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This paper argues that on these grounds, the considering issue should be a global issue. Local overspent fail to implement this technology effectively. The subsidiaries test should be passed when it relates to the considering issue. With rising CO levels, changing weather patterns and an ever increasing intensity of weather events, governments and environmental groups are trying to address the global warming issue. There are many theories on how to deal with climate change; from a reduction in pollution to carbon capture.

Considering is a relatively new idea in the field of science which " describes this array of technologies that aim, through large-scale and deliberate edification of the Earth's energy balance, to reduce temperatures and counteract anthropogenic climate change. " (Broomcorn et all. , 2011: 1)

The vast majority Of technology is nascent and at a theoretical Stage but it has the potential to affect populations and climate on a global scale.

(Broomcorn et all. , 201 1: 1) Any issue that has the ability to instigate social, environmental and political change on a global basis should consequently pass a subsidiaries test.

Subsidiaries as defined by the Oxford English dictionary states that " specifically the principle that central authority should have a subsidiary unction, performing only those tasks which cannot be performed effectively at a more immediate or local level. " (Peterson, no year: 1 1 7) This paper will try to show that considering is an issue that is worthy of the global agenda based on world view implications, social justice, ethics, as well as the science that relates to the issue. Considering: What is it?

As previously stated, considering is the term that encompasses all technologies that try to modify the natural balance of the environment in order to combat man made environmental changes. Normally, considering can be classified in two different groups: Solar radiation management (SRAM): which include any technology which tries to increase the reflections of our atmosphere or ground. Carbon dioxide removal (CDR): technologies which try to remove or capture CO from the atmosphere. Under the Solar radiation management method, a multitude of technologies exist.

The first technology option is solar sunshades. This means sending mirrors into space to reflect the sunlight back towards the sun. Another method would be to seed clouds worldwide with salt water in order to make them lighter and thicker so that sunlight would reflect. Furthermore, releasing ions of aerosols into the atmosphere would also reduce the solar radiation coming in. Other options include modifications done on land. For example, desert reflectors can reflect sunlight back into space if placed appropriately.

(Broomcorn et al. 2011: 7) Carbon dioxide removal is the other set of technologies currently available. CDR is composed of such technologies as Bio-charring, forestation and reforestation, ocean nutrient and carbonate addition as well as enhanced down welling. (Broomcorn et al. , 2011: 7) All of these technologies deal with taking out carbon dioxide from the atmosphere ND are generally considered to require a longer duration for temperature modification. Environmental Issues & Science Considering is seen by many scientists currently as a last case scenario solution.

The term was first coined by Cesar Marietta in the early 1980's and has grown in interest and use since. (Schneider 1996: 5) The reason why considering <https://assignbuster.com/geoengineering-paper/>

sits at the top of the scientific as well as political agenda today is because of worsening environmental conditions. To understand why considering is seen as a solution for the environmental problem, a more detailed look into the root problem of environmental change is needed. Firstly, of " all the environmental issues that have emerged in the past few decade, global climate change is the most serious, and the most difficult to manage. (Desert 2005: 2) The reason for this is because a lot of the factors that are linked to societal progress and development are also contributors to the worsening climate conditions. According to the authors of The science and politics of global climate change, human exploration and exploitation activities have drastically increased the concentration and presence of greenhouse gases in the atmosphere during the last two recorded centuries. The magnitude of the change is distinctly visible when analyzing CO concentration in the atmosphere.

With modern methods of analysis, scientists are able to estimate that over the past 10, 000 years, the concentration has varied between 260 to 280 pump, while it currently rests at around 385 pump. (Desert 2005: 20) With such drastic changes the author Of a food shortages article predicts that, " our continuing failure to deal with the environmental declines that are undermining the world food economy-? most important, falling water tables, eroding soils and rising temperatures-? forces me to conclude that such a elapse is possible. (Brown 2009: 50) Jarred Diamond also elaborates on a multitude of factors in his book about why he believes that manmade factors are adversely affecting the environment and will cause societies to collapse. (Diamond 2005: Chip 1 6) It is this sort of discussions that recently brought

the term considering to the debate table again. According to Schneider H. Steven, it was Crescent with the publishing of " Climate Change" in 2006 that reignited the debate about the use of considering. Schneider 1996: 9)

According to Crueler, considering might be the last remaining solution for ambition climate change. It is understandable why the scientific ramifications of considering seem drastic and need to be on a global agenda. A failure to correctly calculate how much change should be done through SRAM and CDR methods would possibly change the face of the planet with desertification and other changes to livable habitats. The gaps that exist in our knowledge about the state of the ocean, the chromospheres and even the clouds and aerosols of the atmosphere make prediction unreal.

The response of the biosphere to climate and compositional change is even less well understood; most Of all, we are anorak about the Earth as a self-regulating system and only just beginning to recognize that many separate but connected subsystems exist that can exert positive and negative feedback on a global scale. (Lovelace 2007: 85) With such a massive ability to change the way we live, do business and interact with our surroundings, considering should be placed on the global political agenda because a change done through considering affects the whole world.

Schneider argues that " while such scale interventions may be risky, the time may well come when they are accepted as less risky than doing nothing".

Schneider 1996: XV) If that time ever arrives, it is important to anonymously accept a considering solution because if only one government or organization acts as a free agent, the whole world is bound to suffer without an input into the solution. Human Impacts The reason why considering is

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such an important factor when it comes to human impacts is because of the scale of change that can be achieved with this technology.

The long term effects and possible consequences of considering are only estimates currently, therefore human impacts could potentially be large both in a positive as well as negative matter. This is a reason to consider placing the issue on a global agenda because large human impacts should be dealt with regardless of national borders. On the positive side, if considering is successful, a CINE report predicts that " over the next 20 years we would have 'immediate and multiple' benefits, including temperatures between 0.2°C and 0.4°C lower than they would otherwise be by 2050 and the saving of between 0.2 million and 4 million lives with improved air quality. " (The Economist, Feb. 2011: 1) This means that if for no other reason, considering should be a global issue because air and wind have no borders and millions of lives are at stake. Something can be done and without a multilateral agreement as well as international cooperation nothing can be achieved successfully. On the other hand, a lot of things can go wrong with considering. A US Congressional Research report predicts that there could be a SRAM technique failure.

If somehow the system breaks down, the planet could see fast changes affecting humans worldwide negatively. Potential human impact of SRAM techniques may change weather patterns and lead to desertification and changing ecosystems. (Broomcorn et al. , 2011: 4, 15-16) Ozone depletion is also possible as well as the extension of the lifetime of non-CO₂ gases in the atmosphere. The congressional research report also predicts general risk factors for

considering which would also eventually affect humans. Firstly, they question the controllability of considering.

Once considering is started, the report questions the reversibility of the progress. Furthermore, encapsulation of the technology is highly unlikely once deployed into the atmosphere. Finally, the role that private corporations might play into considering could also negatively affect humans because morality only makes sense for corporations as long as it is profitable. Overall, without the proper global systems in place, local governments could not even safely begin to implement considering. Non necessary risks would exist because of the lack of penalties available on the international level of government.

It is to be noted that the congressional report which is addressed to the congressmen/ women of the LISA says that " the consequences of considering could affect people and communities across the world. "

(Broomcorn et al. , 201 1 : 6) The global agenda is the only place to have the considering debate take place. On a regional scale, a global implementation strategy would fail and hence would place the lives of many people affected by global climate change into danger. Ethical and Justice Issues Considering needs to be treated like a global issue because it affects many people worldwide from all sorts of economic backgrounds.

There is a moral issue when considering who gets to influence global climate change. Ethics needs to play a role into this issue and because of the international aspect it would fail if implemented only on a national level. According to author Jeff Goodly, " the moral and ethical taboos regarding

considering me to be fading fast. " (Goodly 2010: 223) Notice that the author states that they are fading but not disappearing from importance. People are getting used to the idea but not necessarily dealing with the moral implications of using considering.

If mankind fails to meet the ethical challenge posed by considering, the gap between the haves and have onto will expand to never before seen dimensions. A principle which further places considering on the global agenda is the polluter pays principle (APP). This principle states that there should be no public subordination of environmental repair. (Elliott 2004: 141-155) With engineering APP would play an important role. Imagine a small country which loses a lot of farmland to desertification. It would be forced to us besides the reparations of the land because otherwise the citizens of the country might be tempted to migrate.

If there is no global pact for considering, this would be a case where each country would act in its own interest regardless of the ethics of APP. Governments would be forced to subsidize environmental repair. Therefore, considering should be only thought of on a global agenda. Another ethics principle which questions the morality of doing anything engineering related on a regional scale or even an international scale is the precautionary principle. " The precautionary principle is, in effect a principle designed to manage or prevent harm. (Elliott 2004: 144) This principle questions the morality of doing anything like considering before the full consequences are known. Furthermore, another ethical issue of considering which makes this topic worthy of the global agenda is intergenerational equity. This principle states that, " future generations have a right to inherit a planetary

environment in at least as good a condition as previous generations have enjoyed. " (Elliott 2004: 145) With the possible side effects of failing to implement considering effectively on a global scale, some nations might have worse conditions than before the considering strategy.

With that in mind, it would be clear that future generations in such nations would fail to have the same environmental situation as their predecessors. Hence, it would be highly advantageous to have considering placed on the global agenda because it might initiate dialogue between affected nations and help them set a plan of action. If considering is on the global agenda, poor nations old be able to engage in a dialogue with the nations that can afford and have the technological know Of implementing considering.

Small nations would have a voice on the global agenda. If considering remains on a local level, the above ethical principles will most likely be broken. Author James Lovelace mentions that if we fail to meet the ethical dilemma posed by considering, we will not only fail ourselves but also the planet. Lovelace refers to mankind as a sort of a nervous system for the earth and we would lose as much as the planet would lose if considering were to go wrong. Lovelace 2007: 91) A global monitoring system needs to be implemented and the subsidiaries test does need to pass.

Considering is too global to deal with it effectively through individual national government policy. Conclusion In summary it is clearly visible that considering could have a vast impact on human lives. Through SRAM and CDR considering can change the way the planet looks. As discussed above, any issue that can instigate such drastic change should be discussed on a

global level because national levels would fail to implement considering technologies effectively. They would fail based on scientific reasons and have human impacts as well as low ethical standards all because there would be no global discussion.

Such big issues need to have a democratic process and have international committees debate the issues involved extensively. There needs to be international consensus and the jurisdiction of an international body needs to extend to all countries of the world. If any one country is not influenced by such an organization, the whole effort is wasted because that country can do considering on its own affecting the rest of the nations. One thing is clear Hough. Something has to change in the way we manage our planet and our ecosystems.