BBVA Research

From Drought to Deluge: Spain's Uneven Hydrological Turnaround

Spain began 2026 with persistent storms, making it one of the wettest Januarys in decades. Reservoirs rebounded quickly, easing drought pressures, boosting hydro output and softening marginal electricity prices. However, unevenly distributed water gains, both geographically and over time, highlight hydroclimatic volatility as increasingly relevant to Spain's outlook.

Francis, Goretti, Harry, Ingrid, Joseph, Kristin, Leonardo, Marta, Nils, Oriana and Pedro.
Since the turn of the year, Spain has experienced an unusually dense succession of named storm systems tracking across the Iberian Peninsula. According to the Agencia Estatal de Meteorología (AEMET)[1] January 2026 brought 119.3 mm of average precipitation over peninsular Spain, equivalent to 185% of the 1991 to 2020 climatological norm. This places the month among the wettest January readings in the historical record.

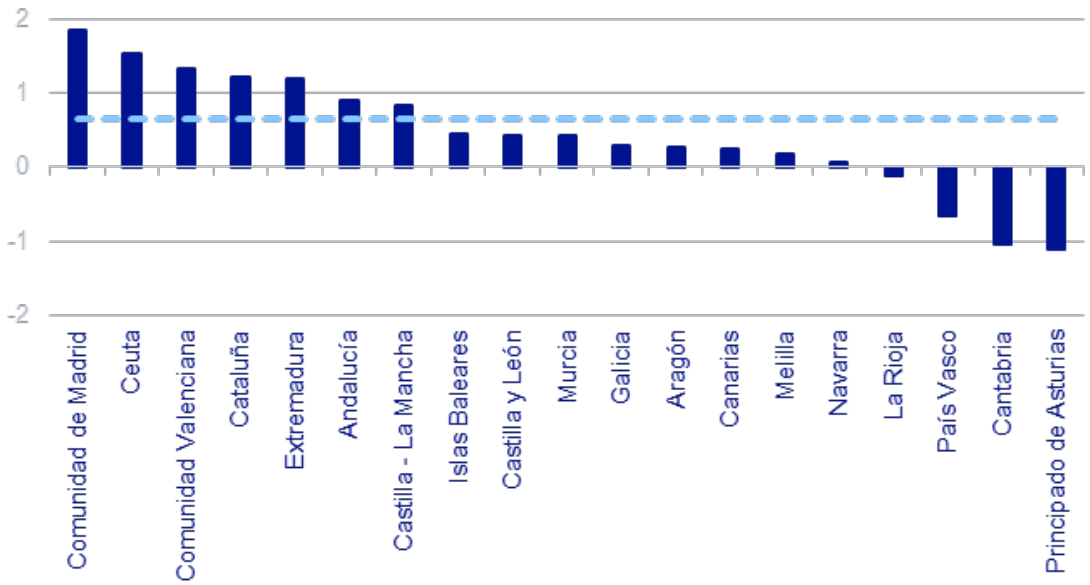
Although the sequence of disturbances has delivered substantial precipitation at the national level, its geographical footprint has been markedly asymmetric. Excessive accumulated rainfall since January has mainly affected large parts of Andalucía, Extremadura, Castilla-La Mancha and sections of the Mediterranean coast, particularly Comunidad Valenciana and Murcia. By contrast, parts of Galicia and the Cantabrian range have recorded more limited gains.

Figure 1, which reports the deviation of the January 2026 Standardised Precipitation–Evapotranspiration Index (SPEI)[2] from the average January for the 1991-2020 period, reinforces this asymmetry. The light blue dashed line represents Spain as a whole, providing a national benchmark against which regional outcomes can be compared. Southern and interior regions display clear positive anomalies, indicating a rapid shift towards wetter-than-normal conditions in drought terms. Cantabria, Asturias and País Vasco, however, show negative deviations relative to their own historical norms. The south to north gradient is therefore evident not only in rainfall totals but also in a water-balance metric that incorporates evaporative demand.

1: National climate advance for January 2026

2: The SPEI (Standardized Precipitation-Evapotranspiration Index) is a multiscalar drought index that utilizes climatic data. It is basically the balance between water that has fallen and water that has evaporated in the territory in question; therefore, its determining factors are temperatures and rainfall patterns

Figure 1. Standardised Precipitation-Evapotranspiration Index
(January 2026 deviation with respect to average January for the period 1991-2020)



Source: BBVA Research from ERA5–Drought: Global drought indices based on ECMWF reanalysis.
Note: Higher values represent a wetter SPEI value than the usual in January, and negative values represent drier SPEI values than the usual in January. The dashed light blue line represents the January deviation with respect to the average January for Spain.

What stands out is not only the accumulated rainfall, but its growing intensity and concentration. AEMET notes that between mid-December and mid-February, Grazalema recorded more than 3,000 mm of precipitation in just 60 days (an unprecedented national, even European, figure for such a period) while the October 2024 DANA delivered over 500 mm in barely three hours in Valencia, setting a new short-duration record. **More broadly, over the past eight years, virtually all national precipitation records for timescales shorter than three months have been broken, underscoring a clear rise in hydroclimatic volatility**[3].

The hydrological consequences have been immediate. According to the Ministerio para la Transición Ecológica y el Reto Demográfico (MITECO), at the end of December 2025, the Spanish water reserve stood at 56.3% of total capacity[4]. For comparison, in February 2025 the Spanish water reserve stood at 57.9% of capacity, broadly in line with the levels recorded in December 2025 and far below the figures observed in February 2026. In less than two months, Spain moved from aggregate storage levels slightly above one half of total capacity to more than four fifths. Such an adjustment represents an exceptionally rapid replenishment of reservoirs and a substantial easing of short-term drought pressures at the national level.

However, national averages conceal important basin-level differences. The improvement in storage has been stronger in systems directly exposed to Atlantic inflows and southern storm tracks, whereas historically stressed south-eastern basins remain structurally more

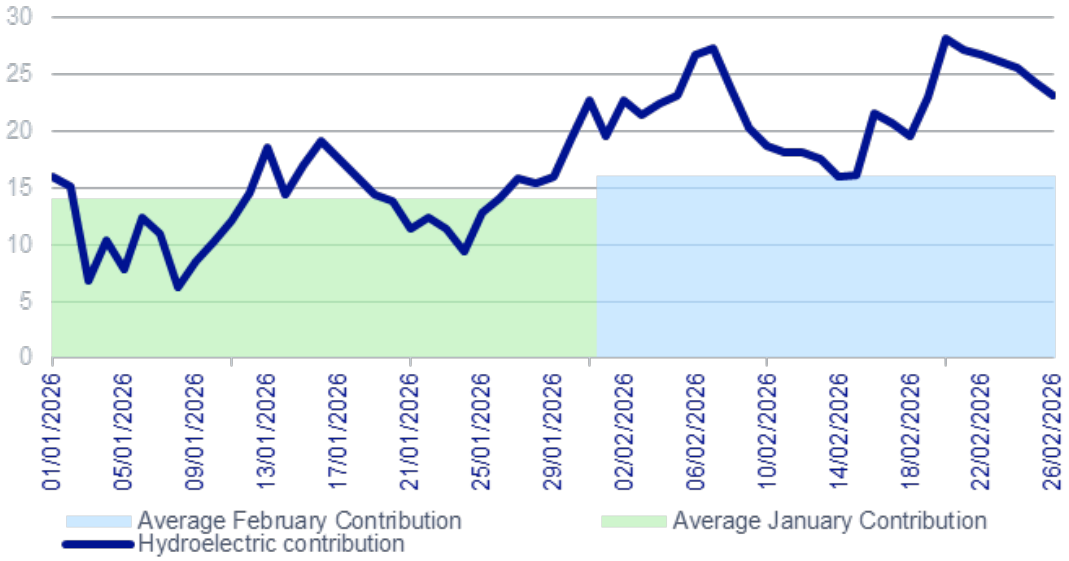
3: While a warmer atmosphere holds more moisture, experts note that local factors like orography, warmer surrounding seas, and repeating storm systems (convective trains) amplify these extreme events far beyond what basic thermodynamic models predict. Consequently, rainfall records will likely continue to be shattered as global temperatures approach 2°C of warming. Reference: ¿Una nueva era de récords de precipitación en España?

4: Find the reference for February 2025 here, December 2025 here and for February 2026 here.

vulnerable. The episode therefore illustrates a broader pattern of hydroclimatic volatility, characterised by rapid transitions from scarcity to abundance, rather than a uniform normalisation of water risk across the territory.

The precipitation shock has also propagated quickly into Spain's electricity system. The contribution of hydroelectric generation has risen markedly since the second half of January, moving well above its historical averages. **Figure 2** shows that the average daily contribution of hydropower to total generation is currently significantly above the January norm and, on several days, has exceeded typical February levels. The hydro share has recently approached 30% of total electricity generation, compared with historical mid-teens averages for this period.

Figure 2. Daily contribution of hydroelectric generation to total electricity generation (in %)



Source: BBVA Research from Red Eléctrica.
Note: The mean contribution for both January and February is computed using the available data since 2013.The dark blue line represents the daily contribution of hydroelectric generation to total electricity generation. The light green shaded area represents the average historical January contribution. The light blue shaded area represents the average historical February contribution. Last observation: 26/02/2026

This increase reflects both improved reservoir inflows and the operational flexibility of hydro generation, which allows producers to adjust output rapidly when water availability increases. From a market perspective, higher hydro penetration contributes to lower marginal generation costs given its near-zero variable cost structure. All else equal, this exerts downward pressure on wholesale prices, compresses clean spark spreads and strengthens short-term system stability.

The impact, however, is not purely mechanical. Spain's day-ahead market operates under an opportunity-cost pricing framework in which storable technologies such as hydro and pumped storage optimise output intertemporally. Generators bid not only on contemporaneous marginal costs but also on the expected value of water over time. When reservoir inflows rise materially, the opportunity cost of releasing water declines. This incentivises hydro operators to

increase participation across a broader set of hours, thereby raising the probability that hydro bids influence marginal price formation and reducing the frequency with which combined cycle gas turbines, and therefore natural gas prices, determine clearing prices.[5]

In this sense, abundant water availability can temporarily shift the short-term pricing regime away from gas-indexed marginality towards hydro-influenced price formation. The episode demonstrates how climatic shocks can reshape not only price levels but also the transmission channels through which global energy markets feed into domestic electricity prices.

From a physical climate perspective, the early-2026 episode is consistent with the IPCC assessment that heavy precipitation intensity tends to increase with warming, broadly tracking the atmosphere's rising moisture-holding capacity, estimated at approximately 7% per degree Celsius of global warming. Observational evidence indicates that the frequency and intensity of heavy precipitation events have increased over a majority of land regions with adequate data coverage.

For Spain and the wider Mediterranean, this reinforces a two-sided adaptation challenge: the region faces elevated risks of both drought and flooding, alongside substantial exposure of infrastructure, settlements and agricultural production. A wet spell can therefore simultaneously improve short-term drought indicators and water storage while increasing near-term hazard exposure, particularly where soils are already saturated.[6]

The early-2026 episode illustrates that hydroclimatic variability is increasingly relevant for Spain. Rapid swings in water availability might propagate quickly into electricity prices, sectoral performance, especially in agriculture and tourism, and overall, impact on regional risk profiles[7]. In that sense, the recent storms represent not only a weather event but a clear example of how climate volatility is increasingly influencing economic dynamics.

5: More details can be found in this report: Spain | Reaping the Benefits of Renewable Energy in the Spanish Economy. BBVA Research, February 14 2025.
6: AR6 Climate Change 2021: The Physical Science Basis - Chapter 11
7: Spain | Heavy rainfall weighs on consumption in Andalusia | BBVA Research. February 13, 2026.

Highlights of the Week

Global	The IEA Ministerial Meeting underscores Agency's central role in tackling global energy challenges. Ministers deliver expanded mandates on critical minerals and build institutional ties with key countries around the world including Brazil, Colombia, India and Viet Nam.
Global	Reframing Energy for the Age of Electricity | Ember. We need to count energy from the perspective of the consumer in order to understand the changes sweeping the energy sector. There are four battles in the energy system and electrotech is set to win three of them.
Global	Artificial Intelligence in Climate and Sustainable Finance: A Blessing or a Curse?. While AI can enable a green transition, there are financial and ethical concerns that need to be addressed with robust governance, regulatory oversight, and institutional awareness to ensure that AI acts as a catalyst for financial stability and sustainable development
Europe	Overcoming structural barriers to the green transition. Looking ahead, the policy effort to foster the green transition should be viewed not only as an environmental necessity but also as an economic strategy.

DISCLAIMER

The present document does not constitute an “Investment Recommendation”, as defined in Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (“MAR”). In particular, this document does not constitute “Investment Research” nor “Marketing Material”, for the purposes of article 36 of the Regulation (EU) 2017/565 of 25 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive (MIFID II).

Readers should be aware that under no circumstances should they base their investment decisions on the information contained in this document. Those persons or entities offering investment products to these potential investors are legally required to provide the information needed for them to take an appropriate investment decision.

This document has been prepared by BBVA Research Department. It is provided for information purposes only and expresses data or opinions regarding the date of issue of the report, prepared by BBVA or obtained from or based on sources we consider to be reliable, and have not been independently verified by BBVA. Therefore, BBVA offers no warranty, either express or implicit, regarding its accuracy, integrity or correctness.

This document and its contents are subject to changes without prior notice depending on variables such as the economic context or market fluctuations. BBVA is not responsible for updating these contents or for giving notice of such changes.

BBVA accepts no liability for any loss, direct or indirect, that may result from the use of this document or its contents.

This document and its contents do not constitute an offer, invitation or solicitation to purchase, divest or enter into any interest in financial assets or instruments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.