Sustainability frameworks: their influence on the operational capacity of sustainability.

Marcos teóricos de sostenibilidad: su influencia en la capacidad operativa de la sostenibilidad.

Alejandra Calleros Islas

This paper seeks to overview some of the existing and most relevant sustainability frameworks in order to compare their approach and level of concretion towards sustainability, as well as its relation with other scientific disciplines by reviewing the considered dimensions and evaluation criteria. The aim here is actually an attempt to clarify some of the possible ways to consolidate the operational capacity of sustainability at different levels without losing its holistic approach.

Descriptores / Key words

Sostenibilidad, marcos teóricos de sostenibilidad, capacidad operativa, enfoque sistémico./ Sustainability, sustainability frameworks, operational capacity, systemic approach.
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1. Introduction

The consolidation of sustainability as a concept was a result from the emergence in the past century, of several scientific publications that underlined the necessity of considering factors other than economic growth to assess development (Carson, [1962] 2002; Boulding 1966; Meadows et al., 1972; WCDE, 1987; Max-Neef, 1991; Sen, 1998).

Since then, it has become evident that both the world's resources and the environmental capacity of natural systems are far from being inexhaustible (Kosoy et al., 2012) and that human activities are not only generating irreversible changes on global ecology but also have adverse consequences for human kind (Lenzen and Schaeffer, 2004). Therefore, it is clear that there are limits that should be considered in how resources are exploited so that the capacity of recharging their natural stock is not exceeded, though nowadays the exploitation rhythm is unsustainable in many cases (Novo, 2006).

This recognition underlines the importance of ecosystems functionalities and services as fundamental for maintaining the Earth's cycles, which emerges as a critical issue, even before climate change extreme events. Accordingly, the inclusion of future scenarios and probability studies is not only important but mandatory to have a minimum grade of preparation to face events yet to come (Mermet, 2008).

Therefore, the need to incorporate the concept of sustainability in any analysis is now indisputable (Kajikawa, 2008; J. J. de Felipe et al., 2009). Considerations on this issue have revealed the fact that human-derived effects such as pollution or ecosystems degradation constitute an obstacle for development and, hence, the inclusion of sustainability guidelines has become necessary in the analysis of economic system processes (Munasinghe, 1993).

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The concept of sustainable development is generally defined as the development that satisfies current needs taking into account the needs of the future (WCED, 1987). However, while the minting of this term itself highlights the unsustainability of the current dominant model, such acknowledgement has rarely been accompanied by a proportional measures to make the concept operative, which also reflects a lack of conceptual concretion (Antequera, Gonzalez and Rios, 2005). Likewise, it is considered as an ambiguous concept for its many definitions with a non-scientific method and therefore, the results obtained from this approach are not precise (Norton, 1992).

Regardless the lack of clarity sometimes associated with the term sustainable development and its own implementation, as stated by Garcia (2004) this provides a wider scope under which issues can be addressed by enabling the incorporation of different elements and approaches as well as its application among different fields, all of which would not be possible with a precise and bounded definition of the topic.

Moreover, the present many-sided environmental and socioeconomic challenges show the need to adopt an adaptable approach that goes across diverse scientific disciplines to be addressed (Gomez, 2004). So, sustainability as a complex and systemic dimension allows the holistic analysis of economy, society, culture and environment as interrelated parts of a whole, allowing the application of interdisciplinary and systemic methodologies (UNESCO, quoted by Aznar Minguet and Ulí Solís, 2009).

In the same way, it must be considered that the complexity of sustainability is also due to the necessity of making an analysis of diverse social, cultural, economic, institutional and environmental aspects to achieve progress in this knowledge area (Virji, Padgham and Seipt 2012).

Even more importance is given to sustainability if the actual crisis scenario that at different levels and scales can be observed globally is taken into account. The reason is that crises promote shifts and adaptation strategies such as the construction of a space that allows the discussion and reflection regarding the role that sustainability research and applications have (Correa-Ruiz and Moneva-Abadía, 2011).

Just like sustainability's conceptual vagueness provides a greater wideness to its application and study (Boström, 2012), the ongoing crisis is actually an opportunity to generate new possibilities, capacities and tools, opening diverse windows for policy making. This also implies and even requests the inclusion of resilience, a concept that goes beyond comprehending a system's capacity to absorb impacts without compromising its functioning basis, for it includes a fundamental issue for sustainability: change potential and possibilities that open through perturbations (Folke, 2006).
Following these statements, sustainability reveals that development is no longer another word for growth but a multifaceted, interdisciplinary and systemic pathway towards the equilibrium of all its dimensions that correspond to the main spheres of human and planetary existence such as social, ecologic, economic and institutional (CEPAL-ESALC, 2003-2004).

All these considerations on the conceptual development of sustainability reveal that there are many positive outputs when adopting sustainability as an approach to any subject, and also outline the benefits of working on a more unified and solid scope to help focusing on the field. One way to do so is to review the existing visions, applications and evaluation methods on sustainability (Mog, 2004).

Taking this into account, the aim of the present article is to conduct a comparison on some of the various theoretical key frameworks of sustainability currently used worldwide, and their main practical and conceptual implications. This comparison is made in a non-systematic way for the main objective is simply to build a commented compilation of these initiatives to take sustainability into account as a decision making driving factor at the institutional level. It is considered that by doing so, further contributions on the actual operational capacity of the sustainable approach can be better directed and addressed.

In order to do so, first of all a review on what some of the major global institutions understand as sustainability has been undertaken, since it is what defines the way the basis is posed for its assessment and measurement. Second, a comparison of the scale at which these frameworks contribute to the concretion of sustainability science, where it is important to note that the order of the factors does affect the results, meaning that the context and approach to sustainability will play a role in defining possible outcomes. Finally, results are commented and some guidelines are drawn as proposals to enhance the capability of sustainability science to address real-life problems.

2. Sustainability frameworks

Sustainability was established as a policy making science at international level in the nineties through the global consensus reached by the first United Nations Conference on Sustainable Development (Earth Summit), which took place in Río de Janeiro, Brazil. Later, at the World Summit on Sustainable Development in Johannesburg in 2002, the Johannesburg Plan of Action was agreed by a large number of governments in order to reaffirm their commitments (UNEP, 2011).

These international events have helped the creation of a new vision that promotes joint science and other tools for development. Thus, sustainability has become a means of responding to the needs of society without compromising
the stability of the systems that support life on the planet (Jernek et al., 2011), and also allows its implementation across different scientific fields enriching their analysis and application (Lang et al., 2012).

Nevertheless, as stated before, there is still a weak consensus on the actual meaning of sustainability as a concept. Sustainability is still under development as a science, which has been broadly debated and criticized at two levels: first, the lack of principles that lead research and knowledge progress; and second, the few built-in capacities to actually implement sustainability on a given situation (Wieck et al., 2012; Salas-Zapata, Rios-Osorio and Trouchon-Osorio, 2012).

As a result of this lack of consensus, there is no single framework of reference in the way the sustainability analysis is conceived nor how is applied through a certain methodology (Olalla-Tàrrrega, 2006). Every country, institution, municipality or research group uses the theoretical framework that best suits the needs and targets that have been proposed.

Another reason for the difficulty of integrating the sustainable approach on a single conceptual framework is that such an approach seeks solutions to problems of a diverse nature and with a structure built of several interconnected branches. Consequently, an interdisciplinary and integrated approach should be settled, which enables and encourages a cross-flow of information and experiences among stakeholders (government, businesses, communities) with distinct and often conflicting interests (Virji, Padgham and Seipt, 2012).

Likewise, there are several projects among the literature that empirically apply an interdisciplinary approach to sustainability in such different ways that the application of its principles and key components gets complicated (Lang et al., 2012).

Another aspect emerges at this point which is related to the dimensions of sustainability (generally assumed to be environmental, social and economic). Among the reviewed literature, it was noted that there is still a low level of integration between these dimensions as a result of their vision as exclusive sets, when there are actually several intersections between them (Naredo 2001; Costanza, 2003; Fenech et al., 2003; Thampapillai and Thangavelu 2004).

A special case is the social dimension, which is the least integrated in the framework of sustainability, mainly due to its greater complexity. More efforts have been made towards defining its own meaning than to its implementation in sustainability assessments (Murphy, 2012; Psarikidou and Szerszynsky, 2012). Nonetheless, a broader inclusion of the social dimension enriches and gives more support to sustainability as a whole as well as to the different processes of its implementation such as decision-making or policy design in
any field (Farber, Costanza and Wilson, 2002; Atria et al., 2003; Nieves Rico and Dirven, 2003; Tipett, 2005; Calleros, 2008; Costa and Kropp, 2012; Virji, Padgham and Seipt, 2012).

These factors lead us to the challenging task of going from a dissected to an integrated assessment of sustainability and its dimensions. This task has been undertaken over the years from different scopes by scholars. Sen (1998) integrates a human capital and capacities point of view; Daily et al. (2000) implement natural capital assessment; resilience and systems approach is taken by Folke (2006); sustainability indicators and ecological-distributive conflicts are studied by Martinez-Allier (2006); Kajikawa (2008) reviews sustainability science as a whole; Gallopín (2010) follows a systemic perspective of sustainability; studies on the structure of sustainability science is made by Jernek et al. (2011); and Linkies (2011) explores the interrelation between people and natural conservation.

On the bright side of it, since its very beginning sustainability has been a bridge between social and natural sciences, allowing a joint search for solutions and alternatives to the complex challenges currently encountered (Jernek 2011). Thus, as stressed by Folke (2006), sustainability makes it easy to consider resilience as a key factor, as it generates a change in perspective: from trying to control and stabilize the system, to managing its own abilities to cope, adapt and transform changes or disturbances.

These arguments lead to take into account the adaptive and dynamic character of sustainable science, making the thinking-outside-of-the-box more and more important in order to generate applied and useful public knowledge that actually impacts our daily lives (Marsden, 2012).

2.1. Review of sustainability frameworks at the international level

Starting from a point where there are almost as many sustainability frameworks as possible applications, it is necessary to first clarify the limits of the scope and also how the sustainability frameworks were selected.

First of all, it should be acknowledge that this review was made in order to observe, in a non-systematic way, how deep the sustainable approach has made an impact on some main institutions at different levels. Second, the starting idea is that there is a direct relation between sustainability frameworks (followed by international organisms, national governments and academics) and its impact among decision making and policy design processes. Finally, there are many sustainability frameworks at local, regional and/or urban scale that could be considered to observe different approaches, but they are more spread among literature, they mostly refer to more specific issues and to the limitations of the present paper were not accounted.
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Consequently, the hypothesis would be that sustainability frameworks enable a path to empower the operational capacity of the sustainable approach. This is based on its capacity to structure, interpret and integrate information to enable help decision making processes (Olalla-Tárrega, 2006).

The following criteria were considered (sorted based on their order of importance): a clear definition on sustainability has to be manifested; this definition must be made through concrete elements or dimensions; and finally, within the framework there is either an evident or an implied contribution to sustainability science.

Selected frameworks are organized and visualized in Table 1, which shows a list of the main conceptual frameworks analyzed through three sections that meet the given selection criteria:

a) The vision of sustainability adopted.

b) The dimensions by which that vision is built.

c) The lines that guide the implementation and / or evaluation of the dimensions considered.

As shown in Table 1, selected frameworks have been placed in descending order considering the spatial scale at which each corresponding institution works. Among the first group, international frameworks are found concerning the United Nations Organization (UN), the Organization for Economic Cooperation and Development (OECD), the European Union (EU), the Inter-American Development Bank (IDB), Initiative for Latin America and the Caribbean (ILAC) and finally, the Sustainability Assessment of Latin American and Caribbean Economic Commission for Latin America and the Caribbean (ECLAC-ESALC). The second group is aggregated around frameworks adopted at national government level, including initiatives in Germany, Spain, UK, Switzerland, New Zealand, Canada and the United States. Finally, more theoretical frameworks of sustainable development study, from which the ones proposed by Meadows (1998) and Bossel (1999) are included.
## SUSTAINABILITY FRAMEWORKS

<table>
<thead>
<tr>
<th>Institution</th>
<th>Sustainability approach</th>
<th>Considered dimensions</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN</td>
<td>SD* promoted through technical cooperation and capacity building at international, regional and national level.</td>
<td>• Economic. • Social. • Environmental.</td>
<td>Dimensions integrated on policy making with participatory approach. Progress evaluated under Johannesburg Plan.</td>
</tr>
<tr>
<td>OECD</td>
<td>Focus in contamination issues linked to climate change aiming to help the integration of environmental issues in sectoral policies.</td>
<td>• Economic. • Social. • Environmental.</td>
<td>Environmental accounting to obtain indicators on economic growth's pressure on the environment.</td>
</tr>
<tr>
<td>EU</td>
<td>SD to contribute towards a deeper change, avoiding irreparable damages and creating a prosperity, equity and welfare future scenario.</td>
<td>• Climate change and clean energies. • Sustainable transportation. • Sustainable consumption. • Global poverty and other challenges.</td>
<td>Corresponding these dimensions targets are fixed to future compare with actual state.</td>
</tr>
<tr>
<td>IDB</td>
<td>SD: maximizing positive impacts at environmental and social levels while minimizing risks and negative impacts.</td>
<td>• Economic. • Social. • Environmental.</td>
<td>Assist countries to develop institutional and regulation frameworks for sustainability investments.</td>
</tr>
<tr>
<td>ILAC</td>
<td>SD: satisfaction of human basic needs and aspirations including future generation ones with ecosystems and natural capital as a base.</td>
<td>• Biological diversity. • Water management. • Vulnerability, human settlements and sustainable cities. • Social, economic and institutional aspects.</td>
<td>Evaluation process supported on sustainability indicators at national and regional levels that responds to social, economic and political local particularities.</td>
</tr>
<tr>
<td>EALC</td>
<td>Systemic sustainability approach, a whole in change with the exterior, seeks equilibrium between subsystems and observes flow's unities.</td>
<td>Socioecological system. • Institutional. • Environmental. • Social. • Economic.</td>
<td>Allows a systemic and integrated evaluation using combined environmental, social and economic indicators within a systemic frame.</td>
</tr>
<tr>
<td>Germany</td>
<td>SD as one where each generation solves its own problems instead of passing them to the next one.</td>
<td>• Intergenerational equity. • Life quality. • Social cohesion. • International responsibility.</td>
<td>Corresponding these dimensions targets are fixed to future compare with actual state.</td>
</tr>
<tr>
<td>Spain</td>
<td>SD is explained through the Driving Forces Model: Pressure, State, environmental Impact and Response (PFEIR) developed by the European Environment Agency.</td>
<td>• Economic. • Environmental and territorial. • Governance and sustainability processes. • Global.</td>
<td>Integrated evaluations: conclusions from development's sustainability dynamics viewed through established indicators.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Stimulate economic growth, diminish deficit, maximize wellbeing and protect the environment without affecting future generation's capability of doing so.</td>
<td>• Economic. • Social. • Environmental.</td>
<td>Progress is measured through SD indicators battery based on SD experience and national international wellbeing measures.</td>
</tr>
<tr>
<td>Switzerland (MONET)</td>
<td>SD as the one that covers the needs of the present without compromising those of the future (Brundtland Report), united to World Bank's capital stock model.</td>
<td>• Social solidarity. • Environmental responsibility. • Economic performance.</td>
<td>Implementation: federal organization and cooperation, monitoring, reports and communication. Progress measured through indicators.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Takes the capital model and seeks to maintain through time the natural, economic and social basis.</td>
<td>• Social and human. • Environmental. • Economic.</td>
<td>Sustainability happens when development does not decrease but maintains and reaffirms capital in its 4 dimensions.</td>
</tr>
<tr>
<td>Canada</td>
<td>SD as the one that covers the needs of the present without compromising those of the future (Brundtland Report).</td>
<td>• Economic. • Social. • Environmental.</td>
<td>Progress is measured through Canadian Environment and Sustainability Indicators (CESI).</td>
</tr>
<tr>
<td>USA</td>
<td>SD as the one that covers the needs of the present without compromising those of the future (Brundtland Report).</td>
<td>• Economic. • Social. • Environmental.</td>
<td>According to these dimensions principles to select themes and indicators are defined.</td>
</tr>
<tr>
<td>Bossel</td>
<td>SD: human and natural systems co-evolution; 6 derived subsystems.</td>
<td>• Human system + individual development + government. • Support and help system + infrastructures + economy. • Natural system + environment + resources.</td>
<td>Viability depends on the correct functioning of each subsystem.</td>
</tr>
<tr>
<td>Meadows</td>
<td>SD: natural, social and constructed capital approach; based on Daly's triangle and Max-Neef pyramid.</td>
<td>• Wellbeing. • Social and human capital. • Constructed and human capital. • Natural capital.</td>
<td>The framework seeks to order and integrate sustainability indicators and these evaluate its performance.</td>
</tr>
</tbody>
</table>

Table 1. Sustainability frameworks: approach, dimensions and evaluation.

*SD= Sustainable development.
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It is worth mentioning that in addition to the frameworks reported in Table 1, the inclusion of countries like Brazil, China and India was also considered. It was deemed important to include the vision and implementation of sustainability in these countries because of the interesting development of their economies and societies. However, for different reasons their view on sustainability is not clear enough to be assessed, and therefore they were not included in the analysis.

On the first place, although Brazil has an interesting view of sustainability defining it through four dimensions of economic efficiency, social justice, sustainable rural development and ecological prudence, a clear sustainability framework and evaluation criteria are missing.

China is directing its efforts to environmental protection and continuous development through industrial process efficiency and productivity under a green strategy, but there is actually no mention of sustainability. This seems somewhat predictable if we bear in mind the country’s position against some global-scale environmental initiatives such as Kyoto’s Protocol.

Finally, India has a sustainability vision at a country level via the existence of the Institute of Biosciences and Sustainable Development, which focuses its efforts on the conservation and management of the abundant biotic diversity of the Indo-Burma region as key for development and therefore, without a sustainable approach in particular.

2.2. Preliminary findings

As observed in the previous comparison, the currently dominant sustainability visions show weak links between the two words that form the term “sustainable development”, widely adopted around the world as the guideline for decision-making and policy design.

Out of the fifteen analyzed frameworks, only four expressed sustainability from a holistic perspective and not only by its implications for development, corresponding to the IDB, the ESALC, the Spanish and the New Zealand frameworks. However, a difference should be made among sustainable development approaches adopted by the OECD, the UK or the U.S. and those adopted by UN or countries such as Switzerland and Germany. The reason is that while the former are focused on sustainability characteristics to drive economic growth, the latter take into account, and at the same level, other considerations such as intergenerational equity, solidarity and capacity building. And there are even more differences with the sustainable development approach adopted by Bossel (1999) and Meadows (1998), which consider the dual nature of the term: the development, in its most global sense as a measure of human welfare, linked to the sustainability of the system taking into account their specific and limitations.
It is noteworthy that under a systemic approach, development should not be considered as a synonym for growth, much less when it comes to measuring sustainable development and including on the analysis aspects such as equity and life quality or the adequacy of resources and the efficiency with which they are used (Meadows 1998).

As for the means of implementation and evaluation of sustainability frameworks, some differences are also evident. Those institutions/countries with a long tradition in conducting sustainability assessments have established their own set of indicators, which means that even countries within the EU are not using the same kind of indicators. This was not unexpected since the vision and even the description of sustainability itself varies among analyzed countries. In another aspect, it is important to note that in all cases the need to measure progress in terms of sustainability it is established and empirically evidenced, and it is considered necessary to conduct a continuous evaluation process such as the preparation of reports, or an accounting for social and environmental aspects complementary to the economic ones.

Because systems are in constant change as their components behave in a dynamic and not static way, the systemic approach is best suited to analyze, process and evaluate different aspects of sustainability, because it allows to generate methods to identify and evaluate key factors, trends and flows of interconnection between these aspects (Gallopín, 2010). Then, the systemic approach helps to underline that what happens in one part of the system (whatever its nature) affects the whole of the system because of the existence of synergies and other forms of relation between these parts (Novo, 2006). So then, if seeking a unifying framework the result should meet these requests because of its holistic nature that, under an integrated assessment can be a more accurate approach to study the complexity of the system (Olalla-Tárrega, 2006).

Accordingly, from the selected frameworks the best suited for the objective fixed on this article are the ESALC and IDB in Latin America (at the regional scale), Spain and Germany in Europe (at the national scale), as well as the ones raised by Meadows (1998) and Bossel (1999) (conceptual-academic scale).

However, some of these frameworks make it more clearly than others. The framework used by the IDB albeit built on the basis of water availability as a limiting factor for the system, entails a vision that does not correspond to the definition of targets and evaluation methods. The cases of Germany and Spain are both well endorsed with an indicators battery of their own helping seek for alternatives and results evaluation, but mechanisms to land proposals and goals at a local level are noted as missing.
In conclusion, in order to gain a greater level of concretion and integration for the sustainable paradigm in general and its implementation in particular, the more appropriate as groundwork for the conception of a single sustainability framework are the ESALC, Bossel (1999) and Meadows (1998). These frameworks have the potential aspects to generate a useful tool for analyzing sustainability science.

3. Conclusions

Reviewing sustainability frameworks has allowed to observe the actual state of the sustainable approach at different scales and to remark its need for a greater operational level.

First, the most widespread vision of sustainability is still the one linked to development, and though three dimensions are generally included, this is not widely reflected on the way policies and decisions are designed and implemented. This is a fact particularly evident at the national scale where paradoxically, it would be more necessary due to the dynamic the decision-making process follows to meet short and medium term goals. Although there are some frameworks that really show a work thoroughly done and some very interesting insights, it is considered that a common base should be built if a greater sustainability of the socio-ecologic system as a whole wants to be achieved. Hence the adoption of a systemic approach is necessary to overcome the challenges faced worldwide and to address the complexity of sustainability related issues where the integration of its dimensions on any consideration is mandatory, the latter especially concerning social dimension.

Second, it was observed that to consolidate the sustainable paradigm and its operational capacity, sustainability dimensions approach should be less fragmented. Among the reviewed literature this fragmentation was present usually at the implementation and valuation stage, since it is more achievable to assess them separately.

One of the possible lines to help through this consolidation process is to measure sustainability via an integrated economic assessment of social and natural capital that still needs to be reinforced (O’Hara 1995; Rescia et al. 2008).

Sustainability has to be measured and evaluated for three main reasons: for its basic recognition as an element to be considered in any analysis, to formalize its own research results, and to facilitate the processing of information (Antequera and González 2005). At this point, the measurement and economic valuation of natural and social capital emerges as an appropriate method to include these goods normally overlooked in the conception of value.
Natural capital is defined as any stock that is able to cause the flow of goods and services profitable over time (Costanza & Daly 1992) and social capital as the whole of social relations based on trust, cooperation and reciprocity (Atria et al. 2003). These definitions, especially the natural capital one, obviate the interrelationship between these two fields. By the obtained results, it could be said that in general current approaches on this matter only glimpse the systemic view of these issues.

However, the economic valuation of these capitals even if reductionist for some, it is important to summarize the complexity of the services received from society and nature, to value them in a homogeneous way and to facilitate decision making processes.

Thus, both the search for methods and tools for natural and social capital evaluation as well as the analysis of sustainability frameworks, help to integrate both elements into a concise tool for understanding sustainability and assessing the elements that conform it under a systemic approach.

Evidently, there is still much to do in this field which also addresses only one of many ways to provide more concrete to the practical outcomes of sustainability. In doing so, a more extended review on economic valuation of social and natural capital is proposed in order to generate integrated valuation methods that help to define a common ground for the socio-ecologic system analysis foreseeing a concrete path to problem solving.

In conclusion, it is not desirable to simplify or uniform sustainability approaches but to make their results and principles as accurate and implementable as possible for the sake of the future.

More than focusing on a general consensus as normally understood (which given the circumstances would be hard to accomplish), what is here acknowledged is that efforts must be directed to broaden the scope under which sustainability is implemented.

The idea is not to create a best-way to analyze and respond to sustainability related issues, but to build a diverse network that acts as a common base for further construction.
References

ATRIA, R. et al., COMP. (2003). *Capital social y la reducción de la pobreza en América Latina y el Caribe: en busca de un nuevo paradigma*. Santiago de Chile, CEPAL.


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Government of the United States of America. Consulted on 20/05/2012 http://www.usa.gov/

Government of India. Consulted on 22/04/2012 http://india.gov.in/