THE USE OF LEED CRITERIA'S FOR THE SUSTAINABILITY OF LABORATORY QUALITY THEIR ROLE IN RATIONALIZING THE COSTS OF ENVIRONMENTAL REMEDIATION

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ABSTRACT

Importance of research is the use of LEED criteria's certificate to sustain the quality of laboratories in Iraq and that these criteria's lead to rationalization of treatment costs (emissions, pollutants, hazardous wastes) in additional to reduce the cost of environmental remediation. The problem of research is reflected in the increasing rates of environmental pollution in Iraq, which adversely affected the integrity of the Iraqi environment and the lack of sustainability of the quality of laboratories, as well as the increasing costs of treatment and remediation of (pollutants, hazardous waste) which leads to increase a burden on the budget balance of public expenditure. The aim of the research is to reduce (emissions, pollutants and hazardous wastes) in additional to preserve the integrity of the Iraqi environment through the use of LEED criteria's for the sustainability of laboratory quality as well as reduce the costs of treating environmental pollutants and thus rationalizing public expenditure. Hypothesis the use of LEED criteria's for the sustainability of laboratory quality reduces the costs of treatment and remediation of the environment, which leads to the rationalization of public expenditure of the state, Results of the research is the LEED criteria's certificate leads to sustainable laboratory quality and rationalizing the cost of Remediation environment by eliminating any (additional, burdens and costs).

Keyword: The LEED Criteria's for Sustainability, Quality Laboratory, Rationalization Cost of Environmental Remediation**.**

INTRODUCTION

Our society has continued to behave in an unsustainable way. This is reflected in the transcendence of the sustainable boundaries of our planet. Despite the warning that our ecological footprint has been and continues to grow at an unbearable rate, we have followed the *"work for the usual"* (Crowther et al., 2019). Making it necessary to implement the foundations of sustainable environmental development as one of the cornerstones of advancing progress, prosperity and welfare. And the subsequent creation of a sustainable society that preserves of right the future generations to friendly environmental resources (Aissa et al., 2019). With increased attention to society and the environment, quality is the difference in determining the centres of organizations in the markets. Quality requires institutions to fully pool their Capabilities and resources to achieve their goals efficiently and effectively. And if talking about quality, it is related to talk about the criteria's specifications (ALsgarawna, 2013).

LITERATURE REVIEW

The Sustainability

The word (sustaina) is derived from the Latin (sustinere), (to hold: tinere) It means support and preservation, and (up: sus) Meaning up to high. Since the beginning of human history on Earth and human consciousness has changed a lot, as well as the vision of the environment and deal with it, and with the increase of the age of human beings on the ground increased its brutality towards the environment; where the human began to believe that the environment was created only for his service and all what Harness to do what he wants, Reached the highest degree of infringement on the environment with the beginning of the era of the Industrial Revolution and continued to this day in humanly forms. With this gradual change in human behaviour and its interaction with the environment, specifically in 1962 when Rachel Carlson published her book Silent Spring, which debated the effects of the industrial revolution on the environment for the first time, the author noted in her book that humanly species of birds disappeared as a result of use *"How much I fear that the coming spring will be silent without birds singing in the forest, and the desert is full of locusts, and the landscape of the stars and the moon is distorted,"* she said (Aihuman, 2016). Since then Human began to see the consequences of his actions to the environment, and this book is a major turning point in human thought and the first basis that paved the way for the emergence of sustainability, and then continue to attack the way of human thinking in the era of the Industrial Revolution; followed by a campaign by lawyer Ralph Nader in 1965 In 1968, the first meeting of the so-called Club of ROME, an informal association of leading independent figures in politics, trade and science, was a men and women of long-term thinking who contributed in a multidisciplinary and comprehensive way to reach To a future Best. Their first concern was to examine the increase in the world's unsustainable economic consumption (Horngren et al., 2018). Recently, attention has been to nature and the environment through the sustainability where it’s know a called the biotic environment of diverse organisms Natural for factors that maintain their existence for the longest time possible (ALsgarawna, 2013). And the Sustainability is from the point of view of institutions are increasingly applying the key success factors of cost and efficiency, quality, time, and innovation to promote sustainability the development and implementation of strategies to achieve long-term financial, social, and environmental goals (Horngren et al., 2018). And the Pillars of sustainability as follow:

1. **Environmental Sustainability**: Ecological integrity is maintained, all of earth’s environmental systems are kept in balance while natural resources within them are consumed by humans at a rate where they are able to replenish themselves.
2. **Economic Sustainability**: Human communities across the globe are able to maintain their independence and have access to the resources that they require, financial and other, to meet their needs. Economic systems are intact and activities are available to everyone, such as secure sources of livelihood.
3. **Social Sustainability**: Universal human rights and basic necessities are attainable by all people, who have access to enough resources in order to keep their families and communities healthy and secure. Healthy communities have just leaders who ensure personal, labour and cultural Rights are respected and all people are protected from discrimination.
4. **Human**: It means preserving human capital, which consists of (health, education, knowledge, skill, leadership, and access to services).

Figure 1
SHOW PILLARS OF SUSTAINABILITY

Scope of the sustainability: It is the domain or community in which sustainability is applied at home, and its existence is usually associated with a range of social, economic and environmental factors that together constitute full support for sustainability in all its components. And the application of sustainability in any dynamic environment depends on four principles As follows in Figure 1:

1. **Consumption:** is the rate of utilization of natural ingredients that are an important catalyst for the sustainability of living organisms, and the higher the consumption rate, the more sustainable the life, and vice versa.
2. **The Resources:** All natural and industrial sources that contribute to sustainability support. When resources are adequate and appropriate to the number of organisms, this will help sustain their life as long as possible.
3. **The Technology:** the modern scientific influence on the nature of life that leads to its development. When technology is used correctly, it leads to sustainability by providing a range of modern scientific discoveries in medicine and biology (Stewart & Coclanis, 2019).

The Sustainability objectives: There are many goals of achieved by sustainability as follows (Aleksanteri, 2019):

1. Provide a range of solutions to maintain the proportions of global food. Reducing poverty rates and trying to find alternative ways to deal with economic crises that provide equal financial stakes to individuals.
2. It is essential to provide comprehensive, adequate and sustainable education through the emergence of new studies that provide ideas for adequate support for sustainability.
3. Take advantage of natural, industrial sources of energy to provide reliable materials at affordable prices and within the financial capabilities of people.
4. To ensure the provision of a health sector capable of reducing the prevalence of diseases, and provide appropriate remedies to reduce the global health crises.

The International Criteria's For the Sustainability

After the nature was for the human being a source of the hope and the well-being. The nature has evolved with the development of science, technology and modern industries. on the second half of the twentieth century increased the environmental problems have represented by pollution of water, air, and the high degree of warming of the earth (global warming) As well as the depletion of non-renewable resources and the deterioration of nature and human health associated with nature. To solve these problems must be adopted an urgent to use global sustainability criteria's to address all these problems (Brenner, 2018). It is known the Sustainability Criteria's and certifications are voluntary, usually third party-assessed, norms and criteria's relating to environmental, social, and ethical and food safety issues, adopted by companies to demonstrate the performance of their organizations or

products in specific areas (Al-Alwan & Bek, 2017). And the Global Sustainability Criteria's Board has sole responsibility for setting globally accepted criteria's for sustainability reporting. And The GRI Criteria's are the first global criteria's for sustainability reporting. They feature a modular, interrelated structure, and represent the global best practice for reporting on a range of economic, environmental and social impacts in Table 1.

Table 1
SHOW THE BASIC CRITERIA FOR SUSTAINABILITY

item	**Global Criteria's**
1.	The World Green building Council – world GBC
2.	**BREEAM** The Environmental Assessment Method for buildings Around the world (UK Criteria's)
3.	**LEED** Leadership in Energy & Environmental Design- US Green Building Council
4.	**THE CODE FOR SUSTAINABLE HOMES** UK Government criteria's legislation that covers all housing
5.	**MINERGIE** The Swiss Sustainability Building Criteria's
6.	**II,Ila loi GreneIIe** The France project of bill the Grenelle for environmental buildings
7.	**PEARL RATING SYSTEM** Abu Dhabi Urban planning Council (Estidama)

Leadership Energy and Environmental Design (LEED)

This system was developed by the American Council Crowther et al. (2019) (USGBC) for Green Buildings in 1998. An internationally recognized system for the design, construction and operation of environmentally sensitive and high-performance buildings. Or is an internationally recognized system of design, construction and operation of high-performance, green buildings. Where the rating system evaluates and measures the impact and performance of an enterprise in Figure 2.

Figure 2
SHOW THE SPECIAL LEVELS OF THE LEED SYSTEM (Talal & Akaba, 2013)

The Advantages of LEED Certification Mathew & Williams, (2006)

There are many advantages to obtaining a certificate of LEED As follows:

1. The building valuation will be increased. & the liability will be reduces.
2. Enhance the relationships between the employees
3. Reduce the Usage of water and energy
4. Enhance the Indoor air quality.
5. The cost of Maintenance and operation will be reduced.

6. It wills much more innovation to improve the performance of the building.
7. Reduce the construction waste during the process.
8. The Sustainability goals will be attract companies.
9. Reduce the 'sick building' phenomenon
10. Improve the employee performance
11. Enhance the reuse of recycled materials

The LEED Scheme (Al-Bakry & Abbas, 2019).

1. The Sustainable Sites
2. The Water Efficiency
3. The Energy & the Atmosphere
4. The Materials & the Resources
5. The Indoor Environmental of Quality
6. The Innovation in Design

Figure 3
SHOW THE LEED SCHEME

The LEED system in the Laboratories Dincer et al. (2019):

The Laboratory facilities present a unique challenge for energy efficient and sustainable design, with their inherent complexity of systems, health and safety requirements, long-term flexibility and adaptability needs, and energy use intensity, and environmental impacts And the Laboratories (labs) are the workrooms used by specialists or people instructed to carry out experiments for the research and usage of natural scientific processes. Such as (chemical, physical, medical, microbiological, & genetic engineering laboratories) and the Following classification shall be used for determining size of lab (Wu et al., 2018):

1. **Small sized**: A lab receiving samples of up to 100 subjects
2. **Medium sized:** A lab receiving samples of up to 101- 400 subjects per day
3. **Large sized**: A lab receiving samples of more than 401-1000 subjects per day
4. **Very large sized:** A lab receiving more than 1000 subjects per day
5. **Multiple locations**: A lab with more than one location in the same district with same legal identity.

Concept of the Quality: That quality began in the 1920s, It then spread to North America and Western Europe until it became the subject of the times in Figure 3, specifically when Taylor developed the concept of planning and Shehwart, the concept of statistical quality control methods (Dittrich, 2015). The Quality (a word derived from the Latin word Qualities) which means that quality is a measure of excellence or the absence of defects,

deficiencies and large variations by strict adherence to measurable and verifiable criteria's to achieve homogeneity and uniformity in output satisfy the specific requirements of customers or users (Asadi, 2021). And the Quality can be described as representing doing the right thing the right way and at the right time, or is (doing the right thing from the first time, and continuing to do the right thing every time (Jones, 2017) in Table 2.

Table 2
SHOW QUALITY OF CHARACTERIZATION

Quest for Excellence of Knowledge	Q
Understanding the user' s need	U
Actions to achieve user' s Demand	A
Leadership Quality for Librarian	L
Involving all staff	I
Team Spirit in Achieving Common Goals	T
Yardstick to measure Progress	Y

Rationalize costs: rational behaviour is one of the basic pillars on which economic units build their goals and objectives to reach the Sustainability. There are several concepts of the term rationalization means Rationalize or controlling, and it is defined as *"those decisions that efficiently achieve the goals of the institution."* Asadi (2019) rationalization is the reorganization of the company in order to increase its efficiency. This organization may lead to an expansion or decrease in the size of the company, a change in policy, or a change in strategy related to specific products. Cost rationalization (a methodology for preventing the depletion of economic resource inputs in the establishments by using systems and methods and raising production efficiency). The concept of cost rationalization means the optimal use of available resources in order to reduce waste and increase production efficiency (Yaqoob, 2018).

The Environment Remediation: The development of human civilization led to a severe imbalance in nature and the occurrence of various types of pollution. Is known as the ecology or prediction science is the science concerned with the scientific study of the human relationship with his physical environment surrounding him, the relationships between all living organisms such as plants and animals, and finding the vital links between them, and between them and the surrounding environment, which affect their distribution and availability in nature (Rubí & de Lira Gondim, 2021). A set of information about the benefits of ecosystems, and how to obtain a healthy environment for future generations through the use of natural resources in a way that is harmless to the environment, and the surrounding environment of a living organism consists of: living factors such as other living organisms that share the same habitat, non-living factors or The so-called physical properties, examples include climate and geology (Kuppusamy et al., 2020). That Environmental pollution a challenge for sustainable development Increasing industrialization and urbanization inevitably generates a number of environmental challenges in many areas of the world. More and more gaseous pollutants are released into the atmosphere. Vast amounts of municipal sewage sludge are being created. Water resources are polluted with so-called emerging organic contaminants, for example pharmaceuticals, insecticides, surfactants (substances that reduce a liquid's surface tension) or endocrine disruptors (chemicals interfering with the body's endocrine system). POPs – Persistent Organic Pollutants – pose a significant risk to human health and the environment around the entire globe. They are organic compounds that are resistant to environmental degradation through chemical, biological and photolytic processes (IAEA, 2021).

RESEARCH METHODOLOGY

Research Instrument: The theoretical aspect the author relied on the inferential descriptive approach through a group of sources and research papers published in scientific journals related to the subject of the study and on articles, reports and studies published on the Internet.in additional to The practical aspect The author relied on the descriptive and analytical approach to study the actual reality of data and information with a set of records and financial statements of the department, the study sample and personal interviews with officials with specialization, and the adoption of the inductive approach to reach the results by using the cost system based on the activities of ABC as a basic rule for calculating costs.

Research Model: This paper uses multiple linear models. There are one dependent variable and two independent variables in this model in Table 3.

Dependent variable: **Cost Rationalization**

Independent variables**: LEED criteria's, Quality Laboratory**

Method of data analysis: Data are analysed by Using the Excel program in analysing and calculating the company's costs. This program helps interpret the data collected in order to accurately test the significance of the dependent variable and the independent variable.

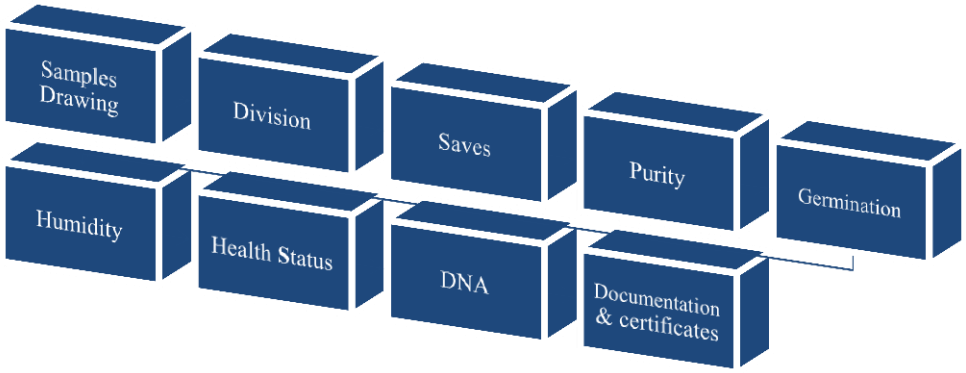
Descriptive analysis: the Directorate of Inspection & Certification of Seeds it's working to Inspection and Certification for all Seeds which is entering to the Iraq because it Controller part in Iraq. We will present the specifications of the current construction with the mechanism of work and the cost calculation for Directorate Building Specifications.

Table 3
SHOW THE DIRECTORATE BUILDING SPECIFICATIONS

Item	Specifications	Notes
Total building area	1,000 Square	
Total laboratory area	270 Square	
The total area of public administration	480 Square	
The total Green area	50	
The total area of the garage & free area	150	
The number of floors	3	
The total number of rooms	35	
Number of laboratories	9	
The number of rooms on each floor	14 ,8 ,8	& 5 for service
The area of one room	20-30 Square	
The total number of windows	105	
The number of windows in each lab	1-3	
The number of windows in each room	1-2	
Type of construction	Modern Regarding the Iraq	Traditional compared to other countries

Source: Author own Computations

The mechanism of operations for the directorate of Inspection & Certification of Seeds is explained in the figure 4.



Source: Reality of laboratories

Figure 4
SHOW STAGES OF INSPECTIONS & CERTIFICATIONS FOR SEEDS

From figure 4 in above the inspections & Certification of Seeds are going through (9) Laboratories, In addition to some side activities of the directorate, including planting some seeds for the purposes of experiments and study in Table 4.

Table 4
SHOW CALCULATE TOTAL COSTS OF DIRECTORATE FOR INSPECTION & CERTIFICATION OF SEEDS BY USING ACTIVE BASE COSTING SYSTEM (ABC)

Laboratory Name	Total cost for Inspections & Certifications	The number of Times Inspections	Cost per unit
Sampling	6,163,526	188	32,785
Partition	4,752,250	290	16,387
Storage	4,756,866	290	16,403
Purity Check	4,964,172	46,394	107
Numerical Examination	4,749,997	47,500	100
Check Weight of 1000 Seeds	4,634,926	46,350	100
Check Coated Seeds	4,634,926	46,350	100
Germination Rate Check	4,251,095	2,823	1,506
Germination Strength Check	4,074,607	12,163	335
Check Germination Speed	4,074,607	12,163	335
Cold check	4,074,607	12,163	335
Temporal Acceleration check	4,074,607	12,163	335
Tetrazolium Essay	4,074,607	12,163	335
Embryo Examination	4,074,607	12,163	335
Insect Examination	4,804,856	24,024	200
Fungal Examination	4,804,137	48,041	100
Nematode Assay	4,804,137	48,041	100
Virus Check	4,639,542	46,395	100
Humidity Check	8,211,529	2,383	3,446
Physical Examination	4,824,527	1,635	2,951
Protein Assay	4,810,221	7,333	656
PCR Assay	4,968,307	121,178	41
GMO, DNA Test	4,969,833	19,644	253
Documentation	6,043,174	368	16,422
Issuing Certificates	6,043,174	368	16,422
Total Costs for 2020	**122,326,320**	**582,573**	**210**

Source: Author own Computations

Analysing the LEED Criteria's and comparing it with building directorate of Inspection & Certification for Seeds.

Table 5
SHOW DISTRIBUTING LEED CRITERIA'S ITEMS ACCORDING TO MAIN SUSTAINABILITY AXES AND COMPARING THEM WITH THE BUILDING OF DIRECTORATE FOR INSPECTION & CERTIFICATION OF SEEDS

Item No	Clause of accreditation or stipulation	Accreditation points	Goals that fall under the item				Conform to Specifications For Building of Directorate for Inspection & Certification of Seeds	
First: Sustainability of The Site (10) Degree per Accreditation points = 100								
			Environmental	**Resources**	**Economic**	**Society**	**Yes**	**No**
1	Prevent pollution from construction works	**4.50**	1.00	1.50	1.00	1.00		*
2	Site selection	**4.50**	0.50	1.00	1.00	2.00		*
3	Intensity and community connection		0.50	0.50	1.00	1.00		*
4	Redevelopment of previously used and polluted areas	**5.50**	1.00	2.50	1.00	1.00	*	
5	Means of transportation	**4.00**	0.50	2.00	0.50	1.00	*	
6	Development Site	**9.00**	3.00	2.00	2.00	2.00	*	
7	Rainwater management: quantitative and qualitative control	**6.5**	1.00	3.00	2.00	0.5		*
8	The impact of global warming on the open and covered sites	**4.00**	1.00	1.00	1.00	1.00		*
9	Reducing light pollution	**0.00**	0.00	0.00	0.00	0.00		*
10	Reducing sound pollution	**0.00**	0.00	0.00	0.00	0.00		*
	Total Number of items	**38.00**					3	7
	Second: Efficiency of water use (25) Degree per Accreditation points = 100							
1	water use reducing	**9.00**	2.30	3.20	1.50	2.00		*
2	Irrigation water use efficiency	**1.00**	3.00	2.50	1.00	3.50	*	
3	Technological innovation used with water Sewage	**9.00**	2.00	3.00	2.00	2.00	*	
4	Creating new ways to reduce water consumption	**10.00**	3.00	2.00	3.00	2.00		*
	Total Number of items	**38.00**					2	2
	Third: Efficiency of use energy (12.5) Degree per Accreditation points = 100							
1	Basic planning in the building's energy systems	**7.00**	2.00	1.50	1.50	2.00	*	
2	Determine the minimum and the best level of	**6.00**	2.00	1.00	1.00	2.00	*	

	energy performance							
3	Planning cooling management	**5.50**	1.50	1.50	1.50	1.00	*	
4	Power supply	**4.50**	1.50	0.50	1.50	1.00		*
5	Building operating energy study	**5.00**	1.50	1.50	1.50	1.00		*
6	Impact on the atmosphere	**4.00**	1.50	1.50	1.00	0.00		*
7	Measurements and audits	**6.00**	1.50	1.50	1.50	1.50		*
8	green energy	**4.00**	1.00	1.00	1.00	1.00		*
	Total Number of items	**42.00**					3	5
	Fourth: Materials and Resources (12.5) Degree per Accreditation points							
1	Material assembly Recyclable	**5.00**	1.00	1.50	1.50	1.00		*
2	Reuse the Building	**10.00**	3.00	3.00	2.00	2.00	*	
3	Construction waste management	**5.50**	1.50	1.50	1.50	1.00	*	
4	Reuse of materials	**4.50**	1.50	0.50	1.50	1.00		*
5	Material use recycled	**5.00**	1.50	1.50	1.50	1.00		*
6	Materials Local Use	**4.00**	1.50	1.50	1.00	0.00		*
7	Renewable Material use	**6.00**	1.50	1.50	1.50	1.50		*
8	The perfect deal With timber	**4.00**	1.00	1.00	1.00	1.00		*
	Total Number of items	**44.00**					2	6
	Fifth: the quality of the internal environment (12.5) Degree per Accreditation points = 100							
1	Minimum indoor air quality performance	**10.00**	3.00	3.50	2.50	1.00		*
2	Environmental control of tobacco smoke	**10.00**	3.00	3.00	2.00	2.00	*	
3	Increase the ventilation performance in the building	**5.50**	1.50	1.50	1.50	1.00	*	
4	Ventilation management plan inside of building	**4.50**	1.50	0.50	1.50	1.00		*
5	Achieve the lowest emissions of air pollutants	**5.00**	1.50	1.50	1.50	1.00		*
6	Efficiency of individual control systems	**4.00**	1.50	1.50	1.00	0.00		*
7	Achieve thermal comfort	**6.00**	1.50	1.50	1.50	1.50		*
8	Enhance natural lighting and external vision	**4.00**	1.00	1.00	1.00	1.00		*
	Total Number of items	**49.00**					2	6
	Sixth: Creativity in design (50) Degree per Accreditation points = 100							

1	Creativity in design	**13.00**	5.00	3.00	3.00	2.00	*	
2	Authorization of professional Specialists from the LEED	**0.00**	0.00	0.00	0.00	0.00		*
	Total Number of items	**13.00**					1	1
	Seventh: Priority of the Region (100) Degree per Accreditation points = 100							
1	Priority of the Region	**45.00**	10.00	12.00	8.00	15.00	*	
	Total Number of items	**45.00**					1	0
	Total items	**269.00**					**14.00**	**27.00**

Source: Author own Computations

RESULTS AND DISCUSSION

Descriptive data analysis and findings: From the table 5, we note the Total items 269 divided on 700 represent total Accreditation points and its equal (38) In other words, this percentage don'ts fall within the classification of LEED criteria's for sustainable construction, as follows: {40-49 point certified, 50-59 point silver, 60-79 point gold, 80+ point platinum} Therefore, the Directorate for Inspection & Certification of Seeds It incurs additional costs to remediation environment Such as costs of not disposing of hazardous waste as a result of lack of these criteria's.

Table 6
SHOW TOTAL COSTS OF A DIRECTORATE FOR INSPECTION & CERTIFICATION OF SEEDS WITHIN ACCREDITATION POINTS 38%

Laboratory Name	Total cost within accreditation points 38%	Total costs within accreditation points 40-49%	Rationalization Cost
Sampling	6,163,526	5,368,431	795,095
Partition	4,752,250	4,139,210	613,040
Storage	4,756,866	4,143,230	613,636
Purity Check	4,964,172	4,323,794	640,378
Numerical Examination	4,749,997	4,137,247	612,750
Check Weight of 1000 Seeds	4,634,926	4,037,021	597,905
Check Coated Seeds	4,634,926	4,037,021	597,905
Germination Rate Check	4,251,095	3,702,704	548,391
Germination Strength Check	4,074,607	3,548,983	525,624
Check Germination Speed	4,074,607	3,548,983	525,624
Cold check	4,074,607	3,548,983	525,624
Temporal Acceleration check	4,074,607	3,548,983	525,624
Tetrazolium Essay	4,074,607	3,548,983	525,624
Embryo Examination	4,074,607	3,548,983	525,624
Insect Examination	4,804,856	4,185,030	619,826
Fungal Examination	4,804,137	4,184,403	619,734
Nematode Assay	4,804,137	4,184,403	619,734
Virus Check	4,639,542	4,041,041	598,501
Humidity Check	8,211,529	7,152,242	1,059,287
Physical Examination	4,824,527	4,202,163	622,364
Protein Assay	4,810,221	4,189,702	620,519
PCR Assay	4,968,307	4,327,395	640,912
GMO, DNA Test	4,969,833	4,328,725	641,108
Documentation	6,043,174	5,263,605	779,569
Issuing Certificates	6,043,174	5,263,605	779,569

Total Costs for 2020	**122,326,320**	**106,546,225**	**15,780,095**

Source: Author own Computations

From the previous table 6, we note that there is an inflated cost as a result of the laboratories bearing additional costs such as (salaries, water, electricity, maintenance, equipment, new facilities, no disposal of hazardous waste, no disposal of solid and liquid waste). As for the application of LEED criteria's, the cost will be Rationalize.

Table 7
SHOW THE COSTS PER UNIT WITHIN ACCREDITATION POINTS 38% COMPARED TO A LEED CRITERIA'S OF THE DIRECTORATE FOR INSPECTION & CERTIFICATION OF SEEDS

Laboratory Name	Total Cost within Accreditation Points 38%	Total Costs within accreditation points 40-49%	Number of Times Inspections	Cost Per Unit within Accreditation Points 38%	Costs Per Unit within accreditation points 40-49%	Rationalize Cost
Sampling	6,163,526	5,368,431	188	32,785	28,555	4,230
Partition	4,752,250	4,139,210	290	16,387	14,273	2,114
Storage	4,756,866	4,143,230	290	16,403	14,287	2,116
Purity Check	4,964,172	4,323,794	46,394	107	93	14
Numerical Examination	4,749,997	4,137,247	47,500	100	87	13
Check Weight of 1000 Seeds	4,634,926	4,037,021	46,350	100	87	13
Check Coated Seeds	4,634,926	4,037,021	46,350	100	87	13
Germination Rate Check	4,251,095	3,702,704	2,823	1,506	1,312	194
Germination Strength Check	4,074,607	3,548,983	12,163	335	292	43
Check Germination Speed	4,074,607	3,548,983	12,163	335	292	43
Cold check	4,074,607	3,548,983	12,163	335	292	43
Temporal Acceleration check	4,074,607	3,548,983	12,163	335	292	43
Tetrazolium Essay	4,074,607	3,548,983	12,163	335	292	43
Embryo Examination	4,074,607	3,548,983	12,163	335	292	43
Insect Examination	4,804,856	4,185,030	24,024	200	174	26
Fungal Examination	4,804,137	4,184,403	48,041	100	87	13
Nematode Assay	4,804,137	4,184,403	48,041	100	87	13
Virus Check	4,639,542	4,041,041	46,395	100	87	13
Humidity Check	8,211,529	7,152,242	2,383	3,446	3,001	445
Physical Examination	4,824,527	4,202,163	1,635	2,951	2,570	381
Protein Assay	4,810,221	4,189,702	7,333	656	571	85
PCR Assay	4,968,307	4,327,395	121,178	41	36	5
GMO, DNA Test	4,969,833	4,328,725	19,644	253	220	33
Documentation	6,043,174	5,263,605	368	16,422	14,303	2,119
Issuing	6,043,174	5,263,605	368	16,422	14,303	2,119

Certificates						
Total Costs for 2020	**122,326,320**	**106,546,225**	**582,573**	**210**	**183**	**27**

Source: Author own Computations

From the previous table 7, we note that in the case of obtaining the LEED criteria's certificate, costs will be rationalized by 12.80% through the following equation. (27/210 =12.80).

CONCLUSION

1. The LEED criteria's certificate leads to sustainable laboratory quality
2. The LEED criteria's leads to rationalizing the cost of Remediation environment by eliminating any additional burdens and costs
3. The LEED criteria's leads to rationalizing the cost for inspections by 12.80%.

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Author Contributions

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