Evaluate education in the Marshes of Southern Dhi-Qar toward a new paradigm of sustainability.

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Abstract: The culture, according to UNESCO, is “interpreter of our being, and elements of our identity”. The establishment of culture in the core of development policies is the only way to achieve a human-centred, comprehensive and equitable development at a time when the world is going through ecological and economic crises with other social and cultural crises. The Culture represents a positive role in the productive process. Subsequently, the importance of education is in values, traditions and attitudes that are instilled in the minds of children which constitute the desired future based on equity, inclusiveness, peace and sustainability of the environment.

Sustainable development represents a prominent role in the preservation of cultural heritage, and in the nurturing of innovative capabilities. In a region that is the cradle of human civilization and fertile ground for a natural cultural heritage, most of its people who are behind the ancient Sumerians still suffer from poverty and illiteracy. So, this research aims to develop the society that is concerned scientifically, technologically and institutionally, and culturally. For a purpose it is prepared to be able to invest the available resources efficiently and fairly and to realize the importance of opportunities to develop its economy and improve its quality of life. This requires the universality of education and its level of faith and importance.

Thus, the problem of research, which sheds light on the lack of education in the marshes of southern Dhi-Qar, was revealed by the results of the reality of the society with questionnaire forms.

As a result of the above research problem and the importance of the role of education to achieve sustainable development, emerged a new paradigm to activate cultural heritage, and promote the Marshlands community as a unique society within its environment.

The researcher resorted to spatial analysis using Geographic Information System (GIS), side by side with statistical analysis to get recommendation that can be used to get sustainable development.

Keywords
Sustainable development, new paradigm, culture heritage, Inclusive education.

1. Introduction:
According to the Encyclopaedia Britannica, culture is an integrated pattern of human knowledge as a result of the human integration of learning and the transfer of knowledge to subsequent generations. Thus, culture consists of language, ideas, beliefs, laws, artworks, rituals, celebrations, and symbols. In that case, culture has played a crucial role in evolution of humanity, allowing humans to adapt to the environment rather than simply relying on natural selection to succeed. Therefore, every human society or every social or cultural system has its own culture [1]. Fukuyama, in the end- of-history
theorician, points out that “culture is the most important factor in determining economic development” [2]. And, he cites the positive role played by Confucian culture in China in defining social relations in Chinese society over 2,500 years. This culture created social capital, Economic development processes and ensured their success. The sociologist Huntington in his book "The Clash of Civilizations", sees in Parallel to Ecological, financial and economic crises, another social and cultural crisis and pointed to an increased cultural crisis because of an increase in polarization between culture and religion.

While economist Amartya Sen Believes, “after the 2001 terrorist attacks in the United States and the recent developments so-called 'Arab Spring' confrontations and conflicts stem in particular from the narrowing of people's identities to the religious side only [3]. Dr. Constantine Zureik believes that culture is the essence of society, and the tool that no society can be formed, developed or sustained without. Therefore, it is clear from the previous suggestions that civilizations can’t evolve with the survival of culture and social relations in a state of stagnation, and the adoption of patterns of production and tools of the same slackness. For that, development is a strategic vision of a better economic, social, environmental and cultural reality. Therefore, development is seen as a cultural renaissance. That means it cannot achieve economic renaissance without profound cultural and social transformations without reference to cultural heritage.

2. Sustainable development
Initially, Sustainable Development was defined in the report of the United Nations Global Commission on Environment and Development (the Brundtland Commission) in 1987 as “development and conservation meet the needs of present generations without compromising the ability of future generations to meet their own needs”. Egmund put his question: When sustainable development assumes that equality to current and future needs as defined by the Brundtland Commission that raises the question of these needs that will be assessed equally [4]. Then According to Max-Neef: people have multiple needs for "good life" in other words, for their guidance of values. People's needs do not depend on material goods, but culture is one of its pillars [5]. This made Schweitzer to describe sustainable development as a form of civilization. In his view, sustainable development is intentional development of perfection for individuals [6]. Sustainable development in its view is a development aimed at achieving perfection for individuals. This is confirmed by Egmund after he compared civilizations since, Islam period until present. He reviewed the sustainability requirements in each of them, and concluded that the worldview and the vision of human nature, throughout history have not changed, but have been constantly illuminated from different angles [7].

This leads to the conclusion that the real needs of future generations can be similar to those of the current generation. Therefore, sustainable development aims at the basic values of the current generation that made future generations "automatically" able to provide the same basic values more than technical circumstances of the future.

3. Cultural heritage
Culture remained one of the social aspects of the traditional sustainability model until only a few attempts were made to explicitly focus on culture or "cultural sustainability" as a distinct dimension of social sustainability [8], [9], [10], [11].

UNESCO considers that culture translates our entity and the essential element of our identity. So, putting culture at the core of development policies is the only way to achieve comprehensive development. Thereafter, culture was put as an aim of development after year 2015 (agenda 21 and others, 2014), as well as, UCLG (Committee on Culture of United Cities and Local Governments)
published culture as the fourth pillar of sustainability, as application of John Hooks condition in year 2001.

Then, culture was first included in the international sustainable development agenda as part of the United Nations Development goals adopted in September 2015. At the international level, UNESCO [12], [13], [14] and the United Cities and Local Government NGO [15] have played prominent roles [16]. Primarily, culture was included in the international sustainable development agenda as a part of the United Nations Development Goals depended on it in September 2015. At the international level, UNESCO (for example, [17], [18], [19], the United Nations NGO Cities and Local Government [20] represent prominent roles [21].

So, Nancy points out that “the 'traditional model', which includes three dimensions or pillars of sustainable development, is incomplete and fails to integrate an essential element: as community culture”.

Duxbury wrote, “Culture is concerned with the preservation of heritage” [22]. Also, Nadarajah illuminated that: Doubleday, Mackenzie, and Dalby in (2004), fall in with that the sustainability discussions must include a dynamic understanding of the specific complexities of culture as well as the place where it occurs, so that the entire community and geographic context is integrated [23]

In recent years, the role of culture in sustainable development has emerged as a multi-faceted theme of interest across a range of disciplines and the emergence of a four-pillar model of sustainability in a number of countries. The new sustainability model represents a qualitative leap in the process for both sustainability and community, and cultural planning [24].

In this situation, Council of Europe Framework Convention on the Value of Cultural Heritage of Society (2005) referred to the importance of heritage as a factor for sustainable economic development, as well as the need to respect its special character when used and to create development policies. One of its principles is intergenerational justice to ensure access to cultural features to future generations [25].

The Intangible Cultural Heritage concept was first introduced in 1990. In 2003, UNESCO Member States adopted a Convention for the Protection of Cultural Heritage, which was signed by 78 States in 2007. According to this Convention, intangible heritage or living heritage is the basic Source of cultural diversity.

Cultural heritage according to its role, in relation to positive or negative, is divided into three sections: first: influential cultural heritage; affects the present and future, such as scientific heritage. Second: Cultural heritage is not influential; it has lost its importance over time and different cultural conditions. Third: Negative cultural heritage; it damages the intellectual, scientific, cultural and civilizational formation of society in general [26]. Therefore, it is necessary to consider the educational system as the main link in the system of knowledge and direct influence in any culture and effective in refining the popular heritage and taking away the negative from it. We do not think about service standards as much as we draw from their sources, because the Marshlands are unique in nature and have high biological diversity.

It is clear from the foregoing discussion that all natural and human systems interact in varying degrees in the formation of culture and the Marshlands environment (added to the World Heritage List in 2014), they form a unique pattern of culture that must be preserved, through planning to appropriate education in the marshland environment, so in this research we are not considering the standards of urban services used as much as we analyse the environment and lifestyle of the
population to find an educational system that suits their circumstances and preserves their ancient heritage.

4. Application methodology
The special environment of the marshes, being neither urban nor rural, does not achieve the standards of education system, and because all of that requires services that suit nature, population living conditions and their works.

In order to achieve the spatial vision, it requires new model of environment the comprehensive education, raising its level, reviving heritage culture, motivating work and producing creativity, by several elements including:

Use of geographic information systems (GIS)) for spatial analysis to locate the population centers and the urban centers for the concentration of services, the work areas representing gathering of birds and fish and places of distribution of natural plant, side by side locate the roads figure (1); cause of their importance in development to be produced using spatial analysis with GIS to get best site in development.

Use the questionnaire to identify the causes of the spread of illiteracy and to take their suggestions. Analysis of the population questionnaire: A sample of the study population was taken from 200 families randomly selected according to the random sampling method due to the fact that the society was homogeneous.

Statistical methods used in data analysis: Three methods were used to analyze the information obtained from the questionnaire: Percentage method, Chi-square test, Contingency Coefficient Test and Cramer Coefficient Test.

5. Coefficient education
Side by side, losing culture is associated with the lack in education system and the role of family as well as, its built. So that may be cause fill of heritage value, that beyond to the system of education quality and quantity stimulation decrease attenders of schools.

Then we should look to education system as a basis for any development, direct effect in any culture, refine popular heritage and stay away from the passive of it. The provision of educational services requires several characteristics, the main objective of which is planned. The planning to any sector of Community Services takes from many sources beside global, regional, or local criteria [26]:

1- Heritage of society: that will save value of society and identity besides its life style includes religion heritage and ethnicity.
2- Environmental criteria: it is most important to protect sustainable environment and prefer suitable life inhabitancy.
3- Technical criteria: depend on standards of society as a need and consumption now and in future.
4- Coordinate framework: use an engineering relation to position and coordinate land use and skyline and else as a criteria set and density [27].

In this research we look to education service not as standard criteria but as extract from source, when the environment of marshes is as unique as diversity ecosystems and heritage culture for dwelling not as farmer or townsman but as they are (Arabs marshes) have special life with heritage of thousands of years ago. For all above the diversity ecosystems, special life of people heritage culture as a Sumerian ancestor, the education will be the most important pillar to investigate aim of sustainable development as a new paradigm toward as intellectual aspect of upgrade education, and the physical aspect to attain a certain degree of luxury and safety to the community which has suffered near to 35 years from neglect and oppression. This requires the provision of quality education and learning for sustainable development to
create more sustainable society that has a sense of responsibility to preserve the unique ecosystems around them and special cultural heritage.

From all above we derive that:
There is no sustainable development without taking the life style of population and their cultural heritage and suggesting them to keep it and maintain it.

The education can’t be efficient without taking the cultural heritage, traditions, mores and inhabitancy needs. The efficient education is the main pillar in the development of sustainable new paradigm.

The marsh environment was a unique and unrivalled one, creating a unique culture that must be preserved and sustainable development is part of the new four-pillar concept.

It is the most suitable style for the preservation of culture and heritage, especially since it has been on the World Heritage List since 2016. So, planning for appropriate education for the Marshlands analysing this area:

6. **Mechanism to analysis**

   A- Special analysis by GIS, B- Questionnaire

6.1 **Special analysis mechanism by GIS:**

   In this research we used the special analysis to get less loss of energy and time [28] for marshes so we drew maps of potential and determinants to put main line of sustainable development as shown in Figure 1, for that:

   1- Draw spatial location of center of governorate, district and town as a center of community service. 
      So as schools, and far distance from them correlate the reason to complete education.

   2- Draw special location to village inside or on edge of marshes.

   3- Draw special location of flock of birds and swarm of fish and natural plants because all of them represent the source of their inhabitancy work.

   4- Drawing the roads because that was the first step of development. stairs.
Figure 1. Map of study area shows all elements use in spatial analysis in GIS

By researcher data of Center of GIS, Iraq Marshes and Wetlands Center (CRIMW), Baghdad.

Figure 2. Map of buffer zones of all town used in spatial analysis in GIS
Spatial distribution mechanism:

**Drawing by researcher, by GIS version 10.4.**

By using tools Muttering Buffer Zone to include the far of villages from center of Districts then from services of societies and schools we assume distance (0.5 km, 3km, 3-6km, more than 6km).

We used clip tool to assume the village number in their zone Figure. (2). From special analysis we found:

1. There are 34 villages on buffer zone 3km from center, 7 of them at edge of marshes and the rest inside marshes.
2. There are 38 villages on (3-6) km buffer zone, 28 villages from edge of marshes and the rest inside marshes.
3. There are 2 villages in 500m zone only, so the standard distance 500m from school is not beneficial, for that we suggest the distance about 3 km because the ability of people and the region in marshes is different.

6.2- From Questionnaire we found that:

From Appendix (2)

1. **The career of inhabitancy:**
   
   12% of people work in forestry, knitting of reeds 10%, Hunting and Agriculture 8%, these kinds of work need a lot of time and potential in a little pay. And, 18% work in ranching, it needs a lot of time, then we must look for all that when we suggest the new sustainable development.

   25% don’t work because they are underage and don’t work so we must look to that section in the distribution of schools. 16% of people are unable to work; almost all of them are illiterate.

2. **Did family have animals?**

   Large number of people grazing buffalo, cow and sheep about (153) animal that need to leave the dwelling almost all the time in the year as well as don’t have time in the day. And have a good budget specially for owning grazing buffalo (71) animal.

3. **Leaving the dwelling for a season of year:**

4. **Large number of people, about 39%, leaves their house to work or for looking for animals to feed that is suitable to upper caste that have large number of animals. Did the family sell animal product?**

   Most of the people of marshes, about 70% of them, sell an animal product so they have a lot of work and a little time in the daytime.

5. **The reason of not going to school.**

   Almost people near to 41% don’t go to school because there are no schools in their village, and 36% people don’t go because the schools are far away. And for many it is time to work so it is reason not go to school so the evening school will be the solution to that problem.

6. **What is the distance to school from house?**

   The zone is located at 0.5 km for about 15% from people of study. About 40% of them in zone 1-3 km and 45% in zone more than 3 km, so 500m is not benefit to locate school in that region of area.

7. **The willingness to go to evening school.**

   About 62% of people have a willingness to go to evening school so that confirms that they don’t have free time during the day.

8. **Did family have Transfer mode?**

   Little number of families, about 18%, doesn’t have a mode of transportation. So, the suggestion of a distance of 3km to go to school isn’t so far in case 6.

9. **Willingness to stay in marshes:**

   Most of the population, about 86% of them, have a willingness to stay in marshes so that proves that the
culture is sustainable, and people have a strength link to their environment and cultural heritage. So, fourth pillar of sustainable development is benefit.

- **By using program SPSS:**
  A- **Chi-square test proves that:**
  1- Sustainable development depends on the level of educated person.
  2- Sustainable development is dependent on the budget of family. So, the economy level of population must be the first step of development because of that affects all parts of life as well as education and forth pillar of sustainable development.

  B- **By using Cramer Coefficient Test to prove that:**
  1- The association between level of educated person and sustainable development is strong.
  2- The association is the medium as the employee out of marshes or grazing buffalos don’t know how education is important.

As well as each civilization has its own characteristics and personality, which is preserved as an inheritance for generations. It is not only our property but also belongs to future generations. It is our duty to preserve it without distortion or destruction.

Deduced from all above as marsh region has the unique environment and special heritage from Sumerian, the new paradigm of sustainable development is suitable to that religion.

7. **Conclusions:**
1- From questionnaire analysis it appears that most of marsh dwellers have difficult works, so they need a lot of time and potential as ranching needs different course of study because of their movement from one place to another searching about fodder. And a lot of people work in forestry and knitting of reeds, hunting as well as agriculture, all of these need daytime for work.

2- The most important crafts prevailing in the marshes are grazing animals, especially buffaloes, so they move out in different seasons of the year in search of food and water for their livestock, and this talk includes most of the population of the marshes because most of them work in forestry or hunting.

3- From GIS analysis it appears that Schools located in zone 500m are less in number from villages in 1-3 km zone and zone more than 3km.

4- Large ratio of people is unable to work because most of them are elderly so, they believe they would benefit more from their experience. Don’t forget them in education.

5- Also, from questionnaire analysis it appears that economic weakness is the main reason for leaving school, then the long distance to schools, and the inadequate start-up education season which clashes with work seasons.

6- Most of the marsh population suffer from lack of services and the spread of illiteracy and poverty, therefore aren’t interest in education and force their children to leave schools early, in order to work and provide income for the family.

7- From visiting marsh, we noticed the lack of basic services of clean water source, and electricity are causes for women for not going to school because they are busy with domestic work.

8- Most of the inhabitants of the marshes return to their territories with the return of water after 2002, and almost all of them don’t want to leave that place which shows adherence to their heritage, and Sumerian culture reflecting the identity of their own distinct from others, that must be protected and planning for investment by four pillars of sustainable development.

9- Most Marshlands residents prefer to add educational process and modify the existing one to fit their heritage and culture, as well as suggest changing the time to go to school to match the nature of their work and mobility.

10- Most people have a willingness to go to evening school so that suggests that they are completely right, and we must lead them to learn more about the benefits of education and sustainable development.

8. **Recommendations:**
1- Large number of people don’t go to school because its far, rest don’t go to school because of unsuitable time of work. The evening school and mobile education will be the solution to that problem. And change the courses of school because a lot of people don’t go to school from March to last of June because of the type of their work.

2- School located in zone 500m are less in number so that condition of standards are not benefitted. When we look at villages in 1-3 km zone are larger than that so, we suggest that distance is the average distance suitable to locate more schools.

3- The system of education may be mobile school by boat (that was the way to Literacy in sixties of last century) to people who don’t go to school because it’s far or their age so can benefit from their culture in education, workshop to teach an ancient heritage, handmade and different craft.

4- Grazing buffalo is a major source of income of the population of marshes, it is one of the historical heritages inherited across the generations, so should be invested in providing economic income to contribute to the development.

5- Change Education curriculum to be suitable to that culture.

6- Promote tourism and train people in tourism. Put tourism methods and different languages in the curriculum of education.

7- Built theatres and hologram cinema to show ancient life of Sumerian.

8- Marsh villages differ from rural and urban areas, so this unique diversity requires different educational services provided to its inhabitants in terms of the nature of their work and their mobility and heritage, skills and traditions in harmony with the topography of their environment.

9- Preserving the heritage personality through studies of folk culture and heritage should be added to the curriculum of education.

10- Positive investment of social culture to protect the environment and its endangered organisms.

11- Develop a course of study suitable to the nature of the work of the Marshlands and their continuous mobility within their environment.

12- Reduce illiteracy and provide a mobile system for special education for women and in the environment of the depths of the marshes where it is difficult to build schools or the arrival of residents to urban centres.

13- Control the introduction of modern technology to preserve the environment without damaging the heritage and conditions of natural protection while at the same time to reduce time and effort and raise the economic level of the population.

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