Project Report

DPLUS206: A REPORT ON FARMER'S FRESHWATER MONITORING IN THE FALKLAND ISLANDS AND PRELIMINARY FINDINGS FROM STATELLITES IMAGES

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VERSION CONTROL

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Introduction

Freshwater is a limited resource essential for human survival and development [1]. Although water covers most of the Earth's surface, less than 3% of it is freshwater, and under 1% of that is easily accessible [2]– [5]. Climate change poses a significant threat to freshwater systems, yet its impacts remain poorly understood in data-scarce regions [6]. This lack of information challenges our ability to monitor changes and implement effective management strategies.

The freshwater resources of the Falklands cover a vast area, play a key role in the maintenance of aquatic and terrestrial biodiversity, in the hydrology of peatlands and the protection of their large carbon stores. Furthermore, they sustain water supplies for the economically important farming activities of the Falklands. A drying climate is a threat to the biodiversity, rural livelihoods, and carbon stores of the Falkland Islands. The causes of this unprecedented drying are unclear in the absence of baseline data but are likely a function of ongoing regional drought affecting a large part of South America (now over 10 years in duration and thought to be the most severe of the last millennium), and broader influences such as climate variability and evolving vegetation patterns [7].

The Freshwater Project (DPLUS206) was developed to investigate how climate change is affecting freshwater systems in the Falklands, past, present, and future. With water security emerging as a critical concern, this project seeks to fill knowledge gaps by combining remote sensing analysis (of soil moisture and surface water area) with hydrological modelling and field-based monitoring. These data are being used to assess freshwater availability, track environmental changes, and model potential future scenarios to identify which ecosystems and regions may be most at risk.

This report brings together two key strands of the project:

1) A survey of farmer's observations and lived experiences related to freshwater availability, water quality, and ecosystem changes.
2) A remote sensing assessment of spatial and temporal patterns in surface water area (1999-2025), and a soil moisture index (2016-2021), exploring the potential of satellite data to monitor national-scale freshwater dynamics.

The Freshwater Project is funded by the UK Government through the Darwin Plus programme and the Falkland Islands Government and delivered in partnership with the UK Centre for Ecology & Hydrology (UKCEH). The ultimate goal is to help make freshwater management on the islands more resilient to climate change.

As part of this effort, a farmer survey was conducted during Farmers Week 2025, gathering data on local water sources, seasonal changes, water quality, and ecosystem shifts. These firsthand insights are critical to grounding satellite analysis in local reality and ensuring future monitoring efforts are tailored to the needs of agricultural communities and land managers.

Objective

The overall aim of this project was to assess the current state of freshwater conditions in rural areas of the Falklands by combining local knowledge from farmers with satellite-based remote sensing data. This integrated approach aims to support better understanding and management of freshwater resources in a changing climate.

The specific objectives were to:

I. Collect qualitative and quantitative information from farmers regarding freshwater availability, ecosystem health, and local observations of environmental change.
II. Identify potential environmental stressors affecting freshwater systems, such as increased algal or weed growth and seasonal drying of ponds or streams.
III. Understand the role and reliability of freshwater resources in supporting agriculture and rural livelihoods, and how these are perceived to be changing.
IV. Assess spatial and seasonal patterns in soil moisture and surface water area using remote sensing datasets, including Sentinel-1 SAR, Sentinel-2 MSI, and the JRC Global Surface Water dataset.
V. Evaluate the alignment between farmer-reported trends and satellite-observed changes, to explore the potential for using Earth observation data in long-term freshwater monitoring.
VI. Contribute to the development of more resilient freshwater management strategies and policies, informed by both community experience and scientific data.

Summary Table of Survey Responses

The survey questions were designed as simple Yes/No responses, aligned with specific objectives for each question, as shown in Table 1. For Question 1-5, a "Yes" response indicates a positive (good) freshwater condition and was scored as 1. For Questions 6-9, a "No" response indicates a positive condition and was therefore reverse-scored (i.e., "No"=1, "Yes"=0). Responses were scored so that a value of 1 consistently represents a "Good" condition (either "Yes" = 1 for Q1–Q5 or "No" = 1 for Q6–Q9).

Table 1 Farmers Freshwater Monitoring with nine Yes/No questions on freshwater conditions.

#	Question	Yes =	No =
1	Do your ponds have water over summer?	✓ +1	✗ 0
2	Are waterfowl (or other native birds) present nearby?	✓ +1	✗ 0
3	Do you think freshwater in your area is good quality?	✓ +1	✗ 0
4	Are the surrounding plants green and healthy?	✓ +1	✗ 0
5	Do you rely on freshwater from ponds or streams for livestock or daily use?	✓ +1	✗ 0
6	Have you seen more algae or weed growth in your ponds in recent years?	✗ 0	✓ +1
7	Do you notice a difference in water levels from, season to season or year to year?	✗ 0	✓ +1
8	Do you think there is less freshwater available now than 10 years ago?	✗ 0	✓ +1
9	Have your ponds ever dried up completely?	✗ 0	✓ +1

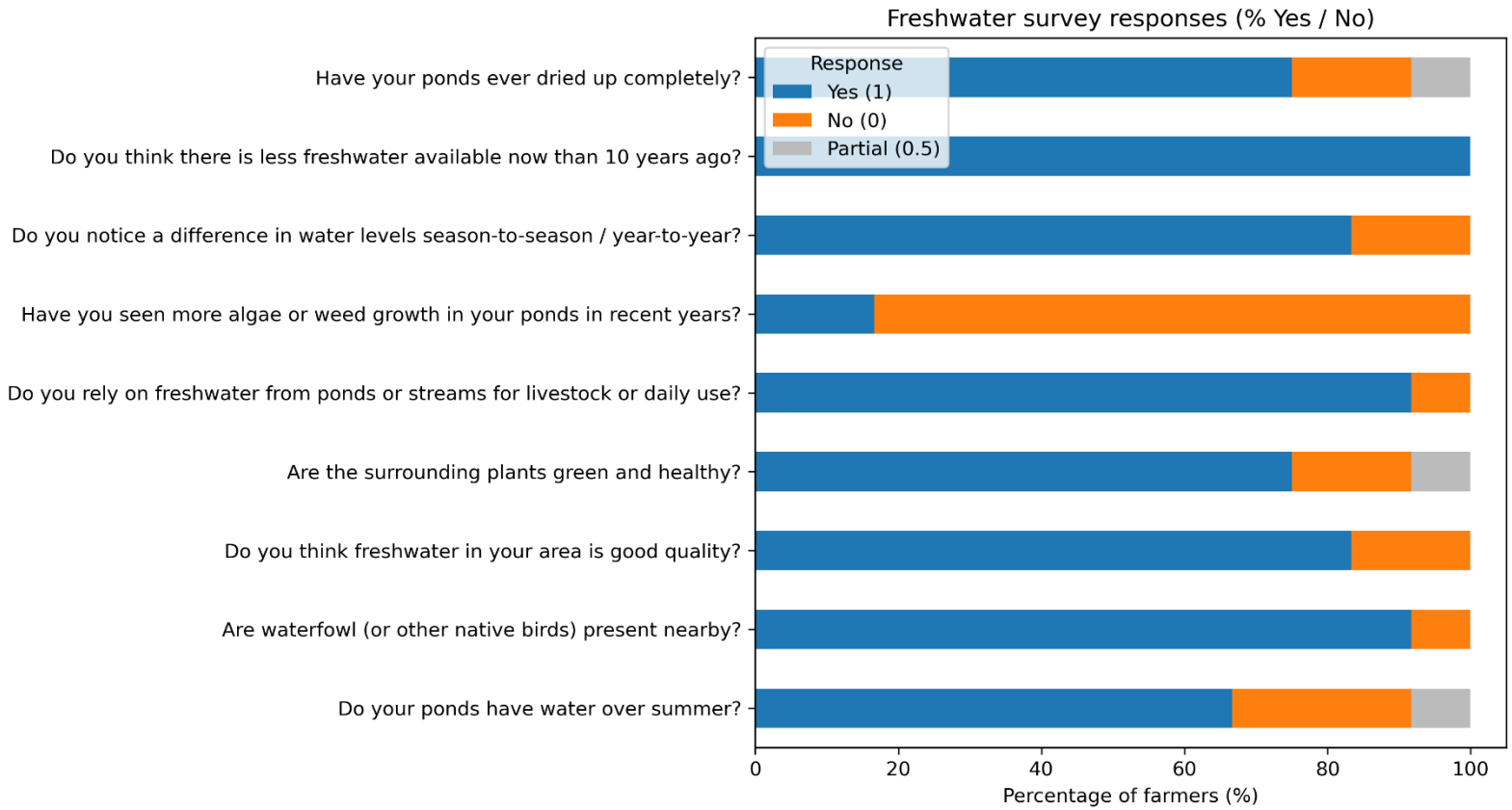

Figure 1 The percentage of Farmers' Freshwater Monitoring Survey Responses (Counts)

Results of Farmers Survey

The freshwater quality survey collected responses from 12 farmers on the state of their water resources. The following are key findings from the summarized data:

Positive Indicators

- **Biodiversity Presence:** 11 out of 12 farmers (92%) reported the presence of waterfowl or native birds, indicating healthy freshwater ecosystems.
- **Perceived Water Quality:** 10 out of 12 farmers (83%) believe that the freshwater in their area is of good quality.
- **Pond Water Availability:** 8 out of 12 (67%) confirmed that their ponds retain water during the summer months.
- **Vegetation Health:** 9 farmers (75%) observed that the surrounding plants were green and healthy.
- **Dependence on Natural Water Sources:** 11 out of 12 farmers (92%) reported relying on freshwater from ponds or streams for livestock or daily use.

Areas of Concern

- **Increased Algal/Weed Growth:** Only 2 farmers (17%) indicated that algae or weed growth had increased, while 10 (83%) indicated no increase.
- **Seasonal Water Variability:** 10 out of 12 farmers (83%) noticed changes in water levels from season to season or year to year.
- **Long-Term Decline in Freshwater:** All 12 farmers (100%) agreed that there is less freshwater available now compared to 10 years ago.
- **Pond Drying Events:** 9 out of 12 (75%) have experienced ponds completely drying up at some point.

Preliminary Findings from the Satellite Images

Surface Water Areas: Past and Present (1999–2021 & 2021–2025)

This section examines the spatial and temporal changes in surface water across East Falkland, West Falkland, and Lafonia from 1999 to 2025. The goal is to understand how ponds, wetlands, and other surface water bodies expand or contract over time and across seasons.

Data and Methodology

We utilized the Google Earth Engine (GEE) platform to estimate surface water area throughout the Falkland Islands. Historical water dynamics from 1999 to 2021 were derived from the Global Surface Water (GSW) Explorer dataset, developed by the European Commission's Joint Research Centre (JRC) under the Copernicus Programme, specifically the JRC Yearly Water Classification History (v1.4) (https://global-surface-water.appspot.com/map). For recent trends (2021–2025), we analysed imagery from the Harmonized Sentinel-2 MSI Level-2A (Surface Reflectance) dataset, provided by the European Union/ESA/Copernicus (https://developers.google.com/earthengine/datasets/catalog/COPERNICUS_S2_SR_HARMONIZED).

It is important to note the following limitations associated with satellite-derived data:

- This is a proof-of-concept analysis, not a fully validated hydrological model.
- Ground-truth validation is limited - only one water level monitoring site (Long Pond-Salvador) was available for comparison.
- Water extent is estimated, not directly measured, and reflects surface area changes, not depth or volume.
- Surface water variability is high and influenced by soil type, vegetation cover, topography, and human interventions, all factors not directly captured in this current study.

Water Changes in Past (1999-2021)

Using Landsat-derived JRC data, we assessed yearly water seasonality at 30 m resolution. The analysis shows a relative decrease in total surface water area across East Falkland, West Falkland, and Lafonia during this period (Figures 2- 4).

Due to the lack of in-situ water area or water level measurements, apparent trends should be interpreted cautiously. While they may suggest declining freshwater availability, such interpretations are provisional and require further field-based validation to confirm accuracy, particularly in peat-dominated and seasonally variable landscapes.

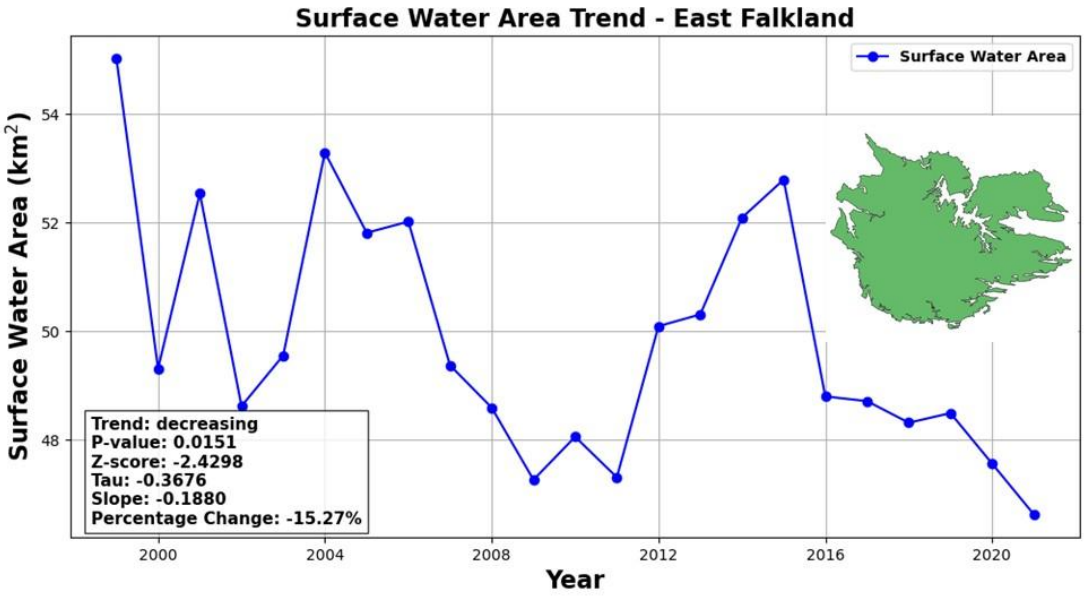

Figure 2 Yearly Surface Water Area (km²) from 1999 to 2021 in East Falkland

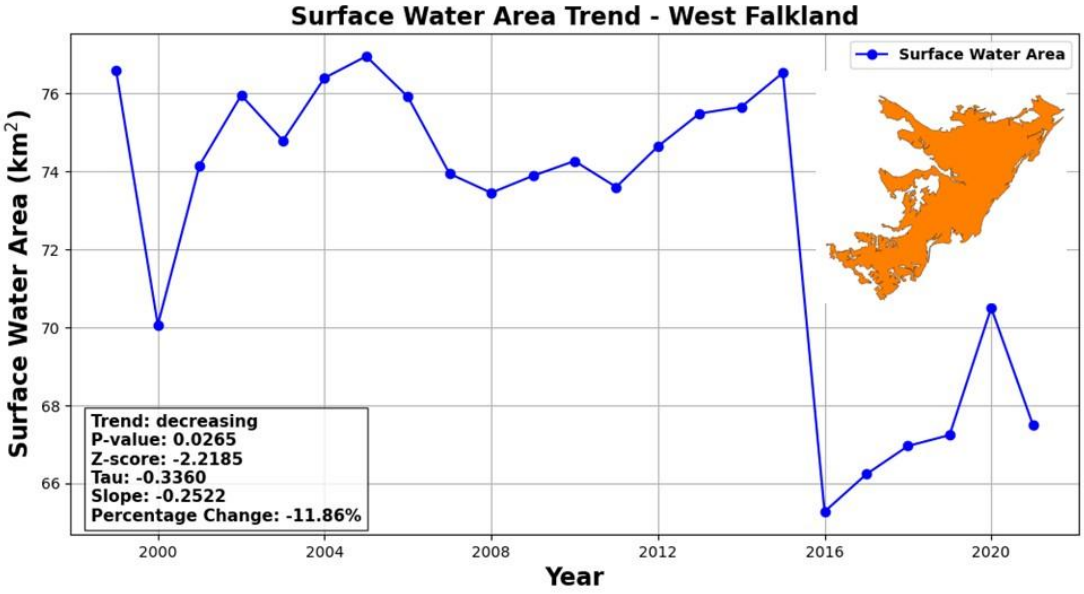

Figure 3 Yearly Surface Water Area (km²) from 1999 to 2021 in West Falkland

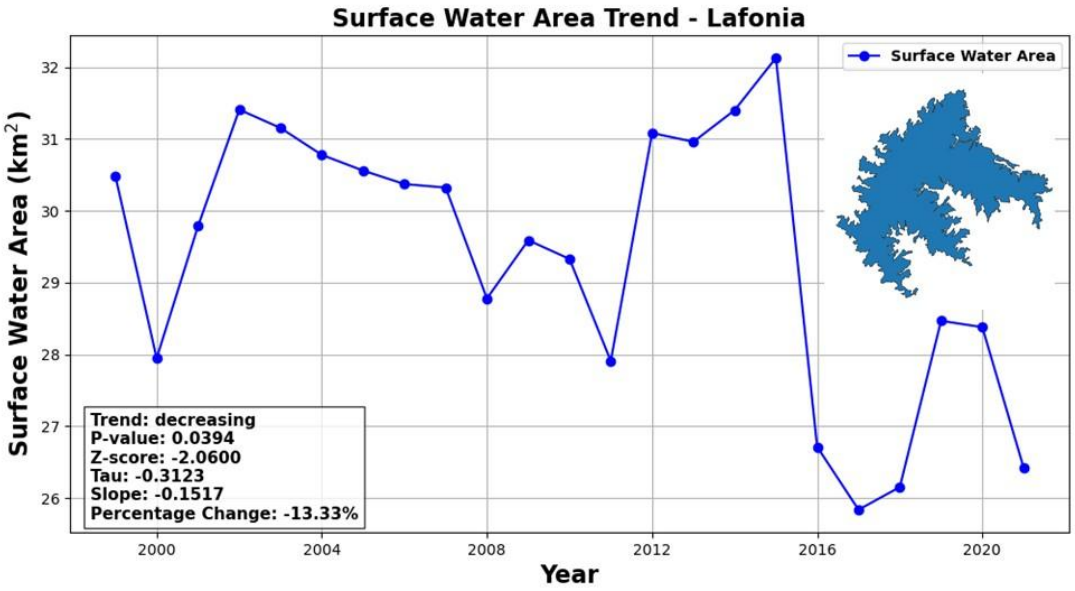

Figure 4 Yearly Surface Water Area (km^2) from 1999 to 2021 in Lafonia- Falkland

Water Changes in the Present (2021-2025)

Recent analysis using Sentinel-2 imagery from 2021 to 2025 reveals region-specific surface water dynamics across the Falkland Islands. Sentinel-2 is a wide-swath, high-resolution (10 m), multi-spectral imaging mission supporting Copernicus Land Monitoring services. It enables monitoring of vegetation, soil, and water cover, as well as inland and coastal water bodies, with a revisit interval of approximately five days.

Surface water trends from Sentinel-2 imagery (10 m resolution) were compared with ground-based water level data from one monitoring site (Long Pond-Salvador), where LevelSCOUT and BaroSCOUT sensors were installed since may 2021.

A strong correlation was observed between surface water area and maximum water level (water_level_max_m) during the period from May 2021 to July 2025, providing initial validation that the satellite-derived water area reflects hydrological conditions, at least at this one site.

Promising finding: Surface water area increases with rising water levels, in line with hydrological expectations.

Limitation: With only a single validation site, these findings cannot yet be generalized across the islands.

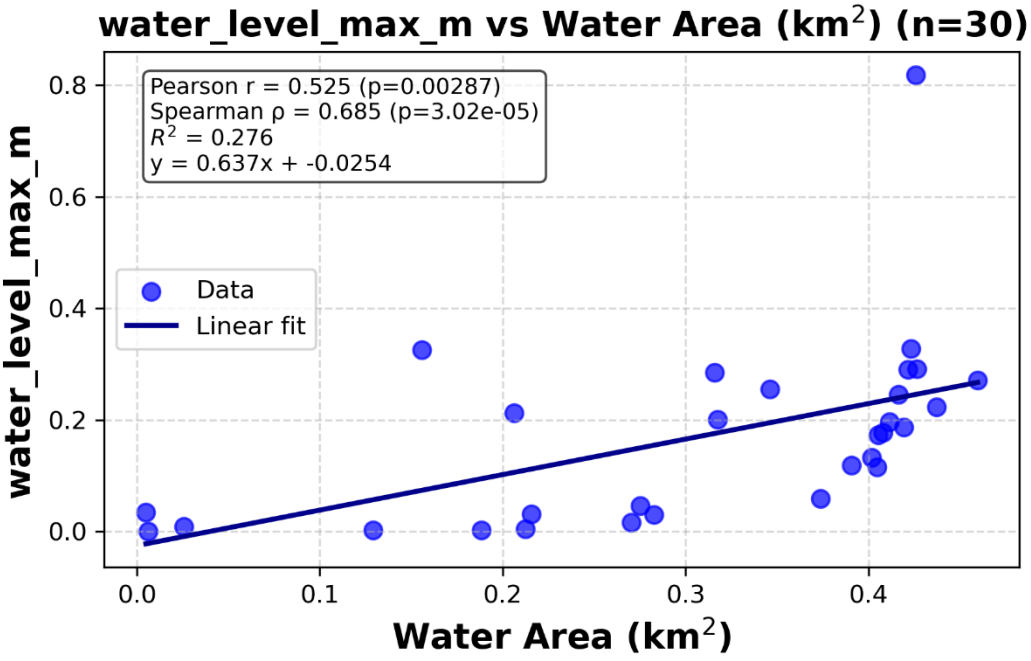

Figure 5 Correlation between Satellites-based water area (km^2) with maximum water level (m) by water loggers (2021-2025) at Long Pond in Salvador

Regional Trends (2021–2025) East Falkland

- No statistically significant trend in surface water area.
- Seasonal fluctuations were minor, suggesting relatively stable hydrological conditions or efficient drainage (Figure 6).

West Falkland

- A moderate increasing trend was observed, nearing statistical significance.
- This may suggest a slight rise in surface water presence, but further years of data and more ground-based validation are needed (Figure 7).

Lafonia

- This region showed the most dynamic surface water changes, with strong seasonal variability and the highest relative increase in surface water extent (Figure 8).

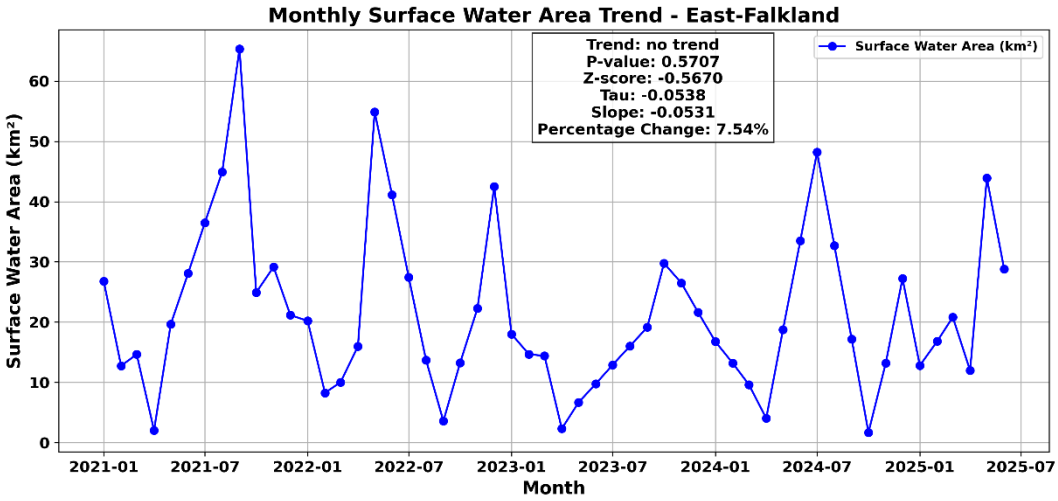

Figure 6 Sentinel-2 based Monthly Surface Water Area (km^2) from January 2021 to June 2025 across the East Falkland

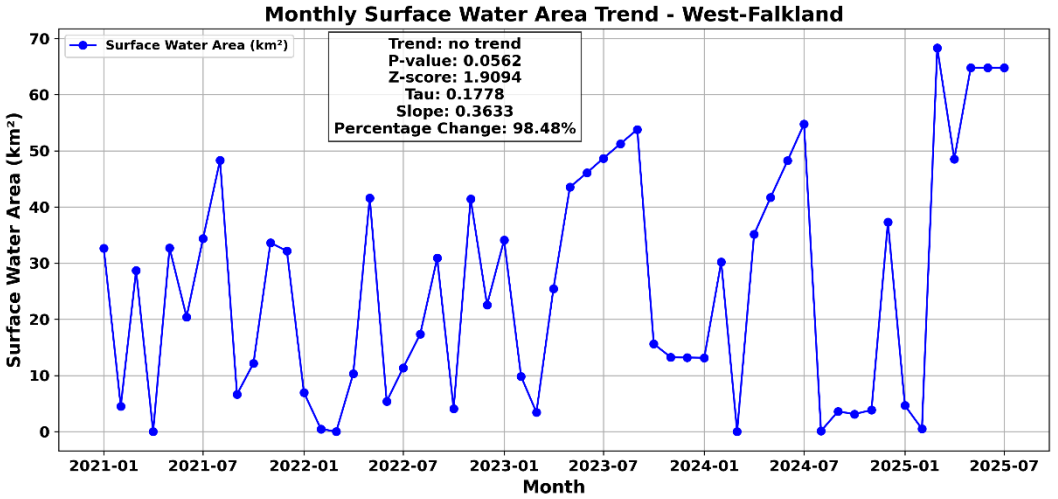

Figure 7 Sentinel-2 based Monthly Surface Water Area (km^2) from January 2021 to June 2025 across the West Falkland

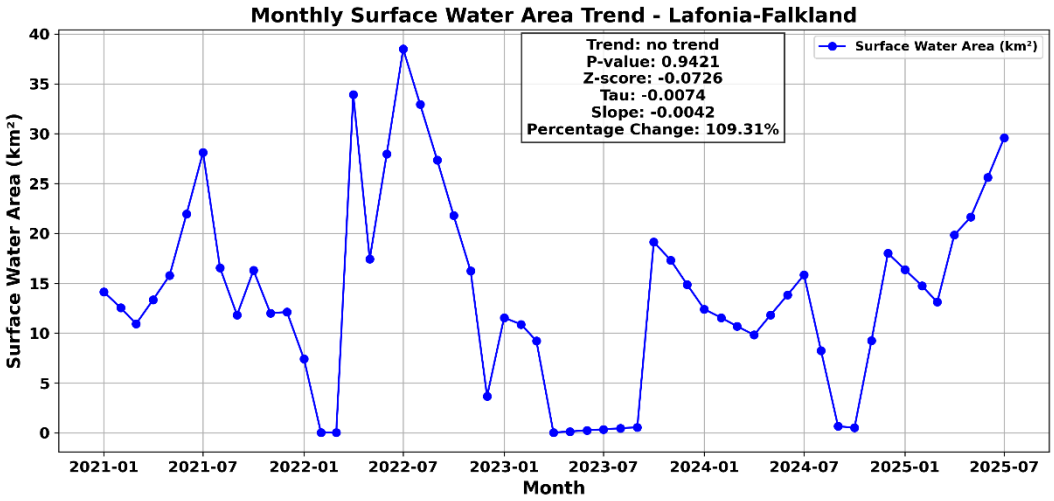

Figure 8 Sentinel-2 based Monthly Surface Water Area (km^2) from January 2021 to June 2025 across the Lafonia

Soil Moisture Index (2016-2021): A Proof-of-Concept Analysis Using Sentinel-1 SAR Imagery

We estimated soil moisture dynamics across the Falkland Islands using Sentinel-1 dual-polarized C-band Synthetic Aperture Radar (SAR) imagery from the European Union/ESA/Copernicus dataset (**COPERNICUS/S1_GRD**). A 10-day interval soil moisture index (SMI) was generated for the period July 2016 to December 2021.

Validation with Ground Soil Moisture Using Satellite-Derived Soil Moisture Index

TOMST soil moisture loggers have been operating in the Falkland Islands since February 2021, across a range of habitats including Astelia (A), Eroded (E), Intact (I), and Shallow Peat Grass (SPG) (Figure 10). Sentinel-1 Soil Moisture Index (SMI) data show variable agreement with these in situ measurements, depending on site characteristics.

A linear regression between Sentinel-1 SMI and TOMST volumetric soil moisture yielded coefficients of determination (R^2) ranging from 0.32 to 0.50, with Root Mean Square Errors (RMSE) between 0.23 and 0.60. The TOMST loggers are predominantly located in peat-dominated soils, which likely exhibit higher average volumetric moisture than Sentinel-1 estimates that integrate mixed peat and mineral soils within a 30 m pixel.

Despite these differences, Sentinel-1 data capture seasonal dynamics reasonably well when compared with ground observations. For example, at site (A4) shows strong correspondence between satellite- and ground-based measurements (Figure 10). The remaining discrepancies are likely driven by scale mismatches (point measurements versus 30 m satellite pixels), as well as local variations in soil properties and vegetation cover.

Figure 9 Locations of TOMST dataloggers across different habitats, installed as part of the Wetland Project (Dr. Stefanie Carter).

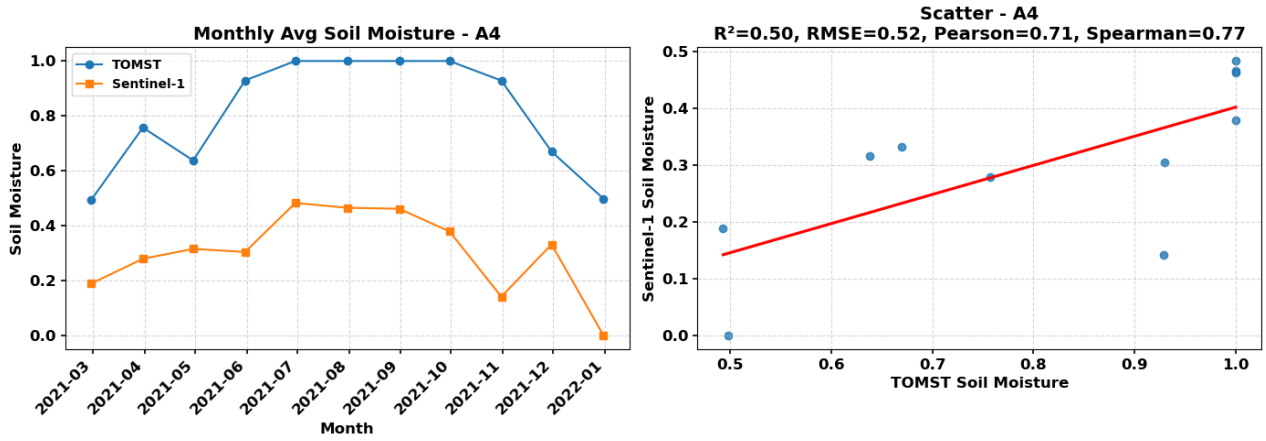

Figure 10 Time-series and correlation plots of Sentinel-1 Soil Moisture Index (SMI) and monthly average volumetric soil moisture measured by a TOMST datalogger at Astelia (A4) in Wireless Ridge

Important Caveats

This analysis should be considered a proof of concept, rather than a definitive account of soil moisture dynamics in the Falkland Islands. Several limitations constrain the interpretation of results:

- **Limited ground-truth validation**: While TOMST loggers provide valuable reference data, the SMI product has not been comprehensively calibrated or validated across the Falkland Islands as a whole. This reduces confidence in absolute accuracy, especially in heterogeneous landscapes and peat-dominated environments.
- **Relative, not absolute values**: The SMI represents relative fluctuations in soil moisture through time, rather than direct estimates of volumetric water content.

- **Restricted temporal coverage**: The analysis concludes in December 2021 and therefore does not encompass more recent conditions, including reported periods of drought.
- **Short observational record**: The dataset covers only five and a half years, insufficient for robust assessment of interannual variability or long-term climate or hydrological trends.

While these caveats highlight the provisional nature of the findings, the analysis nonetheless offers important first insights into spatial and seasonal soil moisture variability across the Falkland Islands. In particular, it demonstrates the potential value of combining satellite-derived indices within situ measurements to improve understanding of soil hydrological processes in remote peatland systems.

Key Observations (Relative SMI Trends)

East Falkland

- Driest summer (relative SMI): 2019
- Wettest winter: 2021
- Winters appear to be getting wetter since 2018
- Seasonal moisture recovery (transition from dry to wet periods) has shown a gradual improvement

West Falkland

- Overall upward trend in soil moisture index
- Driest summer: 2017; Wettest winter: 2020
- Seasonal difference between dry and wet periods appears to be narrowing

Lafonia

- Summer soil moisture indices have improved, with 2020 showing the highest values
- Winters continue to show relatively high moisture
- 2019 marked the most pronounced seasonal moisture recovery

Other Islands

Weddell Island

- Slight upward trend in soil moisture index
- However, recovery from dry periods appears to be weakening

Saunders Island

- Higher summer soil moisture index observed in recent years
- Winter levels remain relatively stable and elevated

Bleaker Island

- Summer moisture has increased relative to 2017
- Winter indices slightly lower, with a weakening seasonal recovery trend

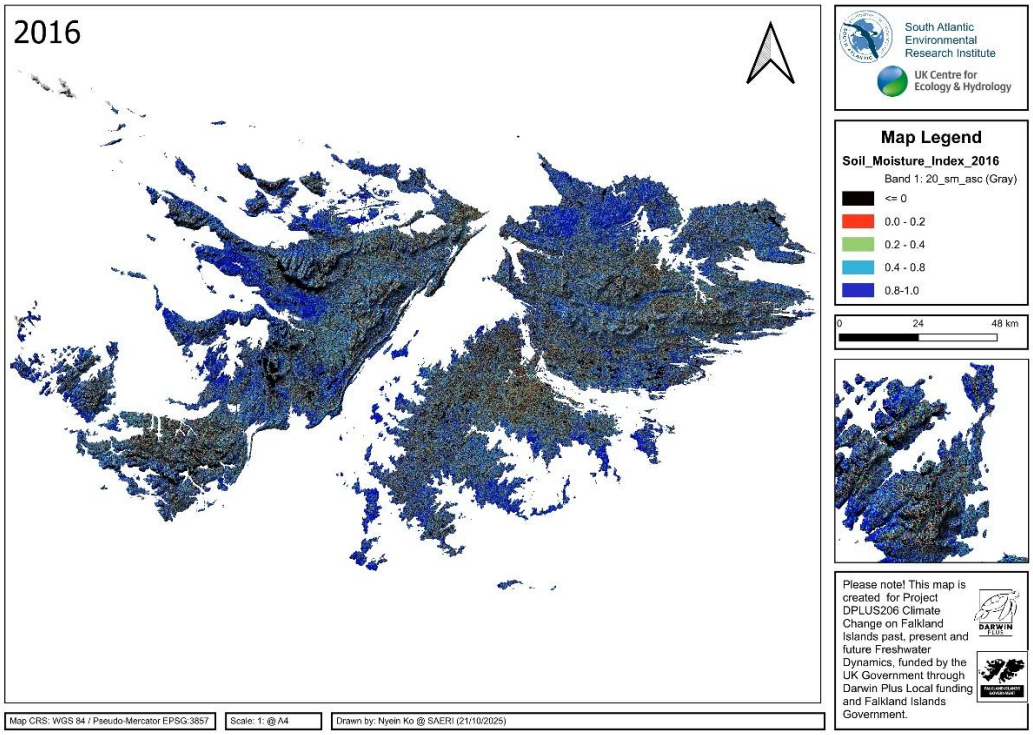

Figure 11 Map of soil moisture index for 2016 using Sentinel-1

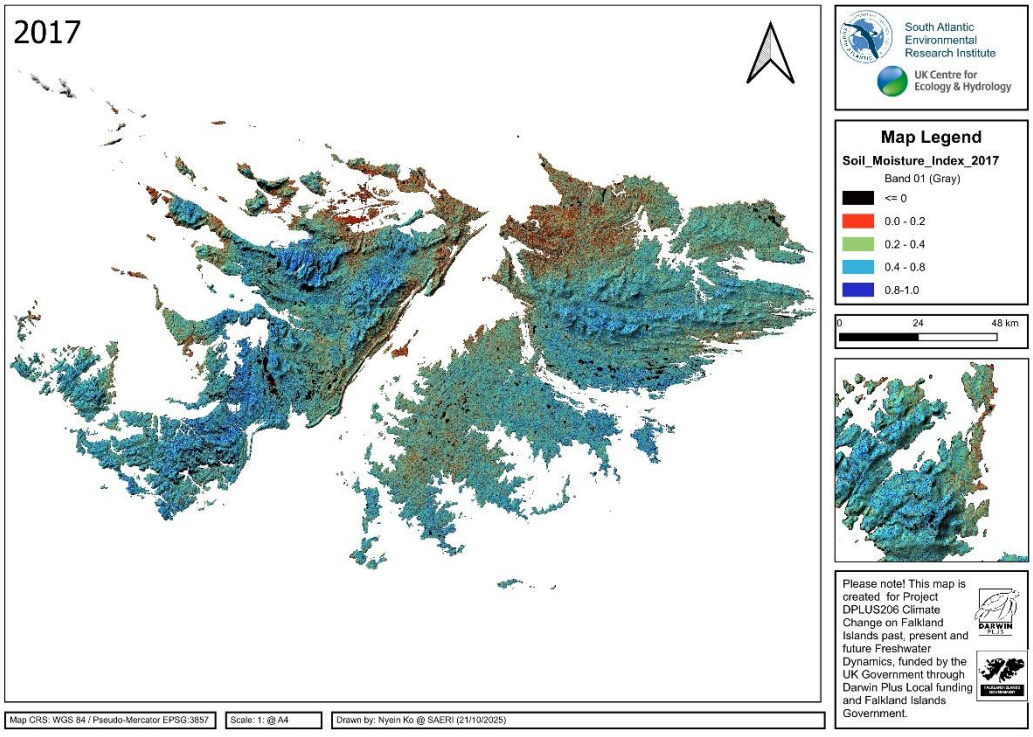

Figure 12 Map of soil moisture index for 2017 using Sentinel-1

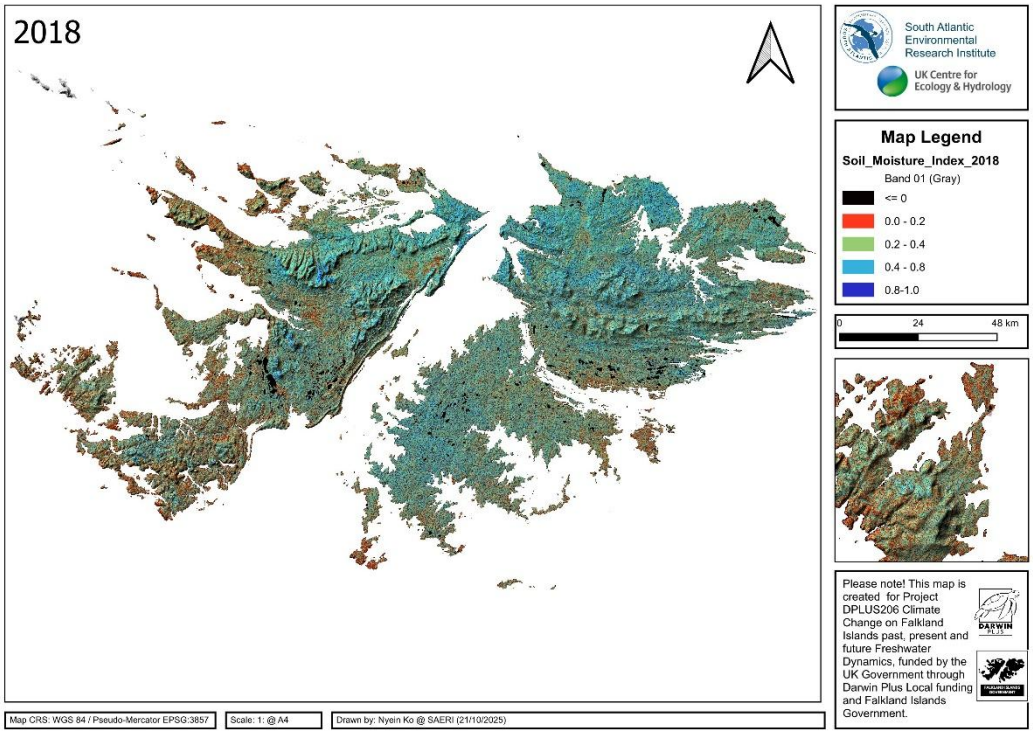

Figure 13 Map of soil moisture index for 2018 using Sentinel-1

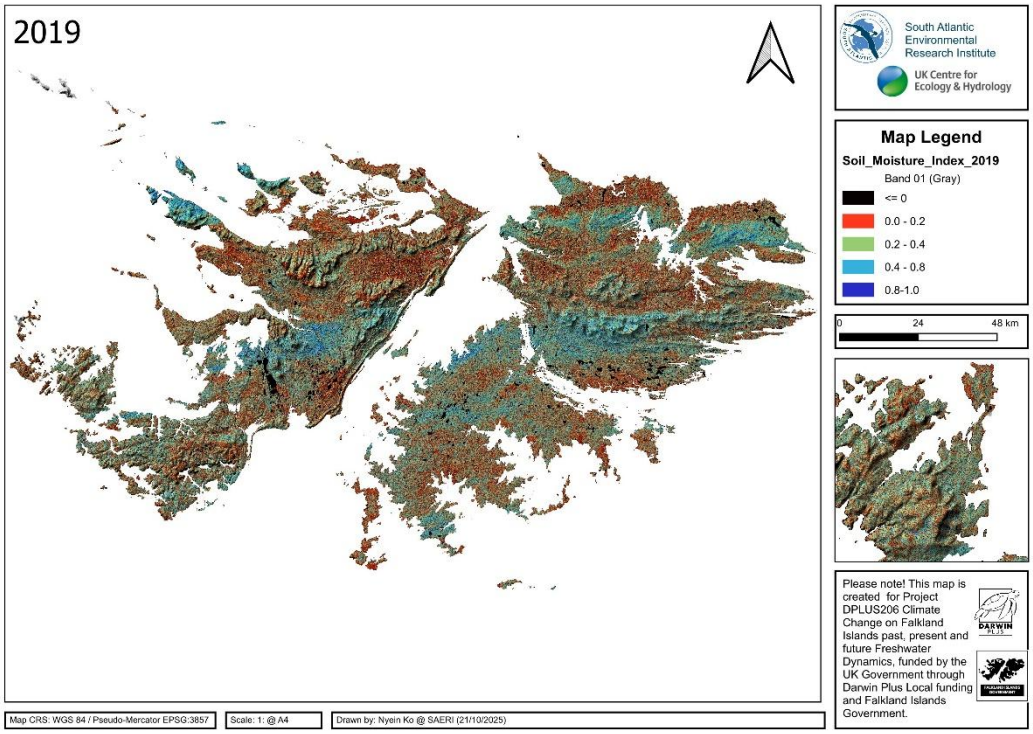

Figure 14 Map of soil moisture index for 2019 using Sentinel-1

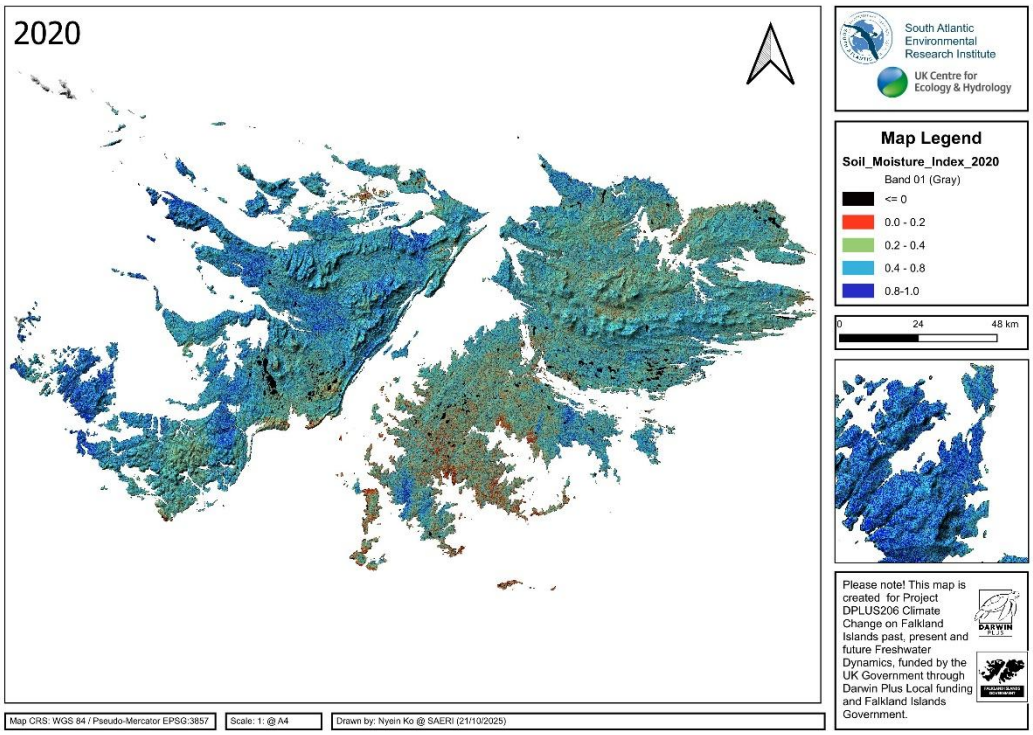

Figure 15 Map of soil moisture index for 2020 using Sentinel-1

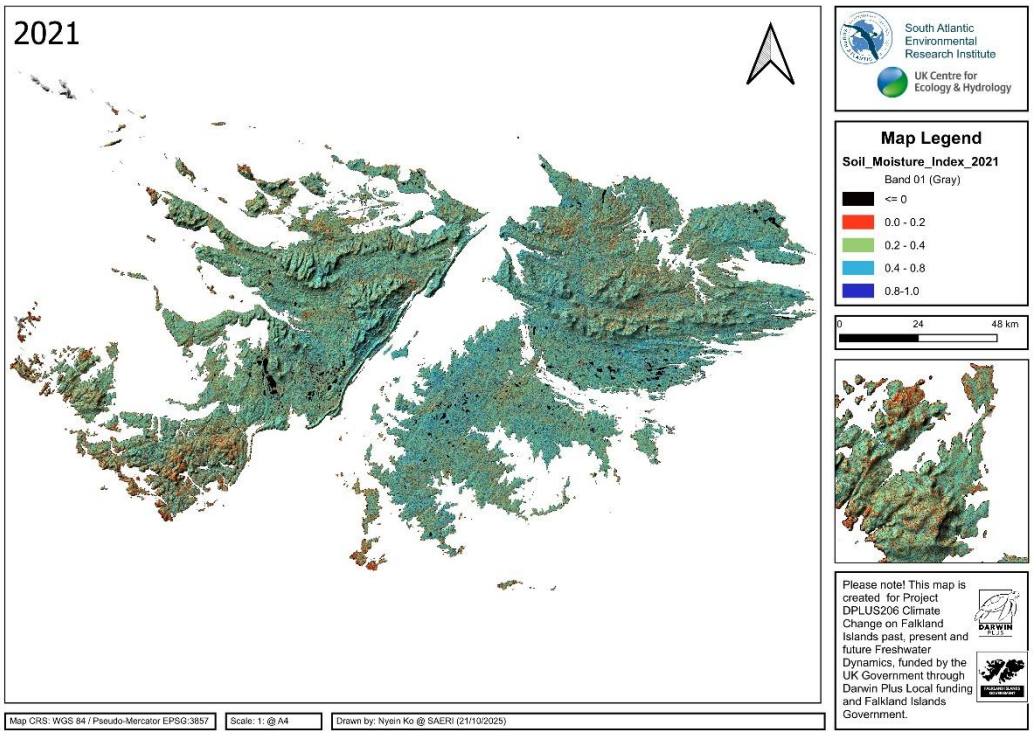

Figure 16 Map of soil moisture index for 2021 using Sentinel-1

Discussion: Interpreting Satellite Observations Alongside Farmer Experiences

Survey responses from farmers across the Falkland Islands point to growing concern about freshwater availability, seasonal variability, and water quality. While some ecological indicators (e.g. observed birdlife or vegetation) suggest partial resilience, concerns about drying ponds, algae growth, and seasonal shifts were consistently reported.

Satellite-based soil moisture index (2016–2021) and surface water area analyses (1999–2025) provide preliminary, spatially consistent data that can help contextualize these experiences. However, it's essential to frame these findings as indicative rather than conclusive, given the lack of baseline ecosystem data, limited ground validation, and the fact that the most recent dry years are not included.

Caveats and Cautions

This analysis should be interpreted as a proof of concept rather than a definitive assessment of soil moisture conditions. Key considerations include:

- **Relative measure**: The soil moisture index provides a relative indicator rather than a direct measurement of absolute soil moisture.
- **Limited validation**: Ground validation of soil moisture data remains limited, and surface water extent has been validated at only one site.
- Much of the data ends in 2021 and therefore excludes several extremely dry recent years reported by farmers.
- We currently lack baseline data on aquatic ecosystem health prior to recent drought events, making it difficult to assess change over time.

Given these limitations, strong conclusions about long-term trends or ecological resilience are not justified at this stage.

Seasonal Water Variability: Patterns Match Expectations

All surveyed farmers reported strong seasonal variation in water availability. Satellite data supports this observation:

- Soil moisture index shows typical seasonal recharge patterns, wetted winters, drier summers, especially in East Falkland and Lafonia.

- Surface water area follows similar seasonal patterns, with larger extents in winter months and minimum values during summer.

These observations are consistent with expected hydrological dynamics in temperate climates and may explain reported summer shortages, though they do not confirm any unusual deviation from historical norms.

Drying and Surface Water Loss: Some Alignment with Observations

A majority (75%) of farmers noted that ponds had dried out completely in recent years. This perception aligns with low summer surface water areas observed during key years, e.g., 2019 in East Falkland and 2017 in West Falkland, both among the driest periods in the satellite record.

That said, we cannot confirm long-term drying without more complete data, and it would be premature to assume permanent changes in water body function based solely on these indices. Additionally, surface water extent alone does not confirm depth, volume, or ecological function, all of which would require field-based assessment.

Water Quality and Algal Growth

Farmers reported increases in algae and weed growth, commonly interpreted as symptoms of shallow, warming ponds. These conditions are plausible under reduced summer surface water and lower soil moisture index values, but such changes cannot be directly measured via the datasets used here.

Some preliminary hydrochemical research by [9] suggests that threshold changes in pond function may already be occurring, further underscoring the need for integrated, multidisciplinary water monitoring.

Ecosystem Resilience: Mixed and Unclear

Some farmers reported ongoing presence of wetland bird species (e.g., teal), and 75% observed healthy vegetation. However, it's important to avoid generalizing this as evidence of resilience. Other species such as black-headed swans appear to have declined or disappeared, and there is currently no baseline dataset for wetland ecosystem health to compare against.

While some seasonal "recovery" in soil moisture is visible (i.e., winter recharge following dry summers), this is expected in such environments and does not indicate a long-term improvement in hydrological or ecological condition.

Summary: A Starting Point, not a Conclusion

Satellite-derived observations provide a useful spatial overview of water-related patterns across the Falkland Islands, but this work is exploratory, not definitive. It offers some alignment with reported seasonal dryness and pond variability, but cannot yet confirm the extent, duration, or ecological impact of these changes.

Next Steps

We explored satellite datasets and hydrological modelling to investigate surface water area, soil moisture index, and the flow dynamics of Falkland Rivers. While satellite tools offer significant potential for spatial and temporal monitoring, the accuracy and relevance of these methods depend on robust, ground-based validation.

To strengthen the connection between satellite-derived insights and real-world hydrology, we plan to expand in-situ monitoring infrastructure across a wider range of locations, including ponds, lakes, and rivers. This includes the planned deployment of water level loggers (LevelSCOUT and BaroSCOUT) to capture continuous measurements of surface water fluctuations.

These field observations will provide critical ground-truth information for model calibration and validation in future studies. We will combine water level data with local rainfall and temperature data from the Falkland Islands Government/Department of Agriculture (FIG/DOA) weather stations to enhance our ability to validate satellite observations, improve hydrological models, and support better forecasting of water availability. Combined with local rainfall and temperature records, this multi-source approach will help us:

- Better understand seasonal and inter-annual freshwater variability,
- Calibrate remote sensing models for improved accuracy,
- And identify potential hydrological thresholds or shifts.

Monitoring freshwater resources through satellite and ground-based data can:

- Support drought preparedness and early warning systems,
- Inform wetland and biodiversity conservation, and
- Guide livestock watering and land-use planning.

This project also highlights the critical role of farmer observations, which provide on-the-ground context that is vital for interpreting data and prioritizing areas for further monitoring.

We are especially grateful to the landowners and community members who contributed their knowledge and allowed access for sensor installation. Their ongoing support is essential to developing a resilient, evidence-based approach to freshwater resource management across the Falkland Islands.

References

[1] K. Tockner, "Freshwaters: Global distribution, biodiversity, ecosystem services, and human pressures," in *Handbook of water resources management: Discourses, concepts and examples*, Springer, 2021, pp. 489–501.

[2] H. Qadri and R. A. Bhat, "The concerns for global sustainability of freshwater ecosystems," *Fresh water pollution dynamics and remediation*, pp. 1–13, 2020.

[3] S. Ahuja, *Handbook of water purity and quality*. Academic press, 2021.

[4] F. R. Rijsberman, "Water scarcity: Fact or fiction?" *Agricultural water management*, vol. 80, no. 1-3, pp. 5–22, 2006.

[5] W. Musie and G. Gonfa, "Fresh water resource, scarcity, water salinity challenges and possible remedies: A review," *Heliyon*, vol. 9, no. 8, 2023.

[6] M. Kernan, R. W. Battarbee, and B. R. Moss, *Climate change impacts on freshwater ecosystems*. John Wiley & Sons, 2011.

[7] B. I. Cook, J. E. Smerdon, E. R. Cook, *et al.*, "Megadroughts in the common era and the anthropocene," *Nature Reviews Earth & Environment*, vol. 3, no. 11, pp. 741– 757, 2022.

[8] Pekel JF, Cottam A, Gorelick N, Belward AS. High-resolution mapping of global surface water and its long-term changes. Nature. 2016;540(7633):418–22.

[9] Carter S, Evans CD, Flower RJ, Stroud DA, Thompson JR. Falklands wetlands and aquatic habitats: baselines for monitoring future change. Indicator monitoring report. 2022. Available from: https://nora.nerc.ac.uk/id/eprint/532710.

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