



# Evaluation of Environmental Performance of BAU to facilitate ranking to a higher position among UI GreenMetric List



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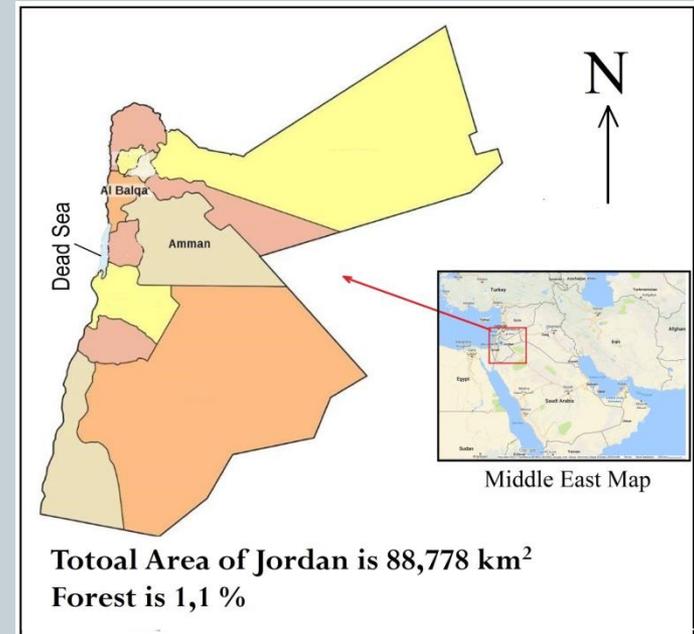
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# 1. Introduction

- The initiative of UI GreenMetric was specially designed to measure Universities sustainability efforts within their campuses .
- The total number of universities recruited in the survey has reached 516 in 2016
- Among them Al-Balqa Applied University (BAU) in Jordan ranked to the position of 236, and 8<sup>th</sup> position among Arab World Universities
- This paper presents the achievements of BAU regarding the issues of climate change, as well as the university's contribution, challenges and drawbacks,

# Jordan Profile

- Jordan is located in the south-eastern part of the Middle East
- Area is 88,778 km<sup>2</sup>
- Forest area is estimated to be 1.1% of the total area
- Area of water bodies is appr. 482 km<sup>2</sup> that includes the Dead Sea and the Gulf of Aqaba.
- Total population is 7.5 million of which 83.4% are urban.
- In addition to about 1.5 million refugees mostly from Syria are settled in Jordan.



# Jordan Profile-contd.

- The average value of CO<sub>2</sub> emission during 1960 to 2013. was 9846.85 kt with a *min. of 744.4 kt in 1960* and a *max. of 24858.59 kt in 2012*.
- The ecological footprint is 2.1 global hectares (gha) per person based on 2012 data published in 2016. This is considerably lower than world-average of 2.84 gha/person.
- The primary energy supply is the fossil fuels (mainly oil and natural gas) which ranked from less than 400 Kg of oil equivalent per capita per year (kgoe) during 1970s to more than 1200 kgoe lately; this is about 96% of the total, the rest is non-commercial fuels in the rural areas;
- Clean Energy use was established by the end of 1980s and sharply increased in 1991 to cover about 1.8% of the total clean energy.

## 2. Al-Balqa Applied University (BAU)

- Al-Balqa Applied University (BAU) is a government-supported university located in Salt, Jordan, was founded in 1997 at the capacity of more than 40638 students.
- BAU manifested its commitment towards local and global challenges by establishing the International Research Center for Water, Environment, and Energy (IRCWEE) in 2009.





- The establishment of the center is a result of collaboration between the university and the United Nations Education, Science and Culture Organization (UNESCO) with the contribution of the United Nations Special Fund to achieve the Millennium Development Goals. The center includes specialized Staff of Ph.D's with extensive experience in different environmental fields conducting researches on water, environment and energy in Jordan.

### 3. Challenges and drawbacks



- University campus is located at semi-arid area, which means in an area of scarce water resources; this impose the following necessities:
  - Need to secure quite large quantities of water for drinking and household uses.
  - Consequently, the necessity to discharge almost similar quantities of wastewater.
  - A considerable degree of unawareness of water saving attitudes can be noticed among students. This is because of the poor syllabus used in the previous levels of education.

### 3. Challenges and drawbacks-contd.



- University offers education to a wider range of students of different municipalities. BAU is continuously working to raise the levels of environmental awareness among staff members in the first position and among students, however, some difficulty may be experience in this respect due to variations in the background of the stakeholders.
- The use of buses and private cars in the main campus is a great challenge that the university is facing since bicycles are almost impossible to use due to the mountainous nature of the area as well as the location of the campus
- It is envisaged that considerable expansion of the green areas around the campus should be achieved, however, this target is greatly hindered back by the problem of water scarcity, the low annual rainfall, and limited area allocated for the campus.

## 4. BAU Initiative to follow up UI GreenMetric

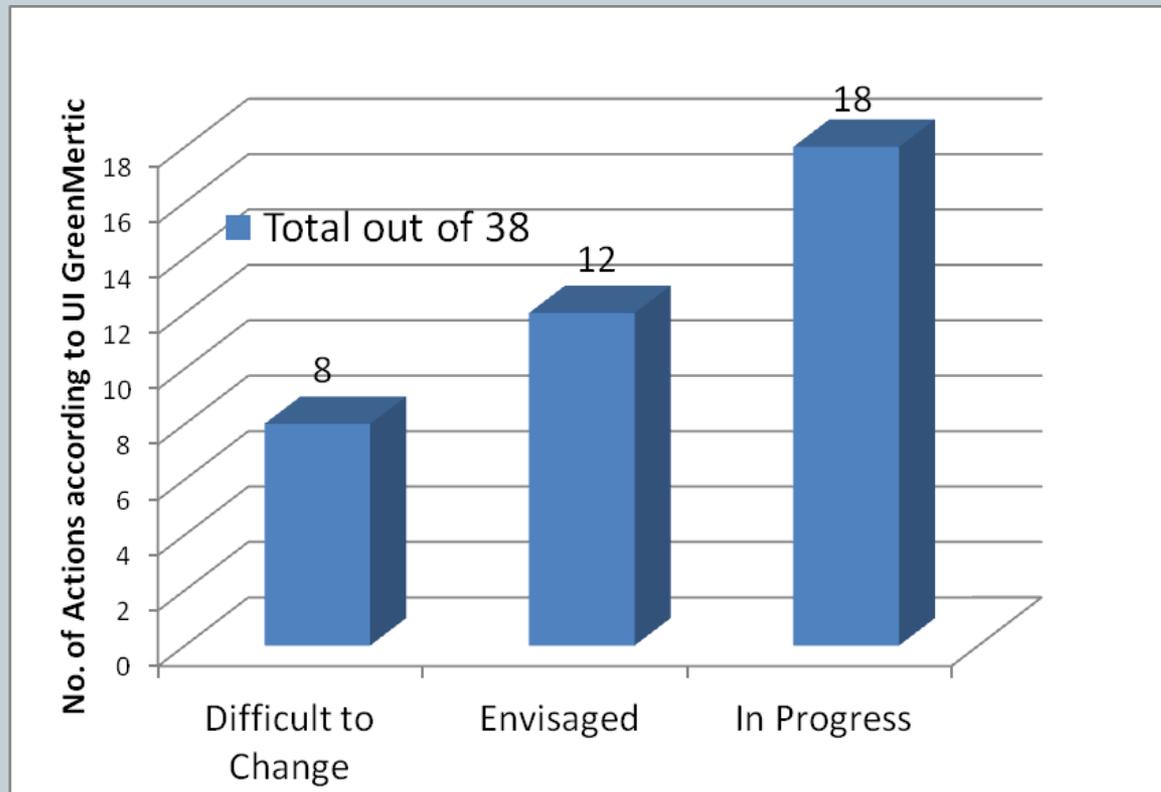
- Opportunities of Improvements that are envisaged or are being implemented during 2017 to improve indicators and criteria items in BAU are mentioned in Tables 1, which focus on the main BAU campus. The situation is expressed in either one of the following three facts:
- Difficult to be changed for the time being;
- Changes and/or implementation are envisaged
- Changes are already in progress .
- The final conclusion of opportunities that could be availed for remarkable improvements as presented in the following Table

## 4. BAU Initiative to follow up UI GreenMetric-contd.

Criteria and Indicators	<i>Difficult to change</i>	<i>Changes are envisaged</i>	<i>Changes in progress</i>
Setting and Infrastructure (SI)	3	1	2
Energy and Climate Change (EC)	-	5	3
Waste (WS)	-	3	3
Water (WR)	1	3	-
Transportation (TR)	4	-	4
Education (ED)	-	-	6
Total out of 38	8	12	18

The final conclusion of opportunities that could be availed for remarkable improvements as presented in the following Figure.

## 4. BAU Initiative to follow up UI GreenMetric-contd.



**Actions either in Progress, Envisaged or Difficult to implement at BAU**

## 5. Summary/ Concluding Remarks



- For Al-Balqa Applied University (BAU), to improve its ranking among UI GreenMetric the total number of actions need to be taken are 38 belonging to 6 Indicators. Majority of those actions (18) are already in “progress”; 12 actions can easily be implemented and are marked as “envisaged” during 2017; whereas 8 actions cannot be implemented for the time marked as “Difficult to Change” due to many constraints. BAU is deeply concerned to rise in its position to a higher one in the near future.

**Thank You  
for Your  
Kind Attention**