

# STATE OF CLIMATE TECH Q3'23

---

A Net Zero Insights' quarterly analysis on global funding and deal activity in the private market venture space.

## KEY TAKEAWAYS

---

### **FUNDING REBOUNDS BUT DEAL ACTIVITY SLUMPS**

Q3 '23 on track to being the best funding quarter of 2023, but the deal drought persists.

### **BIG BOOST FOR ENERGY AND INDUSTRY**

Energy received the most funding in Q3 2023, while industry grew the fastest.

### **HIGHEST NUMBER OF \$1B+ EVER RECORDED**

Despite a two-quarter deal decline, substantial investments were ploughed into fewer deals.

### **STOCKHOLM AND LONDON HOTTEST HUBS**

This quarter, Stockholm secures prime spot in funding, while London reclaims top spot for deal activity.

### **PRE-SEED AND SEED DEALS SHARPLY DECLINE**

Compared to the other equity stages, pre-seed and seed deal activity sees sharpest decline.

### **MAJOR DEVELOPMENTS IN KEY REGIONS**

Africa and India hosted landmark summits, and Germany made major climate finance commitments.

# TABLE OF CONTENTS

---

<u>WHAT IS CLIMATE TECH?</u>	P. 06
<u>QUARTER SHAKER - RECORD HIGH OF \$1B+ DEALS; SEED ACTIVITY PLUMMETS</u>	P. 07
<u>THOUGHT LEADERS - SOPHIA ESCHEU FROM SPEEDINVEST</u>	P. 15
<u>THOUGHT LEADERS - KAI MALKWITZ FROM FOUNDER INSTITUTE</u>	P. 16
<u>BIRD'S-EYE VIEW - HISTORICAL QUARTERLY DATA</u>	P. 17
<u>INNOVATOR SPOTLIGHT - ADAM RAUWERDINK FROM BOSTON METAL</u>	P. 31
<u>INNOVATOR SPOTLIGHT - ROD COLWELL FROM CONTROLLED THERMAL RESOURCES</u>	P. 33
<u>QUARTER SPOTLIGHT - FOCUSING THE LENS ON Q3 2023</u>	P. 35
<u>INNOVATOR SPOTLIGHT - DANTE LUU FROM CARBON UPCYCLING</u>	P. 48
<u>REGIONAL FOCUS - MAJOR DEVELOPMENTS IN Q3 2023: GERMANY</u>	P. 51

# TABLE OF CONTENTS

---

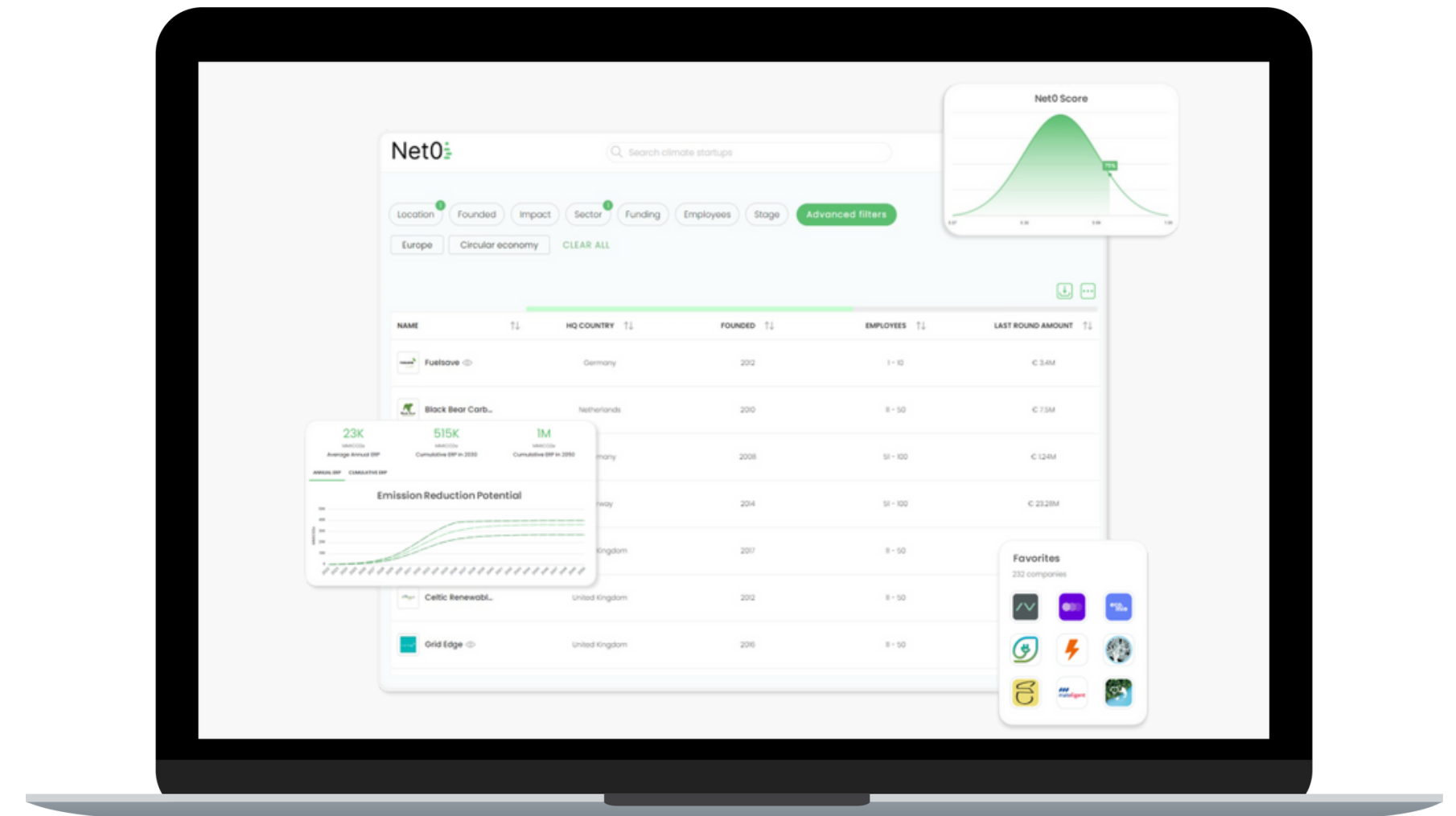
<u>THOUGHT LEADER – RENÉ BÖHM FROM DEUTSCHE ENERGIE-AGENTUR (DENA)</u>	P. 53
<u>INNOVATOR SPOTLIGHT – LUBOMILA JORDANOVA FROM PLAN A</u>	P. 61
<u>REGIONAL FOCUS – MAJOR DEVELOPMENTS IN Q3 2023: INDIA</u>	P. 65
<u>REGIONAL FOCUS – MAJOR DEVELOPMENTS IN Q3 2023: AFRICA</u>	P. 70
<u>THOUGHT LEADER – MOHAMED CASSIM FROM AFRICA CLIMATE VENTURES</u>	P. 75
<u>METHODOLOGY</u>	P. 79
<u>AUTHORS AND CONTRIBUTORS</u>	P. 81

# MARKET INTELLIGENCE FOR CLIMATE TECH

Net Zero Insights is the leading data and research platform for Climate Tech.

The Net0 Platform provides access to thousands of startups/SMEs, deals, and investors, allowing users to spot new innovations, trends, and deals in the rapidly evolving world of climate technology.

Investors, corporates, researchers and business developers use our platform to identify new startups and keep track of emerging trends and opportunities.



# WHAT IS CLIMATE TECH?

---

Conceptually aligned with the framework of the [EU taxonomy for sustainable activities](#), the analysts at Net Zero Insights refer to “Climate Tech” as any technology and innovation that contributes significantly to at least one of the six environmental objectives (see right-sided figure). Refer to [our article](#) for more understanding.

The Net0 Platform features startups and SMEs that have an innovative technology, product or business model.

For clarity, it's worth highlighting that the scope of the analysis includes only private companies developing innovative solutions contributing to at least one of the six environmental objectives.

## ENVIRONMENTAL OBJECTIVES



Climate change mitigation



Climate change adaptation



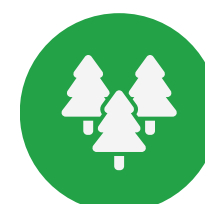
Sustainable use and protection of water and marine resources



Transition to a circular economy



Pollution prevention and control



Protection and restoration of biodiversity & ecosystem

1

# QUARTER SHAKER

RECORD HIGH OF \$1B+ DEALS; SEED ACTIVITY PLUMMETS

2

## BIRD'S-EYE VIEW

HISTORICAL QUARTERLY DATA

3

## QUARTER SPOTLIGHT

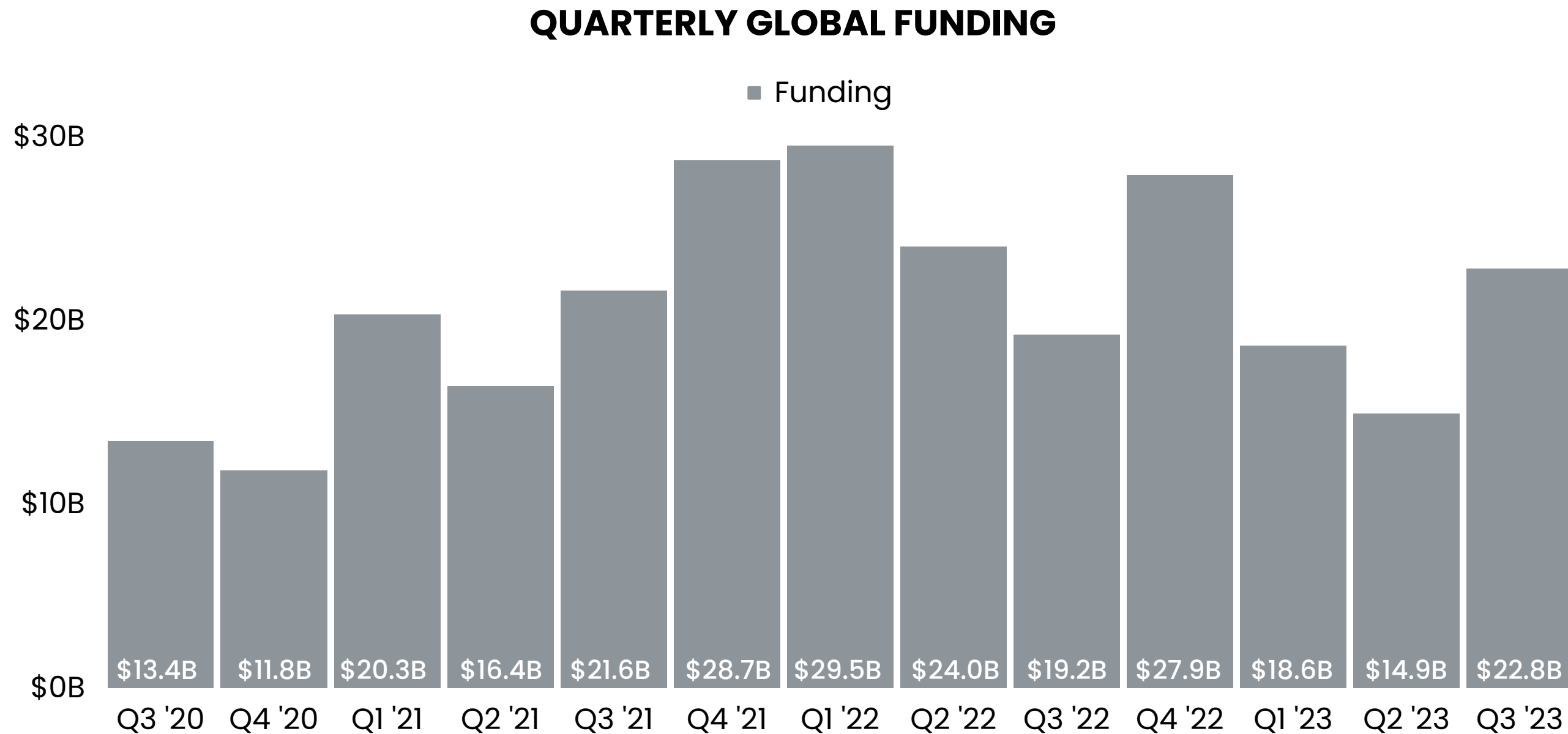
FOCUSING THE LENS ON Q3 2023

4

## REGIONAL FOCUS

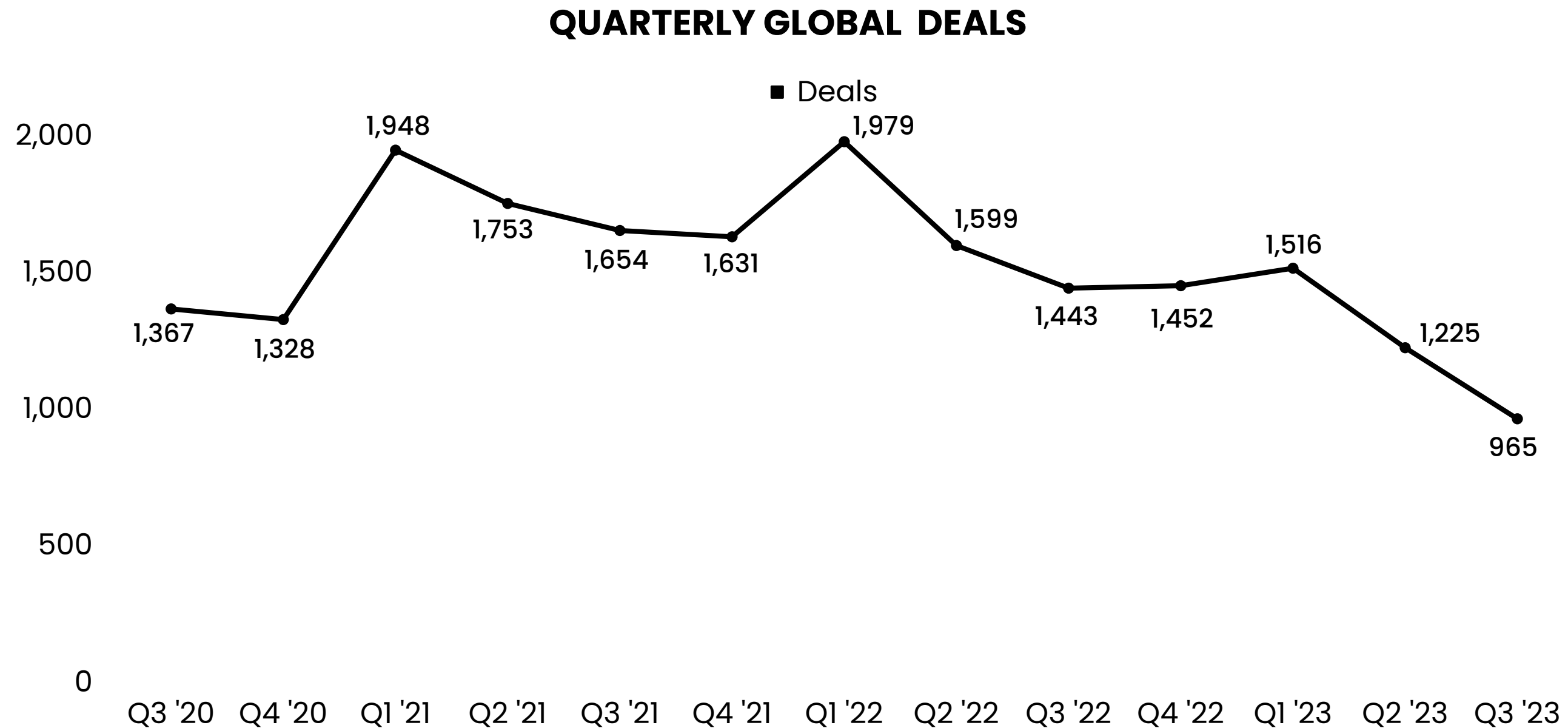
MAJOR DEVELOPMENTS IN Q3 2023

# FUNDING IN CLIMATE TECH REBOUNDS IN Q3 '23 AND REACHES 2021 LEVELS. FIRST POSITIVE QOQ GROWTH SINCE Q4 '22.



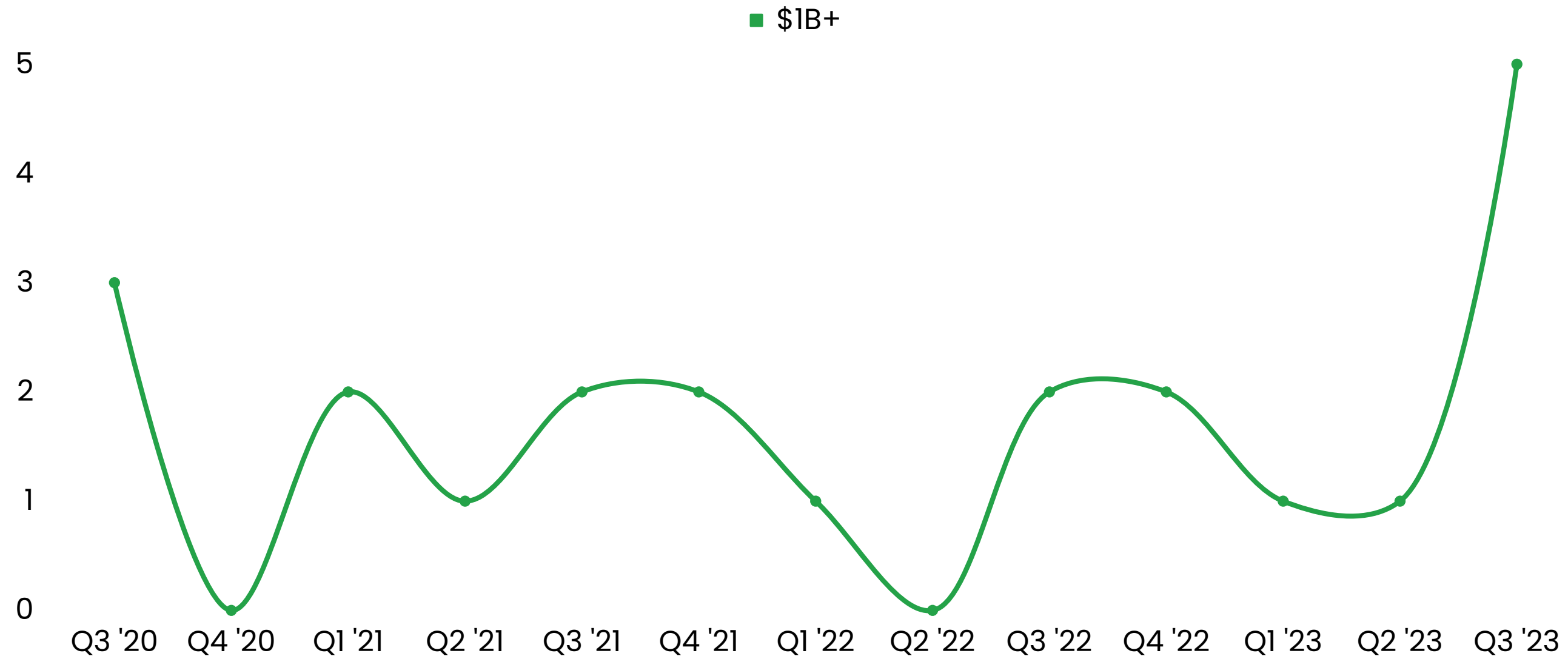


# HOWEVER, DEAL ACTIVITY KEEPS DECLINING. THIS MISMATCH CAN BE MOTIVATED BY THE HIGH NUMBER OF \$1B+ DEALS THIS QUARTER.

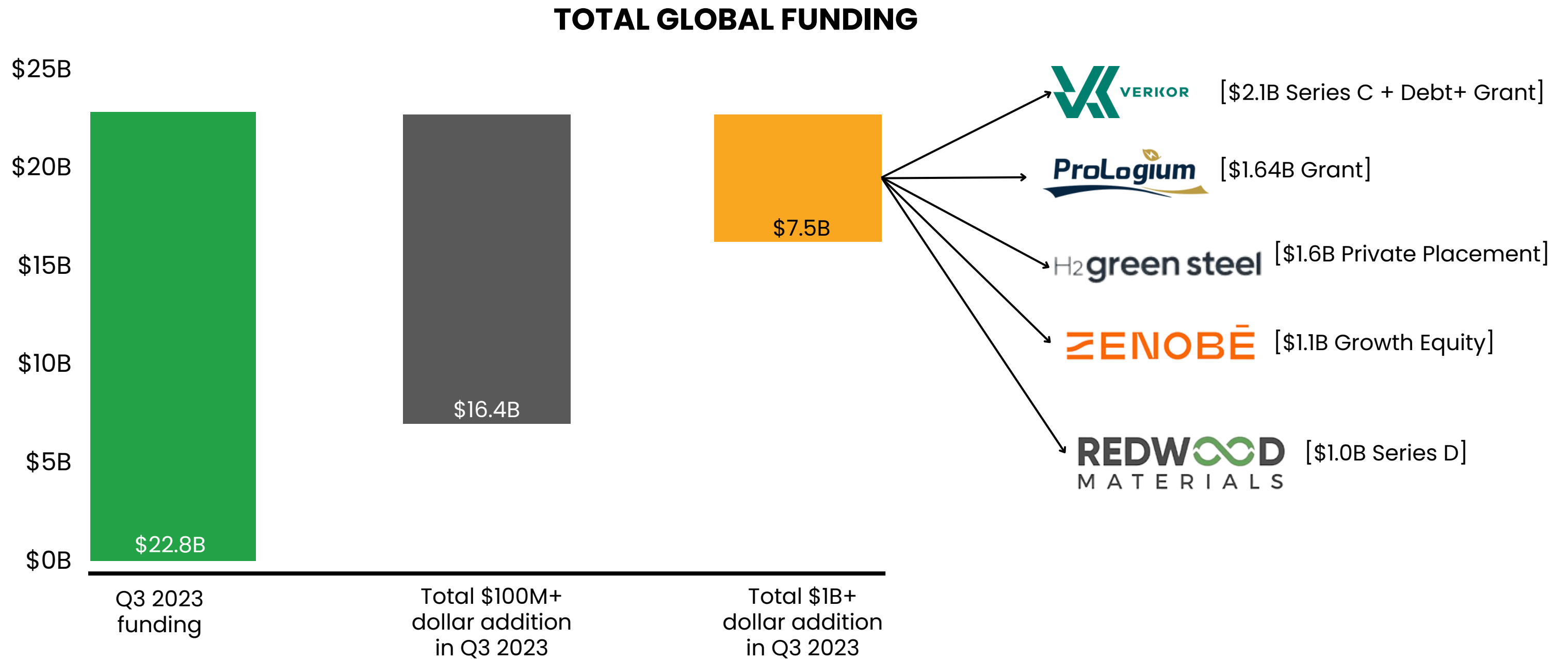


# IN FACT, THE TOTAL NUMBER OF \$1B+ DEALS IN Q3 2023 WERE THE HIGHEST OF ANY RECORDED QUARTER.

QUARTERLY COUNT OF \$1B+ DEALS

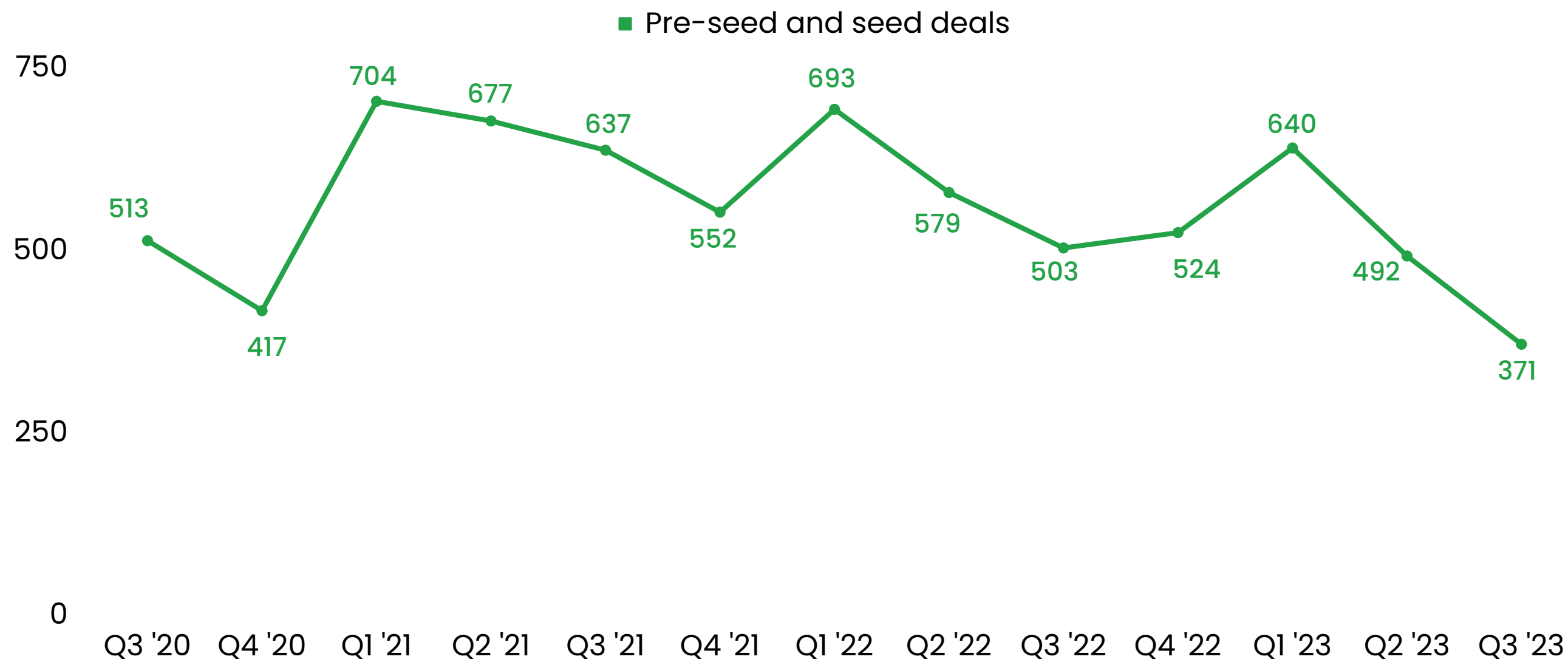


# COMBINED, THESE \$1B+ DEALS REPRESENTED 46% OF MEGAROUND FUNDING AND 33% OF Q3 2023 FUNDING.



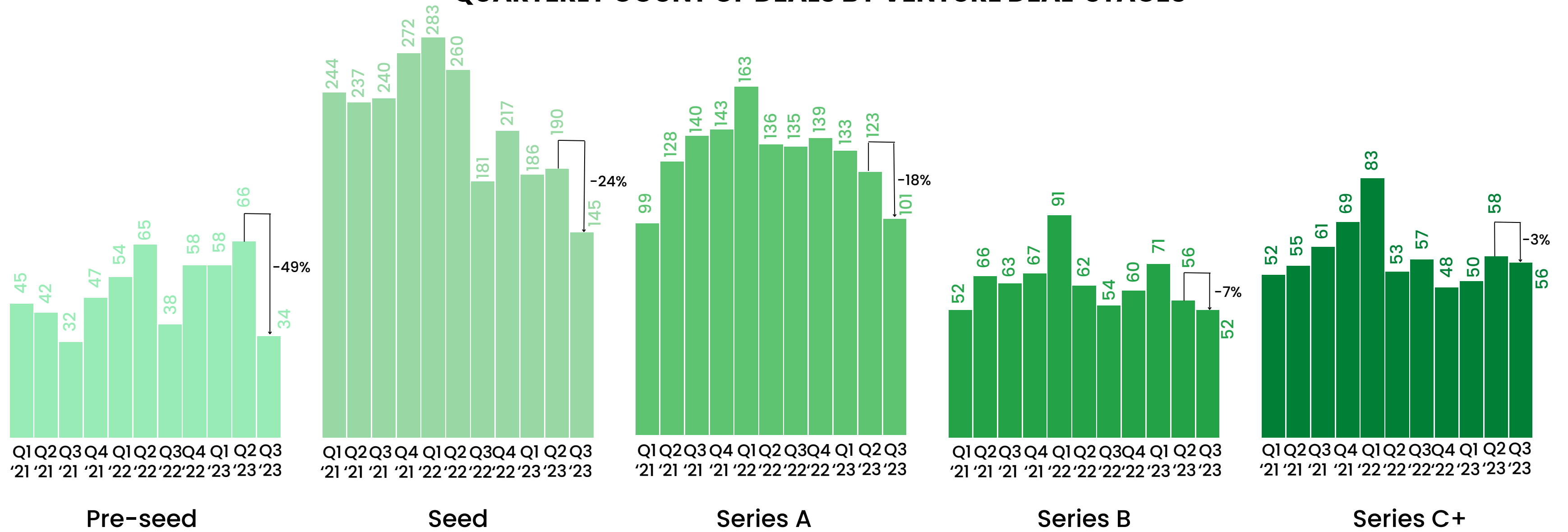
# THE DECLINING DEAL ACTIVITY WITHIN THE QUARTER WATERFALLED QUITE STRONGLY FOR PRE-SEED AND SEED DEALS.

### QUARTERLY COUNT OF PRE-SEED AND SEED DEALS



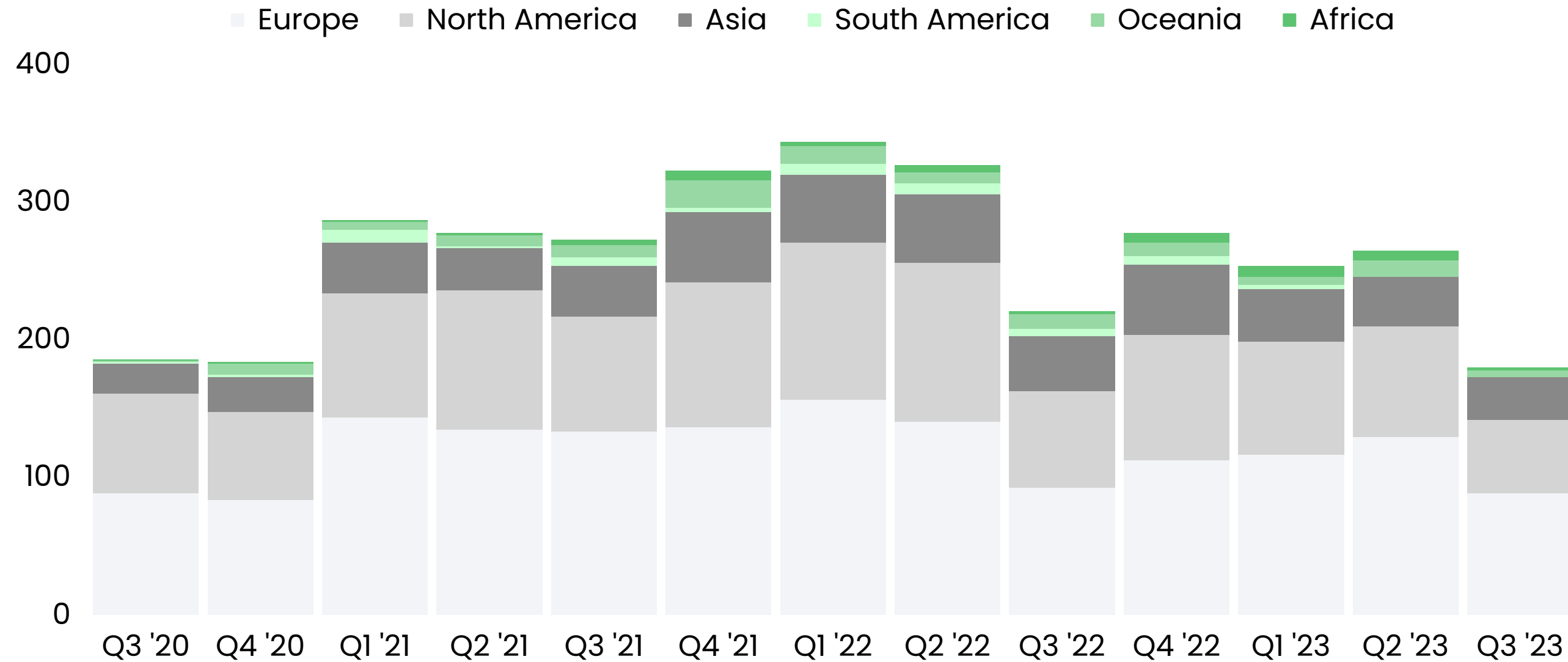
# RELATIVE TO DEAL ACTIVITY IN OTHER STAGES, PRE-SEED AND SEED SAW THE STEEPEST QOQ DECLINES.

QUARTERLY COUNT OF DEALS BY VENTURE DEAL STAGES



# PRE-SEED AND SEED DEALS DECLINED SIGNIFICANTLY BY 33% IN BOTH EUROPE AND NORTH AMERICA, MARKING HISTORIC LOWS.

### QUARTERLY REGIONAL COUNT OF PRE-SEED AND SEED DEALS BY REGION



# THOUGHT LEADERS

## WHAT REASONS COULD EXPLAIN WHY PRE-SEED AND SEED DEAL ACTIVITY IS DECLINING, ESPECIALLY ACROSS EUROPE AND NORTH AMERICA?

Echoing the trends of the previous two quarters, a mix of rising interest rates, persistent inflation, and geopolitical tensions, has cast a challenging shadow over the global startup landscape, resulting in slow growth and a dip in VC investments, climate tech included.

Additionally, Q3 often witnesses a slight dip in activity as European VCs take their summer breaks, with many founders delaying fundraising until investors return to their desks.

## DO YOU EXPECT THE Q3 DECLINE IN PRE-SEED AND SEED DEALS TO PERSIST, OR DO YOU SEE CATALYSTS FOR A TREND REVERSAL?

Lately, funding has faced some challenges, but the strong foundation and importance of the climate tech sector suggest it's gearing up for a rebound.

Major investments in companies like H2 Green Steel and Northvolt indicate strong investor interest in climate infrastructure. Additionally, after an 18-month hiatus, venture-backed tech firms resumed IPOs in September, offering hope for the industry, although full recovery may take more than just the next quarter.



**Sophia Escheu**

*Industrial and Climate  
Tech Analyst at  
Speedinvest*

Speedinvest is a leading early-stage venture capital firm with more than €1 billion AuM and 40 investors based in Berlin, London, Munich, Paris, and Vienna.

Our dedicated sector-focused teams are the first to fund Europe's most innovative technology startups and our in-house operational experts are on-hand to offer founders ongoing support with growth, HR, market expansion, and more. Wefox, Bitpanda, TIER Mobility, GoStudent, Wayflyer, Open, CoachHub, Schüttflix, TourRadar, Adverity, and Twice are among our portfolio of 250+ companies.

# THOUGHT LEADERS

## WHAT REASONS COULD EXPLAIN WHY PRE-SEED AND SEED DEAL ACTIVITY IS DECLINING, ESPECIALLY ACROSS EUROPE AND NORTH AMERICA?

In Q3 2023 and for much of the year in-fact, overall investment into the ecosystem has plummeted. A probable explanation for this has been, in part, due to a substantial deflation of overall startup valuation. Quite simply put, the valuation of any given deal has been trending downwards. This has caused quite a number of investors to reassess their positions and attempt to seek consolidation.

Additionally, the risk appetite of Limited Partners (LPs) has begun to tighten, moreso for European LPs. Thus, there's a lot less money flowing from these LPs into startups, and more specifically, very early stage startups.



**Kai Malkwitz**

*Climate Impact  
Director at Founder  
Institute*

The Founder Institute is the world's most proven network to turn ideas into fundable startups, and startups into global businesses. To date, FI has helped launch over 6,800 companies across 200+ cities and six continents.

We help pre-seed entrepreneurs and teams get to traction and funding by establishing a critical support network of local startup experts that are invested in their success, and by providing a structured and challenging business-building process that has helped our alumni raise over \$1.75BN.



1

## QUARTER SHAKER

RECORD HIGH OF \$1B+ DEALS; SEED ACTIVITY PLUMMETS

2

## **BIRD'S-EYE VIEW**

HISTORICAL QUARTERLY DATA

3

## QUARTER SPOTLIGHT

FOCUSING THE LENS ON Q2 2023

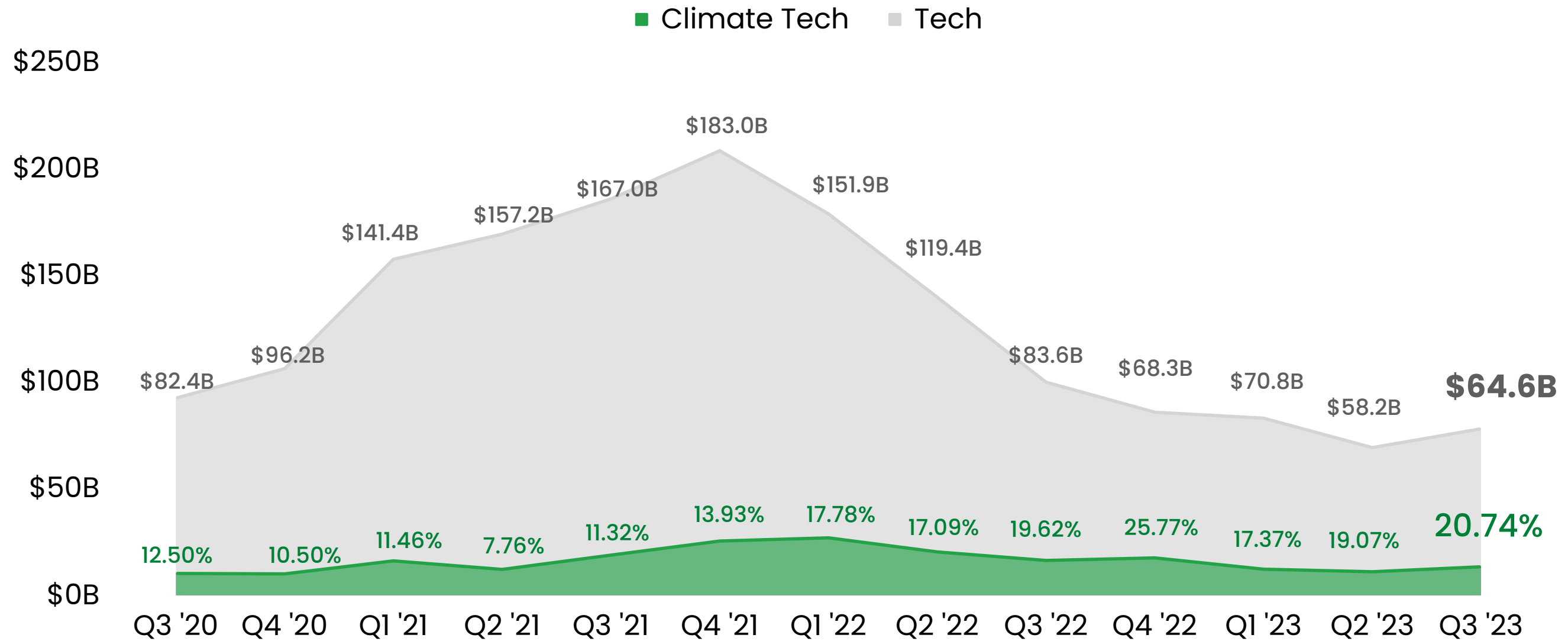
4

## REGIONAL FOCUS

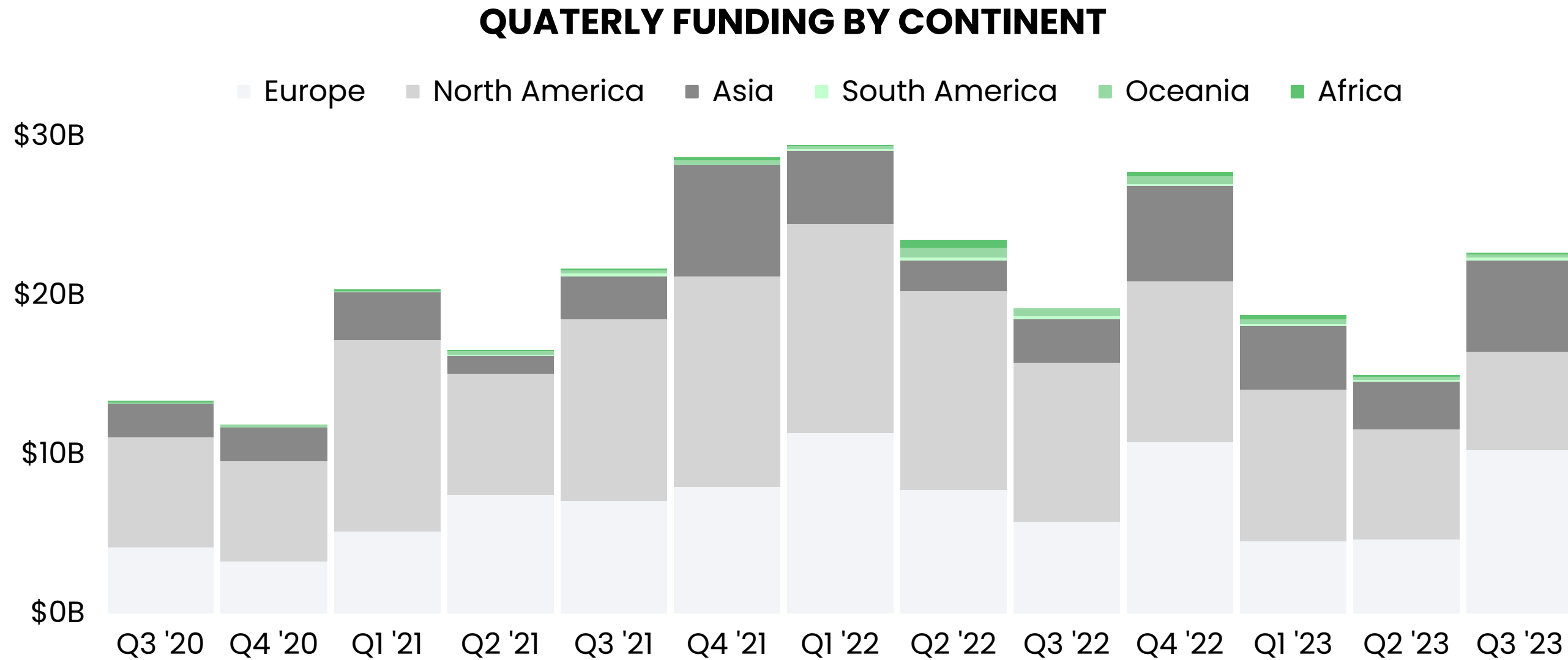
MAJOR DEVELOPMENTS IN Q3 2023

# IN Q3, CLIMATE TECH REPRESENTS 21% OF OVERALL TECH FUNDING, ESTABLISHING ITS GROWING SIGNIFICANCE IN THE INDUSTRY.

SHARE OF QUARTERLY EQUITY FUNDING IN CLIMATE TECH COMPARED TO OVERALL TECH INDUSTRY



# FUNDING REBOUNDS GLOBALLY, EXCEPT FOR NORTH AMERICA, WHICH SHOWED SMALL NEGATIVE VARIATIONS QOQ.

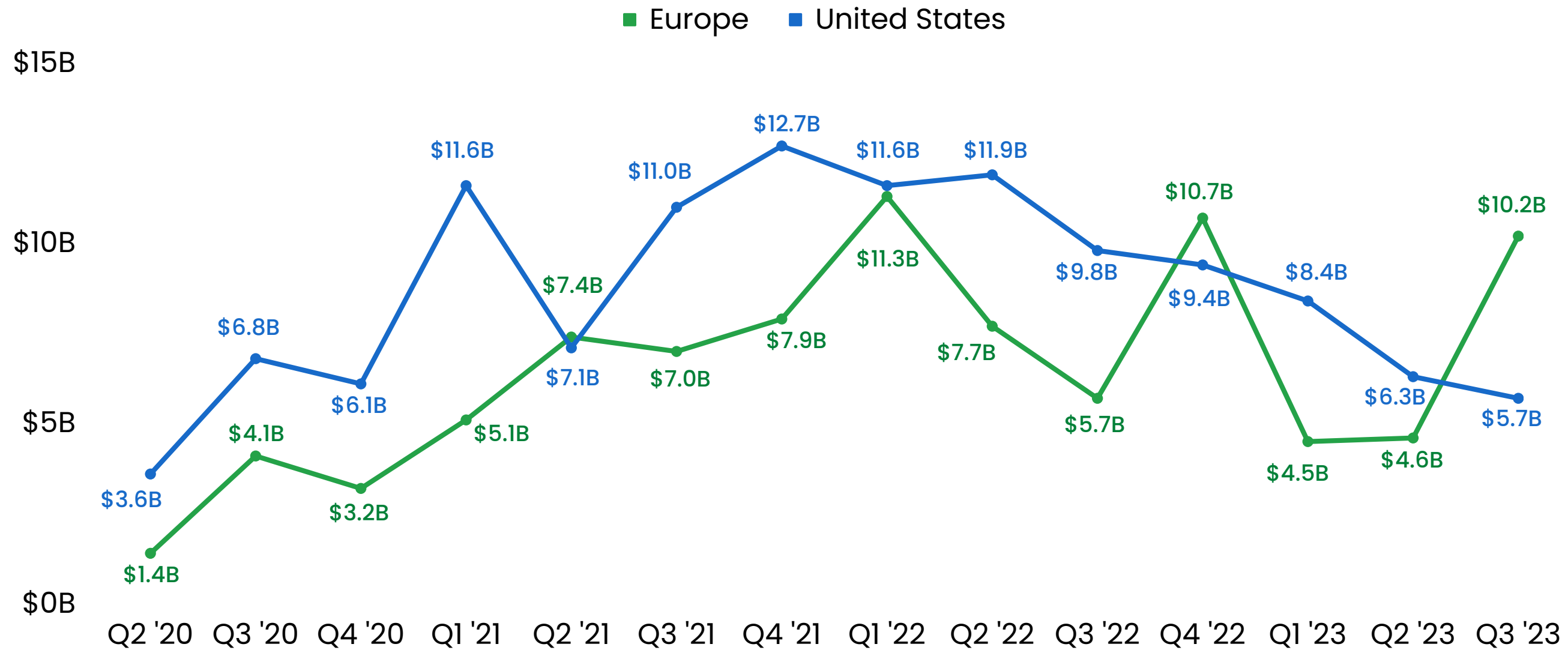


\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

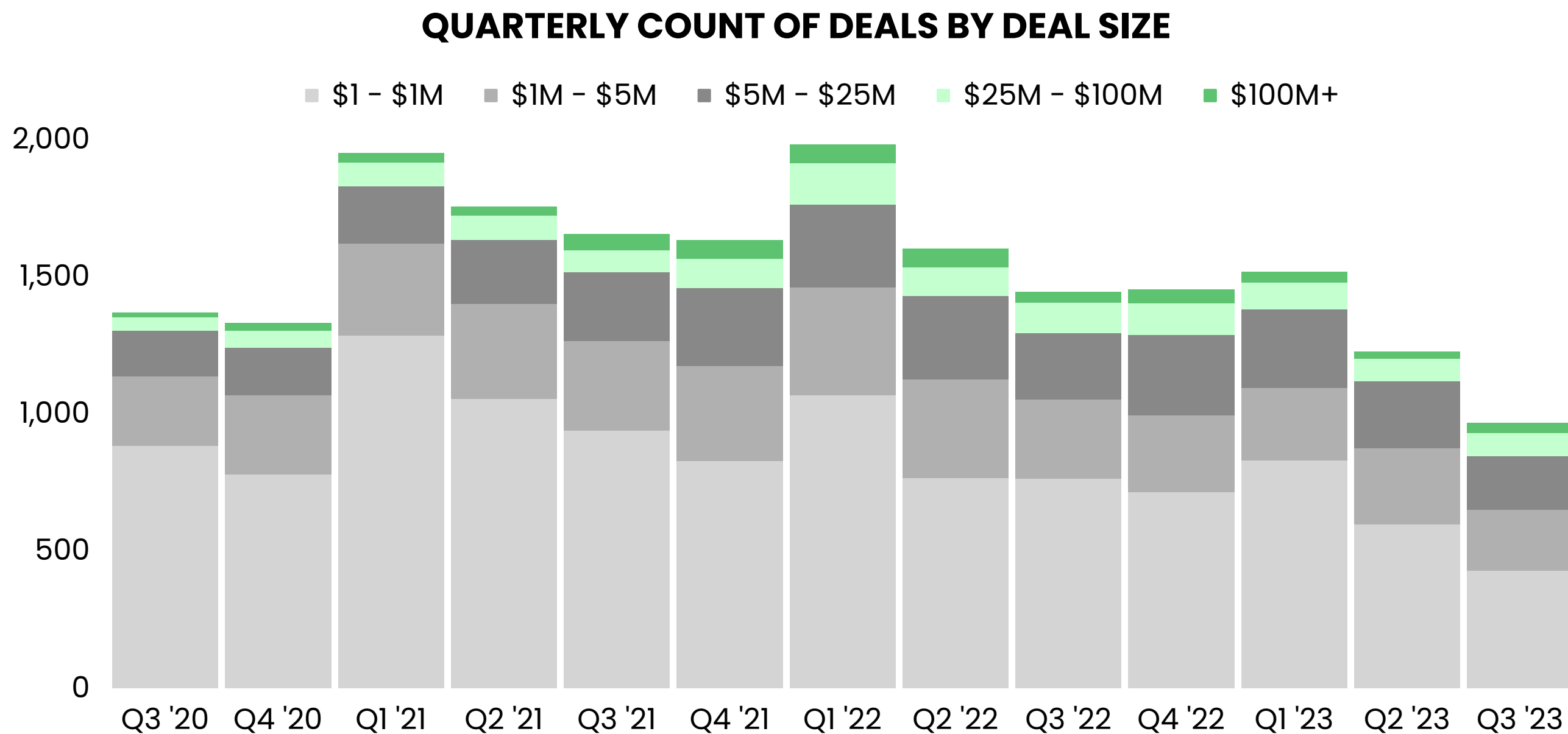
Source: Net Zero Insights

# EUROPE RECORDS STELLAR QUARTER WITH FUNDING INCREASING BY 122%, WHILE THE US RECORDS A 9.5% DECLINE QOQ.

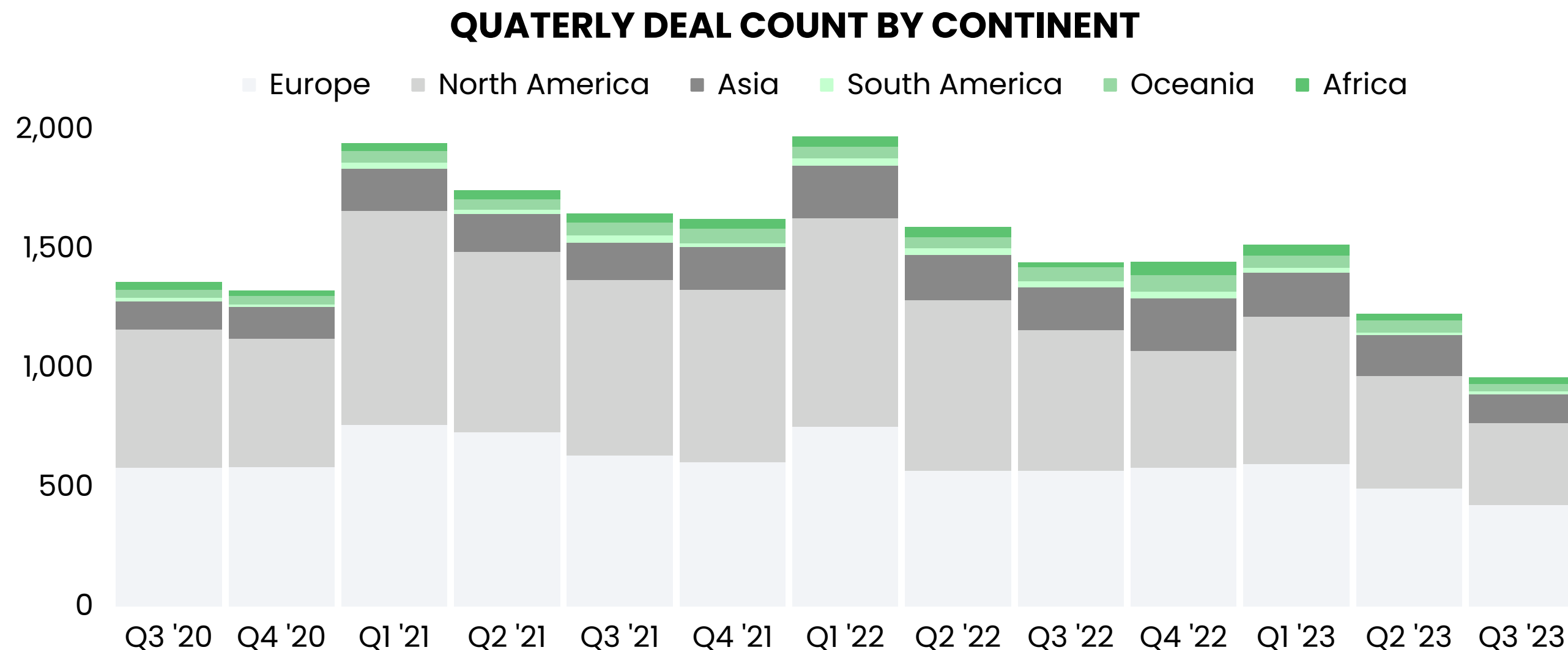
### QUARTERLY FUNDING IN EUROPE AND THE US



# DEAL ACTIVITY IN SCALE-UP AND MEGAROUND DEAL SIZES RALLIES IN Q3 2023. ALL OTHER CHECK SIZES CONTINUE TO DECLINE.

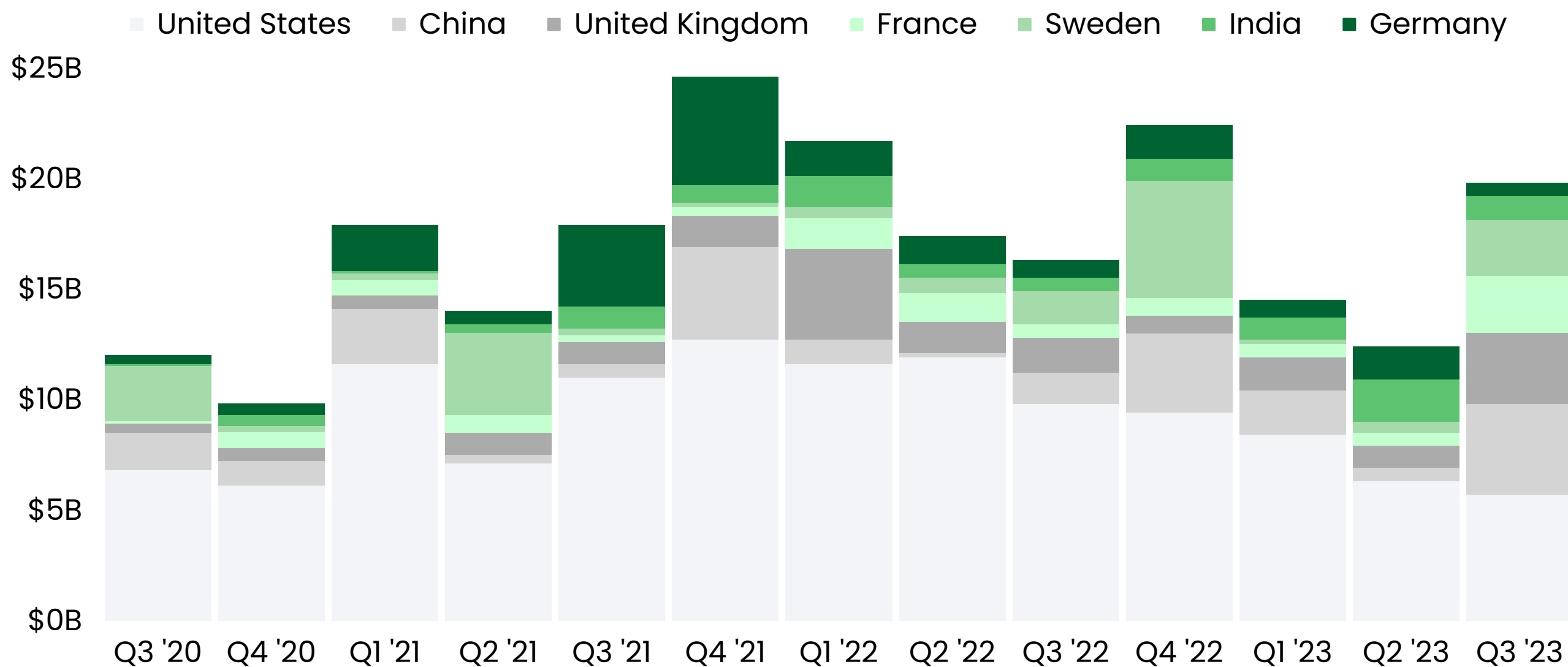


# ON THE OTHER HAND, GLOBAL DEAL COUNT ACROSS ALL REGIONS AT A HISTORIC LOW, APPROACHING 2020 LEVELS.

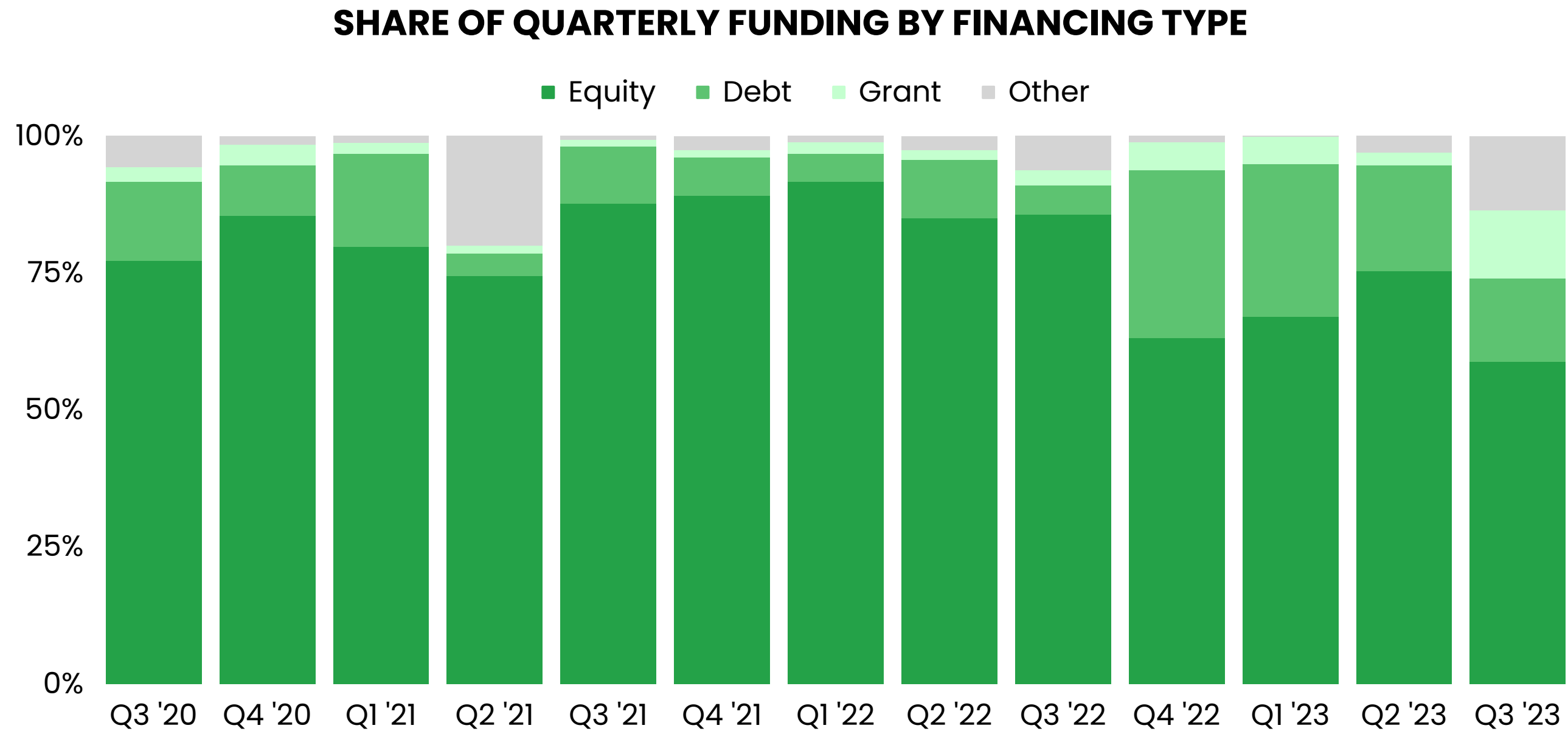


# UNITED STATES MAINTAINS LEAD IN FUNDING. CHINA ESTABLISHES A DOMINANT FUNDING POSITION THIS QUARTER.

### QUARTERLY FUNDING BY THE TOP FUNDED COUNTRIES IN Q3 '23



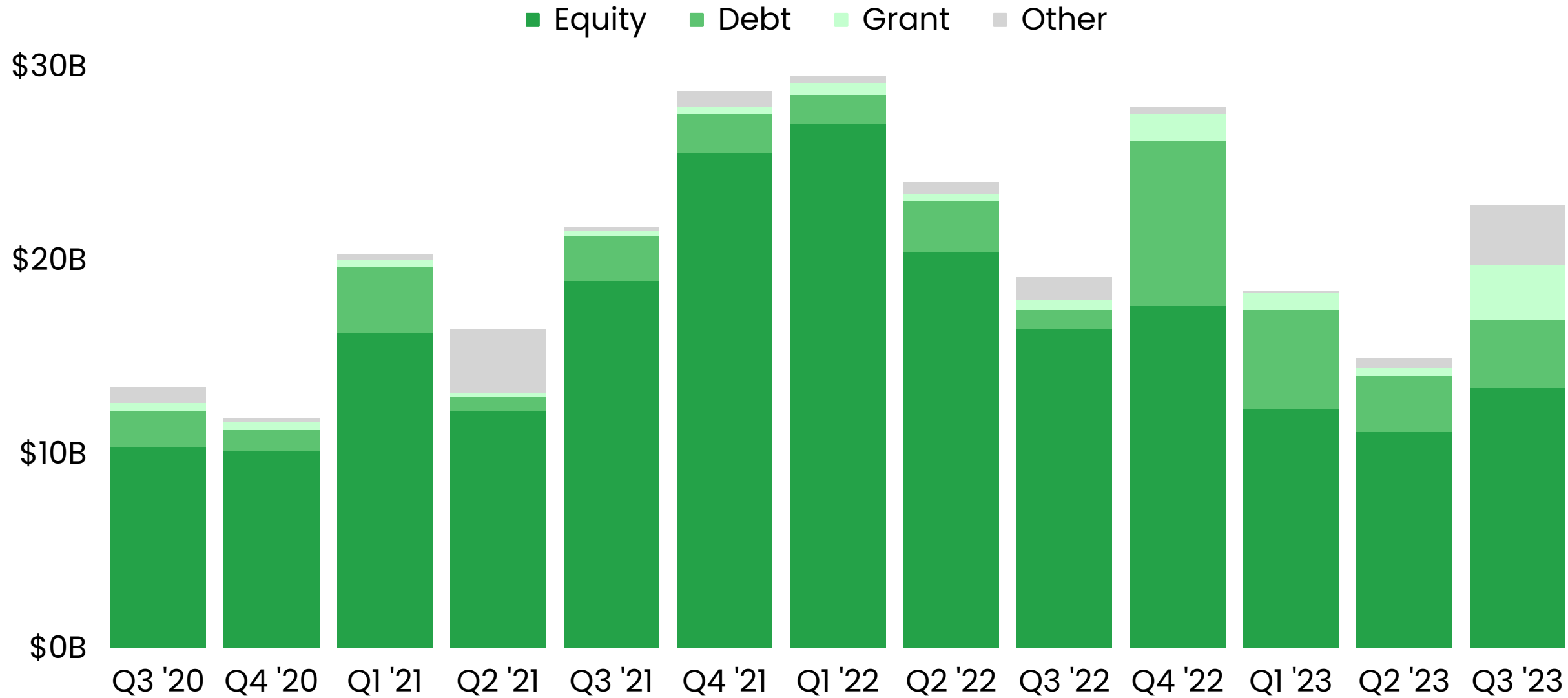
# EQUITY AND DEBT'S SHARE OF TOTAL FUNDING SHRINKS, WHILE GRANTS' SHARE SEES UNUSUAL RISE.



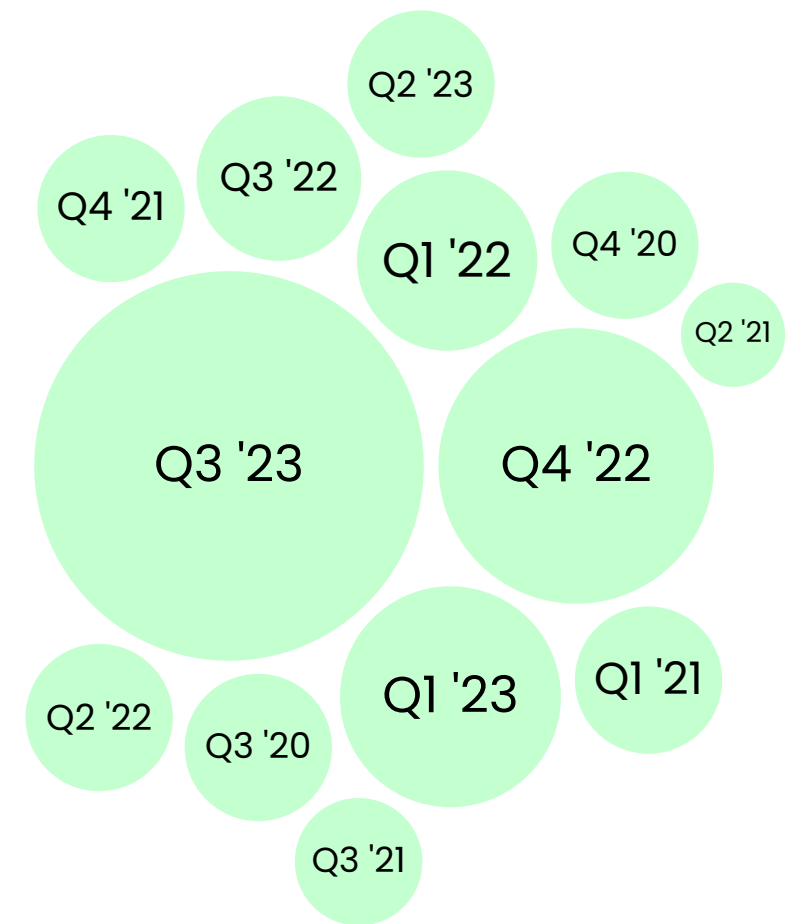


# GRANT ACTIVITY HIT A RECORD HIGH THIS QUARTER, WITH \$2.8 BILLION (+704% QOQ) ALLOCATED TO CLIMATE TECH STARTUPS.

QUARTERLY FUNDING BY FINANCING TYPE

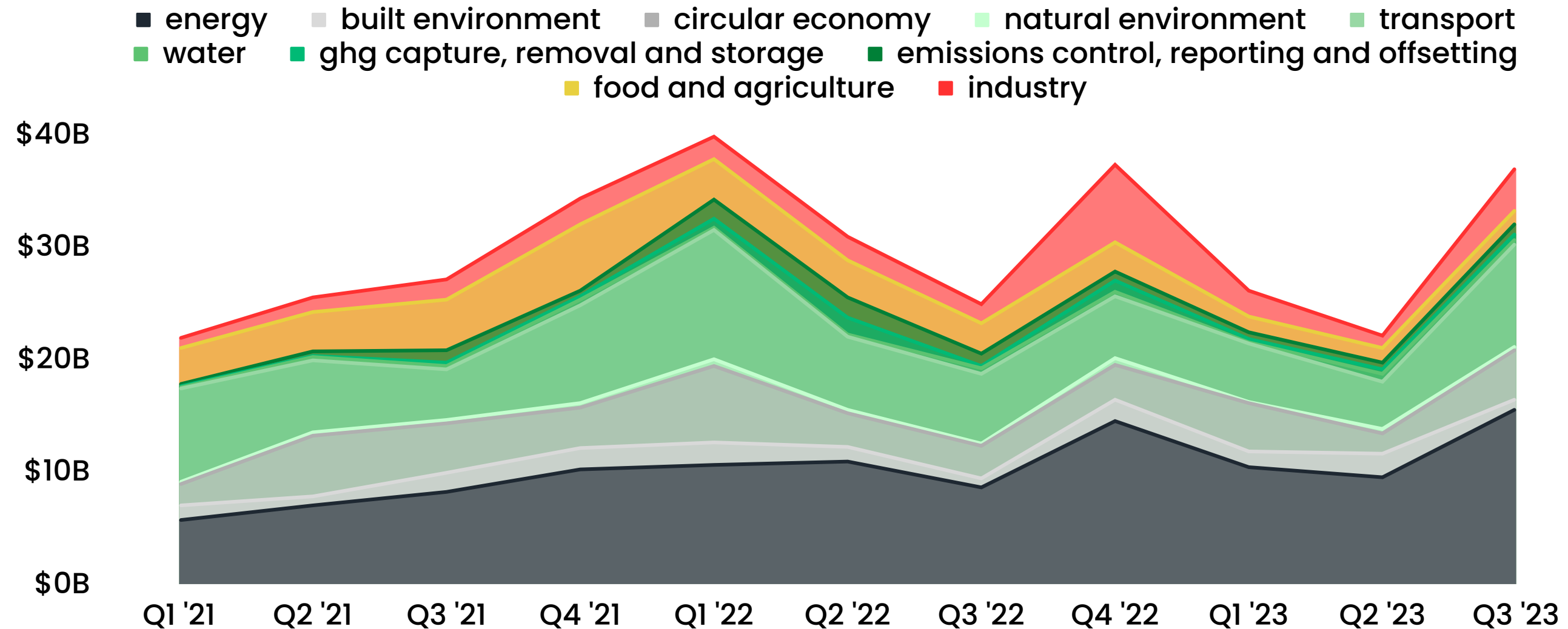


QUARTERLY VOLUME OF GRANT FUNDING



# ENERGY RECEIVES HIGHEST EVER QUARTERLY FUNDING (\$15.5B; +63.2% QOQ) IN Q3 2023.

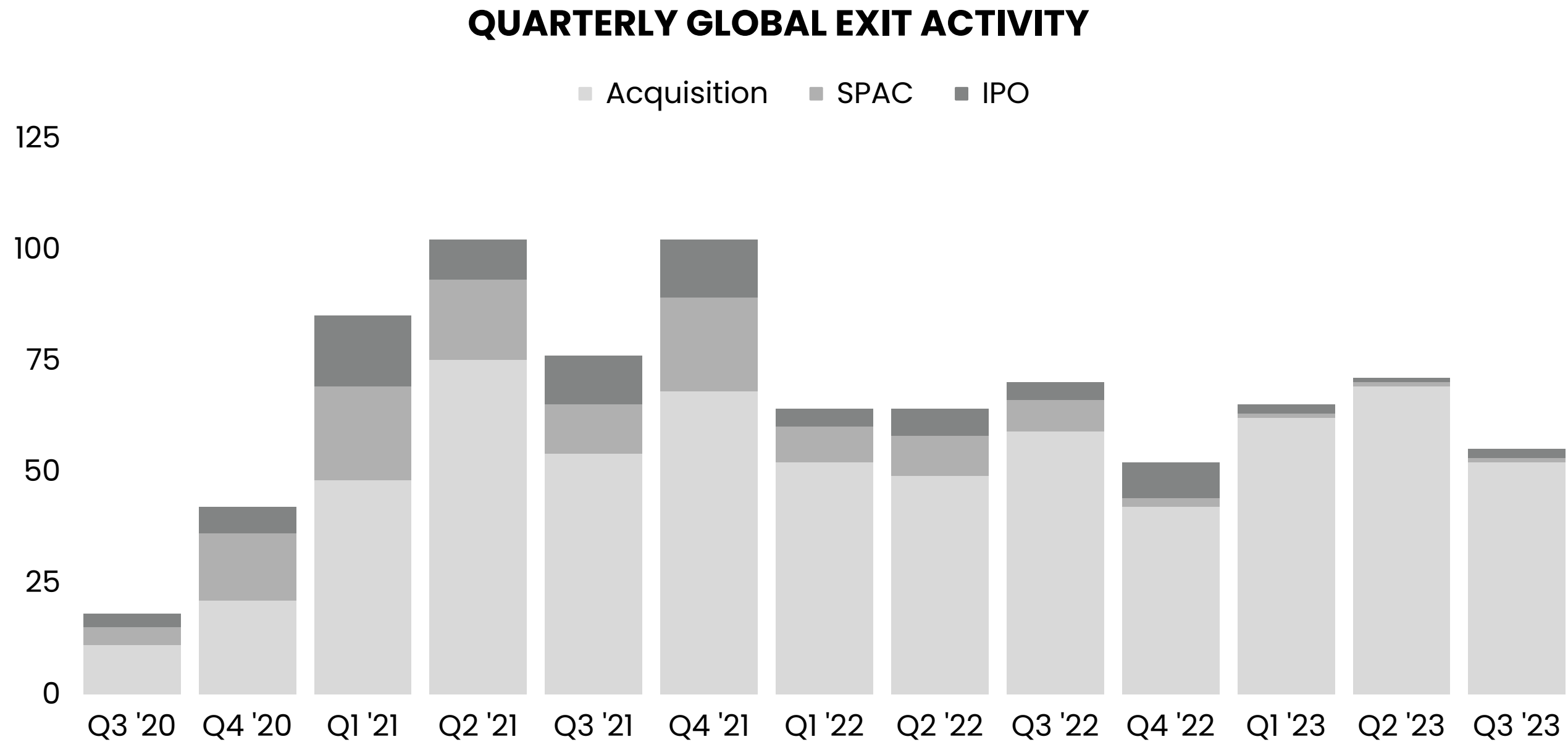
QUARTERLY FUNDING BY CLIMATE CHANGE CHALLENGE AREA



\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.

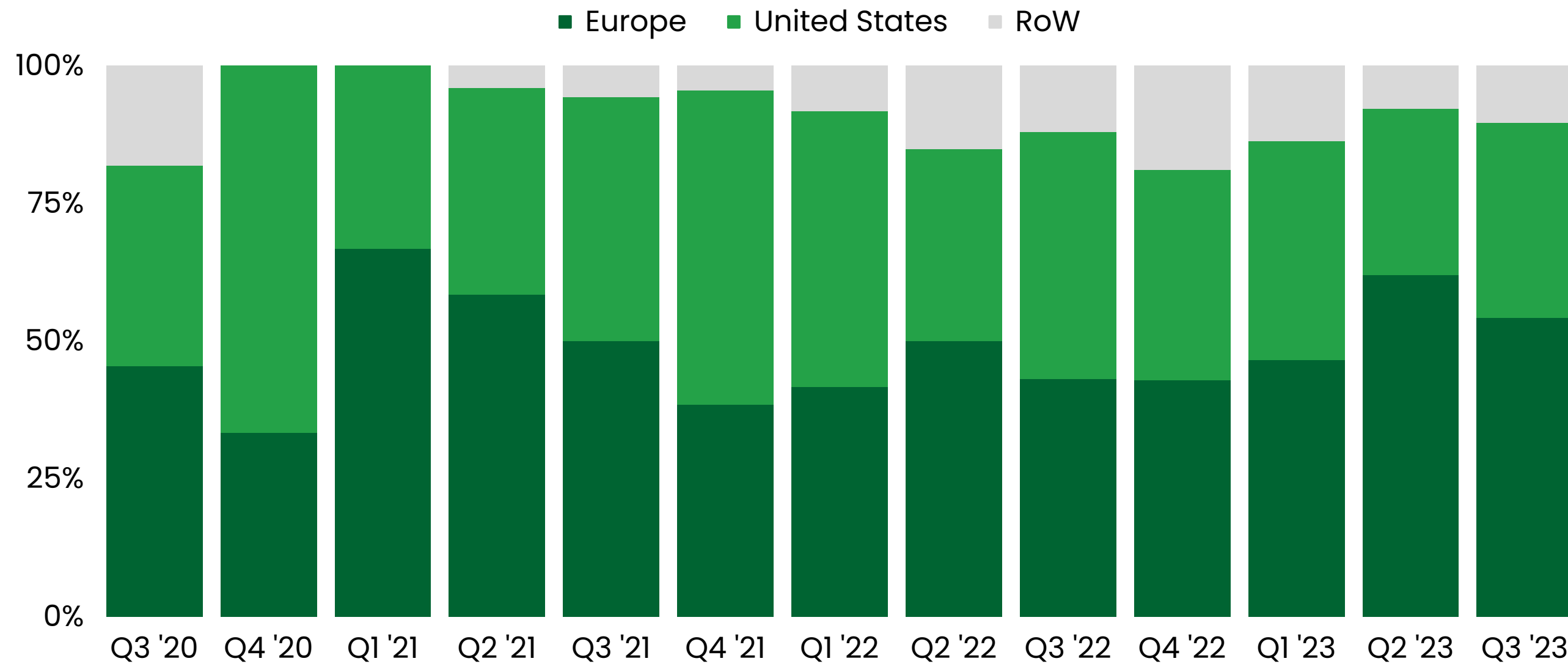
\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

# AFTER A STRONG Q2 2023, EXITS DIPPED 25% IN Q3 2023, WITH ACQUISITIONS MAKING UP 95% OF ALL EXITS.



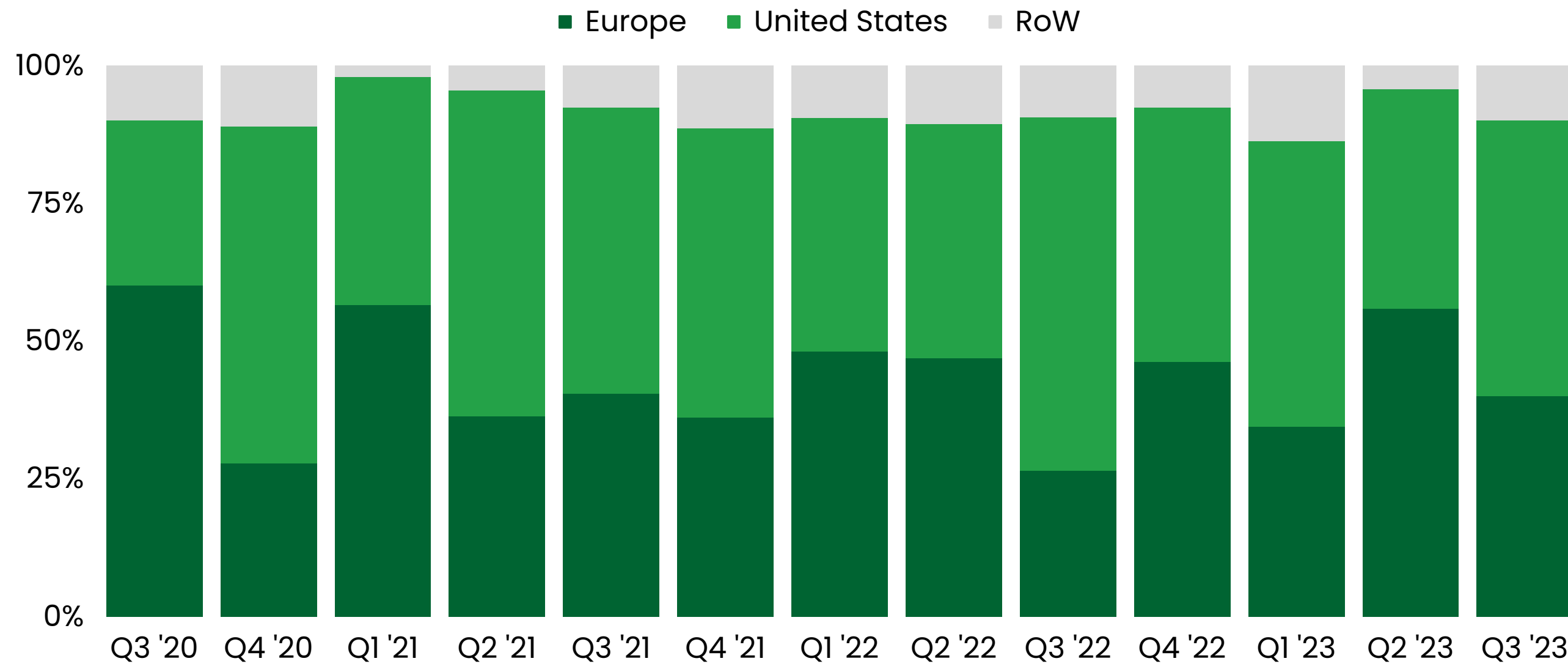
# IN 2023 SO FAR, 55% OF ALL ACQUIRED COMPANIES ARE HEADQUARTERED IN EUROPE.

## SHARE OF GLOBAL ACQUISITIONS BY ACQUIRED COMPANY'S HQ REGION



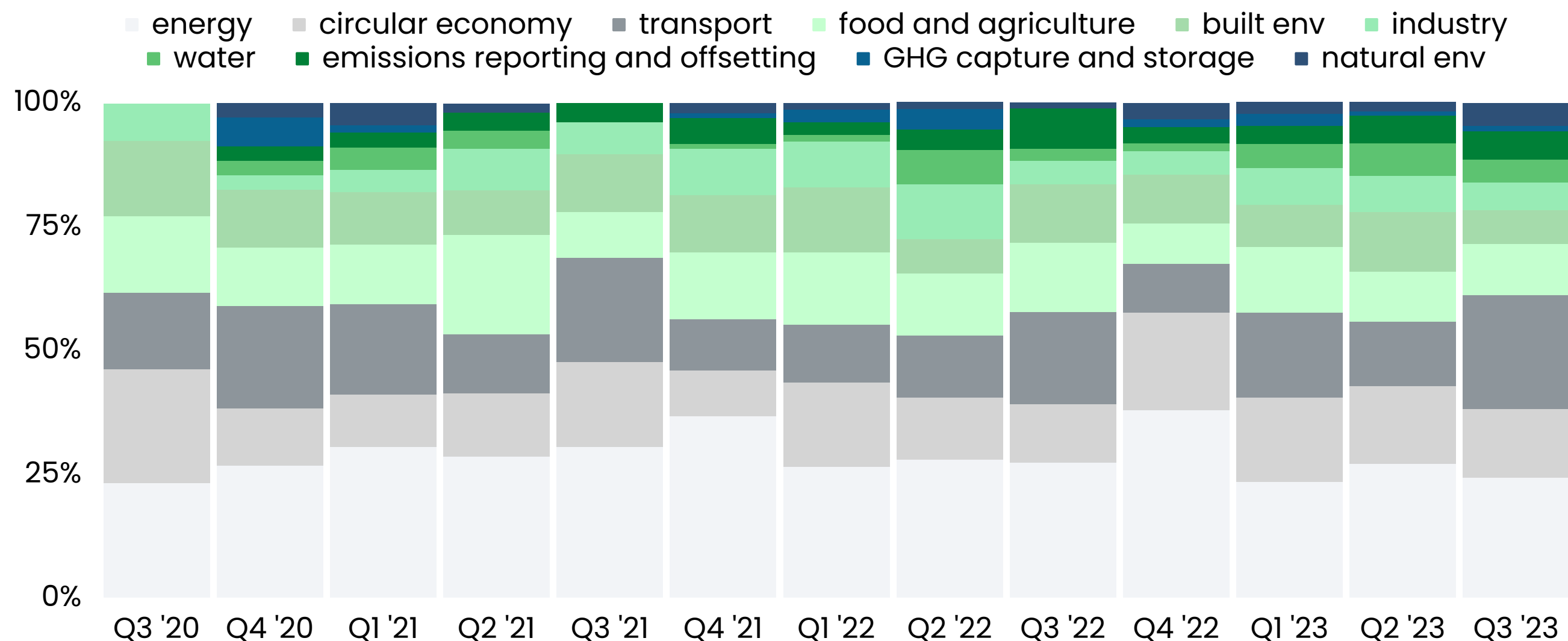
# BUT THE US LEADS IN ACQUIRING COMPANIES, WITH 47% OF ACQUIRERS—MARGINALLY AHEAD OF EUROPE'S 44%.

### SHARE OF GLOBAL ACQUISITIONS BY ACQUIRER COMPANY'S HQ REGION



# IN Q3 2023, MOST ACQUISITIONS WERE MADE IN ENERGY (25%), FOLLOWED BY TRANSPORT (23%) AND CIRCULAR ECONOMY (14%).

## SHARE OF QUARTERLY ACQUISITIONS BY CLIMATE CHANGE CHALLENGE AREA



\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.

\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

# INNOVATOR SPOTLIGHT

## HOW DIFFICULT IS IT TO PRODUCE HIGH-GRADE LOW-EMISSIONS STEEL?

It has been very difficult to reduce carbon emissions from primary steelmaking because the long-standing traditional process is reliant on fossil fuels and involves several complex steps.

Many low-carbon solutions are being explored, including recycling scrap; carbon capture, use and storage (CCUS); green hydrogen-based direct reduced iron (DRI); and using other fuels like biomass and syngas to power blast furnaces. Of these [low-carbon options being explored to reduce emissions], only green hydrogen and Boston Metal's approach, electrification, have the potential to entirely remove carbon emissions in the process.

The ideal steel decarbonization technology is one that is truly free of CO2 emissions, able to use 100% of globally available iron ore feedstock, cost-competitive without long-term subsidies or regulatory pressure, and is capable of global deployment through a modular, incrementally scalable pathway. Boston Metal is the only company in the world that is commercializing a green steel technology that meets this criteria.



**Adam Rauwerdink**

*SVP, Business  
Development at  
Boston Metal*

Boston Metal is a global metals technology solutions company that is commercializing Molten Oxide Electrolysis (MOE) to offer a scalable, cost-competitive and green solution for the production of steel and other metals.

The technology is currently being scaled up for green steel production at Boston Metal's pilot plant outside of Boston, while nearing commercialization for high-value metals production at its facility in Brazil.

## WHAT DOES BOSTON METAL'S PATH TO COMMERCIALIZATION LOOK LIKE?

At full production scale, MOE has the potential to be cost-competitive with today's coal-based steel. Like aluminum smelting, MOE runs in modular reactors and can be economically scaled in steps of less than 100,000 tons/year of production capacity with the potential for millions of tons of output as seen in current integrated steel mills.

In terms of how we're scaling MOE to bring it to the steel market by 2026, we're currently focused on industrial-scale development of our inert anode technology. We are in the process of building a state-of-the-art facility for developing and manufacturing refractory and reactive metals – from raw materials to finished products that will produce the supply of inert anodes required for our green steel technology.

For our high-value metals business, Boston Metal do Brasil will use the MOE technology to recover high-value metals from mining waste at our facility in Brazil, creating a new revenue stream for the company.



As of September 2023, the company has raised more than \$350 million in capital from diverse sources (including a \$262M Series C round) spanning private equity, venture capital, institutional investors.

Boston Metal intends to use this funding to advance the company on its path to commercializing MOE for green steel production by 2026.



# INNOVATOR SPOTLIGHT

## CONTROLLED THERMAL RESOURCES (CTR) OPERATES IN A RATHER INTERESTING NEXUS: LITHIUM MINING AND GEOTHERMAL ENERGY. WHY?

Geothermal power operations have been producing baseload renewable energy in the Salton Sea geothermal field for over 40 years. The highly mineralized brines from this massive underground reservoir contain lithium and other critical minerals.

Through Direct Lithium Extraction (DLE) technology, we can now recover lithium and other critical minerals from these super hot brines, and utilizing the excess heat and steam, we can produce battery-grade lithium products in a matter of hours with a near-zero carbon footprint. There is also the added benefit that cathode and battery manufacturers can co-locate onsite for direct access to our products and clean power.



**Rod Colwell**

*CEO at Controlled Thermal Resources*

Controlled Thermal Resources (CTR) is a U.S. company specializing in lithium, battery materials, and renewable energy production with projects in advanced development in California. CTR's leadership team has successfully developed and managed renewable energy projects in the Salton Sea region for over 30 years.

**EXPERTS PREDICT THAT LITHIUM COULD BE IN SHORT SUPPLY AS EARLY AS 2025. HOW DOES CTR EXPECT TO TACKLE THIS ISSUE OF A SUPPLY SHORTAGE?**

CTR has multiple long-term lithium supply agreements in place with our clients. What makes this project so unique is that we have developed a modular engineering design where each project stage can be replicated for a more cost effective and efficient scale up. As we start to see projects in other countries delayed due to geopolitics and environmental issues, it's more important than ever for the auto sector to source materials from secure jurisdictions with higher sustainability credentials.

**YOUR COMPANY RECENTLY RAISED \$100M IN GROWTH EQUITY. HOW IS THE FUNDING RAISED IN THIS ROUND GOING TO BE DEPLOYED?**

We expect to commence construction of Stage 1 in December and are scheduled to deliver 25,000 metric tons of lithium hydroxide monohydrate (LHM) in 2025. We plan to deliver a total of 175,000 metric tons of lithium per year via seven modular project stages in 2027/28.

These funds will be deployed to commence construction while we continue to raise capital throughout 2024.



1

## QUARTER SHAKER

RECORD HIGH OF \$1B+ DEALS; SEED ACTIVITY PLUMMETS

2

## BIRD'S-EYE VIEW

HISTORICAL QUARTERLY DATA

3

## QUARTER SPOTLIGHT

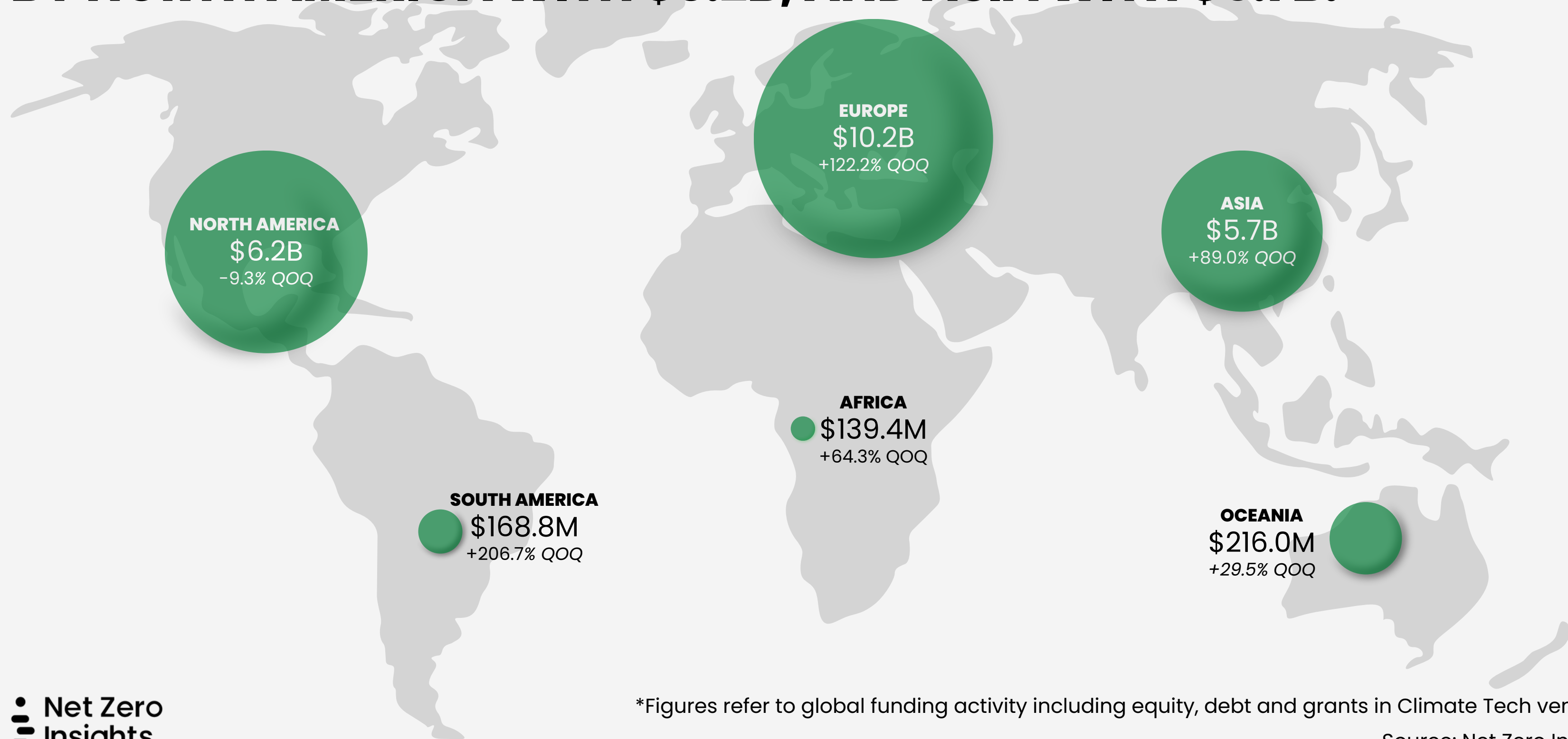
FOCUSING THE LENS ON Q3 2023

4

## REGIONAL FOCUS

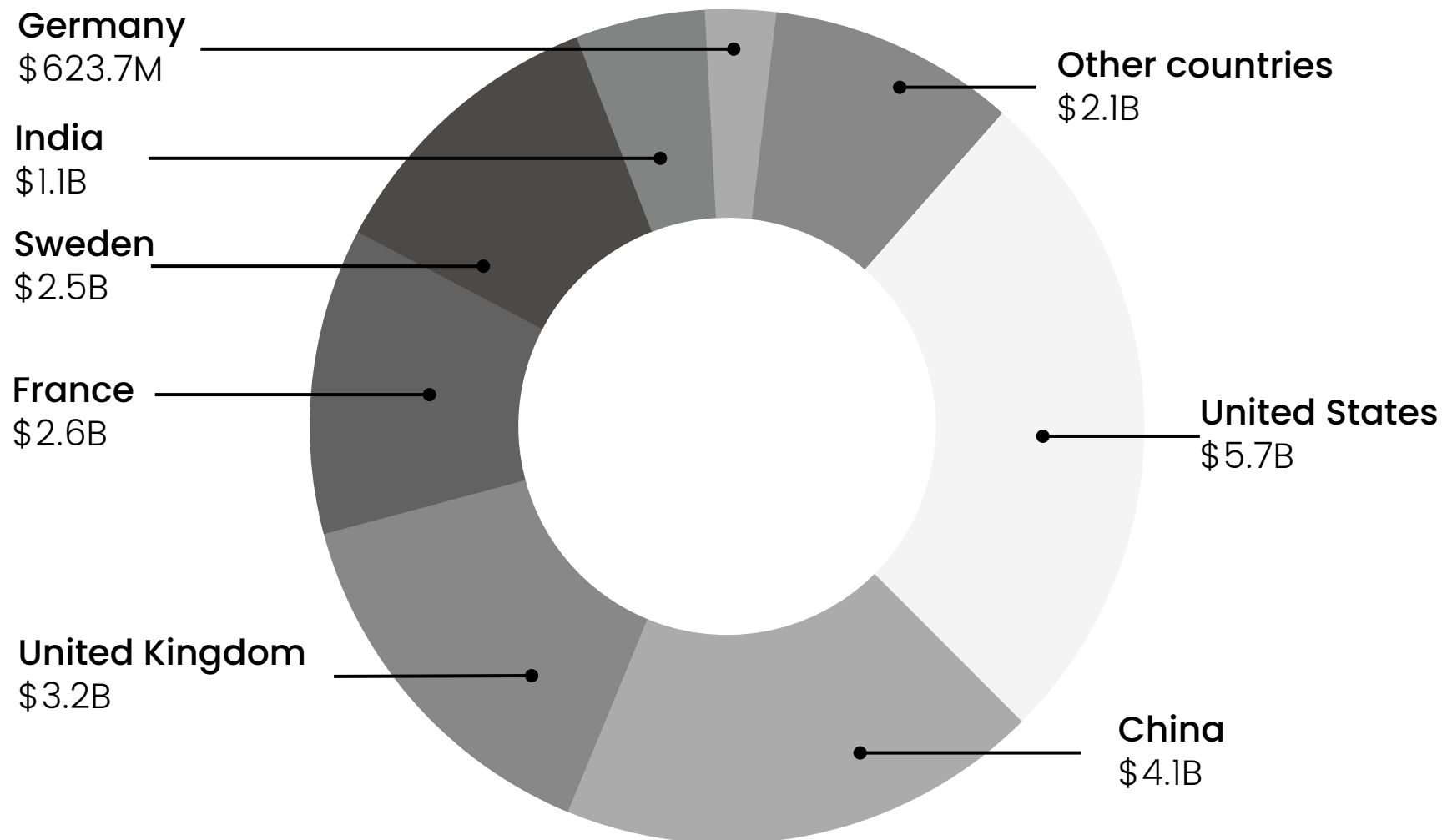
MAJOR DEVELOPMENTS IN Q3 2023

# IN Q3 '23, EUROPE LEADS IN FUNDING WITH \$10.2B, FOLLOWED BY NORTH AMERICA WITH \$6.2B, AND ASIA WITH \$5.7B.

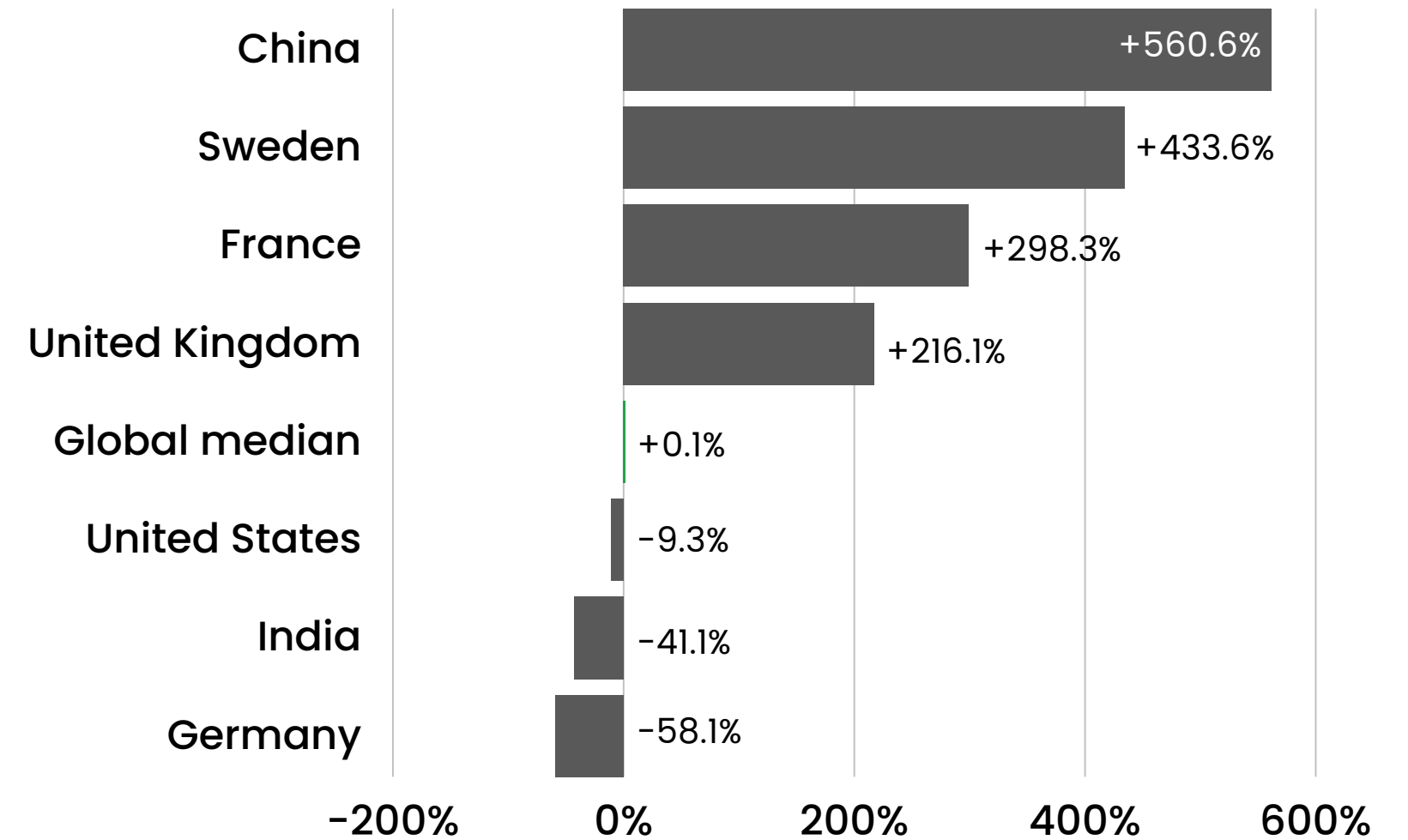


# US-BASED CLIMATE TECH STARTUPS LED FUNDING IN Q3 2023, ALBEIT WITH A 4% QOQ DIP. CHINA SAW THE MOST QOQ GROWTH.

Q3'23 FUNDING BY TOP 7 COUNTRIES



QOQ FUNDING FLUCTUATIONS IN TOP 7 COUNTRIES



\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

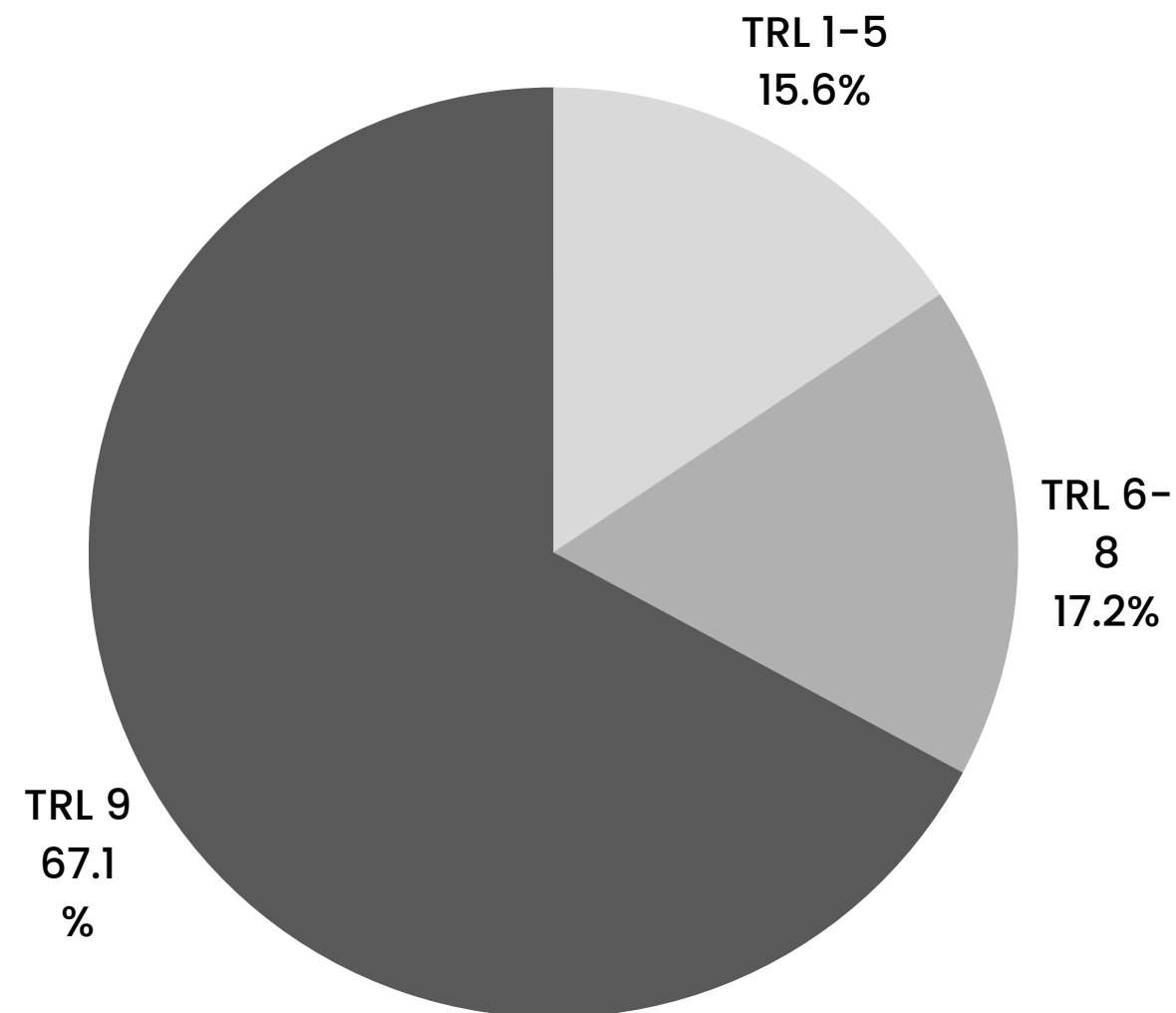
# IN Q3 '23, STOCKHOLM CLAIMED THE TOP SPOT FOR FUNDING, WHILE LONDON HAD THE MOST NUMBER OF DEALS.

## TOP 10 HUBS IN Q3 '23 BY FUNDING WITH 5+ DEALS

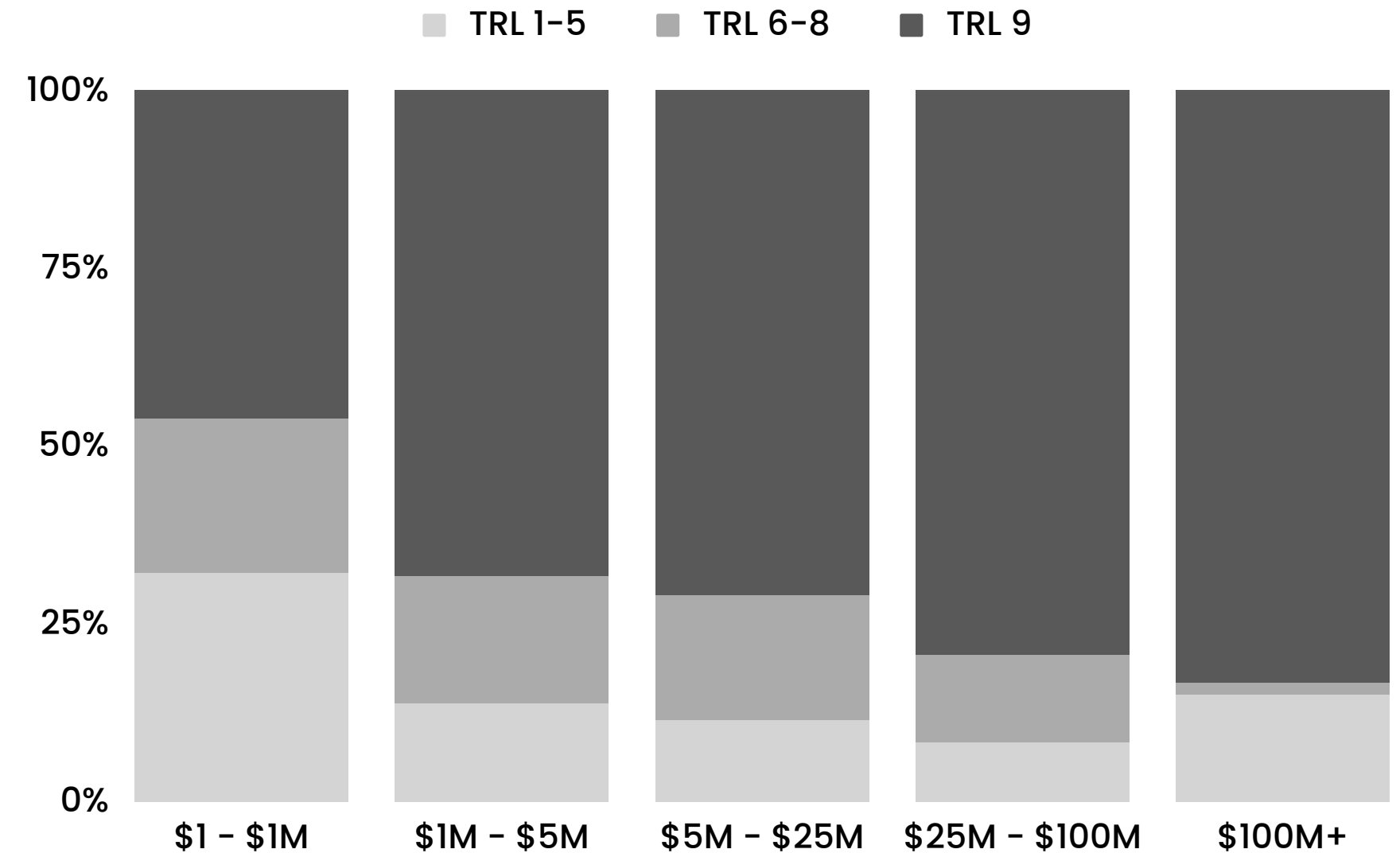
ORGANISATION HQ CITY	FUNDING	DEALS
STOCKHOLM	\$2.5B	18
GRENOBLE	\$2.3B	6
LONDON	\$1.4B	52
LOS ANGELES	\$596.2M	9
SAN FRANCISCO	\$480.4M	27
HOUSTON	\$452.1M	6
MUMBAI	\$370.5M	6
BOSTON	\$299.2M	9
BENGALURU	\$238.5M	10
SAN JOSE	\$237.1M	5

# TRL 9 STARTUPS DOMINATE WITH 67% OF DEAL ACTIVITY IN Q3 '23, WHILE LOW TRL STARTUPS CLOSE LOWER TICKET DEALS.

SHARE OF DEALS IN Q3 '23 BY TRL

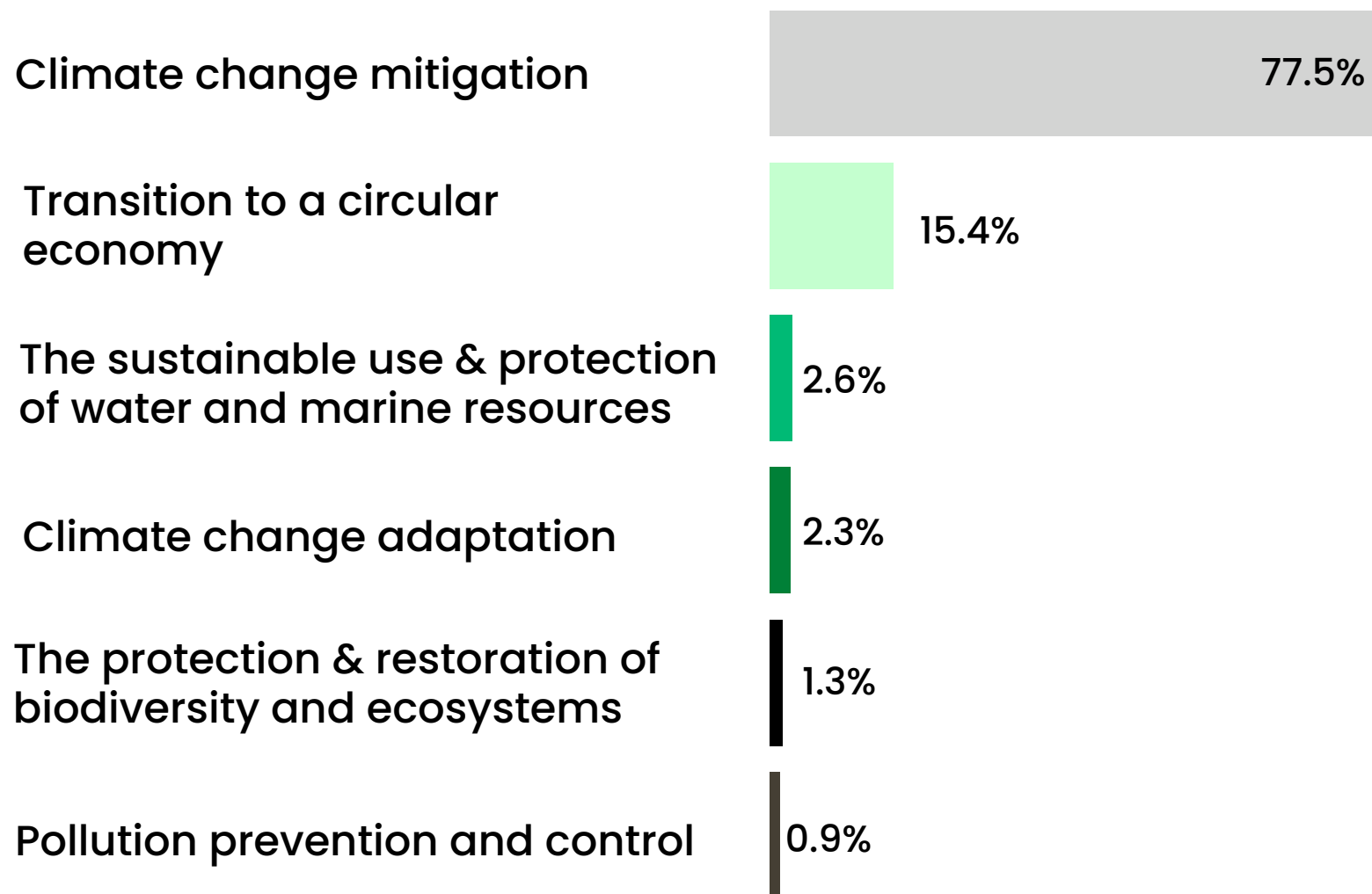


SHARE OF DEALS BY TRL AND DEAL SIZE

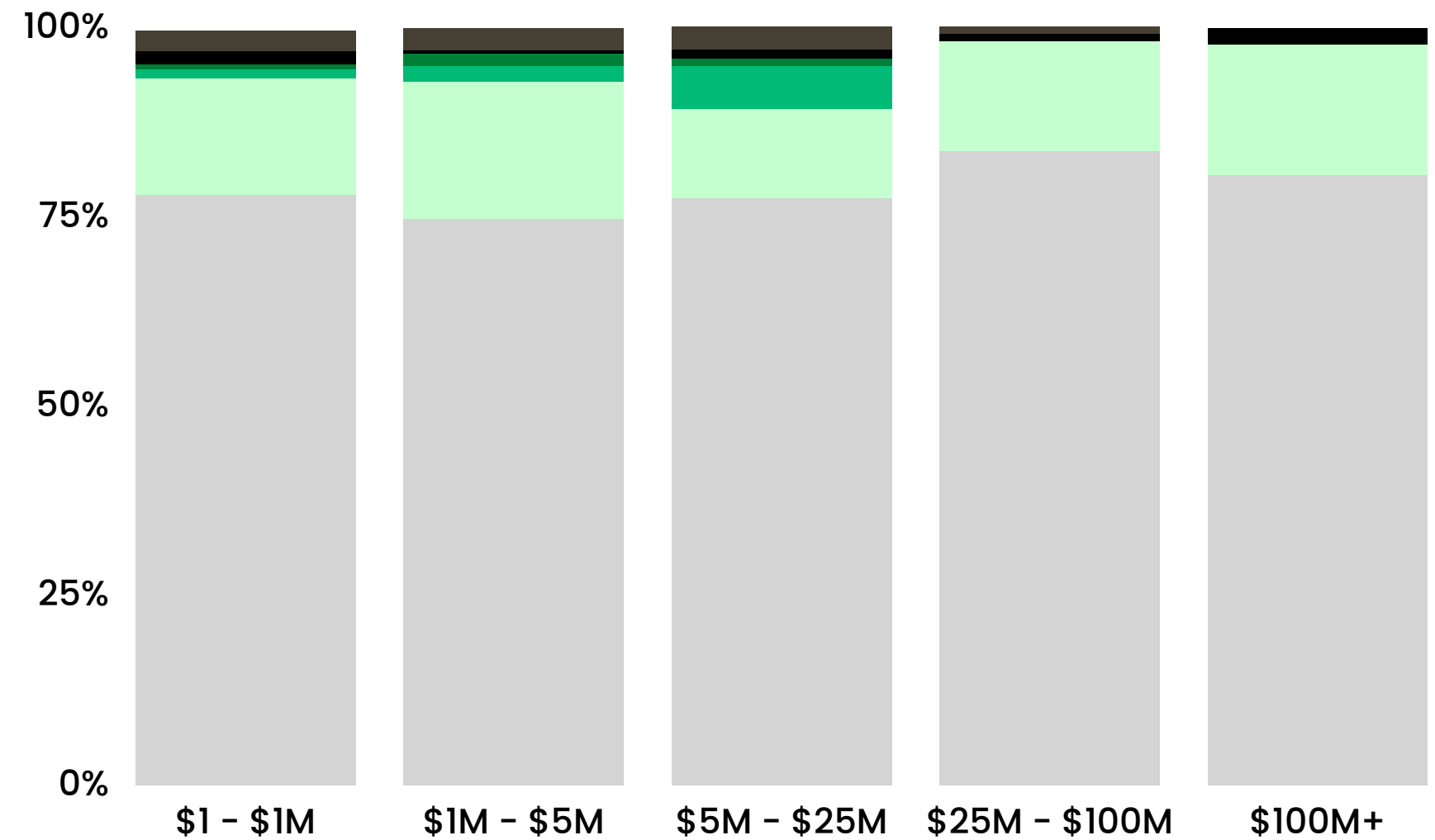


# 77% OF DEALS IN CLIMATE CHANGE MITIGATION. OTHER ENVIRONMENTAL OBJECTIVES LAG BEHIND, EXCEPT CIRCULAR ECONOMY.

SHARE OF DEALS BY ENVIRONMENTAL OBJECTIVE



SHARE OF DEALS BY OBJECTIVE AND DEAL SIZE



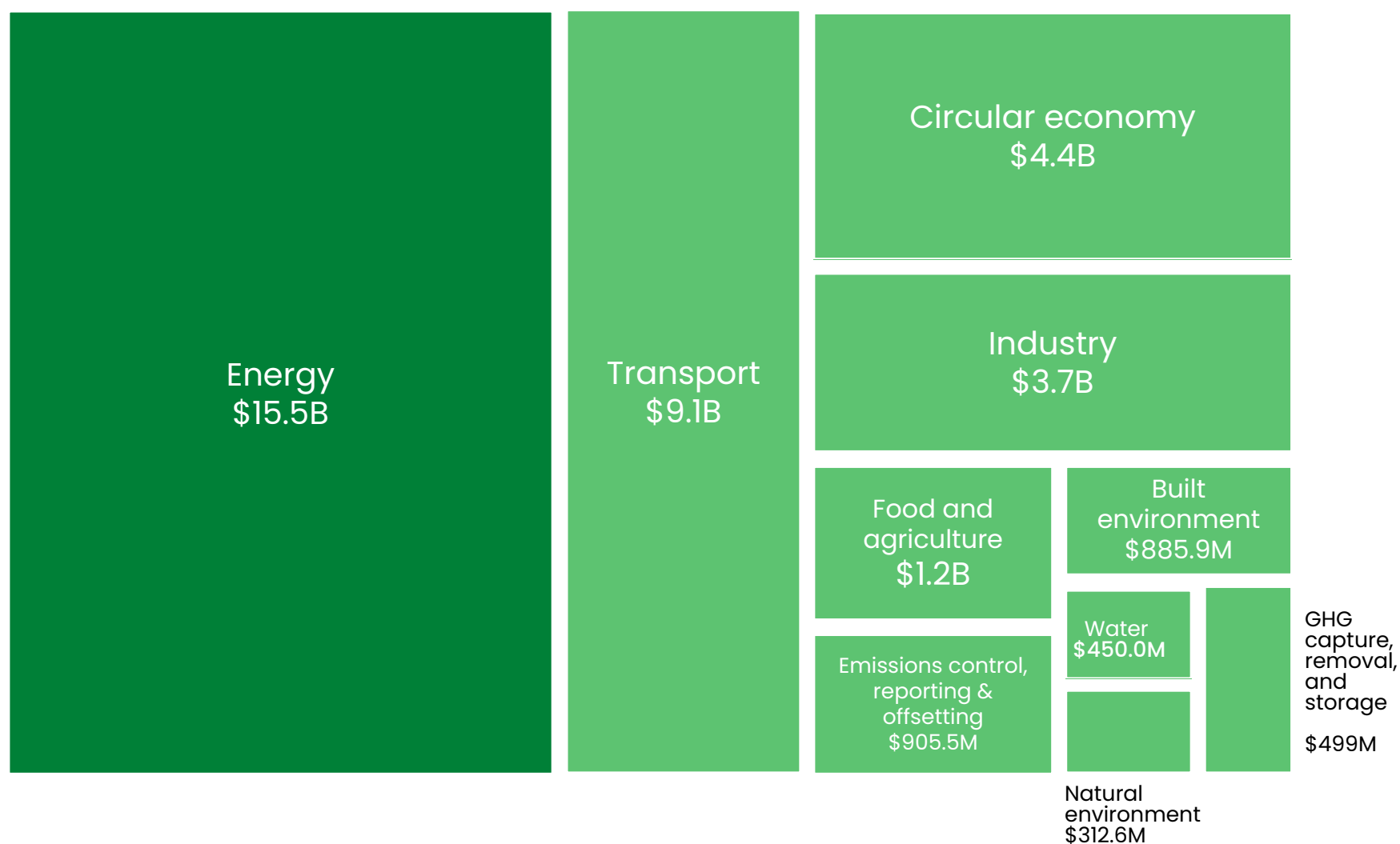
\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.

\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

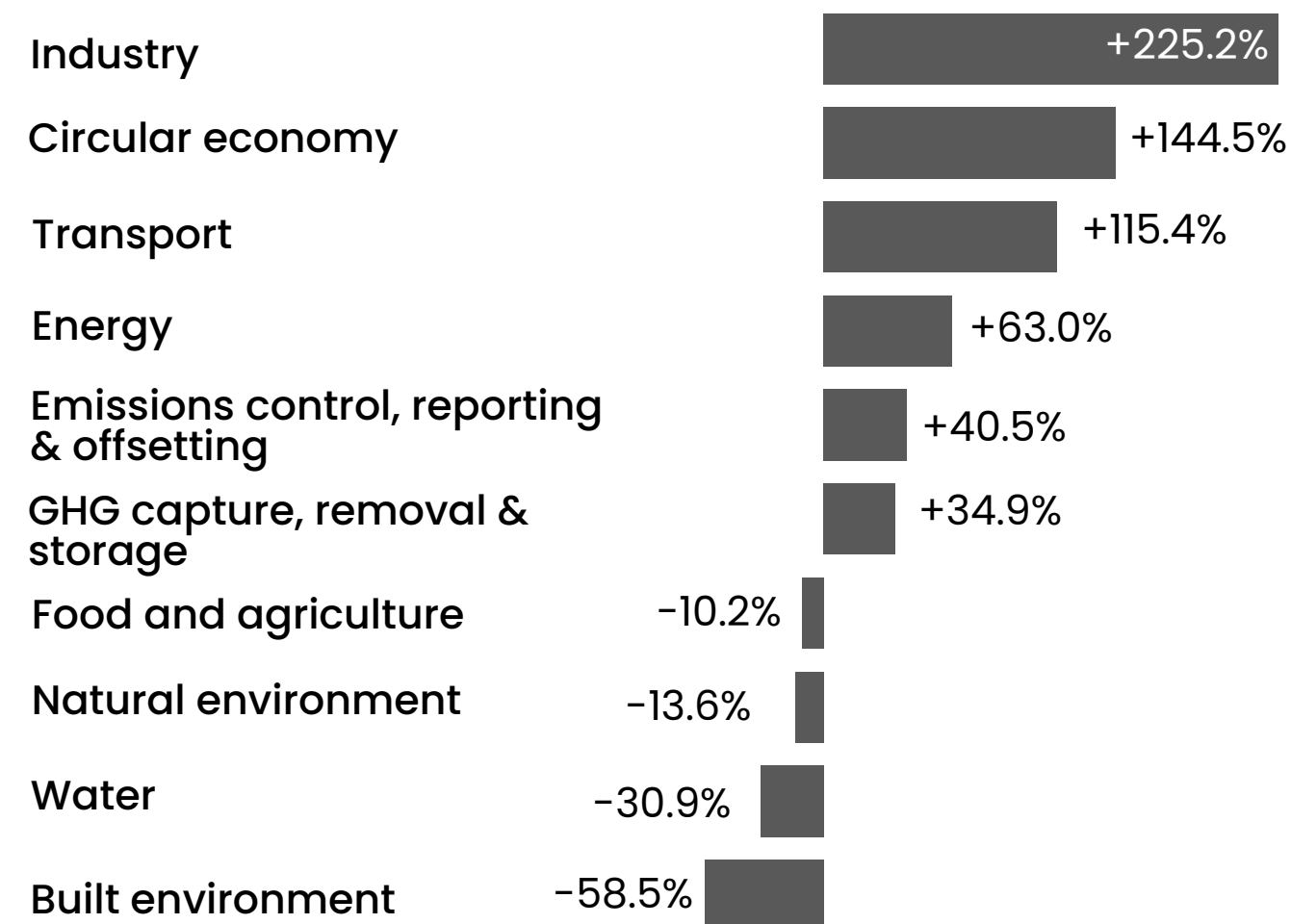


# ENERGY SECURED 40% OF FUNDING, WHILE INDUSTRY LED QOQ GROWTH. ONLY 4 CHALLENGE AREAS SHOWED QOQ DECLINES.

Q3'23 FUNDING BY CLIMATE CHANGE CHALLENGE AREA
















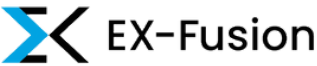





QOQ FUNDING VARIATIONS







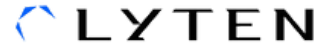















\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.

\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.





















# TOP 10 PRE-SEED AND SEED DEALS IN Q3 '23

COMPANY	AMOUNT	COUNTRY	TAGS	SOURCE
 <b>maka</b>	\$37.6M	Indonesia	#electricvehicle #B2C	
 <b>KONSCIOUS</b>	\$26M	Canada	#alternativeprotein #biotech	
 <b>BLUE LASER FUSION, INC.</b>	\$25M	United States	#nuclearenergy #energy	
 <b>ISOMETRIC</b>	\$25M	United Kingdom	#carbonauditing #B2B	
<b>terralayr</b>	\$21.4M	Switzerland	#energystorage #B2B	
 <b>constellr</b>	\$18.8M	Germany	#foodandagriculture #satellites	
 <b>NODAL</b>	\$13M	United States	#biogas #energy	
 <b>EX-Fusion</b>	\$12.8M	Japan	#nuclearenergy #B2B	
 <b>CO2 AI</b>	\$12M	France	#AI #carbonaccounting	
<b>LYDIAN</b> 	\$12M	United States	#CCUS #chemicals	






# TOP 10 EARLY STAGE DEALS IN Q3 '23

COMPANY	AMOUNT	COUNTRY	TAGS	SOURCE
 CONIGITAL CONNECTED DIGITAL	\$619.7M	United Kingdom	#AI #electricvehicles	
 AVATR	\$415M	China	#electricvehicles #B2C	
 LYTEN	\$200M	United States	#electricvehicles #energystorage	
 TIANNENG	\$138.3M	China	#recycling #batteries	
 PVcase	\$100M	Lithuania	#solar #monitoring&analytics	
 com bio	\$90M	Brazil	#wastetoenergy #B2B	
 AVNOS	\$80M	United States	#DAC #B2B	
 VERDAGY	\$73M	United States	#greenhydrogen #B2B	
 ARC	\$70M	United States	#electricvehicle #B2B	
 aeroseal	\$67M	United States	#energyefficiency #B2C	






# TOP 10 LATE STAGE DEALS

COMPANY	AMOUNT	COUNTRY	TAGS	SOURCE
 VERKOR	\$2.1B	France	#energystorage #batteries	
 ZENOBE	\$1.1B	United Kingdom	#energystorage #electricvehicles	
 REDWOOD MATERIALS	\$1B	United States	#batteries #recycling	
 HOZON	\$968.4M	China	#electricvehicles #B2C	
 HITHIUM	\$626.2M	China	#energystorage #batteries	
 ASCEND ELEMENTS	\$460M	United States	#batteries #recycling	
 ASTROENERGY	\$278.3M	China	#solar #AI	
 indigo	\$250M	United States	#biotech #precisionagriculture	
 OLA ELECTRIC	\$140M	India	#electricmobility #transport	
 FIELD	\$128.8M	United Kingdom	#energystorage #B2B	





# MOST ACTIVE PRE-SEED AND SEED INVESTORS

INVESTOR	COMPANY COUNT	INVESTOR TYPE	HQ COUNTRY
	29	Accelerator/Incubator	United States
	10	Accelerator/Incubator	Sweden
	10	Accelerator/Incubator	Israel
	9	Accelerator/Incubator	Switzerland
	9	Corporate	United Kingdom

# MOST ACTIVE EARLY STAGE INVESTORS

INVESTOR	COMPANY COUNT	INVESTOR TYPE	HQ COUNTRY
	5	Venture Capital	Netherlands
	5	Venture Capital	United States
	4	Venture Capital	United States
	4	Investment Bank	France
	4	Venture Capital	Belgium

# MOST ACTIVE LATE STAGE INVESTORS

INVESTOR	COMPANY COUNT	INVESTOR TYPE	HQ COUNTRY
 Prelude Ventures	5	Venture Capital	United States
 Breakthrough Energy	4	Venture Capital	United States
 Microsoft	3	Corporate	United States
 bdc	2	Venture Capital	Canada
TEMASEK	2	Lender/Debt provider	Singapore

# INNOVATOR SPOTLIGHT

## WHAT IS UNIQUE ABOUT CARBON UPCYCLING'S PROCESS FOR CONVERTING CARBON INTO ADVANCED MATERIALS?

Carbon Upcycling's technology mineralizes CO2 emissions into underutilized feedstocks, upcycling them into carbon-enhanced cementitious material. The material can be used to replace a portion of clinker in cement or cement in concrete while providing exceptional strength and durability.

Our process is unique because it can utilize a range of CO2 concentrations from point source emissions like a flue stack to highly concentrated sources like direct air capture units. The productive use of CO2 is also unique. Instead of storing the emissions underground, emissions are mineralized into materials like industrial byproducts to upcycle them into valuable cement replacements - enabling a circular economy.



**Dante Luu**

*Associate at Carbon Upcycling*

Carbon Upcycling is a cleantech company delivering technology to decarbonize hard-to-abate industries.

Our patented technology permanently stores CO2 in industrial byproducts and minerals, transforming them into high-performance alternative materials for cement and concrete. We reduce the carbon impact of industrial processes, divert industrial byproducts from landfills, and enable a circular economy.



## **AMONG THE MARKET SEGMENTS THAT YOU CATER TO, WHICH ONE IS CURRENTLY DEMONSTRATING THE HIGHEST DEMAND?**

Our primary vertical is hard-to-abate industries like cement, steel, energy, and mining. We are seeing demand in these industries for practical decarbonization solutions to achieve upcoming 2030 ambitions.

Carbon Upcycling provides cement manufacturers with a carbon utilization solution and unlocks a diverse and local supply of low-carbon materials to reduce the carbon impact of their cement while also providing a circular solid waste management solution for other industries.

## **HOW ADAPTABLE IS THE CARBON UPCYCLING MODEL TODAY, AND TO WHAT DEGREE CAN IT BE INTEGRATED WITH EXISTING INFRASTRUCTURE?**

Our technology was designed to be highly adaptable to the legacy infrastructure found in hard-to-abate industries. It can be integrated wherever there is an adequate CO<sub>2</sub> source, sufficient feedstock and a relevant commercial offtake.

Our primary integration is at the cement plant, where our technology connects directly to the kiln flue stack to carbonate feedstock. Material from our technology then flows downstream integrated with the plant's material handling system.

We also have the opportunity to build stand-alone units at a feedstock or CO<sub>2</sub> source and sell material directly to ready-mix concrete producers.



**CONSIDERING CANADA'S RECENT CLIMATE POLICY RECORD COMPARED TO ITS NORTH AMERICAN COUNTERPART, WHAT POLICY DIRECTION DO YOU BELIEVE IS SORELY NEEDED TO BEST ENHANCE CO2 CAPTURE, STORAGE, AND UTILIZATION IN THE FUTURE?**

For carbon utilization and industrial decarbonization technologies like ours, governments should look to implement procurement policies that incentivise uptake. Both “buy clean” and “buy local” policies greatly enhance demand for cleantech products and help to create incentives for companies to deploy technology in different jurisdictions.

To enhance the future of CCUS technologies and, ultimately, the end goal of decarbonization, we need to clearly distinguish between carbon dioxide removal (CDR) and emissions reductions/abatement. CDR captures carbon dioxide from the atmosphere. Emissions reduction prevents emissions from entering the atmosphere, which can be achieved by point source capture, optimization of processes, or replacement of carbon-intensive material inputs.

Both removal and reduction are required for decarbonization, but leading groups like SBTi support the thesis that a net zero 2050 will be achieved through 5-10% CDR and 90-95% emissions reduction. Yet, it seems like policy favours the former. Setting incentive policies and emissions targets that proportionally represent the impact that removal and reduction have will better aid the adoption of emissions reduction technologies, like Carbon Upcycling. In doing so, the industry as a whole can evolve as opposed to the over-development of one-half of CCUS.



1

## QUARTER SHAKER

INSIGHTS ON UNEXPECTED EXIT ACTIVITY

2

## BIRD'S-EYE VIEW

HISTORICAL QUARTERLY DATA

3

## QUARTER SPOTLIGHT

FOCUSING THE LENS ON Q3 2023

4

## **REGIONAL FOCUS**

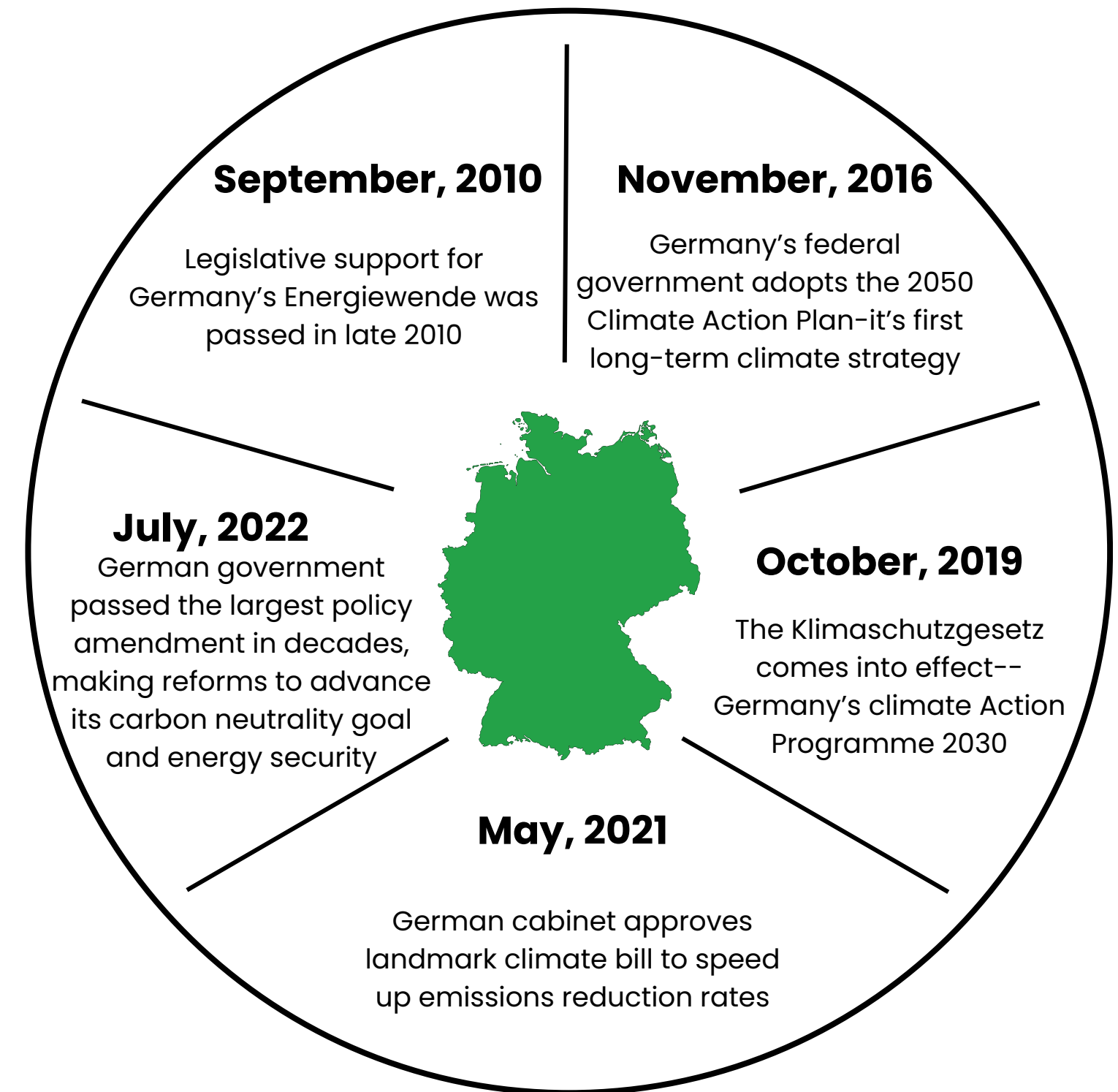
MAJOR DEVELOPMENTS IN Q3 2023

# GERMANY'S POLICY LANDSCAPE AND CLIMATE TECH.

For Germany, the focus on climate change, its contributors, and effects predates the 21st century. The very first climate change policies for the country were passed in the mid 80s-early 90s, where Germany's Bundestag established the BMU for environmental regulation, the 'Climate Enquete' for atmospheric change discussions, and an Inter Ministerial Working Group to cut CO2 emissions by 25%.

From this point up until the early 2000s, Germany implemented more policies to enable its transition. None accrued more acclaim than its pioneering **Energiewende** policy in 2010, which has become a hallmark of its climate efforts and currently underpins policy such as the Climate Change Act (2019), 2050 Climate Action plan, Climate Action Programme 2030, and other acts such as the Fuel Emissions Trading Act, Energy Action Package, Buildings Energy Act, Electric mobility package, and so on.

**In Q3 2023 the German government announced €212B in its climate and transformation fund to emphasize its commitment to reducing its emissions and becoming carbon neutral by 2045. This fund, a key financial mover for many of the country's climate-oriented policies, is a critical lever to finance the fight against climate change.**



# THOUGHT LEADERS

## WHAT IS THE PURPOSE OF THE KTF AND HOW DOES THE GERMAN GOVERNMENT INTEND TO USE IT TO CATALYSE SUSTAINABLE DEVELOPMENT?

In addition to the federal budget, there are special funds that are set up to finance extensive and multi-year measures on an earmarked basis. They are established by law and must meet the same requirements as the federal budget, but are managed and accounted for separately from other federal assets. Only the additions to or transfers from special funds have to be budgeted.

**The "Climate and Transformation Fund" (KTF)** is the further development of the "Energy and Climate Fund" (EKF) of July 2022. The purpose of the special fund has been adjusted in order to better and more flexibly align it with the climate protection goals of the Climate Protection Act. The purpose of the KTF is to finance activities for Germany's transition to climate neutrality.

The German government intends to use KTF funds to support the energy-efficient refurbishment of buildings, the decarbonization of industry, the establishment of a hydrogen economy, and the expansion of renewable energies, electromobility, and charging infrastructure.



**René Böhm**

*Senior Expert, Start-ups and Innovation, at DENA*

dena is a centre of excellence for the applied energy transition and climate protection. We work with stakeholders from across all sectors, on both a national and international level.

As a think tank, we study the challenges of building a climate-neutral society and support the German government in achieving its energy and climate policy objectives.

## WHAT SOURCES ARE FINANCING THE €212B COMMITMENT?

Between 2024 and 2027, €212 billion is planned to be spent from the KTF, but it is important to note that the budget has not yet been approved by the parliament. There are still several steps in the parliamentary process before the budget for 2024 and the financial plan for 2023 to 2027 are adopted and come into force.

The KTF is funded, among other things, by **the proceeds of European and national carbon pricing**, which is intended to ensure that climate-related revenues are channeled directly into investments for climate protection measures. In 2024, revenues from European and German emissions trading will amount to approx. €19.1 billion.

In addition, €9.3 billion will be available from the Global Excess Revenue, which consists of the expected additional revenues and reduced expenditures in 2023. A federal allocation to the KTF special fund is no longer planned for the entire financial planning period. Reserves in the KTF are another source of funding for the expenditures.



The German Energy Agency (dena) sees itself as an independent driver and pioneer of the energy transition – nationally and internationally. With our work we want to make a contribution to their success and to global climate protection.

Our guiding principles are the energy policy triangle of environmental compatibility, security of supply and affordability as well as the internationally agreed climate protection goals.

## WHERE WILL THE COMMITMENTS FLOW INTO AND WHAT IS THE PROJECTED IMPACT OVER THE THREE YEAR IMPLEMENTATION PERIOD?

The German government's draft economic plan for the KTF 2024 lists **38 allocations and grants item** and **27 items for capital expenditure**, while **the financial plan focuses on 8**.

The biggest focus in the economic plan for 2024 as well as in the financial plan from 2023 to 2027 are **building subsidies**, which will receive **8.88 billion euros** more from 2023 to 2026 than what was planned for the same period last year. The amount of subsidies for the building sector is connected to the new **building energy act** that was passed in parliament. Another focus is the Renewable Energy Sources Act (EEG) subsidies, subsidies to electricity-intensive companies, and financial compensation under Section 11 of the Fuel Emissions Trading Act, which are intended to help to relieve citizens as well as companies and avoid excessive burden.

The item decarbonization of industry and ramp-up hydrogen, further development of electromobility, the National Climate Action Program & NKI and the industrial manufacturing Energy storage as all of the planned funding are supposed to finance the energy transition and transformation to a net zero society and economy. Additional commitments are environmental bonus, subsidies for buses/vehicles, charging infrastructure, as well as the from 2024 on new investment in rail infrastructure by federal EIU and microelectronics. The government considers the semiconductor production to be highly relevant for climate-neutral technologies and thus for a successful transformation of the German economy towards net-zero-emissions.

## HOW WILL THIS INJECTION OF FUNDS AFFECT THE VENTURE MARKET WITHIN GERMANY AND BY EXTENSION, WITHIN EUROPE?

There is no KTF item that directly addresses the (climate tech) venture market. In 2022, however, the German government's Future Fund-**Zukunftsfonds**-was launched, which leverages private investments through various modules/components or invests directly in start-ups (also with a deep tech focus).

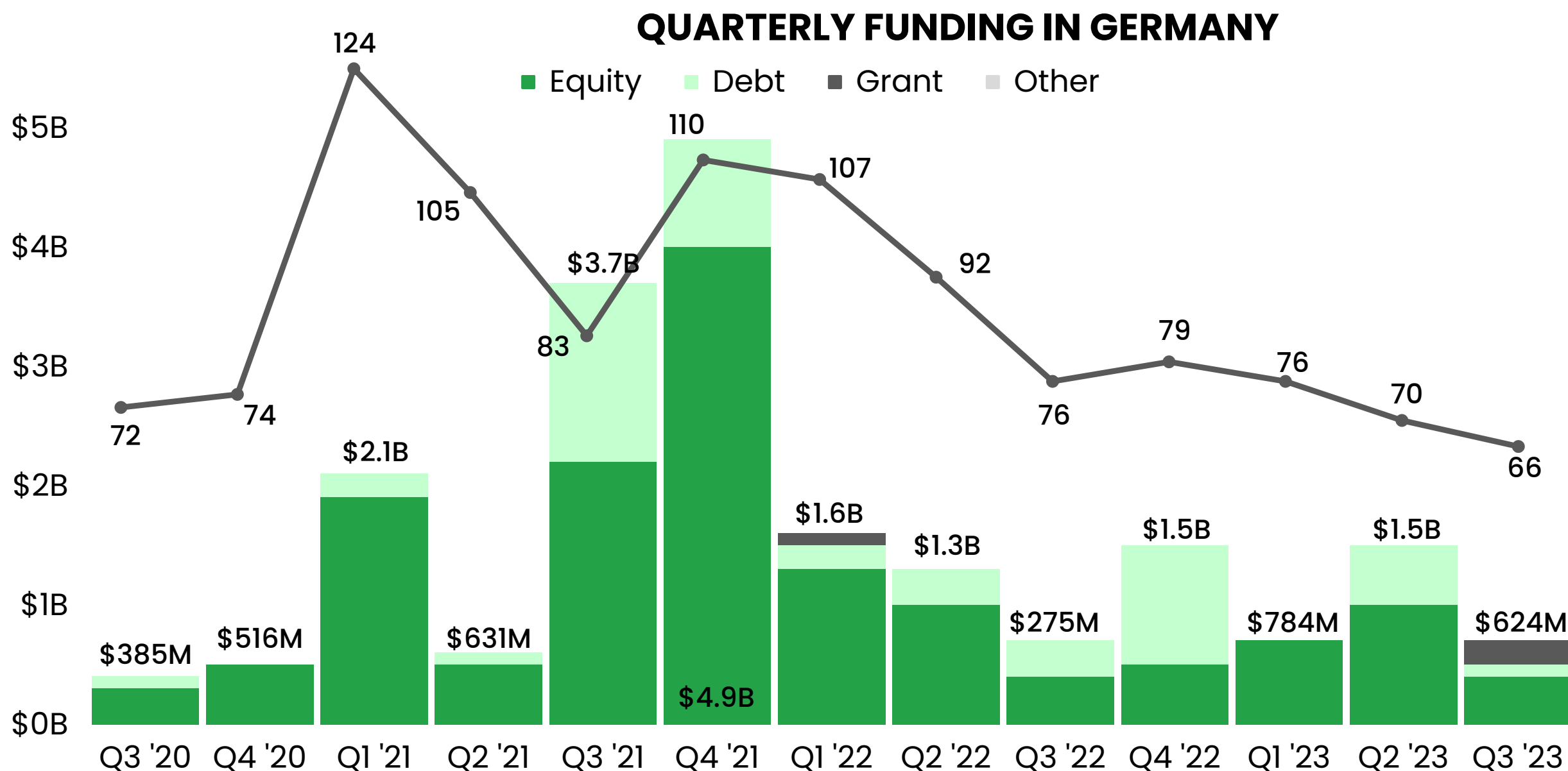
THE KTF aims to decarbonize and transform the entire economy. This is also a huge opportunity for climate tech start-ups, as well as for their investors. By funding certain areas, there may be a market ramp-up of certain start-up solutions (e.g. technologies for refurbishing buildings, or FOAKs to decarbonize the industry). This may also shorten the technology maturation cycles of new climate technologies, thereby incentivizing venture capital.

Nevertheless, this also requires other instruments at the European level, such as public guarantees and green public procurement, to address the risk profiles of particularly young hardware start-ups.





# FUNDING AND DEAL ACTIVITY IN GERMANY HAVE LARGELY TRENDED NEGATIVELY OVER THE LAST FEW YEARS.

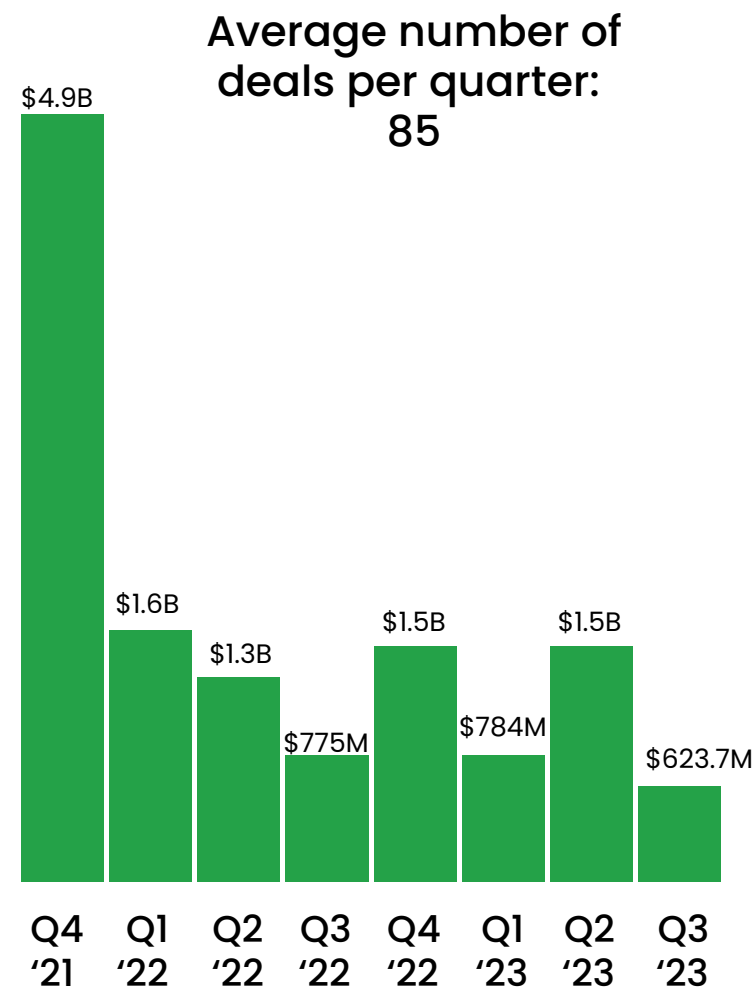


Historically, Germany has been one of the climate strongholds within Europe, advocating and enabling the kind of landscape necessary for climate tech startups to thrive. However, since the boom year of 2021—where Germany recorded \$11.4B in funding across 422 deals—funding and deal activity have dipped steeply.

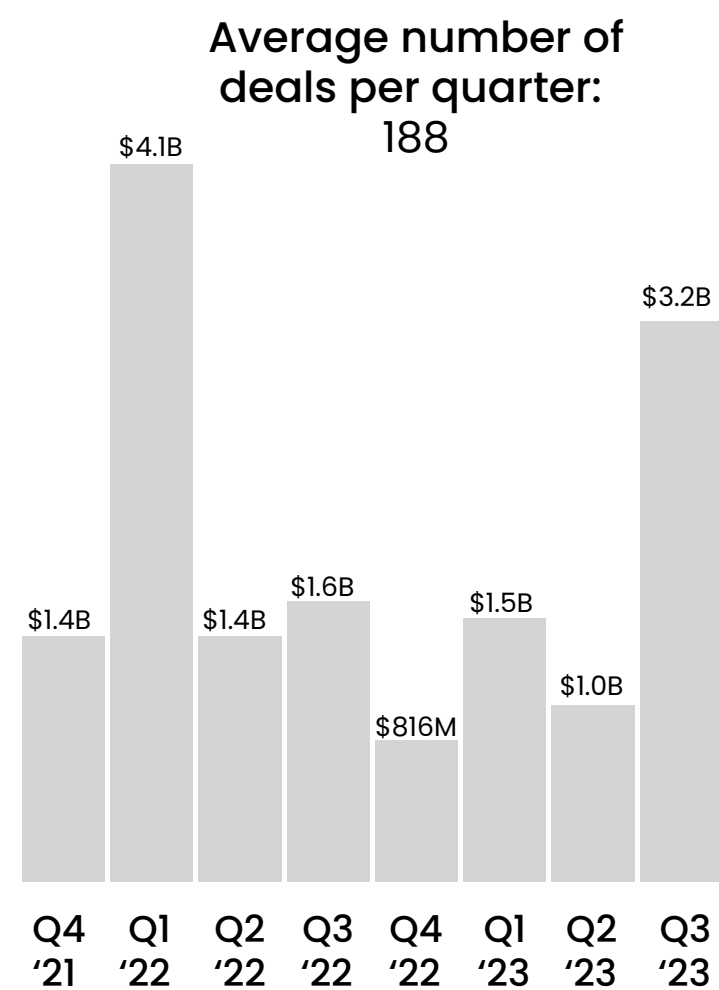
Most climate tech startups within Germany are funded primarily with equity and less so with debt. Grant funding hardly colours the funding landscape in Germany, but Q3 2023 was one quarter that saw the highest inflow of grant funding into German based climate startups.

# IN Q3 2023, GERMANY LAGGED BEHIND THE UK, FRANCE, AND SWEDEN IN FUNDING BUT MAINTAINS ACTIVE DEAL ACTIVITY.

## QUARTERLY FUNDING: GERMANY, UK, FRANCE, SWEDEN



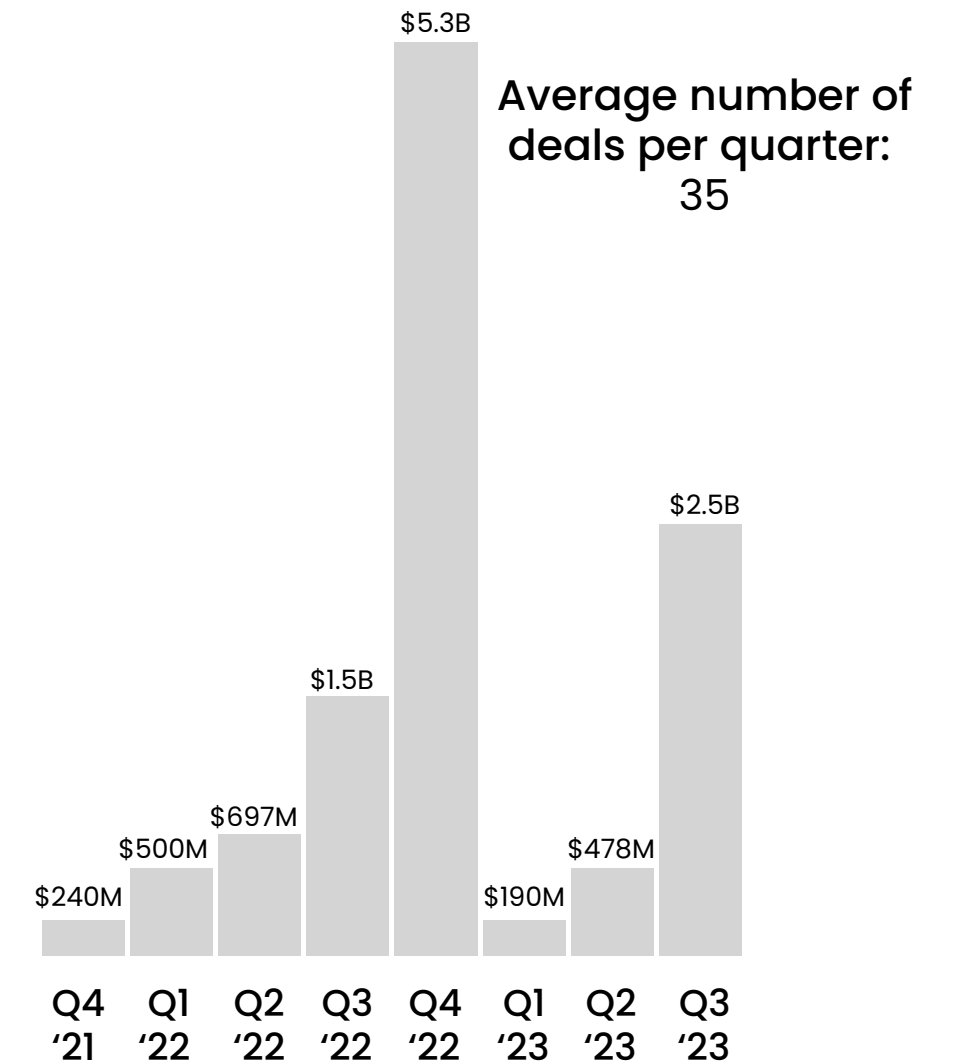
Germany



United Kingdom



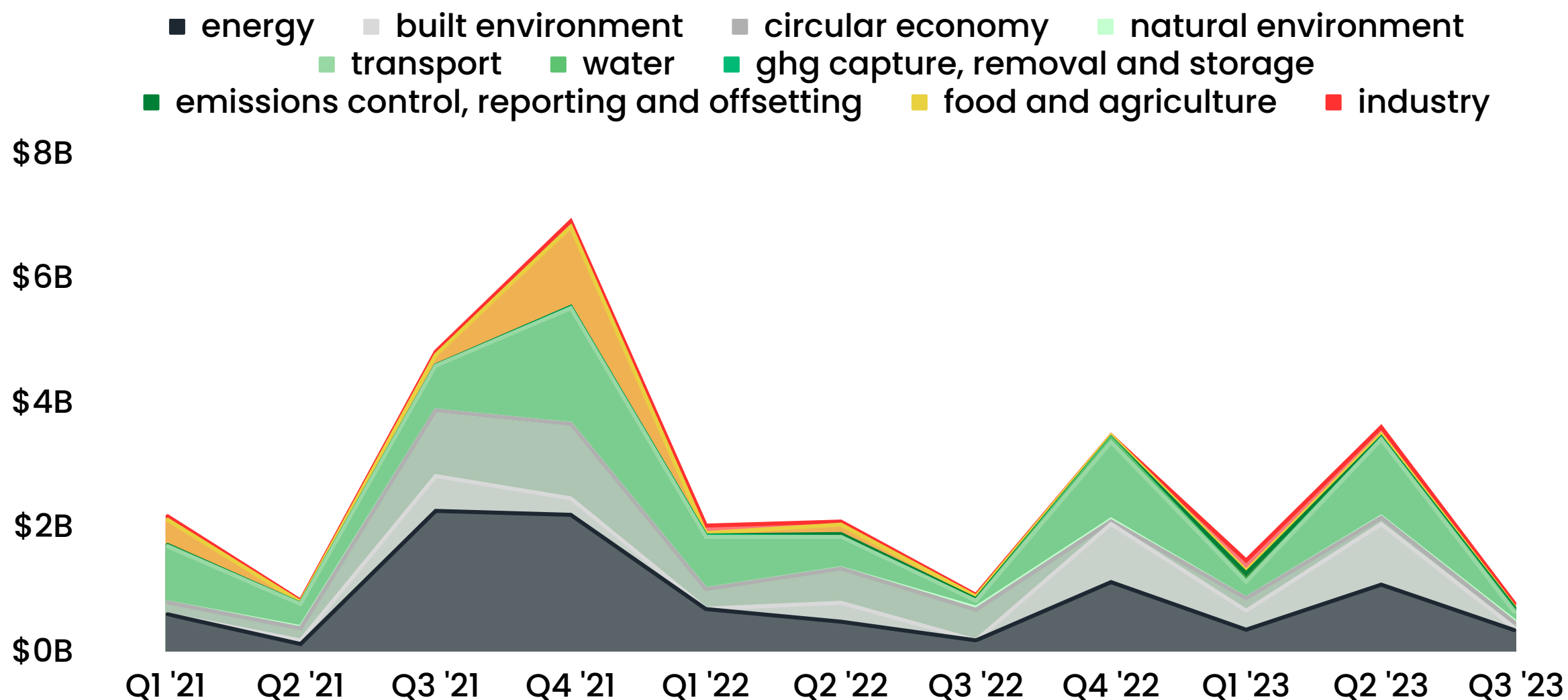
France



Sweden

# HISTORICALLY, FUNDING IN GERMANY CONSOLIDATES ACROSS 4 MAIN CHALLENGE AREAS.

## QUARTERLY FUNDING IN GERMANY BY CLIMATE CHANGE CHALLENGE AREA



These four main challenge areas are: energy, transport, built environment, and circular economy.


Together, these 4 challenge areas account for 85% of all funding flowing into the private climate-tech market in Germany.

In Q3 2023, they made up 87% of funding, with \$348M, \$86M, \$38M, and \$144M respectively. Ironically, however, these areas all saw negative QoQ growth, as did most other challenge areas, except for natural environment, water, and emissions control, reporting, and offsetting.

\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.

\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.



**TOP 5 Q3  
2023  
DEALS IN  
GERMANY**



**SUNFIRE**

\$184.4M


Grant  
#hydrogen #energy

**TRACELESS  
MATERIALS**

\$39.1M

Series A  
#biotech #materials





**BLACKLANE**

**BLACKLANE**

\$36.0M


Series F  
#electricvehicles #B2B

**PLAN A**

\$27.0M

Series A  
#co2accounting #B2B



**nuventura**


**NUVENTURA**

\$26.7M

Series A  
#energy #B2B




**MOST  
ACTIVE  
INVESTORS  
IN Q3 2023  
BASED IN  
GERMANY**



**STATKRAFT  
VENTURES**

Deals: 4


Corporate



**H2UB**

Deals: 4


Accelerator/  
Incubator



**HTGF**

Deals: 3


Venture  
Capital



**BAYERN  
KAPITAL**

Deals: 3

Venture  
Capital



**FEV**

Deals: 2

Venture  
Capital

# INNOVATOR SPOTLIGHT

## WHAT ARE THE CORE LEVERS IN PLAN A'S SOFTWARE OFFERING THAT ENABLES COMPANIES STAY AHEAD OF CHANGING STANDARDS AND REGULATIONS?

Our Plan A Sustainability Platform serves as a central hub for corporate sustainability and due to the high degree of automation, it makes deep decarbonisation and compliance in a highly fragmented regulatory market manageable, less complex, and cost efficient.

By automatically mapping all necessary data across Scopes 1, 2, and 3 and merging them with national emission factors and datasets, our SaaS platform is able to provide granular emissions profiles and ESG insights in dynamic dashboard overviews. Based on the indicators with the most significant reduction potential, our software empowers companies to set science-based net-zero targets and achieve them through 1,000+ decarbonisation solutions and activities, best practices, as well as a network of service providers and sustainability professionals. At the end of this holistic process, the platform produces regulation-proof ESG reporting.

**planA**



**Lubomila Jordanova**

*CEO and Co-founder at Plan A*

Plan A is Europe's leading corporate carbon accounting, decarbonisation, and ESG reporting software provider. Founded in 2017, the Greentech has developed a SaaS platform that combines cutting-edge technologies and the latest scientific standards and methodologies (compliant with the Greenhouse Gas Protocol; certified by TÜV Rheinland).

To meet the highest scientific standards, all platform-embedded calculations, decarbonisation solutions, and reporting capabilities are fully aligned with internationally recognised scientific methodologies and standards such as the Greenhouse Gas Protocol and the Science Based Targets initiative (SBTi). The scientific accurateness of the applied Corporate Carbon Footprint (CCF) calculation methodology is certified by TÜV Rheinland, one of the world's leading verification bodies.

## **HOW DO THESE LEVERS DIRECTLY CONTRIBUTE TO SOLVING THE CLIMATE PROBLEM?**

As per IEA, global CO2 emissions rose to a new high of over 36.8 Gt in 2022. As the climate crisis is defined in large part by the growth of emissions, one of the most urgent challenges and the only economically viable choice is to rapidly reduce the emissions curve, especially for companies. And as outlined above, this is exactly where our decarbonisation platform comes in.

At Plan A we are focused on catering to enterprise and midsize companies and have strong references. To date, we have served over 1,500 customers such as Chloé, BMW, Deutsche Bank, Visa, GANNI, and N26, and many more. We have brought 7 Mt carbon under management on our platform, with our target being to measure and reduce 1 gigatonne of CO2e annually.



The end-to-end software solution enables businesses to self-manage their entire net-zero journey – from data collection over emissions calculation, target setting, and decarbonisation planning to non-financial reporting – in one central hub. The Berlin, Paris, and London-based company counts Chloé, BMW, Deutsche Bank, Visa, GANNI, N26, HomeToGo, trivago, Personio, Sorare, KFC, and DFB among its customers.

In September 2023, Plan A raised \$27M in a round led by Lightspeed Venture Partners.

Given our current growth trajectory and the increasing number of highly valuable partnerships with industry leaders such as Visa and BMW Group's affiliate Alphabet, we will also massively increase the impact that our Plan A Sustainability Platform brings in terms of corporate decarbonisation at a global scale.

**YOUR RECENT \$27 MILLION FUNDING ROUND GARNERED SIGNIFICANT ATTENTION. CAN YOU SHARE HOW YOU PLAN TO UTILIZE THIS FUNDING TO FURTHER ENHANCE YOUR OFFERINGS AND EXPAND YOUR IMPACT IN THE CORPORATE SUSTAINABILITY SPACE?**

The funding heralds the next growth phase. With the fresh capital, we will double our headcount to 240+ employees to expand our market penetration in Europe with a strong focus on France, the UK, and Scandinavia, as well as deepen our platform capabilities. For the latter, our aim is to further advance our platform's decarbonisation tooling, Scope 3 coverage and actionability, as well as policy alignment capabilities. With this, we will further our mission to empower hundreds of thousands of businesses to self-manage their net-zero journey by using our end-to-end SaaS platform.



Leading by example, Plan A has established its own Sustainability Initiative team to define, manage, and steer the company's sustainability journey. As a first milestone, Plan A disclosed its corporate carbon footprint for the base year 2021 (44.29 tCO<sub>2</sub>e). Plan A is B Corp-certified and thus demonstrably adheres to strict social and environmental standards.

In fact, with the top score achieved, Plan A is among the top 5 percent of all certified companies worldwide in the impact area "Governance".

## **IN PLAN A'S 5 YEARS, WHAT HAVE BEEN THE EMISSION REDUCTION STORIES OF YOUR CUSTOMERS AND HOW IS THAT MAKING A DIFFERENCE IN THE WAY THEY DO BUSINESS?**

Our mission has always been to decarbonise businesses of all sizes, worldwide. Since our foundation, we have guided and empowered several hundred businesses to account for and reduce their carbon emissions, improve their ESG performance, and align with non-financial reporting requirements.

For example, the Danish fashion brand Ganni has started an ambitious program years ago aiming to become a leader in sustainability in the fashion space. They've already achieved a 44% reduction in material emissions and continue to pursue ambitious decarbonisation goals by 2025, especially embedding sustainability into their suppliers as well as across their value chain.

Another example is the global NFT-based fantasy game Sorare. Through a technical migration in the blockchain, the company could reduce its carbon footprint by 99 percent. Together with Plan A, Sorare has disclosed its emissions across all Scopes 1, 2, and 3 and is now working on its long-term sustainability strategy with the goal of becoming the world's first net-zero gaming company.

What all of them have in common is that they have deeply embedded sustainability into their corporate strategy. They do not see sustainability as a burden, but understand it as an opportunity to do business more efficiently, cut costs, enhance their reputation and brand equity, attract and retain talent, and have a competitive advantage.



# INDIA'S POLICY AND CLIMATE FINANCE LANDSCAPE.

India has been actively engaged in climate policy initiatives over the years, with a focus on renewable energy adoption, emissions reduction, and environmental sustainability. However, even though the country has announced its NDC and allocated over \$8B to aid its transition, it still has not committed to phasing out coal or fossil gas use.

India operates a host of sector-specific strategies and laws. Its legacy piece of policy is the **National Action Plan for Climate Change (launched in 2008)**, which serves as the guiding framework upon which all other policies/provisions are designed and implemented.

In Q3 2023, **India hosted the G20 summit for the first time**, where the nation sought to assert its stance as a voice for the Global South to demand accountability from wealthier nations for the overdue promise of \$100 billion annual climate finance for vulnerable countries.

In 2022, India amended its Energy Conservation Act, which potentially lays the foundation for the creation and development of a domestic carbon market

In 2023, India saw the passing of:

- National Electricity Plan (NEP 2023)
- National Green Hydrogen Mission
- The first of a kind deployment of two tranches of sovereign green bonds - worth nearly \$2B - cementing this as a key form of financing for its long-term climate strategy.

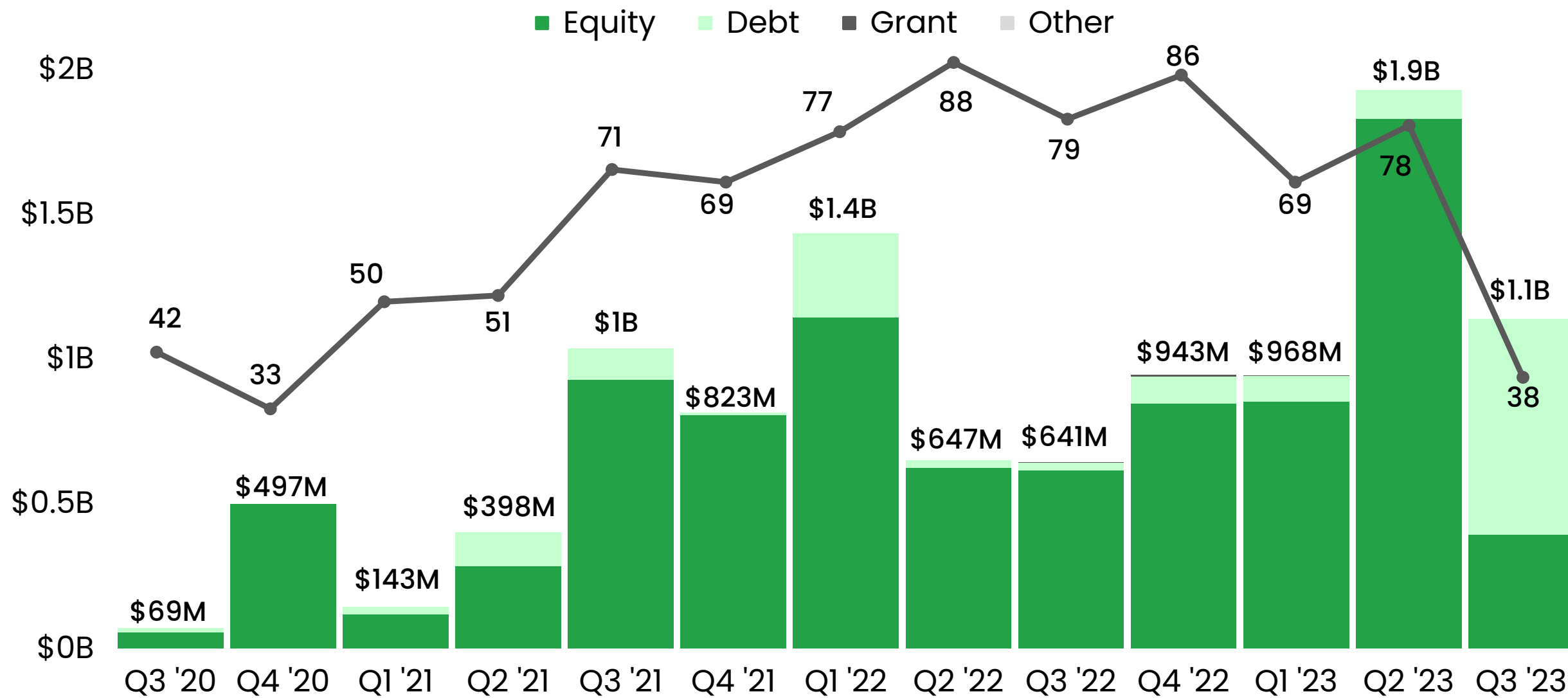
\*The issuance of sovereign green bonds reflects India's dedication to expanding renewable energy production and reducing carbon intensity. These bonds support investments in renewable energy and the electrification of transportation systems.

As part of India's \$550B economic fund and in line with its climate agenda, 2023 also saw India announcing:

- \$8B for mangrove restoration
- \$4.3B for the energy transition
- \$2.5B to facilitate local energy production
- An import tax cut for components required to manufacture lithium-ion batteries

# DESPITE Q3 2023'S FUNDING AND DEAL DECLINE, 2023 PROMISES TO BE A PROLIFIC YEAR FOR INDIAN CLIMATE TECH INVESTMENTS.

QUARTERLY FUNDING AND DEAL ACTIVITY IN INDIA



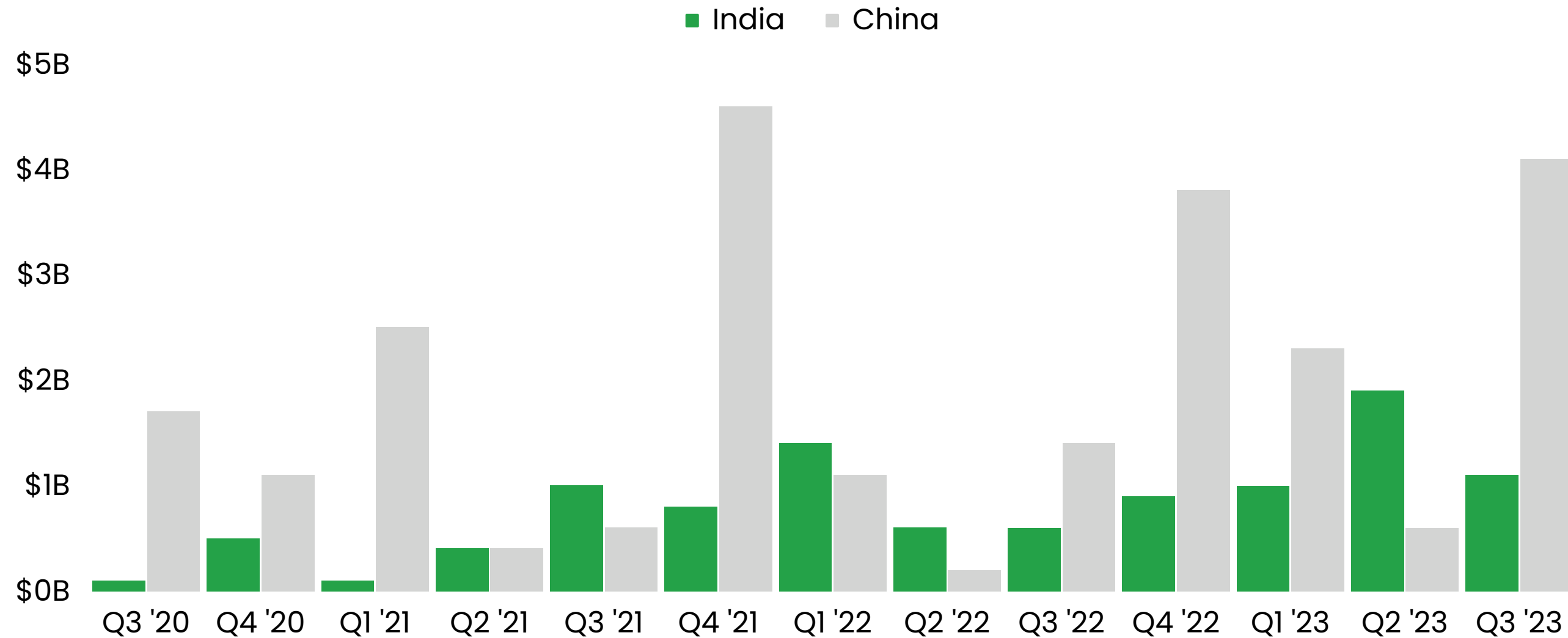
The climate prerogative for India is hinged largely on the country's strategy for economic growth and development.

Since 2021, India has attracted a healthy amount of investment into its climate tech landscape, and has consistently been growing YoY (2021 - \$2.4B|241 deals; 2022 - \$3.7B|330 deals; 2023 so far - \$4.0B|185 deals).

Most climate tech startups within India are funded primarily with equity or debt. Q3 2023 saw the highest proportion of debt to equity funding in India, and is the only quarter where debt exceeded equity funding. (\$743M vs. \$391M respectively).

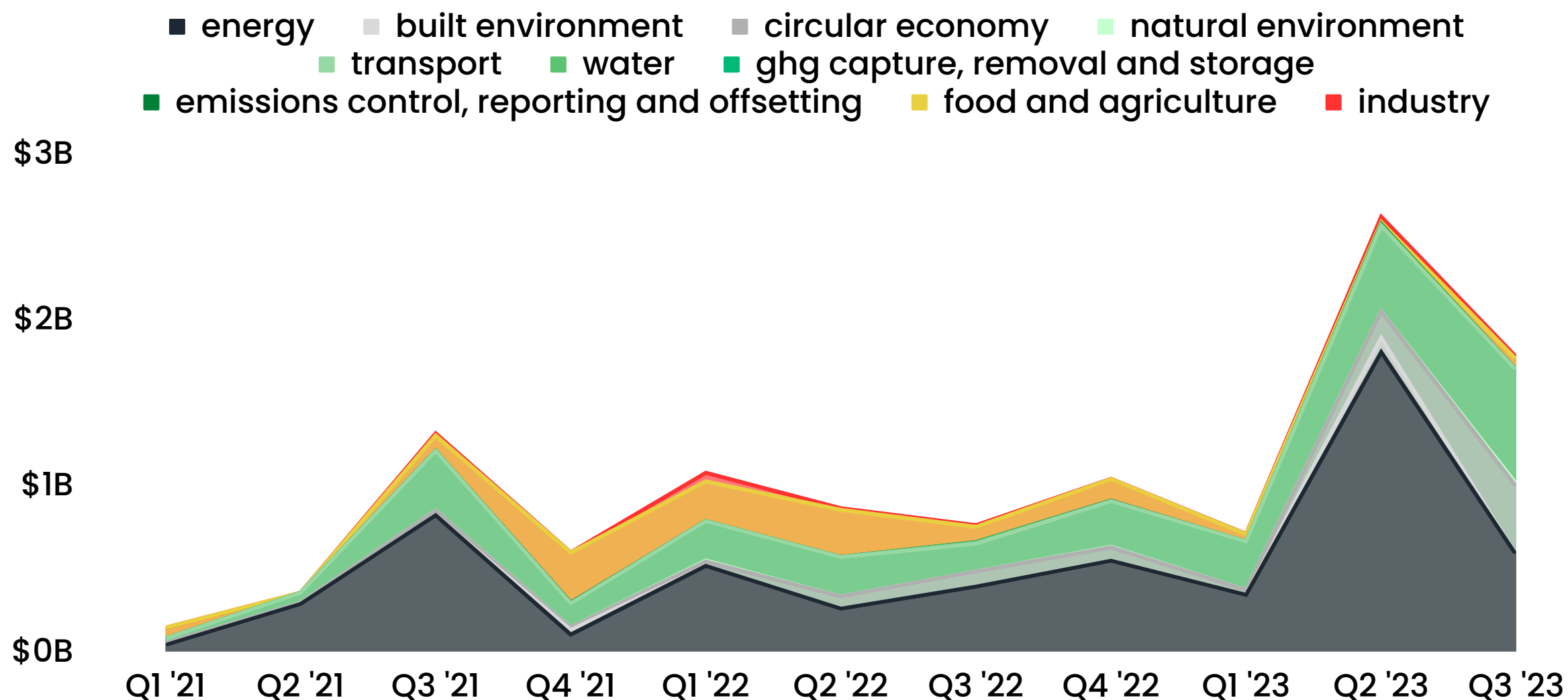
# INDIA AND CHINA HOLD A MONOPOLY ON ASIAN FUNDING, BUT INDIA STILL HAS SOME CATCHING UP TO DO.

### QUARTERLY FUNDING: INDIA VERSUS CHINA



# IN Q3 2023, ENERGY, CIRCULAR ECONOMY, AND TRANSPORT COMPRISED 94% OF CHALLENGE AREA FUNDING.

## QUARTERLY FUNDING IN INDIA BY CLIMATE CHANGE CHALLENGE AREA



Historically, energy, transport, and food and agriculture comprise the challenge areas to which India attracts the most climate tech related investments.


Of recent, circular economy has increasingly been gaining traction in the Indian climate market, growing by over 160% over the last quarter.

Nevertheless, India still has a sizeable climate funding gap and will need to attract even more investment if it will reach its economic and climate targets. (the Council on Energy, Environment and Water, an Indian think-tank, pegs the investment required to reach net zero at \$10.1T).

\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.



\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

**TOP 5 Q3 2023 DEALS IN INDIA**




**GREENCELL MOBILITY**

\$365M  
Debt  
#EV #B2B

**SERENTICA RENEWABLES**



\$313.1M  
Debt  
#solar #energy



**OLA ELECTRIC**



**OLA ELECTRIC**

\$140M  
Growth Equity  
#EV #batteries


**ATHER ENERGY**

\$66.2M  
Series E  
#EV #B2C





**LEADSCONNECT SERVICES**

\$60.2M  
Series A  
#AI #agriculture




**MOST ACTIVE INVESTORS IN Q3 2023 FOCUSED ON INDIA**




**HYPERSCALE**

Deals: 4  
Accelerator/  
Incubator



**JAVA CAPITAL**

Deals: 2  
Angel Group




**BLUME VENTURES**

Deals: 2  
Venture Capital



**ANICUT CAPITAL**

Deals: 2  
Private Equity



**EVOLVEX A**

Deals: 2  
Accelerator/  
Incubator

# Q3 2023: THE QUARTER THAT WILL BE REMEMBERED FOR AFRICA'S FIRST EVER CLIMATE SUMMIT.

Between the 4th and 6th of September, 2023, the Kenyan Government and the African Union Commission under the theme, “Driving Green Growth and Climate Finance Solutions for Africa and the World”, convened the Africa Climate Summit – a historic first for the continent.

Africa, while contributing the least emissions, bears a disproportionate burden of climate change impacts. This summit had a dual mission: to tackle growing climate vulnerability and the associated social, economic, and industrial costs, while advocating for innovative climate finance to bolster continental resilience.

Staying true to its theme, two landmark events spotlighted the conference:

**1. the summit secured a total investment commitment of \$26B from public and private sectors, development banks, philanthropic foundations, and more**

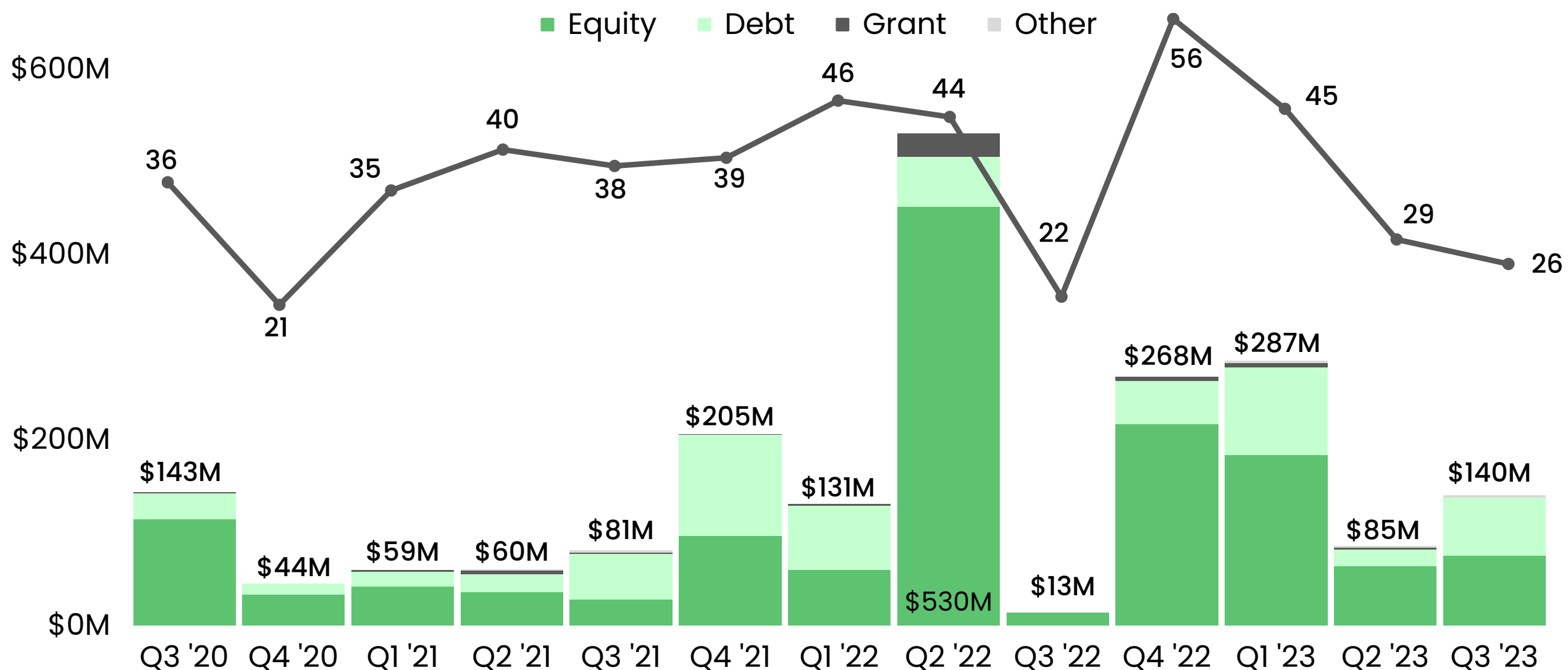
**2. 19 African Heads of State signed the Nairobi declaration, a unified stance for the upcoming global climate talks at COP 28.**

## Some Key Announcements from the Summit

- The UAE committed \$450M to purchase carbon credits from the African Carbon Markets Initiative (ACMI), as well as a further \$4.5B to help unlock Africa's clean energy potential.
- A \$200M commitment from Climate Asset Management in projects that will produce ACMI credits.
- A \$65M debt swap between Germany and Kenya to allocate money for renewable energy expansion within the country.
- The UK announced £49M in climate finance to be delivered across the African continent.
- €24M announcement from the Belgian government to renewable energy projects that will contribute to climate adaptation in 5 African countries.
- The US Special envoy for Climate, John Kerry, announced the provision of an additional \$30M in climate finance to drive climate resilience and food security efforts across the continent.
- A \$23M commitment by the Bezos Earth Fund to be geared towards African restoration.

# FUNDING AND DEAL ACTIVITY WITHIN AFRICA IS NOT GROWING FAST ENOUGH TO MEET THE CONTINENT'S NEEDS.

QUARTERLY FUNDING AND DEAL COUNT IN AFRICA



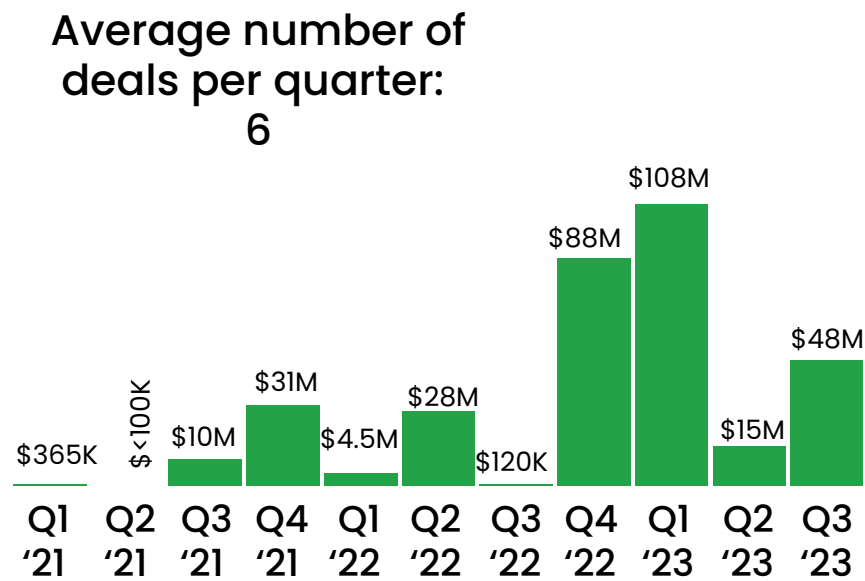
According to estimates from the Africa Finance Corp, Africa needs investments worth \$2.3T to satisfy its growing population needs, and a supplementary \$1T to climate-proof its infrastructure.

And according to a report by the Climate Policy Initiative, around \$250 billion is needed annually to help African countries move to greener technologies and adapt to the effects of climate change.

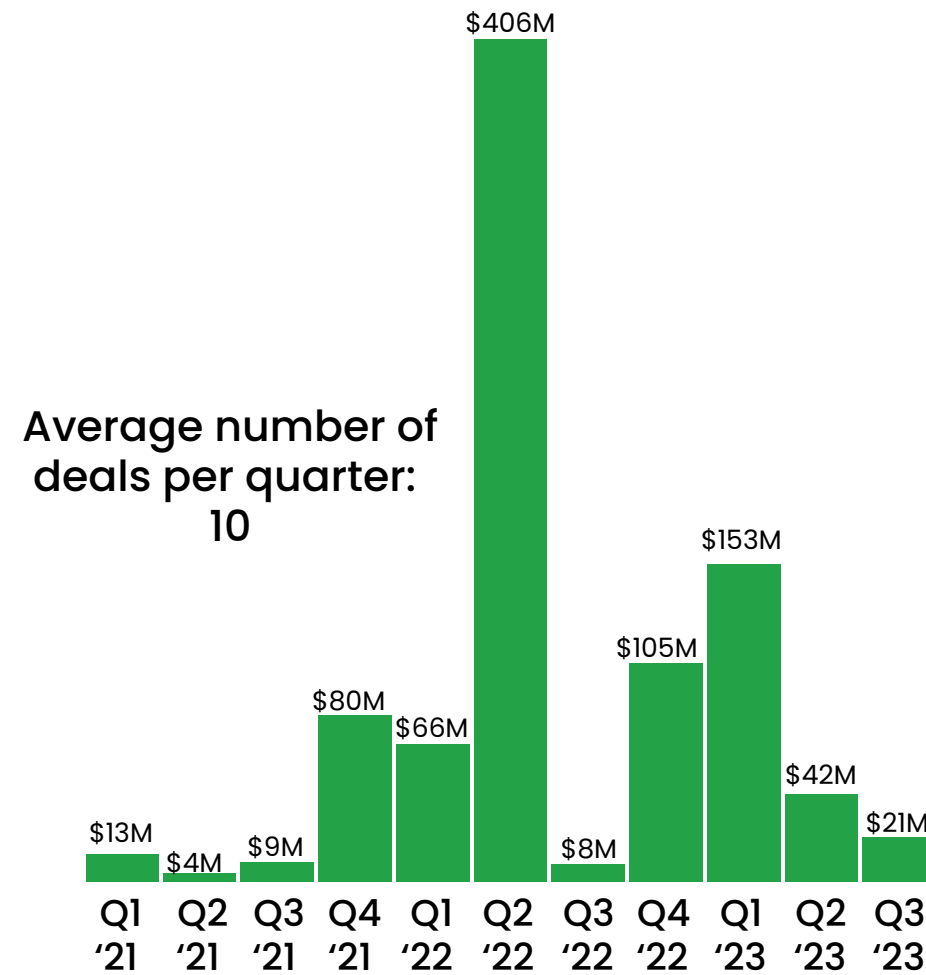
Even though we are showing investments into Africa's private climate tech market, it is clear that the continent is still an exponential way away from meeting these targets.

# IN Q3 2023, SOUTH AFRICA, KENYA, AND NIGERIA ACCOUNTED FOR OVER 60% OF CLIMATE TECH FUNDING INTO AFRICA.

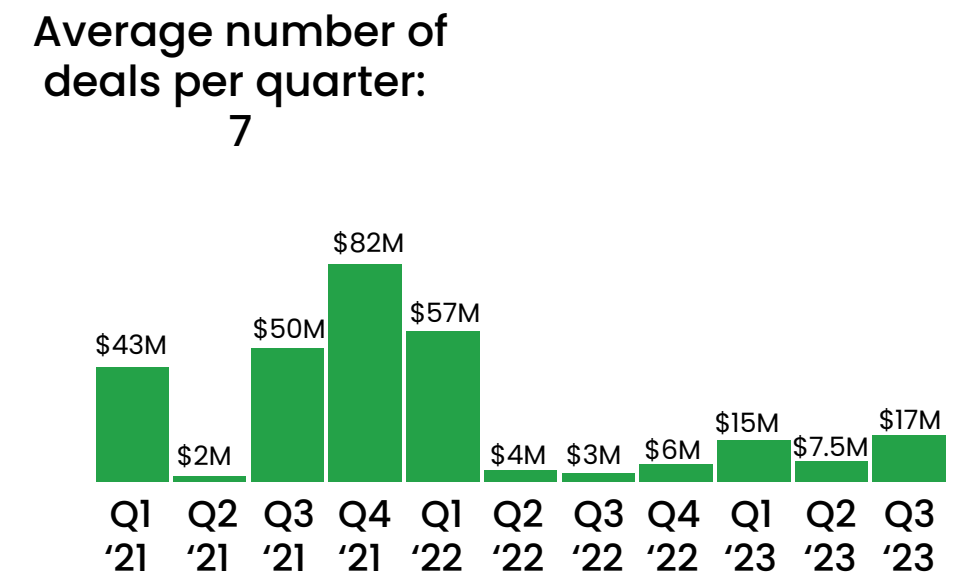
## QUARTERLY FUNDING OF TOP 3 COUNTRIES IN AFRICA



South Africa



Kenya

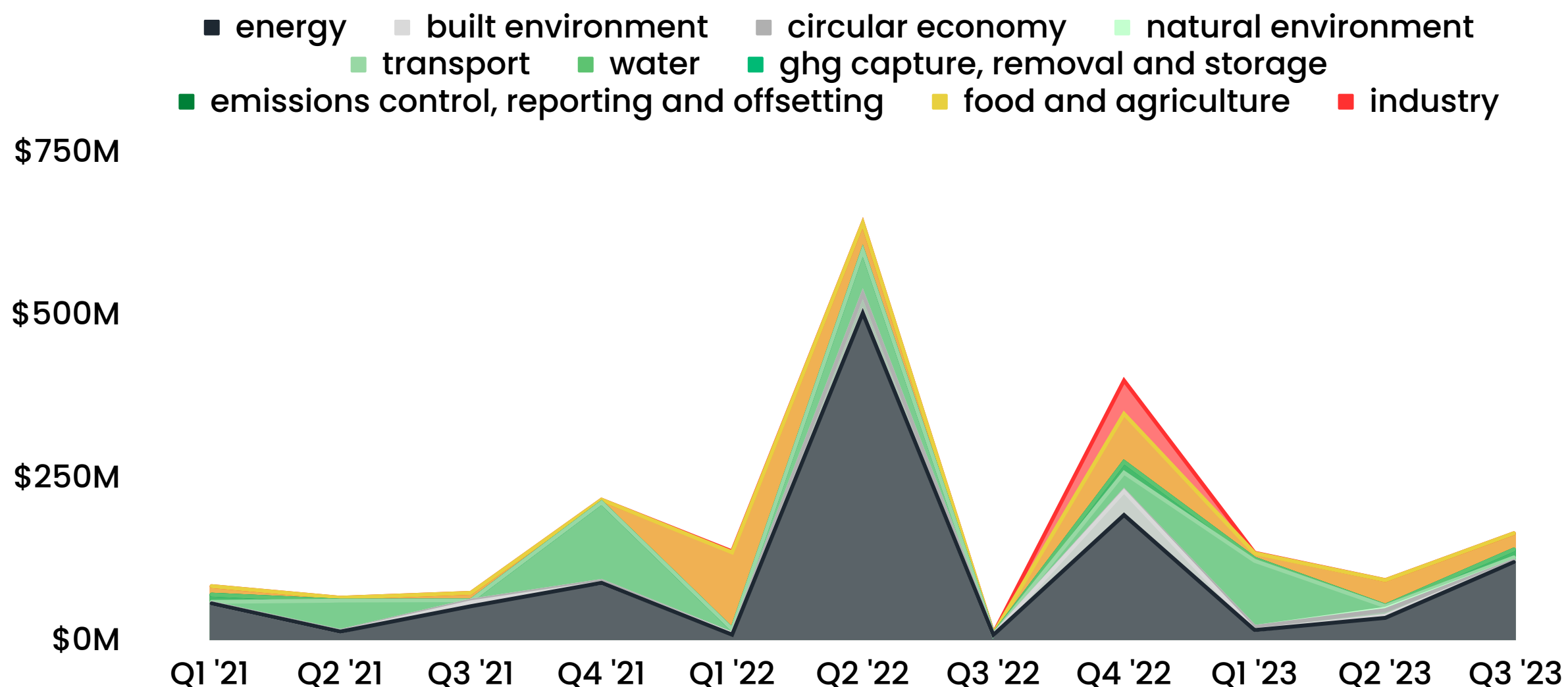


Nigeria



# HISTORICALLY, AFRICAN VENTURE FUNDING FOCUSES ON ENERGY, TRANSPORT, AND FOOD & AGRICULTURE.

**QUARTERLY FUNDING FOR AFRICA BY CLIMATE CHANGE CHALLENGE AREA**



Climate tech within Africa is inextricably linked to solutions that tackle the most severe drawbacks that result from the effects of climate change and accelerating industrialization.


So, it's no surprise to see that most of the climate-tech funding within the continent is directed towards energy (usually solar), e-mobility solutions across rural to peri-urban areas, and climate resilient agriculture.

Recently, however, circular economy has been gaining momentum on the continent as it emphasizes 'waste-to-wealth'. Furthermore, carbon removals are gaining attention in light of the African Carbon Markets Initiative (ACMI).

\*An organisation can fall under different categories. Therefore, the same deal can be included more than once.



\*Figures refer to global funding activity including equity, debt and grants in Climate Tech ventures.

**TOP 5 Q3 2023 DEALS IN AFRICA**





**WETILITY**

\$48M  
Early VC + Debt  
#solar #B2B



**NURU**

\$40M  
Series B  
#solar #offgrid


**RENSOURCE**

\$15M  
Debt  
#solar #batteries

**SUNCULTURE**

\$12M  
Debt  
#energy #offgrid





**COMPLETE FARMER**

\$7M  
Series A  
#agriculture #B2B



**MOST ACTIVE INVESTORS IN Q3 2023 FOCUSED ON AFRICA**



**OCEANHUB AFRICA**

South Africa  
Deals: 4  
Accelerator/  
Incubator



**JICA**

Japan  
Deals: 4  
Accelerator/  
Incubator




**PROPARCO**

France  
Deals: 2  
Lender



**ARAF**

Kenya  
Deals: 2  
Impact Fund



**VESTEDWORLD**

United States  
Deals: 2  
Venture  
Capital

# THOUGHT LEADERS

## WHAT ASSET CLASSES (WITHIN CLIMATE TECH) DOES ACV BELIEVE TO HOLD THE MOST TRANSFORMATIVE POTENTIAL FOR THE CONTINENT?

ACV believes there is an enormous opportunity for green growth in Africa. With the backdrop that the potential for climate-positive business has not yet been fully defined, we believe that they cannot be considered from the perspective of relative life-cycle maturity alone.

This means that we are of the view that businesses which presently exist will not fulfil the spectrum of capabilities required to combat climate change. Africa Climate Ventures will, using its investment lens, where relevant:

- Transfer globally proven technology to Africa,
- Scale proven African successes to enjoy a larger continental presence, and
- Support existing business to become climate-positive and, where possible, earn green revenues.



Africa  
Climate  
Ventures



**Mohamed Cassim**

*Chief Investment  
Officer at Africa  
Climate Ventures*

Africa Climate Ventures starts, builds, and invests in climate businesses in Africa. The need for urgent climate action and a resulting revolution in carbon markets and new technologies has created a generational opportunity for the rapid growth of new, impactful ventures on the continent.

With specific reference to carbon markets, there appears to be investment appetite for enterprises which offer reliability and confidence in their mitigation and/or sequestration capabilities. The increasing formalization and growth of global carbon markets, which many climate tech companies can access by providing alternative low-carbon solutions or by removing carbon, presents an unprecedented opportunity for African businesses to serve large global markets.

There are also intensively polluting sectors which can be transformed over time, including the energy sector and others which will see relatively large investments over the medium-term.

### **ACV RECENTLY RECEIVED ITS FIRST INSTITUTIONAL BACKING OF £1M FROM FSD AFRICA. WHAT SECTORS WILL BE PRIORITIZED BY ACV AND WHY?**

While we survey opportunities across various sectors, our early portfolio development has focused on carbon removals. The latest IPCC findings underline the urgency to not only substantially reduce emissions but also escalate the removal of greenhouse gases. By 2030, the goal is shifting from today's million-scale carbon dioxide removal to a multi-gigaton scale – which presents enormous market opportunities.



**Africa  
Climate  
Ventures**

Our African-led team leverages extensive experience in investment and climate, and a history of advising the most influential decision makers in Africa. One of our key objectives is to promote Africa's meaningful economic participation in combating climate change. As a result, we expect to witness first-hand, the emergence of several African climate unicorns over the medium-term.

For us, Africa, with its abundance of inputs, stands out as an optimal landscape for carbon removal. We are already seeing evidence of the ability to deliver low-cost, high-quality carbon removal credits across an array of deals that we are looking at. What's more, carbon removals often have important co-benefits.

An array of carbon removal pathways, for example, have positive externalities that improve soil productivity and restore degraded land. In another example, Direct Air Capture presents an opportunity to develop the industrial demand needed to anchor investment in renewable energy generation.

We also value low-carbon innovations, with investments like clean cookstoves marking our dedication to emission-reducing solutions. We are actively looking into emerging climate solutions in large, hard to decarbonize sectors – including the built environment, mobility, and the circular economy.



We are taking the lead in testing and proving out this thesis by starting and investing in businesses that we believe are well placed to succeed the space. Our vision is to seed new green sectors on the continent, in so doing contributing to global climate action, creating jobs in Africa, and delivering attractive returns to investors.

**INVESTORS TYPICALLY ATTACH A PREMIUM TO INVESTING IN AFRICA DUE TO THE FRAGMENTED STATE OF ITS MARKET AND OFTEN UNSTABLE POLITICAL ENVIRONMENT. HOW IS ACV'S INVESTMENT AND VENTURE BUILDING PHILOSOPHY TACKLING THIS?**

We have two broad strategies to manage risk. The first is by bringing a very hands-on role to our investments. We take an active stance in the businesses we start or invest in; to ensure that ventures have the best talent, access to our networks and; are making smart strategic and operational decisions.

The ACV founding group have built deep networks and experience, with cumulatively more than 50 years' advising, building, and investing across Africa. We believe that by offering this to our ventures, they will be rendered less vulnerable to the volatile commercial environment.

Our second approach to managing risk is by explicitly focusing on businesses that have the potential to reach significant scale. We understand that we are entering a nascent, high-risk sector. However, we are of the view that the opportunity is large enough to allow for several of our investee companies to scale beyond the realm of everyday fragility. We are of the view that the first few years of any investee company will be the most challenging and will therefore enjoy more direct support from Africa Climate Ventures during this period.



Africa  
Climate  
Ventures

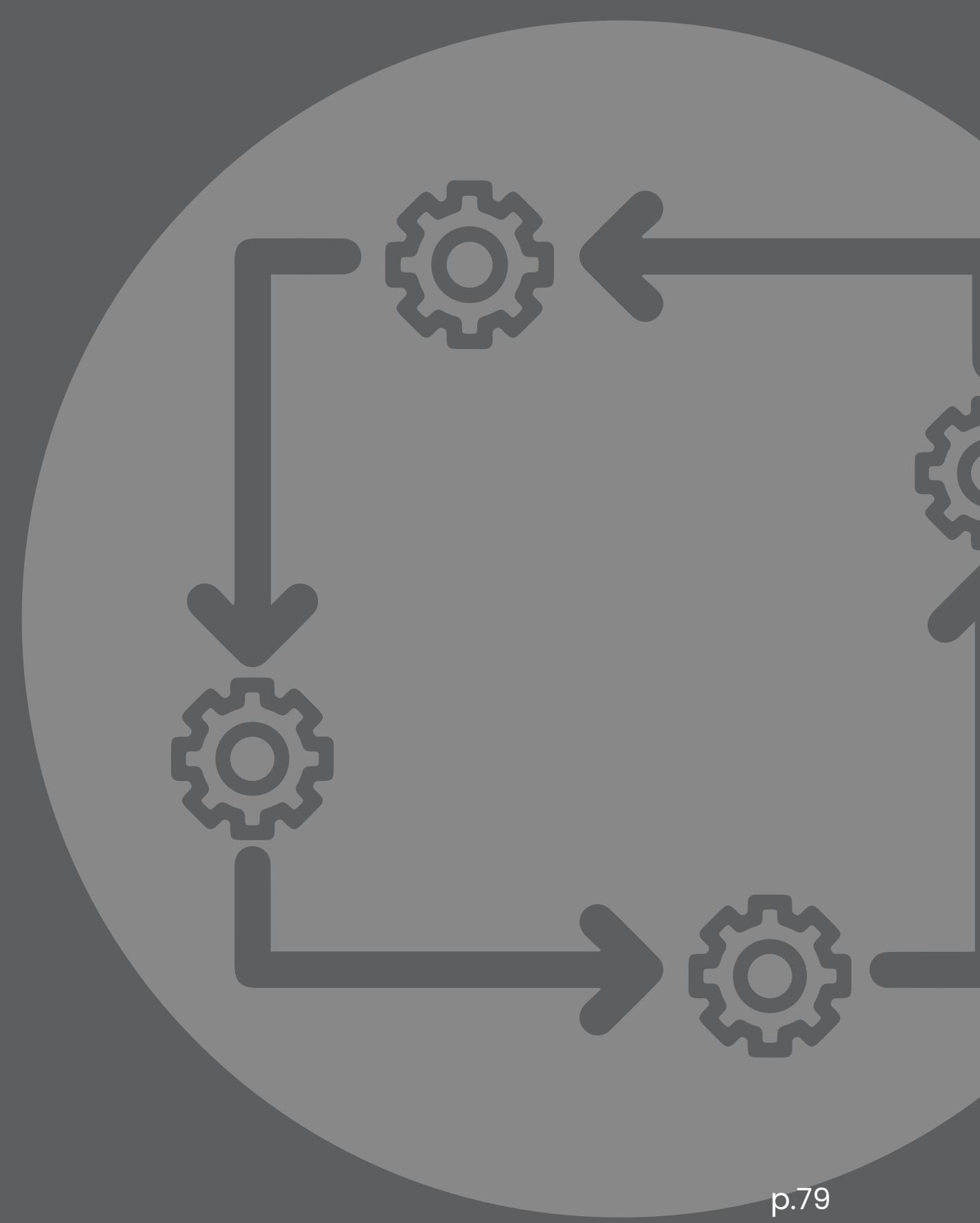
# METHODOLOGY & SCOPE

---

This report analyses global funding data for climate tech startups, scaleups, and SMEs using the Net0 Platform.

The analysis covers equity, debt, grants, and other forms of investments for funding and deals, while exits include acquisitions, IPOs, and SPACs. Financing rounds after an exit are not included.

Please note that the data is accurate as of 03/10/2023, but there may be reporting delays, potentially resulting in incomplete information. Nevertheless, this analysis offers valuable insights into the funding landscape of the climate technology sector.



# ABOUT NET ZERO INSIGHTS

---

Net Zero Insights is the leading data and research platform for Climate Tech.

Our comprehensive Net0 Platform offers climate innovation professionals worldwide access to thousands of startups/SMEs, deals, and investors, enabling you to uncover new innovations, trends, and deals in the ever-evolving world of climate technology.

Investors, corporations, researchers and policy-makers use our platform to keep track of climate innovation and understand technology and financial trends.

Let us show you how to take advantage of data to find the right climate solutions.

[Book a demo](#) or [create a trial account](#).

Don't miss out on climate tech. Follow us!





## AUTHORS



**CHIGOZIE UBAH**  
**ANALYST**

Chigozie applies himself as an Analyst at Net Zero Insights; using data as a tool to unearth the ebbs and flows in mature and emerging markets. His goal is to enable global decarbonization – while advancing social wellbeing – by focusing on technologies, business models, and financiers making a difference.



**FEDERICO CRISTOFORONI**  
**FOUNDER & MANAGING DIRECTOR**

Born as a business professional with proficiency in data and analytics, Federico co-founded Net Zero Insights to increase transparency in the climate tech sector. The ultimate aim of the venture is to enable corporates, investors and public institutions to make more-efficient decisions related to climate innovation.

## COLLABORATORS

Carolina Bentley | Proofreader  
Emet Zeitz | Proofreader  
Praneet Daspute | Proofreader  
Haya Khoury | Visual designer

## CONTRIBUTORS

Rod Colwell | CEO, Controlled Thermal Resources  
Lubomila Jordanova | CEO and Co-founder, Plan A  
Adam Rauwerdink | SVP, Boston Metal  
Kai Malkwitz | Climate Impact Director, Founder Institute  
René Böhm | Senior Expert, DENA  
Mohamed Cassim | Chief Investment Officer, ACV  
Sophia Escheu | Industrial & Climate Analyst, Speedinvest  
Dante Luu | Associate, Carbon Upcycling