

RELEASE OF INORGANIC NUTRIENTS FROM THE SUBMARINE VOLCANO TAGORO

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VULCANOLOGÍA
CANARIA SUBMARINA

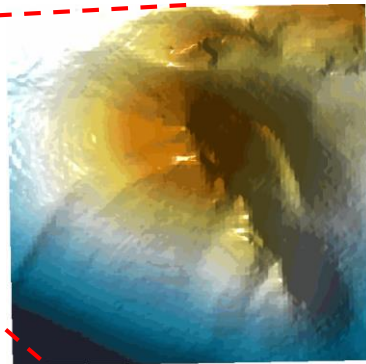


Vulcana

TAGORO SUBMARINE VOLCANO



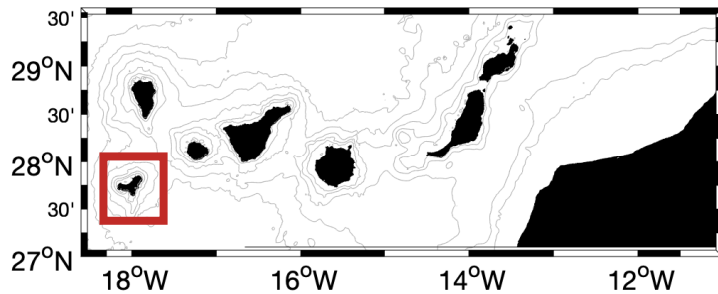
- **Eruptive stage:** October 2011 – March 2012
- **Degassing stage:** 2012 – Present



- Main crater: **127 m depth**
- Diameter: 1–1.3 km
- 1.8 km from coast

Dissolved inorganic nutrients

- **Nitrate:** $\text{NO}_3^- + \text{NO}_2^-$
- **Phosphate:** PO_4
- **Silicate:** $\text{Si}(\text{OH})_4$



7 years of monitoring | 15 surveys | 3300 samples

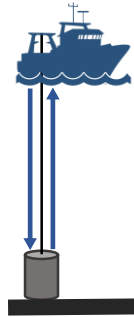


METHODOLOGY AND RESULTS

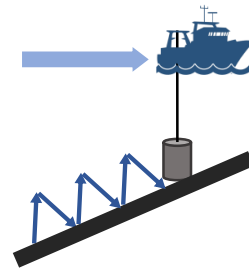


Sampling methodologies:

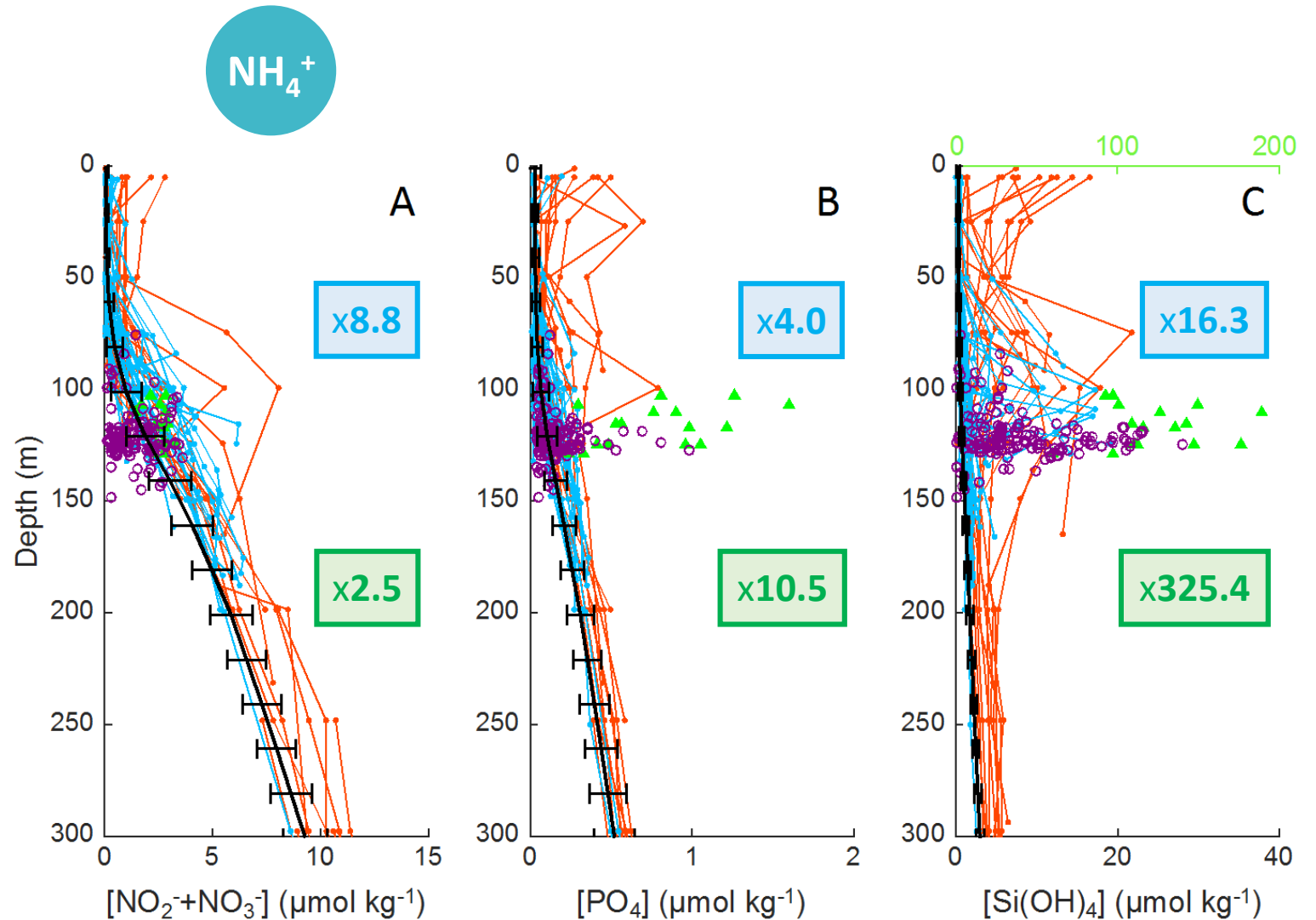
Vertical profiles
(water-column samples)



Tow-yos
(near-bottom samples)



ROV
(vent samples)



RESULTS



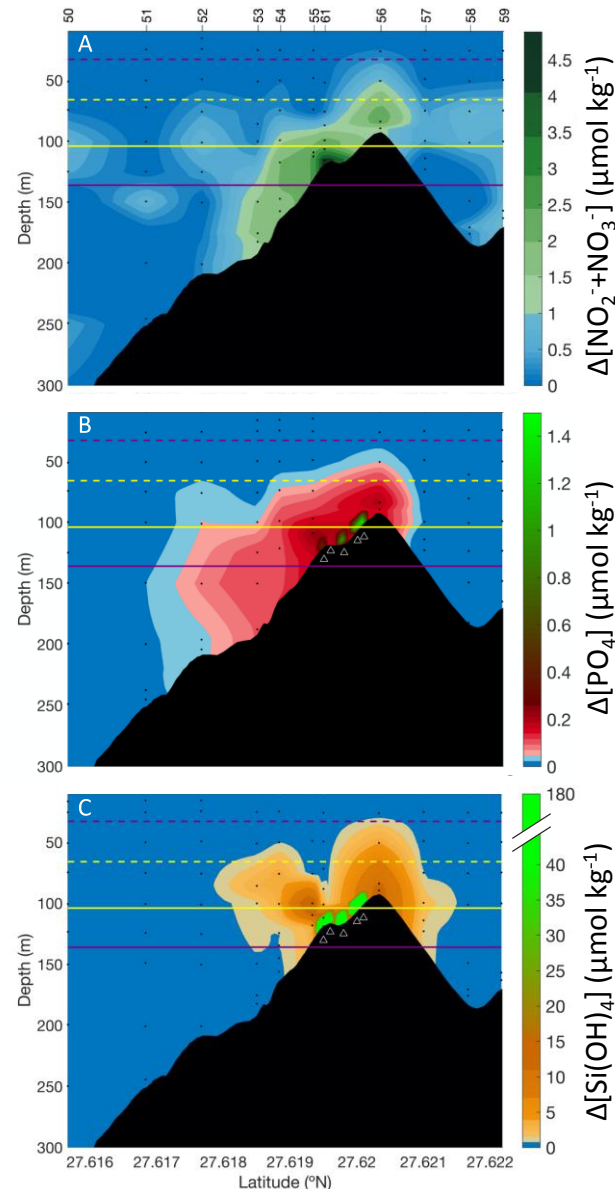
- Mixed layer depth (min / max)
- Euphotic zone depth (min / max)

Fluxes
(mol m⁻² yr⁻¹):

- **3.19 ± 1.17**
- **0.02 ± 0.01**
- **0.60 ± 1.35**

- Nitrate fluxes (mol m⁻² yr⁻¹):**
- NW African Upwelling: **5.87**
 - Filaments reaching Canary region: **0.29**

(Barton et al., 1998)



Future works:
Effects on local ecosystem?



Read the **full article** here:



(González-Vega et al., 2020)

2011:



Now:



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