


Correction

# Correction: Bonnail et al. Physicochemical Characterization of Desert Bay with Brine Discharge: A Case Study from Caldera Bay, Northern Chile. *J. Mar. Sci. Eng.* 2025, 13, 1199

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In the published article [1] “Physicochemical Characterization of Desert Bay with Brine Discharge: A Case Study from Caldera Bay, Northern Chile”, several minor corrections are required to ensure accuracy and clarity.

These changes do not affect the interpretation or the scientific conclusions of the study.

## Error in Table

In the original publication, there was a mistake in Table 1 as published. Values were incorrectly transcribed. The corrected Table 1 appears below.

**Table 1.** Physicochemical parameters and element concentrations in sediment samples from Caldera Bay at three distances (0, 500, and 1000 m) from the desalination plant discharge point.

		St1	St2	St3
Distance from outfall	m	0	500	1000
Coordinates		27°04′02″ S	27°04′25″ S	27°04′13″ S
		70°51′8.6″ W	70°51′20″ W	70°51′21″ W
Depth	m	17	15	18
T	°C	15.28 ± 0.3	15.24 ± 0.2	15.25 ± 0.3
pH		7.34 ± 0.2	7.39 ± 0.1	7.84 ± 0.1
EC	µS/cm	82,330 ± 3130	55,530 ± 2652	52,790 ± 2673
TDS	mg/L	41.16 ± 3.3	27.76 ± 2.5	26.4 ± 2.8
Salinity	PSU	57.75 ± 3.8	36.9 ± 1.1	34.87 ± 0.5
DO	%	66 ± 2.4	62.2 ± 4.3	59.4 ± 3.1
Al	mg/kg	28,955.24 ± 5146.3	15,193.62 ± 4151.2	5307.12 ± 1280.7
As	mg/kg	205.87 ± 44.1	398.01 ± 57.9	278.14 ± 64.4
B	mg/kg	193.22 ± 12.8	288.1 ± 93.5	320.74 ± 33.7
Ba	mg/kg	156.65 ± 21.2	60.82 ± 49.7	73.19 ± 59.9
Bi	mg/kg	<0.02	<0.02	112.73 ± 26.7
Ca	mg/kg	107,440 ± 2201	158,659.6 ± 43,583	144,436 ± 54,628
Cr	mg/kg	79.07 ± 60.1	2.8 ± 3.2	13.62 ± 5.3
Cr(VI)	mg/kg	94.08 ± 63.2	12.95 ± 6.7	12.03 ± 9.8
Fe	mg/kg	14,981 ± 2644	5931 ± 966	4947 ± 163
Hf	mg/kg	1.2 ± 0.4	0.6 ± 0.8	0.6 ± 0.1
Ir	mg/kg	89.58 ± 10.7	166.71 ± 36.4	148.4 ± 57.9
K	mg/kg	207 ± 12	1487 ± 224	733 ± 162
Li	mg/kg	301.23 ± 3.2	280.22 ± 49.2	305.99 ± 43.5



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**Table 1.** *Cont.*

		St1	St2	St3
Mg	mg/kg	1747 ± 192	10,815 ± 1717	7865 ± 807
Mn	mg/kg	236.96 ± 30.1	93.8 ± 8.8	510.88 ± 612.1
Sn	mg/kg	<0.02	<0.02	3.48 ± 3.89
Sr	mg/kg	687 ± 25	1077 ± 218	904 ± 398
Ti	mg/kg	927.35 ± 86.1	583.33 ± 102.3	339.64 ± 87.7
Zn	mg/kg	<0.02	<0.02	46.14 ± 26.8
Zr	mg/kg	7.03 ± 0.6	6.68 ± 3.7	7.66 ± 9.4

These errors were due to data transcription and do not affect any conclusions.

### Additional Affiliations

In the published publication, there was an error regarding the affiliation(s) for Estefanía Bonnail and Yesenia Rojas-Lillo. The institutional affiliation of author Estefanía Bonnail should include an additional research center: Centro de Investigación para el Desarrollo Sustentable en Zonas Áridas (CRIDESAT), Universidad de Atacama, Avenida Copayapu 485, Copiapó 1530000, Chile. This addition reflects her dual institutional appointment and does not affect the interpretation or conclusions of the study.

The institutional name of Yesenia Rojas-Lillo is Departamento de Química y Biología, Universidad de Atacama, Avenida Copayapu 485, Copiapó 1530000, Chile.

### Text Correction

There was an error in the original publication. Electrical conductivity (EC) was expressed in  $\mu\text{S}/\text{cm}$ , total dissolved solids (TDSs) in  $\text{mg}/\text{L}$ , and salinity in PSU. This equivalence has been clarified in the revised Table 1 caption to avoid ambiguity.

All scientific names (e.g., *Heterozostera nigricaulis*, *Posidonia oceanica*) have been italicized for taxonomic consistency.

A correction has been made to the Section 4 Conclusions: in the originally published version, the sentence “. . .which far exceeds international thresholds, such as the 2 PSU limit applied in the EU WFD for sensitive coastal areas” was inaccurate. The 2 PSU thresholds do not originate from the EU Water Framework Directive itself, but from national environmental recommendations applied in Spain to protect sensitive marine habitats (*Posidonia oceanica* meadows) near desalination outfalls.

The corrected paragraph now reads as follows: This study demonstrates that brine discharge from a Caldera desalination plant significantly alters the marine environment in the immediate vicinity of the outfall. A marked increase in salinity was observed at St1 (57.75 PSU), representing more than a 20 PSU rise above ambient levels at 1000 m (34.87 PSU). This increase far exceeds several international recommendations for brine discharges. In RO plant monitoring programs in Spain, for example, along with brine discharge monitoring, critical salinity thresholds (38.5 PSU) are established through the control of protected species of high environmental value and the use of salinity-sensitive bioindicator species such as the seagrass *Posidonia oceanica*; this threshold is low regarding the salinity of the Mediterranean Sea (average 37.7 PSU) [22]. Such criteria illustrate the magnitude of the alteration recorded in Caldera Bay and highlight the need for region-specific regulatory thresholds in Chile.

The authors state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

## Reference

1. Bonnail, E.; Rojas-Lillo, Y.; DelValls, T.Á.; Cruces, E. Physicochemical Characterization of Desert Bay with Brine Discharge: A Case Study from Caldera Bay, Northern Chile. *J. Mar. Sci. Eng.* **2025**, *13*, 1199. [[CrossRef](#)]

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