

How Not to Starve to Death because of Global Warming

Michael Noppe

Department of Applied and Theoretical Physics, NSTU, Kiryat-Yam 2907429, Israel

Abstract: The development of heat- and drought-tolerant varieties is recognized as a critical area of warming adaptation, but will require a long time. The approach to warming adaptation proposed in the article is to use “Sunny Rain” for efficient irrigation which will double the yield and will not require a long time to do so. Future startup “Sunny Rain International” proposes to solve problems with the help of “Sunny Rain”: obtaining water from the cloudless atmosphere in industrial quantities possible in the Arava, Negev and Kinneret; doubling crops through efficient irrigation with “Sunny Rain”; extinguishing large fires; cooling the air from heat waves; cleaning air polluted (by fires, transportation, industry); eliminating fog at airports and airfields and other problems.

Key words: “Sunny Rain”, getting water from cloudless atmosphere, efficient irrigation.

1. Introduction

“For half a century Israel has been gradually shifting to food imports, and now there is an urgent need to move in the opposite direction. The reason is climate change, because the countries from which we buy food won’t have enough of it themselves. The Ministry of Agriculture is handing out grants for scientific research to prepare Israel’s agriculture for warming, which is a matter of survival. According to the ministry, some 5.5 million shekels have been handed out to scientists over the past two years. The creation of heat and drought resistant varieties is recognized as the most important area of adaptation to warming. Prof. Peleg views the future of this direction with pessimism. He is sure that famine is inevitable in many countries and that there is little time left for preparation, for it takes 10-15 years to bring a new crop variety to market.” [1]. Our proposed approach to adaptation to warming is to use the future startup “Sunny Rain International”, which will not require a long time to increase yields.

2. Methods and Data

The invention of condensation nuclei for “Sunny Rain” was proposed by Noppe [2, 3]. Condensation

nuclei ejected from an airplane or drone create “Sunny Rain”. I have written multifunctional breakthrough inventions [2, 3] and article [4-6], that will solve problems (A1)-(A7):

(A1) Obtaining water from the cloudless atmosphere in industrial volume. It is possible to irrigate agricultural lands, Arava, Negev (a world problem). Receiving crops from former semi-deserts and deserts and eliminating droughts with the resulting water will increase food production.

(A2) Our proposed “Sunny Rain” strategy cools the air in cities and saves humanity from climate catastrophe (world problem). “Sunny Rain” will destroy greenhouse gases and evaporate the Earth, which will lower air temperatures, cooling the air in cities and other areas.

(A3) “Sunny Rain” irrigation will double food production (world problem).

(A4) “Sunny Rain” can be used to put out fires (world problem).

(A5) “Sunny Rain” can be used to clean the air over cities and polluting industries.

(A6) “Sunny Rain” can be used to eliminate unwanted thick fog at airports. U.S. airlines lose many billions due to fog disrupting flight schedules.

Corresponding author: Michael Noppe, Ph.D., associate professor, IEEE senior member, research field: atmospheric physics. E-mail noppe.mg@gmail.com.

(A7) “Sunny Rain” directly absorbs CO₂ and can be used to irrigate shrubs and trees on mountain slopes and in semi-deserts, which will result in CO₂ absorption by vegetation [2, 3].

3. Results

The future startup “Sunny Rain International” proposes to solve the problems of getting water from the atmosphere and increasing crop yields with efficient KIA irrigation and other problems with Sunny Rain [2, 3].

3.1 Obtaining Water from the Cloudless Atmosphere in Industrial Quantities Is Possible in the Arava, Negev and Kinneret

I invented the environmentally friendly artificial rain SR (“Sunny Rain”), which absorbs all greenhouse gases, as well as a device for making “Sunny Rain” condensation nuclei.

Water precipitation is proposed to be produced using condensation nuclei, for the creation of which an Earth-based device has been invented. Condensation nuclei are delivered by drones to the desired altitude and released into the atmosphere.

The aggregate of drops of all falling families of drops creates rain, which we called “Sunny Rain”. These results provide a theoretical physical justification for creating “Sunny Rain” and solving a number of other problems [2, 3].

3.2 Efficient Irrigation with Sunny Rain Will Enable Significant Progress in Food Production

Photosynthesis is the basis of agricultural productivity and serves as a major source of inorganic carbon in the biogeochemical cycle. Plant leaves absorb CO₂ from the air in the light with the help of chlorophyll and converts it into organic matter along with mineral-rich water that reaches the leaves from the root system. Thus, the limitations for photosynthesis are lack of CO₂ in air, water and minerals in water.

A method and system to produce water from water vapor of cloudless atmosphere, resulting in “Solar Rain” which can be used for efficient irrigation, increases

crop yield by 2 times [3]. Therefore, efficient “Sunny Rain” irrigation should be utilized everywhere, including areas with traditional water supply, to obtain high crop yields worldwide.

Thus, we propose to utilize the CO₂ inside the air. “Sunny Rain” absorbs all greenhouse gases, including CO₂. Carbon dioxide is a solution of carbon dioxide in water—the composition of “Sunny Rain”. Carbon dioxide directly feeds plants with water and minerals dissolved in it, while promoting the solubility of minerals in the soil. Thus, the increase in the greenhouse gas CO₂ when using “Sunny Rain” results in increased yields.

4. Conclusions

(1) Obtaining water from cloudless atmosphere in industrial quantities is possible in Arava, Negev and will be a breakthrough in the field of obtaining water.

(2) Doubling crop yields through efficient irrigation with the help of “Sunny Rain” will be a world breakthrough in the field of technology for increasing crop yields through efficient irrigation.

(3) Public protection from heat waves and other issues are described by [4, 6].

(4) “Sunny Rain” can be used to put out fires. For example, as a result of attacks from Lebanon with rockets and drone strikes, amid dry and hot weather, numerous forest fires have broken out in northern Israel. Significant damage was caused. Several houses were burned down in Kiryat Shmona [7].

Conflict of Interest

I, the author, declare that there is no conflict of interest regarding the publication of this article.

Acknowledgements

My thanks go to Lev Noppe for help.

References

- [1] Aronov, N. 2024. “Not Waiting, but Preparing: How Israelis Will Not Starve to Death due to Global Warming.” <https://detaly.co.il/ne-zh-dem-a-gotovimsya-kak-izrailityanam-ne-umeret-s-golodu-iz-za-globalnogo-potepleniya/08.05.2024>

- [2] Noppe, M. 2023. A Method and System for Recovery of Industrial Water from the Atmosphere and Application for Different Purposes. The United States Patent, patent application number: 18/445,190.
- [3] Noppe, M. 2023. Effective Irrigation with the Use of Industrial Water from a Free Atmosphere and His 26 on Adaptation Measures to Solve Tel-Aviv's Environmental Problems with "Sunny Rain" Application for Different Purposes. Patent application filed September 2023.
- [4] Noppe, M. 2023. "The Sunny Rain Geoengineering Project Will Adapt Humanity to Climate Change and Slow Climate Warming and Solve a Number of Other Problems." *IJIRSES* 3 (8): 1-6. <http://ijirses.com/volume-3-issues-8/>.
- [5] Noppe, M. 2018. "Preventing Eruptions of Kikai Submarine Caldera." *International Journal of Science and Research (IJSR)* 7 (6): 1222-4. <https://www.ijsr.net/archive/v7i6/ART20183463.pdf>.
- [6] Noppe, M. 2024. "On Adaptation Measures to Address Tel Aviv's Environmental Problems with Sunny Rain." *Journal of Environmental Science and Technology A* 13: 23-6. doi: 10.17265/2162-5298/2024.01.003. <https://www.davidpublisher.com/index.php/Home/Article/index?id=50425.html>.
- [7] Newsru.co.il. 2024. "Israel's North Is on Fire after Hizbullah Attacks." https://www.newsru.co.il/science_hitech/4jun2024/sea.html.