+357 96 030922
info@marketpublishers.com

Environmental DNA Market by Type of Solution (Services, Products, Instruments & Platforms, Software & Data Analytics), Sample Type (Water, Soil, Sediment, Air, Biological Waste), Detection method, Application, and Region – Global Forecast to 2031

https://marketpublishers.com/r/E5D97AC6426AEN.html
Date: April 2026
Pages: 407
Price: US$ 4,950.00 (Single User License)
ID: E5D97AC6426AEN

Abstracts

The environmental DNA market is projected to reach USD 5.61 billion by 2031, from USD 1.63 billion in 2026, with a CAGR of 10.2%. The market is growing as newer testing methods make it simpler to detect species without having to capture or directly observe them. These approaches rely on genetic material present in water, soil, and air, allowing teams to track biodiversity more quickly and with less disruption to natural habitats. This makes them practical for both research activities and regulatory monitoring. Demand is rising because organizations need reliable data to track ecosystem health and identify invasive species. Government regulations around environmental monitoring are also becoming stricter, which is supporting adoption. Many projects are backed by public funding and academic research, while private labs are helping scale testing. Technology is also improving; sequencing tools, testing accuracy, and data analysis are getting better, especially for samples with very low DNA levels. At the same time, efforts to standardize methods are increasing. As the process of standardization advances and collaborations with stakeholders increase, the environmental DNA market remains evolving as an innovative tool for contemporary environmental management.

“The climate change impact assessment segment within the application category is expected to record a notable CAGR.”

The segment is gaining traction as organizations place more focus on measuring how climate change is affecting ecosystems over time. There is a growing need to track

+357 96 030922
info@marketpublishers.com

shifts in species presence, habitat conditions, and overall biodiversity in a consistent manner. This has increased the use of methods that allow repeat monitoring across locations. Environmental DNA is being used more frequently as it allows sample collection from water, soil, and sediment without intensive fieldwork. This makes it easier to run periodic studies and build comparable datasets over time. It is particularly useful in identifying gradual environmental changes that are not always visible through traditional methods. Government bodies, research institutions, and conservation groups are strengthening climate-related programs, where biodiversity tracking forms an important part of assessment. These efforts are expanding across regions, especially in sensitive ecosystems. As testing methods become more dependable and easier to deploy at scale, adoption is expected to increase.

“The air sample segment within the sample type category maintains strong growth.”

Growth in this segment is driven by wider use of air sampling for biodiversity monitoring. The method is non?invasive and easier to deploy. Water and soil samples are still the standard approach, but air sampling is now drawing interest because it can collect DNA from plants, animals, and microorganisms at the same time. Air?based sampling is especially useful in areas where fieldwork is difficult or expensive. Fewer sampling points are needed to cover large areas. This makes the method practical for long?term and repeat monitoring projects. Both natural and urban locations are now part of ongoing trials. Universities, research centers, and environmental agencies are increasing pilot programs to test performance and repeatability. These studies focus on data quality and consistency. Early results have been promising and are encouraging further use and refinement of the approach. As operating procedures become clearer and test results improve, confidence in air?derived DNA data is expected to rise.

“North America is a lucrative market for eDNA.”

North America represents a large portion of the environmental DNA market, driven by sustained research activity and early uptake of advanced testing techniques. The region also benefits from a mature laboratory base, which allows these methods to be applied at scale. Investment in environmental monitoring is well established, particularly among government agencies and research organizations that use environmental DNA for biodiversity studies, water quality analysis, and invasive species monitoring. In both the US and Canada, environmental DNA has moved beyond trial use and is now embedded in a range of conservation and monitoring programs. This shift is supported by defined regulatory structures and continued funding for ecological research. A strong presence of specialized service providers and technology firms further supports the market,

+357 96 030922
info@marketpublishers.com

helping ensure efficient processing and dependable analytical output. Ongoing collaboration between universities, environmental authorities, and private companies plays an important role in advancing the field. These partnerships contribute to method refinement and greater alignment in testing practices. As a result, project activity remains consistent across freshwater, marine, and terrestrial applications.

In-depth interviews were conducted with CEOs, directors, and other executives from various key organizations operating in the environmental DNA market:

By Company Type: Tier 1 – 25%, Tier 2 – 45%, and Tier 3 – 30%

By Designation: Directors – 20%, Managers – 50%, Executives – 30%

By Region: North America – 25%, Europe – 30%, Asia Pacific – 20%, South America – 15%, and Rest of the World –10%

Prominent companies in the market include Thermo Fisher Scientific Inc. (US), QIAGEN (Netherlands), Illumina, Inc. (US), Eurofins Scientific (Luxembourg), SGS Soci?t? G?n?rale de Surveillance SA (Switzerland), NatureMetrics (UK), EnviroDNA (Australia), EDNAtec (Canada), SPYGEN (France), ID-GENE ecodiagnostics Ltd. (France), Takara Bio Inc. (Japan), Stantec (Canada), Applied Genomics (UK), AllGenetics (Spain), and Jonah Ventures (US).

Other players include Cramer Fish Sciences (US), StarSEQ (Germany), Sinsoma GmbH (Germany), eDNA Metagenomics Inc. (US), eDNANature Ltd. (UK), Wilderlab NZ Ltd. (New Zealand), SimplexDNA (US), Biome Makers Inc. (US), Metagen (US), and Biomeme (US).

Research Coverage:

This research report categorizes the environmental DNA market by Type of Solution {Services [Sample Collection & Field Services, Laboratory Analysis, Sequencing services, Bioinformatics & Data Interpretation, End-to-End Project Studies], Products [Sampling Kits, DNA Extraction Kits, PCR Reagents (qPCR, ddPCR), Library Preparation Kits], Instruments & Platforms [PCR Systems (qPCR, ddPCR), Sequencing Platforms (NGS), Sample Processing Instruments], Software & Data Analytics [Bioinformatics Pipelines, Species Identification Databases, Monitoring & Reporting Platforms]}, Sample Type (Water, Soil, Sediment, Air, Biological waste), Detection

+357 96 030922
info@marketpublishers.com

Method [qPCR (quantitative Polymerase Chain Reaction), ddPCR (digital droplet PCR), Metabarcoding, Metagenomics, CRISPR-based Detection, Hybrid Methods (e.g., qPCR + NGS)], Application (Biodiversity Monitoring, Invasive Species Detection, Conservation Biology, Aquaculture & Fisheries, Water Quality Assessment, Climate Change Impact Assessment, Forensics & Compliance), and Region (North America, Europe, Asia Pacific, South America, Rest of the World). The report's scope encompasses detailed information on the major factors, including drivers, restraints, challenges, and opportunities, that influence the growth of the environmental DNA market. A detailed analysis of key industry players has been conducted to provide insights into their business overview, solutions, and services; key strategies; contracts, partnerships, and agreements. New product & service launches, mergers & acquisitions, and recent developments associated with the environmental DNA market have been included. This report also covers the competitive analysis of upcoming start-ups in the environmental DNA ecosystem.

Reasons to buy this report:

The report will help market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall environmental DNA and subsegments. It will also help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights into the following pointers:

1. In-depth Segmentation across Type of Solution, Sample Type, Detection method, and Application: This report offers an in-depth analysis of the environmental DNA market, categorizing by Type of Solution {Services [Sample Collection & Field Services, Laboratory Analysis, Sequencing services, Bioinformatics & Data Interpretation, End-to-End Project Studies], Products [Sampling Kits, DNA Extraction Kits, PCR Reagents (qPCR, ddPCR), Library Preparation Kits], Instruments & Platforms [PCR Systems (qPCR, ddPCR), Sequencing Platforms (NGS), Sample Processing Instruments], Software & Data Analytics [Bioinformatics Pipelines, Species Identification Databases, Monitoring & Reporting Platforms]}, Sample Type (Water, Soil, Sediment, Air, Biological waste), Detection Method [qPCR (quantitative Polymerase Chain Reaction), ddPCR (digital droplet PCR), Metabarcoding, Metagenomics, CRISPR-based Detection, Hybrid Methods (e.g., qPCR + NGS)], Application (Biodiversity Monitoring, Invasive Species

+357 96 030922
info@marketpublishers.com

Detection, Conservation Biology, Aquaculture & Fisheries, Water Quality Assessment, Climate Change Impact Assessment, Forensics & Compliance). Such detailed segmentation enables stakeholders to pinpoint high-growth areas, optimize product development, and strategically position offerings along the supply chain.

2. Region-specific Insights with Focus on Emerging Markets: The report provides country- and region-specific analysis, emphasizing opportunities in rapidly growing markets such as Asia Pacific, North America, Europe, and South America. It explores regional regulatory frameworks, key demand drivers, and investment trends, serving as a critical guide for companies pursuing expansion or localization strategies.

3. Competitive Intelligence and Innovation Landscape: Leading market participants, including Thermo Fisher Scientific Inc. (US), QIAGEN (Netherlands), Illumina, Inc. (US), Eurofins Scientific (Luxembourg), SGS Soci?t? G?n?rale de Surveillance SA (Switzerland), NatureMetrics (UK), EnviroDNA (Australia), EDNAtec (Canada), SPYGEN (France), ID-GENE ecodiagnostics Ltd. (France), Takara Bio Inc. (Japan), Stantec (Canada), Applied Genomics (UK), AllGenetics (Spain), and Jonah Ventures (US) are profiled in detail. The report covers recent developments such as new product launches, mergers & acquisitions, facility expansions, and R&D initiatives, helping users benchmark competitors and monitor emerging innovation trends.

4. Demand Forecasts Backed by Data-driven Methodologies: Market sizing and growth projections through 2031 are developed using a combination of top-down and bottom-up approaches, validated by industry experts, trade associations, and official government data. These insights provide reliable guidance for investment planning and market opportunity assessment in the environmental DNA sector.

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Environmental DNA Market by Type of Solution (Services, Products, Instruments & Platforms, Software & Data Analytics), Sample Type (Water, Soil, Sediment, Air, Biological Waste), Detection method, Application, and Region – Global Forecast to 2031

Product link: https://marketpublishers.com/r/E5D97AC6426AEN.html

Price: US$ 4,950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/E5D97AC6426AEN.html