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Political Criteria for Sustainable Development Goal (SDG) Selection and the Role of the Urban Dimension

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Abstract: A flood of ideas and proposals on the shape and selection of Sustainable Development Goals (SDGs) has begun to rise since 2012. This article looks at some of them, trying to understand which kind of “boundary work” between science and policy is done here. Starting with a reflection on the epistemological and practical implications of “discussing SDGs”, it primarily addresses scientists, but also decision makers and activists interested in the post-2015 debate. In practical terms of SDG selection, the argument goes in favor of a self-reflective “politization of science”; *i.e.*, against claims for broad scientific comprehensiveness of SDGs and in favor of an “exemplary” selection of thematic areas and targets, which would combine aspects of (i) political opportunity and (ii) societal visibility. These criteria are only very partially met in the proposals the article looks at. By applying them, the article emphasizes the political importance of addressing, through SDGs, the subnational level directly, thus making the case for an SDG on cities. Such an SDG should, by the same logic, be rather focused and exemplary than all-encompassing. The recently employed formula of “resilient, inclusive and connected cities” is considered useful, when accompanied by tangible and communicable indicators.

Keywords: Sustainable Development Goals; science policy interface; boundary work; cities

1. Introduction

The proposal of developing goals, targets and indicators for Sustainable Development, complementary to and coherent with the post-2015 MDG process [1] is clearly formulated as a *political* mission. Not only should this development serve the aim of “pursuing focused and coherent

action on sustainable development” ([1], para 246, emphasis added); the criteria indicated for the goals are almost exclusively related to political practice: “action oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries, while taking into account, different national realities, capacities and levels of development and respecting national policies and priorities” ([1], para 247). (Possible exceptions are the terms “concise”—which, beyond mere brevity, might refer to an inherent structure of the goals—and, above all, “aspirational”, which can be understood as referring to some kind of objective standard or need.) The development of such goals, therefore, is apparently framed much less as a discovery, insight or conclusion, than as a process of consideration, negotiation and decision-making. This is emphasized by the fact that goals, per definition, belong to the realm of the desirable, rather than the descriptive.

When scientists are asked to participate in this kind of processes, they necessarily transgress their disciplinary limits and do what has been labeled “boundary work” in sociological science studies. At the origin of the concept and in its core, lies the diagnosis of a specific tension between politics and science. The original interest of Gieryn [2] was to analyze the struggle of scientists for epistemological authority over the definition of “what science is”, *i.e.*, boundary work as some sort of demarcation for the sake of scientific autonomy and professional interest. Jasanoff [3] shifted the focus towards the increasing importance of the negotiation element (inherent to decision making processes) for science itself, that is to say, towards aspects of overlap or even fusion between politics and science or (albeit the term is not used by her) a *politization of science*. The “boundary”, so to say, is then more perceived as a point of contact or even common (although contested) ground, than as something that would divide two epistemological fields or social systems.

This basic notion of boundary work is still useful, and should definitely be applied to the process of developing SDGs. The value of such application, however, should consist in developing success criteria for the selection and framing of goals. This is what this article does in Section 2, where it will single out some epistemological implications contained in the concept of boundary work, mainly regarding what is considered “scientific” and what is seen as “political” in theory and practice. From this analysis, and from insights of classical political theory, some main features of “the political” derive which scientists should bear in mind when advocating and proposing political goals and targets. This argument leads toward two meta-criteria—“opportunity” and “visibility”—which can be handy when formulating political goals.

In Section 3, we can see that scientists already *do* ponder these political aspects when discussing the post-2015 agenda, but often in an unsystematic or inconsequent way. The Section visualizes some tensions that can arise between scientific scrutiny, on one hand, and the criteria formulated above, on the other. It gives special attention to the fate of the urban dimension in the debate. SDG proposals by scientists, the article will argue, might follow a wrong direction by overestimating the possible “coherence” and comprehension of an SDG framework. Our selectivity regarding SDGs should be far more political, and this means also: *partial*. Selection should try to follow the abovementioned criteria.

Section 4 tries to exemplify how a positive use of political criteria for SDG selection could look like. The reflections on a possible *goal on sustainable cities* apply the ideas of “opportunity” and “visibility” not only to the establishment of a stand-alone goal on cities itself, but also to the selection of target priorities *under* this goal.

2. Boundary Work Revisited: The Political Element and Its Implications for SDG Selection

The aforementioned tendency to see boundary work more as a common playing field than as a struggle for demarcation, is radicalized, under the guiding assumptions of a “second modernity” of overlapping institutional responsibilities and redundancy [4], by Stefan Jungcurt from the Institute for Advanced Sustainability Studies (IASS) [5], who is interested in a better analysis of different institutions or institutional types in the context of international or multi-lateral decision making. He even speaks of a boundary “*space*” where institutions can be located: on a y-axis of increasing internationality, the constraints put on these institutions by representation mechanisms—per country—will lead to more “diplomatisation”, while on the x-axis, the “politization” of contributions increases. The latter term is explicitly used but not defined, although the author suggests that the scientific pole is more interested in facts, and the political pole, in values ([5], p. 268f.) The results of the negotiation processes within the boundary space are described as “partial amalgamations of facts and values which can be consolidated into inclusive and robust decisions”. Institutions located near the scientific pole (such as research institutes, but also the more representative, international assessment bodies, as for example IPCC in the climate change discourse or the Millennium Ecosystem Assessment in biodiversity negotiations) would be more fact-driven. NGO’s are located more at the middle of the x-axis, and national and international decision making bodies (like parliaments, the G7, the UN General Assembly or the UNFCCC Convention of Parties, in the case of climate change) at its right, *i.e.*, at the very political pole ([5], pp. 270–272).

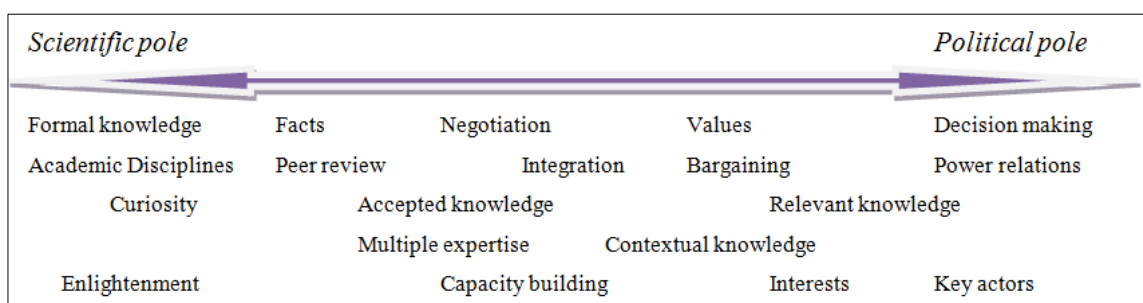
While Jungcurt’s impulse to create, out of the boundary concept, a tool for analysis of institutional behavior, is certainly just as pertinent as his idea to involve the internationalization of players as a crucial dimension, it’s the x-axis of the “boundary space” which does not completely satisfy analytical curiosity. The claim that there is increasing politization from, let’s say, the US Academies of Sciences to the US Congress, or from IPCC to the UN General Assembly, is intuitively right—but why? Certainly not (only) because of a greater concern of the latter with “values”. The author himself, in his descriptions, emphasizes the *decision-making* aspect on the policy side, thereby invoking implicitly one of the classical criteria of the political task, as expressed by a long line of thinkers from Macchiavelli to Weber. It might, therefore, be asked whether it is truly the *nature* of the knowledge concerned that provides the distinctive criterion to delineate the boundary between the scientific and the political realm, and not rather its *use*. Jumping ahead to the SDG discussion: It might be crucial for the process that there is no fact-finding or “fact-negotiating” body on sustainability in general, as there is for climate [IPCC] or biodiversity [IPBES]. This indicates that “the problem” is politically not [yet] sufficiently agreed on. Regarding the boundary work on SDGs, there is rather a diffuse and implicit call for scientists to contribute to the demarcation of the *problem itself*, in one breath with *its solutions*.

In this sense, Clark *et al.* argue that it is the sources and the use of knowledge that determines the success of boundary work. In the use dimension, the authors distinguish the support of enlightenment, decision or negotiation ([6], p. 4). While striving for a general theory of boundary work, they come to the conclusion that the most general context or function of boundary work is negotiation support—which means that the decision support and enlightenment functions “can be thought of as limiting cases ... in which ... the number of competing political interests in the use of knowledge have been reduced” ([6], p. 15).

To describe multi-lateral negotiation—like both Jungcort and Clark *et al.* do—as the paradigmatic context for contemporary boundary work, obviously makes the case for applying the notion to the SDG discussion, but does not provide, by itself, the means to distinguish between the scientific and the political aspect of that debate (which, by the way, cannot even be described as “participatory joint fact-finding” [7], because the SDGs are not facts but norms we seek to establish). Several authors have stated, in general terms, that this distinction becomes blurry, anyway, within the context of reflexive modernity, thus giving way to “mode 2”, “post-normal” or transdisciplinary science, especially regarding sustainable development issues [8–10]. Some even try to avoid the term “science” for the matter and replace it by “research” ([10], p. 123), or, even more radical, by “design” (where researchers, among others, contribute to finding robust plausible perspectives for action, [11]).

There are, however, hints at a heuristic distinction between “scientific” and “political” which can be followed by clustering keywords from the aforementioned literature (in addition, reference to an intercultural assessment of SD knowledge co-production by Pohl *et al.* [12] is made). I have attempted to align these keywords in Figure 1, mostly following and interpreting the authors’ either explicit or implicit attributions.

Figure 1. Boundary work: Clustering keywords.



Source: Own reading and extraction from [4,6–10,12].

The figure shows that distinctions are blurry indeed, considering the amount of terms used rather in the middle of the scale. That’s also why a continuum rather than a dichotomic table is displayed. Nevertheless, it seems that contributions, institutions or problem definitions are considered, implicitly, the more “scientific” the more they are

- (a) Centered in formal (abstract, general) aspects;
- (b) Interested in facts;
- (c) Self-sufficient and
- (d) Produced and controlled by scientists.

while “politization” of these contributions, institutions and problem definitions is perceived when being

- (e) Close to the decision making itself,
- (f) Sensitive to power relations and
- (g) Defined as “relevant” by influential actors.

To these, the more problematic notions of (h) “value centrism” and (j) “contextual knowledge” might be added. For the question on which proposals on Global Sustainability Goals might be pertinent

in worldwide boundary work, the guiding idea is that politization is a process that happens within boundary work anyway and cannot be answered by “shaping a broadly accepted common knowledge base” alone, as suggested by Clark *et al.* ([4], p. 15)—this would be more the case for assessments, but not so much for an SDG formulation—but by an *increased reflexivity of scientists about the political implications of their suggestions*. More precisely, while the scientific (*i.e.*, scientists-controlled, factual, general) pole of boundary work will ideally have to play “a central role in determining the level of ambition” of goals ([13], p. 15), *e.g.*, necessary target values for environmental preservation, it is probably the political one which will help to decide on priorities. *Prioritization—i.e.*, deciding on points of effective action within the complex field of sustainability interdependencies where there are many pressing issues and many angles of intervention—certainly requires elements of factual knowledge, but in the case of the Rio process and its current flow into SDGs it is hardly the knowledge itself which is most debated. It is the *decision* (see criterion (e) above) on where common action *could* (see (f)) and *should* (see (g)) be prioritized until 2030. This task, as stated above, might demarcate problems and solutions on one breath, but not in the way of ideal models, but of feasible things to do. A corresponding reflexivity among scientists on the political character of their problem framing is already often there, but rather in an “intuitive” way nurtured by experiences in the field [12]—so, there is room for improvement by systematization.

Power as the ability to make and impose *decisions* (in the Weberian sense) and/or as the ability to gain prestige and *relevance* and, as a result, *acceptance* in the eyes of multiple others (the approach of Hannah Arendt) is a classical term in political and sociological theory [14,15]. Therefore, it does not surprise to find the italicized terms characterizing political aspects of boundary work. With regard to multi-lateral bargaining (a process which of course SDGs, within the so-called Open Working Group, are subjected to) and to the national acceptance backgrounds which determine the behavior of negotiating parties, one could reformulate both the aforementioned theoretical aspects of politization as follows:

Politically sensitive boundary work and knowledge production

- (i) Anticipates power relations in the adjacent bargaining and implementation processes and
- (ii) Looks after societal visibility and relevance as a prerequisite for acceptance.

It is safe to say that the often claimed “contextuality” of practical solutions (see aspect (j) mentioned above) only reinforces criterion (ii), as societal problems and constellations always gain their shape in a concrete lifeworld. For the matter at hand, *i.e.*, Sustainable Development Goals with possibly regionally differentiated targets (see introduction of this article and the affirmations by discussants in [16]), contextual differentiation seems to be a given and reaffirms and strengthens the importance of the visibility point.

Lastly, aspect (h), which alludes to the notion that the political decision deals with values more explicitly than with facts, can contribute to criterion (i) if conceived in a proper way. The proper way would take into account the classical imperative raised by Max Weber when he said that the value-dimension of politics, *i.e.*, its *ethics*, has to include the *consequences*, not only the *motives* of actions; it is well-known that he spoke of “ethics of responsibility” [17]. With regard to target-setting, that would mean for instance to consider, first and foremost, what could actually happen or not happen if a target is established, rather than to part from the premise of what happens if a target is (ideally) met. Therefore, one could argue that there is indeed a specifically *political* value-dimension, which needs to

consider *political* facts and consequences. It is to be seen in the next section what this implies for SDGs. For the time being, the criteria might be reformulated and specified, for the purpose on hand, as follows:

Boundary work on political targets should

- (i) Anticipate power relations, probable political consequences and opportunities linked to the target-setting process (*criterion of opportunity*) and
- (ii) Consider the contextual applicability, relevance and visibility of the norms that are developed (*criterion of visibility*).

It might be argued that the term “visibility” does not really embody the full meaning of the second criterion, but it certainly expresses the most fundamental of the notions contained in this complex, in the sense that Sustainable Development Goals which are not *perceived* within societies, will not be relevant at all—an aspect exacerbated by their probably non-binding, soft law character and their reference to societal “ways of life” and individual lifestyles not in direct reach of nation state legislation [18].

3. Some Current Proposals on SDGs and the Urban Dimension

This section will briefly revise some proposals on the selection of thematic areas and framings for SDGs. The point of this is not to analyze these proposals in depth and to do them “full justice”, but to follow this paper’s main line of argumentation by demonstrating that problems arise when “opportunity” and “visibility” are not sufficiently taken into account. SDGs that look “reasonable”, but will not be operational, could be the outcome if these problems are not addressed. Special attention is given to the urban dimension, in order to prepare the argument for a stand-alone SDG on Cities in the next Section. The intuition here is that within a new multi-level governance architecture, which a post-2015 development agenda should contribute to, addressing local administrations provides a unique opportunity for transformative action [19] and could improve the visibility of that agenda “on the ground”.

The proposals were selected because they were “at hand” when the present paper was first conceptualized (April 2013) and because they were drafted by independent scientist although in different formats:

- (a) As a report by cross-national governance think tanks, building on a transdisciplinary process involving the public sector,
- (b) As a commentary in the journal *Nature* redacted by a numerous group of prestigious, mainly natural scientists from all over the world,
- (c) As a policy brief developed by a German development cooperation think tank.

Additional proposals will be looked at in Section 4 when discussing an SDG on cities.

One of the first and most ambitious projects on goals for the post-2015 agenda was the series of conferences—commencing with the one held in Bellagio 2011—and regional consultations held by the Centre for International Governance Innovation, Ontario (CIGI) and the Korean Development Institute (KDI) [20,21], a process led by scientists but in a transdisciplinary and participatory way. For the present paper’s central question, it is most striking that the arguments, invoked by the authors of the final report for the selection of the eleven “Bellagio Goals”, are almost exclusively political, as for

instance: to build on the agreed texts of the Millennium Declaration and of “The future we want” and possibly other declarations and conventions; to set priorities and avoid exaggerated comprehensiveness (“if everything is a priority, nothing is a priority”); to leave out controversial issues like population or nuclear power; to build on the MDGs by correcting their flaws, *etc.* ([20], pp. 2,3). While all these arguments are certainly in the spirit of the opportunity and even the visibility criterion, it can be observed that the actual selection of goals and targets fails to do so in at least four respects:

- (1) Visibility criterion: The number of goals alone exceeds the psychological limit of “seven, plus or minus two” recommended for a political handling [22,23] and taken into account in the case of the MDGs; this problem is exacerbated when looking at the sheer number and also the character of targets for each goal, which fail to be “easy to communicate”, *i.e.*, succinct.
- (2) Opportunity criterion: Some of the Bellagio Goals, like the one on “Inclusive Growth” or the one on “Infrastructure”, in great part only extrapolate already observable world-wide trends, with no sufficient *transformative* ambition. This critique is—of course—again political in itself, as the criterion of “opportunity” with regard to post-2015 development goals should, in our opinion and those of many others [18,24–27], not be misunderstood as merely defensive (to pursue “the feasible”) but be interpreted in a proactive way (to be “ambitious”). It is a critique that has also been uttered with regard to the Millennium Development Goals: that progress on many of them has been reached by certain (growth-based) advances, *e.g.*, in East Asia that were to be expected anyway, not “inspired” by the MDG framework and not really addressing structural global deficits, while inequality and structural causes of regional poverties had not been sufficiently taken into account. Sustainable Development Goals, as introduced into the debate by Colombia and other Latin American States [28,29], clearly intend to counter unsustainable trends (such as poverty reduction at the expense of resource sufficiency and resilience), rather than to merely “adjust” the current development agenda.
- (3) Opportunity criterion: The candidate goal on “Food, Water and Sanitation” merely refines and combines the MDGs 1 and 7.C by correcting their technical shortcomings and by complementing the hunger topic by the aspect of overweight, *i.e.*, a dimension that addresses developed countries as well ([20], p. 33). It misses, however, the opportunity to focus on the *resource* aspect of the issues in question, like integrated watershed management or the avoidance of soil degradation. Other proposals on SDGs have come further in this regard [30–33].
- (4) Opportunity/visibility criteria: Cities are only mentioned one single time throughout the entire 60 pages of the report, under a goal proposal called “Quality Infrastructure for Access to Energy, Transportation and Communication” and in order to highlight the importance of cross-country connectivity, *i.e.*, infrastructure, as an “ingredient for economic growth” which allows rural dwellers “to reach cities and markets” ([20], p. 21). This is surprising not only considering the undeniable agglomeration costs or “diseconomies” [34] of the urbanization megatrend, but also because it ignores the unfinished business left by MDG 7.D on slum dwellers, which calls for a fresh look at the multidimensionality of urban poverty and segregation [35]. This is both a missed opportunity in negotiation terms, and a shortcoming with regard to the fact that two thirds of humanity will dwell, act and discuss politics in cities by the year 2030.

Griggs *et al.* [32], in a comment published in *Nature*, propose six Sustainable Development Goals that build on the MDGs and “add” “planetary must-haves” for human survival, the latter “drawn from science and from existing international agreements” and largely identified with the planetary boundaries (originally proposed by Rockström *et al.* [36]). Apart from the question whether the planetary boundaries—boundary objects developed and/or imagined between science and policy—actually meet the criteria of representing “science” and not rather normative choices [37], it is quite striking that Griggs *et al.*—a group of scientists writing for one of the world’s most renowned scientific journals—combine an explicitly political with a scientific criterion in order to arrive at an SDG selection. One could argue that the aforementioned international treaties are used due to the opportunity criterion: It makes sense to include these areas into the SDGs, the authors seem to say, because we already have the legal frameworks in place which would support the commitment of nation states to achieve the goals. This is clearly a political argument—but the opposite to the one used for instance by Beisheim [38] when she says that it is exactly the contested and burdened arena of these treaties that should be avoided by a post-2015 agenda. As with any arguments of political anticipation and appraisal, there is no such thing as an exact proof for one or the other. The author of this paper shares Beisheim’s view and could give a series of indicative arguments against the inclusion of greenhouse gas emission targets into an “energy” goal, but the point to be made at this moment is, again, only that there are issues with the opportunity criterion that could and should be made explicit by scientists when advancing proposals for political goals.

The most notable example of a problem with the *visibility* criterion and of what should definitely be avoided by scientists when suggesting political goals, however, is the formulation of their first SDG by Griggs *et al.*: “*Thriving lives and livelihoods*. End poverty and improve well-being through access to education, employment and information, better health and housing, and reduced inequality while moving towards sustainable consumption and production.” In this goal, there seem to be packed implicitly not only at least three different MDGs (numbers 2, 3 and 6), their enhancement by the inequality consideration and new aspects like access to information (probably the internet); but the authors also want to have the resource and pollution aspects of production and consumption included, ranging from black carbon to scarce minerals ([32], p. 307). While “thriving lives and livelihoods” certainly sounds appealing as a political slogan, it is clear that actually nobody would be able to perceive, under this headline, the plethora of issues addressed. Apparently, by trying to solve the tension between (1) the comprehensiveness of their approach, (2) the visibility they wish to give certain issues like energy, water and food security (each provided with an own goal) and (3) the necessity of being succinct (“seven, plus or minus two”), the authors created a “mega goal” containing all other issues—but this is hardly a solution.

The colleagues from the German Development Institute (DIE) and Conservation International, Washington, DC, in their approach to SDGs [24], want to prove a similar “factual” point as the authors in *Nature*: They also refer to the planetary boundaries, only with slightly more emphasis in the enabling (rather than the restricting) character of ecosystem cycles and services—similar to the famous Oxfam “doughnut” [39], but with a more macroeconomic emphasis. More explicitly—one could say: more politically—than Griggs *et al.*, Boltz and colleagues want to make the point that “the environment is a foundation for development NOW” ([24], p. 3). The seven areas they propose for the SDGs focus on an inclusive green economy (although the term itself is avoided), and six of them (food

security, water security, health, sustainable energy, opportunities, peace and justice) use the epithet “for all” in the headline. A seventh goal, named “earth system security”, seems to make an allusion to (all?) planetary boundaries.

Apart from the omission of the education topic, which is not even mentioned under the “opportunities” heading, this proposal actually makes use of the opportunity criterion in a politically sensitive way, addressing classical MDG issues in a reframed manner (inclusion, resource provision focus) and picking up e.g., on current debates on land use (appearing in the target area indications for the food security goal) or on the Rio+20 outcome document’s agreed language on social protection floors ([1], para 156)—instead of staying, for instance, in the realm of “better” or “green” jobs like Bates-Earner *et al.* did ([20], pp. 11,21). But there is little doubt that Boltz *et al.* fail to meet the visibility criterion by doing something quite similar to Griggs *et al.*: While the authors in *Nature*, for the sake of greater visibility for their ecosystemic concerns, try to plug all social issues in one single goal, the DIE proposal does the opposite and combines virtually all ecosystemic issues into a bundle: “an effective global program of ecosystem conservation, restoration and low emissions to avoid harmful or irreversible damage to ecosystems”. It is almost needless to say that this mega-goal would have little chances to be “easy to communicate”, let alone to become operative.

The most interesting point when looking at the DIE proposal—which certainly seems to have the potential to provide a sort of blueprint for upcoming SDG negotiations—, however, surfaces when comparing it to the priorities for SDGs named before Rio+20 (when expectations were high that a decision on them would be made at the summit itself). The subsequent table was compiled by officials of the Colombian, Peruvian and United Arab Emirates government [29]:

Figure 2. Pre-Rio Priorities for Sustainable Development Goal (SDG) Thematic Areas.

	Poverty	SCP	Food	Water	Energy	Cities	Oceans	Growth & Jobs	Natural Resources	Gender	Climate Change	Technology	Education	Disasters	Biodiversity	Land Degradation	Forests
JPOI	x	x							x								
GSP	x	x	x	x	x	x	x	x			x						
Major Groups	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
SG of UNCSD	x	x	x	x	x	x	x	x		x		x					
Zero Draft	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Rio CSO Dialogues	x	x	x	x	x	x	x	x									x

Source: Governments of Colombia, Peru and United Arab Emirates, Concept note on Sustainable Development Goals, May 2012.

The comparison most notably shows two omissions from the formerly majoritarian canon: Oceans and Cities (both taken on board, as well, as priorities in the Colombo-Peruvian concept note). In terms of both opportunity and visibility, one can argue that these omissions go against essential political criteria for SDG selection. The reference to High Seas beyond national jurisdiction has been

considered one of the very few advancements of Rio+20, and, even within the logic of DIE thinking itself, the concern for Global Public Goods should be considered in a post-2015 development framework [40] and could be easily addressed, exemplarily, by some clearly visible targets, e.g., on fisheries, deep sea mining or marine litter.

It is, however, the example of *cities* which the next section will discuss. Before doing so, one essential point deserves to be anticipated, though. We could see that SDG proposals failed to meet the visibility criterion by packing long wish lists into single goals and avoiding prioritization. A solution one can think of, and that has effectively been applied in the MDG framework, is going for *exemplary* targets which do not cover the whole range of problems related to the goal's headline, but instead select *a few aspects* which have both a high communicative potential (visibility) and a positive effect of many dimensions of the complex the goal wishes to address. There are important examples in the most recent SDG debate where this has already been done, *i.e.*, by the High Level Panel in the cases of health and energy [30]. For the urban dimension, it might be an advisable strategy as well.

4. An SDG on Cities: Recent Debate and Political Criteria for Its Establishment and Framing

It is rather unquestioned that the mega-trend of urbanization, and the revolution in production and consumption patterns it implies, impose particular challenges for sustainability [41]—and that the MDG target 11 on slum dwellers [42] did not do sufficient justice to this trend. The challenge, however, goes along with a huge opportunity when considering that the urban dimension is of a nexus nature that permits to address economic, ecologic, social, physical and governmental aspects of development simultaneously in a limited geographical area [43]. More importantly, and in contrast to other multidimensional areas like poverty or the so called WEF nexus (water-energy-food), the issue of cities corresponds directly to societal units and established structures of responsibility. In some cases, these structures are ahead of the nation states [19,44]. Municipalities as political actors are already leaders in worldwide endeavors towards CO₂ neutrality [45]; members of the Climate Alliance of European Cities have set for themselves not only emission reduction targets that are more ambitious than those of the Union, but also established soft forms of peer review on target achievement and processes [46]; Local Agenda 21 has stimulated manifold experiments and areas of public participation. (The very puzzling fact that the topic of cities, at least in the run-up to Rio+20, did rank higher in proposals by government officials than in the appraisal of the civil society organizations [47], is maybe to be explained, in part, by some frustrations generated by *failed* participation.) On the other hand, growing cities worldwide face enormous internal problems regarding transport, employment, population growth, housing and finance—and tend to “export” their problems by exerting pressure on global resources and sinks. For the case of the aforementioned carbon resource alone: urban areas only cover 0.5% of earth's surface but are responsible for about 80% of anthropogenic green-house gas emissions ([41], p. 11). Cities epitomize and lead a resource-depleting lifestyle whose challenge is at the core of the SDG idea.

A stand-alone SDG which targets cities directly, would therefore seem opportune. Moreover, it could lend greater societal visibility to the whole SDG framework, by communicating it directly the sub-national level. Accountability of nation states could of course not be replaced, but would have to involve and empower the accounting, reporting and possible peer-reviewing of municipalities—a

strategic necessity in times of “second modernity” and institutional redundancy which are prerequisites for SD governance [11]. Availability of local data would be considerably improved by an SDG stimulus, which in itself would foster “good housekeeping” as a prerequisite for sustainable development. Again, this is a lesson learned by the MDGs: While there were considerable gaps on several of the MDG indicators precisely regarding the most urgently addressed countries, with significant statistic breaches and hampering comparability [48,49], mechanisms of data collection and equalization were strengthened through the MDG review reporting process itself [50]. If one understands measurability—an important feature both of MDGs and SDGs—as a *process* allowing for control and visibility, rather than a rigorous *base* of scientific evidence, it is evident that the process of data improvement itself can fuel global “local to local” competition and dialogue. This is not only a lesson from the MDG “strand” or tradition that leads to SDGs, but from one of the core outputs of the 1992 Rio summit as well. Local Agenda 21, early on, has contributed to the monitoring of local SD indicators and intraregional comparability of data [51,52]—and most probably benefitted from the existence of such monitoring in terms of participation and awareness-raising [53] (although the latter point is contested [54]). These arguments—*political* arguments in the sense of the criteria proposed in this article—should outweigh the more scientific doubts and considerations (namely: the *current* non-comparability of urban indicators across the globe, and the increasing difficulty to draw a meaningful distinction between cities and non-cities when considering the transformations of the former “countryside” in middle- and high-income countries [16]).

While we have seen in section [3] that political criteria were not applied sufficiently and that the urban dimension lost visibility in SDG discussions after Rio+20, two important and highly visible reports to the UN Secretary General have reconsidered the issue in late spring of 2013, during the review process of the present article. The High Level Panel of Eminent Persons (HLP), among them mostly politicians, explicitly recognized that post-2015 goals will raise the bar higher than former MDGs, both in terms of political boldness and scientific depth, because they will have to elaborate on *drivers* of unsustainable trends and frame the fight against poverty, inequality and exclusion in a much more comprehensive way—by putting “sustainable development at the core” [30]. The report discusses the implied institutional challenges, the necessary “data revolution” for crucial fields like inequality or ecosystem services [30,55], the necessity to involve both the traditional “environment” and “development” communities in the build-up and implementation of a post-2015 agenda, and to mobilize political will and engagement in sectors that are transversal to those two. The urban dimension is explicitly highlighted in the authors’ reflections, but a stand-alone SDG is rejected. The argument is worthwhile to be quoted fully:

“The Panel recognised that city governments have great responsibilities for urban management. They have specific problems of poverty, slum up-grading, solid waste management, service delivery, resource use, and planning that will become even more important in the decades ahead. The post-2015 agenda must be relevant for urban dwellers. Cities are where the battle for sustainable development will be won or lost. Yet the Panel also believes that it is critical to pay attention to rural areas, where three billion near-poor will still be living in 2030. The most pressing issue is not urban *versus* rural, but how to foster a local, geographic approach to the post-2015 agenda. The Panel believes this can be done by disaggregating data by place, and

giving local authorities a bigger role in setting priorities, executing plans, monitoring results and engaging with local firms and communities.” ([30], p. 17.)

The argument is curious. Will a stand-alone SDG on cities really play “urban vs. rural”? Nobody used the word “versus” when considering the WEF nexus but calling for separate goals on water, energy and food, as the HLP itself does (and then cleverly addresses the other nexus dimensions through sub-targets, like water-efficiency in agriculture). One is inclined to suspect other motives behind this expression, as for example a hesitance of certain national negotiators to really empower local governments (who were not long ago officially addressed as “authorities” only, avoiding the stronger term “government”), or as an influence of rural campaigners who fear to be somehow overshadowed by an urban SDG. Be that as it may, it is clear and notable that the HLP is practically on the brink of recognizing the urban opportunity, but then shies away from turning it into an SDG on cities.

The second report mentioned, authored by the Leadership Council of the Sustainable Development Solutions Network (SDSN), a mostly academic collaboration created to support the post-2015 agenda, was published shortly after the HLP report and tries to turn the tide with regard to the urban dimension. Building on the UN-Habitat formula of “environmentally sustainable, socially inclusive, economically productive and resilient cities” [56], the SDSN includes the empowerment of “inclusive, productive and resilient cities” among their ten priority challenges and goal proposals. The *rationale* for this is more or less twofold: first, the ongoing urbanization trend and the stress it puts on urban quality of life (mainly a *poverty* argument that draws its illustrations from the reality of developing countries), second and somehow less emphasized, the role of cities as “users of resources” and the role they play e.g., vis à vis greenhouse gas emissions ([31], p. 19). A third aspect concerns governance improvements: “Metropolitan areas and local governments will be at the center of decision-making and therefore need to be empowered, but they must work with many other actors: national governments, businesses (including financial institutions), knowledge institutions, civil society, and the police” [31]. We can consider this an excellent application of the opportunity criterion.

The visibility criterion we mentioned at the beginning of this Section, however, was not prominently applied by SDSN, not even when the authors, some months after the report had been published, embarked on a campaign for an urban SDG together with several local government networks [57]. Although they mention the necessity of mobilizing a broad range of actors repeatedly, and recognize the importance of urban centers for overall SD transformation, they do not explicitly derive from this the necessity of an urban SDG to be succinct and easy to communicate. Put otherwise: the application of the visibility criterion would suggest not only the establishment of the separate SDG on cities itself, but to frame its targets in a way which avoids the dilemmas we saw in Section 3.

At a first glance, the SDSN approach is promising. They establish three guiding ideas for the urban SDG which reflect the dimensions of sustainable development in an interwoven manner (“productive, inclusive and resilient” or, later, “inclusive, connective and resilient”) and derive targets from these ideas. But similar to UN-Habitat in 2012, the authors seem unable to limit themselves to a handful of targets which would suffice the “seven, plus or minus two” approach. Habitat ([56], p. 3) had listed 11 targets: on national urban policies, urban sprawl, public space, housing and slums, citizen participation, urban safety, job creation, mobility, energy, water and sanitation, and urban resilience—a “mega-goal”, once again, whose wish-list character is exacerbated when considering that some of the

targets comprise different sub-targets, e.g., renewable energy, energy efficiency and waste recycling under the Energy target. When looking closer at the SDSN proposal, the same problem seems to recur: Although there are only three “targets”, these comprise at least 12 different thematic areas, trying to mirror everything that, in the experts’ opinion, is essential for a “sustainable city”. There is, compared to Habitat, more order (through the guiding dimensions), but hardly more priority setting.

Such disregard of the visibility criterion could spoil the “focus” that a stand-alone goal on cities promises to provide. It is worth to remember that, out of the MDGs, only one had more than four clearly quantified sub-targets, and this was MDG 8, by many considered the least successful one. There is a need to prioritize *within* the urban goal as well, and to send out simple, clear messages to decision makers, NGOs (who need to appropriate SDGs a political tool), business, media and the general public. It is not the task of this article to propose and flesh out a specific urban development goal. But it seems safe to say SDSN formula of inclusive, connected and resilient cities is sufficiently broad to provide guidelines for different social realities, and specific enough to indicate global priority areas for urban development. It also indicates political opportunities for transformative urban development inasmuch as the terms encompass important areas of *local* responsibility, an aspect which is key for selecting priorities, as the SDG on cities should make use of addressing areas that the other goals do not.

Regarding *inclusiveness*, targets could focus on inner-urban inequalities that might be masked by mere city averages and “urban” vs. “rural” disaggregation of data. Two key issues that urban decision makers have a say about come to mind: first, spatial segregation, and second, the deprivations of the informal sector. The first challenge is relevant for most cities around the world, and the second for a vast majority of developing and emerging countries. Both could be selected for an urban SDG as top priorities with multiple co-benefits on resilience (e.g., access to green areas per capita) or productivity (social insurance for informal workers).

Within an urban SDG, the major benefit of *connectivity* could be captured not through the overall increase of infrastructure, but through measurement of its effectiveness and its climate impacts, thus interacting with the inclusiveness and resilience dimensions, respectively. Reducing average travel time within the city and reducing the share of private cars in the modal split could be good proxies of what we ought to achieve, both in rich and poor cities, especially when combining it with an overall reduction of spatial inequalities.

Resilience, in the specific form of resilience to climate change, has become a powerful guiding idea for urban researchers, networks and decision makers over the past few years. It could be supported either by governance targets, or by targets which address the “slow variables” in socio-ecological systems [58], such as soils with their direct and indirect role in water filtration and evaporation, *etc.*, which on their part are essential for urban climate, especially for the reduction of the heat island effect, and under the direct control of urban planning. Countering the trend of soil sealing would also be a challenge for both growing and stagnating urban areas.

These are just some suggestions at where to go. The important thing is the “method”: a *meaningful exemplarity*, which captures both essential domains and concerns of urban governance and connects to general patterns of (un-)sustainability within the overall SDG framework.

5. Conclusions

Scientific advice to political negotiations on SDGs, as they currently take place at the so-called Open Working Group, is indispensable, but has to reflect its own criteria in order to work effectively. Transdisciplinary research and boundary work, as shown in Section 2 of the article, tend to “politizice” science not as much due to the *nature* of the knowledge they produce, but because of the *use* they make of that knowledge. The most general context for this use is usually provided by multi-lateral negotiations. When scientists wish to avoid a mere “formalization” of existing political opinions or systematization of academic consensus on SD essentials, and to actively and influentially contribute to a “meaningful” selection of goals, they have first: to anticipate power relations, opportunities and probable consequences within and after the political bargaining, and second: ponder whether the goals they propose can become visible, applicable and relevant within different societies. Of these two criteria—called here the opportunity and the visibility criterion, respectively—it is the second which deserves particular attention. Non-binding, soft-law instruments, which strive for transformation of lifestyle-related drivers and structures (such as resource consumption or inequality), will be in double need of societal visibility and acceptance. This is the only way they can serve as a reference point for the necessary multiplicity of political processes and actors.

The analysis of a few proposals that on SDGs showed that these criteria are often only partially met, and that a major temptation of scientists seems is to compensate their existing political priorities either by packing “the rest” into inflated goals which will send no recognizable signal to the societal arena, or by extending the number of goals and targets beyond the advisable limit. The recommendation of this article is to accept incompleteness and “exemplarity” as a necessary feature of politically meaningful goals, and to look for selected areas where international agreement can be expected, windows of opportunity are currently open, and several drivers of unsustainability can be addressed at once through a kind of domino effect (opportunity criterion)—and where societal dynamics might be triggered through mechanisms that do not exclusively rely on national governments (visibility criterion).

As an example for the above reasoning, the article has made the case for an SDG on cities in general, in order to grant municipal actors and processes the high priority they deserve, not only with regard to their internal SD challenges, but also to the influence they exert on societies and the planet as a whole. The neglect of this priority has been assessed as a political mistake which might involuntarily be supported by a scientific logic which legitimately sees each and every “urban” dimension only as a specific case of broader categories (evident in the case of water, energy, food, *etc.*). Remarkably, during the review period of the present paper, the academia-led Sustainable Development Solutions Network has floated, again, the idea of an SDG on cities ([31], p. 30). It has done so by highlighting the notions of “productivity” (or alternatively, “connectivity”), “inclusivity” and “resilience” and met the opportunity criterion. A fully developed use of the visibility criterion will imply selecting targets under an SDG even more selectively and restrictively, which above all means limiting their number, but also choosing targets which *exemplarily* embody the dimensions in which transformative action ought to be triggered.

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Conflicts of Interest

The author declares no conflict of interest.

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