



**INNOVATION
& TECHNOLOGY**



828 million people don't have enough food to eat



More than 1 in 10 people go to bed hungry every night



Poor diets among adults account for more than 12 million avoidable deaths every year



Around half of deaths of children under 5 are linked to undernutrition



Less than 1% of global development assistance focuses on nutrition.



WHAT IS THE PROBLEM?

Around 2,000 children die each day from severe malnutrition and 828 million people – more than the entire population of Europe – go to bed hungry each night.

Many countries in the world are affected by poverty, lack of safe water, climate change, conflict and emergencies, poor mental health provision and gender inequality.

These factors, combined, result in malnutrition and life-threatening hunger. And while the total number of deaths from severe malnutrition has decreased over the past 40 years, any death from malnutrition is both unacceptable and avoidable.

The need to find innovative ways to treat and prevent hunger

That is why we put a huge effort into ensuring communities across the world, whatever their situation, can get the help they need. It is why we constantly challenge ourselves to

find better ways to deliver that help. We are working to find new, innovative and effective treatments to reach more children to tackle increasing world hunger.

There are two big challenges. First, we must ensure everyone in need of help can get treatment. That means having health workers and clinics and all the necessary support within reach. It means being able to access life-saving treatment easily.

And hand-in-hand with this, it means seeking timely data and evidence to make the best decisions and to be able to design the best programmes that deliver the right help to the right people at the right time. We live in a world where there is enough food for all, so this can and must change. This is why Action Against Hunger is dedicated to saving lives by eliminating hunger. We are world experts in predicting, preventing and treating hunger. We strive to learn continuously, to find better ways of doing this.

WHAT IS THE SOLUTION?

We are doers. We work on the ground, tackling hunger and its causes, saving and improving lives. But we are always striving to do better, to reach more people and to be more efficient, so that every pound people give us stretches further.

That's why we are also thinkers, researchers, innovators. We strive relentlessly to improve what we do for the people for whom we work.

Pioneers

Thirty years ago, the medical community didn't have a cure for malnutrition – so, in 1993, we created it. Our team of scientists developed F100, the first-ever therapeutic formula to treat severely malnourished children.

Then scientists adapted this treatment to create ready-to-use therapeutic food (RUTF), a peanut paste that can bring a malnourished child from a medical crisis to recovery in just 45 days.

The paste – which is full of healthy fats and protein – can last for years without the need for clean water or refrigeration. It's simple to use and extremely effective. We were the first organisation to test it in communities around the world. And we helped to develop the international standard for treatment protocols.

With the new millennium came new thinking: we challenged ourselves to transform where malnutrition could be

treated – no longer just in hospitals, but in health centres and in communities making it much easier for people to get help at home.

Our Community-Based Management of Acute Malnutrition (CMAM) approach means we can reach even more children in need. Today, more than 70 national governments use our system for treating acute malnutrition within the local community.

Tech & innovation are working

As a result, since 1990, the proportion of malnourished children globally has been cut in half. And more than 4.4 million children were treated in 2017, a four-fold increase from 1.1 million children reached in 2009. But we still need to do more. And to do so, we are working on even more innovations and new technologies.

Research and innovation allow us constantly to assess, improve and expand our programmes, making us the go-to organisation when it comes to understanding how to tackle hunger and its causes. It's why we lead the field.

Action Against Hunger's research and innovation work focuses on the prevention, treatment and the causes of undernutrition. In 2021 alone, we contributed to 55 research and innovation projects highlighted in more than 100 publications, thus allowing us to share our expertise.



The SAM App

We've created a simple smartphone app for diagnosing life-threatening hunger with just a photo. The SAM (Severe Acute Malnutrition) photo app compares the body shape of a malnourished child with that of a healthy child to decide if they need lifesaving treatment with ready-to-use therapeutic food.

iCCM+

And we've tested a new way to reach more children with life-saving nutrition treatment when they need it most. The approach we've used is called iCCM+. Community health workers are trained to diagnose and treat malnourished children in their communities, rather than patients having to travel long distances to their nearest health facility.

Bringing diagnosis and treatment for malnutrition closer to home means we can get to more children, more quickly and improve results for less money.

In Mali this new approach has doubled treatment coverage, improved outcomes for children and cut costs by half.

Our task now is to demonstrate our success to others so that our work can be scaled up across the world. We want to use our evidence to change international policies and guidelines that dictate how malnutrition is treated and then turn these policies into practice.

It's already happening. Our ideas have been picked up in Kenya, Mauritania and Niger

and now the World Health Organisation (WHO) is reviewing its guidelines on how malnutrition should be treated globally in light of our work.

Predicting, preventing and preparing

We are also leading the way, developing early warning systems to help us predict problems likely to face farmers and pastoralists. Unpredictable rainfall is a classic example.

To do this requires accurate, real-time data from the field. In the Sahel, where two out of three people make their living from agriculture and livestock, we are pioneering digital solutions to support local pastoralists by monitoring risk factors such as drought or other climate shocks.

This is vital for a region where temperatures are rising 1.5 times faster than in the rest of the world and agricultural yields could fall by 20 per cent per decade by the end of the 21st century.

Being able to predict, prepare for and prevent hunger-related problems before they take hold is a vital part of our philosophy. Put simply, prevention is better than cure.

That's why we developed our 'Pastoral Sentinel Sites' – a remote data collection system in Mali, Burkina Faso and Niger, providing weekly data on water availability, market prices, animal diseases and pasture conditions via mobile phone

In 2020 we adapted this system to monitor and react to the impact of the coronavirus pandemic. By creating a system that

enables early identification of shocks, be it drought or a global health pandemic, we can share vital information with local producers, communities, policymakers and other charities and non-governmental organisations (NGOs) so they can take fast and effective action to avert crises.

The HydroNut project is another case in point, where we use data to predict and prevent emergencies.

We know there is a link between water reserves, health and children becoming malnourished. If we can unlock it and understand it, we believe we will be able to prevent hunger better.

With the HydroNut project, we have set up a surveillance system that monitors groundwater and rainfall data, and correlates it with nutritional, health and food security information.

We believe this project will help us develop a system capable of providing early warnings for acute malnutrition based on rainfall and water table levels.

Evidence, learning and sharing

Evidence is the foundation of all we do. Our goal is to test our innovations and ensure they work. Then we share our research with others, so they can adopt our new and better ways of working.

One way we do this is through our Learning Hub which brings together all sorts of learning from Action Against Hunger staff all over the world, in the form of articles, blogs, videos, audio, and more.





SIMBO'S STORY

Two-year-old Simbo lives in Kourougue, a village in Mali. Simbo, whose name means 'big hunter' is strong and healthy. But this wasn't always the case for this fun-loving little boy.

Only recently, Simbo could not even sit up and was underweight. His mother, Mamissa, tried desperately to get him to eat, but Simbo was so weak he couldn't even do that.

Hawa, an Action Against Hunger-trained community health worker, lives in the same village as Simbo and noticed his symptoms. After diagnosing Simbo with acute malnutrition, Hawa prescribed him a course of ready-to-use therapeutic food for four weeks. With Hawa's support, Mamissa was able to treat Simbo from her own home.

Simbo responded well to treatment. "He soon started sitting up, then began crawling and

walking" said Mamissa, and before long he was back to normal, eating and playing.

In Mali, acute malnutrition rates for children under five are high. And often, because of the long distances to health centres, children aren't receiving treatment at all or are only brought to the centres when their condition has become critical.

Action Against Hunger's innovative work, training community health workers like Hawa, is ensuring more children with acute malnutrition are reached sooner.

"Since Hawa has been in the village I've noticed a change" says Mamissa. "There were a lot of sick children before, but now there are few". Mamissa is looking forward to her son's future. "All I want is for Simbo to grow up, go to school and be happy in life".

Contact us for more information, we would love to hear from you.

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Together, let's take action against hunger.