

Urban Flood Prediction Sensor Grids

ANMD-MRS28-279 · Smart City & Infrastructure AI

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Urban flood prediction sensor grids combine water-level and flow sensors, rainfall and weather sensors, and flood-prediction AI models to provide early warning and real-time situational awareness across urban catchments. By forecasting and detecting flooding before it peaks, they enable timely alerts, asset protection and coordinated emergency response in an era of intensifying extreme rainfall. This report is a comprehensive, decision-grade study of that market across sensor type, prediction-model type, application, end user, business model and deployment scale, spanning history 2020–2024, a 2025 base year, a 2025–2032 forecast and long-term outlooks to 2035, 2040 and 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

The sustainability and resilience case is the report's backbone. Beyond monitoring, flood sensor grids deliver measurable disaster-risk reduction, asset protection and life-safety lead time, strengthening the climate-resilient-cities story. The analysis applies double materiality, maps outcomes to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, and links contributions to SDGs 11, 13 and 6. Equitable coverage, false-assurance risk, data governance and cybersecurity are treated as material risks — with greenwashing and SDG-washing screens applied throughout.

Mapped Sustainable Development Goals:

| | | |
|---|---|--|
| <p>SDG 11 Sustainable Cities</p> | <p>SDG 13 Climate Action</p> | <p>SDG 6 Clean Water & Sanitation</p> |
|---|---|--|

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

| | | | |
|--|---------------------------------------|--|---------------------------------------|
| <p>53 Chapters</p> | <p>9 Report Parts</p> | <p>7 Regions Covered</p> | <p>40+ Country Markets</p> |
| <p>2025–32 Forecast Horizon</p> | <p>4 Forward Scenarios</p> | <p>25+ Companies Profiled</p> | <p>3 SDGs Mapped</p> |

MARKET OVERVIEW

Urban flood prediction is moving from gauge-based monitoring to AI-driven, grid-wide forecasting.

Demand is driven by climate-intensified flooding, resilience funding and early-warning mandates. The market is read two ways — value and units (sensor nodes / monitored catchments), with catchment coverage as a maturity lens — forecast under conservative, base, accelerated and disruption scenarios, every projection resolved to the 2025 base year and each region reported separately rather than folded into Rest of World.

- Asia Pacific leads exposure-driven demand, anchored by monsoon-and-typhoon flood risk across dense, low-lying metros.
- Europe scales on resilience policy, where flood directives and climate-adaptation funding drive sensor-grid investment.
- North America advances on early warning, with urban-flooding and stormwater programmes expanding prediction networks.
- Sensor and model segment the value, across water-level, rainfall and AI-prediction layers, and across catchment, district and citywide grids.

REGIONAL OUTLOOK

Across the seven reporting regions, the report separates deployment leaders from high-growth and emerging markets, profiling named country sub-markets, policy regimes and project pipelines in each. Latin America, Africa and the Middle East are assessed on their own merits — never aggregated into Rest of World — and every forecast resolves to the 2025 base year.

| Region | Stage | Lead Country Markets & Drivers |
|---------------|---------------------|--|
| Asia Pacific | Exposure leader | India, China, Japan — monsoon and typhoon flood risk, dense metros |
| Europe | Resilience-policy | UK, Netherlands, Germany — flood directives, adaptation funding |
| North America | Early-warning scale | United States, Canada — urban-flooding and stormwater programmes |
| Latin America | Emerging | Brazil, Colombia — urban-flood early-warning systems |
| Africa | Frontier | Kenya, South Africa — flood early-warning, donor finance |
| Middle East | Frontier | UAE, Saudi Arabia — flash-flood monitoring, megaproject resilience |

KEY MARKET DRIVERS & RESTRAINTS

| Drivers | Restraints |
|--|---|
| <ul style="list-style-type: none"> • Climate-intensified extreme rainfall • Resilience & adaptation funding • Early-warning & flood-directive mandates • Urban stormwater & drainage pressure • IoT, AI-modelling & weather-data maturity | <ul style="list-style-type: none"> • Model accuracy & false-alarm balance • Sensor durability in flood conditions • Data-integration with emergency systems • Sustained funding & maintenance • Cross-agency coordination & governance |

SEGMENTATION SNAPSHOT

| | |
|----------------------------|---|
| By Sensor Type | Water-level / flow · rainfall / weather · soil-moisture · camera-based |
| By Prediction Model | Statistical · hydrological · AI / ML · hybrid |
| By Application | Catchment · district · city-wide |
| By End User | City governments · emergency services · water utilities · disaster agencies |
| By Business Model | CAPEX purchase · SaaS / data-subscription · managed-service · outcome-based |
| By Deployment Scale | Pilot · district · citywide |

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 1. Scope, Methodology and Report Architecture
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- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

PART II — MARKET INTELLIGENCE, SIZING, FORECASTING AND SEGMENTATION

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COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans hydromet and flood-prediction vendors, platform specialists and integrated system providers. Profiled players include Vaisala Oyj, Xylem Inc., OTT HydroMet GmbH, Campbell Scientific, Inc. and Sutron Corporation. Other profiled names include FloodFlash Limited, Previsico Limited, One Concern, Inc., FloodMapp Pty Ltd and Worldsensing S.L. Deal activity — hydromet acquisitions, flood-AI partnerships and citywide early-warning contracts — signals a market organising around predictive, integrated resilience platforms. Investment intelligence spans venture, growth, infrastructure, climate and blended finance, green bonds and sustainability-linked loans, culminating in a bankability assessment and investment verdict.

KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global urban flood prediction sensor grids market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do technology and adoption shifts change value versus legacy approaches?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the category align with the SDGs and disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG and natural-capital intelligence and a decision-ready bankability verdict in a single architecture.

- **Triangulated sizing** — every market read three ways so value, volume and installed-base views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment verdict.

WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, hydromet and flood-prediction vendors, municipalities and disaster-management agencies, water and resilience authorities, insurers and lenders, regulators and policymakers, and corporate strategy and ESG teams — alongside strategic corporate planners and decision-makers.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.

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