Gobeyond

Empowering
communities' response

Flash floods hazard & impacts @Swiss pilot site

Centre de Recerca Aplicada
en Hidrometeorologia
UNIVERSITAT POLITÈCNICA DE CATALUNYA

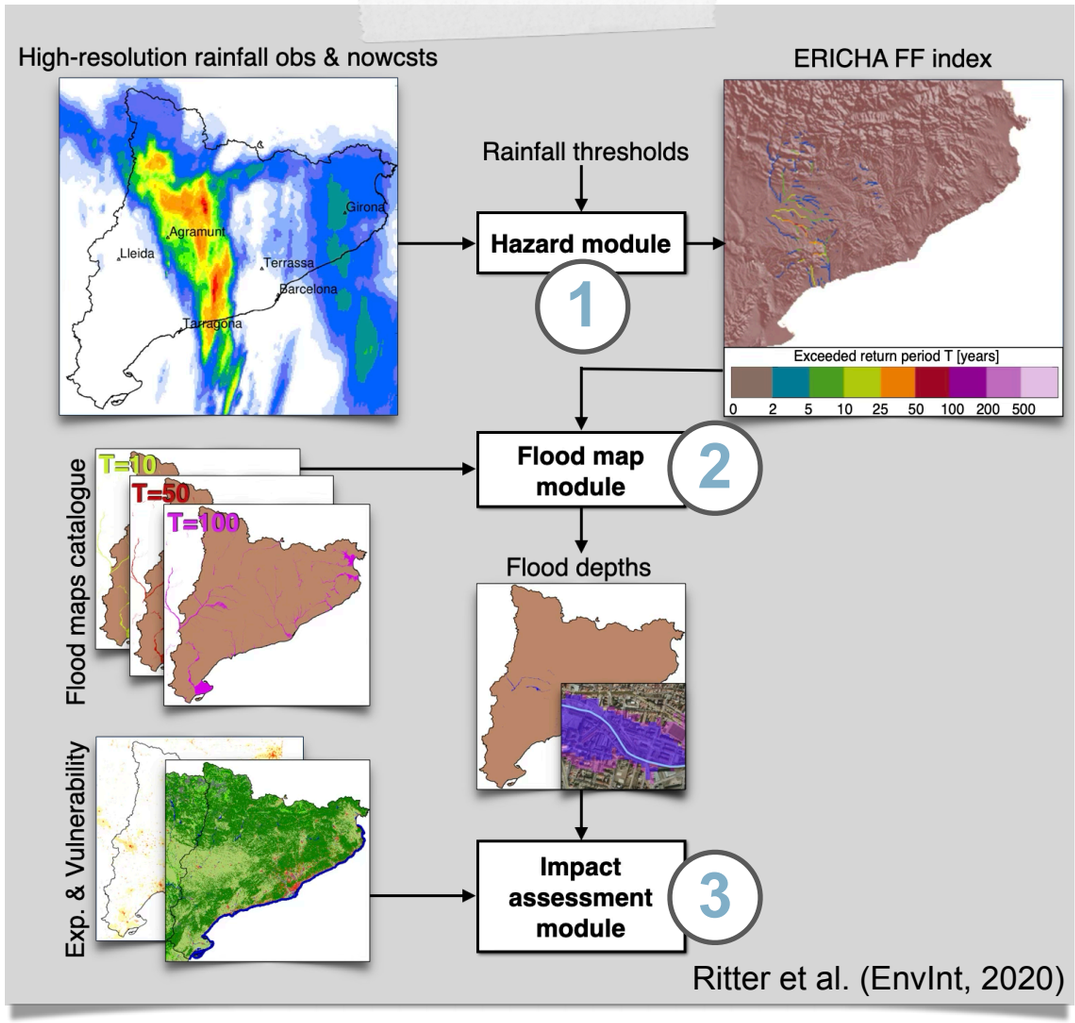
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Approach and datasets

Application of the ReAFFIRM method to Switzerland:

1) From QPE to flash flood hazard: comparing real-time basin-aggregated rainfall with climatology.

- QPE (1 km)
- Drainange network (200 m)



2) Transforming the flash flood hazard to the flooded area: connecting the estimated hazard with the pre-calculated flood hazard maps (20 m resolution).

3) Converting the flood extent into impacts: using vulnerability and exposure datasets.

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Approach and datasets

Static datasets:

- Flood hazard maps (AquaProtect - now available).
- Population density, depth-damage curves (economical losses), potentially affected infrastructures.

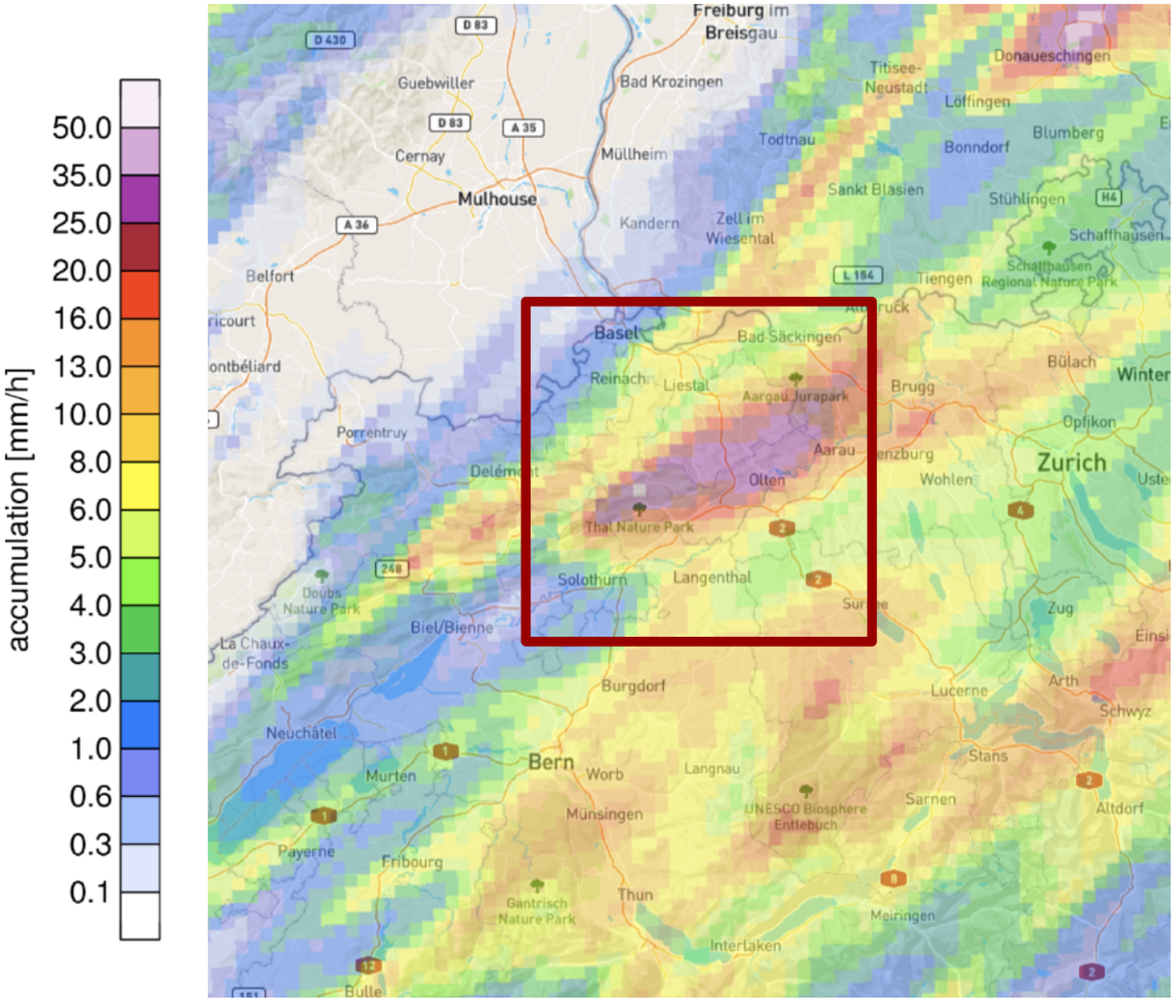
Precipitation inputs:

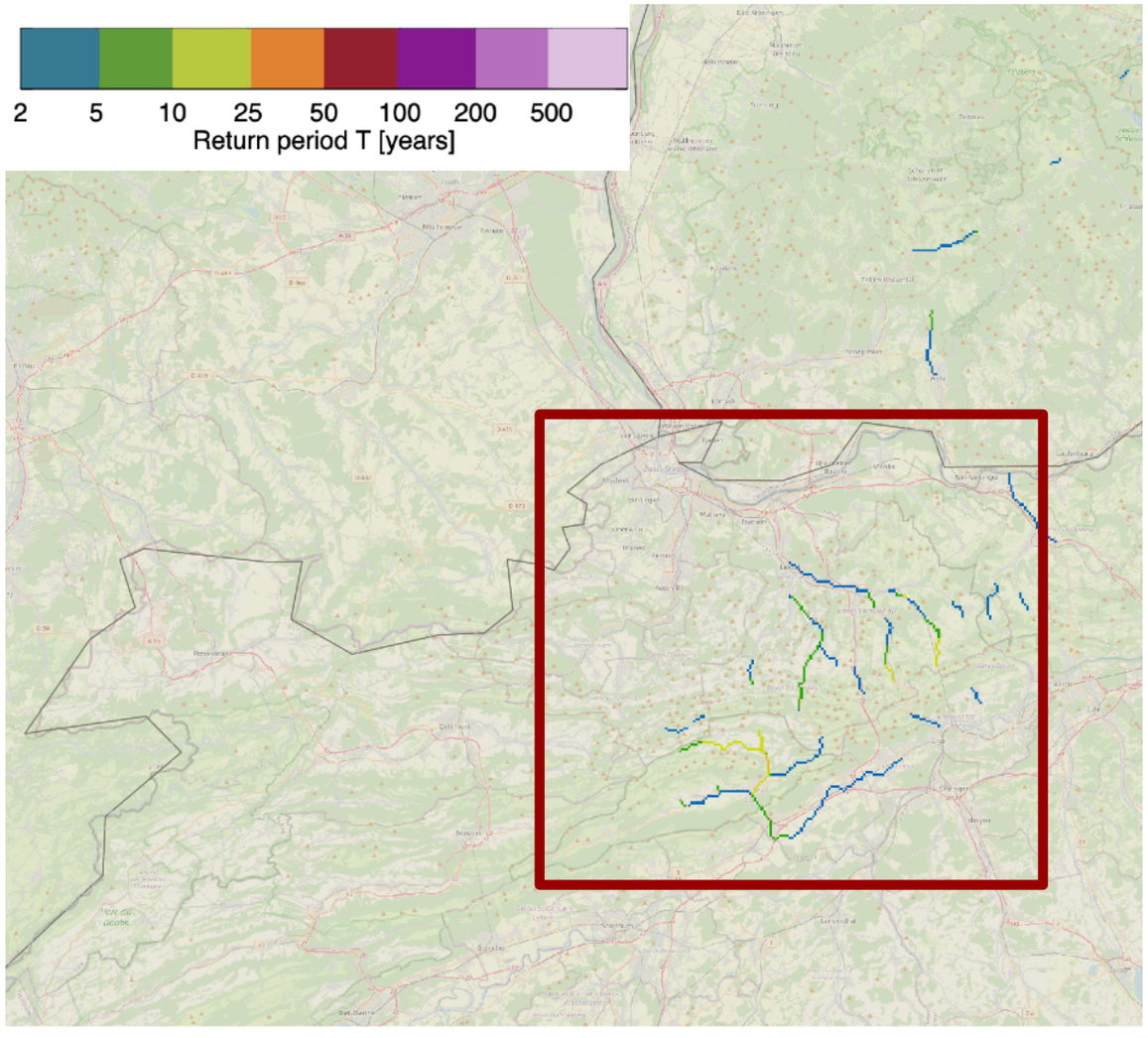
- Dynamic: to assess the flash flood hazard (simulating real-time conditions) → “Ensemble QPE”:
  - OPERA (for development purposes)
  - MS Precip
  - MS CombiPrecip
  - MS RainForest
- Reference (hazard assessment): processed fromlong-term datasets.
  - MS CombiPrecip

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27-28 July 2021

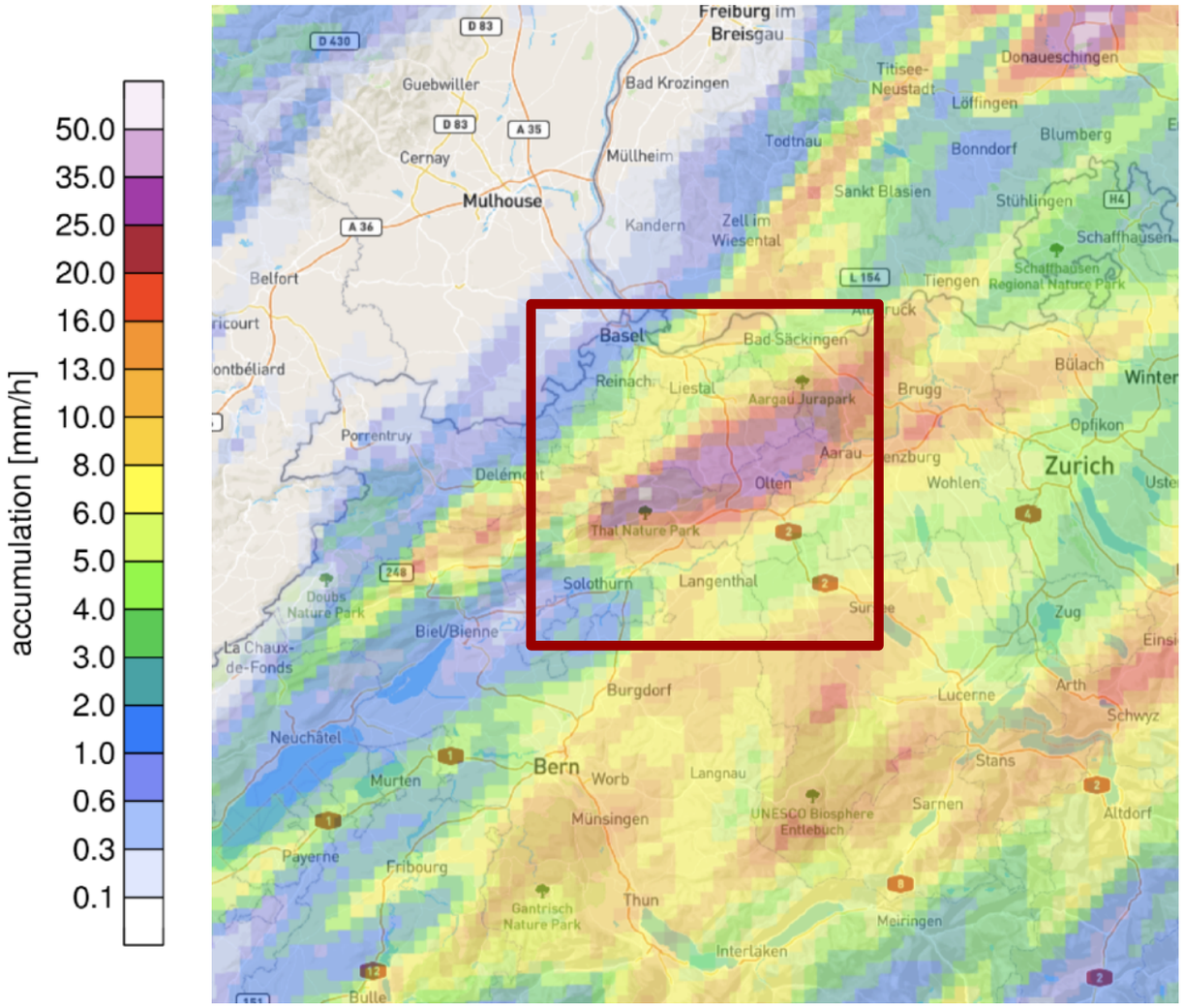
26 Jul 2021

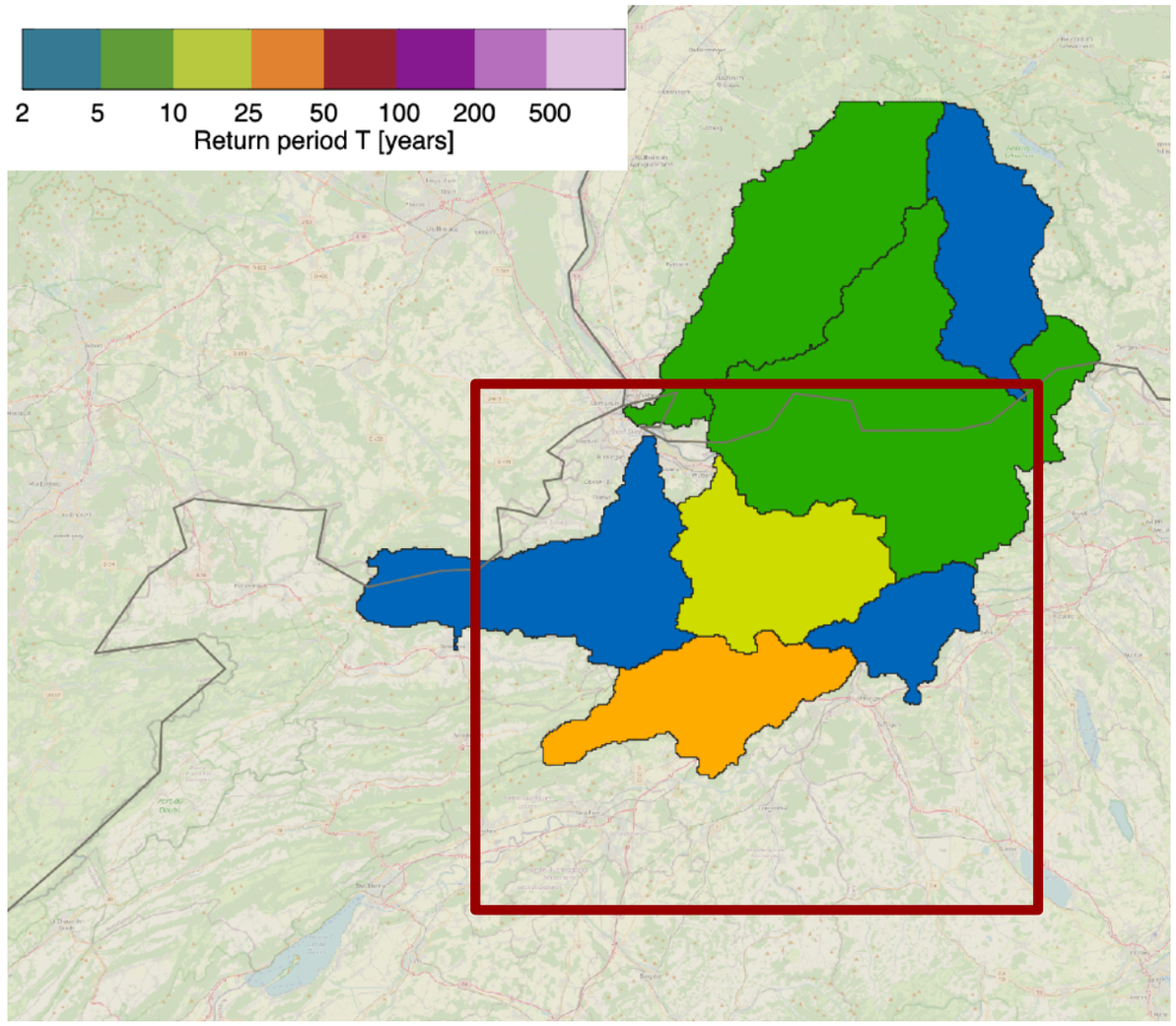




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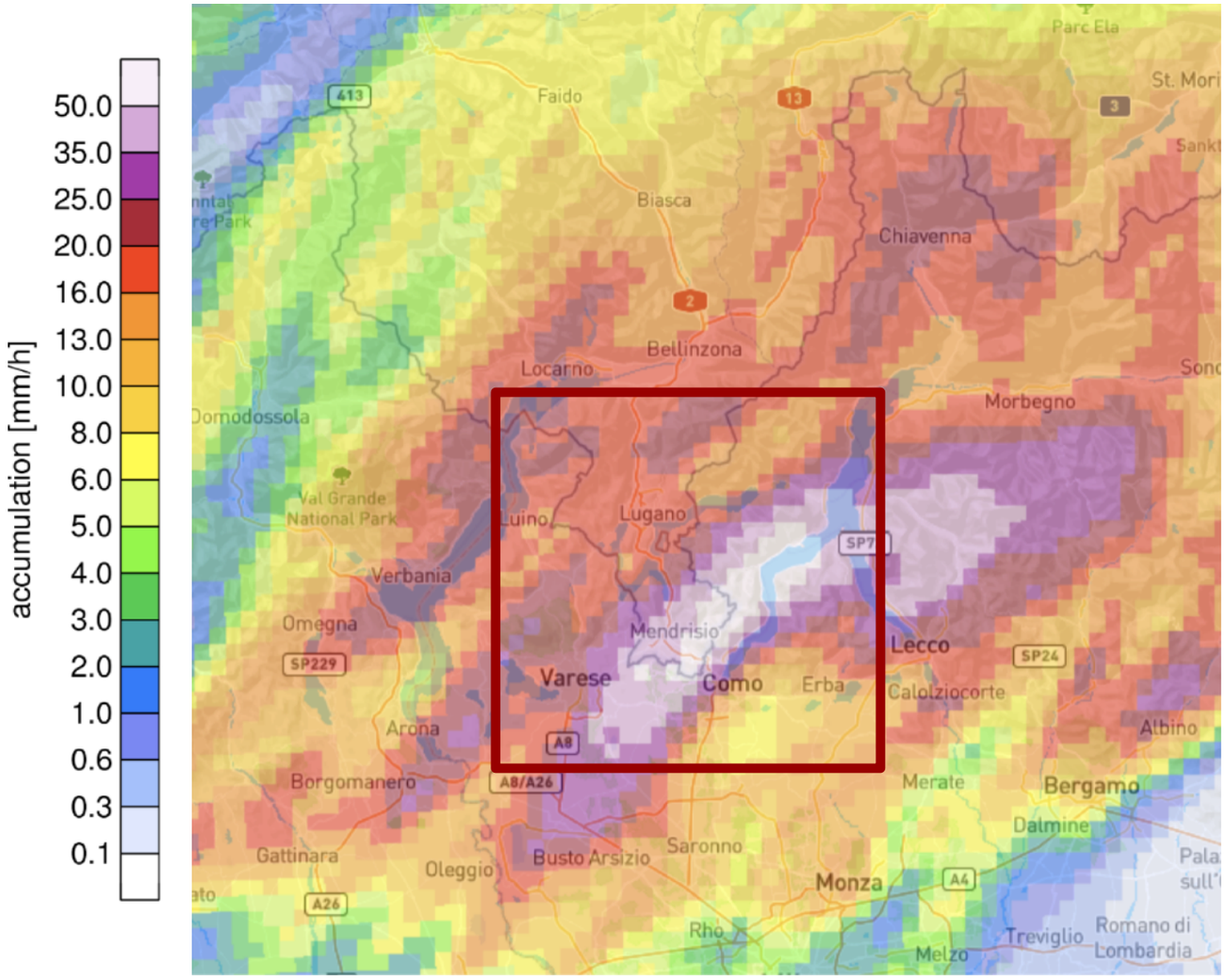
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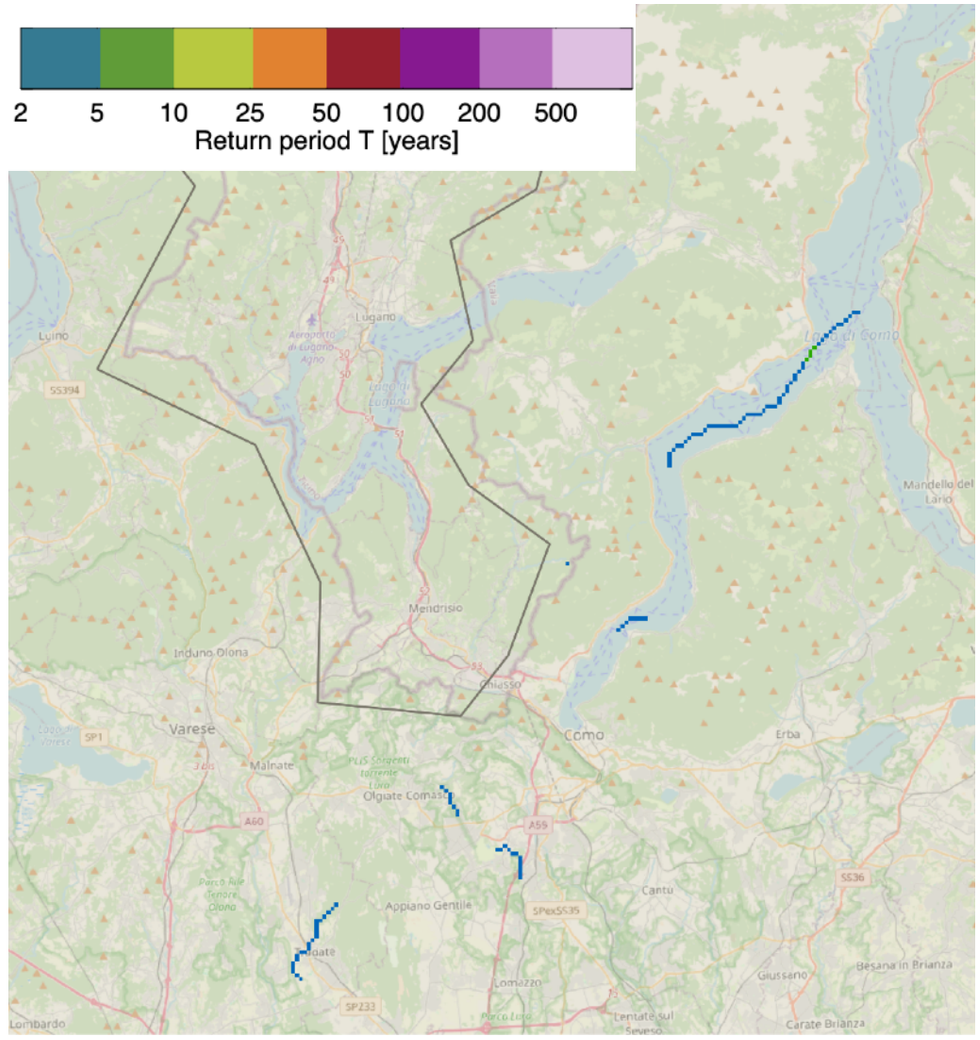




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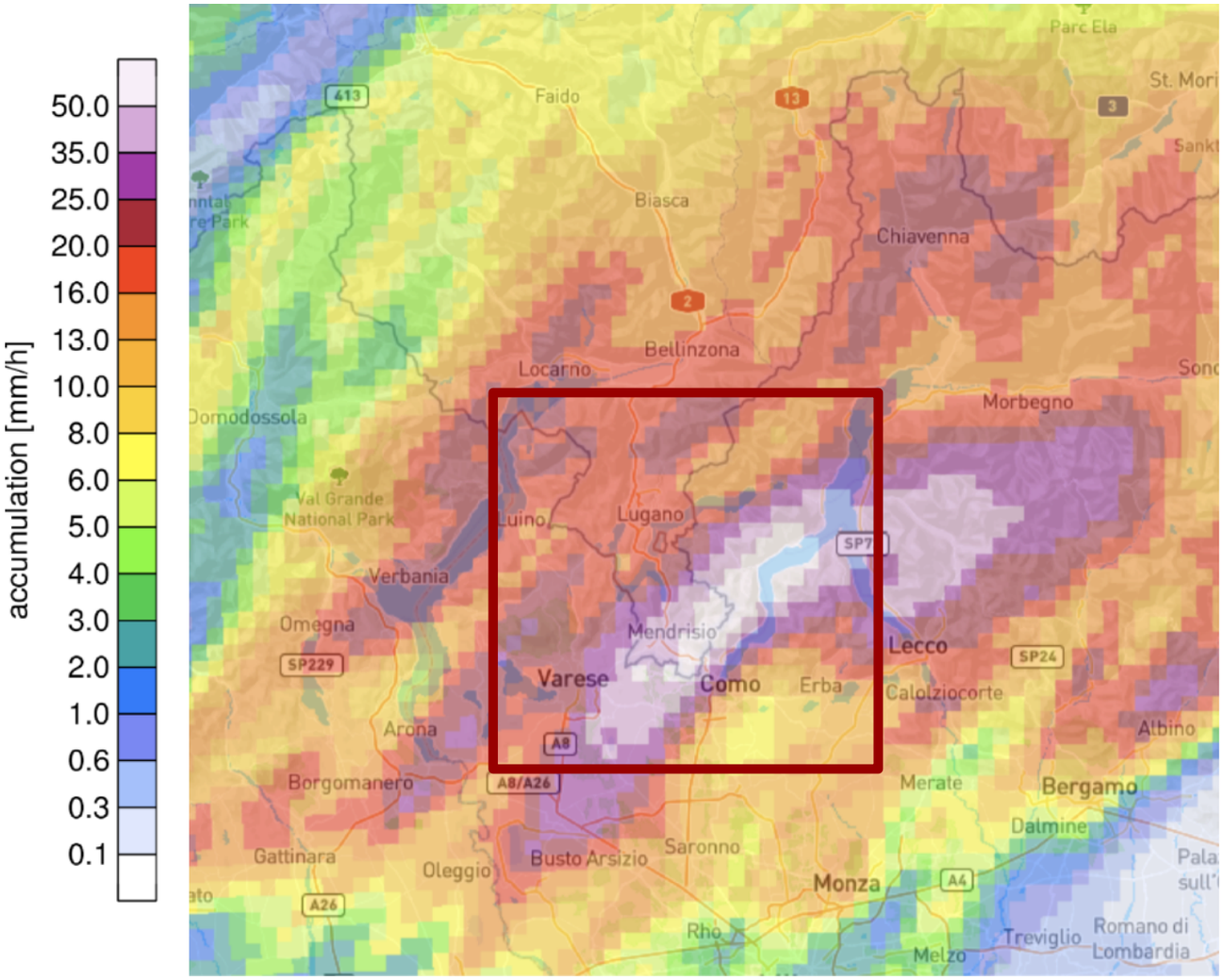
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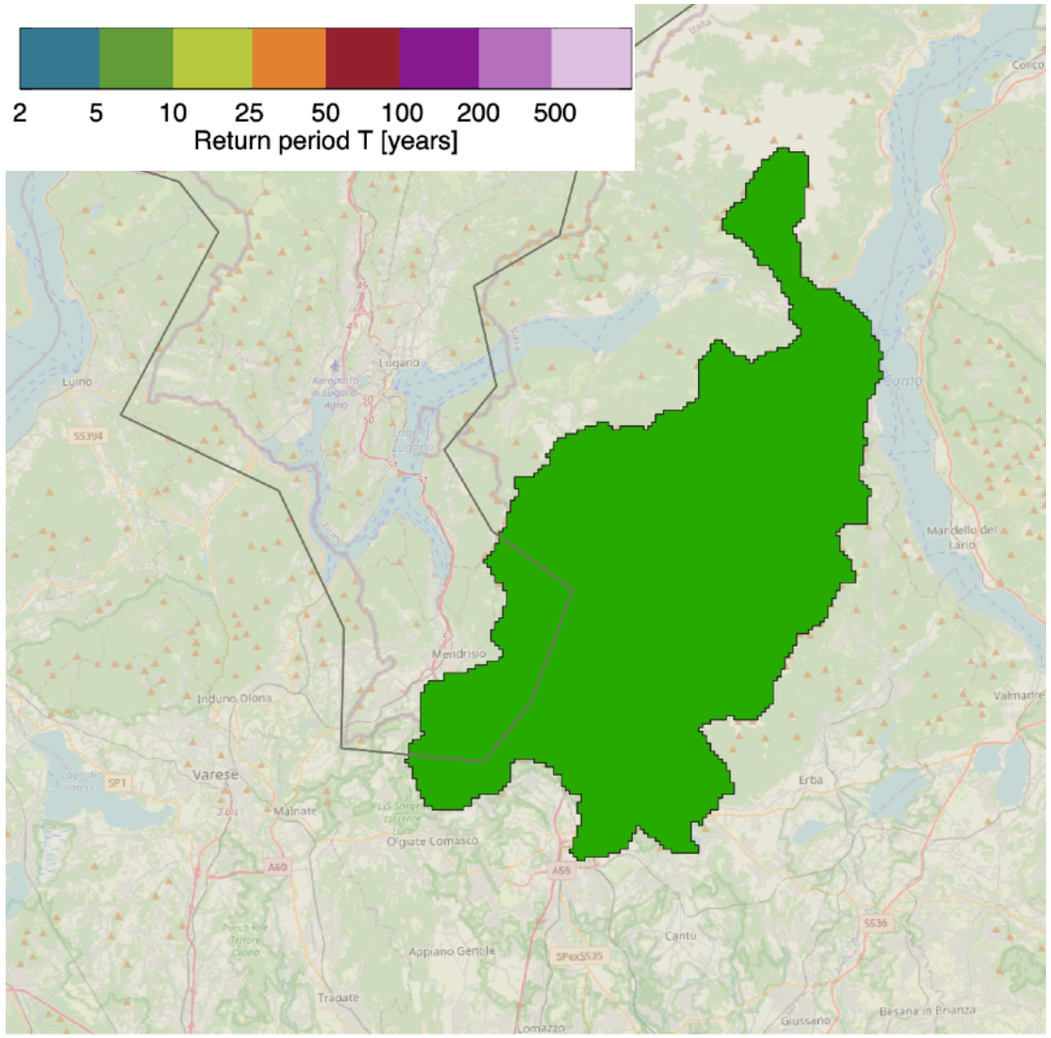




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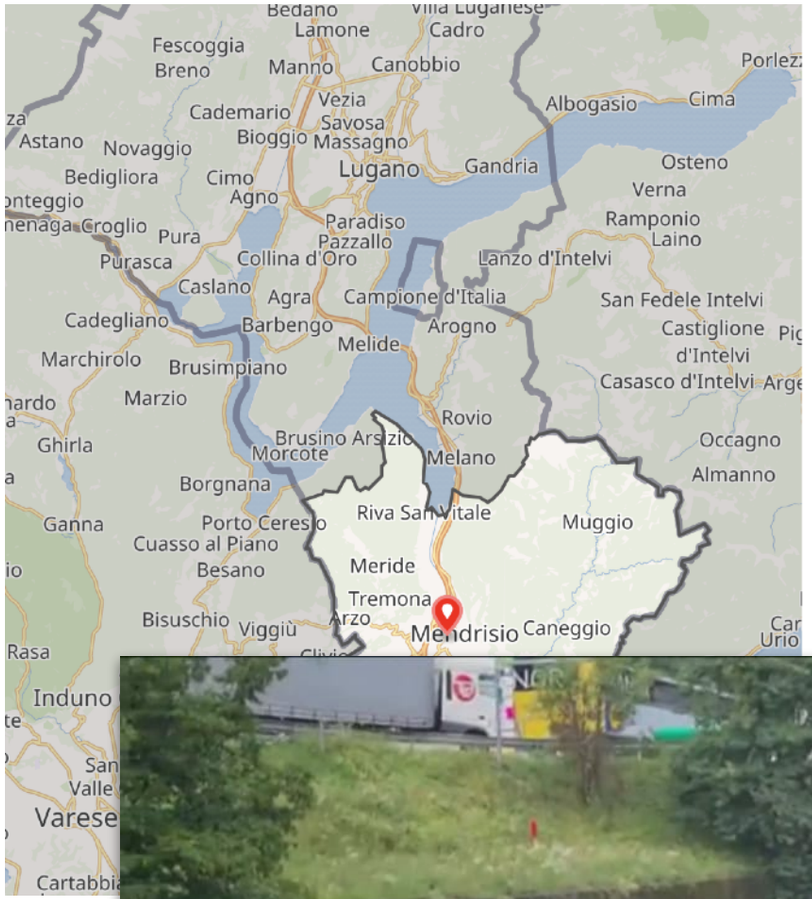
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27 Jul 2021

Au Tessin, le trafic ferroviaire et le secteur viticole perturbés par la drache

Publié le 28 juillet 2021 à 07:48 - https://www.letemps.ch/suisse/tessin/tessin-trafic-ferroviaire-secteur-viticole-perturbes-drache

Des inondations, des glissements de terrain et des chutes de débris ainsi que des arbres tombés dans le Mendrisiotto ont été signalés par la police tessinoise. Selon le portail Internet du TCS, plusieurs routes du sud du canton sont fermées. Le sud du Tessin a été particulièrement touché ce mardi.

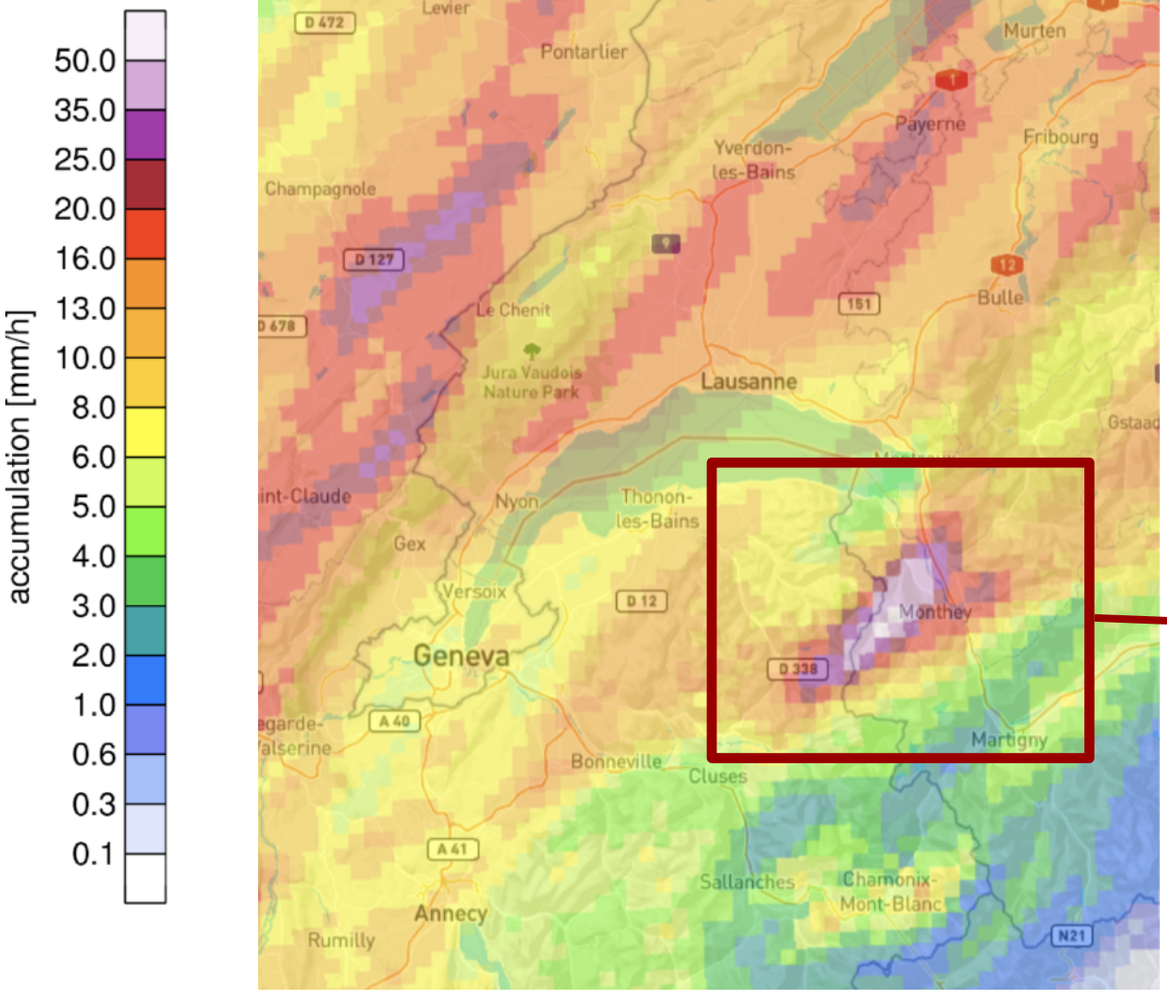


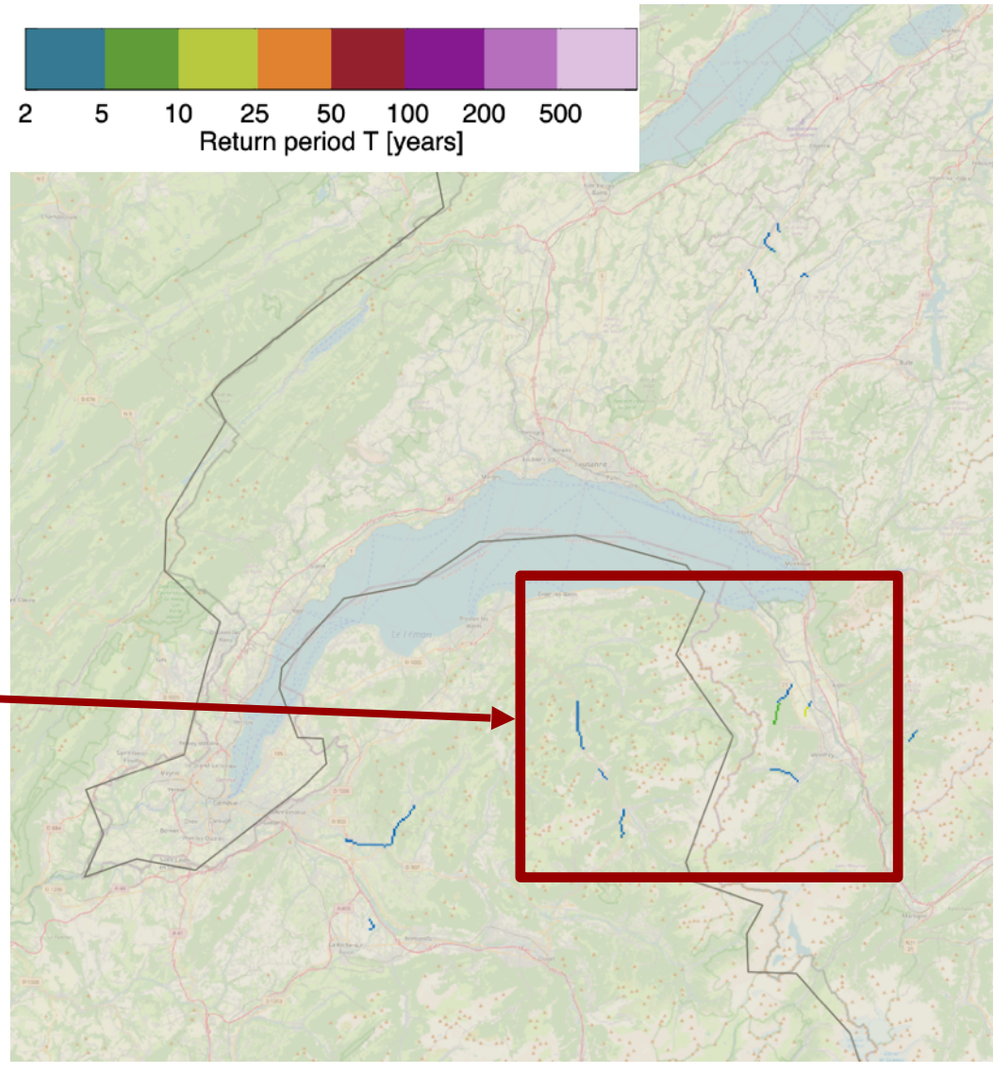


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07-08 Sep 2022

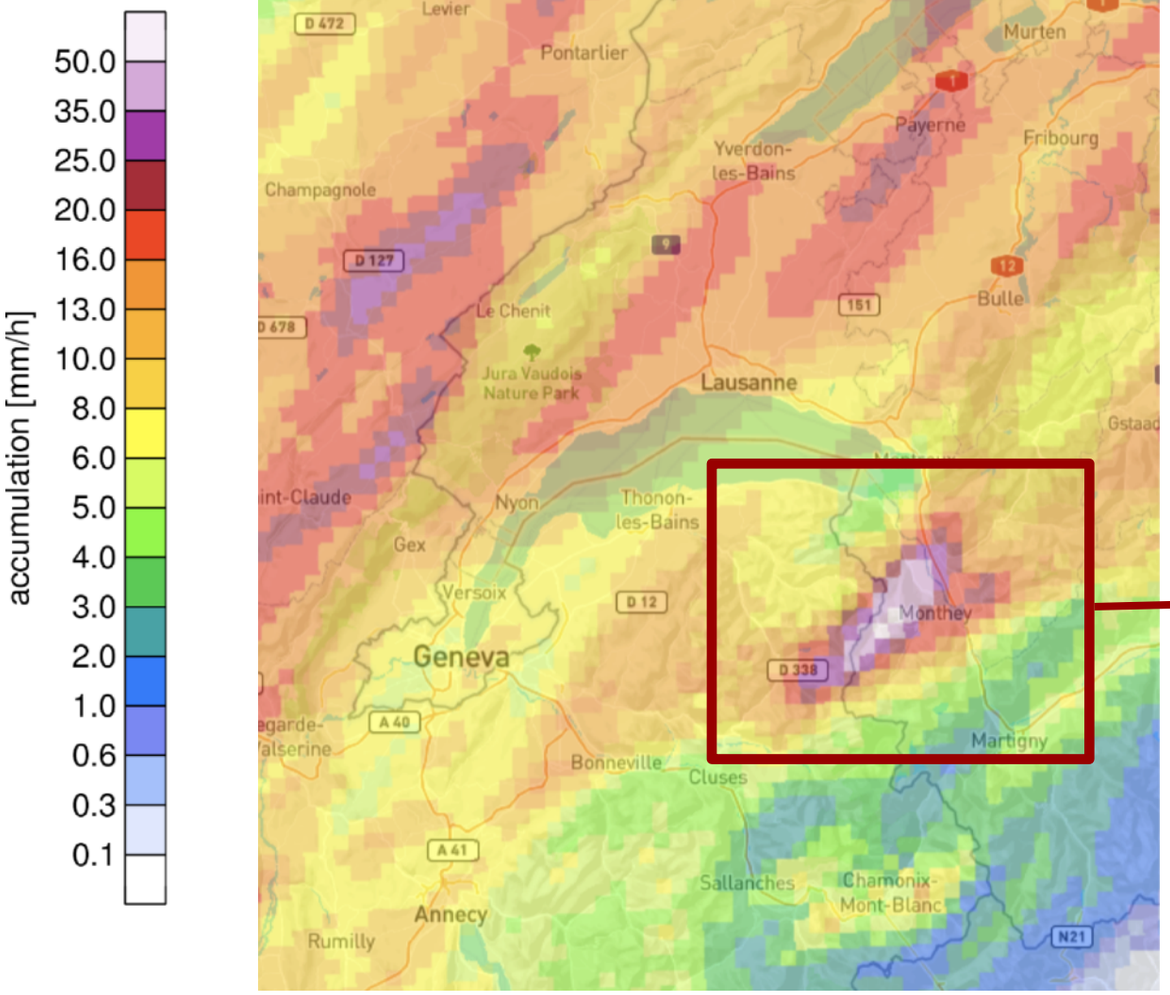
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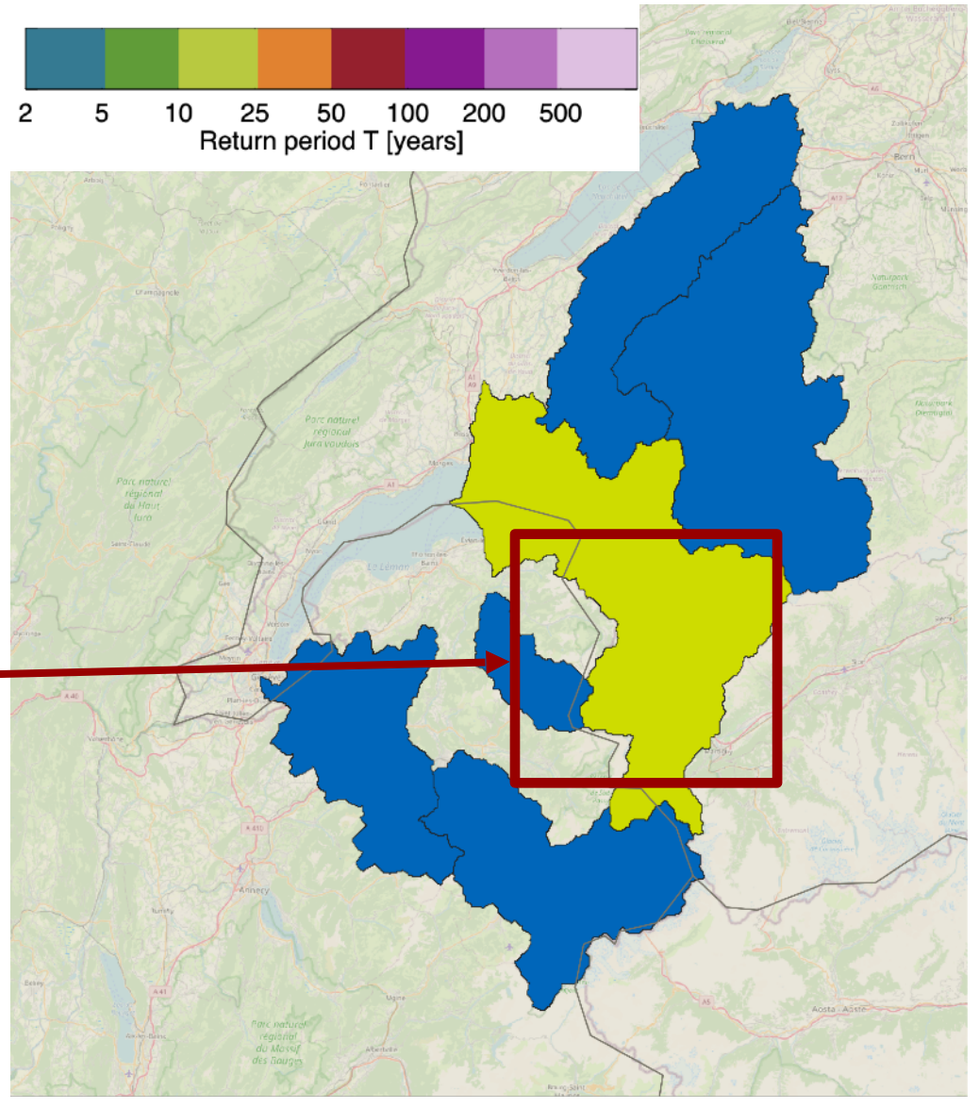




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07 Sep 2022





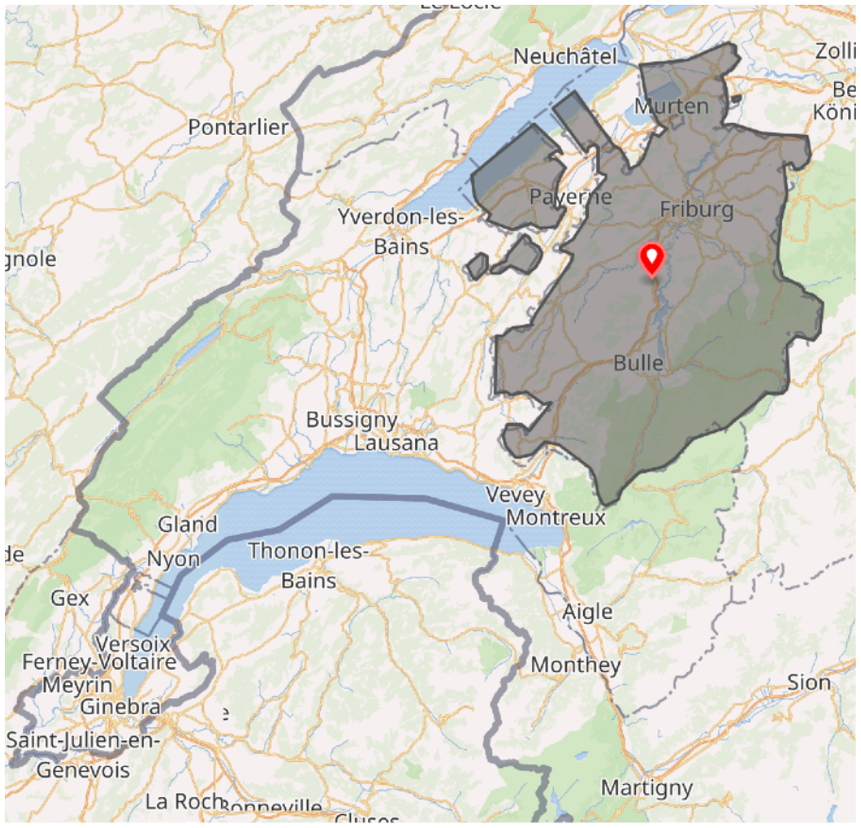
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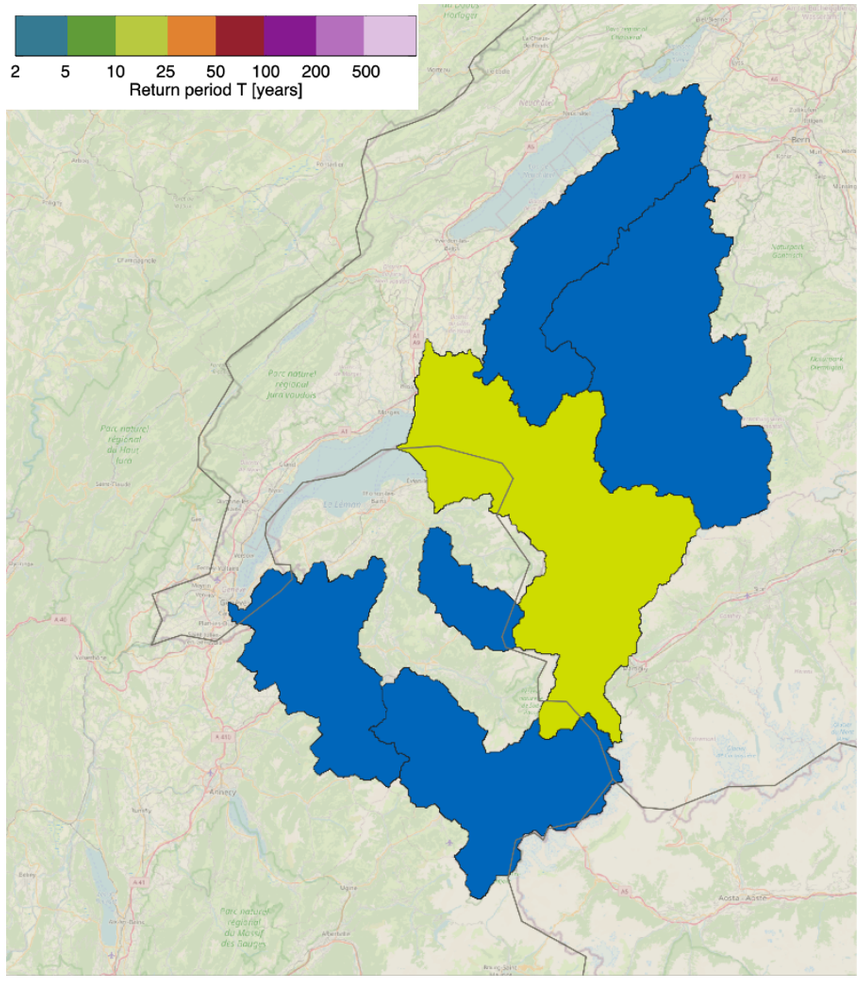
07 Sep 2022

Orages violents et grêle se sont abattus sur la Suisse mercredi soir

Publié le 8 septembre 2022 à 08:26 - https://www.rts.ch/info/suisse/13367672-orages-violents-et-grele-se-sont-abattus-sur-la-suisse-mercredi-soir.html

Le canton de Fribourg a été particulièrement touché par ces intempéries. La police et les pompiers sont intervenus plus de 60 fois, principalement pour des inondations et des arbres tombés sur les routes, a indiqué la police cantonale fribourgeoise dans un communiqué.

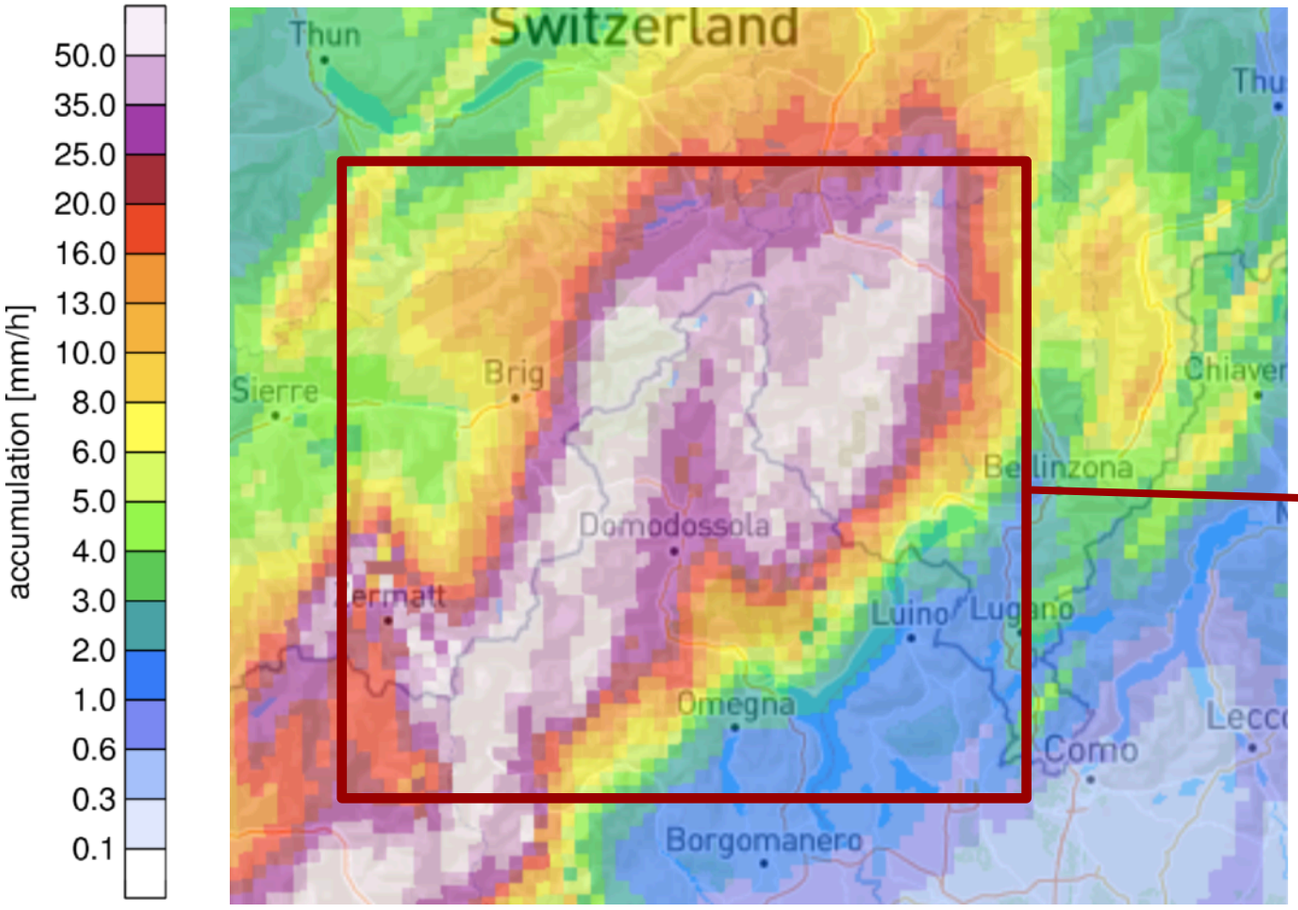


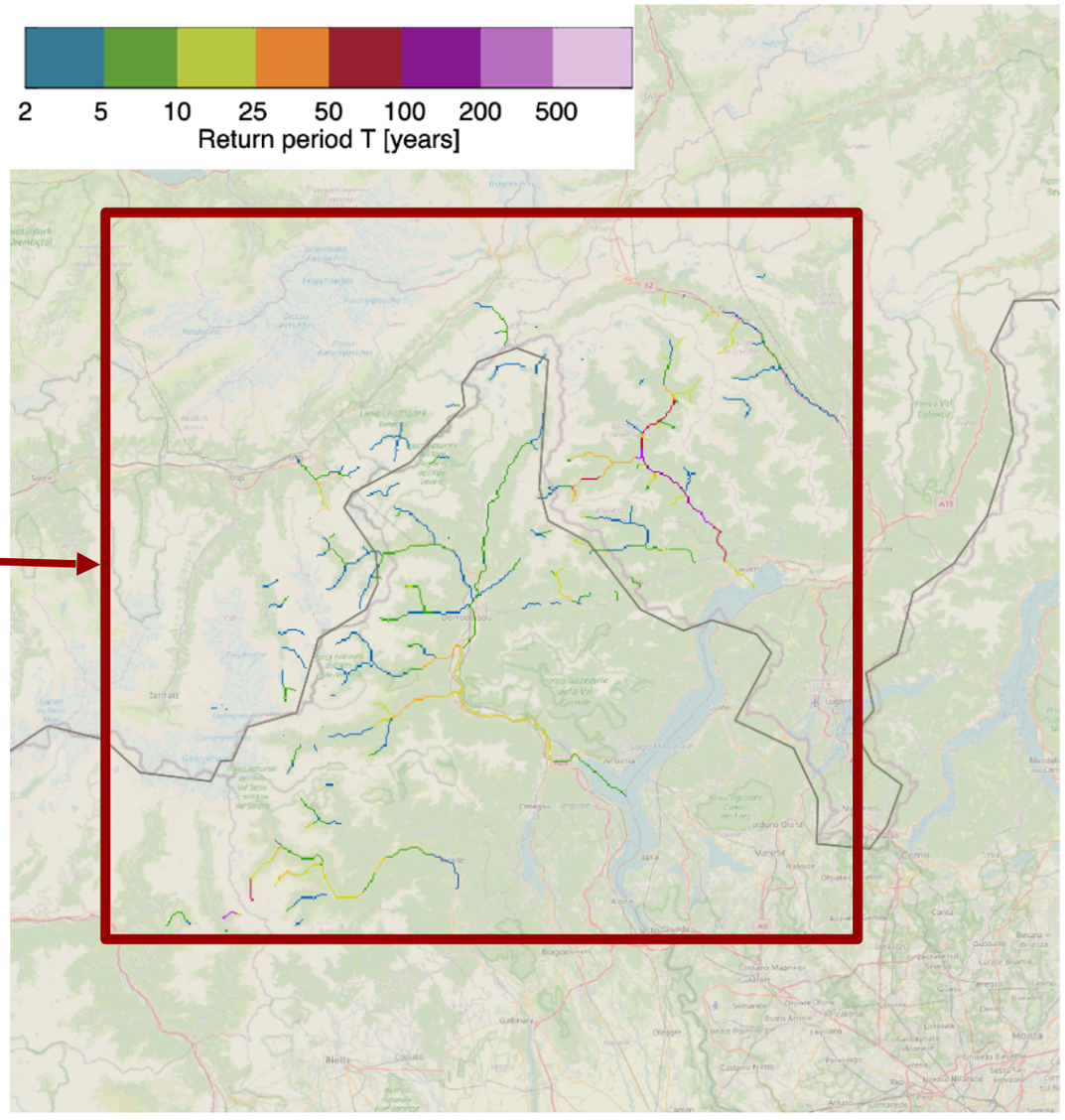


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29 Jun - 01 Jul 2024

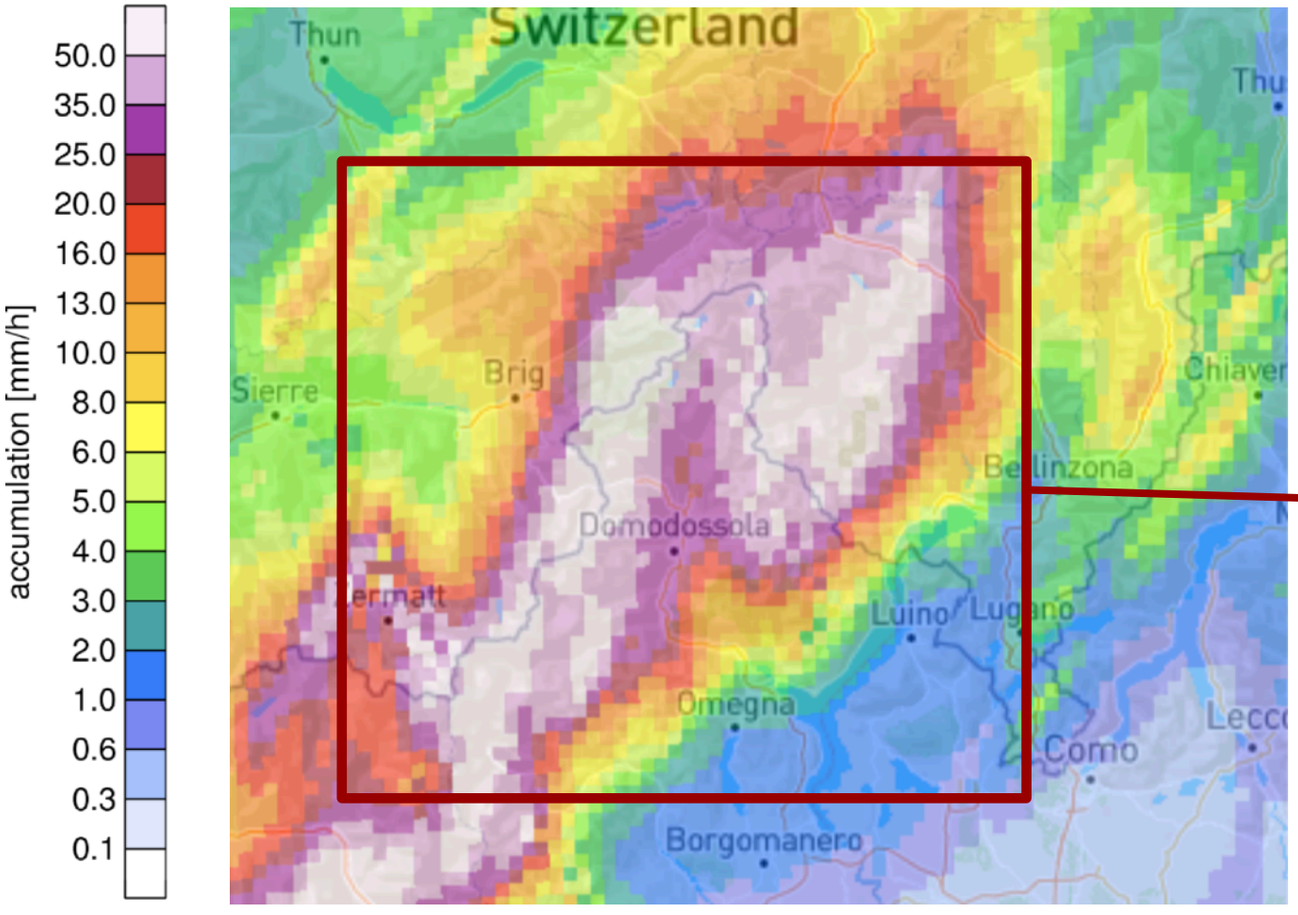
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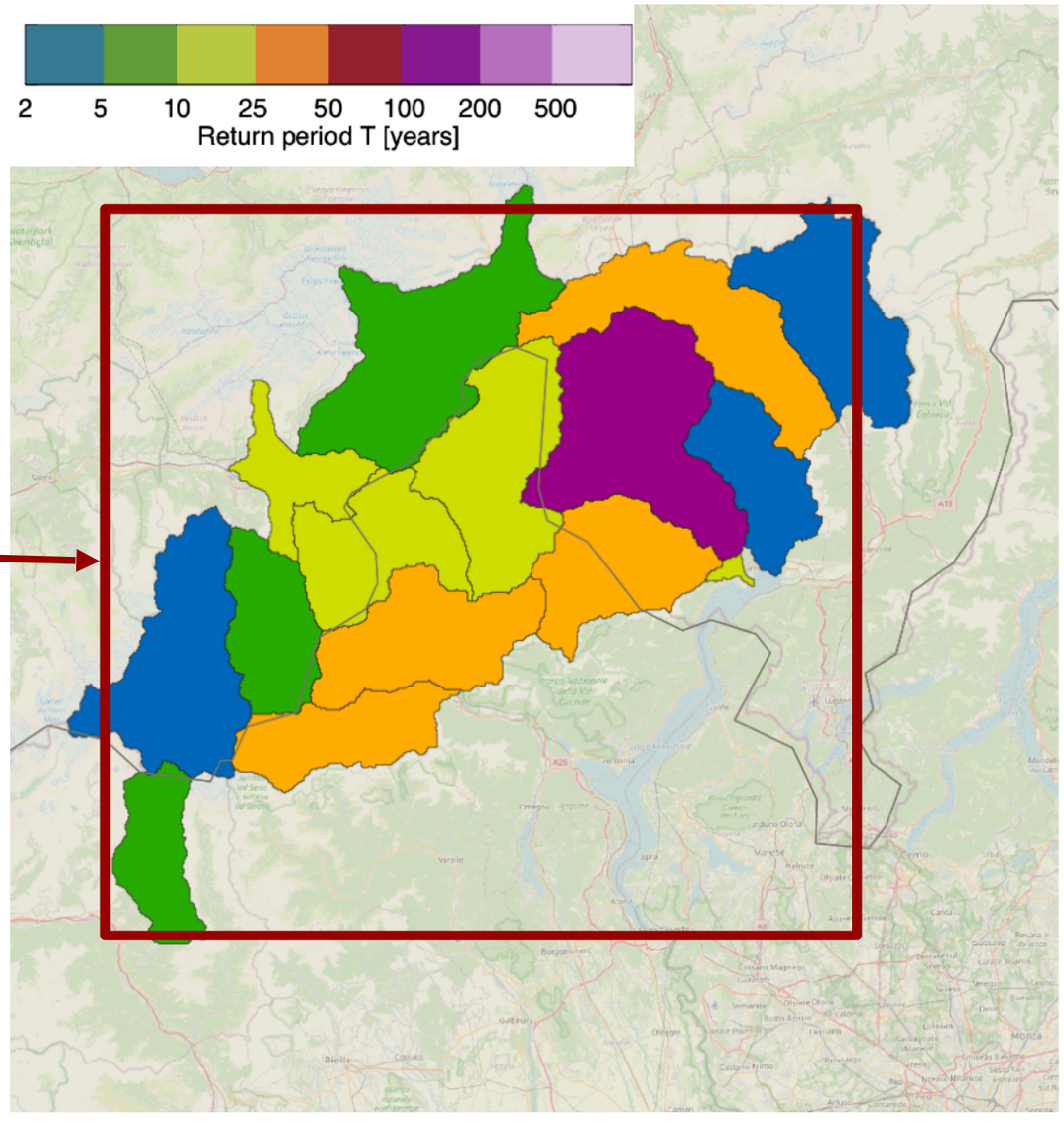




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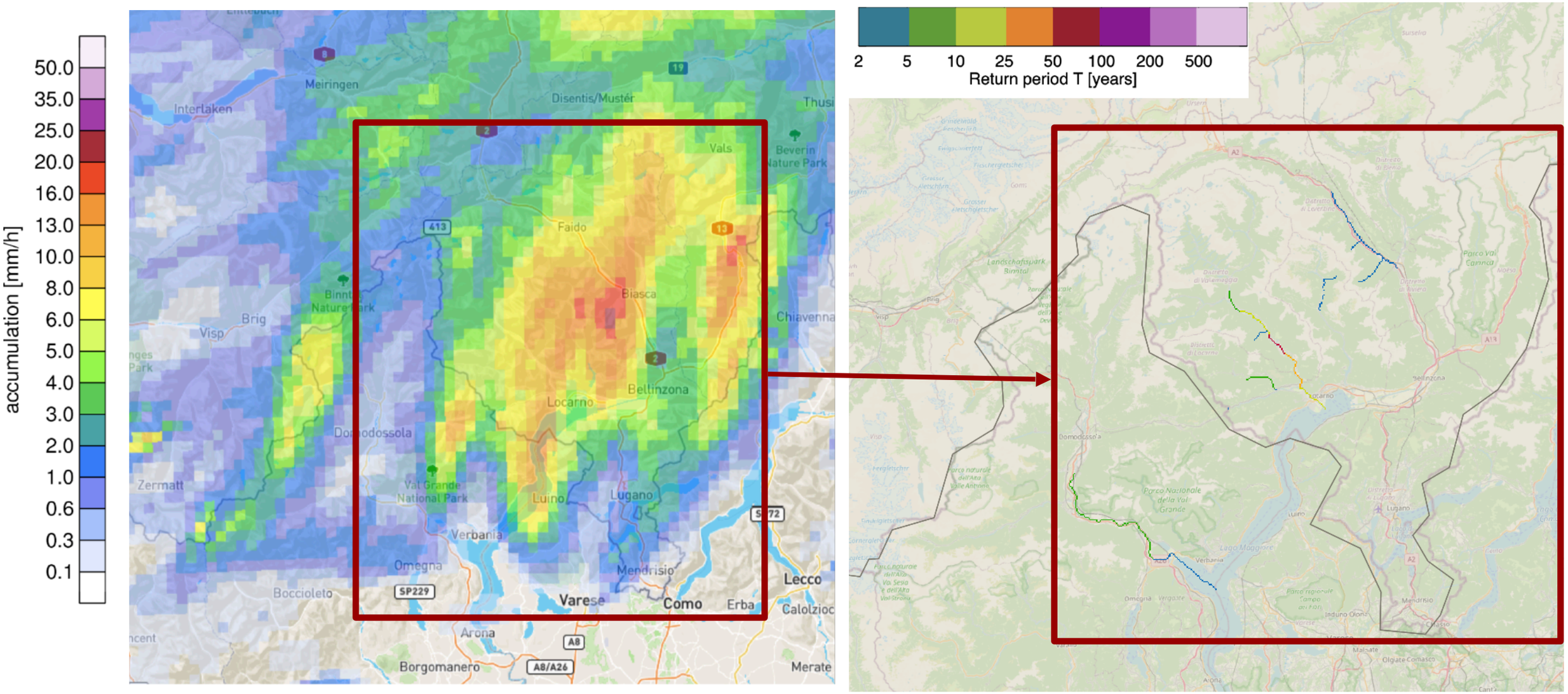
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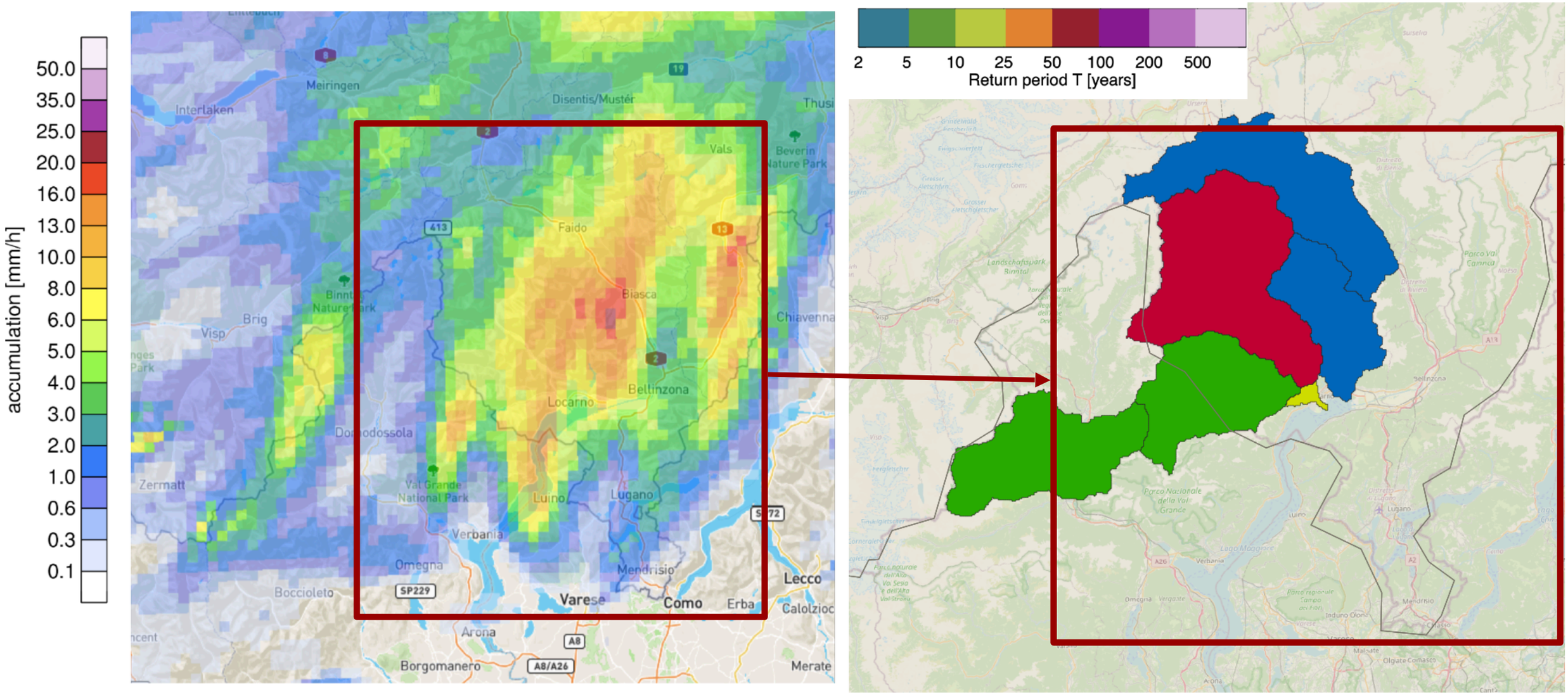
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30 Jun 2024



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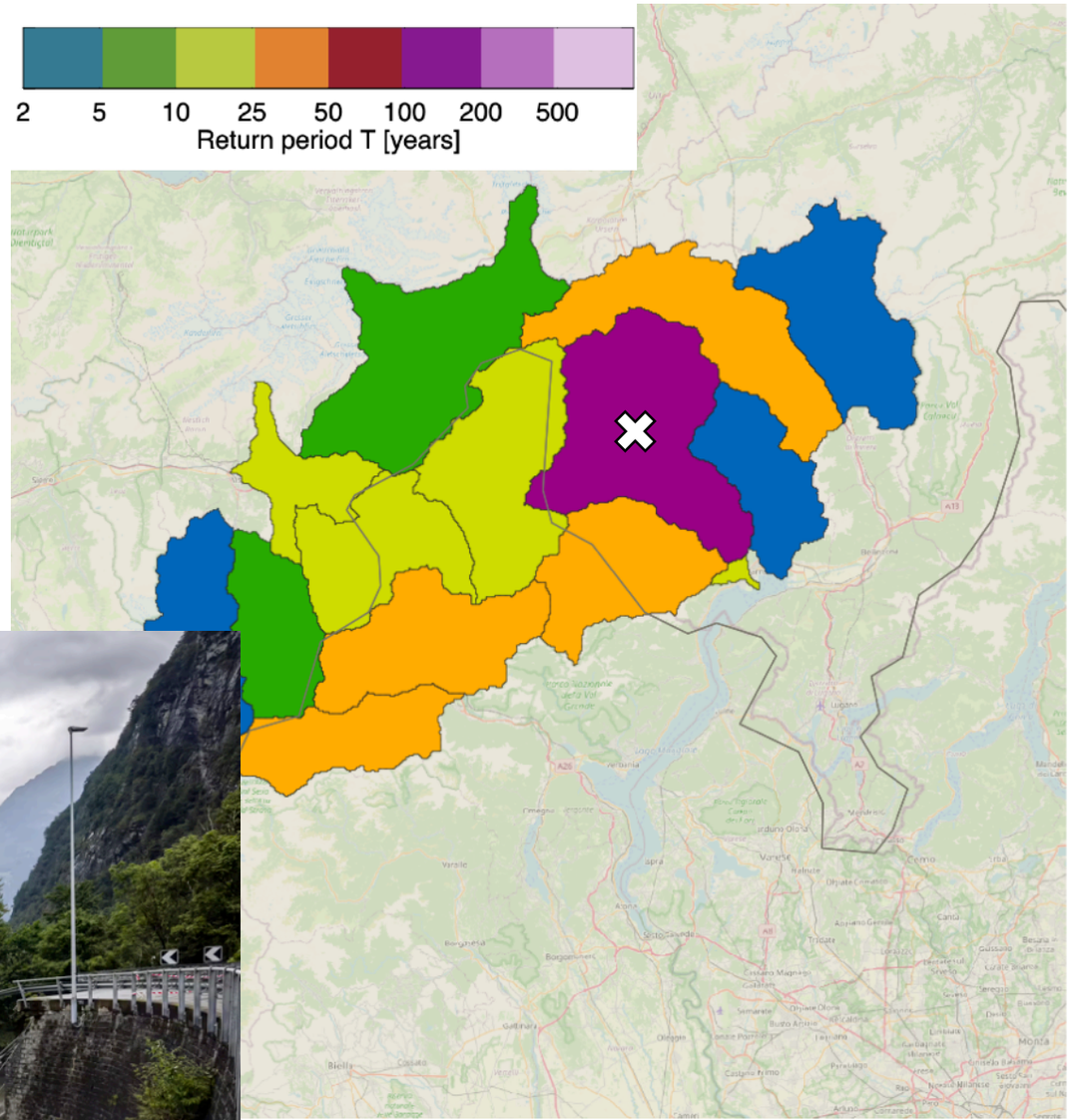
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Intempéries des 29 et 30 juin 2024 en Valais et au Tessin: revivez notre suivi

Publié le 29 juin 2024 à 13:59. / Modifié le 01 juillet 2024 à 23:37. - https://www.letemps.ch/suisse/geneve/en-direct-pas-de-fan-zones-a-geneve-et-dans-le-canton-de-vaud

Les inondations dévastatrices dans la nuit de samedi à dimanche ont entraîné des glissements de terrain, faisant au moins **quatre morts**: trois dans le Val Maggia (TI) et à proximité, et un dans le Haut-Valais, à Saas Grund, où demeurent aussi au moins deux disparus.

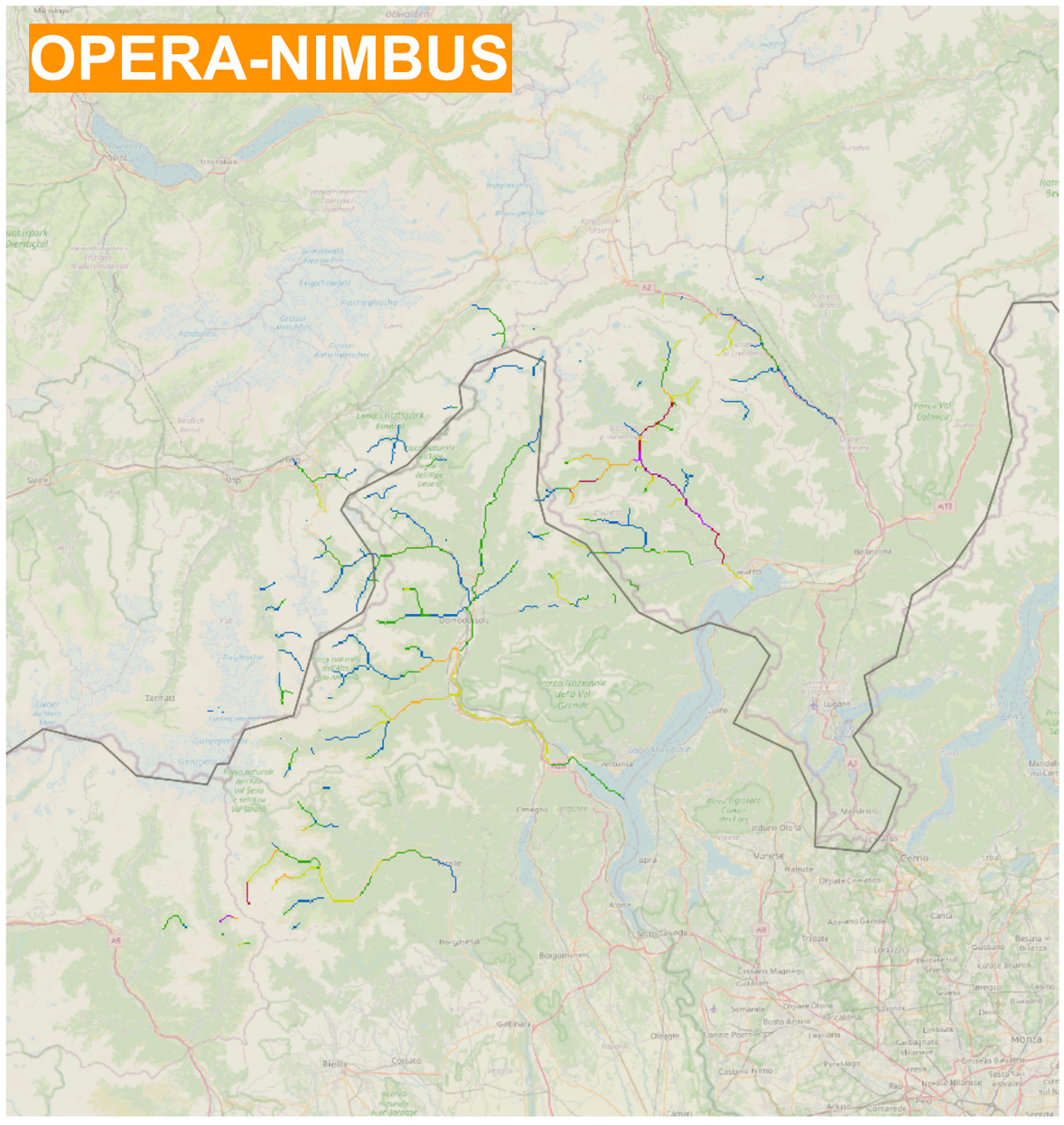


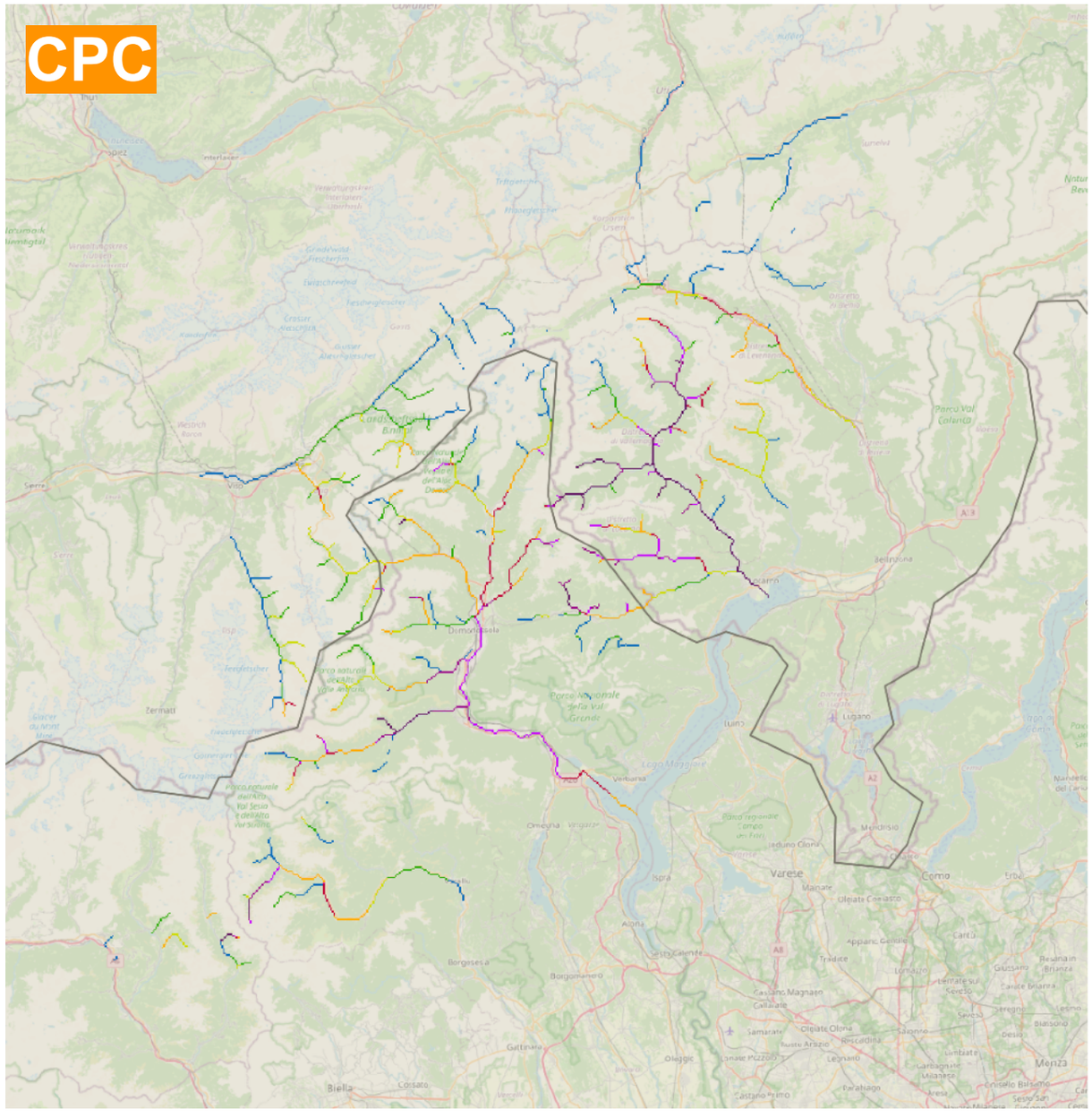


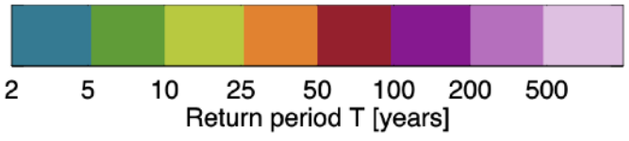
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Comparison between OPERA-NIMBUS and CPC QPE inputs



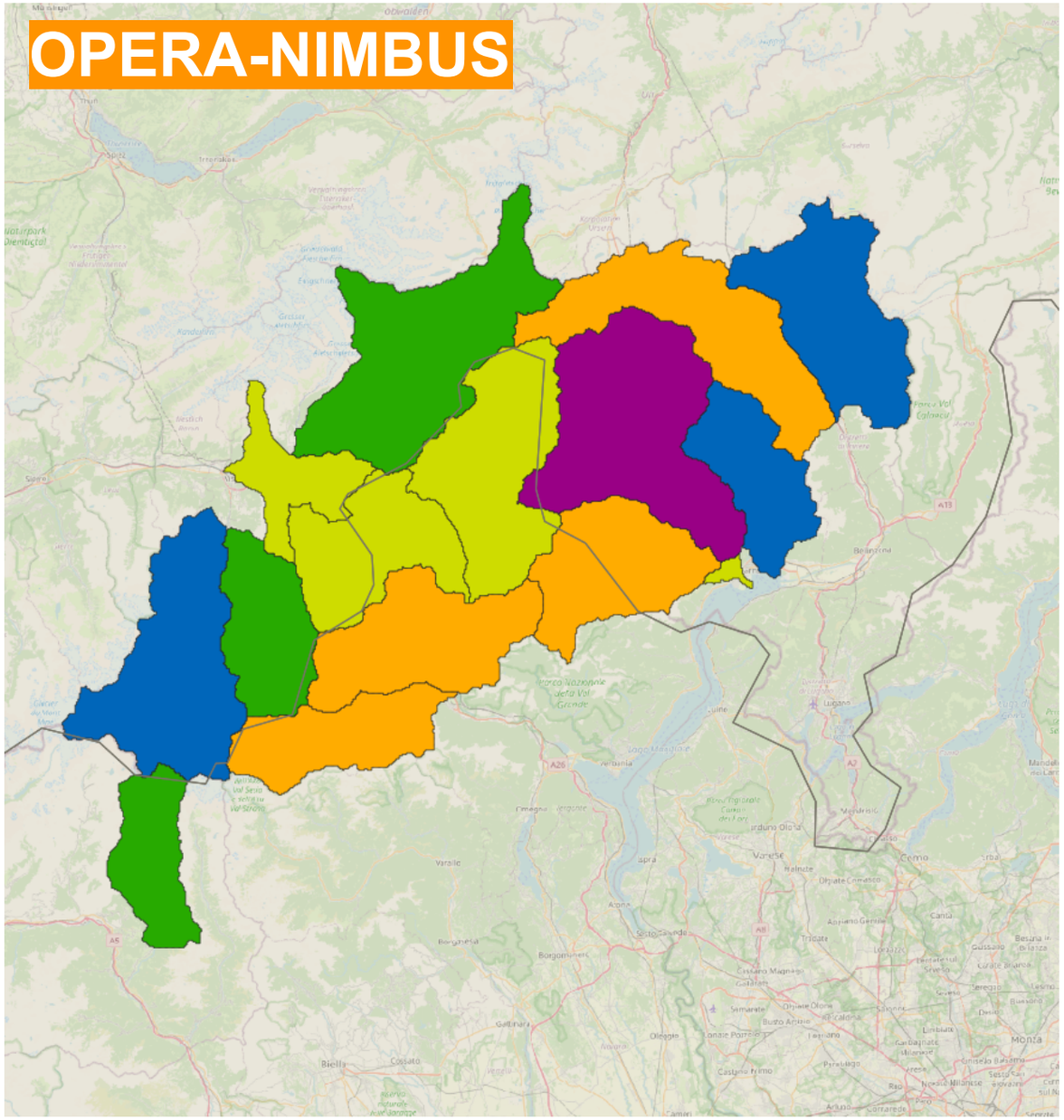


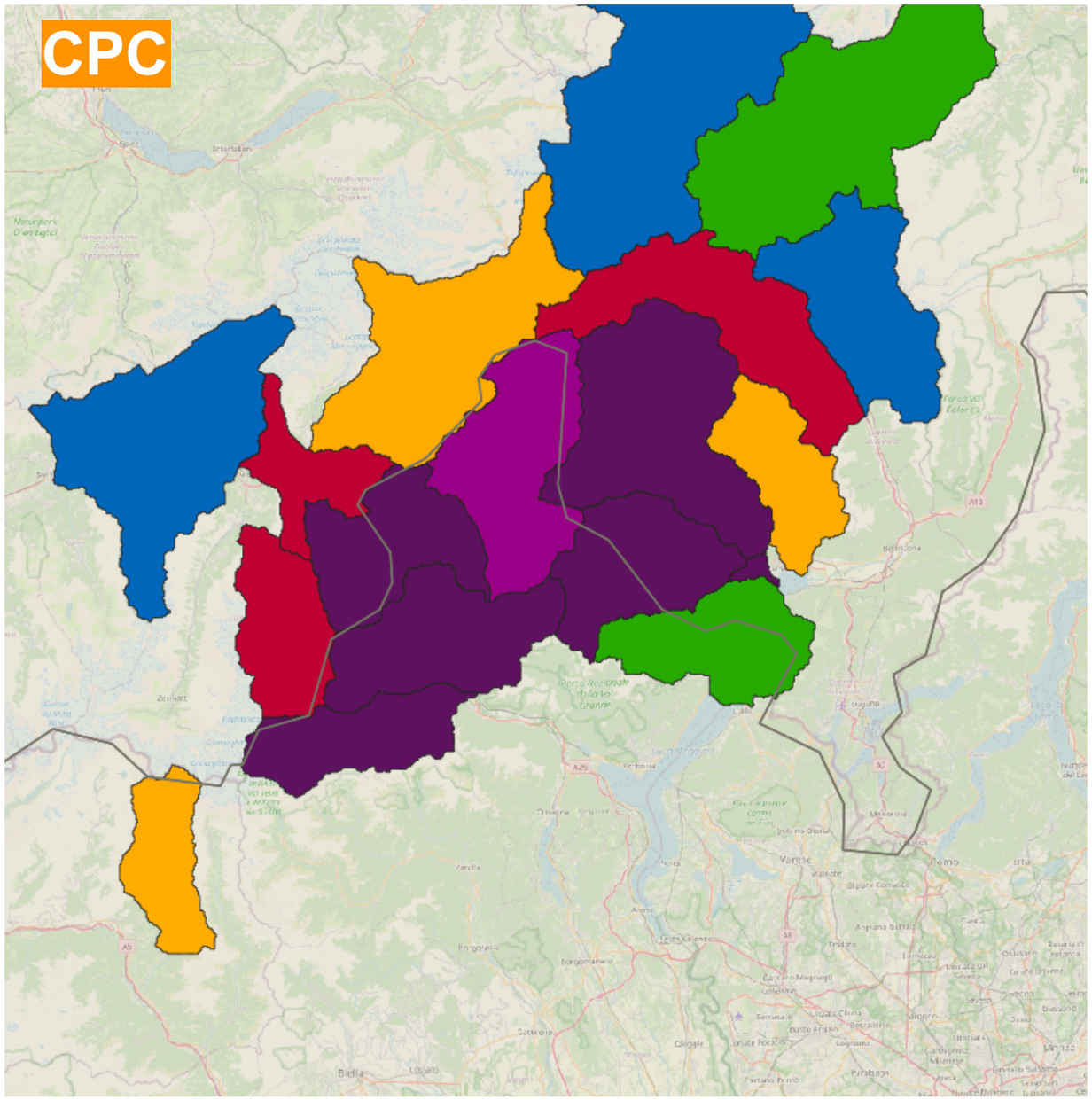


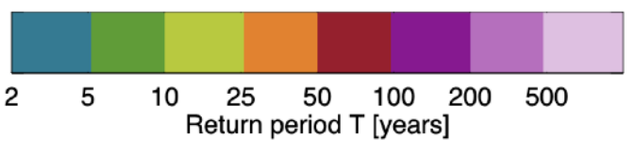
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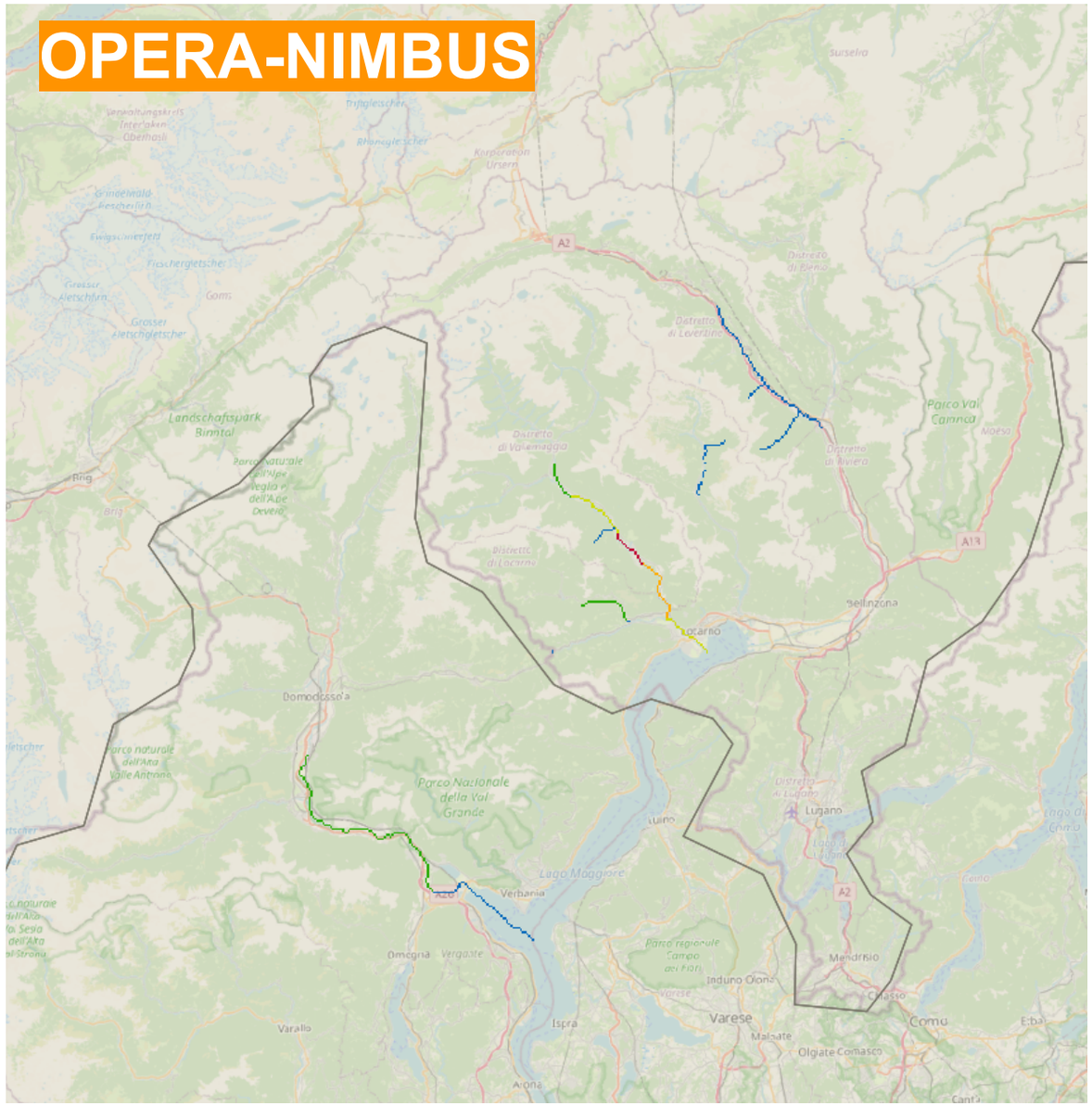


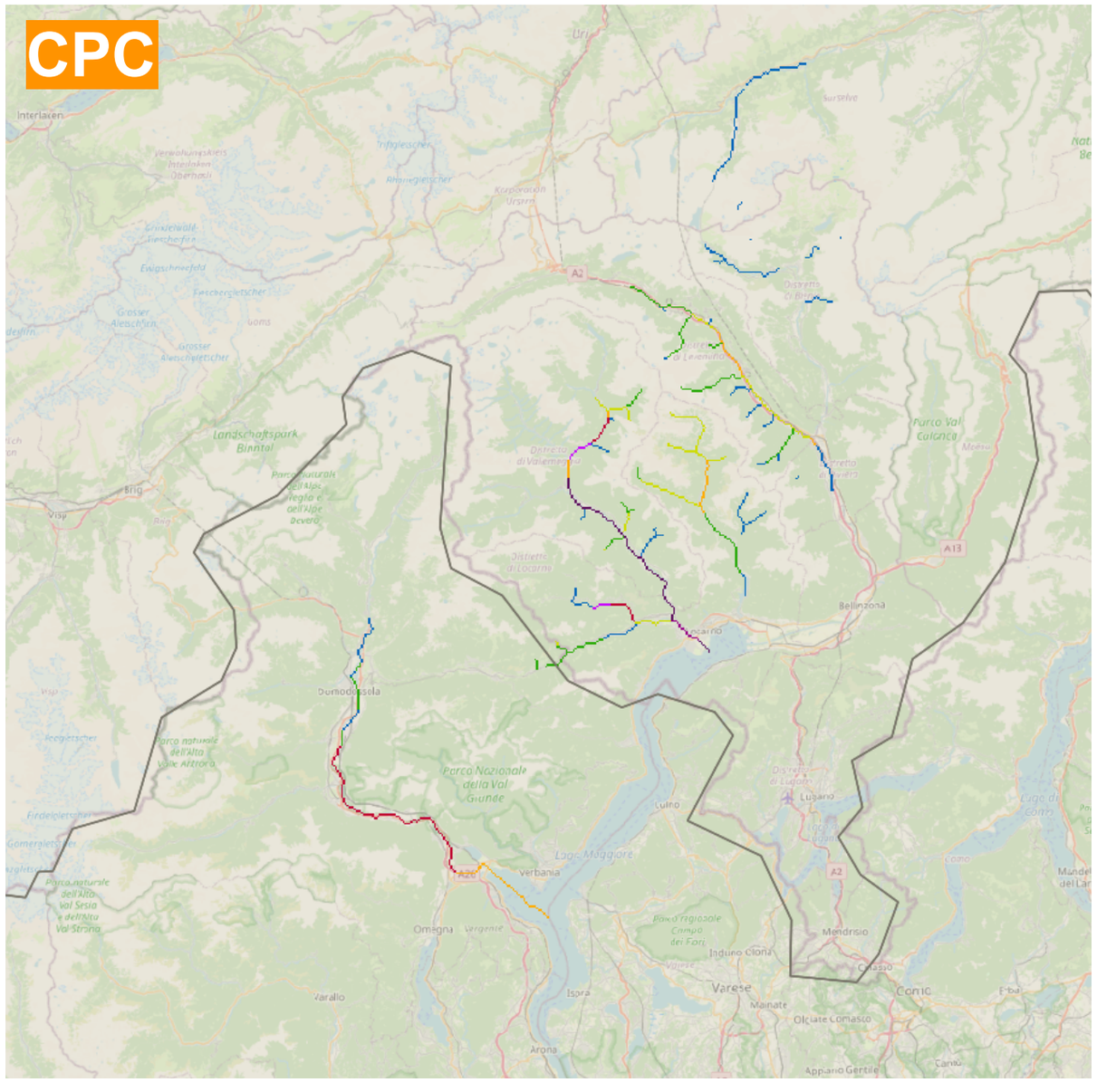


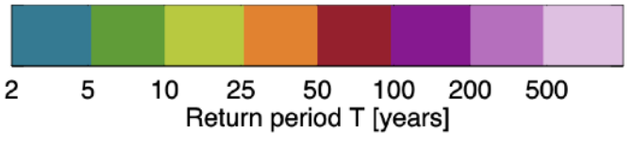
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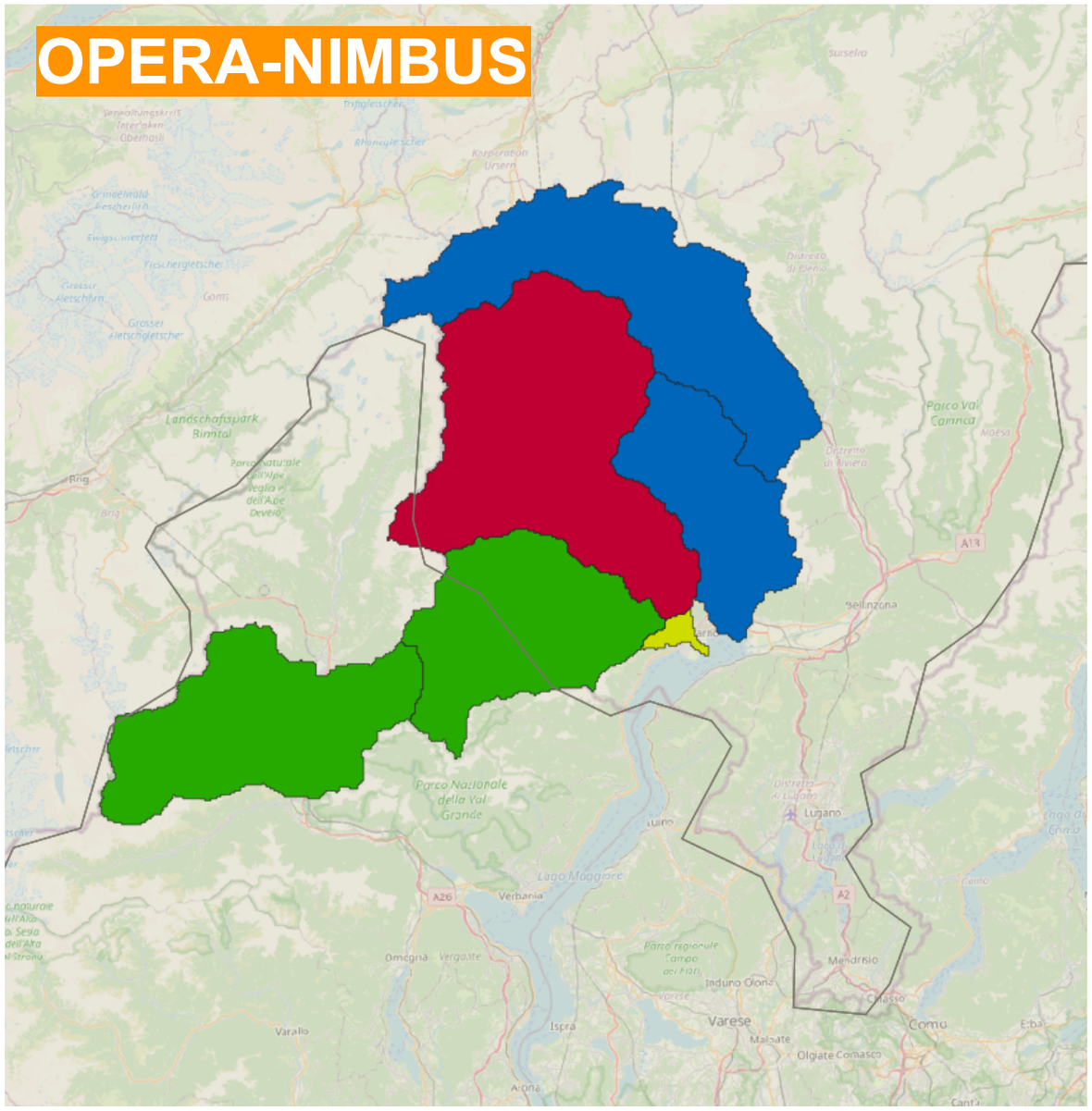


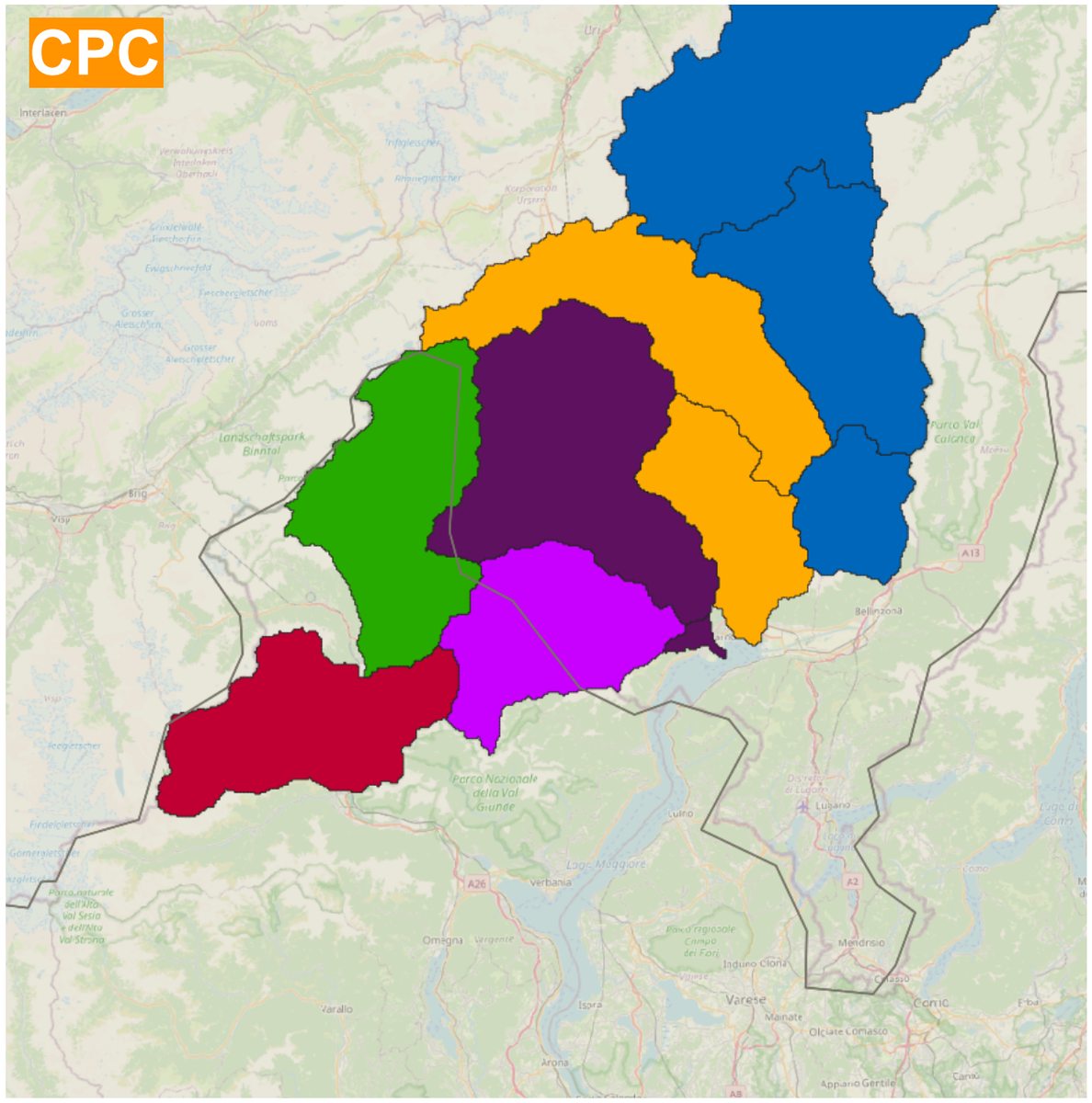


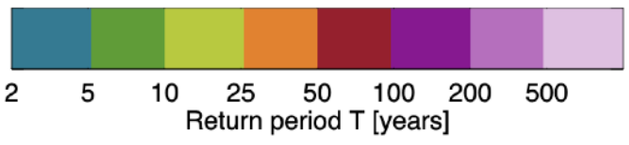
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Comparison between OPERA-NIMBUS and CPC QPE inputs







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