

## IS IT POSSIBLE?

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### ABSTRACT

The theme of the 57<sup>th</sup> Meeting of ISSS, systemic leverage points for emerging a Global Eco-Civilization, in view of curating the conditions for a thrivable planet, is a great challenge. As Alexander Laszlo said in the Presidential message of last year, according with Donella Meadows, the most powerful leverage point is at the level of paradigms. So, the task is exhibit current and emerging initiatives to do that. But, as the old adage, attributed to Bertrand Russell, says, “*things done by half are never done right*”. All who intend to work in this, and want their effort is rewarded with a long-standing transformative action term, and not content with achieve a fleeting feeling of doing the right thing, take this into account.

Is it possible to share, create, and innovated theories, methods, and practices that foster new paradigms in planetary thrivability and systemic conviviality? This paper reviews some issues and difficulties inherent in this subject. And, at least, offer to share an experience in Patagonia, to create a tool for decision-making from the ecological footprint of a little town.

Keywords: Global Eco Civilization, thrivable systems, ecological footprint

### INTRODUCTION

*“The crisis consists precisely in the fact that the old is dying and the new cannot be born; in this interregnum a great variety of morbid symptoms appear”*

Antonio Gramsci

The phrase of Gramsci (1935, 2010) attached it to the extraordinary situations in which the existent legal frame of social order loses its grip and can hold no longer, while a new frame, made to the measure of newly emerged conditions responsible for making the old frame useless, is still at the designing stage, has not yet been fully assembled, or is not strong enough to be put in its place.

Keith Tester (2009) suggests recognizing the present-day global condition as a case of interregnum. Times of interregnum are times of uncertainty, a time when rules no longer can rule and the ruled no longer wish ruled, institutional disparity, the endurability of the life on earth.

There are times of uncertainty, not risky times, because through the category of **risk** the assumption of controllability has increase in influence. To know the risk do not promise

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fool security from dangers, but it promised the ability to calculate their probability and, as a consequence, the possibility of calculate and applying the optimal distribution of resources, effective and useful. But this semantic assume, as an axiom, a structured and essentially rule-abiding environment. If assume a universe in which the probabilities of events are predetermined, it could be scrutinized, made known and accessed. But the prospects of predetermining the future are small and insignificant in comparison with the premonition of uncertainty of the modern consciousness. Today, the governments of the nations do not know how the markets react tomorrow, and they may expect contingencies, catastrophes, and other occasional facts. All of them will be unexpected, unpredictable and without calculus who will be victims or beneficiaries.

At the same time, a divorce between power and politics has resulted in the mismatch between institutions of power and those of politics. Power is no more in the level of nation-state, because the growing volume of power that matters<sup>1</sup> has turned global (corporations!), but politics has remained local.

A few centuries ago, at not place of earth the standard of living was no more than twice as high as in its poorest region. Today, the richest country, Qatar, boasts an income per head 428 times higher than the poorest, Zimbabwe. And, the prime victim of deepening inequality will be democracy. And the raising levels of richness translate at raising levels of consumption. Many believe that the road to heaven leads through the mall to shopping. And of course, the emptier is the planet, the only supplier of resources, like raw materials and energy, needed to refill those malls.

The scientists suppose that by the end of this century the humanity will face a hostile climate, less resources, destruction of habitats, decimation of species, food and water scarcities, mass migration and almost war (Jackson, 2009). Consumption “*is unsustainable ecologically, problematic socially, and unstable economically*”. But it is the king.

Pope Francis, in the World Environment Day promoted by the United Nations, past June 5<sup>th</sup>, said to the faithful gathered in St. Peter's Square, “*What does it mean to cultivate and care for the earth? Are we truly cultivating and caring for creation? Or are we exploiting and neglecting it?*” And explained “*Cultivating and caring (...) means responsibly making the world grow, transforming it so that it becomes a garden, a place that all can inhabit*”.

*“But cultivating and caring for doesn't just refer to our relationship with the environment, the relationship between humanity and creation. It also concern human relationships. ... We are living a moment of crisis. We see it in the environment but above all we see it in humanity. The human person is in danger. ... This is the urgency of human ecology! The danger is serious because the root of the problem is profound, not superficial. It isn't just a question of economics but of ethics and anthropology. ... The dynamics of an economy and finance that lack ethics are dominating.”*

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<sup>1</sup> The power that matters is the kind of power that has decisive influence on the settings of options open to people's choice.

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Speaking off the cuff, the pontiff added: *“What is in charge today isn't the human person but money. Money is in command. And God our Father has given us the task of caring for the earth not for the money, but for us: for men and women. This is our charge. Instead, men and women are sacrificed to the idols of profit and consumption. It is a 'culture of waste'”*“If, for example, on a winter's night,” he continued, “a person dies here in [nearby] Via Ottaviano, that's not news. If in so many parts of the world there are a child who have nothing to eat, that's not news. It seems normal. It must not be this way! And yet these things come to be normal ... On the other hand, a drop of ten points on the stock exchange constitutes a tragedy. If someone dies that isn't news but a ten point drop in the markets is a tragedy! Thus people are discarded, as if they were garbage.”

*“Human life, the person, is no longer felt to be the primary value to respect and care for ... This culture of waste has also made us insensitive to a squandering and wastefulness of food ... Consumerism has caused us to get used to the daily excess and waste of food, which we are no longer capable of seeing for its true worth, which goes well beyond mere economic parameters. Remember, however, that the food that is thrown away is as if we had stolen it from the table of the poor, from those who are hungry!”* (Pope Francis, 2013).

He invite to all of us to reflect on the problem of the lost and the waste of food. And with the same vigorously speech, we can reflect on the problem of the lost and waste of all the human production. Is it possible to change those paradigms?

In a deep article, Erwin Laszlo (2011) go on from the unusual context surrounded us, as species, to the big unpredictable and inevitable change. We converge quickly to an inflection point, no lineal evolutionary jump, or to the elimination of human beings; when the Earth Spatial Ship ended their fuel, and not come back.

To overcome this unprecedented challenge humanity must lie, as Einstein suggests, out of the box thinking that created the problem.

The first step will be demolish *“the golden calf”*, Laszlo explained, whose basis are composed of a Decalogue nonsense with which we fall by the hegemonic model, mechanistic and economic.

From there, Lazlo continued, it will be necessary to incorporate deep into our collective consciousness, the paradigmatic change that leads to the new science of holistic vision and the deep interconnectedness of all things, the pre-eminence of the wave and the ethereal over matter and the phenomenon universal consistency.

Ultimately, Laszlo concluded, only real and profound experience socially expressed that "all are one", will can save.

## IS IT POSSIBLE TO FIND THE LEVERAGE POINTS TO SOLVE THE SITUATION?

Donella Meadows (1999) explain that leverage points are places within a complex system where a small shift in one thing can produce big changes in everything. She explains that

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we must believe that there are leverage points, and need to know where they are and how to use them. So leverage points are points of power, and, sorry, are not intuitive; and, of course, no magic.

If those points are not intuitive, also they are not easy to identify. With tools of thinking systems it's possible to address this (Nguyen and Bosch, 2013), but is a hard work. Upon if the leverage points are founded, how to operate with?

Donella Meadows, in her paper, describes twelve places to intervene in a complex system, in increasing order of effectiveness:

1. Constants, parameters, numbers (such as subsidies, taxes, standards)
2. The sizes of buffers and other stabilizing stocks, relative to their flows
3. The structure of material stock and flows (such a transport networks, population age structures)
4. The lengths of delays, relative to the rate of system change
5. The strength of negative feedbacks loops, relative to the impacts they are trying to correct against
6. The gain around driving positive feedback loops
7. The structure of information flows (who does and does not have access to what kinds of information)
8. The rules of the system (such as incentives, punishments, constraints)
9. The power to add, change, evolve, or self-organize system structure
10. The goals of the system
11. The mind-set or paradigm out of which the system – its goals, structure, rules, delays, parameter – arises
12. The power to transcend paradigms

This list is tentative, and its order can be modified. And she says: “*The higher the leverage point, the more the system will resist change it – that’s why societies tend to rub out truly enlightened beings*”. So, this is a hard work, because in first place, it is necessary to know where the leverage points are, and in second, to define a strategic path of levels of difficulties and their respective loops of feedbacks. Is it possible in the way of a global-local eco civilization?

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### THE ETHICAL DILEMMA

A holistic (systemic) perspective is an ethical perspective. The systemic view help to understand how all human, biological and natural systems are interrelated and mutually dependent, so it is then easy to recognize the reciprocal bond between human rights and responsibilities, also to accept the right of every culture to exist. Of course, except violent culture. In a competitive world, as today, the actions of its various parts do not support the well-being of the whole.

Apparently, the nation-state system is not well designed to address with the global problems, and the multinational corporations operates politically at global level without either systems thinking or adequate global structures to rule their limits (Crouch, 2011). The entire system is the engine of production. Given the emergence of global corporations, a system that relies on government control of policy at nation-state levels is in the reality a laissez faire system at the international scale. This is unable to generate positive feedback systems at the global scale. If the people believe they exercise constraint by voting as costumers of corporations, don't understand the limitation of the customer's democracy. It is possible only in certain markets, not in all, and there are multiple ways to create segmentation markets where the corporation evade the bounds.

Is it possible to create a sustainable global system without more ethical and better global governance? But also, how can define global ethic? The challenge of define universal ethic is a very hard work, and maybe it is unattainable.

### SUSTAINABLE CONDITIONS

It will be impossible to design a sustainable system without developing constructive views, values and institutions. To change actual civilizations from violent to peaceful, fearful to trusting, defensive to open, competitive to cooperative, from scarcity to abundance, illness to wellness, it must transform not only our convictions, but also changes others their destructive, violent values and behaviours.

Is it possible to focusing exclusively on the local issues of management, once at a time? All things, actual and potential, are linked together by the world system. Probably, managing for the function of the entire system is the only way to manage for multiple issues simultaneously. As Tim Allen et al says, "*The future must be cast through prediction coming from the general constraints that apply in the whole ecosystem*" (2003). Manage issues separately can be expected to fail because of conflicting management actions, as occur in complicated and complex flat hierarchies.

The renewable crisis resides largely at the global level, and it to be crucial to achieve a context for management that sets long-term goals. Is it possible to expect management in such a setting to moderate short-term goals of production and consume?

### WHAT CAN BE DONE?

One of the most famous Margaret Mead's quote was: "*Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever*

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*has*". If this is true, then it must begin inroad the different approaches to do that. That is one of the themes of the 57<sup>th</sup> Meeting of ISSS. For example, the extraordinary experience of the tools to manage the Cat Ba Biosphere Reserve, developed by Bosch, Nguyen et al. And as many other systemic works around the world, because it's the beginning.

Janet McIntyre-Mills (2013), in a deep paper, aims to exploring the systemic intervention to promote the sustainability of biospheres, by a hybrid melting of laws and praxis to enable the transformation of designs for living to support it. The challenge is how to promote a widening circle of solidarity between different states and people. For that it is necessary the creation of new global narratives arising out of a cross-pollination of spiritual ideas. But to make that successful it requires getting government and people without "*crab mentality*". She promises to extend the argument in a follow-up paper.

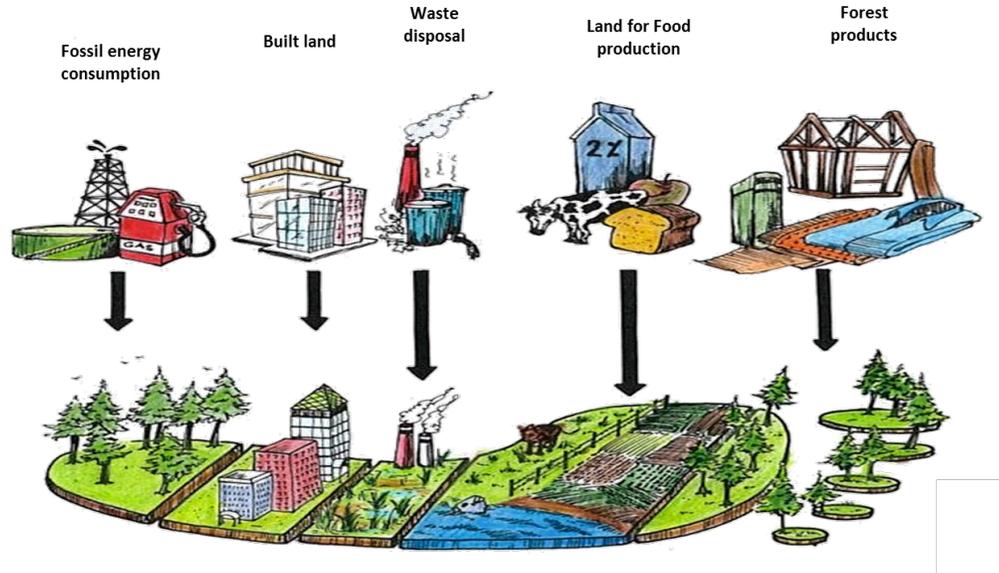
Without much ambition, presented below a project that is being developed to assist the government of a small town sustainable.

### **A CASE STUDY: THE ECOLOGICAL FOOTPRINT AT ESQUEL CITY IN PATAGONIA**

The ecological footprint is a tool for measuring and analysing human's demand on the biosphere. Is the amount of natural capital required to produce a natural annual income large enough to meet biological expenses –resource consumption plus waste output-. For example, the footprint of a land or city includes all the cropland, grazing land, forest, and fishing grounds required to produce the food, fiber and timber the land or the city consumes, to absorb the pollution it discharges and to provide space for its infrastructure (Taylor, 2008). It is expressed in hectares of productive land consumed or "appropriate" for any community.

In terms of sustainable local development, the ecological footprint is a useful model because it allows integrating indicators covering social, economic and environmental. Therefore, this proposal is to redesign the indicator, conceptually and methodologically, to use it as a tool to build and implement strategies for promoting sustainable development for communities of small and medium scale used responsibly socioeconomic environment they inhabit.

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**Figure 1.**

Since early 2011, Esquel Headquarters of the Faculties of Engineering and Economics, of the National University of Patagonia S.J.B., the Higher Institute of Technological Education of Chubut (Ceret) and the City of Esquel are working together to develop this tool and the first results are auspicious long.

The conceptual framework that expresses the power of this indicator to be used as a unique support for socio-economic development planning at the municipal level is:

- In Patagonia, small and medium communities have yet opportunities to manage and applied strategies for sustainable social and productive development
- The ecological footprint could be used as:
  - Management tool
  - Means of evaluation
  - Diagnostic tool
  - Promote of development ways
  - Involvement as a substratum
- The university must adapt its actions to the changes in the societies where it operates.

### **Ecological Footprint of Food**

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The first application was developed for calculating the Footprint of Food. Besides knowing the productive territory which "appropriates" the community to meet their consumption habits (food in this case) the tool provides a wide range of possibilities to meet the requirements of different areas of a municipality, for example:

- What is the composition of waste in different parts of the city?
- What are the characteristics of food consumption in neighborhoods or areas of the city?
- What activities family and community production of food can be addressed in the short and medium term?
- How many jobs can be created through a plan of food production in the urban space?
- What guidance should be given to local food production as domestic demand?
- What aspects need to be considered to meet nutritional needs in certain neighborhoods?
- What are the municipal territory biological productive areas with better conditions to develop different productions?
- What if ....? Setting prospective scenarios

In the case of Esquel, the calculation of food consumption food recital 46 of a total of 66 including the Food Consumption Survey was conducted to 467 families in all neighbourhoods of the city, yielded the result of 80,787.47 ha, equal to 2.77 ha by inhabitant.

The productive area is appropriate to meet consumption Esquel (partial) food of its inhabitants, of 80,787 hectares, is 2.9 times higher than the effective bio productive area available to the municipal territory, which is 27,840 hectares.

For these calculations, the project use a computer system specially designed to meet the Ecological Footprint of Communities of Small and Medium Scale Socioeconomic.

Additionally, the task is to calculate the Footprints of Housing, Transport of Goods, Services and surface for the deposition of waste, the redesign also brings about the methodology module programming specific computer.<sup>2</sup>

### **WHO BELIEVES THAT SOMETHING IS IMPOSSIBLE SHOULD NOT BOTHER ANYONE WHO IS DOING**

Instead of the questions about if it is possible, the author is optimistic. In a modern world of cyberspace is possible to create a system of fast communications between governs. But

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<sup>2</sup> The name of the research project is: Ecological Footprint as a tool for decision-making at a municipal level towards a sustainable development. Case study: The Ecological Footprint of Food at Esquel City in Province Chubut, Patagonia, Argentina. Faculty of Engineering and Faculty of Economic Sciences, National University of Patagonia S.J.B.

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is necessary to constraint both the logging operations and the corrupt parts of government, to act sustainable. It is necessary to empowering local people to will force better policy for the long term. Local people informed by global information systems as to their best interest will act appropriately locally, defying the corrupt part of their society. The people also need new “*narratives*” in the way Janet McIntyre-Mills describes, new ways to think about the world and the future, freedom to express and confront their different ideas about, and new indicators of social, economic and environmental issues, tools to transform the present, etcetera.

Who will be the guarantor of the information system? Maybe this will be the task of the system movement. This story will continue.

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