



Co-author
Caitlin Krutsinger



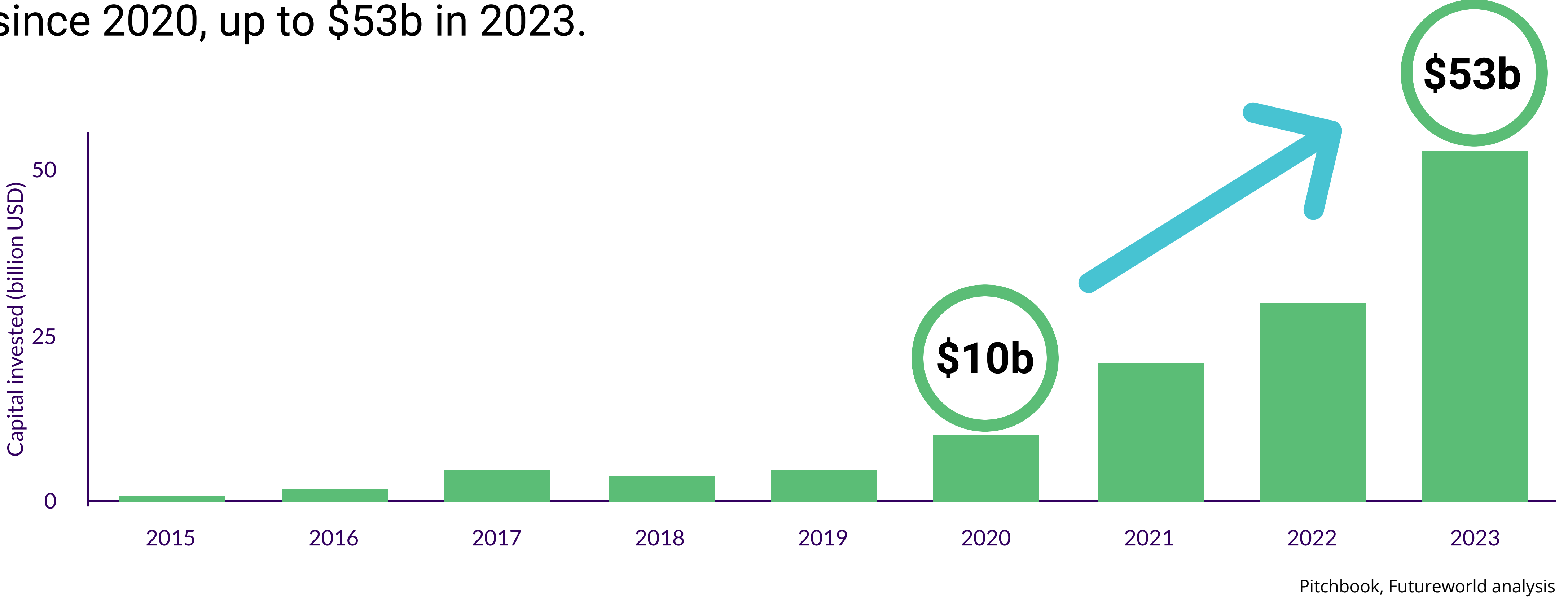
Co-author
Fourie Moller

Introducing **Grow-X**

Join us in creating a circular agricultural value chain, to tackle climate change and feed the world.

The world is facing a **climate crisis**

Capital markets are responding. Global investments in climate tech increased 5x since 2020, up to \$53b in 2023.



We see opportunity in **green fertilizers**

Particularly in Africa, where population growth and climate change threaten food security. Affordability of synthetic fertilizer imports is a **barrier to growth**.

Africa's population will **nearly 2x by 2050 to 2.5b**. Local food production must increase to meet this growth in demand.



5%

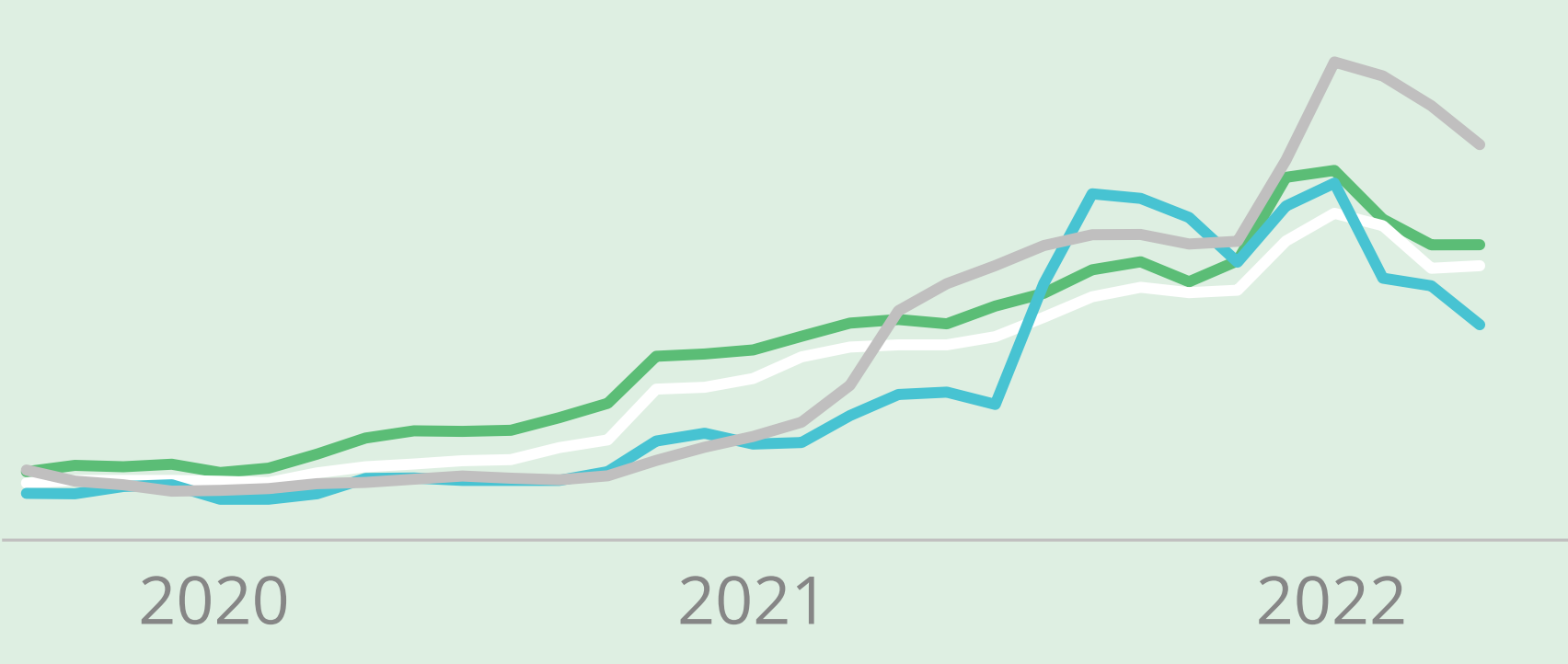
Of global emissions.

Fertilizers help feed the world, but cause **5% of global emissions**. More than aviation and shipping combined. **Most is emitted on farms**.

The African fertilizer market is large and growing. **More fertilizer is required** to increase yields and feed the continent, but affordability is a barrier.

\$12b

Est. market size in 2028.



Most African countries rely on fertilizer imports. Global instability and supply constraints caused **prices to 3x in 2022**.

Higher input costs contributed to **24% avg. food inflation** on staple foods across the continent and increased **food insecurity**.

24%

Avg. food inflation rate.



Sources: [Modor Intelligence](#), [IMF](#), [World Bank](#), [University of Cambridge](#)

\$4.3b invested in alternative fertilizers

Since 2020 in promising solutions. Investment is concentrated in North America and Europe, **leaving space for African players**.

GLOBAL INNOVATORS TO WATCH



USA

Microbial nitrogen fertilizer.



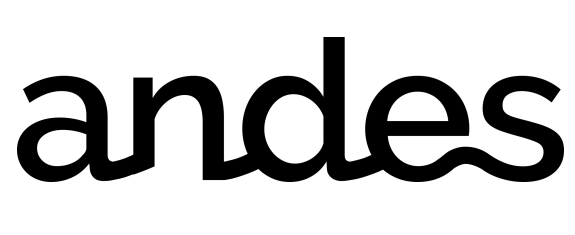
France

Frass, a nutrient rich insect byproduct.



Belgium

Microbes to improve nutrient uptake, fight disease.



USA

Microbial tech to accelerate crop growth.



Canada

Soil and plant boosters from bacteria and yeasts.



Mexico

Bio-digesters turn waste into energy and fertilizer.

Source: Pitchbook

Local, climate friendly solutions

are required to feed the African continent.

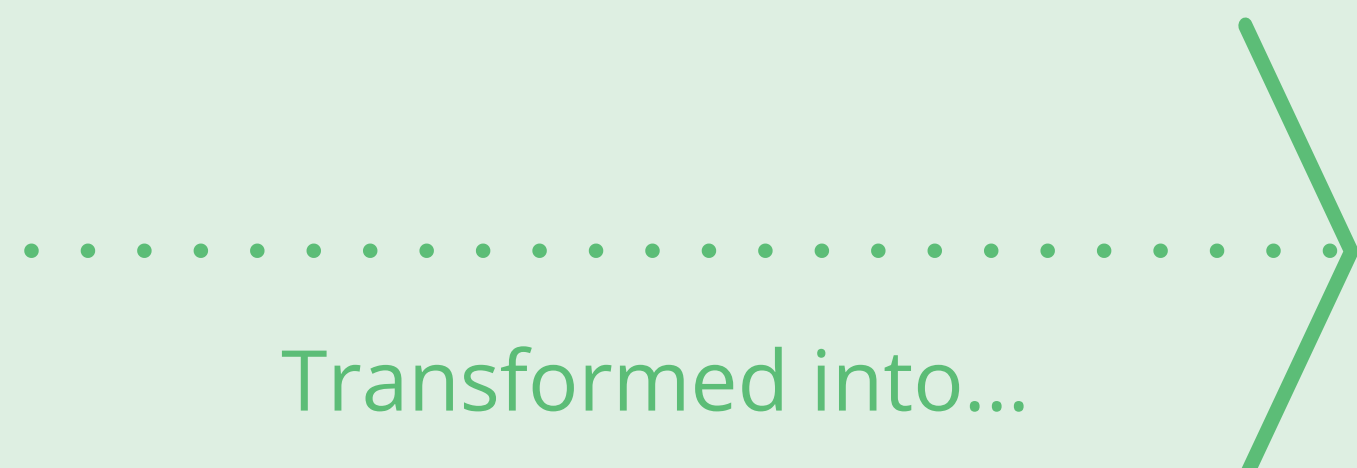
We are building a **\$500m opportunity**

Futureworld is building a new business called **Grow-X**, which transforms **food waste into fertilizer** to tackle climate change and feed the African continent.



1/3

Of food is lost or wasted. In Africa, most happens before reaching consumers.



Transformed into...



\$500m

Opportunity size if we capture 4% of Africa's fertilizer market in 2028.

Creating **new revenue streams** for food producers, **affordable and regenerative crop nutrient solutions** for farmers, and **food security** for Africa's next generation.

Sources: [FAO](#), [Modor Intelligence](#)

Build with us

Futureworld works with organizations to build new, future relevant businesses and we co-invest with our clients into these ventures.

To learn more about **Grow-X** or our other ventures and how to get involved, contact our circular economy specialist, **Caitlin Krutsinger**.



www.futureworld.org