

## Global sustainability needs novice urbanites. Approaches from an educational experience towards collective action

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An increasingly globalized and urbanized world will need deep behavioral changes to both mitigate and to adapt to different global economic, social and environmental changes. We need to learn more about threats and risks to reduce vulnerabilities and to increase our capacities to adapt and to act collectively. It will be necessary to reduce our pressure on the environment if we are to sustainably live under uncertainty within a complex human-nature world. We present results from an educational experience aimed at fostering behavioral changes at the individual level and towards collective action through formal education at the National University of Rio Cuarto in Argentina. Possibilities for sustainable development increasingly rest on our capacity of “*reconnecting cities to the biosphere*” (Andersson et al, 2014; Folke et al 2011).

### Introduction

Despite quite strong short term local actions are required if we are to pursue sustainable and resilient cities, equally strong but long term deep individual and collective behavioural changes from our urbanites will be necessary as to avoid a tragedy of our global commons.

Globalization and urbanization are two similar processes in the sense that both contribute with unsustainable development by disconnecting people from the biosphere. By 2050, it is expected that between 65% and 75% of the world population will be living in cities, with more than 40 million

people moving to cities each year. That’s around 3.5 billion people now, rising to 6.5 billion by 2050; a huge and singular event in human history (Zenghelis and Stern, 2015). This means that for the sake of its own sustainability and in order to reduce negative global impacts, cities will have the challenge of educating urban citizenry towards both ends.

The 2030 Agenda for Sustainable Development includes as a way for “*transforming our world*” Goal 4 with which to ensure inclusive and equitable quality education. By 2030, it is expected that all learners acquire the knowledge and skills needed to promote sustainable development through a substantial increase in the supply of qualified teachers (UNDP, 2015). But also it is expected that education can accelerate progress towards the achievement of each of the proposed sustainable development goals for 2015 and beyond (UNESCO, 2014).

We will argue that cities have a crucial role to play with respect to education goals if we are to live/develop sustainably; that it is possible to develop the required capacities to acknowledge impacts urbanites cause over planetary resources; and, that it is necessary to bring the competences to cooperatively act towards a sustainable future (Didham and Ofei-Manu, 2014).

### The Proposal

Urbanites will further drive global consumption and production patterns therefore demand for all type of raw materials for food, shelter and energy provision coming from elsewhere around the world (UNESCO, 2016). “*The physical and mental distance*

*between urban consumers and the ecosystems supporting them mask the ecological implications of choices made”* (Rees and Wackernagel, 1996; Folke et al, 1997 cited in Andersson et al, 2014). Cities not only will have to sustainably develop themselves but also must take into account the economic, social and environmental impacts they represent for other spaces and the planet as a whole.

Given the importance the education system has towards a necessary cultural change, from early stages in human lives, we propose an initiative oriented to strengthen teacher training programs oriented to effectively achieve incorporation of environmental education (UNESCO, 2016; Bokova, 2014). *“Increasing people’s awareness of how their actions impact the biosphere is not just a matter of close proximity to green areas, stewardship is about getting involved, which in turn may be facilitated by institutional designs...”* (Andersson et al, 2014). In this sense formal education to which most urban individuals have access to constitutes a way to avoid rooted conditionings in relation to interactions and mutual influences between nature and society in all its dimensions. The intention of this proposal is to contribute to the development of formal educational mechanisms to train a new generation of active citizens able to collectively and cooperatively constitute themselves as agents for the necessary balance between society and nature (UNESCO, 2006).

### **The Project**

*“...When we understand how much we depend on nature then we will start this huge cultural change we need to be more sustainable...”* (Antonio Tironi Silva, Young Scientists Network Conference, Villa Vigoni, Italy, 2014; Video available at [www.icsu.org](http://www.icsu.org))

The PRODEC Project was aimed at introducing environmental issues within all discipline curricula at our University based on the premise that most of our students are those future professionals and educators that at different levels and within different spaces will have the opportunity and hard challenge to foster that huge cultural change we need to sustain life on Earth. The PRODEC Project

was an interdisciplinary research group from the social and natural sciences at Rio Cuarto National University in Argentina that have carried out a two-year Project. The Project started in 2013 with the integration of professors from different disciplines, within the social and natural sciences, interested in an interdisciplinary approach to global environmental changes and challenges through formal education. The Project has been associated to a request from the Humanities school at our University and nurtured from the demand of a Secondary school with a trajectory in “education for the environment”. To date, six workshops have taken place: two with undergraduate students from our University; two with students for primary education; and the other two, with students from first years of secondary school.

In all cases, each workshop was structured in three phases: a) an oral presentation accompanied by allusive photographs, pictures and diagrams to the presented global environmental threats and challenges; b) the development of competitive and cooperative games; and, c) a space for creativity from group productions (posters made by students) related to what has been experienced, followed by a fifteen minutes presentation by group. Each workshop started with an impersonal individual written inquiry about their expectations for the workshop and ended with another individual appreciation on what has been experienced, in a written form.

### **The results**

Main results from these participative dynamic experiences may be summarized as follows:

- a) All students show themselves **eager to learn** more about what is going on at Planetary scale concerning the relationship human-environment;
- b) There is a widespread **willingness** to reconnect to nature –i.e. through different activities within and outside the University; and,
- c) There is a kind of widespread **happiness** when discovering the power for problem solving through collective action and its capacity for harnessing differing strengths of individuals.

These experiences have allowed our working team to increase our expectations on introducing environmental issues within all discipline curricula at our University through this type of workshop activities.

The PRODEC Project has itself constituted as an interdisciplinary mechanism transformed into the cornerstone for training future educators based on the fact that it was possible to demonstrate it is possible to develop the required capacities to acknowledge impacts urbanites cause all over the Planet; to bring the competences to cooperatively act towards a sustainable future; therefore, that possibilities to reach significant achievements in reconnecting our urban youth to the biosphere do exist.

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