead time* – 0-6 hours
- *2 year exceedance probability*: 60%

Catchment 1
Lead time = **2 hours**
Exceedance probability = **90%**

= send notification email

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EDERA Notification Service - Example

If one or more catchments within your area of interest meet your criteria, you will receive an email notification…

Notification Details
- Country(ies): **Finland**
- Administration Region(s): **Kymenlaakso**
- River(s): **Kymijoki**
- Likely peak of event: **Friday 13th October 2023 – 06:00 UTC**
- Probability to exceed a 2-year return period threshold: **90%**

Impact Information
- Total population potentially affected: **10000**
- Maximum impact category: **Severe**

Additional Information:
- Forecast date: **2023-10-13 00 UTC**

This is the only notification you will receive for this event! Please follow the event on the EDERA platform

What other information could be added to the notification email?

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EDERA Notification Service - Example

e.g. adding impact matrix?

Notification Details
- Country(ies): **Finland**
- Administration Region(s): **Kymenlaakso**
- River(s): **Kymijoki**
- Likely peak of event: **Friday 13th October 2023 – 06:00 UTC**
- Probability to exceed a 2-year return period threshold: **90%**

Impact Information
- Total population potentially affected: **10000**
- Maximum impact category: **Severe**

Additional Information:
- Forecast date: **2023-10-13 00 UTC**

	Low Exposure	Medium Exposure	High Exposure
High Likelihood			✔
Medium Likelihood			
Low Likelihood			

EDERA Notification Service - Example

e.g. adding map of affected area?

Notification Details
- Country(ies): **Finland**
- Administration Region(s): **Kymenlaakso**
- River(s): **Kymijoki**
- Likely peak of event: **Friday 13th October 2023 – 06:00 UTC**
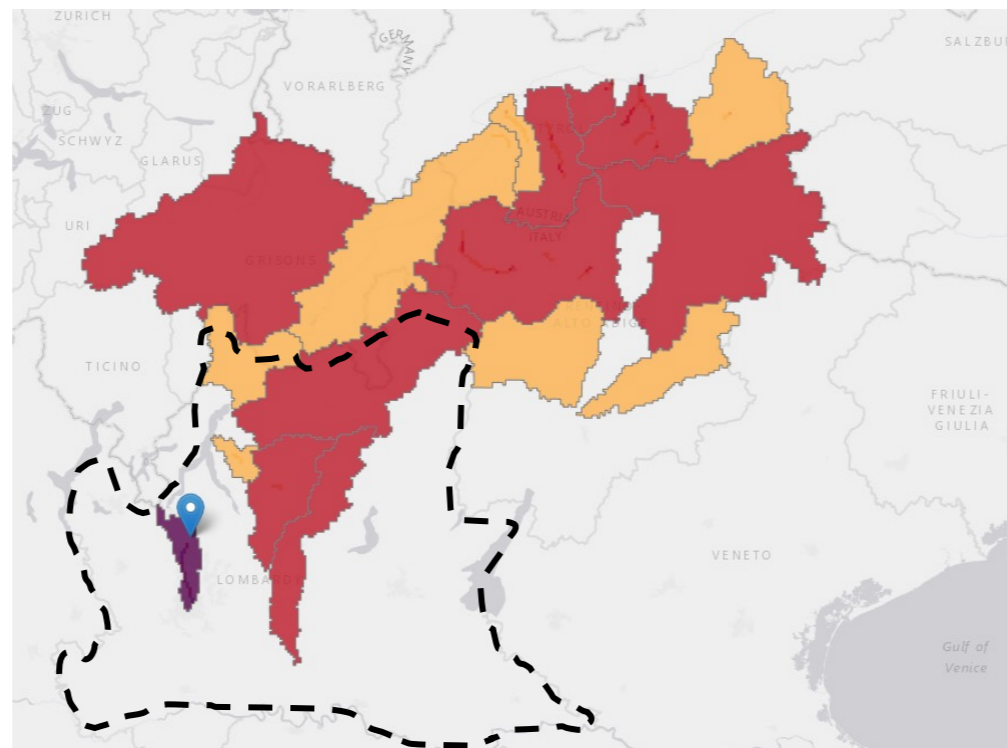- Probability to exceed a 2-year return period threshold: **90%**

Impact Information
- Total population potentially affected: **10000**
- Maximum impact category: **Severe**

Additional Information:
- Forecast date: **2023-10-13 00 UTC**

This is the only notification you will receive for this event! Please follow the event on the EDERA platform

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EDERA Notification Service – Other Aspects

- What if multiple catchments within your area of interest meet your notification criteria? – summarise into single email?

Notification Details
- Country(ies): **Finland**
- Administration Region(s): **Kymenlaakso** ← **List all regions / rivers – order by severity, colour code by severity?**
- River(s): **Kymijoki**
- Likely peak of event: **Friday 13th October 2023 – 06:00 UTC** ← **Earliest peak?**
- Probability to exceed a 2-year return period threshold: **90%** ← **Maximum exceedance probability?**

Impact Information
- Total population potentially affected: **10000** ← **Total population?**
- Maximum impact category: **Severe** ← **Maximum category?**

Additional Information:
- Forecast date: **2023-10-13 00 UTC**

This is the only notification you will receive for this event! Please follow the event on the EDERA platform

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EDERA Notification Service – Other Aspects

How often do you wish to receive notifications?

- New forecasts produced every hour
    - But this could result in sending loads of notifications

- Limit number sent per day
    - For example, 1 email per day?

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EDERA Notification Service – Next Steps

- Each stakeholder to decide on their criteria for receiving notifications

- Send these criteria to: **edera@lists.ecmwf.int**

  - Email address(es) of people to receive notifications
  - Area of interest
  - Lead time of interest
  - Optional: One or more of:
    - Exceedance probability of the 2-year return period threshold
    - Impact category
    - Total population affected

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Providing Feedback During Demonstration Phase

At the bottom of each notification email, will be a link to provide feedback via a form (based on EFAS feedback form)

Notification Details
- Country(ies): **Finland**
- Administration Region(s): **Kymenlaakso**
- River(s): **Kymijoki**
- Likely peak of event: **Friday 13th October 2023 – 06:00 UTC**
- Probability to exceed a 2-year return period threshold: **90%**

Impact Information
- Total population potentially affected: **10000**
- Maximum impact category: **Severe**

Additional Information:
- Forecast date: **2023-10-13 00 UTC**

This is the only notification you will receive for this event! Please follow the event on the EDERA platform

Please provide feedback about this notification using the link below:

Feedback Form

Notification Feedback Form

EDERA Notification Feedback Form - mockup

This form aims to collect feedback on the EDERA notification you received for an event.

calum.baugh55@gmail.com Switch accounts

* Indicates required question

Email *

test@test.com

What organisation are you from? *

Your answer

What was the date you received the notification? *

Date

02/11/2023

Are you providing feedback to an EDERA notification you received? (select No to report a missed event) *

◉ Yes

◯ No

Next — Page 1 of 4 — Clear form

EDERA Notification Feedback

This section aims to collect feedback on events identified by an EDERA Notification.

What was the location of the event? *

Your answer

Did the location of the event match the area identified in the EDERA Notification? *

◯ Yes - location of event was an exact match

◯ Yes - location of event was not an exact match but surrounding area(s) were affected

◯ No - location of event was incorrect

When was the observed peak of this event? (include Date, Time, and Timezone) *

Your answer

How accurate was the EDERA Notification in forecasting the event peak? *

Choose ▾

⊘ This is a required question

What was the observed flood impact severity for this event? *

Choose ▾

What were the reported impacts of this event? *

Your answer

Other comments? *

When to Provide Feedback

- As soon as possible after the event –
  - If you received a notification - complete the form (link at bottom of email)

- Missed events: If no notification received there is a separate form

How can we stay in regular contact with you to receive your feedback?

- What format?
  - Email reminder to provide feedback
  - Online catch up meetings

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What will Feedback be Used for?

- Revise notification criteria
  - e.g. if you receive too many notifications, we can increase the probability threshold
- Revise the product design
- Evaluate the accuracy of the forecast products
  - Hits, misses, false alarms

Conclusions

With your continued feedback throughout the demonstration phase, the products/notifications can be iterated to make them as useful as possible to your analysts

Any Questions?

edera@lists.ecmwf.int