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Sustainable development in times of economic crisis: A needs-based illustration from Granada (Spain)

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1. Introduction

The World Commission on Environment and Development (WCED) defined Sustainable Development (SD) as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED, 1987:43) and assigned equal importance to the economy, society and the natural environment when designing development interventions. This approach to SD inspired the policy guidelines agreed by the parties in the United Nations (UN) conference on Environment and Development in Rio de Janeiro in 1992 and the subsequent recommendations resulting from the many conferences on sustainability organised to date under the auspices of the UN (Adams, 2009; UN, 1992; UN, 2012). Nevertheless, since the Rio Summit the main mechanisms put forward as a means of moving towards SD have relied on improving economic efficiency, stimulating technological investments and fostering economic growth. This has implied prioritising, both as an instrument and as a goal, the economic over the environmental and societal dimensions of SD. Such an approach has proven of little or no success in halting the destruction of global ecosystems, biodiversity loss, the progressive warming of the earth’s climate system or the rise of socio-economic inequalities within and across countries (Martínez-Alier et al., 2010; Wilhite and McNeill, 2015; Wilkinson and Pickett, 2010).

The limited contribution to environmental conservation and enhancement made by sustainability policies that include economic growth as an indispensable instrument for the satisfaction of human needs, suggests that a more radical approach is needed in order to place societies on the path to SD. Despite the fact that there are many alternatives to growth-based approaches, including the steady-state, degrowth and post-development paradigms (Daly, 1996; Gudynas and Acosta, 2011; Martínez-Alier, 2009), they are not openly endorsed by mainstream international organisations¹, due to, among other reasons, the fact that challenging economic growth implies challenging the main foundation of the capitalist system (Smith, 2010). This appears particularly unacceptable in times of economic

¹ Mainstream international organisations such as the World Bank (WB), the International Monetary Fund (IMF), the Organisation for Economic Development and Cooperation (OECD) and major UN programmes such as the United Nations Environment Program (UNEP).

crisis, when unemployment and poverty rates tend to escalate and economic growth seems the only way to put societies back on track.

Contrary to widely-held belief, improving quality of life does not necessarily require societies to be articulated around the growth imperative that characterises capitalist economies (Guillen-Royo 2016). Approaches such as Human Scale Development (HSD) proposed by Chilean economist Manfred Max-Neef (Max-Neef, 1991) attribute equal importance to economic, societal and environmental interventions, and emphasises their interdependence. HSD puts human needs at the centre of development practice, underlines the importance of balanced interactions between society, the economy and the natural environment, and proposes a participatory methodology to help communities and grass-roots organisations make progress in terms of needs satisfaction. It offers a promising way to identify interventions that incorporate the interdependent economic, social and environmental dimensions of SD as defined by the WCED, while allowing human needs rather than economic prosperity to take centre stage.

This paper uses needs-based participatory workshops with unemployed people in Granada, a city in southern Spain severely affected by the recent economic downturn, to illustrate how a HSD approach to SD can be used to reveal possible interventions that can contribute both to needs satisfaction and to environmental sustainability. The paper is organised as follows. First, the ‘green economy’ approach to SD is discussed with regards to its relative emphasis on economic growth and the HSD proposal is presented. Next, the socio-economic and political context in Granada and the personal and socio-demographic characteristics of participants are introduced and the methods of the study discussed. The results of the workshops are then analysed, with a particular emphasis on the interdependence between interventions addressing human wellbeing and those dealing with environmental sustainability. Lastly, findings are discussed, with a focus on the importance assigned by participants to citizen participation and empowerment and to a balanced relationship between dimensions of SD development.

2. Sustainable Development and Human Scale Development

2.1 The ‘green economy’ approach to Sustainable Development

The centrality of economic growth as an instrument for SD has recently been reinforced through the concept of the ‘green economy’. Such an economy is defined by the United Nations Environment Program (UNEP) as one where economic growth is fostered by clean energy, investments in resource-efficient technologies and an understanding of the natural environment as a critical economic asset (UNEP, 2011). In this approach, which became mainstream in the UN Conference on Sustainable Development in Rio in 2012, the economic dimension of SD assumes an explicit central position through an emphasis on policies to stimulate economic growth. The latter is justified in terms of its

positive effects on unemployment, inequality and poverty; particularly in times of economic recession such as the recent global financial crisis (UN, 2012). The recently approved UN Sustainable Development Goals are an example of the importance of growth in the sustainability debate. The 8th goal is articulated in terms of promoting ‘sustained and inclusive sustainable economic growth, full and productive employment and decent work for all’² and it is very specific with regards to the least developed countries, where the target is a 7% increase in GDP per year. In practice, this implies a subordination of the social and environmental dimensions of SD to the requirements of economic growth.

Putting the economy first is problematic because it relies on erroneous beliefs about the power of technological innovation, efficiency improvements and economic growth to solve current environmental and societal problems. Regarding the negative environmental impacts of economic growth, there is no evidence that absolute decoupling or reduction of pollution levels, CO₂ emissions and resource depletion, is possible in a context of expanding production and consumption. The constant increase in global carbon emissions, the current rate of extraction of industrial ores and minerals, as well as the speed of biodiversity loss experienced in recent decades all suggest that technological and organisational innovations are not enough to halt environmental destruction as economies expand (Jackson, 2008; WWF, 2014). In addition, there is now a wide array of studies indicating that, in many cases, efficiency gains in one consumption domain are offset by increases in the total volume of goods and resources consumed (Chitnis et al., 2014). When it comes to inequality, poverty and unemployment, placing the emphasis on the economic dimension of SD does not seem to automatically solve societal problems. Economic growth rarely trickles down to poorer and more marginalised groups, and in fact it appears to increase inequality and socio-economic disparities unless institutions associated with strong welfare states are put in place (Lorek and Spangenberg, 2014).

There are many alternatives to the green economy approach to SD and they are all rooted in an understanding of the economy as a sub-system of the biosphere; a larger and finite system on which the economy depends (Smith and Max-Neef, 2011). This dependence in terms of resources and the sink capacity of the earth’s ecosystems was first made evident by the Club of Rome in its report *Limits to Growth* (Meadows et al., 1972) and has recently been brought back to the sustainability debate through Rockström and colleagues’ (2009) work on planetary boundaries.³ A discussion on the similarities and differences between alternatives to the ‘green economy’ as a SD approach is not the object of this paper and besides has already been done elsewhere (Guillen-Royo, 2016; Wilhite,

²<https://sustainabledevelopment.un.org/?menu=1300>

³ Rockström and colleagues (2009) demonstrate that at least three of ten planetary limits concerning climate change, biodiversity loss and the nitrogen-cycle have already been crossed as consequence of human activity, with irreversible effects on the earth’s ecosystems.

2016). However, it is interesting to note that while some non-mainstream approaches to SD, such as the steady-state and degrowth paradigms, aim at the stabilisation and/or reduction of materials and energy consumption as a way of progressing towards SD (Daly, 2008; Kallis, 2011), approaches to development such as *Buen Vivir*⁴ and HSD focus on achieving a balanced relationship between society, the economy and the environment. This implies that policy interventions grounded in the latter approaches would not revolve around specific economic goals but instead would be articulated as a set of mutually reinforcing measures at the personal, societal and governance levels aimed at achieving SD (Guardiola and Garcia-Quero, 2014; Guillen-Royo 2016; Max-Neef, 1991).

2.2 Human Scale Development

HSD is an approach to development proposed by Chilean economist Manfred Max-Neef and several other experts in the mid-1980s, with the aim of supporting endogenous development processes. It is articulated around three interdependent pillars: self-reliance, balanced relationships and human needs satisfaction. Self-reliance concerns the centrality of communities and the need to activate their endogenous capacities. Balanced relationships are based on horizontal relationships between levels and dimensions of human activity; for example, between institutional, governance and economic levels, or between nature, technology and the economy. Finally, human needs satisfaction assigns central importance to meeting human needs in any development process and is associated with a particular conceptual and methodological framework operationalised through participatory workshops (Max-Neef, 1991).

The way HSD addresses human needs merits some attention. Human needs are not only understood as requirements for a good life but also represent opportunities for personal and social mobilisation that can be drawn on to support societal change. As with other theories of needs (Alkire, 2002), human needs are considered to have a socio-universal character, implying that they are shared across cultures and through time, even if they are not always felt with the same intensity (Cruz et al., 2009).

However, Max-Neef argues that there is no hierarchy of needs and although the need for subsistence shows some precedence over other needs, people will not perceive their way of life as fulfilling unless a certain level of satisfaction of all universal needs is achieved.

Fundamental human needs are defined as comprising the *axiological needs* for subsistence, protection, affection, understanding, participation, idleness, creation, identity and freedom, as well as the *existential needs* of being, having, doing and interacting. Existential needs represent the ways

⁴ *Buen Vivir* is an approach to wellbeing that emerged in Latin America in the early 2000s ‘based on the indigenous conception that nature, community and individuals all share the same material and spiritual dimensions’ (Guardiola and Garcia-Quero, 2014:177).

needs are expressed. Thus, ‘being’ refers to personal or group attributes, ‘having’ concerns institutions, values, tools and forms of organisation; ‘doing’ identifies personal and collective actions and ‘interacting’ links to the characteristics of spaces and environments. The HSD approach to needs is often represented graphically through a matrix, where the first column features the nine axiological needs and the first row the four existential needs (see Table 1 below).

Table 1 Matrix of fundamental human needs

	Being	Having	Doing	Interacting
Subsistence				
Protection				
Affection				
Understanding				
Participation				
Idleness				
Creation				
Identity				
Freedom				

Source: Max-Neef (1991: 33).

The 36 cells that result from crossing axiological and existential needs identify *satisfiers*; the ways of being, having, doing and interacting associated with the realisation of needs. Thus, satisfiers are the values, attitudes, norms, laws, institutional arrangements, organisations, actions and ways of using spaces, resources and nature that define needs satisfaction in specific contexts and which vary across cultures and through time. For example, regarding the fundamental need for subsistence, a sustainable community could be characterised by satisfiers such as: being cooperative, supportive and caring (being); basic income schemes and organic farming activities (having); volunteering, respecting other community members and contributing to local initiatives (doing); and the availability of communal land and open flexible spaces for gatherings (interacting) (Guillen-Royo, 2016). Modern capitalist societies, on the contrary, might require specific sets of interlinked satisfiers that differ considerably from the above. As Cruz and colleagues (2009) posit ‘the rise of modern free-market society (as a new *interacting* milieu), requires for the members of society a full range of new satisfiers at the *having* level (money, property, credit, etc.), of *being* (consumer, owner, free to buy and sell, etc.) and *doing* (shopping, acting ‘rationally’ in chrematistic terms, etc.) in order to satisfy their fundamental needs’ (Cruz et al., 2009: 2023).

Though a wide range of satisfiers can be found across societies, they do not necessarily all have an equal capacity to meet needs. In order to clarify this, Max-Neef proposes a classification of satisfiers whereby they are divided into five groups: the first group consists of satisfiers that concentrate on

meeting just one of the nine fundamental needs (singular); the second involves satisfiers that simultaneously support the actualisation of more than one need (synergic); the third concerns satisfiers that over-satisfy a particular need while reducing the capacity to fulfil other needs (inhibiting); the fourth encompasses satisfiers that mislead people into believing a need is satisfied while in the long run making it difficult for them to meet the need (pseudo-satisfier); and the fifth group represents satisfiers that thwart the realisation of the need in question in the long run while also impairing the fulfilment of other needs (destroyers or violators) (Max-Neef, 1991). When societies are characterised by satisfiers from the last three groups, the potential to meet needs at the personal and societal levels is jeopardised and the conservation and enhancement of the natural environment is threatened.

The relationship between destroyers, inhibiting satisfiers and pseudo-satisfiers on the one hand, and environmental degradation on the other, was not addressed in Max-Neef's initial work. Recently, several studies have suggested that satisfiers such as the pollution of water sources and soils, the effects of global warming in terms of droughts and floods, the loss of biodiversity and the progressive erosion of green areas are interlinked with other satisfiers such as materialistic values, consumerism and overconsumption, hectic lifestyles, marginalisation, authoritarianism, lack of institutional transparency and limited political participation, among others (see Guillen-Royo, 2016 and Smith and Max-Neef, 2011 for further references). Thus, from a needs-based perspective, satisfiers characterising economic, social and environmental sustainability or unsustainability cannot be understood in isolation but rather must be explored in terms of their interconnections. This notion links back to the earlier discussion on SD perspectives; prioritising the economic dimension, as is the case with the 'green economy' approach, disregards the fact that if technological fixes are to be effective in reducing energy use, associated changes may well be required in terms of the way decisions are made, the pace of daily life, and in values or understandings of personal/societal success, for example (Guillen-Royo 2016).

Despite presenting a solid theoretical, conceptual and methodological proposal, Max-Neef never intended that HSD should remain a static theory of needs but rather he envisioned that it would provide a flexible framework for development practitioners and grassroots organisations. Max-Neef suggested using the empty matrix in Table 1 as a tool in participatory workshops in order to support groups of people or entire communities as they seek to improve needs fulfilment and environmental sustainability. The phases and characteristics of needs-workshops have been explained elsewhere (Guillen-Royo, 2016; Max-Neef, 1991) and will be described in the next section with regards to the study in Granada. However, it is important to highlight that Max-Neef believed that simply participating in needs-based workshops was potentially empowering and the applications of the HSD approach and methodology with local communities in different parts of the world seem to confirm this point (Smith and Max-Neef, 2011).

3. Methods and data

3.1 Unemployment and socio-political context in Granada

Granada is the capital city of the province with the same name located in Andalusia, the largest Autonomous Community (AC) in southern Spain. The city has 239,000 inhabitants, most of whom work in the service sector, and the total population in the province is 919,000. The Andalusian AC has one of the highest unemployment rates in the country, averaging 34.7% in the second quarter of 2014 (36.9% for women and 62.3% for under-25s) and at the time of data collection (May and June 2014), Granada was the Spanish province with the second highest unemployment rate (36.6% on average, 38.9% for women) just after Cadiz, another Andalusian province (IECA, 2014).⁵

As a consequence of the economic recession, labour market reforms that make it easy to recruit cheap labour and dismiss workers (Official Spanish State Gazette, 2010, 2012) and the national austerity policies⁶ implemented from 2008 to 2014, social inequalities and social exclusion in Granada have spiralled. Citizens experience great difficulties accessing public health care services, cannot afford to enrol in higher education, see their access to credit restricted, face salary and pension cuts, and witness the deterioration in quality of public services. All these things, together with the growing number of evictions due to families falling behind on mortgage payments⁷ (1,167 evictions in Granada since the beginning of the economic crisis) have contributed to a significant increase in social unrest, leading in turn to frequent rallies and protests in most of the larger Spanish cities, including Granada.

In the context of this economic crisis, one would expect people from Granada to emphasise the importance of economic recovery over other socially and environmentally relevant goals when discussing needs and satisfiers. However, drawing on the results of previous research that takes a needs-based approach to SD (Guillen-Royo, 2010, 2016; Jolibert et al., 2014) the hypothesis of this study was that the policy interventions suggested by participants would stem from a more nuanced understanding of the interconnected economic, social and environmental sustainability dimensions than that inherent in a growth-based approach to SD.

⁵ In the city of Granada, the number of unemployed people rose by 81.44% between June 2007 (15,000 people unemployed) and June 2014 (27,216 people unemployed) according to the national government's registered unemployment data. At the national level, the unemployment rate rose from 8.2% in 2007 to 24.5% in 2014, which, with the exception of Greece, was the EU's highest unemployment rate, according to EUROSTAT. More information on unemployment data is available here: <http://www.ine.es>

⁶ Austerity policies attempt to significantly curtail government spending in order to reduce government budget deficits. The last two Spanish governments (PP 2011-2015 and PSOE 2008-2011) passed different packages of austerity measures following guidelines from the EU, the International Monetary Fund (IMF) and the European Central Bank (ECB). Example measures reportedly include the privatisation of state assets, sharp increases in the regressive VAT sales tax and raising the retirement to age to 67.

⁷ See <http://auditoriaciudadana.net/> (in Spanish)

3.2 Research design and data collection

Data collection was carried out in May and June 2014 in Granada in two differentiated phases. The first phase centred on a survey questionnaire that was distributed off-line (via hard copy) through Caritas, a Catholic NGO working with unemployed people in the city, and also on-line through Almanara, a local social consultancy firm that e-mailed potential participants using mailing lists from the University of Granada's job office, several neighbourhood associations and organisations for the unemployed. The self-completion questionnaire included questions on personal goals, subjective wellbeing and selected demographic and socio-economic characteristics. Attached to the questionnaire was a separate page where people were asked about their willingness to participate in HSD workshops. It included information about the €5 that each participant would receive to cover travel expenses and the pen drive⁸ they would get as a token of gratitude for their participation in two of the three workshops. In total, 129 people answered the survey and 16 of them agreed to join HSD workshops.

Table 2 Characteristics of participants in HSD workshops

Characteristics	HSD workshops participants	Survey participants
Women	56%	55%
18-30	43%	45%
30-40	38%	37%
Over 40	19%	18%
Secondary education (includes vocational education)	44%	47%
Higher education	50%	45%
Unemployed	88%	52%
Intrinsic goals score ¹	4.00	4.06
Extrinsic goals score ¹	2.30	2.32
Happiness score ²	3.44	3.40
Sample size	16	129

Notes: ¹Participants' personal goals were elicited through 42 closed-ended questions. For each question participants were asked to rate the importance of each goal on a scale from 1 (not important at all) to 5 (extremely important). ²Happiness was elicited through a global happiness question ('In general, how happy/unhappy would you say you are these days?') measured on a 5-point semantic differential scale ranging from 'very happy' (5) to 'very unhappy' (1).

As Table 2 shows, participants in HSD workshops did not differ from survey respondents with regards to the selected socio-demographic and personality related characteristics, except for the fact that many more stated that they were unemployed (88% vs. 52%). Table 2 also reports the scores derived from an analysis of the questions on personal goals included in the survey. Following Kasser and Ryan's (1996) and Grouzet et al.'s (2005) Aspiration Index, the scores for the items that are usually associated with intrinsic and extrinsic goals were calculated. The former includes goals linked

⁸ The pen drive gift was proposed by Caritas, who suggested that it would be useful to jobseekers (to keep a scan of their ID card or curriculum vitae).

to valuing the community, affiliation, physical health and self-actualisation. The latter concerns goals related to financial success, popularity and good looks. The goal scores presented in Table 2 suggest that the workshop participants' goals did not differ substantially from those of survey respondents, thus reducing the likelihood of self-selection bias associated with different values, attitudes or life goals.

The second phase of data collection revolved around three, three-hour needs-based participatory workshops aiming to: 1) generate a *negative matrix* -a matrix including those satisfiers labelled as inhibiting, destroyers and pseudo-satisfiers, which hamper needs fulfilment in Granada; 2) produce a *utopian matrix* -a matrix including those synergic and singular satisfiers that might enable optimal needs fulfilment; and, 3) identify *synergic bridging satisfiers* that might allow society to progress towards the utopian scenario (Guillen-Royo, 2016). Participants could choose between joining the first or the second workshop but all were requested to participate in the third. The goal of this strategy was to prevent people in the second workshop using the information from the first to construct a *utopian matrix* that was simply the opposite of the negative one.

Following Guillen-Royo (2016), the research team analysed the utopian matrix prior to the last workshop and identified four common themes or categories intended to summarise the synergic and singular satisfiers brought up by participants. These categories of satisfiers were then proposed as the ones defining a society with optimal needs satisfaction and used as a basis for the discussion in the third workshop. In addition, copies of the negative and utopian synthesis matrices⁹ were also handed out (see Appendix) in order to enable participants to make an informed choice when assessing the classification and in general they agreed with the categories suggested. To encourage an in-depth discussion on the *synergic bridging satisfiers* that would allow society to progress towards the utopian scenario, the 14 participants in the last workshop were divided into two groups, both of which addressed two of the proposed categories. The next two sections introduce the researchers' analysis of the satisfiers discussed in the three workshops, drawing on the content of the negative and utopian synthesis matrices and the notes and audio recordings from the discussions.¹⁰

4. Identifying hurdles and enablers for SD through needs-based workshops

This section presents the analysis of the satisfiers from the negative and utopian synthesis matrices, taking into account the three contexts suggested by Max-Neef (1991:18): (a) oneself (*Eigenwelt*-the individual level); (b) the social group (*Mitwelt*-the community level); and (c) the environment

⁹ Only one or two satisfiers that a majority of participants considered most harmful or synergic in each of the 36 cells were included in the negative and utopian synthesis matrices (see the Appendix).

¹⁰ Participants were asked for their consent to record the workshops. One person in the first workshop did not agree to being recorded and so written notes of the discussions were taken instead.

(*Umwelt*-the societal or ‘governance’ level). Following Jolibert and colleagues’ (2014) approach, the three contexts in which satisfiers operate (individual, social group and environmental) are used as a reference to illustrate the potential focus of policy interventions. However, this paper does not stress the boundaries between contexts as the emphasis is on the interconnections between satisfiers and across contexts.

The negative matrix (a copy of which is provided in the Appendix) captured the satisfiers that participants considered were hampering the actualisation of needs. It described a society characterised by fear and powerlessness—two harmful satisfiers with a particularly detrimental effect on the needs for subsistence, understanding, idleness and creation. Fear and powerlessness, operating initially at the individual context, were said to prevent participants and the population in general from engaging in transformative processes and they appeared to be systemically associated with the lack of trust in institutions reported by participants. Particularly, they seemed to reinforce and be reinforced by other harmful satisfiers in the social group and governance contexts such as the perceived control of society and the economy by elite groups; the repressive attitude of police forces; the lenient treatment of corruption by the judiciary; and an education system that did not prepare people for the job market or for their responsibilities as citizens. Schools were said to promote competition instead of cooperation and on entering the job market, students experienced insecurity as they lacked a basic understanding of job regulations and workers’ rights. An excerpt of the discussion on the need for subsistence illustrates the powerlessness felt by participants with regards to the labour market¹¹:

Noelia (32): Teachers promote competition...

Thais (23): Bullying....

Noelia (32): competition generates insecurity when it comes to entering the labour market....

Angelina (23): what use is algebra to me if my boss cheats me because I don’t know my rights as a worker? As much as we should learn algebra, we should also learn about workers’ rights in our studies.

[All participants nod in agreement]

Fear and powerlessness were also connected to the limited opportunities to engage in decisions concerning uses and management of local spaces described by participants. This was believed to contribute to citizens’ lack of knowledge about the local orchards, the local agricultural production and the green areas in the city. The limited appreciation of the natural environment in Granada appeared strongly interlinked with the negative satisfier representing an elitist socio-economic and political system, as it seemed to participants that local elites were interested in keeping the population uninformed and largely uninvolved in the management of the common good. This provoked comments, such as that of Manuel (35), illustrating people’s alienation from nature: ‘we need things

¹¹Names of participants have been changed for the sake of anonymity. Participants’ real ages are shown in brackets.

that we do not know we need, for example going to the countryside'. The discussion below further underscores the same point:

Carla (25): ...dirty parks, not suitable for children. When I take my son to the park I have to be careful that he doesn't grab broken glass, cigarette butts, etc.

Angelina (23): regulations, laws... they don't always help. They don't make it easy for us to discuss issues that directly affect us. This group that's here today would not get a positive reception from the municipality [others nod in agreement]

Sonia (41): Spaces where people can communicate are not promoted. But I see some change happening and I think that self-managed spaces will become increasingly available. That would be the best way forward.

Regarding the *singular* and *synergic satisfiers* discussed in the second workshop, four categories of satisfiers emerged from the researchers' analysis of the utopian synthesis matrix (a copy of which is provided in the Appendix). The first concerned satisfiers linked to an education in values and capabilities; the second was associated with universal coverage of basic needs; the third revolved around popular participation and the consensual development of institutions; and the fourth group of satisfiers included norms and spaces for personal and community development. The four groupings captured a set of interdependent satisfiers that were expected to enable optimal needs fulfilment in the city. They constituted elements of an ideal society that had overcome the fear, powerlessness, elitism and alienation that had been impeding human needs fulfilment.

The first category of satisfiers encompassed participants' suggestions of a different approach to education and the way schooling and adult training were delivered by state schools and private organisations. Participants suggested a style of education where students were actively engaged both intellectually and emotionally. They suggested taking inspiration from the principles of the *escuela libre* or free school, which they described as integrating emotions and knowledge, having inclusive physical spaces -for example, round classrooms-, groups organised by students' ability rather than age, more than one teacher per room and no exams, among other features. Participants valued the fact that these types of schools focused not only on knowledge transfer but also on promoting social interaction and children's wellbeing by developing children's capacity for assertiveness, mutual respect and tolerance. Such an approach to learning, encompassing satisfiers running across the individual, social group and governance contexts, was considered necessary in order for education to contribute positively to the needs for subsistence, affection, understanding and creation.

Antonio (38): The education system should respect the fact that there are different ways of learning. It's the only way to support people's creativity so that it becomes the basis for education. We can't use the same tools to evaluate different people...

Juliana (33): For that you'd need a type of school that enables personal development based on people's individual capacities, without a fixed curriculum. It wouldn't work with an authoritarian sort of education. It should be an education that prioritises sustainability and cooperation and discourages competitiveness. Educating people in values contributes to subsistence.

The second category of satisfiers concerned participants' support for schemes to provide universal coverage of basic needs not necessarily through subsidies or social assistance but rather through the public and private provision of quality jobs, and part-time jobs in particular. Participants stressed the need for 'decent' jobs, defined in terms of the flexibility required to achieve work-life balance and collaborative decision making. The latter was closely linked to the synergic satisfiers of tolerance and cooperation, as participants considered these important personal attributes when workers and employers engage in horizontal negotiations about the characteristics and organisation of their jobs. Examples of specific job situations discussed in the workshops that could be categorised as 'quality jobs' were those typical of worker cooperatives, as well as jobs that promote creativity and innovation by providing spaces for 'co-working', understood as open-plan offices where social innovators meet and create something together through exchange and collaboration.

A third interdependent category of satisfiers concerned the increased participation of people in local decision making, particularly greater involvement in decisions taken at neighbourhood and municipal levels. The possibility of being part of the development of norms or regulations concerning playgrounds, gardens, local public transport, neighbourhood associations and schools, among others, was reported as having potential synergic effects on the needs for protection, participation, creation and identity. Citizens playing a greater role in decision making was seen as particularly relevant with regards to the management of the city's urban, agricultural and natural spaces. They believed that only a greater involvement of the citizenry could result in policies promoting a greater adoption of urban gardening and allotments, more cycle lanes and paths, and the dissemination of existing knowledge on local biodiversity and traditional agriculture. The jointly developed norms and the new spaces created as a consequence, was considered a fourth category of satisfiers with synergic effects on protection, participation, leisure, creation and identity.

A situation characterised by the interplay of synergic and singular satisfiers suggested by participants was closely linked with allocating nature a greater role in people's everyday lives, mainly in the domains of leisure, food production and transportation. From a focus on tolerance and creativity in the personal and social group contexts to an emphasis on participatory decision making, transparency and horizontal relationships in the governance or environmental context, satisfiers identified by participants in the second workshop featured an assortment of personal attributes, values, actions, environments, laws and organisational characteristics representing all three dimensions of SD. The conservation and enhancement of a 'healthy' local natural environment via the satisfaction of human needs arose as both a synergic satisfier interlinked with other synergic and singular satisfiers, and also as a constitutive element of the systemic understanding of needs inherent in the HSD approach and methodology.

5. Synergic bridging satisfiers: balancing social, economic and environmental dimensions

The last workshop concerned specific *synergic bridging satisfiers* that could bridge from the negative to the utopian matrix. Following Max-Neef (1991), participants' were invited to discuss *synergic bridging satisfiers* in terms of either their endogenous or their exogenous character. This required participants' assessment of the capacity of the community or local groups to generate the proposed satisfiers without external assistance (endogenous) and, when this was not considered feasible, identifying the experts, policy-makers or organisations that they should engage with to implement the satisfiers (exogenous). The way participants envisaged the process of achieving greater needs satisfaction in Granada is described below. As in the previous section, the individual, community and governance/societal contexts in which satisfiers operate are addressed.

Starting with the individual context, participants believed that in order to be active members of the local community, they first needed to transform their 'inner-self'. The concept of 'inner-self' was defined as concerning personal needs, values, attitudes and behaviours, and was considered interdependent with the 'outer world' representing family, friends, work/school colleagues, local institutions and the natural environment. Transforming the 'inner-self' was associated with, among other aspects, a move towards non-materialistic goals and values through endogenous means such as seeking self-awareness and engaging in dialogue with others. To illustrate this, participants described how they would make gift-giving traditions less materialistic by replacing market value with creative value. This could entail, for example, giving presents that people could 'create' themselves such as organising a walk to a special location or preparing a special meal.

The notion of interdependence between people's 'inner' change and the 'outer' world was further developed when participants discussed how to start a social or environmental project in their community or neighbourhood. They agreed that instead of starting up their own projects, it was better to first search for similar initiatives already successfully underway in their local area and to try to engage with them. Using the example of a hypothetical neighbourhood gardening project, a workshop participant, who was an active member of a local organic agriculture cooperative¹², said that his organisation would be eager to collaborate with this sort of neighbourhood initiative and would happily share knowledge and donate seeds. He explained that the cooperative could also contribute by making it possible for people to start cultivating vegetables in the cooperative plots just outside the city centre, so the project could have a pilot phase supported by an existing grassroots group. Participants suggested that after a successful pilot phase, local people and cooperative members could work together on a proposal to the municipal council to request support for their neighbourhood

¹² The *Cooperativa Integral Granaina* specialises in producing and distributing organic vegetables, fruit and cheese. More information is available at <http://www.ci-granaina.org> (accessed 23.11.2015).

initiative. Such a proposal would be more likely to succeed in this way than if the initiative had not engaged with a group already working on similar issues. Thus, effecting change at the community level depended on people's and groups' networking skills, which was seen as a *synergic bridging satisfier*, as it would help bridge the gap between the harmful situation described in the negative matrix and the optimal scenario of the utopian matrix.

Despite the general focus on grassroots initiatives, people acknowledged that structural change was needed and that it was often difficult for local organisations to bring it about. Two examples of synergic bridging satisfiers at governance levels were discussed. The first concerned making citizen participation in local policy-making widespread; the second was linked to transforming the education system in line with the principles of the *escuela libre* or free school. Regarding the former, participants referenced the power of the population to mobilise and put pressure on local public institutions by means of peaceful demonstrations and support for political parties advocating greater citizen participation, such as the newly-founded political party, Podemos.¹³ With regards to the move towards educational reform, participants suggested that interested parents could start by volunteering to run extracurricular activities in state schools that captured the participatory philosophy characterising the free school movement. Thus, education based on participation and collaboration could gradually be introduced in Granada and help change values in the population as a whole.

Finally, the *synergic bridging satisfiers* identified in the last workshop seem to converge on the need for citizens' increased personal involvement in the social, economic and political spheres. It is interesting to note that 'getting involved' as a means of achieving optimal need satisfaction implied overcoming fear and powerlessness, the harmful satisfiers permeating the negative matrix. In addition, greater connection between oneself and others at the community or municipality levels made it more likely that participants would improve their economic prospects as it would encourage more popular participation, which in turn would tackle nepotism and privilege in the system. This would also improve the sustainability of their local environment, as initiatives linked to urban gardening, organic agriculture and lowering consumption levels were not considered possible without increasing people's capacity to engage and collaborate.

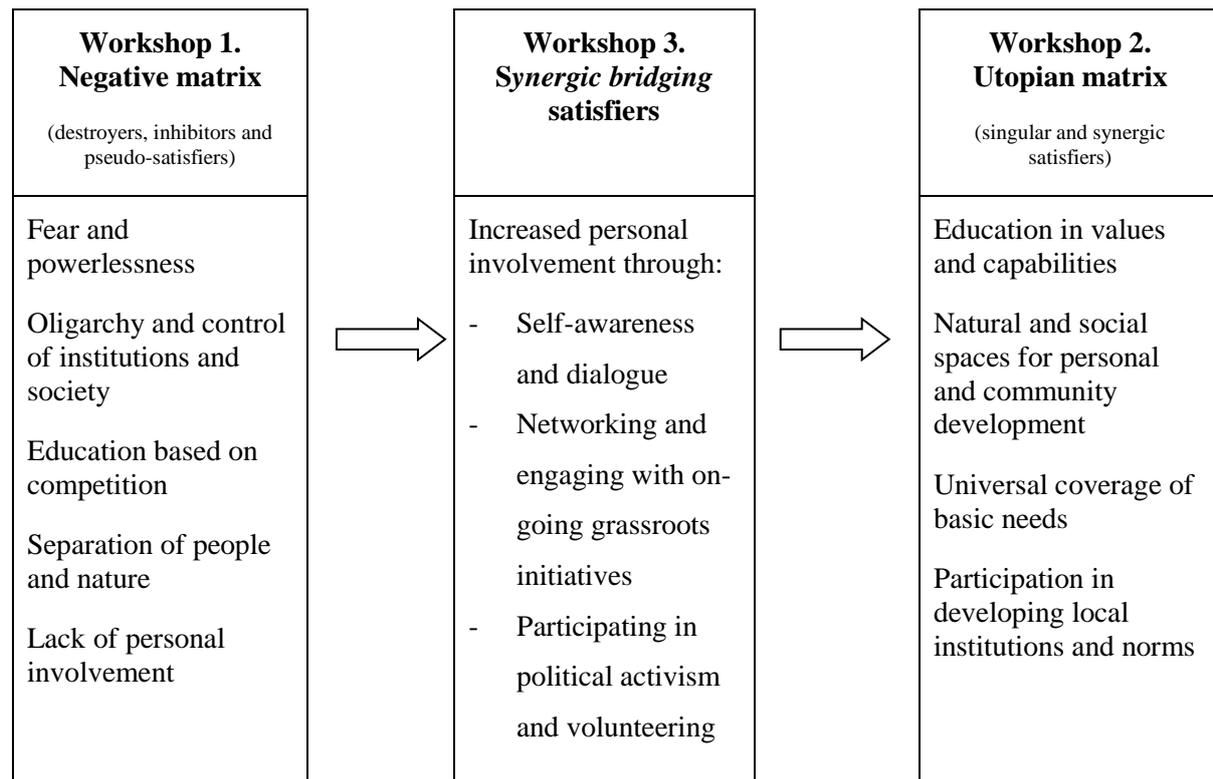
6. Discussion and concluding remarks

Contrary to what might well be expected from a group where most people were unemployed, economic prosperity and job creation were not the main topics of discussion in these needs-based workshops. Instead, in order to improve needs satisfaction, participants deemed it necessary to

¹³ Podemos is a left-wing political party that grew out of the protests of the '*indignados*' movement in Spain against corruption and rising inequality. Although it advocates for a more direct form of democracy, its current electoral program only addresses greater citizen participation in large infrastructure projects (<http://unpaiscontigo.es/en/programa/>).

identify deeper structural problems underpinning the poor employment prospects in the city of Granada as well as solutions that went beyond a focus on economic growth to encompass educational, environmental and governance related interventions. Figure 1 summarises the satisfiers that emerged during workshop discussions. Since discussions in workshop 3 revolved around the *synergic bridging satisfiers* participants considered necessary to bridge from the negative to the utopian matrix, the results of this last workshop are presented in the centre of the figure below.

Figure 1 Summary of harmful, synergic and bridging satisfiers in Granada



As Figure 1 illustrates, the set of satisfiers emerging from the first two workshops depicted radically contrasting scenarios despite the fact that the groups in the two phases were made up of entirely different people who had not communicated with each other about the content of their discussions. Two aspects of the findings are worth focusing on with regards to their relevance for SD. The first is the importance participants attributed to their own involvement in triggering social change by identifying personal and institutional mechanisms leading to citizens' empowerment. The second concerns the way the set of synergic and singular satisfiers discussed during the second and third workshops are connected across contexts (personal, societal and governance) and SD dimensions (economic, social and environmental).

Regarding the first aspect of the findings, the *synergic bridging satisfier* of personal involvement required people to feel empowered to engage in social change. Following Andersen and Siim (2004:

3) citizens' empowerment can be defined as "the process of awareness and capacity-building, which increases the participation and decision-making power of citizens and may potentially lead to transformative action". Participants saw this process as emerging from a transformation of the 'inner-self' through self-reflection, dialogue, networking and political activism, and from radical reforms in education and policy decision making. The idea that a free school approach to education is necessary to improve needs satisfaction is not new, as evidenced by the participatory approaches to literacy and the education of poor and marginalised people championed by Paulo Freire in Latin America and elsewhere. Such approaches revolve around people's direct involvement in the learning process so that they engage in social criticism and learn the skills that help them to break with the structures that keep them marginalised (Pick and Sirkin, 2010). In addition, a participatory approach to learning is also a key tool for moving societies towards sustainability; both from a production perspective, when workers are empowered and committed to sustainable change (Verhulst and Lambrechts, 2015), and from a consumer perspective, when people and communities feel empowered to take greater control over the use of local natural resources (Garmendia and Stagl, 2010).

The institutionalisation of citizen participation in local decision making was considered a synergic satisfier supporting people's empowerment. One could argue that the fact that the HSD methodology is by its very nature participative might frame workshop discussions in such a way that the importance of participation is overemphasised. Nevertheless, and beyond the potential framing effects of the HSD methodology¹⁴, it is important to note that deepening democratic structures and developing new participatory mechanisms (community councils, study circles, neighbourhood/street working groups, village development associations, etc.) are characteristic features of current sustainable community projects such as transition towns, eco-villages and eco-municipalities (Hopkins, 2011; James and Lahti, 2004; Phillips et al., 2013). They are also a central element of alternative approaches to sustainability such as the degrowth movement. As Schneider et al. put it when describing the roots of the movement, an important source of 'degrowth is the quest for democracy, the aspiration to determine our economic and social system, breaking the close link among the political system, the technological system, the education and information system, and short-term economic interests' (Schneider et al., 2010: 512).

With respect to the second aspect, people's empowerment and the inclusion of participatory mechanisms in local decision making were not in themselves enough to increase human needs satisfaction but had to be supported by tolerant attitudes, social programmes guaranteeing universal

¹⁴ See Guillen-Royo (2016) for a thorough discussion of the limitations of needs-based workshops and the HSD proposal.

coverage of basic needs, and spaces (natural and man-made) where people could fulfil their needs for leisure, identity and freedom. The understanding of the way satisfiers connect across contexts (personal, societal and environmental) and sustainability dimensions (economic, social and environmental) is not fully developed yet but two promising avenues can be identified. The first comes from social psychology, where scholars such as Tim Kasser have long studied the connection between assigning relatively low importance to financial success and having pro-environmental attitudes, engaging in low-carbon lifestyles or behaviours, or getting involved in volunteering or socio-environmental activism (Crompton and Kasser, 2009; Kasser, 2016). A second interesting perspective comes from an examination of the interdependent singular and synergic satisfiers that characterise bottom-up sustainability processes (Guillen-Royo, 2016). When researchers studying sustainable communities or practitioners involved in sustainability processes discuss the mechanisms through which low-carbon lifestyles emerge, they always stress the role of community, participation and inner change, and their interlinkage with successful interventions to promote low-carbon lifestyles (Hopkins, 2013; Aponte in Guillen-Royo, 2016; Seyfang and Smith, 2007).

To conclude, it is important to underline the usefulness of needs-based workshops and the HSD approach in general, in providing a holistic perspective on the social, economic and environmental challenges faced by society as well as, crucially, the interdependence of the policies to address them. It is in fact an approach that allows grassroots organisations, researchers and policy planners to visualise avenues for SD without needing to decide beforehand which of the three dimensions should be prioritised. Our study suggests that the traditional pre-eminence of the economic dimension of SD development as articulated in the ‘green economy’ paradigm and favoured by international organisations does not appear to be key for sustainable change; not even in the context of high unemployment and economic recession currently facing the city of Granada.

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Appendix

Table A1. Synthesis negative matrix

	BEING	HAVING	DOING	INTERACTING
SUBSISTENCE	Fearful, individualist	System created for/by an economic and political elite	Indoctrinating in competitiveness, thinking short-term	Lack of jobs in rural areas, shortage of land for food production, pollution
PROTECTION	Indifferent, stressed	Unfair judicial system., lack of knowledge about work regulation	Not serving full prison sentences, despising	The police makes common spaces unsafe, lack of quality information
AFFECTION	Individualist, envious	'Machismo', competitiveness	Undervaluing others' merits, associating feelings with being weak	Spaces dominated by routine, underestimating benefits of natural environments
UNDERSTANDING	Fearful	Information controlled by elites	Complaining, stereotyping, generating confusion	Lack of channels that convey reliable information
PARTICIPATION	Divided, indifferent	Repression, institutions that label citizens	Stereotyping, expecting something in exchange for participation	Surveillance of public spaces
IDLENESS	Fearful	Lack of money, prejudices about how leisure time should be spent	Not daring to try new things	Regulated and degraded public spaces, lack of leisure opportunities in rural areas
CREATION	Powerless, self-critical	Fear, rigid structures	Excluding those who are different, delegating to others the responsibility for creation	Norms, customs and regulations that limit how spaces are created
IDENTITY	Conformist, fearful	Social pressure towards uniformity, low self-esteem	Stereotyping, despising	Closed and sectarian spaces
FREEDOM	Disrespectful	Lack of interest in one's children	Insulting, limiting our and others' freedom	Lack of spaces for being alone, agglomeration

Table A2. Synthesis utopian matrix

	BEING	HAVING	DOING	INTERACTING
SUBSISTENCE	Empathetic	Education that stresses values, equality and freedom Basic needs provided for	Valuing in time not money, redefining basic needs	No speculation, natural environment at the centre of municipal decisions
PROTECTION	Tolerant	Agreed norms regulating use of spaces, basic understanding of job regulations	Opening up the concept of family to include other people	Public spaces that favour communication
AFFECTION	Empathetic	Gender equality, education that promotes socialisation and understanding affect	Understanding different ways of receiving/giving affection	Availability of personal spaces, areas for leisure
UNDERSTANDING	Honest, patient	Information and training accessible to people from any social background	Improving communication channels, simplifying	Open spaces, without haste
PARTICIPATION	Assertive	Laws that encourage participation, transparent institutions	Getting involved, working to achieve consensual solutions	Open and shared public spaces
IDLENESS	Engaged	Decent jobs, decent part-time jobs, the need for idleness articulating working time	Reflecting on the need for idleness prior to organising working time, considering other's freedom	Urban gardens in the city, art as a part of public spaces
CREATION	Tolerant	Education that promotes creativity	Involving, motivating	No hierarchies, spaces open to collaboration and spontaneity
IDENTITY	Tolerant	Intercultural dialogue, dialogue to bring together opposite viewpoints	Getting information	Spaces where different areas, such as neighbourhood or rural/urban spaces, meet.
FREEDOM	Tolerant, responsible	Laws that support freedom of speech and movement for all	Giving voice to the different alternatives, eliminating institutional controls	Open spaces, platforms or schemes to express/propose new ideas