Importance of Green Construction Rating System for Sustainable Management of Constructions in Kosovo

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1 ABSTRACT

The aim of the paper work is to provide a research that forms the basis for the Sustainable Environmental Management in general, its appliances within overall progress cities, with intention to encourage responsible authorities to provide comprehensive guidelines and manage environmental consequences due to misapplied regulations of the sustainability assessment of new construction in Kosovo. Many new building programmes require one of most common used models of sustainability. Regardless the sustainability assessment of buildings, comparable alternatives of buildings assessment management methods and in default of appropriate Green Construction Rating System (GCRS) as the benchmark for measuring the sustainability of new building structures, the paper work in general focus attempt for appliances of GCRC – assessment of buildings and solutions for management methods that can be successfully implemented in local level and/or regional level, in this case Pristina City.

2 OBJECTIVES

The overall objective of our paper is to introduce findings and useful data to suggest draft proposal for GCRS guidance, as a new national and/or regional standard form, that links process of sustainable structures during phases: design, construction and maintenance, to a higher standard of sustainability, thus useful tool for responsible authorities when identify challenges for providing a management methods that protect public interest, secure a sustainable and healthy environment for all in Region.

The scope of GCRS include: identifying the benchmarking best practices for new construction and major renovation while evaluating the construction's environmental performance, standards for certifying the design and construction of commercial or institutional buildings and high-rise residential buildings of all sizes, both public and private. The intent is to promote healthful, durable, affordable, and environmentally sound practices in building design and construction, basically in subject-matters such as Sustainable Sites (SS), Water Efficiency (WE), Energy and Atmosphere (EA), Materials and Resources (MR), Indoor Environmental Quality (IEQ), Innovation in Design (ID), Regional Priority (RP).

Specific objective is increasing the awareness of importance of implementing of GCRS in overall construction sectors; one of the largest ones of the Kosovo economy, hence has a tremendous impact on the environment and society. This study could help contractors' perceptions of green building practices by measuring the current levels of awareness of, and participation in GCRS methods.

The goal of implementing the GCRS includes the identification and best practice of designing, construction and maintenance of construction; communicating common goals, experiences and methods; and providing a directional tool to measure progress towards the concept of 'sustainable habitat'. Ideal assessment method using the GCRS identifies the most important attributes of a sustainable habitat, is calculable and comparable, measure more eco-efficiency, accesses processes and motivations and is comprehensible to multiple stockholders.

The successful cross-institutional assessment using the green construction rating system presented in this paper deepens from the stages of development. A best result of implementing the GCRS deepens as well from social structure and indicators within its content. Another goal of this paper is to give critical parameters to achieving sustainability in higher level, which are matters to decrease whitewashes, pursuing incremental and systemic change simultaneously, to increase habitat conscience by sustainable development education, and engaging it in cross-functional and cross-institutional efforts. The final goal is to adapt best practices of GCRS in regional and local context.

3 INTRODUCTION

3.1 The significance for a new developing model

Apparently, the world is facing several environmental, social and economic problems. The problems result essentially by the combination of three main factors such as world population growth; resource consumption and pollution of air, soil and water.

The world population has been increasing in a scary way in the last decades. To better understand the rapid population growth, world population reached one billion people by the year 1804, increased to 2 billion in 1927, three billion in 1960, 4 billion in 1974, 5 billion in 1987 and finally reached 6 billion in 1999. The world population in 2010 has reached 6.850 billion people and is expected to reach the 8 billion in 2018 (UN, 2010). This major increase in world population combined with the lifestyle of today's society, which is beginning to be adopted by developing countries, is causing a great demand for the natural resources of the planet. This fact is being a major cause of the global crisis that the world is experiencing nowadays. If the entire world's population will be living in a European's lifestyle, it would take two and a half planets to supply resources for the entire population (EU, 2009).

Global warming, a major cause of environmental problems, result mainly from the increased greenhouse gases emissions to the atmosphere. Some of the main gases are carbon dioxide, methane, nitrous oxide and fluorocarbons, which are derived mainly, form burning fossil fuels. This phenomenon has caused several consequences for the world's environment as, among others, increase of average sea level, climate changes, biodiversity loss, and desertification, e.g. 12 of the 13 warmest years ever have occurred since 1995; in year 2005 the average global temperature was 0.76 ^{0}C above the average temperature of the pre-industrial era and it is expected that by the end of this century the temperature will increase 1.8 to 4.0 ^{0}C (EU, 2009).

The energy consumption is one of the most important factors in the quest for sustainable development and leads to global warming. Energy consumption is the main responsible for emissions of greenhouse gases in the European Union (EU), It is also estimated that the construction sector accounts for about 35% of greenhouse gas emissions (EC, 2006). Thus, the efficient use of energy is certainly one of the most important ways to minimize the environmental problems; however, the demand for energy is increasing worldwide. The International Energy Agency predict that the global energy demand will increase by more than 50% by 2030 if politics remain unchanged and more than 60% of this increase respect to developing countries.

Beside above mentioned fields, according to European Environment Agency, in 2005 Europe produced 1300 million tons of waste, equivalents to 3.5 tons of waste per capita and 518 kg of Municipal Solid Waste. Moreover, protecting biodiversity is also seen as an important factor against the greenhouse effect, since the photosynthesis of plants provide an important natural mechanism for storing huge amounts of carbon. Water is also one of the essential elements for life on the planet. It is an invaluable resource for the continuity of human life, not only for drinking, but it is also essential for the production of other food resources. In fact, it takes a lot more water to produce food than the direct consumption. The needs of drinking water per person per day are 2 to 4 liters, but it is needed 2000 to 5000 liters of water daily to produce the food for one person (UN-Water, 2010).

The example taken for expansible city type is Prishtina, capital city of the newly independent state of Republic of Kosovo, Kosovo's wealthiest municipality, grown from a small trading town, with 18,000 habitants in 1910; to a recorded 20,000 inhabitants in 1948; 108,000 by 181 and approximately more than 550,000 inhabitants recently. This growth, developments and the proceedings of economic and political changes within two late decades have impacted upon the achievement of the city's Strategic Plans and developers. Rapid growth effected beyond the harmonic balance of community, environment and economy. Actually, habitants, area and cost aren't harmonically apprehended. For a long time the sustainability environment is seen by many as a restraint on development and only recently has it been recognized as a justified restraint on inappropriate development.

Moreover, there is a lack of capacity in terms of qualified and experienced environmental managers, necessary when rising expectation and speed of population, or when answering surfaced questions: can we maintain and improve live quality whiles radically improving the effectiveness in how we use all our resources, reducing pollution and waste, uncontrollable build environment, and manage sustainability environment? Which appropriate forms, contest, methods and authorities to use when building human and health environment?

3.2 The relevance of construction sector to development model

The construction sector is responsible for consuming about 40% of raw materials and 55% of extracted wood (Gaspar, 2009). The sector represents 40% of final energy consumption in Europe (Directive 31/2001/EU) and about 35% emissions of greenhouse gases; construction activities generate about 22% of all waste generated in Europe (APA, 2010).

The building sector is one of the biggest energy users and therefore a cause for being a CO_2 emitter. According to the Kosovo Statistical Office of the Ministry of Public Administration, the total number of households in Kosovo is 370,000, of which 10% or approximately 36,400 are apartments. This percentage of the housing stock consists of privatized apartments from the formerly public rental housing and new apartments' buildings block, and the other 90 % is individual housing. Based on the information of PHE of Prishtina the privatized housing stock is up to 50 years old and not refurbished, due to the lack of funds and longtime absence of complete legal framework. Also, after the war the new housing construction has increased, increasing home ownership and therefore electricity consumption. The Annual Average Consumption (AAC) of final energy for the period 2001- 2005 for constriction sector is 4% and for private household 30.7% of total energy consumption (Berisha & Bowen, 2010).

The economic and social global impact of the sector is also enormous. Construction is directly and indirectly related to almost 10% of GDP at the European level, it directly employs 12 million EU citizens and indirectly 26 million workers are dependent of this sector (EP, 2010). The building sector produces also 17% of emissions of greenhouse gases. However, as mentioned above, the building sector accounts for about 40% of energy consumption. Thus, 40% of emissions in the energy sector are also related to the building, resulting in a total emission corresponding to this sector of approximately 28% (EU, 2009).

The World Business Council for Sustainable Development (WBCSD) Vision 2050 report emphasize the way to sustainability and calls for a new agenda for business laying out a pathway to a world in which nine billion people can live well and within the planet's resources, by mid-century. The report is a consensus piece, compiled by 29 leading global companies, 14 industries and the result of an 18 month long combined effort between experts and dialogues with more than 200 companies and external stakeholders. This report addresses three questions: what does a sustainable world look like? How can we realize it? What are the roles business can play in ensuring more rapid progress toward that world?

It is stetted also that we have what is needed to live well, within the limits of the planet: the scientific knowledge, proven and emerging technologies, financial assets and instant communications. Nevertheless, today our societies are on a dangerously unsustainable track. The story is one of growth in populations and consumption (in most countries) compounded by inertia stemming from inadequate governance and policy responses necessary to manage growth. The result could be degradation of the environment and societies.

3.3 The importance of sustainability and assessment tool – GCRS

The concept and definitions of the term "sustainable" is basically the maxim of ethic of reciprocity, a simple veracity: do onto future generations as you would have them do onto you, although the literature is replete with complex and sometimes conflicting definitions of the term. The most popular definition of sustainable development was published by the 1987 U.N. World Commission on Environment and Development (WCED). It defined sustainable developments as those that "meet present needs without compromising the ability of future generations to meet their needs". Rosenbaum (1993) offers a similar and succinct definition that focuses on present responsibility versus long-term effect: "Sustainable means using methods, systems and materials that won't deplete resources or harm natural cycles". Thus, a sustainable aims to proper balance between three dimensions of sustainable development: Environment, Society and Economy (Figure 1.).

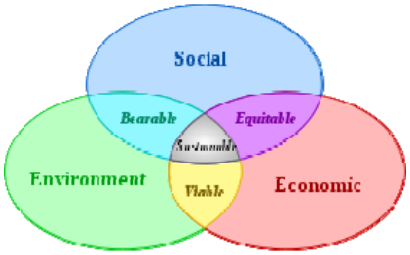

Fig. 1: Three main overlapping fields defining sustainable development, source: http://en.wikipedia.org

New, complex and constantly evolving sustainable design and construction practices have created a wide spectrum of published opinion about the definition, appropriate application and future direction of the concept and practice. This dearth of information has created a continuum of apprehension that ranges from a fear of reduced environmental laws weakening protection of the natural environment to the position that sustainable methods should be the only accepted construction practices (Venables et at, 1999).

Most states and many major cities have incorporated sustainability, 'green' concept into their internal building requirements for new construction. These green guidelines are used as benchmarks for green building incentive programs to build a green infrastructure too, necessary to mainstream green building practices, moreover practicing sustainable construction. There are currently many tools for assessing the sustainably of constructions, but there is issue to be taken into account such as s political, cultural, social and economic aspect of the site where it will be applied. Hence, given the subjectivity inherent in assessing sustainability, none of these methods is widely accepted (R. Mateus, 2009).

The oldest tool for the analysis of the environmental assessment method for buildings is BREEAM, developed by researchers in UK and the private sector in 1988. It is estimated that over 30% of buildings in UK are assessed by this method. In order to allow assessments outside the United Kingdom there is nowadays the BREEAM International. LEED is an American rating system that was established in 1996 and is managed by the NGO U.S. Green Building Council. The expansion of this system to the outside of the United States is notorious as this system i being used in many countries around the world. HQE is a French association founded in 1996 that brings together professionals in the construction sector with the aim to improving the environmental quality of construction. The label replaces the HPE HQE – Haute Performance Énergétique exists since early 1990. The SBTool is a rating system for sustainable construction developed through the participation of more than 20 countries since 1996. This tool was developed and is updated by the International Initiative for a Sustainable Build Environment (iiSBE). SBTool was aimed to allow the assessment and internationally comparison of the environmental performance of buildings. CASBEE is a Japanese system of environmental assessment of buildings and was developed by the Japan Sustainable Building Consortium in 2002. DGNB System is a German environmental assessment tool that was developed by the German Sustainable Building Council in cooperation with the Federal Ministry of Transport, Building and Urban Affairs and released in 2009 to be used to support the sustainable design and to assess the sustainability of buildings (J. Barbosa, et al, 2011).

The USGBC is considered the leader in promoting green/sustainable construction practices in the United States. The USGBC membership includes building developers, environmental leaders, retailers, financial industry leaders, architectural and engineering firms, product manufacturers and professional construction industry organizations. These members include the Construction Specification Institute, the American Institute of Architects, Turner Construction, Bovis Lend Lease, Johnson Controls, Ford Motorland, Herman Miller, the Natural Resources Defense Council, the Rocky Mountain Institute, Starbucks, Bank of America and numerous federal, state and local government agencies (Fedrizzi, 2004).

In 1999, the USGBC introduced the LEED Green Building Rating System. Through its use as a design guideline and third party certification tool, it aims to improve occupant wellbeing, environmental performance, and economic returns of buildings using established and innovative practices, standards and technologies. As of June 2004, its 4700 members had completed more than 1,400 LEED certified and registered projects across all 50 states (Fedrizzi, 2004; USGBC, 2002).

4 GENERAL APPROACHIES TO DEVELOPING THE GREEN CONSTRUCITON RATING SYSTEM

Attainability to achieve sustainability of construction sector is only possible thought a real methodological work. The background information, state-of-art information identified at Prishtina City, such as public administration's responsibility to enforce legislation, low level of social consciousness for sustainable and healthy environment, insufficiency of continues analysis for Sustainable Building Management and protection of public interest, were considered as a significant and an important part of causes that affected urban chaos recently. Thus, in order to have feasible sustainability the GCRS should be carried out during the phases of design since it gathers and report information for decision-making during the different faces of designing, constriction and use of building, explicitly during entire building lice cycle.

At the initial stage of design, clients have to be fully aware of regulatory requirements for sustainable development and follow it to producers, in order to accompany a planning application. In this case, GCRS tool in design stage (Figure 2.) helps to develop an environmental policy statement that clearly shows out the objectives and advise the project teams on design options for meeting sustainability targets, e.g. low energy heating, natural ventilation systems, etc. As well, during construction, the GCRS construction stage ensures the site is registered under the 'considerate constructors' scheme and monitor the delivery of sustainability goals – for example, to encourage the supply of materials from sustainable sources, the adoption of a sustainable waste strategy, etc.

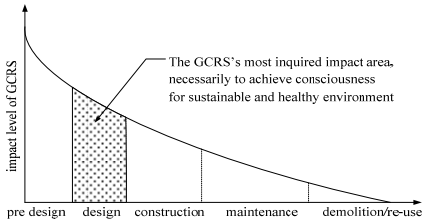

Fig. 2: The impact of GCRS during building life cycle

Such tools are increasingly emerging as important solutions to decrease the impacts of the construction sector. The common indicators of above mentioned tools is that sustainability assessment of buildings in based in several goals that are much wider than the energy efficiency aims. While, there are certain definitions for sustainable building, generally speaking resources like energy, water, land, material, etc. should be considered in a much more efficient and effective way compares to conventional construction. The construction sector should produce buildings that are also designed and used in order to crate healthier living conditions and more productive working environments, through the use-reuse as much as possible natural resources, e.g. natural light and improved indoor environmental quality.

4.1 Why for GCRS

Generally speaking, the Green Construction Rating System (GCRS) is like a report card for buildings, demonstrating to the community that a facility is built and/or operates in a way that supports the health and well-being of occupants and saves energy, resources and money following basic framework (Figure 3.)

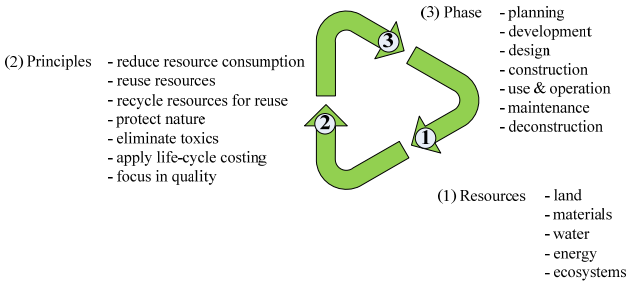

Fig. 3: The framework towards Sustainable Development when using GCRS

The GCRS tool, its method and practice is an internationally recognized certification system that measures how well a building is designed, built or operated to perform using several metrics: energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, stewardship of resources, Innovation in sustainable design and construction, and others metrics (indicators) deepening state's or instructional models for implantation.

Regardless of what rating, standard, or guideline system is used, one should always ask who, organization or instructional authorities, will make an assessment. Is it being done by a first-party, second-party, or third-party? A first-party assessment is one that comes directly from an organization that is associated with the entity making or may benefit from the claim.

A second-party assessment is not performed by an interested party. It might be done by a trade association, for example, and thus provides a level of independence from those who would directly benefit from a positive assessment. A third-party assessment is one that is done by an independent party that has no

financial interest in the outcome of the assessment. There can be no direct payments, shares, loans, grants, or ties to members of the product or service being assessed.

There are four principles that should be used when evaluating an assessment system:

1. Science-based – Results/decisions must be reproducible by others using the same standard.
2. Transparent – the standards and process for awarding the certification should be transparent and open for examination.
3. Objective – the certification body should be free of conflict.
4. Progressive – the standard should advance industry practices, not simply reward business

The most prevalent measurement standard for "Green" buildings is the USGBC's LEED (Leadership in Energy and Environmental Design) Program. LEED, a design tool and guide for "Green" construction, establishes standards that are verified through a third party rating system.

Concordantly to the Kosovo's legal survey and analyses and its significant need to evaluate and suggests the best and positive practices of GCRS awareness and participation, the causation has not been studied when suggesting the possible in a LEED project (participation). It could increases stack-holders, contractor's knowledge or consciousness of LEED practices (awareness), end users, etc. However, it could also be the case that awareness is a prerequisite to participation. This research established correlation, but further study should attempt to determine causation if suggested LEED tool as suitable rating system within Kosovo.

4.2 Rating systems and green building constructions

Beside recapitulations of different GCRS tools, the most appropriated and suggested rating system to further development into Kosovo's context could be LEED, or Leadership in Energy and Environmental Design, when redefining the way we think about the places where we live, work and learn. As an internationally recognized mark of excellence, LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

With nearly 9 billion square feet of building space participating in the suite of rating systems and 1.6 million feet certifying per day around the world, LEED is transforming the way built environments are designed, constructed, and operated --- from individual buildings and homes, to entire neighborhoods and communities. Comprehensive and flexible, LEED works throughout a building's life cycle too (Figure 4.)

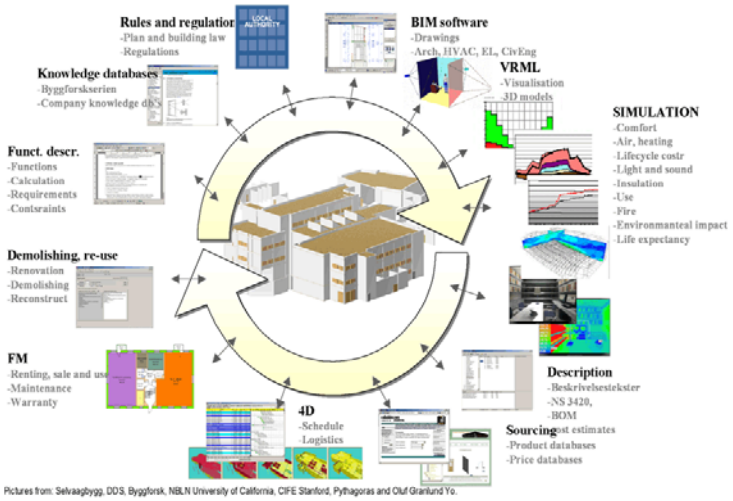

Fig. 4: The entire building life cycle, source: http://www.epmtech.jotne.com/

4.3 What LEED measures

Herewith are presented briefly the measures that the LEED promotes for a whole-building approach to sustainability, by recognizing performance in key areas:

4.3.1 Sustainable Sites

Site selection and development are important components of a building's sustainability. The Sustainable sites category discourages development on previously undeveloped land; seeks to minimize a building's impact on

ecosystems and waterways; encourages regionally appropriate landscaping; rewards smart transportation choices; controls storm water runoff; and promotes reduction of erosion, light pollution, heat island effect and construction-related pollution.

4.3.2 Water Efficiency

Buildings are major users of our potable water supply. The goal of the Water Efficiency category is to encourage smarter use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside and water-conscious landscaping outside.

4.3.3 Energy & Atmosphere

According to the U.S. Department of Energy, buildings use 39% of the energy and 74% of the electricity produced each year in the United States. The Energy & Atmosphere category encourages a wide variety of energy-wise strategies: commissioning; energy use monitoring; efficient design and construction; efficient appliances, systems and lighting; the use of renewable and clean sources of energy, generated on-site or off-site; and other innovative measure

4.3.4 Materials & Resources

During both the construction and operations phases, buildings generate a lot of waste and use large quantities of materials and resources. The Materials & Resources category encourages the selection of sustainably grown, harvested, produced and transported products and materials. It promotes waste reduction as well as reuse and recycling, and it particularly rewards the reduction of waste at a product's source.

4.3.5 Indoor Environmental Quality

The U.S. Environmental Protection Agency estimates that Americans spend about 90% of their day indoors, where the air quality can be significantly worse than outside. The Indoor Environmental Quality category promotes strategies that improve indoor air as well as those that provide access to natural daylight and views and improve acoustics.

4.3.6 Locations & Linkages

The LEED for Homes rating system recognizes that much of a home's impact on the environment comes from where it is located and how it fits into its community. The Locations & Linkages category encourages building on previously developed or infill sites and away from environmentally sensitive areas. Credits reward homes that are built near already-existing infrastructure, community resources and transit – in locations that promote access to open space for walking, physical activity and time outdoors.

4.3.7 Awareness & Education

The LEED for Homes rating system acknowledges that a home is only truly green if the people who live in it use its green features to maximum effect. The Awareness & Education category encourages home builders and real estate professionals to provide homeowners, tenants and building managers with the education and tools they need to understand what makes their home green and how to make the most of those features.

4.3.8 Innovation in Design

The Innovation in Design category provides bonus points for projects that use innovative technologies and strategies to improve a building's performance well beyond what is required by other LEED credits, or to account for green building considerations that are not specifically addressed elsewhere in LEED. This category also rewards projects for including a LEED Accredited Professional on the team to ensure a holistic, integrated approach to the design and construction process.

4.3.9 Regional Priority

USGBC's regional councils, chapters and affiliates have identified the most important local environmental concerns, and six LEED credits addressing these local priorities have been selected for each region of the country. A project that earns a regional priority credit will earn one bonus point in addition to any points awarded for that credit. Up to four extra points can be earned in this way.

4.3.10 LEED 2009 - CHECKLIST

Rating systems use a scoring system/checklist to evaluate new and remodeled buildings against a selected standard for environmental performance. LEED evaluates environmental performance from a whole building

perspective over a building's life cycle. Energy Star scores buildings based on their energy efficiency, comfort and indoor environmental quality. The Leadership in Energy and Environmental Design (LEED) building rating system is a voluntary, consensus-based rating system for commercial buildings which rapidly is becoming the de facto national standard for green building certification.

LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS PROJECT			
CHECKLIST			
Sustainable sites			27 Possible Points
	Prerequisite 1	Constriction Activity Pollution Prevention	Required
	Credit 1	Site Selection	1
	Credit 2	Development Density and Community Connectivity	5
	Credit 3	Brownfield Redevelopment	1
	Credit 4.1	Alternative Transportation - Public Transportation Access	6
	Credit 4.2	Alternative Transportation - Recycle Storage and Changing Rooms	1
	Credit 4.3	Alternative Transportation - Low-emitting and Fuel-Efficient Vehicles	3
	Credit 4.4	Alternative Transportation - Parking Capacity	2
	Credit 5.1	Site Development - Protect or Restore Habitat	1
	Credit 5.2	Site Development - Maximize Open Space	1
	Credit 6.1	Strom-water Design - Quantity Control	1
	Credit 6.2	Strom-water Design - Quality Control	1
	Credit 7.1	Heat Island Effect – Non roof	1
	Credit 7.2	Heat Island Effect - Roof	1
	Credit 8	Light Pollution Reduction	1
Water Efficiency			11 Possible Points
	Prerequisite 1	Water Use Reduction	Required
	Credit 1	Water Efficient Landscaping	2
	Credit 2	Innovative Waste Technologies	2-4
	Credit 3	Water Use Reduction	2
Energy and Atmosphere			35 Possible Points
	Prerequisite 1	Fundamental Commissioning of Building Energy Systems	Required
	Prerequisite 2	Minimum Energy Performance	Required
	Prerequisite 3	Fundamental Refrigerant Management	Required
	Credit 1	Optimize Energy Performance	1-19
	Credit 2	On-site Renewable Energy	1-7
	Credit 3	Enhanced Commissioning	2
	Credit 4	Enhanced Refrigerant Management	2
	Credit 5	Measurement and Verification	3
	Credit 6	Green Power	2
Material and Resources			14 Possible

			Points
	Prerequisite 1	Storage and Collection of Recyclables	Required
	Credit 1.1	Building reuse - Maintain Existing Walls, Floors and Roof	1-3
	Credit 1.2	Building reuse - Maintain Existing Interior Nonstructural Elements	1
	Credit 2	Construction Waste Management	1-2
	Credit 3	Material Reuse	1-2
	Credit 4	Recycled Content	1-2
	Credit 5	Regional Materials	1-2
	Credit 6	Rapidly Renewable Materials	1
	Credit 7	Certified Wood	1
Indoor Environmental Quality			15 Possible Points
	Prerequisite 1	Minimum Indoor Air Quality Performance	Required
	Prerequisite 2	Environmental Tabaco Smoke (ETS) Control	Required
	Credit 1	Outdoor Air Delivery Monitoring	1
	Credit 2	Increased Ventilation	1
	Credit 3.1	Construction Indoor Air Quality Management Plan - During Construction	1
	Credit 3.2	Construction Indoor Air Quality Management Plan - Before Occupancy	1
	Credit 4.1	Low-Emitting Materials - Adhesives and Sealants	1
	Credit 4.2	Low-Emitting Materials - Paints and Coatings	1
	Credit 4.3	Low-Emitting Materials - Flooring Systems	1
	Credit 4.4	Low-Emitting Materials - Composite Wood and Agrifiber Products	1
	Credit 5	Indoor Chemical and Pollutant Source Control	1
	Credit 6.1	Controllability of Systems - Lighting	1
	Credit 6.2	Controllability of Systems - Thermal Comfort	1
	Credit 7.1	Thermal Comfort - Design	1
	Credit 7.2	Thermal Comfort - Verification	1
	Credit 8.1	Daylight and views - Daylight	1
	Credit 8.2	Daylight and views - Views	1
Innovation in Design			6 Possible Points
	Credit 1	Innovation in Design	1-5
	Credit 2	LEED Accredited Professional	1
Regional Priority			4 Possible Points
	Credit 1	regional Priority	1-4
LEED 2009 for New Construction and Major Renovations			
100 base points; 6 possible Innovation in Design and 4 regional Priority points			
Certified		40-49 points	
Silver		50-59 points	

Gold	60-79 points	
Platinum	80 points and above	

Figure 5a,b,c. LEED 2009 for New Construction and Major Renovations Project,
source: For Public Use and Display, LEED 2009 for New Construction and Major Renovations Rating System, USGBC Member Approved November 2008, pdf.

5 CONCLUSION

Based on the analysis and comparison of the observable evidences for Sustainable Construction rating Systems developed recently in the world and appliance of standards for Sustainable Development in general, in regard to increase better understanding for all decision – makers and participants, our research presents suitable recommendations for principles, methods and checklists (comprehensive measures) for sustainability of new constructions during entire life cycle, thus explicitly the role of appliance of Green Construction rating system emphasizing as follows:

- promotes overall benefits for environment, builders and end-user when implementing GCRS, explicitly during the design and construction stage, the increment of the sustainable build environment performance will mutually increase the social, cultural, economic and environmental benefits;
- applicability of GCRS promotes and ensure users that the construction industry will start building in more sustainable way, with real improvements in key areas, such as: energy, carbon dioxide emissions, water use, better management of surface water run-off, usage of less pollution materials
- the implementation of GCRS, using its methods and suggested tools, improves environment today and sustainable environment of the region in the future, such as: increasing public attention and its conscience through education and media concern over environmental issues, notably climate change, giving rise to a continues education among consumers for more sustainable products and services,
- the GCRS increase the builder's performance towards sustainability performance of their Buildings, quality and efficient completion in that regards, lower running cost, improved comfort and satisfaction of tenants too;
- the GCRS provides valuable information to costumers / end-users, sufficient knowledge for sustainability performance of different buildings, assisting them in their choice for a new dwelling which should meet the sustainability criteria for a more pleasant and healthy place to live.
- as an alternative to creation of GCRS in Republic of Kosovo can be used the U.S. LEED rating system, since it is notorious and continues to be used in many countries around the world.

Prerequisite towards successful implementation of GCRS is to create and maintain the credibility between decision- makers, participants and implementing body of GCRS.

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