



Sustainable Project Management and Sustainability-Focused Projects:

A Brief Summary

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Abstract

Life cycle management and its contribution with sustainability evaluate the projects with the environmental, economic and social effects of a project's life. In other words, with the sustainability aspect in project management, a project is organized with measurable sustainable standards and the consequences caused by the project contain sustainable attributes. Even though this sustainability point of view has a rising significance in project management literature another important approach is managing sustainability focused projects around the world. "Without endangering the next generation's needs" is the main concept of sustainability. From this point of view, in order to inherit a habitable world for the next generations, sustainability projects are being conducted in a variety of areas. Having gained attention by the public, sustainability projects developed special assessment tools, instruments, processes, and methodologies to evaluate and apply sustainability around the world. However, each type of project revealed its own methodologies and the projects can be classified according to these techniques. As well as methodologies, evaluation criteria and indicators are also established for sustainability projects literature. In this study, sustainable project management is summarized and the sustainability focused projects around the world is researched.

Keywords: Sustainability, Project Management

Introduction

Today, sustainability concept is being integrated in many areas as well as project management domain. This term is being handled in two different aspects in project management. The former one is sustainable project management which balances environmental, economic, and social areas of sustainability with life cycle management. Here, the projects are designed by taking into consideration the effects to the global society. The projects are organized with measurable sustainable standards so that the consequences caused by the project contain sustainable attributes. This approach provides a basis for sustainable development where the natural resources are being protected for next generations and their needs are not endangered as defined in Brundtland Report, 1987 [1].

Even though this sustainability point of view has a rising significance in project management literature another important approach is managing sustainability focused projects around the world. In order to inherit a habitable world for the next generations, sustainability projects are being conducted in a variety of areas. Some examples of these projects are; sustainability of drinking water, wetland, drainage, forest areas, fisheries, waste management and agriculture areas.

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Sustainable Project Management

The three well-known concepts of sustainability are environmental, economic and social aspects. A sustainable atmosphere is provided by balancing and harmonizing these three aspects [2]. In Figure 1, the intersection of the three components can be found.

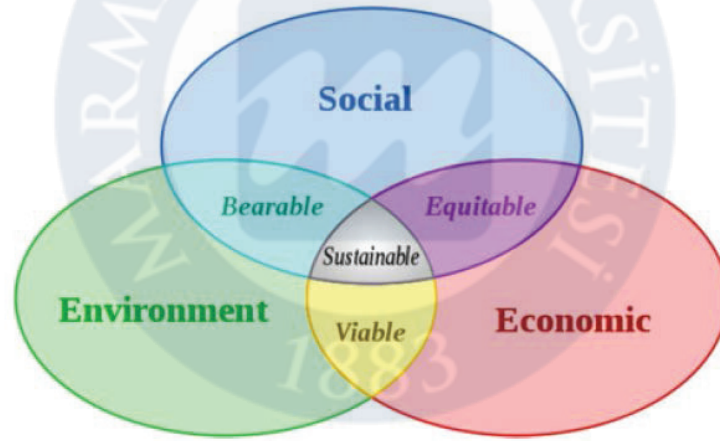


Figure 1. The three components of sustainability [3]

In order to integrate sustainability and project management Silvius (2012) defined the 6 principal of sustainability [3]:

1. Sustainability is about balancing or harmonizing social, environmental and economical interests.
2. Sustainability is about both short term and long term orientation.
3. Sustainability is about local and global orientation.
4. Sustainability is about consuming income, not capital.
5. Sustainability is about transparency and accountability.
6. Sustainability is also about personal values and ethics.

Projects are jobs which have a start and finish point in other words temporary, however sustainable development must provide permanent effects [4]. The contrast between these two is given in Table 1.

Table 1. The contrast between the concepts of sustainable development and projects [3]

Sustainable Development		Project Management
Long term + short term oriented	↔	Short term oriented
In the interest of this generation and future generations	↔	In the interest of sponsor/ stakeholders
Life cycle oriented	↔	Deliverable/result oriented
People, planet, profit	↔	Scope, time, budget
Increasing complexity	↔	Reduces complexity



Sustainability Projects

Governments, municipalities and special organizations perform a variety of projects in order to protect the environment and inherit to the next generations. These projects are conducted on environmentally protected areas to make a living for today's population and sustain it for the future population. Most popular sustainability oriented projects:

- Agriculture Projects
- Fisheries Projects
- Water & Wetland Management Projects
- Waste Management Projects

In this study, examples of these projects are investigated and a literature survey for each type is provided below. Finally, a summary of the literature is given in Table 2.

Sustainable Agriculture Projects

On the livelihoods of rural people the degradation of natural resources leads to desperate and poor agricultural practices [4]. Sustainable agriculture works with natural processes to conserve all resources and minimize waste and environmental damage, while maintaining or improving farm profitability [5]. Principles of sustainable agriculture are defined by Gerber (1992), and the sustainable agriculture projects aim to provide these goals [6].

- A sustainable agricultural system is based on the prudent use of renewable and/or recyclable resources.
- A sustainable agricultural system protects the integrity of natural systems so that natural resources are continually regenerated.
- A sustainable agricultural system improves the quality of life of individuals and communities.
- A sustainable agricultural system is profitable.
- A sustainable agricultural system is guided by a land ethic that considers the long-term good of all members of the land community.

It is foreseen that in the next four decades food production will have to be increased 70% at least, by using the same area of land, with increasing costs of energy and other inputs, and under evident climate change [7]. For this reason, sustainable agriculture gains importance around the world and maintaining the agriculture lands to the next generations is vital for human existence.

Sustainable Fisheries Projects

Once believed to be inexhaustible resources, many of the world's commercially harvested fish populations have now reached a point of crisis [8]. Over the last two decades, demands by fish harvesters for greater input into policy-making, combined with government cutbacks to fisheries management agencies, have resulted in a proliferation of community-based fisheries co-management projects in many countries [9]. However, mono-disciplinary research and scientific paradigms have approached their limits in fisheries, both in terms of costs and utility, now it is apparent that the future for policy related research lies in an interdisciplinary approach incorporating the natural, economic and social sciences centralizing ecosystem integrity, economic viability and social equity [10]. This approach indicates sustainability and the importance of sustainable fisheries for managing fisheries policy.

Sustainable Water & Wetland Management Projects

Water management, sustainable agriculture, and food security are the key issues that dominate current policy debates in most developing countries of Asia and Africa [11]. The quality of the marine environments and coasts has a big role in the ecological integrity of the environment as well as in the economy with the fishing, tourism, transport, trade and industrial activities [12]. Because of this, academicians and government officials have advocated incorporating ecosystem services into



environmental policy-making processes [13]. For instance, marine protected areas are often recommended as tools for meeting management objectives for the marine environment and, in some cases, the creation of marine protected areas has become a management objective [14]. Similarly, sustainable management of wetlands as a part of water resources and a major component of water resources, are crucial to life-support functions, human health and the natural environment is especially important [15]. Therefore, wetlands are vital to the functioning of any economy in the world, providing the necessary inputs to production in several economic sectors such as agriculture, industry, tourism and household consumption [16].

Sustainable Waste Management Projects

Waste is often the result of inefficient use of natural resources or a potential product in the wrong place [17]. Government policy and development of sustainable waste management programs is becoming increasingly important to local authorities. For a waste management system to be sustainable, it needs to be environmentally effective, economically affordable and socially acceptable [17]. An extensive review of waste management practices across Africa has concluded that the most sustainable way to manage waste in the majority of urban communities is to [18]:

- remove dry recyclables by scavenging, through door to door collection, and/or a dirty materials recovery facility;
- compost the remaining biogenic waste in windrows, using the matured compost as a substitute fertilizer; and
- dispose reject fossil carbon (plastics, synthetic textiles, metals) and inert waste in sanitary landfills.

Conclusions

In this study, a summary of sustainable project management is provided and how sustainability is integrated into project management is defined. Furthermore, the conflict between project management and sustainability is described. Afterwards the sustainability focused projects is researched and a brief summary of the types for these are given.

It is seen in the literature that sustainability focused projects has rising importance around the world. The projects are analyzed and evaluated by different methods. However, a management tool is not defined to assess projects and their success. So, it is thought that a methodology for assessing sustainability-focused projects will contribute improvement to the literature. This methodology can be constituted for each type of project separately, as each type has different variables and success factor. Another contribution can be provided by defining variables according to sustainability components (environmental, economic, and social). Especially, social factors are less indicated, than the other two in literature. As a future study, a project management methodology for sustainability-focused projects is planned to be formed for social issues and social success evaluation.



Table 2. Examples of Sustainability-Focused Projects from Literature

Author & Year	Sustainability Project Type	Area (if provided)	Method	Major Findings
Mölsa et al. (2002) [20]	Fisheries	Finland, Lake Tanganyika	Ecosystem Monitoring	•The institutional sustainability is required to harmonise legal arrangements and establish regional organization. •The project results show the lake fisheries are best managed for the whole lake rather than separately by each country.
Morissey (2005) [17]	Waste	Ireland	Survey	•In order to enhance the understanding of the social issues associated with the implementation of waste management policy in Ireland, a project is underway which examines participation in, perceptions of, and attitudes and responsibilities towards recycling. •The results of a pilot study are presented in the paper and social indicators are determined for waste management.
Shi & Gill (2005) [21]	Agriculture	China, Jinshan County	A system dynamics model	• A system dynamics model is developed to explore the potential long-term ecological, economic, institutional and social interactions of ecological agricultural development through a case study of Jinshan County in China. • Model is a feasible integrated tool to provide insight into the policy analysis of ecological agriculture, and sets a solid basis for effective policy making to facilitate sustainable development on a regional scale.
Davis et al. (2006) [9]	Fisheries	Bonavista Bay, Newfoundland, Eastport Project	Interviews	•By developing partnerships with government, researchers, public schools, and media outlets, the Eastport Peninsula Lobster Protection Committee has been successful in developing and promoting a unique approach to lobster conservation based on exclusive harvesting rights and a diverse array of conservation initiatives, including closed areas.
Mulder & Brent (2006) [4]	Agriculture	South Africa, LandCare Programme	Analytical Hierarchy Process	• The development of a new set of project selection criteria for the evaluation of project proposals in order to compile an effective LandCare programme portfolio is summarized.
Birol et al. (2008) [15]	Wetland	Cyprus, Akrotiri Wetland	A Contingent Valuation Study	•The results of the contingent valuation case study indicate that the public, both users and non-users of the resource, derive positive and significant economic values from sustainable management of the Akrotiri wetland.
Can & Alp (2012) [12]	Water	Turkey, Gocek Bay	Choice Experiment Method	• The environmental benefits can be obtained with improved water quality and restored marine ecosystem
Couth & Trois (2012) [19]	Waste	South Africa, Clean Development Projects	Sustainability Assessment	• The sustainability analysis shows that waste recycling and composting is beneficial over controlled landfilling, although uncontrolled dumping of waste as practiced across sub-Saharan Africa is cheaper in the short term.



Table 2. Examples of Sustainability-Focused Projects from Literature (continued)

Author & Year	Sustainability Project Type	Area (if provided)	Method	Major Findings
Mapedza et al. (2012) [22]	Wetland	Zambia, Lukanga	Qualitative Study	• In Lukanga, proposed developments in the name of poverty alleviation are more likely to result in the exclusion of poor local communities from the wetlands. • Any poverty alleviation strategy must take into account unequal power interests and ensure that developments made in the name of the poor really do benefit the poor.
Bobojonov et al. (2013) [23]	Agriculture	Khorezm, Uzbekistan, Aral Sea basin	A Mathematical Simulation Model	• Greater crop diversity can increase water use efficiency, • Secure farm income in dryland areas prone to water scarcity and soil salinity, • Crop diversification could secure income of downstream farmers during the climate-driven decline in water availability, and • Greater crop diversity and improved access to markets can lead to a sustainable development path in the region.
Phillipson & Symes (2013) [10]	Fisheries	-	Review	• The case for interdisciplinary research and call for renewed and deliberate efforts to build capacity for interdisciplinary working within research projects, programmes and institutions is reviewed.



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