WHAT WE DO

FEEDING EVERYONE NO MATTER WHAT

HOW DO WE FEED EVERYONE IF A GLOBAL CATASTROPHE DRAMATICALLY REDUCES OUR ABILITY TO GROW FOOD?

ALLFED is working on planning, preparedness, and research into practical food solutions so that in the event of a global catastrophe we can respond quickly, save lives, and reduce the risk to civilization.

Some of the scenarios and catastrophes we examine are included within this flyer.

Many more are being considered.

RESEARCH

Our research team seeks to answer how to grow or produce food with little sunlight or infrastructure, both with modeling and experiments.

PUBLICATIONS

The book "Feeding Everyone No Matter What: Managing Food Security After Global Catastrophe" by David Denkenberger and Joshua M. Pearce proposes more than 10 solutions for providing food in the event of a global catastrophe.

Profs. Denkenberger and Pearce and others have produced over two dozen academic publications analyzing the technology and economics of feeding people in catastrophes. With the significant probability of these catastrophes and how little attention has been paid to resilience to these catastrophes, research has shown that further work is highly cost effective at saving lives and reducing the chance of collapse of civilization.

PREPAREDNESS

We organize catastrophe planning exercises to explore the potential impact of global catastrophic events and what can be done to mitigate the impact. We are also investigating financial mechanisms for incentive alignment for industry to invest into preparedness.

GET INVOLVED

SPREAD THE WORD

Help increase the preparedness and readiness (knowledge, resources, technology) of world bodies, governments, corporations, and NGOs/people to be able to feed everyone in the event of a global catastrophe. Specifically, talk to your networks and contacts about it, share www.allfed.info and our flyers.

JOIN OUR RESEARCH

Profs. Denkenberger and Pearce have research teams at their universities. They largely take engineering students, but a number of different fields should contribute to the effort. See several dozen relevant effective theses at www.effectivethesis.com; remote work is typical.

HELP WITH PREPAREDNESS

We also work on preparedness and response planning with multiple engagement opportunities available both online and in the field. We have a special need for policy professionals, data, agricultural and behavioral scientists, economics, finance and communications professionals, crop modelers, chemical engineers, nutritionists and biochemists. We especially welcome experts on modern day food security issues.

VOLUNTEER OR INTERN WITH US

Volunteering opportunities include research, awareness-building, administration and the hands-on makers to test our ideas. We also run an internship program for those looking for structured personal and professional development.

DONATE TO ALLFED

As a non-profit, we rely on donations and grants to fund our work. Your support provides the vital funding so we can grow, carry out our research and promote preparedness. Make a donation at www.allfed.info. Or introduce us to a philanthropist or a company that would like to support this work.

DO IT YOURSELF

Consider how you would feed your family, your community, your country. Help us write a preparedness and/or response plan for your country.

ALLFED

info@allfed.info | /allfedalliance

WWW.ALLFED.INFO

CAL003

ALLFED

ALLIANCE TO FEED THE EARTH IN DISASTERS

SCENARIO 1

DISASTROUS FOOD PRODUCTION LOSS

Certain human-caused or natural catastrophes could cause a 5-30% reduction in our food production capacity.

Based on current research there is a >80% chance of it happening this century.

CATASTROPHES

EXTREME WEATHER EVENTS

Climate change is increasing the likelihood of more extreme weather events: droughts, heat waves, floods, fires, etc.

According to a UK government study, a 10% agricultural shortfall just from these catastrophes has about an 80% chance of occurring this century.

POLLINATOR LOSS

Animals (bees, bats, etc.) pollinate 3-8% of our food. If they died out quickly, it would be a significant shock.

SUPER CROP DISEASE

The entire grass family (corn, wheat, rice, sugarcane, grass etc.) accounts for more than half of our food.

A virus or bacterium targeting this family could be catastrophic

SOLUTIONS

In the disastrous food shortfalls, there should be a reduction in food waste, biofuels, and human edible food fed to animals. "Resilient feed" for animals could include agricultural residues (leaves, stalks), seaweed, and single cell protein grown on natural gas.

ALLFED has over a dozen peer-reviewed articles on technical solutions for food production in disasters.

SCENARIO 2

LOSS OF INDUSTRIAL CIVILIZATION

Without electricity, the majority of industry and agriculture would grind rapidly to a halt.

Several human-caused and natural catastrophes could cause global-scale temporary or long-term electrical grid failure.

CATASTROPHES

HIGH ALTITUDE ELECTROMAGNETIC PULSES

Nuclear weapons can produce high altitude electromagnetic pulses (HEMPs). If these happened around the world, they could destroy electrical grid infrastructure and electronics.

EXTREME PANDEMIC

A pandemic much worse than COVID-19 could cause workers in critical industries to be too fearful to show up to their jobs. This could disable infrastructure globally.

CYBER ATTACKS

Stuxnet was a computer virus that destroyed Iranian centrifuges to disable their nuclear industry.

A coordinated attack on many electric grids could disrupt industry globally.

SOLUTIONS

Solutions for food production include burning wood from landfills to provide fertilizer, high use of nitrogen-fixing crops, and using non-industrial pest control. Solutions for other needs include converting vehicles to wood gasification as was done in World War II and modifying ships to be wind powered. A backup communication system, such as shortwave radio or hardened satellites to cell phones, would allow coordination globally.

SCENARIO 3

CATASTROPHIC FOOD PRODUCTION LOSS

Certain catastrophes have the ability to block a large part of the sunlight for years to a decade, thus reducing food production by >30%.

Research indicates that this has a probability of around 10% this century.

CATASTROPHES

ASTEROID/COMET

NASA is currently monitoring hundreds of potentially hazardous extraterrestrial bodies through their Near Earth Object (NEO) Program. Comets are likely greater risk than asteroids as they are generally not yet feasible to monitor. An asteroid or comet likely caused the extinction of the dinosaurs.

SUPER-VOLCANO

Supervolcanoes erupt every 10,000 to 100,000 years. The eruption of Mount St. Helens was 1000x smaller than a supervolcano, for reference. A supervolcano may have nearly caused the extinction of humans.

NUCLEAR WAR

A nuclear war involving thousands of warheads would introduce smoke into the atmosphere by burning cities. This could cause the sun to be blocked for up to a decade, resulting in nuclear winter.

SOLUTIONS

Much of the infrastructure might remain intact, including communications and the electrical grid. Resilient foods include mushrooms and insects growing on dead trees. Nutrition could also be obtained from leaves (e.g. pine needle tea), biotechnology could be deployed to convert plant residues to edible sugar, and wastes could be fed to animals. Relocation of cool tolerant crops, seaweed production ramp-up, and careful stock management could make a huge difference.