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Limits on Sustainability at the Crossroads '20

Christine VOLKMANN¹, Ileana GAVRILESCU^{2*}

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Abstract

By this statistical reference of 2020, several sustainability programs, which have been ratified and launched worldwide at UN or EU summits and other platforms, have not achieved their objectives or achieved them only in part. Two important crises – the financial one from 2008-2010 – and the pandemic which appeared at the beginning of 2020, add to some barriers more or less inherent in the planned and desired development of sustainable development programs. While some structural limitations - for example, on non-reduction of greenhouse gases to the desired level – have been researched, debated and combated practically well enough, others – such as, for example, non-eradication poverty and the non-qualitative rise of the educational level, did not enjoy the same attention or effective practical amendments. But the most neglected limits were those of a superstructural nature – such as, for example, those concerning human behaviour. The lack of an integrative and interconditional vision through which all the dynamic components of the sustainable approach are to be approached unitarily, simultaneously and interdependently, determined us to reconsider in part the sustainability paradigm, proposing here a new approach, based on a three-dimensional tool and, hopefully,, more operational and more suggestive.

Keywords: sustainability, sustainable development, limits of sustainability, sustainability crises.

JEL Classification: Q01, Q56, Q54, H12

Acronyms:

SD – Sustainable Development

UNFCCC – United Nations Framework Convention on Climate Change

WCED – World Commission on Environment and Development

WSSD – World Summit on Sustainable Development, Johannesburg, South Africa, 2002

UNCED – United Nations Conference on Environment and Development, Rio de Janeiro, 1992

UN – United Nations

EU – European Union

SSP – Super Sustainability Program

GES – Greenhouse Gas

¹ University of Wuppertal, Germany, volkmann@wiwi.uni-wuppertal.de.

² Innovation laboratory at the University of Wuppertal, Germany, gavrilescu@wiwi.uni-wuppertal.de.

* Corresponding author.

1. Introduction

The sustainable approach, designed by scientists to help the world move from a civilization of subsistence surpluses to one with a harmonious consumption balanced with the vitality of the natural environment, is based on so many programs and projects that their correlation and congruence have proved very difficult.

The need to interconnect and intercondition superstructural factors with structural ones, as well as the correlation of all of them with other essential components of the sustainable approach, inspired the authors of this material, its vision and concept, "Super Sustainability Program" (SSP). It covers virtually the entire sustainable approach, containing all programs and projects, including all specific and characteristic issues. And beyond the content of the idea, the authors imagined for SSP and the configuration of a working tool suitable for connecting any problem with the rest of the system.

In the modest vision of the authors, SSP can also benefit from a linguistic super-valence: it gives the sustainable approach, (in the most formidable way) a psychology of ample quantity and a superior quality, suggests the passage of the sustainable approach in a new historical stage and finally, one can enjoy an increased sympathy among the new generations - more inclined towards a "sensational" terminology.

2. Literature Review and Problematization

In the almost thirty years of substantiation and sustainable practice, a whole series of punctual criticisms have been elaborated, respectively, for many specific and characteristic coordinates of sustainability. Still, as the authors of this study appreciate, an integrative vision was approached too rarely.

The number of limits of the sustainability super program is much higher than the one processed here. This aspect refers to the idea of a much broader and more profound study. Until then, the authors of this research aim to offer a brief introduction to the problem, as an alarm signal, with what was revealed to them more strongly from the related documentation.

1) The first limit of the sustainability super program on which the analytical collimator of the present study will be set is the exaggeration of the trust of most people in some of the components of the sustainability super program alone, obviously to the detriment of others. As a result, there has always been a concentration of confidence in, for example, the chances of science and technology to solve the fastest and most efficient ecological problem of depollution of the GES (greenhouse gas) atmosphere - as the most significant reduction in sustainability.

However, their meanings, thus designed with a constructive character, have often been deviated and speculated in a completely different direction from the projected one.

It should also be noted that the false idea of excessive and / or almost exclusive trust in the fields of "science and technology" - obviously while minimizing the importance of others -, was credited as such by the Johannesburg World Summit

(Sustainable Development Implementation Plan (WSSD, 2002), which set out how to implement Agenda 21 (Rio). In a scientific article published 15 years ago, the authors warned about the exaggeration mentioned above, giving as examples some paragraphs of the summit document - 97, 106 and 108 (Nath and Kazashka-Hristozova, 2005).

The final documents of the South African summit "encouraged", among others, the most developed countries to build increased capacity in science and technology and to transfer green technologies to developing and transition countries. Thus, the problem of promoting science and technology from the forum of the highest form of sustainability was presented both by the (intrinsic) virtues of science and technology and by the value of their export to less developed economies. It was just a matter of subjective interpretation for economically strong countries because, after all, no matter how non-ecological (read "polluting") the technologies they relocated from their territories to a world far behind were, they were received with open arms.

At the same time, as things are interconnected in the sustainable system, the excessive focus of attention and action on the science and technology components has widowed, among other things, the role of sustainable education - especially the younger generations which, for decades to come, could have meant, without a doubt, the most determining factor of the sustainable offensive.

Other authors point to the existence of a current focus on the importance of production and consumption as factors conducive to sustainable development, which also means a wrong focus on only some of the directions of action of the sustainable offensive (Bell & Morse, 2003).

Unfortunately, the practice of about thirty years of the sustainable offensive has shown that science and technology alone are not able to bear the brunt of sustainable transition, and therefore to insist on overestimating them means nothing more than cultivating a false idea (Nath and Kazashka-Hristozova, 2005).

The problem with this limit is not the exaggeration of confidence in the success of some of the components of the sustainable super program itself, but the fact that this focus of all people's attention and efforts on only a small part of the sustainable whole has had multiple and severe repercussions over nearly three decades.

2) The second limitation of the sustainable programs developed so far results from those mentioned above. It consists in the naivety of many people to hope in (a kind of ...) miracle - as hypothetical potential elements of scenarios in which things are solved overnight. No one is saying that the world should not remain optimistic about the success of sustainability, but overconfidence in miracles can only be an unrealistic attitude. Seeing, for example, a miracle in reducing the world's ecological footprint for 2020 - as reported by the Global Footprint Network - is a misguided direction, especially when everyone already knows that this relatively "success" is actually due to the medical crisis triggered by the Sars-Cov-2 virus.

The author of a scientific article from 2018 states that miracles which are not purely scientific fall into pseudo-sciences (Afisi, 2018). He argues that miracles do not observe methodically and experimentally and do not commit to advance firm empirical evidence.

3) The problem of the limit of understanding the systemic character of the approach of sustainable development is correlated, in the most obvious way, with the limit of the exaggeration of the trust in some of the components of the programs and projects of the field alone. Sustainability, as a system, must be perceived and approached in a balanced, symbiotic and synergistic spirit, because there can be only one methodical principle in addressing any problem: the systemic approach (Capra, 2015).

And as most sustainability issues overlap with humanity's biggest problems (i.e. hunger, military conflicts, climate disasters, emigration, etc.), it becomes clear that the sustainability superprogram will resonate interactively with the societal system in times of crisis, such as the current health crisis generated by the Sars-Cov-2 virus, which "infected" all major societal components: social, economic, cultural, and educational. Immediately, almost the entire supersystem of sustainability interacted with the societal system and went into stand-by. Many sustainable programs and projects froze during the crisis, and some of them even collapsed, some no longer deemed being appropriate for the post-crisis period (Romanian Academy, 2020; Filho et al., 2020).

Speaking then, in the sense of the correct understanding of sustainability as a system, there is also the formula advanced by the Swedish ambassador to Bucharest - Mr. Stefan Löfven, during an interview on September 27, 2019: "The climate crisis is the crisis of humanity".

In the meantime, however, the world has come to understand more and more correctly that the effort must be constant and united from all major components of the sustainable development approach: from ecology - especially as safeguarding and rehabilitating the natural environment, from the economy - especially as management and equitable exploitation of natural resources but also as technological efficiency, and from the social point of view - especially as a rationalization of consumption, as scientific-intelligent management of activities of all kinds, as sustainable education, especially of the younger generations. The systemic approach is thus revealed as the only logical solution for action towards the concrete approach of sustainability. However, there are still many steps to be taken in this direction.

Capra (2015) also supports the idea that a systemic solution cannot solve any problem if it does not take into account the context of other related issues (Capra, 2015).

4) The fourth limitation consists in the loss of sight of man as a central goal of the sustainable approach. Many scientists, politicians, and businessmen approaching the issue of sustainability as an abstract concept, refer instead to some environmental elements (water, air, soil) or some economic aspects (energy consumption, pollution reduction, technological efficiency).

However, the idea of involving as many people as possible in the sustainability programs - although it has been incorporated since 1992 in Principle 10 of the Rio Declaration ("*Environmental issues are best addressed with the participation of all citizens involved person should have... [information] and the opportunity to participate in decision-making processes*"), was forgotten and decisions have since

been the sole prerogative of only a few scientists, technocrats, politicians, managers or business owners.

They have thus lost sight of the most potential proactive factor of sustainable action and at the same time, the most important recipient of sustainable action. Sustainability decision-makers need to understand and consider people's values and needs, rather than building ideas and norms from their own, often far too technical, perspectives (Kessler et al., 1992).

The fourth limitation is found as a concern in the attention of many authors. They point out, among other things, that the development of sustainability, both as a theory and as a practice, means nothing, for most researchers, in the absence of people (Gatto, 1995). Sustainability must be an idea that everyone can understand, something that everyone can connect to and express a personal opinion about, not just scientists and technicians (Bell and Morse, 2003). Some authors assure everyone that they have scientific evidence that public confidence in scientists, and even less so in politicians, is at a low level in much of the developed world (Pinfield, 1996; MacNaughton et al., 1995).

5) Correlated largely with the previously set limit, the issue of the hegemony of decision-making becomes here the fifth limit of the sustainability programs, carried out until 2020.

The practice of rehabilitation of the natural environment carried out so far demonstrates that the establishment of the norms in the matter by the representatives (politicians and ecologists), followed by the conformation of the masses, is not a fruitful one. The masses perceive ecological acts with a psychology similar to all administrative constraints that come "from above"; no one consults their opinions, no one respects their wishes; they are only asked to comply. Some authors point out, for example, how the lack of involvement of farmers in a participatory manner, from the design to the implementation phase of sustainability programs in the field, has led to the failure of negligently proposed programs from "above" (Wurzinger, Sölkner, Iniguez, 2003).

How much sustainability should be in a "top-down" process, led primarily by technical specialists, and how much should be in a "bottom-up", driven by dynamic public participation, is a matter existing all the time under debate. Simon Bell & Stephen Morse (2003) believe that the viable solution could be a compromise between the two directions. Although reconciling top-down and bottom-up visions can be problematic, it is a mandatory necessity because it depends on the level of trust between these different groups and, in addition, on the involvement of all people in a united effort (Crilly et al., 1999).

6) The sixth limitation of sustainable development programs and projects is the hyperconcentration of the factors involved (researchers, politicians, entrepreneurs, etc.) on the symptoms of sustainability, on treating serious problems after they begin to manifest, but not on etiology or prevention. This conventional approach cannot make significant progress on the sustainability superprogram (Nath & Kazashka-Hristozova, 2005).

7) The seventh limit concerns the anachronism of the laissez-faire economic model, characteristic of traditional capitalist liberalism, but which, through the free market mechanism of satisfying consumer demand and creating new needs, is no longer compatible with the desideratum of the sustainable approach. The economic model of "laissez-faire" does nothing but maintain a greedy and hedonistic lifestyle (Nath & Kazashka-Hristozova, 2005).

The limit of the economic model of the "laissez-faire" type (characteristic of traditional capitalist liberalism) has also been repeatedly recorded in the scientific literature. Researchers believe that a steady increase in the production and consumption of goods and services, which the dominant economic laissez-faire system demands for its proper functioning, is a very consistent barrier to achieving a modest degree of sustainable development (Nath, 2003). The most delicate part of the revolution of this free market mechanism is that it is difficult to imagine how more affluent people could, quite quickly, adopt a less energy-intensive lifestyle, and thus, more friendly with the natural environment (WCED, 1987).

8) The insufficient non-education of the new generations in the most authentic sustainable spirit but also the non-education based on a strong general culture, can represent in the light of the '30s of this century, the most significant error of the sustainability of the first two decades. The problem has several causes, but the most cited is that the rich will simply not agree to adopt more restrictive lifestyles in terms of consumption.

Much of the scientific world now agrees that the level of education of the last two generations has become precarious, either because of the wrong direction it has experienced in recent decades or because of the shift of the traditional education system to attitudinal and behavioural reality of today's youth. The inadequacy of educational methods has led to the inability of the education system to cope with change and, accordingly, to limiting the access of new generations to the fund of fundamental and authentic knowledge. The lack of healthy culture of young people becomes alarming in the perspective that some of them will have to become the leaders of tomorrow's society, deciding for the fate of their peers and the planet as a complex ecosystem (Romanian Academy, 2020).

Therefore, the evolution of the traditional mentality must move, through education, from the brutal exploitation of the resources of the natural environment to the real respect and concern for it (Nath, 2003). Some authors build the limit of sustainable education on the unfortunate fact that engineering and related fields of education have ignored vital issues such as ecology and sustainability (Quinn, Gaughran, and Burke, 2009).

Other authors argue for the importance of education for the success of sustainability. One of them criticizes the little attention that has been paid to the field and the fact that there are serious problems related to the subsumption of the term "education for sustainability" (Jickling, 2003). Therefore, the hypothetical "new education" becomes, at some point, a very potential lever for the success of the radical transition of mentalities and behaviours.

The challenge of this paper is that precisely based on the appreciation of the two kinds of factors / limits / principles of the same value, to find an effective way to inextricably integrate them into a sustainable unitary system, coherent and authentically scientific - respectively to reduce arbitrariness, improvisation, fantasy and subjectivism which have continuously characterized the political decision and group interests until this crossroads year, 2020.

Refocusing attention on the importance of superstructural factors therefore implies a sharper and deeper focus of research on behavioural theories: Theory of Planned Behaviour - TPB and Rational Choice Theory - RCT.

It is easy to see from everyday life that most political leaders and business people are not able to focus on more than one problem, and when another problem overlaps, they move it elsewhere. This is the case with the obsessive increase in energy production on traditional agents, at the same time, ignoring the problems of climate stabilization, biodiversity, or public health. In other words, these "important" people are not usually able to interconnect the big problems. Maybe they are really well-intentioned, but they lack a tool with which they can become more clairvoyant.

3. Methodology

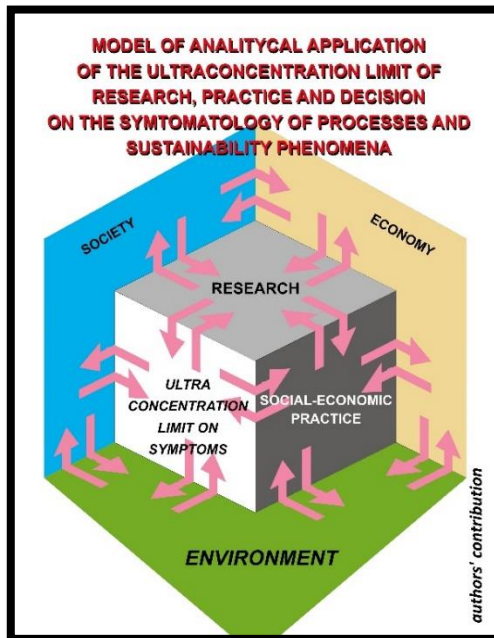
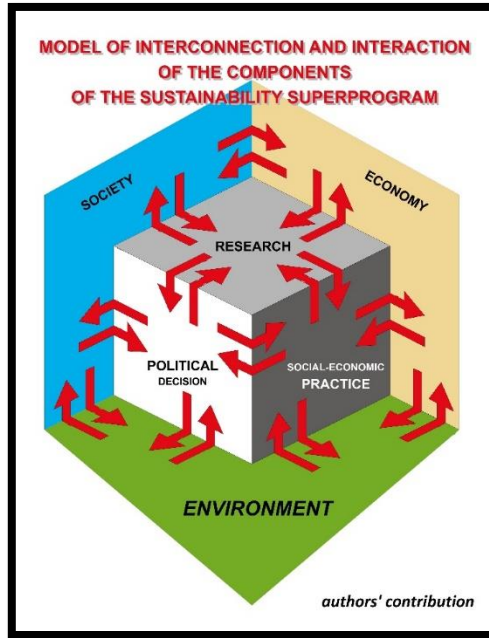
In the theory of sustainability, the idea that there are three major areas, interconnected and implicitly interactive, on the contribution of which sustainable success is based has been established from the beginning: the economic environment, the social environment and the natural environment. That is why these three major components have been called "pillars of sustainable development". However, these essential active components must be considered individually but also as a whole, both causes and effects, both purposes and conditions. However, the Venn diagram that represents this concept has a too static visual character.

At the same time, however, the analysis of the limits of the attitudinal-strategic components of sustainability reveals three new categories of sustainable levers - research, political decision and socio-economic practice - which, in turn, are interconnected with the major components present in the Venn Diagram.

Starting from the idea that the Venn representation - as a diagram with three fundamental components of the structure of sustainability (social, economic and natural environment), is a less suggestive formula for the complexity of the sustainable problem, this study proposes a three-dimensional and exciting representation, in response to the need for a new vision of overall systemic sustainability. From the point of view of technical schematics, the present model is noticeably close to Osterwalder's 2005 "Canvas" model.

In all honest modesty, SSP does not claim a traditional methodological invention, but claims the merit of a revolutionary methodical reconsideration both as a concept and as a spatial (or three-dimensional) visual, unitary-systemic representation of the whole sustainable issue - to be adoptable as a working tool.

Figure 1. The three-dimensional (axiological) model of the Super Sustainability Program - SSP, includes mainly six interconnected components (left) and Example of systematization of a sustainable development problem (right)



Any problem - be it a limit, a constructive approach or the promotion of an idea, can be substituted for the field in which the invoice or its fundamental nature is limited and can be analysed according to its immediate and generic connections. For example, if the idea of a sudden ban on diesel mobility - a hypothesis based, obviously, on the principle of reducing toxic gas emissions into the atmosphere - arises in the political environment, a (re) research is immediately required, according to the application of the SSP, to reveal both the potential socio-economic impact and the potential psychological, moral and ethical impacts on the population.

Obviously, the SSP model does not exhaustively solve any problem, just by inserting the reason in its related system. As in the applications on Canvas, a detail and, accordingly, a deepening of the issue proposed for analysis is needed. In the post-system analytical phases, the interconnections can be represented in two dimensions.

Figure 2. On a second level of analysis, solutions of principle are proposed for the fields of the central components, correlated with the problem considered initially

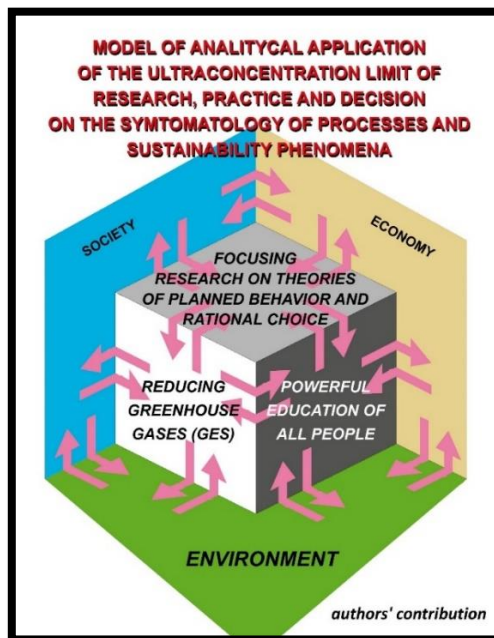
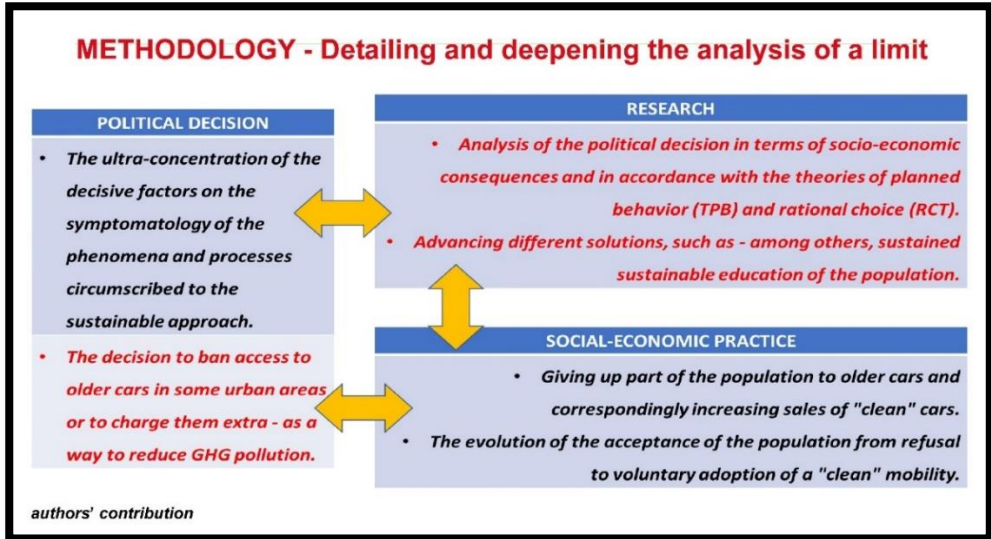


Table 1. After discerning the most appropriate systematization of a limit or any problem, a thorough analysis follows, often based on value data, which is essentially conceived to solve an efficiency equation. The circumstantial importance of the components (or “variables”) has an interpretable aspect, which means that it can be better defined, the better the analyser masters the issue of sustainability



4. Results and discussions

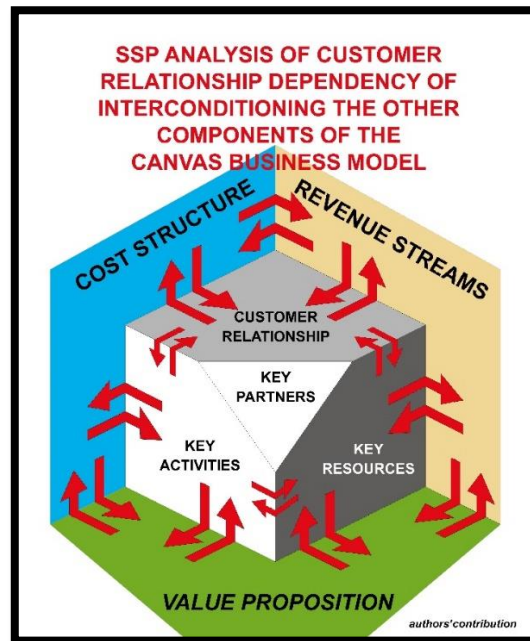
Therefore, the policy decision on the issue of reducing greenhouse gas emissions must ask Research for solutions based on attitudinal and behavioural theories, but also taking into account the foreseeable social and economic consequences.

If there is any difficulty with the SSP mechanism, it is not so much the scope and difficulty of analysing and synthesizing the problems as it is the discernment of the initial classification or assimilation of each problem in the related field. This discernment is a process similar to putting the unknown into the equation or putting any idea into context.

The operationalization of the method is based to a considerable extent on the procedural principle “input-output”, the approach of the problems through SSP supposing, often, the first step in initiating a research, up to value / mathematical levels. At the end of the analytical and synthetic operations, the economically decoded results must be interpreted in a moral or ethical key.

The comparison of SSPs with the Canvas Model is made only in the relativity of the differences between their fields of action: putting in the entrepreneurial or managerial equation some characteristic factors, often even valuable. The similarity of the two concepts consists in the interdependent character of the processed elements, but SSP reveals more suggestively the interdependence of the invoked components for any approached application.

Figure 3. An example of the assimilation of an entrepreneurial problem in SSP



More dynamic in its intimate physiology than a Venn Diagram and more convincing than a Canvas, the SSP visual model will also benefit from the hypothetical empathy of the younger generations, more inclined to superlative terminology.

5. Conclusions

The few limits and problems of a sustainable nature that the authors checked revealed a leitmotif or a common denominator: poor educational quality. At the empirical level, observation reappears obsessively or strikingly in many discourses. Against this truth, it is necessary for the Research to send the strongest and most immediate signals to the average political decision maker.

Ultimately, SSP is a plea for the further humanization of economics and the business world, as well as an impetus for research, to take a more nuanced approach to the importance for humanity of behavioural factors the neglect of which has generated unforgivable limits of sustainable action.

If the masses were no longer ignored, if people began to feel the direct participation in the great political-administrative decisions, a common mobilizing motivation would be generated, capable of true miracles - as it proved to be constructive in many periods and historical episodes. By its nature, education - in this case, sustainable education, is suitable for relatively medium and long-term programs. But for its success, an immediate and strong start, followed by continuous support is essential.

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