

TomorrowNow.org

Working <u>Together</u> To Adapt and Thrive in A Changing Climate







TomorrowNow accelerates the adoption of next gen weather & climate action innovations for communities most in need





The Time to Act is <u>Now.</u> If we wait, it will be too late!

<u>The Problem:</u> The Destructive Consequences of Climate Change Are Unfolding NOW. Those Most At Risk Are Least Equipped To Adapt & Act.

- The global food & climate crisis is here; Crops are failing; Farmers no longer know what to plant
- ~70% increase in food production required by 2050 to feed a global population of 10 billion
- <u>Weather is a critical and missing input for #zerohunger_ecosystem:</u> climate-resilient seed production, farmer advisory services, inclusive insurance









"Weather intelligence plays an important role in advancing our climate adaptation and resilience work"

The Problem: Weather Systems Are the Backbone of National Climate **Resiliency, Yet Failing Regions and People Most In Need.**

The Broken Weather Value Chain

64% of African countries have no early warnings at all, the rest very poor and unactionable.





Last-Mile

Poor data flow. Limited trust and use of information

The Global Weather Gap

Traditional approaches to monitoring and communicating weather continue to fail in areas most in need



Global distribution of terrestrial radars

Source: WMO

<u>The Problem:</u> We Have Learned A Lot From The Many Many Failed Attempts To Fix The Global Weather Gap. We Need a Different Approach.



Engineer, East Africa

Georgeson, Maslin, Poessinouw, Sci. Adv. 2017;3:e1602632 24 May 2017



For example: Tomorrow next generation space radar tech

<u>The Opportunity:</u> Phenomenal Potential To Leverage Private Sector & Next Gen Weather For Public Good And Close The Global Weather Gap



"Science [and technology] is giving us the opportunity to improve lives more rapidly than ever. But we'll only make the most of that potential if we ensure that these tools reach everyone who needs them, including the poorest people in the world."



Bill Gates, February 14, 2020





Quality Weather Data Must Be Made Universal

"A constellation of active precipitation radar satellites will, for the first time, provide radar data, and therefore reliable weather forecasts, to the 5 billion people worldwide who live outside of radar coverage. In particular **this data will enable a dramatic improvement in forecasts** of precipitation, flooding and drought, phenomena that are **so critical to smallholder farmers and the general population of Africa**."



Kathryn Sullivan, PhD

Tomorrow.io Advisor, Former NOAA Administrator and NASA Astronaut First American women to walk in space and reach the deepest point in the ocean



Our Solution: TomorrowNow.org

We are a visionary **501(c)(3)** nonprofit that exists to accelerate the adoption of transformative next gen weather and climate action innovations in regions (and for people!) most in need.

We convene and lead projects. We learn by doing. We close gaps today + identify opportunities for tomorrow

• Weather/Space Intelligence to power next generation weather/climate infrastructure

- Targeted Use Cases most critical to climate action and adaptation
- User-Driven Innovation Processes to ensure the voice of the vulnerable are central to design farmers, women, youth
- Novel Development Partnership Models to ensure access affordability and sustainability

We have built an Africa-First team with farmer-first capabilities We have established multi-stakeholder partnerships with the most influential players in international development and weather

We have a unique public good partnership with Tomorrow.io



⁴⁴As farmers, we want to contribute to the solution not just be a recipient of the solution⁷⁷

MAASAI LEADER Southern Kenya



We are intentional about how advanced tech and
 innovation reaches vulnerable communities. It will not happen on it's own!

<u>Impact Potential</u>: By Working Together, We Can Power Critical #ZeroHunger Solutions With Next Gen Weather Infrastructure

"It's a problem that top climate scientists, local meteorologists and rural farmers all desperately want solved" The Washington Post



Climate-Resilient Agriculture

"If we are trying to understand whether rain caused crop failure, it really matters to know if 20 inches of rain fell in one hour versus over 48 hours"

Seed Trial Manager, CGIAR, Africa





"All we care about is when the next emergency is going to happen and how can we be better positioned to respond. 30 seconds can make all the difference to someone's life"

Emergency Response Dispatch Manager, Nairobi, Kenya.

Meet Our All Star Team

- Georgina Campbell Flatter, Executive Director
- Asiedua Amoah, Managing Director
- Philip Frost, Climate Resilience Lead
- John Corbett, Agriculture Climatologist
- Kenneth Chepkwony, Kenya County Officer
- Ronald Dinaga, Kenya County Officer
- Rei Goffer, Board Chair





We also have an All-star Board of Directors and Advisory Board who bring a deep understanding of weather and development across government, humanitarian, NGO and private sectors

















EARTH DATA FOR AGRICULTURAL DECISIONS



TomorrowNow.org - Activity SnapShot

TomorrowNow is a visionary 501(c)(3) non profit addressing the urgent need for <u>climate action NOW</u> by accelerating the adoption of next generation weather & climate action innovations for communities most in need

We bring the latest <u>climate</u> <u>action</u> data and tools to at-risk communities <u>today</u> We invest in <u>transformation</u> to achieve long-term viability of weather/climate systems in underserved regions.



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Boston nonprofit gets Gates Foundation backing to help African farmers Goal is to develop mobile weather apps that improve crop yields









TomorrowNow leads projects to empower agricultural and food systems in Africa with critical farm-first weather and climate tools, including two Gates Foundation funded activities in East Africa.





TomorrowNow in the field talking to farmers about their weather and climate needs

TomorrowNow created a series of climate action videos made by farmers for farmers to help proactively act and protect their farms against the desert locust

Program Overview - OSIRIS

The <u>OSIRIS project</u> identifies activities that aims to lay the foundations for <u>closing</u> <u>the weather/climate data gap</u> in areas traditionally underserved but most in need

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• Establish products and technologies for Small-Scale Producers. Establish new high-quality, cost-effective farmer service delivery models

• To demonstrate the value of integrated weather innovations (CBAM, space radar etc.) improving the usefulness of weather data in the context of seed breeding



BILL& MELINDA GATES foundation



Program Overview - Project Locust

Relmagining Early Warning/Action Systems

Through Inclusive Participation of Farmers Most At Risk



"If you see locusts on the horizon, the only thing you can do as a farmer is pray" Farmer, Kenya **2021**

EARLY WARNING/ACTION



PROACTIVE ACTION

Harvesting and upcycling locusts for animal feed and compost

ECONOMIC EMPOWERMENT

Selling locusts to market and/or enriching their own crops



t=0, tomorrow



#WeatherTheSwarm



Leveraging Tomorrow.io's scalable infrastructure for public good On Time Alerts And Insights for Locust Action



Tomorrow.weather Proprietary Modern Modeling for Weather and Climate Change, fueled by Proprietary Observations





tomorrow.space Groundbreaking Data from Space, Enhancing Earth Observations, Informed by Customer Needs

Localized for Desert Locust

- State-of-the-science trajectory model
- Bespoke, hyperlocal land surface
 model
- Novel, multivariable "Hatching Index"
- Actionable custom insights
- SMS/Whatsapp alerts, sightings





#WeatherTheSwarm

Program Overview - Project Locust







One of several expert working sessions with key stakeholders in Desert Locust Response



Project Locust team seeking feedback from women farmer coop who experienced locusts



A farmer testing the tomorrow.io mobile app and live weather tracking feature

• Leveraged tomorrow.io tech for public good

- System designed for/by farmers
- Design and content informed by farmers
- Multi-stakeholder public good solution - public, private, NGO



Project Locust partners meet in Kenya to storyboard digital on-farm content for locust action, based on farmer input



Farmers filming content to train other farmers on locust harvesting for animal feed and fertilizer

eceived: 03:02 AM

YOU MAY SEE LOCUSTS ON YOUR FARM, PREPARE DON'T PANIC

- Locust Swarm Forecasted
- 💮 Mandera County

omments

Did you know you can avoid total crop losses on your farm by better preparing before any pest infestation Follow the link to learn more: <link to video>

View of alert sent through tomorrow.io's customizable weather intelligence platform for use by government agents and NGOs

Youth: Empowering Youth To Thrive in Our Changing Climate

TomorrowNow runs educational activities to connect at-risk children with weather and climate knowledge





TomorrowNow's Executive Director, Georgina Campbell Flatter, using the tomorrow.io platform to lead a virtual weather club session with 30 Malawian children, teaching children how to better prepare for extreme weather



TomorrowNow visits to an orphanage in Uganda to learn from children how weather tools can improve their lives.

Women: Lifting the Voice of Women in Weather and Climate

TomorrowNow believes that inclusive solutions start with inclusive leadership. TomorrowNow leads women-centered projects to lift the voice of women across the weather and climate sectors.



TomorrowNow ran <u>a #WOW campaign</u> to celebrate women in weather and climate space globally. We conducted dozens of online videos and webinars to celebrate the careers and impact of women in weather.



TomorrowNow lead a project in Kenya that engaged 200 women farmers on how to improve weather and climate services for women

System: Working Together to Transform Weather Systems

TomorrowNow brings together the public, private and NGOs sectors to enable long term viability of weather and climate services. We lead virtual and in-person forums, generate thought leadership and facilitate partnerships





TomorrowNow meeting with public sector leaders in Kenya and Uganda to discuss how to enable "weather for all" through new innovations and business models.



TomorrowNow visits COP26 to promote TomorrowNow's mission and vision.

Together, We Will Ensure <u>Everyone</u> Can Adapt and Thrive in a Changing Climate.

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