

Sustainable Tactical Equipment

ANMD-MRS20-192 · Green Defense Technologies

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

Sustainable tactical equipment lightens the soldier's energy and logistics load through wearable power, energy harvesting and field life-support. Conformal batteries, solar films, power managers and water purification cut battery resupply, reduce carried weight and extend dismounted endurance across soldier power, communications power and water-purification missions. This decision-grade study sizes the global market three ways — value, unit volume and adoption — across category, power source and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond operational performance, this market delivers measurable battery-waste reduction, water security and resource self-sufficiency, while harvesting and reuse strengthen the circularity story.

Mapped Sustainable Development Goals:

SDG 6 Clean Water & Sanitation	SDG 7 Affordable & Clean Energy	SDG 12 Responsible Consumption & Production
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Measurable sustainability outcomes assessed:

- Battery-waste reduction and water security
- Resource self-sufficiency for dismounted troops
- Embodied carbon and end-of-life of cells and electronics as a material risk
- Dual-use export-control exposure assessed

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

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

REPORT COVERAGE

Geographic scope: North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. North America leads adoption; Europe scales on modernisation; Asia Pacific is the growth engine; other regions assessed on their own merits.

- Fewer batteries carried and lower resupply demand
- Conformal batteries, solar films, power managers and purifiers
- Self-sufficient power and water in the field
- Cell and electronics circularity and export-control as risks

MARKET OVERVIEW

From battery-heavy load to self-sufficient soldier — where harvested power and field water purification underpin endurance gains conventional gear cannot match.

Sustainable tactical equipment is moving from pilot to programme adoption. Demand is driven by the soldier energy burden, battery-logistics cost and the push for dismounted self-sufficiency across North America, Europe and Asia Pacific. The market is read three ways — value, unit volume and adoption — and forecast under four scenarios, each region reported separately.

- **North America leads adoption** — the United States and Canada, where soldier-power programmes and special-operations demand are most advanced
- **Europe scales on modernisation** — the United Kingdom, France and Germany, combining soldier-systems programmes with sustainability drivers
- **Soldier-load reduction is the differentiator** — fewer batteries, harvested power and field water purification underpin endurance gains conventional gear cannot match
- **Category and power source segment the value** — wearable power, solar/energy-harvesting and water & life-support, each with distinct economics

REGIONAL OUTLOOK

Across seven reporting regions, the report separates procurement leaders from high-growth and emerging markets — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Country Markets & Drivers
North America	Procurement leader	United States, Canada — operational-energy strategy, DoD programmes, allied demand
Europe	Fleet renewal	Germany, France, United Kingdom, Italy — NATO drivers, energy security, defense OEMs
Asia Pacific	Growth engine	South Korea, Japan, India, Australia — modernisation, domestic capability
Latin America	Emerging	Brazil, Chile — selective modernisation, cost-driven adoption
Africa	Frontier	Egypt, South Africa — peacekeeping, expeditionary support
Middle East	Frontier	Saudi Arabia, UAE, Israel — sovereign procurement, climate resilience

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
• Soldier energy & battery-logistics burden • Dismounted endurance & self-sufficiency demand • Special-operations & expeditionary requirements • Defense sustainability & waste-reduction goals • Wearable-power & energy-harvesting technology gains	• Power-density & ruggedisation limits • Cost premium vs disposable batteries • Qualification & soldier-acceptance cycles • Harvesting yield variability in the field • Supply security for cells, films & membranes

SEGMENTATION SNAPSHOT

By Category	Wearable power · energy harvesting · water & life-support
By Power Source	Battery · solar/PV · kinetic/thermal harvesting · hybrid
By Component	Conformal batteries · solar panels · power managers · filters
By End User	Dismounted infantry · special forces · logistics · allied forces
By Business Model	Hardware sale · SaaS · data · managed service
By Application	Soldier power · communications power · water purification

TECHNOLOGY & APPLICATION FINDINGS

Where the category is differentiating fastest — the technology and application fronts that separate leaders from followers:

- **Soldier power** — conformal batteries and central power managers cut carried weight and simplify charging for dismounted troops
- **Communications power** — harvesting and high-density storage sustain radios and sensors on extended missions
- **Water purification** — portable membrane and life-support systems reduce water resupply and improve field self-sufficiency

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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COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans established defense primes, specialist technology suppliers and turnkey integrators. Deal activity — soldier-power partnerships, harvesting pilots and special-operations procurements — signals a market consolidating around bankable, fieldable designs.

Representative players profiled in the full report:

Galvion Ltd. · Bren-Tronics, Inc. · Saft Groupe S.A. · Thales S.A. · Elbit Systems Ltd. · and 20+ further profiled players.

Investment intelligence: venture, growth, infrastructure and blended finance, green bonds and sustainability-linked instruments — culminating in a bankability assessment and a conditional investment view.

KEY QUESTIONS THIS REPORT ANSWERS

- How large is the global sustainable tactical equipment market, and how fast will it grow to 2032?
- Which regions, countries and programmes offer the strongest risk-adjusted opportunity?
- Which technologies and architectures reshape the addressable market and the cost curve?
- 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, operational-energy mandates 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, climate and natural-capital intelligence and a decision-ready bankability view in a single architecture.

- **Triangulated sizing** — every market read three ways so value, volume and the adoption view 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 programme 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 programme analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment view.

WHO SHOULD BUY THIS REPORT

Dismounted infantry, special forces, logistics commands, allied forces, soldier-systems suppliers, investors and policymakers, and 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.