

Weather Forecasting Services Market Forecasts to 2032 – Global Analysis By Forecasting Type (Nowcasting (0–6 hours), Short-range Forecasting (1–3 days), Medium-range Forecasting (4–10 days), and Long-range Forecasting (10+ days)), Service Type, Organization Size, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Weather Forecasting Services Market is accounted for \$3.00 billion in 2025 and is expected to reach \$5.80 billion by 2032 growing at a CAGR of 9.9% during the forecast period. Weather forecasting services analyse atmospheric data to predict upcoming weather conditions using tools like satellites, radars, computer simulations, and meteorological instruments. By tracking factors such as temperature, wind, rainfall, and air pressure, they generate both short-range and extended forecasts. These predictions are vital for industries including farming, aviation, shipping, energy, and disaster preparedness. Reliable forecasts improve decision-making, reduce weather-related risks, ensure safety, and enhance operational efficiency across numerous economic and environmental sectors.

According to the U.S. Department of Agriculture's Foreign Agricultural Service, drought conditions negatively impacted milling yields. As a result, private sector rice stocks dropped sharply by 21% in June 2024 compared to the previous year, reaching 1.56 million MT, the lowest level since 1999.

Market Dynamics:

Driver:

Increasing frequency of extreme weather events

The rising incidence of severe weather phenomena such as hurricanes, floods, and heat waves is intensifying the demand for advanced forecasting solutions. Governments and enterprises are investing in predictive analytics to mitigate climate-related risks and improve disaster preparedness. Enhanced satellite imaging, radar systems, and IoT-based sensors are enabling real-time data capture across geographies. As climate volatility escalates, sectors like agriculture, aviation, and energy are relying more heavily on hyperlocal forecasts. Emerging technologies such as ensemble modelling and climate simulation platforms are improving forecast accuracy and lead times. This surge in environmental unpredictability is propelling innovation and adoption across the weather services ecosystem.

Restraint:

High infrastructure and operational costs

Building and operating satellite networks, ground-based radar stations, and high-performance computing clusters can be prohibitively expensive for smaller providers. Integration of AI, machine learning, and cloud-based analytics adds complexity to system architecture and operational workflows. Regulatory compliance, data licensing, and cybersecurity protocols further inflate costs and slow down scalability. Emerging players often face barriers due to limited access to skilled personnel and high upfront technology costs. These financial and technical constraints can hinder market expansion and delay service modernization.

Opportunity:

Integration of AI and machine learning

Predictive algorithms are enhancing model precision, enabling faster and more granular insights into weather patterns. AI-driven platforms are automating anomaly detection, storm tracking, and climate trend analysis across sectors. Cloud-native architectures and edge computing are facilitating scalable, real-time forecasting for remote and urban regions alike. Startups and incumbents are collaborating to develop intelligent dashboards and decision-support tools tailored for agriculture, logistics, and emergency response. This digital transformation is unlocking new revenue streams and reshaping the competitive landscape of weather services.

Threat:

Data security and intellectual property risks

Sensitive geospatial data, proprietary algorithms, and client-specific insights are vulnerable to cyberattacks and unauthorized access. The integration of third-party APIs and cloud platforms introduces additional exposure points in the data pipeline. Regulatory frameworks around data sovereignty and cross-border information sharing are evolving but remain fragmented. Companies must invest in encryption, access controls, and compliance audits to safeguard their digital assets. Without robust cybersecurity strategies, providers risk reputational damage and operational disruptions.

Covid-19 Impact

The pandemic disrupted field operations, delayed infrastructure projects, and strained global supply chains for weather instrumentation. Lockdowns hindered the deployment of sensors and maintenance of forecasting stations, impacting data continuity. However, the crisis accelerated the adoption of remote sensing, cloud-based modeling, and virtual collaboration tools. Agencies and enterprises turned to automated forecasting platforms to maintain service delivery amid workforce constraints. Post-Covid strategies now emphasize resilience, digital redundancy, and decentralized data collection across the forecasting value chain.

The data collection & processing segment is expected to be the largest during the forecast period

The data collection & processing segment is expected to account for the largest market share during the forecast period, due to its foundational role in enabling accurate forecasts. This segment encompasses satellite telemetry, ground-based sensors, and ocean buoys that feed raw data into predictive models. Advances in big data analytics, sensor miniaturization, and cloud integration are enhancing data throughput and quality. Governments and private players are expanding sensor networks to capture hyperlocal and real-time weather metrics. Automation in data cleaning, normalization, and fusion is improving model reliability and operational efficiency.

The agriculture & forestry segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the agriculture & forestry segment is predicted to witness the

highest growth rate, driven by the need for climate-resilient farming and resource management. Precision agriculture is leveraging weather insights to optimize irrigation, pest control, and crop scheduling. Forestry operations are using predictive models to manage wildfire risks and biodiversity conservation. Integration of mobile apps, satellite imagery, and AI-based advisory tools is empowering rural stakeholders with actionable forecasts. Governments are launching agri-tech initiatives and subsidies to promote weather-informed decision-making. As climate variability threatens food security, this segment is witnessing rapid digital transformation and service uptake.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share supported by large-scale investments in meteorological infrastructure and disaster resilience. Countries like China, India, and Japan are expanding satellite coverage and upgrading radar networks to improve regional forecasting capabilities. Government-backed modernization programs are fostering domestic innovation and reducing reliance on imported technologies. The region is witnessing increased adoption of AI-powered weather platforms across agriculture, transportation, and urban planning. Strategic alliances between global tech firms and local agencies are accelerating technology transfer and service deployment.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, fuelled by technological leadership and robust R&D investments in climate science. The U.S. and Canada are pioneering next-gen forecasting tools, including AI-enhanced models, smart weather stations, and predictive analytics platforms. Regulatory bodies are streamlining data-sharing protocols and supporting innovation through public-private partnerships. Enterprises are integrating weather intelligence into logistics, insurance, and energy operations to improve risk management. Cloud-native solutions and IoT-enabled sensors are driving real-time, location-specific forecasting across industries.

Key players in the market

Some of the key players profiled in the Weather Forecasting Services Market include AccuWeather Inc., Spire Global Inc., The Weather Company (IBM), Climavision, DTN LLC, The Tomorrow Companies Inc., StormGeo (Alfa Laval), Foreca Ltd, Met Office (UK), Pelmorex Corp., Vaisala Oyj, Precision Weather Services, Fugro, AEM, and

ENAV S.p.A.

Key Developments:

In September 2025, AccuWeather announced a new partnership with Life360. Through the partnership, Life360 members will begin receiving real-time severe weather alerts, personalized to their location, helping families prepare, respond, and stay connected through the chaos of severe weather.

In July 2025, Spire Global, Inc. announced the expansion of its Space Reconnaissance portfolio with new radio frequency (RF) geospatial intelligence (GEOINT) capabilities. Designed to support both U.S. and international missions, the enhanced offering delivers persistent monitoring, real-time geolocation, and multi-layered situational awareness.

Forecasting Types Covered:

Nowcasting (0–6 hours)

Short-range Forecasting (1–3 days)

Medium-range Forecasting (4–10 days)

Long-range Forecasting (10+ days)

Service Types Covered:

Data Collection & Processing

Meteorological Consulting

Real-time Weather Alerts

Custom Forecasting Solutions

Climate Risk Analytics

Organization Sizes Covered:

Large Enterprises

Small & Medium Enterprises (SMEs)

End Users Covered:

Agriculture & Forestry

Aviation

Energy & Utilities

Transportation & Logistics

Government & Defense

Media & Consumer Applications

Construction & Infrastructure

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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