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Indigenous Knowledge and Practices Related to Food Preparation and Preservation in a Bedouin Community, Egypt

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Introduction and Study Problem

The potential value of using traditional and indigenous knowledge in achieving sustainable management and thereby improving the livelihoods of indigenous local communities is highly acknowledged nowadays. However, a more systematic approach to including traditional knowledge in research and management systems is necessary. This could be enriched through the development of collaborative research projects between scientists and indigenous communities (FAO, 2009:24). Bedouin IKPs' systems are territorial treasures, generated by local people that need both documentation, to assure their territorial rights, and innovative arrangement to maintain their socio-economic, cultural and environmental integration. These systems must be assimilated with contemporary research agenda and results to enable Bedouins, especially women, to face socio-economic challenges and mitigate and adapt to the negative effects of climate change, as well. Women, who represent about 43% of the agricultural labour force in developing countries, are increasingly recognized as important actors in these systems. Within the household, they are responsible for food preparation and food preservation.

As per the UN Declaration on the Rights of Indigenous Peoples (September 2007): "*Article 20: ... Indigenous Peoples have the right to maintain and develop their political, economic, and social systems or institutions, to be secure in the enjoyment of their own means of subsistence and development, and to engage freely in all their traditional and economic activities...*" Facilitating optimal conditions for small-scale communities depends on access to good information on which appropriate policies and strategies can be based. This requires improved data collection, as well as further research on small-scale communities that is participatory in nature and seeks to learn from indigenous knowledge (FAO, 2009:21). The most recent shifts in agricultural extension and advisory services (EAS) parallel the growing complexity of the global food system. Women are among this group of new and newly recognized actors in these networks (FAO 2011: 5). Managing the global food system must contend with demands for efficiency and sustainability while at the same time encouraging greater equity in access and participation.

The study documented the plant and animal sources of foods and different practices of preparation and preservation which suite the dry weather and scarcity of water. Food preparation and preservation practices reflect the socio-economic, cultural and environmental conditions prevailing in the tough desert nature that Bedouin women live at. These practices and conditions could provide researchers and development specialists with necessary guidelines to verify, develop the IKPs and support them with latest scientific developments to upgrade their capacities for better coping with the harshness of nature.

Study Objectives

1) To investigate and document the indigenous practices using local knowledge related to food preparation and preservation in the studied area, 2) To identify coping mechanisms used to overcome challenges at the studied area, and 3) To identify challenges facing Bedouin women related to food preparation and preservation.

Methodology

A semi-structured check-list was designed and utilized during focus-group discussions and individual personal interviews with Bedouin women on the Northern-Western coast of Egypt for data collection. The studied variables include food consumption, number of daily meals, elements of the meals, gender role in food preparation and preservation in-house and out-side the house, coping mechanisms to overcome environmental challenges seeking food security, food-related knowledge-practices, animal food origin, types of animals, products, food preparation and preservation, plants and vegetation food origin, kind of plants, home food processing methods, home food

preservation methods and preferable methods. Moreover, energy supply was investigated which includes information about energy sources and preferences. Besides, customs and traditions related to food, food storage, food waste, food preservation, time spent on food process and preservation, as well as food perceptions and beliefs for males and females were studied.

Results and Findings:

The results of the study are divided and demonstrated into three main categories, namely food meals daily calendar, traditional mechanisms for food preservation, and Gender Role Related to Food, Food Process and Food Preservation.

General Description for the Food System:

Tribal food-related practices and patterns are highly influenced by their traditions and environment; consequently, understanding the wide diversity of food systems of Indigenous Peoples and improving and strengthening these systems in the context of nutrition and health merit attention.

Table (1) Families' Food meals daily calendar

	1st meal (Dawn)	2nd meal (10 am)	3rd meal (1-2 pm)	4th meal (4-5 pm)	5th meal (7-8 pm)
Family 1	Tea with milk	Leftover cooked meal+ lentils	Rice with either red/ white meat or animal fats +pickle or/salad	Green tea with bread	
Family 2	Cow or goat milk	Beans + cooked vegetables with tomato with bread	Rice or Pasta with pickle or Radishes, arugula Couscous	Dried dates+ olives oil+ Tea with mint+ bread	Cooked vegetables + pickle+ bread
Family 3	Tea with milk+ bread	Lentils + watermelon+ Eggs, milk	Couscous + Aseda(flower +salt +butter+ dates honey extract+ olive oil)	Cakes with tea	Cooked vegetables with bread
Family 4	Tea with milk	Leftover cooked vegetables from previous day+ bread+ salad	Rice+ green salad + tea		Cooked veg. + bread
Family 5	Tea with milk Bread, cheese	Left over veg. bread, milk	Rice, milk, tomato, chicken		Bread, Fried potatoes, cooked veg., dates, milk.
Family 6	Tea with milk	Left over veg. bread, cheese, jam, bread	Rice cooked with milk, meat, bread		Cooked veg. + bread
Family 7	Tea with milk		Cooked veg.+ bread+ pickle		Rice+ Cooked veg.+ bread

Table (2) Traditional Mechanisms for Food Preservation

Plan origin	Animal origin
Drying: dry leafy vegetables and medical & aromatic plants (mint, okra, Artemisia, Thyme)	Meat Drying: cutting meat in small pieces add salt and curry, dry it in the sun by day collect it by night till full dryness. Summer time: 7 days, winter time 10 days
Salting: using salt as a preservative element (cucumber, olives, carrots, pepper, rapeseed)	Shaking Milk: to separate cream and butter out of milk by shaking for 10 minutes to separate cream and for 30 min. to get butter. During this process they add salt & Fenugreek
Sugaring: add sugar and heat it for long time and keep it in a dry clean jar (Figs)	Kishk: Mix Barley and/or wheat flour with shacked milk. They shape it into small balls and dry them and store it in a plastic bag when they don't have milk. (It also shows the rationality in consumption)
	Animal Fat: in the past, they use to put animal fats in a big plate add salt and turmeric. Nowadays, they just melt it and store it.

Cultivated plants: Barley, Wheat, Figs, Olives, Tomato, squash, okra, watermelon, sweet melon, Mint, Almond, Palm trees and wormwood plant.

Food Residues and leftover: The Bedouin house hold has no leftover; all food left can be eaten by sheep, goats and chicken.

Preservative Materials used in the community: Salt, Sugar, Fenugreek and turmeric.

Source of Energy: 2-5 years ago, there was no domestic source of energy. They all depended on the shrubs they collected from the desert. Nowadays, electricity and gas are almost covering all households. On the other hand, in times of gas shortage, Bedouins use the traditional oven which depends on shrubs as fuel. Elderly women prefer the traditional ovens while the younger generations prefer the modern ones.

Types of tendering food: Boiling, frying, and drying.

Occasions for animal slaughtering: On the occasion of giving birth, first day of the holy month of Ramadan, the feast, having guests or visitors for the first time, and/ or weddings.

Table (3) Gender Role Related to Food, Food Process and Food Preservation

	Females	Males
Inside the House (in-doors)	<ul style="list-style-type: none"> - Cooking & preparing all meals - Raising Chickens - Feeding in house animals - Breeding kids - Cleaning - Food process activities: pickle and jam - Carpets and blanket handmade 	<ul style="list-style-type: none"> - Slaughtering small ruminants, camels or even chicken (Women traditionally are not allowed to do this job) - Sheep shaving - Men can help cooking but never wash the dishes
Out-side the house (out-doors)	<ul style="list-style-type: none"> - Helping in cultivation and harvesting: olives, figs, watermelon and other crops - Only participating in social occasions for close neighbor and family members 	<ul style="list-style-type: none"> - Sheep, goat and camel grazing - Cultivating - Buying all kinds of food from market - Selling Eggs for women - Sheep shaving - Collecting shrubs using cart or donkey. - Have other official jobs such as security or driver.

Traditional Mechanisms for Food Preservation from

a. Animal origin

- **Meat Drying:** cut meat in small pieces, add salt and curry, fully dry it in the sun, then collect it by night. Summer time: 7 days, winter time: 10 days.
- **Shaking Milk:** to separate cream and butter out of milk by shaking for 10 minutes to separate cream and for 30 minutes to get butter. During this process Bedouins add salt & Fenugreek.

- **Kishk:** Mix Barley and/or wheat flour with shacked milk. They shape it into small balls and dry them and store them in a plastic bag when they don't have milk. (This also shows the rationality in consumption).
- **Animal Fat:** in the past, Bedouins used to put animal fats in a big plate add salt and turmeric. Nowadays, they just melt it and store it.

b. Plant origin

- **Drying:** dry leafy vegetables and medical & aromatic plants (mint, okra, Artemisia, Thyme).
- **Salting:** using salt as a preservative element (cucumber, olives, carrots, pepper, rapeseed).
- **Sugaring:** add sugar and heat it for long time and store it in a dry clean jar (Figs).

Observed Conventional mechanisms Bedouins practice to cope with environmental harshness

- Due to very high temperature during summer time, they eat pickles to make the balance they need for the minerals in their bodies.
- They use wool out of their sheep in pillows, carpets, blankets during the very tough weather in winter.
- They dry their food (plant or animal origin) using solar energy in summer and winter time.
- Due to scarcity of water, their practices related to water is very rational.
- People at Bedouin societies are fatalists; they do not recognize that they should rehabilitate their grazing area. They believe that God will do it all.
- Drought and desertification are the most critical phenomena in this area. They have rain harvesting techniques to store water for year round. They have rain in winter over the grazing area, and then they can cultivate and bread good number of small ruminants which they can sell or consume.

Recommendations

A. For Academia:

- These Knowledge and practices should be incorporated into strategies that would enable the communities to meet nutrition, food security and livelihood needs in a more sustainable manner
- Interdisciplinary researches on indigenous knowledge related to food should be developed to better utilization of the resources.

B. For Local Government:

- There is a need for strategic community-based interventions to improve food security, nutrition and health.
- There is a need to integrate the existing health and nutrition interventions with traditional food promotion.
- Strategies and programs should consider the increase of animal source foods

D. For Civil Society and other Stakeholders:

- Awareness campaign should start with balanced diet out of improved local food resources.

References:

FAO (2009), "FAO and Traditional Knowledge: The Linkages with Sustainability, Food Security and Climate Change Impacts", Rome, Italy.

FAO (2009), "The Code of Conduct for Responsible Fisheries and Indigenous Peoples: An Operational Guide", FAO, Rome, Italy.

FAO (2009), "Indigenous Peoples' Food Systems: the many dimensions of culture, diversity and environment for nutrition and health". Food and Agriculture of the United Nations (FAO), Centre for Indigenous Peoples' Nutrition and Environment, Rome, Italy.
http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf