

## Review Article

### Are natural disasters really all natural ?

#### **Abstract**

For a half century, the military has been developing and perfecting techniques to control the climate and provoke extreme environmental phenomena. These techniques have been studied for use as weapons and to create the illusion of natural events. Since the 1990s, HAARP (High-frequency Active Auroral Research Program), the most powerful ionospheric heater in activity, is able to influence climate. High-power electromagnetic pulses in the earth's crust, produced by a mobile magneto-hydrodynamic generator, is a technology developed since the 1970s to trigger earthquakes. Directed energy weapons, a real-world technology, can ignite destructive fires at range. For several years, scientific articles and official documents report effects on health and the environment similar in all aspects to those that would be detected if solar geoengineering by SAI (stratospheric aerosol injection), a climate-altering technique, was used.

The Intergovernmental Panel on Climate Change explains that extreme environmental events (heat and cold waves, storms, hurricanes, tornadoes, droughts, floods, wildfires, air pollution, etc.) are the consequence of global warming, itself mainly due to anthropogenic CO<sub>2</sub> emissions. However, numerous publications and thousands of scientists strongly contest the responsibility of CO<sub>2</sub> in climate change, and therefore cannot be held responsible for extreme environmental phenomena. The solar explanation isn't appropriate either, given its low activity for several years.

The increase in natural disasters, causing more and more deaths and environmental damage, urgently requires studies, free of conflict of interest, in the field of military environmental and climate modification technologies. Indeed, the extreme environmental events of recent years do not all appear to be natural.

**Keywords:** air pollution, drought, electromagnetic waves, earthquake, extreme weather, haarp, solar geoengineering, wildfires.

#### **Introduction**

At least 50 countries are already using weather-modifying technology. China uses this method on almost 50% of its territory [1, 2]. The most widely used technology is cloud-seeding, which aims to enhance precipitation [3, 4, 5]. Rather than using traditional cloud seeding, which raises significant health and environmental safety concerns due to byproduct fallout, the United Arab Emirates employs drones, designed to target certain clouds, that produce electrical discharges via concentrated lasers to forcibly pool water droplets in the air, thus triggering desired rainfall [6].

But it's the military who are most interested in weather modification techniques, with objectives much more ambitious than simply making it rain. In 1957, Lyndon B. Johnson stated: "From space one could control the earth's weather, cause drought and floods, change the tides and raise the levels of the sea, make temperate climates frigid". Since the 1970s, through a climate control program called Climate Dynamics, the Pentagon studied how the United States could melt ice caps, generate destructive storms, and use "key environmental instabilities" to unleash huge amounts of energy. They had discovered how the United States, acting secretly from space, could inflict bad weather on the Soviet Union. In the Soviet Union, engineers were able to reverse the course of the Pechora River, which flows through the Arctic, to create inland seas, which would alter the global climate [7].

The first meteorological manipulation for military purposes was the well-known Operation Pop-Eye (cloud seeding) carried out during the Vietnam War, whose aim was to prolong the monsoon. The rain was of acid quality and the ecological risks were totally unknown [8]. As a result of this military operation, the UN established, in 1976, the Environmental Modification Convention

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(ENMOD). However, this convention is not sufficiently precise and offers the opportunity to circumvent and adapt almost everything that is written. For example, the convention allows for the research and development of climate weapons or the use of such techniques against a non-signatory state [9, 10]. **Note that France is not a signatory state.**

**Comment [BW2]:** Why is it important?

In the United States, since at least 1959, the government has funded research on weather modification [11], whose objective remains mainly military [12, 13, 14]. Among the technologies needed to ensure US security, a study requested by the US Air Force in 1994, entitled "SPACECAST 2020", considered weather modification as a weapon [15]. In 2001, a bill, which was rejected, was presented to the US Congress to ban space-based weapons, including meteorological and tectonic weapons [16].

Fifty years ago, Gordon J. F. MacDonald (geologist, geophysicist and member of President Johnson's Science Advisory Committee), heavily involved in weather modification work, predicted a new war strategy in a chapter ("How to Wreck the Environment") in a book entitled "Unless Peace Comes" written in 1968. The author explains that future conflicts will be linked to the manipulation of the environment. These wars will be secret because storms, floods, droughts, earthquakes and tidal waves are unusual, but not unexpected, and will be able to continue for years in total discretion [17]. In 2012, The British newspaper "The Guardian" published a letter from a former aerospace and defense executive advisor, who explained that weather was weaponized by at least four countries: "... US, Russia, China and Israel possess the technology and organisation to regularly alter weather and geologic events for various military and black operations, which are tied to secondary objectives, including demographic, energy and agricultural resource management... Warfare now includes the technological ability to induce, enhance or direct cyclonic events, earthquakes, draught and flooding, including the use of polymerised aerosol viral agents and radioactive particulates carried through global weather systems..." [18].

Scientific publications, numerous official documents and observations show that military climate modification techniques may have been in use for over 20 years [12, 13].

What technologies **could be used to generate** extreme meteorological, climatic and environmental phenomena (heat and cold waves, air pollution, storms, hurricanes, tornadoes, droughts, floods, wildfires, strong earthquakes, etc.) ?

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### **1) High-power electromagnetic waves**

The Earth's ionosphere (~60-1000 km above sea level) is composed of dense plasma, which exhibits complex variations with altitude, geographic location, and solar activity level [19]. The ionosphere plays a major role in the performance of civil and military communication systems. Longer wavelength radio signals reflect from the ionosphere. Shorter wavelength radio signals pass through the ionosphere but are affected by it, via processes such as absorption and scintillation [20].

#### 1.1) Directed energy in ionosphere

##### 1.1.1) Ionospheric heater

An ionospheric heater (IH) sends high frequency (HF) waves at high power in the ionosphere to disturb it and observe the effects. The most known is HAARP (High-frequency Active Auroral Research Program) (Fig 2, 4). Officially, the axes of research of HAARP are: Plasma physics, radio science, mesosphere-thermosphere diagnostics, space weather, arctic maritime domain awareness, magnetosphere-radiation belt, sub-auroral physics, plasma duct generation, ELF propagation, detection of cavities in the Earth, over-the-horizon radar, citizen science and amateur radio, trends in ionospheric and atmospheric conditions, including trends in global change. Between 1990 and 2014, HAARP was a military program. Since 2015, responsibility for HAARP facilities and equipment has been transferred from the University of Alaska Fairbanks (UAF), but the land is still owned by the US Air Force [21].

HAARP operates between 2.7 and 10 megahertz (MHz) with a peak power (PP) of 3.6 megawatts (MW) [21]. Because HAARP employs a phased array antenna, energy can be concentrated along

variable directions, producing an effective radiated power (ERP) in the few gigawatts (GW) range (at least up to 5.1 GW). Heating with higher frequencies results in an increase in ERP and allows to focus the pump power on a smaller point in the ionosphere, which again increases the heating efficiency [22, 23, 24].

In the world there are other IHS: Russia (SURA) operates between 4.5 to 9.3 MHz with a PP of 750 kilowatts (750 kW) and an ERP of 190 MW; Norway (EISCAT), 3.85 to 8 MHz, PP of 1.2 MW and ERP of 1.2 GW; Peru (JRO), 50 MHz with a PP of 6 MW (Fig 1, 4) [25]. IHS can propagate their HF beams over very long distances, for example from Norway to Antarctica [26].



Figure 1: JRO (Peru) [25].

Scientists are also working on the construction of mobile IHS (on the barge of a ship) with the same technical capabilities as HAARP (Fig 2). These studies are supported by the Air Force Office of Scientific Research [27, 28, 29, 30].



Figure 2: Research for the development of a mobile IH operating with the same technology as HAARP (left) but on a surface 20 times smaller [28].

#### 1.1.1.1) Ionospheric heater effects on weather

The experiments produced by HAARP generated unprecedented disturbances in the ionosphere [22]. Although the UAF states that HAARP cannot alter meteorology, B. Eastlund, whose applications initiated the development of HAARP [31, 32, 33], asserts that HAARP's capabilities are adequate to generate weather control [34]. According to a university report, written in 1998, the whole truth about HAARP would not officially be disclosed. This technology can lead to dangerous imbalances for the environment and people [35]. The 1999 European Parliament report states that HAARP created holes in the ionosphere and can be used as a directed energy weapon to induce climate disruption and manipulate global weather patterns [36, 12]. When the ionosphere was heated by an IH (SURA (Russia)), a decrease (up to 20%) in the intensity of the ozone emission spectrum (mesosphere: 60 km) was measured [37]. Eastlund's patent allows the production of artificial ionized regions from sea level to around 80 km [34]. Since the heating altitude can be stratospheric, the ozone layer located at this level can be altered.

Atmospheric gravity waves, which appear during vertical movements of air parcels, can have a powerful impact on the behavior of extreme weather events (rain and temperature extremes, hurricanes, tornadoes, tsunamis) [38]. Studies have shown that a powerful radio emission from HAARP or SURA generates atmospheric gravity and acoustic waves in the ionosphere [37, 39, 40, 41, 42]. Internal gravity waves generated by ionospheric heating, including in the upper atmosphere, propagating down to mesospheric heights, change the temperature of the mesosphere [37]. Eastlund specified in his patent that generation of heated air regions by powerful IH enables to deposit energy in the air of tropospheric regions that can generate atmospheric acoustic waves or atmospheric gravity waves to modify the steering winds for meteorological modification purposes. It is also possible to influence the distribution of electrical charges in mesocyclones [34].

In addition to modifying wind patterns (as in another patent [31]), the technology developed by the Eastlund's patent [32] enables modification of the atmospheric molecular composition, as well as increasing the concentration of one or more molecules in an atmospheric region (e.g. ozone, nitrogen, etc.).

It is important to note that two patents relating to HAARP technology are classified as a directed energy weapon [32] and a device or method for influencing weather conditions [34]. Therefore, in accordance with the European Parliament's 1999 report [36, 12], an IH such as HAARP has the capacity to be used to modify the climate.

#### 1.1.2) Other apparatus sending electromagnetic beams into the ionosphere

Numerous powerful military very low frequency (VLF) transmitters (Fig 3, 4) induce significant disturbances and heating of the ionosphere, which can extend laterally for several thousand kilometers [43, 44].



Figure 3: Australia, powerful VLF transmitter (North West Cape (NWC) transmitter : Naval Communication Station Harold E. Holt) [45].

Among all the instruments that send electromagnetic waves into the ionosphere to study it, there are :

- Incoherent scatter radar (ISR), designed to probe the ionosphere in order to understand density, temperature and movement speed of the plasma. They must be built with sufficiently large power (megawatts) and apertures (usually hundreds of square meters) (Fig 4) [19, 46].
- Some high-powered military radars (Fig 4) [45].
- Super Dual Auroral Radar Network (SuperDARN). An international network of ~40 low-power HF radars, operate between 8 and 22 MHz, located throughout the northern and southern hemispheres [47].
- Nerc MST Radar Facility (UK), Chung-Li VHF radar (China), EAR (Japan) [47].

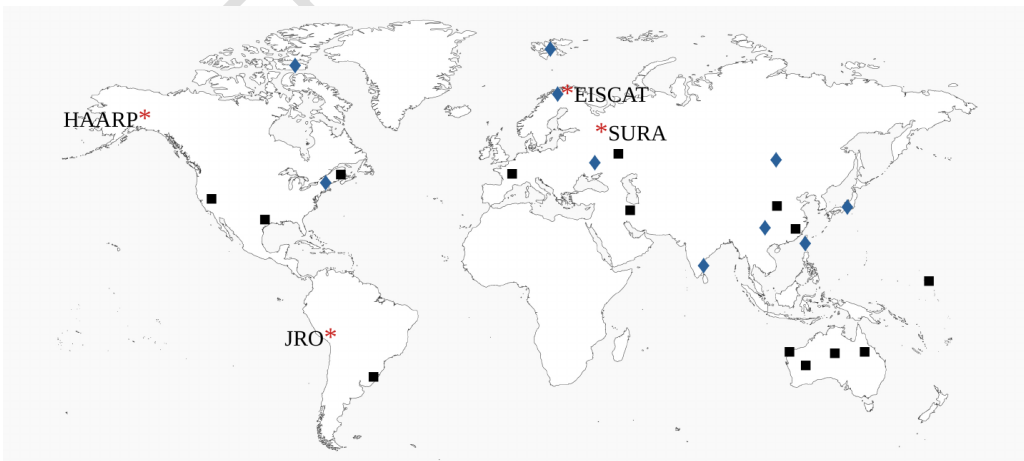


Figure 4 : \* IH; ♦ Some ISR; ■ Some military radar. (Realized from references [21, 25, 45, 46]).

The large number of radio transmitters emit waves of different wavelengths into the ionosphere, to which satellites must be added, contributing to environmental, weather and climate changes [37, 48] (See also section 2.2). Note that individually, these devices don't behave exactly like IHs, but it's their quantity that inevitably induces environmental disturbance.

## 1.2) Links between earthquakes and electromagnetic waves

### 1.2.1) Earthquakes triggered by electromagnetic impulses

Tectonic weapon has been a military objective since the Second World War. In 1944, an English scientist created an earthquake bomb [49]. Later, Soviet programs worked on triggering earthquakes by electromagnetic impulses [50].

In the 1970s, Russian scientists discovered that electromagnetic impacts on rocks and faults in the Earth crust in the stress-strain state could trigger earthquakes. Originally, this method was studied with the aim of triggering small earthquakes to release tectonic stresses in order to prevent destructive earthquakes. Russian scientists are therefore developing a mobile magneto-hydrodynamic (MHD) generator (Pamir-1), able to generate a lot of energy in a very short time and convert it into electricity. This system will be perfected in subsequent years. Thus, using a pulsed MHD-generator (Pamir-1, Pamir-2) or a more economical electric-pulsed system (ERGU-600-2), a ground electric dipole with electrode spacing of 3 to 4.2 km, current pulses injected into the Earth's crust, creating strong local earthquake activation after 2 to 7 days and continuing for several days (depending on the apparatus used). Electromagnetic pulses accelerate the release of energy stored in the medium during tectonic processes, in the form of relatively weak earthquakes. The authors point out that earthquakes depend not only on triggers, but also on the nature and geological properties of the region. Consequently, in a metastable seismic zone, low-power electromagnetic pulses may be enough to trigger a cascade of small tremors, leading to a disastrous earthquake [51, 52, 53, 54].

In 1995, a high-power MHD generator, Pamir-3U (PP ~15 MW), was constructed by the Institute of High Temperatures of the Russian Academy of Sciences and delivered to the U.S. Air Force. It is a self-contained portable power system that can be transported to various operational locations and for possible use with advanced weapons applications (Fig 5) [55, 56].



Figure 5: Pamir-3U MHD system [56, 57].

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### 1.2.2) Could an IH such as HAARP trigger an earthquake?

#### 1.2.2.1) Parameters measured during an earthquake

Before the very strong earthquake in Japan on March 11, 2011, significant variations in the total electron content (TEC) of the ionosphere were observed [58, 59], as well as a warming of the atmosphere above the epicenter [58]. These anomalies have been identified as short-term precursors associated with some of the most destructive recent earthquakes. Some authors argue that radon release from the earth's crust would act through a series of events to induce heat and atmospheric conductivity [58, 60]. Other authors stipulate that TEC anomalies are triggered and managed by a large-scale electric field [61, 62].

The occurrence of disturbances (increases) in the ultra-low frequency (ULF), extremely low frequency (ELF), VLF wave ranges has also been observed prior to strong earthquakes [63, 64, 65, 66].

Literature shows that an earthquake generates microwaves and that microwaves can contribute to the triggering of an earthquake (depending on the energy state of the earthquake focus). Indeed, the earthquake focus is a permanent generator of microwaves, but it is also a microwave receiver. This leads to a self-triggering mechanism due to the microwaves generated by the earthquake focus itself. Microwaves stimulate the rock, causing its dislocation, which in turn generates microwaves. The rocks therefore appear to be penetrable by microwaves [67].

#### 1.2.2.2) Ionospheric disturbance can trigger an earthquake

A magnetic storm caused by a solar flare can also trigger a release of energy stored in the Earth. Solar electromagnetic flares disrupt the conductivity of the lower ionosphere, also generating geomagnetic field disturbances. Absorption of ionizing solar radiation will induce variations of telluric current density in seismogenic faults, which may lead to an earthquake if the affected area is in a metastable stress-strain state. This change in current density in the Earth's crust is comparable to the variations induced by artificial electromagnetic injections [51]. In addition, the strong correlation between solar activity (solar wind) and major earthquakes, resulting from the modulation of proton density and thus the electrical potential between the ionosphere and the Earth, is likely to be the cause of the luminous phenomena visible before, or accompanying, a large earthquake [68].

Thus, the scientific literature not only shows that earthquakes influence certain parameters of the ionosphere, but also that ionospheric disturbances can have an impact on the lithosphere.

### 1.2.2.3) What is HAARP able to do ?

It should be pointed out that, among HAARP's objectives, military reports show that the generation of low-frequency radio waves is also used for tomography of the earth, i.e. detection and imaging of underground structures [69, 70]. HAARP could therefore first identify metastable zones in seismic areas.

We have previously seen that an IH such as HAARP seriously disrupts the ionosphere [22]. Moreover, it can create irregularities of the ionospheric TEC (such as enhancement) by heating localized regions of the ionosphere [23, 34, 71].

The generation of ULF/ELF/VLF waves in the ionosphere by modulated heating with high-power HF waves is one of the most important objectives of an IH [21, 23, 72, 73].

Through heating, HAARP can create artificial ionization layers, produce magnetic field disturbances, various luminous structures, airglow and artificial auroras, sometimes visible to the naked eye [74, 75].

Thus, all the parameters that appear in the ionosphere and atmosphere before a strong earthquake can be generated by HAARP. Moreover, since ionospheric disturbances linked to magnetic storms of solar origin can trigger earthquakes, and HAARP is capable of disturbing the ionosphere to the point of creating local artificial auroras - i.e. comparable to what a magnetic storm is capable of doing - it seems justified to consider the possibility that an IH like HAARP could be at the origin of at least some parameters acting in cascade to produce an earthquake. In 2011, although not published in a peer-reviewed journal, Dr. F. De Aquino (Professor of Physics at the State University of Maranhao (Brazil), Titular Researcher at the National Institute for Space Research) demonstrated that high-power ELF radiation generated by HF from an IH, such as HAARP, can cause earthquakes, cyclones, and strong localized heating [76].

In terms of microwaves, HAARP's ability to create an ionospheric mirror allows microwave beams to be used over long distances [77, 78].

### 1.3) Other electromagnetic radiation frequencies for control weather

A patent explains how a device, which can be used as a military weapon, can produce lightning, thunder and hurricanes by means of high frequency sound waves generated by radar or other microwave or high frequency emission devices [79].

The laser allows lightning control, water vapor condensation, fog formation and dissipation, and light scattering (albedo) from high altitude clouds for radiative forcing management [80].

## 2) Solar geoengineering by stratospheric aerosol injection (SAI)

### 2.1) Official explanations are not consistent with observations and measurements

According to the authorities, weather modification technology called solar geoengineering by stratospheric aerosol injection (introduction of tiny reflective particles into the upper atmosphere, to bounce part of the sun's light towards space) is not currently used [13]. The World Meteorological Organization (WMO), representing the only authoritative reference (International Cloud Atlas) for cloud identification, classified persistent aircraft trails as "aircraft condensation trails" to designate them as new clouds: Cirrus homogenitus [13], Cirrocumulus stratiformishomomutatus [81].

Although the majority of scientific literature agrees with this cloud classification, it specifies that these aircraft trails cause deleterious effects on health, the environment, the quality of the air and act strongly on the climate by warming it up much more than by CO<sub>2</sub> [13, 82, 83]. Moreover, the combustion of alternative aviation fuels generates small non-volatile particles, promotes the formation of contrails and widespread cirrus clouds [84].

Numerous clues lead to the conclusion that solar geoengineering by SAI has been in use for a long time. For several years, scientific articles and official documents report effects on health and the environment (no more blue skies, diseases, pollution, ozone depletion, quality and quantity of solar radiation, drought, electrical properties of atmosphere, etc.) similar in all aspects to those that would be detected if solar geoengineering by SAI was used (Fig 6) [13].

Scientific publications that do not acknowledge the existence of the use of solar geoengineering by SAI nevertheless shows that persistent aircraft trails are composed of many metal particles [13]. Using solar spectrometry irradiance measurements, a study showed that these persistent aircraft trails are not ice crystal condensation trails, but chemical trails [85]. Documents linking these persistent trails to chemical spray weather modification technology show that the content appears to be particularly concentrated in aluminum (Al), barium (Ba), nanoparticles and sulfur [13]. Neither Al and Ba, nor nanoparticles are monitored in international air pollution analyses [86].



a



b

Figure 6: The photographs were taken by the author himself, located in France, with a Nikon Coolpix L16 camera. a) : Near Toulouse city (south) Sept 5, 2021, 16h37 ; b) Near Lille city (north), Aug 12, 2021, 14h58 . Persistent aircraft trails are mostly directed towards the sun and spread out, leaving a veiled sky, gradually becoming white (a, b).

## 2.2) SAI effects and their coupling with electromagnetic waves

A 1996 military report showed that this electromagnetic technology requires chemical spraying to manipulate weather, added to the use of nanotechnology to create artificial meteorology around 2025 (e.g. smart clouds composed of microscopic computer particles), so that deliberate actions can be taken for natural weather phenomena [78]. This was corroborated in 2009 by a U.S. Air Force report, stated that around 2030, with the help of nanotechnology, the US military will be able to create (not just modify) weather (storms, fog, clouds, etc...) in a defined area [87].

As SAI damage the ozone layer [13, 88], which has been corroborated by a sulfate geoengineering model [89], solar radiation becomes poor quality and very aggressive, so much so that ultraviolet (UV) radiation in the form of UV-C, in the range 250-300 nm, has been measured at the Earth's surface [90]. SAI increase the local warming of the atmosphere through heat transfer caused by the particles [10], and increase the electrical conductivity of the atmosphere due to the metal particles [13]. Eastlund's discoveries [32] allow a technology like HAARP to alter solar absorption patterns by constructing one or more plumes of atmospheric particles which will act as a lens or focusing device. Moreover, by using diverging field lines, and with the availability of sufficient energy transmitted by an IH, particles of different sizes with desired characteristics such as tackiness, reflectivity, absorptivity, etc., can be transported for specific purposes or effects (e.g. concentrating large amounts of sunlight on specific parts of the earth) [32]. In relation to this subject, a study demonstrated that the physical properties of suspended atmospheric microparticles (which increases global air pollution, affects health as well as local weather and climate by scattering and absorbing solar radiation) are significantly changed under the continuous action of electromagnetic radiation. Particle number increases, particle morphology is distorted with increasing electromagnetic action time, microparticle motion characteristics are affected, particle trajectory is modified and electromagnetic field promotes particle agglomeration in the direction corresponding to the magnetic field force [91].

Consequently, an IH, such as HAARP, and solar geoengineering by SAI can act in symbiosis to optimize their respective actions on climate. That's why, in the military weather control roadmap,

atmospheric spraying of chemicals (mainly metallic) is timed to coincide with the launch of HAARP (in the 90s) [13].

In addition, atmospheric particles are constantly stimulated by the frequencies of other devices sending electromagnetic beams into the ionosphere (section 1.1.2). For example, over-the-horizon radars (OTHs) are military radars that continuously transmit HF waves (between 3 and 30 MHz) over thousands of kilometers [45]. Consequently, these actions also have an influence on the weather and climate.

### 2.3) Funding, patents, similar technology

Spy agencies (CIA and others), very interested in geoengineering, fund climate research with the aim of finding a weather weapon [92, 93]. Note that Bill Gates is also among the powerful financial backers of this technology [94].

Among the dozens of patents explaining numerous weather modification techniques, several concern solar geoengineering by SAI, describing, among other things, certain components used and spreading methods [13, 95, 96, 97].

Although not part of geoengineering, there is a similar and equally polluting method. Indeed, spreading Sahara sand is another technology to modify the scattering of sunlight in the upper atmosphere [98]. This could explain the episodes (or some of them) in recent years of sand dust fallout from the Sahara in France and Spain, dimming the sky and causing air pollution [99].

### 2.4) Wildfires

According to the United Nations Environment Programme, there is a link between climate change and uncontrollable and extreme wildfires [100]. However, the sulfur and aluminum nanoparticles in SAI increase the risk, through dryness, of wildfires [13, 101]. Aluminum nanoparticles are also well known for their pyrophoric capacity and the high energy they emit during combustion [102], thus amplifying the risk and severity of wildfires. In addition, geoengineering simulations showed that SAI induces drought [103], leading to an increase in the frequency of extreme fires in some regions [104].

It would seem that 50% of forest fires in the western United States are caused by lightning [80], but it has also been reported (in section 1.3) that some directed energy technologies are able to trigger and control lightning [79, 80]. A military document explains that directed energy weapons (DEWs), composed for example of lasers, radio frequency devices, high power microwave, millimeter wave and particle beam technology, can ignite destructive fires, at range. Moreover, as it is difficult to locate the source of the directed energy, DEWs are often used in special or covert operations. Authors of this report assert that the world has reached a “tipping point” in which directed energy is now essential to successful military operations [105]. DEWs using specific military devices (aircraft, ship, combat vehicle, etc.) are not science fiction [106]. Note that forest fires are part of the environmental weapons implemented by the US military [107].

## Conclusion

In 2006, Dr. D. Deming (geologist and geophysicist) testified before the US Senate committee on the Environmental and Public Works that the media are overwhelmingly biased on the issue of global warming, trying to link every natural disaster to global warming. This constitutes significant disinformation for the public on climate and environmental issues [108].

Intergovernmental Panel on Climate Change (IPCC) explains in its reports that since the 1850-1900 period, the climate has been increasingly disrupted (in particular warmed) by a powerful anthropogenic factor, greenhouse gases, whose main representative is CO<sub>2</sub> emitted by the combustion of fossil fuels. This global warming would increase extreme weather, climate and

environmental events (heat and cold waves, storms, hurricanes, tornadoes, droughts, floods, wildfires, air pollution (worsened by heatwaves and wildfires) etc.) [109]. For some scientists and media, climate change could also trigger earthquakes, tsunamis and volcanic eruptions [110].

However, the IPCC's international authority on climate policy has been achieved by suppressing dissenting views on any issues where there is still scientific disagreement [111]. Numerous publications show that the IPCC's climate models fail to take account of natural multidecadal, secular and millennial climate cycles, overestimate global warming (urbanization bias) and, in many cases, are not validated by observed climate [111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121]. In addition, IPCC reports on current climate causes (CO<sub>2</sub> as the culprit of climate change) are strongly contested by thousands of scientists [122, 123, 124, 125, 126, 127, 128].

Thus, the official explanations for the increase in the intensity of extreme events are unsatisfactory. A hypothesis would be solar activity. However, although there are many solar cycles (Schwabe cycle (Schwabe 11-year sunspot cycle), Hale cycle (22-years), Gleissberg cycle (~85 years), Jose cycle (~178 years), Suess-de Vries cycle (~208 years), Eddy cycle (~1000 years), and Bray-Hallstatt cycle (~2300 years)), whose interactions are complex [129], and which can superimpose on and influence natural terrestrial oscillations [113, 130, 131, 132], the Schwabe cycle shows weak solar activity since cycle 24 (2008 to 2019) (Fig 7), and this low activity will continue until ~2050 [133, 134, 129]. Consequently, the rise in frequency and intensity of at least some extreme environmental events in recent years cannot be attributed to an increase in solar activity.

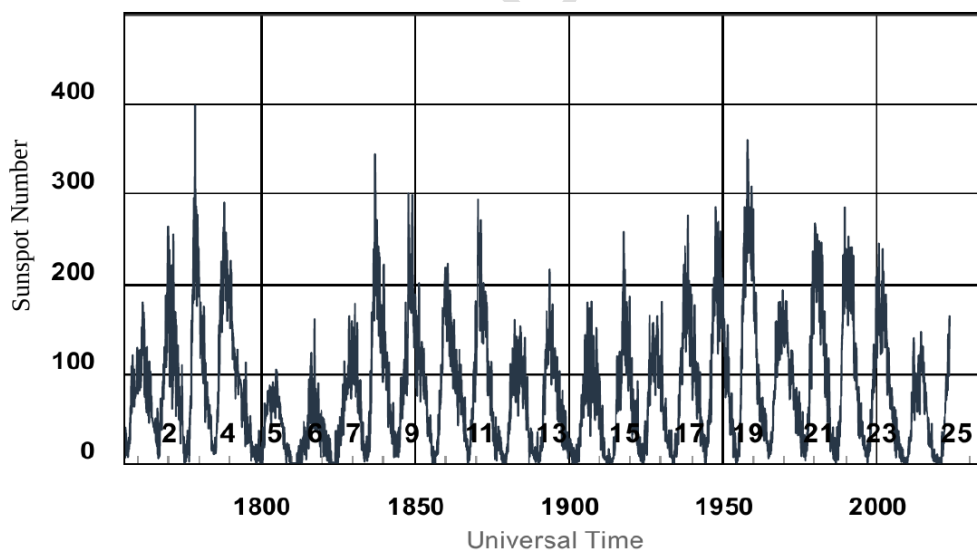


Figure 7: Sunspot cycles according to years. Monthly values. Produced from: Space Weather Prediction Center [135].

For the World Economic Forum (WEF), it is necessary to unlock \$3 Trillion a year for climate and nature [136]. There are huge financial interests behind climate policy, as well as the progressive implementation of energy control laws [137], and taxing carbon as part of the global governance plan outlined by the WEF [138].

Throughout this article, we have seen that the scientific literature reveals that meteorological, climatic and environmental manipulation and control techniques have been studied for over half a century. The strongest of these technologies have always been intended for military use, i.e. as weapons able to create the illusion of a natural event. Given that the IPCC's argument on the increase in extreme events in recent years lacks a significant degree of objectivity, and that global climate management generates enormous financial stakes, it would seem that the most plausible explanation for the rise in extreme events (at least some of them) over the last 20 years is not natural, but rather due to the use of military climate and environmental modification techniques. Consequently, there is an urgent need for more investigations, free of conflicts of interest, into the sources of these extreme events.

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