

Global Warming Reduction Proposal Assessment

Roberto Brusa
High School Diploma
Mechanical Expert Chief Technician
Olgiate Olona, Varese, ITALY

Abstract:- The aim of this work, is to find out if there is a convergence of different scientific considerations into a common aggregation point, that can be used as a key point for a new global approach to the problem of global warming, even using a heuristic method of evaluation.

Keywords:- Harmony.

I. INTRODUCTION

Unity: The fact or state of being unified or whole even if composed of two or more parts.

Defining the Energy Circle of Unity presupposes the fact that it represents something dynamic, in continuous and free change, for example the human population, located in the single Planet, our current home, called Earth.

To understand if and what variations occur over time, we must establish a non-random interval to conceptually evaluate and scientifically measure the changes, especially unexpected ones, that may have occurred in the period considered.

A first starting point used is that of the year 1712, indicated by the scientist James Lovelock, and corresponding to the beginning of the exploitation of steam energy to carry out work.

Originating from the combustion of coal, James Lovelock identified in 1712 the beginning of the variation of the earth's thermodynamic equilibrium due to human activities to produce and exploit energy.

II. METHOD

Extrapolating from the demographic references I obtained that on that date the earth's population consisted of ~640M people.

Until that moment, the Unit consisting of the Earth and all living beings, evaluating the data relating to temperatures, can be considered thermodynamically stable.

The change occurred approximately around the year 1910: measurements showed a constant increase in Ocean and Land temperatures from that point on, until around 1940.

The only answer found to this change is represented by the fact that the quantity of water involved in the annual cycle of the seasons, approximately 580k km³, could no longer be

reconverted into Ice: the progressive reduction of the overall mass of Ice had begun.

An emblematic event occurred in that period: the sinking of the Titanic, which occurred in 1912 following a collision with an iceberg.

By 1925, the world population had reached 2G.

From 1940 to 1965, the average temperature recorded underwent a slight reduction, to start increasing again at the same speed recorded in the period 1910-1940, until around 2015, where the speed of warming increased further.

In 2022, the world population reached 8G.

This is real data available to everyone to analyze, try to understand and find solutions.

Human Population and Basic Living.

Considering at first the average daily consumption of 2500k cal (2.5x10⁶cal) necessary to keep a person alive in good health at a temperature of 37°C, and at the peak of his intellectual faculties and work capacity.

If we multiply 2500k cal by 8G (billion) individuals and by 365.25 days, we obtain the minimum annual requirement equivalent to: 7.3x10¹⁸cal.

Bearing in mind the existing relationships between 1BTU=1055J=252.2cal, a value of 7.3x10¹⁸/252.2 = 2.9x10¹⁶ BTU is obtained, equivalent to 30.6x10¹⁸J.

Given that 1Gtoe=42x10¹⁸J, we are able to quantify the annual global energy requirement to keep 8G people alive, expressed in Gtoe (billion ton of oil equivalent).

In our case this value corresponds to 30.6x10¹⁸/42x10¹⁸ = 0.73 Gtoe. In the year 2021, primary energy consumption was 14.8 Gtoe, according to IEA certified calculation.

From these data, scientifically demonstrable, and until proven otherwise, we are finally able to begin to relate numerical values and their meanings to each other.

For example, it become evident that in 2021, with a world population close to 8G of people, from the point of view of an external observer, we have produced Energy to keep alive 14.8/0.73 = ~20 times the world population, i.e. 8Gx20=160G, and a heat production 20 times higher than

what is necessary for the whole world population basic survival.

Now I think a fundamental question can have and answer: the amount of Heat produced for basic survival, eating, drinking, breathing, can be considered non influent in the global thermodynamic equilibrium, because represent globally only 5% of Total amount of Heat emissions.

The rest, 95% has the highest impact, and is directly connected to the Life style of only a fraction of global population. As a first intuition and hypothesis: if we round the daily per capita requirement to 2,740kcal, which could for example contain losses linked to distribution problems or accidents between producers and consumers, we obtain a value of 0.8Gtoe per 8G of population.

I believe that this report should be considered the key to understand and connect the whole aspects related to Spirituality and Science. To be clear, the live protection from the Spiritual/Religious point of view expressed in the "Grow and multiply", and the Scientific Natural Dispersion of Heat into Empty Space, the Thermodynamic Equilibrium, are Integrated and Consolidated in the concept of "ARMONY".

III. RESULTS

➤ *Some General Considerations and food for thought.*

The research carried out in glacier cores measured an increase in the quantity of Carbon Dioxide in the Atmosphere from 250ppm (parts per million) to ~420ppm. [3]

Translated into another form can be represented in an interval between $0.025\% \div 0.042\%$, corresponding to a percentage increase in the Atmosphere referring to the starting data (250ppm) equivalent to:
 $(420-250)/250 = +68\%$.

The human population, from 1712 to 1925, had a percentage increase, always referring to the starting point (640M inhabitants) equivalent to:
 $(2G - 640M)/640M = + 212\%$.

Overall, the percentage change in the population from 1712 to 2022 is equivalent to:
 $(8G - 640M)/640M = + 1150\%$.

I think it is clear that there is not even remotely a link between the increase in the human population and the food needs linked to its sustenance (+1150%) and the observed increase in Carbon Dioxide present in the Atmosphere (+68%).

In relation to the problem of Earth's Thermodynamic Equilibrium, from 1712 until 1910, overall human activities linked to the production of Energy reached the threshold in which it was no longer possible for the Earth's Thermodynamic System to maintain a Stable Balance between the global quantities of water in the solid state, i.e. Ice, and that in the liquid state.

There would still be several topics to explore, but as they say: "Rome was not built in a day", and I add by underlining it, "by one person alone".

Cumulative and progressive emission of HEAT from 1712 onwards, mainly linked to Energy Production Systems, can reasonably be considered the Primary Cause of the INCREASE OF TEMPERATURE in the Atmosphere and Oceans, having exceeded the terrestrial heat dispersion capacity in the Space.

The REAL TEMPERATURE DETECTED shows the END of the LATENT HEAT OF LIQUEFACTION EFFECT around the period 1910. Double cross-check, "toe" and "BTU" units, demonstrated the RESULTS.

I referred the relationship between Heat produced and average increase in Temperatures to the year 2000, and I calculated it to be in the order of: 0.0086°C for each unit of "Gtoe" (billion tons of oil equivalent), referring to a constant value of water involved in the annual cycle (580k km^3) and a mass corresponding to 40% of the total weight of the Atmosphere [1].

Another very important period is from 1940 to 1965. As I previously said, there was a slight decrease in the average temperatures of the Atmosphere and Oceans, despite not having found any decreases in the production of Energy during World War II and the period after until about 1965.

The only plausible answer lies in the fact that for most of that period, the standard of living of most people did not go beyond that of survival: nothing was thrown away, they generally moved on foot, only to take shelter in collective shelters or to stock up on basic necessities, they warmed with the proximity of people or by taking advantage of the heat produced by the livestock, or with refractories to be able to bring heat where it was needed.

A life in which one suffered from hunger, pushed to the limits of survival, I don't know more. In this sad period, in addition to natural combustion processes, research has produced a new energy production system, the so-called Nuclear Combustion.

The main product of each type of combustion is represented by Heat, while the residue can be either Carbon Dioxide with other gases, or the hitherto unknown Nuclear Waste.

With the end of the War, which culminated with the explosion of the two nuclear bombs on Japan and the terrible consequences on the populations of the survivors, efforts were made with difficulty to return to a certain "normality".

Having been born in 1952, I did not have that experience, and what I can remember comes from fragmented stories "almost stolen" in particular moments of collective or family life.

It must be said that the common feeling was that of looking forward and working hard to the reconstruction of what has been destroyed, trying not to involve the new generations.

Honoring the dead and respecting the living, I don't want to add anything other than a wish: Harmony and Peace. In the sixties, there was an enormous demand for work and products, the so-called Economic Boom, the population reached 3 billion individuals and Energy Production began to rise again, as did the average atmospheric and ocean temperatures, with the same speed recorded from 1910 to 1940, and since 2015 this speed has begun to grow dangerously.

The food for thought on this second part broadens the horizons of analysis, because they begin to involve, starting from the foundations, all the qualifying aspects of the human race: Philosophy, Science, Development, Intellect, Consciousness, Spirituality.

I would like to mention just one, which I believe represents the keystone to deal with. If our lifestyle based on the ever-increasing production of Energy, Consumerism, has led to this critical situation for the survival not only of humans, but of the entire planet Earth as we know it today, how do we bring back the relationship between Solid State and Liquid State of water in Safety Levels, comparable to those existing before 1712, within a maxim range extension up to 1910?

From 1712 to today we have not dealt with these consequences, due to an error on our part, we have only tried to gain the upper hand against each other, and now the time has come to change this state of affairs.

An old proverb common to all states that "It is the Union that creates Strength". Until the second publication, my perception was that what I had described represented my belief, but lacked official confirmation of the validity of the results I had reached.

On July 26, 2022, this confirmation materialized in the publication of the immense archive of the US Energy Information Agency, which occurred on the same day James Lovelock left us. [4] It was like a last message saying: "it's our turn to continue".

In this publication, the unit of measurement to be used in energy calculations, the BTU or British thermal unit, was officially established. Since these were very large values, concerning the energy produced by the entire planet, the value of 1QuadBTU was specified, i.e. 1QuadBTU = 10^{15} BTU. The verification of the correspondence in Joules of the two units of measurement gave a positive result.

Results of the comparison show that the consumption recorded in the year 2000 used in the calculations, i.e. 10Gtoe or 400QuadBTU, both correspond to 420EJ.

This was the culmination of an internal tension that lasted a long time, which began as far as I'm concerned in 1970, evolved in the period of forced segregation due to the restrictions for the COVID-19 Pandemic and in conjunction with the basic indications contained in the Great Reset.

The end of this chapter of research into the probable causes of global warming has allowed me to ease the tension and start thinking about a possible solution to this problem.

IV. CONCLUSION

The Multiple and Wonderful Diversities can progress only in the presence of the necessary and sufficient condition for evolution represented by the dynamic balance of opposites, that is, Harmony.

Whenever its absence occurs, we witness the onset of conflicts, more or less immediate but nevertheless inevitable, and with a predictable exodus: the destruction of Life.

The Convergence of Diversities in a universally accepted and shared common point is the first indispensable step to avoid the failure of any initiative.

➤ *The Rest will come by itself.*

- There will be no shortage of errors, but they will be the stimulus to acquire awareness of the results obtained or missed.
- The survival instinct immediately senses the presence of a potential problem or danger. [5]
- I remember an overheating problem with the engine of my first car that occurred in August 1970.

The painful burn due to the typical youthful impatience that made me open the radiator cap too soon, made the following consideration materialize in my mind: "We're crazy, we go around with a fireplace lit even in summer."

The importance of this intuition bore fruit 52 years later, based on the belief that Carbon Dioxide could NOT be the main cause of Global Warming.

I remind you that the so-called scientific method is based on the observation of events and their interpretation through a process based on mathematical laws.

The results must be in harmony with the hypotheses. History is full of events caused by errors in judgment and/or calculation that resulted in conflict or failure. [2] Let's take one example above all. The failure of the Mars Climate Orbiter mission which occurred in 1999, the cause of which was identified and ascertained in the use of the wrong unit of measurement, after a subsequent investigation of the event, which placed the emphasis on having "given assumed that everything was OK."

I remember James Lovelock in an interview, wondering: "What we have forgotten to pack in our suitcase before leaving on a trip?". An intuition of the presence of a "twilight

zone", common to all living beings, experienced continuously in existence.

➤ *What if it Were really like this?*

Furthermore, in this case we are talking about a spaceship made up of the planet we live on, and the totality of Life present on it. Given the enormous computing potential we have at our disposal, the so-called Artificial Intelligence, why don't we carry out a detailed check to avoid repeating the mistake of having "taken for granted that everything was in order"?

There may not be the possibility of a subsequent check. Quick but without rushing. "Harmony": dynamic balance of opposites. Applied to the problem of Earth Warming, it means analyzing the extreme conditions on the planet: empirical observations indicate that Life evolved in an environment between two extremes, Warming and Ice Ages.

Time interval these processes occurred is in the order of millions of years. Even smaller intervals, thousands of years, represent something that escapes our sensitivity: perception concerns our single existence, a few dozen years. Even talking about three centuries ago makes us think of a remote past, beyond our control. But the imprint of our ancestors determined our present, and our imprint will influence our successors.

In just over three centuries, we have transformed into heat a quantity of solar energy accumulated over millions of years by both terrestrial and marine ecosystems. "Nothing is created, nothing is destroyed, everything is transformed", summed up Antoine-Laurent de Lavoisier.

In our case, starting from 1712, the amount of heat produced has transformed and will continue to transform the ice present on the planet we live on. In common reasoning, the concepts of renewable energies and non-renewable energies were introduced.

We will have to deepen our Meditation and Awareness on the Primary Renewable Energy at the basis of all vital processes, constituted by the renewable mass of ice that manages to keep the temperature of the Oceans stable, i.e. the one present until 1712. The upper maximum limit should be represented from the one present until 1910. This Harmony contains the balance between the two opposites: the solid state and the liquid state of water.

- Solid State = Stored Energy.
- Liquid State = Energy Used.
- Static = Mobility.

It all depends on us and the choices we make. Food for thought: "and why does the Universe bother to exist, if Life is the expectation of death?" The tendency to maintain Life, starting from each individual Unit, we can believe is the fundamental motive behind all growth and development processes.

We have attributed to this process multiple qualities and attributes. I am thinking for example of the survival instinct, of chemical reactions, of philosophical and scientific evolution. All reflections, knowledge, intuitions converge in a single point of aggregation, the achievement of balance and its maintenance. I still remember, during the state exam to obtain my diploma, the question an examiner asked me: "how is heat transmitted?"

My mind went into turmoil, the whole general review of the concepts and calculation formulas of the Hydraulic and Thermal Machines course was distant, suspended in mid-air in a balloon. Little by little, I managed to "discover" and reconstruct the answer: heat can be transmitted by contact, convection and radiation. Six years of evening studies, after working eight hours a day condensed into three words.

Contact, the sensory perception we have when, for example, we touch a child's forehead to understand if he has a fever. Convection, the motions of the atmosphere and the ocean currents that transport this energy and distribute it to the elements. Radiation, the Energy coming from the Sun, in the form of Light, which can move and transfer in the Universe even in Empty Space.

Wonderful, we would have to Meditate for Eternity. In this context each of us has been catapulted and finds ourselves trying to survive, building rules of life suitable for this purpose. We don't know how many civilizations have existed on Earth, let alone those that may have developed in the entire Universe.

One fact should make us reflect: what could be the reasons why they became extinct? A certain reason is instinctively perceptible: in some way Universal Laws that regulate the Balance of Life itself have been violated.

Let's limit ourselves to individual situations that can be extended to every creature: when we get sick, a common fact is the rise in body temperature. A few degrees Centigrade are enough to compromise our health and sometimes Life itself.

This is what we are experiencing nowadays. As in any disease, the correct diagnosis is the basis of the chances of success of the treatments adopted, the monitoring of the evolution of situations to restore the balance is also the basis of success or failure.

If the cause of the problem lies in the imbalance between Energy produced and Energy dissipated, we should work mainly on how to dissipate into Space this Energy already produced. [6]

Naturally, we should work on reducing waste, and taking advantage of the experiences acquired over recent history, avoid destroying in order to rebuild, otherwise the heating problem will cyclically repeat itself.

Wars will only create further and useless problems, leaving their causes unchanged. If in addition we work on reducing incoming Solar Energy, which is not the cause of

the problem, we will waste time and energy unnecessarily. On the one hand it is argued that 2 planets like Earth are needed for 8G of population, and on the other hand to reduce the incoming Solar Energy...?

How much overall energy is needed to build an object or a robot, compared to the average 2500kcal needed to keep a human being alive to his full potential and in good health? And the added value deriving from a smile that makes Empathy contagious?

It depends on our choices. Once the primary origin of a problem has been identified, we must necessarily reconsider our actions and behaviors to check whether they are in harmony with the solution to the problem itself.

This necessarily requires a time of reflection, a sort of sabbatical period, to allow the changes that will take place within each of us to consolidate, due to a global reconfiguration of our way of feeling and perceiving.

Every culture will have to discover in a new light, the most suitable attitudes for achieving a state of balance with the attitudes of the past, continuing in the weaving of a renewed collective sensitivity, not yet written in the history books, because it concerns the construction of a future which can currently only be imagined.

We have managed to give a meaning to Energy measurable value corresponding to approximately 1000W per second for each square meter of surface, measured on a sunny, cloud-free day, located at the point on Earth closest to the Sun, and at sea level. [7]

Albert Einstein gave us a still valid interpretation of the connection between Energy, Mass and Light, represented in the elegant and fascinating general equation: $E = m \times C^2$. Starting from these foundations, the hope is born that a solution to the problem of Global Warming can be found.

During the opening assembly of a school year at Bocconi University, Sergio Marchionne concluded his speech with the following reflection: "It is said that a person can survive 4 weeks without eating, 4 days without drinking, 4 minutes without breathing, but he cannot live 4 seconds without Hope.

"Within the limits, outside the rules", the life lesson of a dear friend. "You cannot solve problems with the same mentality with which they were created," a thought of wisdom attributed to Albert Einstein. "We are, all of us, the rightful heirs of the sum total of human wisdom," an aphorism by Raimon Panikkar.

The hypothesized solution [7], starting from Spirituality as a fundamental prerequisite, provides a feasible non-static solution, equipped with its own and self-sufficient dynamics, combining the Scientific aspect within it as a catalyst for the entire process of terrestrial thermoregulation, a fundamental prerequisite for the development of Life. It brings all the values of Human Culture attributed so far, Knowledge,

Economy, Lifestyle, Progress, to their essence: they represent a means, not the end.

This perspective places us at the center of the process as active and driving elements of the entire process, without exception. Why must we delude ourselves that the problem lies in the search for a new Habitable Planet, when the predatory mentality, which represents our Achilles' heel, will inexorably bring us back to this critical situation wherever we find ourselves?

Instead, we must change, starting from ourselves, what needs to be changed. Suppose for a moment that we have found a potentially habitable planet, Earth, and that we have all managed to arrive safely, how do we continue to live?

A dear friend once expressed to me a concept derived from economics that shocked me: you have to be able to live with the interest on your debts. I thought that without preservation of capital, it is not possible to have an interest, but only loss of value.

Over the course of individual history, a few decades, this process has occurred and continues to occur. The value attributed to the currency has changed substantially: I remember monthly salaries of around 100 thousand lire, which allowed not only survival but also progress, reconstruction, the level of study, etc. etc.

Today the Euro equivalent of this sum, just over 50 Euros, allows food survival for just a few days, and the other remaining monthly days? And all the rest? An Indian Chief, speaking of the arrival of the new peoples and their lifestyles, expressed himself with the following words: "when the last tree is cut down, the last fish caught, the last bison killed, you will realize that the money cannot be eaten."

➤ *What is the Capital? The Preservation of Nature.*

What are the interests? Its products, whose origin depends on the conversion of Solar Energy into Food. What does this conversion depend on? From the presence of a fundamental capital, Solar Light.

➤ *Again: What Are the Interests?*

Food that can be produced cyclically by Nature's Ecosystems, only in the presence of a Thermodynamic Equilibrium which represents the catalyst of the entire vital process.

➤ *How to Preserve and Increase these Interests?*

By increasing capital, not reducing it through deforestation, wars, waste, abuse, predatory Human Greed. Even carnivores, once their hunger is satisfied, do not destroy the flock that provides nourishment: we have a lot to learn from so-called instinctive behaviors.

➤ *What Allowed, from 1712 To 1910, a Stable Balance in Average Seasonal Temperatures?*

The presence of a sufficient quantity of ice, the one referred to in 1712, which limited the annual temperature range only in seasonal periods.

➤ *How is it Possible to Keep a Mass of ice Constant?*

By reducing the overall production of Heat, compensating that which is necessary and indispensable for survival, with the equivalent Solar Energy reflected in Space: from now on.

➤ *How is it Possible to Report the Mass of ice Present in a Period Identified by James Lovelock in the Year 1712?*

With the addition of an artificial Albedo surface, which slowly but with a constant measurable and controllable trend, recovers the thermal imbalance introduced by ourselves.

➤ *Can we do it with Robots and Artificial Intelligence?*

I believe it is essential to recognize the human being as a complete and extremely efficient Entity, capable of analyze, understanding and finding solutions, using 2500k calories a day, that until proven otherwise has been capable of thinking, building, controlling both robots and artificial intelligence itself: can we do the same with equal or even less Total Energy Consumption?

At the moment I do not think so. The reconstitution of the relationship between the Autotrophic Species, which are the basis of the Possibility of Evolution of Heterotrophic Species, to which we belong to, became the starting point to be considered. Every action or activity since our birth, has an impact on the environment in which we live.

The association between the Physical/Scientific connections and the Emotional/Spiritual relationship that occur for example in the Orbital Stations, represent the more general processes that occur on our Planet, considering it as a larger Orbital Station, in which more than 8G of people coexist. Every action or activity, from survival, scientific research, meditation, rest, must necessarily be in Dynamic Balance to reach a higher level represented by Harmony.

Given that every Vital Process transforms Energy into Heat, we have to solve the problem of its dissipation into Empty Space: the key of success or failure over time of Life Evolution. We have to be aware that everything is connected, and that Mistakes represent the Intellectual spring that allow everyone without exception, to make Experience and transform it into Basic Instinct.

We have understood through Scientific Research that a very small genetic variation can create enormous problems at a level of more complex Units, but we still have not given importance to the Thousandths of Degrees Centigrade variation and the consequences associated with them. I believe that a phase of self-critical rethinking is essential for Survival as a Species, within the broader Global Evolution.

The whole Human activities must take into consideration the Total Energy Content of any kind of Product, and the way of Dispersing the Equivalent Heat Produced for this purpose into Empty Space. The Love that we can transmit is the only message that distinguishes us and that makes Life as a Whole "Worth Living". At the end of Life, we will be judged on Love"

ACKNOWLEDGEMENT

All this work would not have been possible without the contribution of many people: first of all I would like to thank the IJISRT Editors, without their requests of Explanation and support, I would never be able to reach this point. Thanks to Violetta Giada, Claudia, for helping me in the management of the first publication document, and Lorenzo for the presentation of this last one.

I want to mention the main friends that during my Life helped me to grow with their inspirations and empathy: Fiorenza, Giorgio, Pierino, Natale, Filippo, Vito, Bruno, Alfredo, Francesco, Paolo, Werner, Zanna, the teachers I had the pleasure to meet during my Life, and the Authors I have mentioned in the References.

A particular Thanks to "The Laszlo Institute" for their activity to connect different people and spreading new points of view, and "The Fuji Declaration" that fixed the Essential Convergence Points that make Life worth Living. Final Thanks to my family for their Suggestions, Patience, Wisdom and Love.

REFERENCES

- [1]. IJISRT21DEC222, (2021) -<https://ijisrt.com/terrestrial-overheating-analysis>
<https://doi.org/10.5281/zenodo.6386549>
- [2]. IJISRT22FEB141, (2022) -<https://ijisrt.com/analysis-of-relations-between-subjects-involved-and-their-numerical-representation>
<https://doi.org/10.5281/zenodo.6323191>
- [3]. IJISRT22JUN1246, (2022) -<https://ijisrt.com/global-warming-carbon-footprint-and-footprint-of-heat>
<https://doi.org/10.5281/zenodo.6791994>
- [4]. IJISRT22SEP618, (2022) -<https://ijisrt.com/global-warming-analysis-upgrading-cross-check-and-opened-questions>
<https://doi.org/10.5281/zenodo.7160671>
- [5]. IJISRT22SEP969, (2022) -<https://ijisrt.com/intuitions-and-serendipity-the-case>
<https://doi.org/10.5281/zenodo.7143314>
- [6]. IJISRT22DEC1644, (2022) -<https://ijisrt.com/global-warming-operating-hypothesis-for-a-trend-reversal>
<https://doi.org/10.5281/zenodo.7525283>
- [7]. IJISRT23OCT208, (2023) -<https://ijisrt.com/global-warming-reduction-insight-into-basic-concepts-and-preliminary-assessments>
<https://doi.org/10.5281/zenodo.10003065>