

POLICY CHALLENGES AND FOOD SECURITY IN ALQADARIF STATE, SUDAN

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ABSTRACT

Food security is under focused issue in Sudan as a whole and AlQadarif State is not apart from that. According to the integrated food security phases classification (IPC) report April (2015), about 60% of the population suffering from food insecurity in the State. This problem needs to be solved by clear and sound policies and strategies. The main objective of this study is to investigate and evaluate the Food Security and Nutrition (FSN) policies and strategies in the State. To achieve this objective secondary data such as annual reports, policy documents were collected from all key line institutions and primary data were collected by the mean of a questionnaire the main results of this research are that: there were no clear food security and nutrition policy documents for the key line institutions in the State. Also, there was a gap between the policymakers at the State level and the locality level. 42% of the policymakers at the locality level did not aware of the existence of the FSN body in the State. About 94% of the policymakers in the localities believed that the Chamber of Zakat plays a very important role in helping at FSN situations. About 92% of policymakers in the state said that finance is not sufficient. The majority of the localities policymakers, 94%, do not have any (FSN) database in their localities. Finally, the main recommendation of this study is to build a food security and nutrition policy/strategy putting the conservation of the natural resources in consideration.

Keywords: Policy challenges, food security, AlQadarif State, Sudan

1. INTRODUCTION

1.1. Background:

Food security is a hot issue now a day all over the world, the world summit on food security, which held from 16th to 18th of November 2009 in Rome, stated some strategic objectives, which were:

- a) To reduce respectively the proportion and the number of people who suffer from hunger and malnutrition by half by 2015.
- b) Join our efforts and expertise to work in the Global Partnership for Agriculture, Food Security and Nutrition – building on existing structures to enhance governance and cooperation to promote better coordination at global, regional and national levels and ensure that national and regional interests are duly voiced and considered.
- c) Reverse the decline in domestic and international funding for agriculture, food security and rural development in developing countries, and promote new investment to increase sustainable agricultural production and productivity, reduce poverty and work towards achieving food security and access to food for all.
- d) Proactively face the challenges of climate change to food security and the need for adaptation of, and mitigation in, agriculture, and increase the resilience of agricultural producers to climate change, with particular attention to small agricultural producers and vulnerable populations. To achieve these objectives we need to follow the Five Rome Principles for Sustainable Global Food Security; the first principle is to invest in country-owned plans, aimed at channeling resources to well designed and results-based programmers and partnerships (WSFS 2009/2).

According to the document that produced by FAO(Food and Agriculture Organization) of the United Nations to determine the food security status in the world in meeting the 2015 international hunger targets, About 795 million people are undernourished globally, down 167 million over the last decade, and 216 million less than in 1990–92. The decline is more pronounced in developing regions, despite significant population growth. In recent years, progress has been hindered by slower and less inclusive economic growth as well as political instability in some developing regions, such as Central Africa and western Asia (McGuire, 2015).

Until 2011, it was, geographically, the largest country in Africa. The total area of Sudan is now 1,861,484 square kilometers (Berry, 2015b). According to the Central Bureau of Statistics, Sudan, the population was about 30.9 million in the 2008 census, 29.8% of them were urban, and

the rest 70.2% were rural population. This was reported by, Central Bureau of Statistics (CBS 2012b).

Sudan is endowed with vast and diverse agricultural resource base that provides various means of sustaining a livelihood. Sudan economy depends mainly on the agricultural sector, which contributes about 70% of the population activities, in addition to the industrial sector that depends mainly on agriculture. Sudan is rich with its natural resources represented by the vast extended cultivable land, diversity of climate and soil provides a good opportunity for cultivation and livestock production. The cultivable land is more than 100 million feddans (one feddan=0.42 hectare). The annual water resources are about 42.5 billion cubic meters, 31.5 billion m³ comes from the River Nile and about 11 billion m³ are under groundwater and rainfall. The forest area is about 80 million feddans, pastureland about 115 million feddans, 104 million heads of cattle (CBS 2012b).

Agriculture in Sudan is the principal source of income and livelihood for between 60 per cent and 80 per cent of the population (Elgali et al. 2010) and the engine of growth for other economic sectors such as trade, industry and transport. The expected results of agricultural development would be to create more job opportunities. This would make rural areas more habitable and reduce internal migration to big cities, which would lead to stable food security status and poverty reduction.

According to (FAO/EWSFA 1997), the country's agricultural policy was changed in 1997 to attain greater food self-sufficiency. It focused on reducing the area of cotton in production because of a shortage of irrigation water; and instead replaced the crop with wheat and sorghum, which require less water.

The hope was that, regardless of the inevitable reduction in export revenue, any increases in food production, in the long run, would mitigate the increasing effects of drought and food shortage and reduce cereal imports (FAO/EWSFA 1997). Mechanized rain-fed agriculture also expanded. In addition to land allocation policies, this led to the displacement of subsistence farmers and nomads and dismantled traditional systems of communal ownership and management International Fund for Agriculture Development (IFAD 2010).

The agricultural sector is the backbone for the Sudanese economy; it contributes by 34.2% of gross domestic product, GDP, it represents 80% of the Sudanese exports excluding petroleum products and 57% of the labour works in this sector (General Administration of Planning & Agricultural Economics 2012).

Agriculture in Sudan depends on two sources of water: direct rains and irrigation principally from the River Nile and its tributaries. There are also flood irrigation schemes fed by seasonal rivers in the eastern part of the country in Gash and Tokar deltas. The area of irrigated sub-sector is about 4.2 million feddans, represents 5% of the arable land. The irrigated sub-sector produces most of the cotton, sugarcane, legumes and cereal crops in Sudan.

The major components of the sub-sector are large scale schemes, which are Gezira, Rahad, Suki and New Halfa. Most of Sudan exports consist of agricultural products such as cotton, gum Arabic, oilseeds, meat ... etc. in addition to vegetables and fruits that are exported to neighbouring countries, including Arab and African countries (General Administration of Planning & Agricultural Economics 2012).

AlQadarif State is located in the eastern part of Sudan and extends over an area of about 72,000 km². The state is bordered to the east by Ethiopia and Eritrea. The four Sudanese states surrounding AlQadarif State are Khartoum, Kassala, Gezira and Sinnar. The mean temperature in the AlQadarif town is 29°C, the mean maximum is 37°C and the mean minimum is 21°C. May is the hottest month of the year. The area is characterized by a unimodal rainfall season most of which primarily occurs from June to September and controlled by the nature of the Inter-Tropical Convergence Zone.

The annual rainfall in the area ranges between less than 300mm in the North to more than 800mm in the South. Analysis of climatic records from AlQadarif Meteorological Station by (Sulieman and Elagib 2012) showed that there is significant warming of the climate, increasing rainfall variability and seasonality and intensifying aridity conditions during the start and end of the wet season. Also, there is an increase in rainfall concentration.

According to the 2008 census, the total population of AlQadarif State is 1,336,662 persons with an annual population growth rate of 4.7 per cent, which is higher than the national growth rate (CBS 2012b).

Food security is under focused issue in Sudan as a whole and AlQadarif State is not apart from that, so the Government of the Republic of Sudan in collaboration with Food and Agriculture Organization of the United Nations, started a three years programme to develop and to enhance state governments' capacity to address the capacity gaps in the four target states, the Blue Nile, AlQadarif, Kassala and Red Sea States, that are related to (a) food security inter-sectoral institutional coordination framework, food security policy and information system; and (b) the line ministries' policy planning, budgeting, monitoring and implementation capacity resulting in effective public action for food security and nutrition.

Its expected outcome is to make food security decision more inclusive, better integrated, informed, implemented and monitored in the four selected states of Sudan, The intended impact of the programme is the long-term improvement of food security in targeted states of Sudan (FSPS-CB 2014a). In this paper, the focus would be on AlQadarif State. The paper would try to cover the food security policy issue in AlQadarif State.

1.2. Problem Statement:

The main issue that raises the need for this research is that:

According to the Integrated Food Security Phase Classification (IPC) report April (2015),(IPC 2015) which is a set of tools and procedures to classify the nature and severity of food insecurity for decision support. The IPC classifies areas with Acute Food Insecurity into five Phases: Minimal, Stressed, Crisis, Emergency and Famine. Each of these Phases has different implications for response objectives.

The state food security is in a very bad situation, about 60% of the population suffering from food insecurity and that due to the increase in the commodity prices.

According to the Integrated Food Security Phase Classification (IPC) phases, the total population of AlQadarif State is about (1,911,614) persons distributed as follow:

- Phase 1 (None/ Minimal): about 757916 (40%) of the total population of the state.
- Phase 2 (Stressed): 872406 (45.6%) of them.
- Phase 3(Crises): 273515 (14%) of them
- Only 7777 (0.4%) of the total population is in phase 4 (Emergency), and none of them in phase 5 (Famine), (IPC 2015).

The problem of food insecurity in the state needs a clear policies and strategies to solve it, this policies should be clear and sound, the Government of Republic of Sudan (GoS) and the State Government have done a lot of efforts to deal with this issue, but the most important one is the Food Security Policy, Strategy and Capacity Building Programme (FSPS-CB), this programme funded by the European Union (EU) and is being implemented by the Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Government of the Republic of the Sudan (GoS).

The intended impact of the programme is the long-term improvement of food security in targeted states of Sudan. One of the main expected outputs of the FSPS&CBP is to enhance state governments' capacity to address the capacity gaps that are related to (a) food security inter-sectoral institutional coordination framework, food security policy and information

system; and (b) the line ministries' policy planning, budgeting, monitoring and implementation capacity resulting in effective public action for food security and nutrition.

Its expected outcome is to make food security decision more inclusive, better integrated, informed, implemented and monitored in the AlQadarif State, (FSPS-CB 2014a). So, this study is seeking to ensure that Food Security and Nutrition (FSN) strategies, policies and approaches exist and be both well designed, formulated and able to be implemented with minimum challenges and reduced costs.

And confirm the effectiveness and viability of Food Security and Nutrition (FSN) Policies and Strategies in confronting hunger in AlQadarif State, and that might produce some critical questions to be answered, namely:

- i. Are there any FSN policies and strategies designed and assigned for AlQadarif State?
- ii. Are those key FSN policies and strategies assigned for the State identified effectively and efficiently?
- iii. Are such policies and strategies formulated effectively and efficiently?
- iv. Are such policies and strategies (if any) implemented effectively and efficiently?

1.3. Objectives of the Study:

The overall objective of this study is to investigate and evaluate the (FSN) policies and strategies and to evaluate the state of Food Security in AlQadarif State.

This objective will be achieved by focusing on some specific and organizational objectives which are:

- a) To determine whether there are suitable, feasible, and acceptable policies and strategies concerning Food Security and Nutrition in the State and to evaluate the existing FSN Policies and Strategies. i.e. Determine whether these Policies and Strategies are implemented and achieved the stated objectives?
- b) To address suitable treatments required for reaching the final impacts of FSN Policies, and designing future strategies.
- c) To determine if there is any policy that protects the vulnerable populations and address food insecurity concerns by developing capacity for early warning and emergency management.

1.4. Hypotheses of the study:

Two hypotheses have been tested in this section and are:

- H_0 : there is FSN policy.
- H_1 : there is a FSN policy.

We have used this scale to test the answers

1.5. Importance of the paper:

The importance of this study came from the fact that AlQadarif State is one of the most important mechanized rain-fed agricultural areas in Sudan and one of the irrigated schemes is also located in the State, which Rahad Agricultural Corporation. The total population of the State is 1,336,662 persons with an annual population growth of 4.7%, which is higher than the national growth (CBS 2012b). The above facts reflect the potential of the State in food production and consumption. Also, this paper is very important to cover the information gap in food security in the State.

2. LITERATURE REVIEW

2.1. Food Security:

Food security is an important element of poverty alleviation, Food and Nutrition Security (FNS) has evolved dramatically during the last decades in theory and practice. There are many definitions concerns Food Security and Nutrition, in this section, we will try to provide some basic information about the definitions and framework of the Food Security.

2.1.1. Food Security definition:

The definition of FNS has evolved considerably over time. The starting point of 'Food Security' was food availability to balance unequal food distribution regionally and nationally. However, it was rapidly accepted that availability, though a necessary element, is not sufficient for food security, because food may be physically existent but inaccessible for those most in need. According to the accepted definition, Food Security is "adequate access to food for all people at all times for an active, healthy life". Food is here defined as any substance that people eat and drink to maintain life and growth. As a result, safe and clean water is an essential part of food commodities (Gross et al. 2000).

The Committee on World Food Security stated that: Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. The four pillars of

food security are availability, access, utilization and stability. The nutritional dimension is integral to the concept of food security and the work of CFS (Committee on World Food Security, 2013).

Food stability: Refers to the ability to obtain food over time.

Food access: Refers to the affordability and allocation of food, as well as the preferences of individuals and households.

Food availability: Relates to the supply of food through production, distribution, and exchange (retrieved from <http://www.disabled-world.com/fitness/nutrition/foodsecurity/> 6/Nov/2016, 11:13 AM).

2.1.2. Food Security and Nutrition Pillars or Dimensions:

According to the definitions above, the Food Security and Nutrition concept built up of four pillars, these pillars are 1. Food Availability 2. Food Accessibility 3. Food Utilization 4. Food Stability or Sustainability (Gross et al. 2000).

2.2. What is Policy?

Several definitions have been used to describe the public policy. Professor (Rose 1969.) suggests that policy be considered "a long series of more-or-less related activities" and their consequences for those concerned, rather than a discrete decision. Although somewhat ambiguous, his definition does embody the useful notion that policy is a course or pattern of activity and not simply a decision to do something. Finally, political scientist (Friedrich 1963.) regards policy as a proposed course of action of a person, group, or government within a given environment providing obstacles and opportunities which the policy was proposed to utilize and overcome to reach a goal or realize an objective or a purpose.

To the notion of policy as a course of action, Friedrich adds the requirement that policy is directed toward accomplishing some purpose or goal. Although the purpose or goal of governmental actions may not always be easy to discern, the idea that policy involves purposive behaviour seems a necessary part of its definition. Policy, however, should designate what is done rather than what is merely proposed in the way of action on some matter.

Taking into account the problems has been raised by these definitions; one may offer this concept of policy: A relatively stable, purposive course of action followed by an actor or set of actors in dealing with a problem or matter of concern. This statement focuses on what is actually done instead of what is only proposed or intended, and it differentiates a policy from a decision, which is essentially a specific choice among alternatives.

Public policies are those developed by governmental bodies and officials. (Nongovernmental actors and factors may, of course, influence public-policy development.) The special characteristics of public policies stem from their being formulated by what political scientist David Easton has called the "authorities" in a political system, namely, "elders, paramount chiefs, executives, legislators, judges, administrators, councillors, monarchs, and the like". (Anderson et al. 2000).

These are, he says, the persons who "engage in the daily affairs of a political system," are "recognized by most members of the system as having responsibility for these matters," and take actions that are "accepted as binding most of the time by most of the members so long as they act within the limits of their roles." In short, public policies are those produced by government officials and agencies.

2.2.1. Policy Formulation:

This involves the development of pertinent and acceptable proposed courses of action for dealing with public problems. Many types of the formulation can be identified depending on the criteria for classification. However, the most interesting and useful basis for identifying the nature of decision-making are three types and it can be identified as in (Dunn 2015).

- a) Routine formulation: A repetitive and essentially changeless process of reformulating similar proposals within an issue area that has a well-established place on the agenda of the government.
- b) Analogous formulation: Treating a new problem by relying on what was done in developing proposals for similar problems in the past i.e. searching for analogies.
- c) Creative formulation: Treating any problem with an essentially unprecedented proposal one, which represents a break with past practice? However, it is sometimes to see creative formulation government as many proposals are normally modified along the way towards past practices during the implementation stage.

Also, a prerequisite to public policy formulation hangs the attachment of why to study it. This leads to conclusions such as, that there are academic reasons and political ones. Basu (2004) suggests that policy decision involves action by some official person or body to approve it. In practice policy formulation often overlaps with policy decision stage. Formulation aims at getting a preferred policy alternative approved; an affirmative decision is the reward of the whole process.

2.2.1.1. Challenges to Public Policy Formulation

Challenges to public policy formulation and evaluation may be similar at times. In this trajectory, (Juma and Onkware 2015) draw them from the questions of; 1. What is public policy? 2. Who is involved? 3. How is it arrived at? 4. What types and models?

2.2.1.1.1. The Challenges arising out of what is the public policy

The first question in this maze of challenges views the diverse definitions and gaps as a source of challenges since it is one of the causes of the justification of what practitioners do. Underneath this includes factorial elements that determine policy formulation. These include; political/social factors, environmental factors, and even economic factors.

Dimock et al. (1958) define public policy as consciously acknowledged rules of conduct that guide administrative decisions. This line of thought poses the challenges such as the existence of a body of laws whose existence are not questionable in a way and thus are external from the subjects. The issue of mental existentialism makes this thinking very disturbing and applications have been made wholesome based on such notions.

Fischer and Miller (2006) are of the view that although policy advice-giving is as old as government itself, the increasing complexity of modern society dramatically intensifies the decision-makers' need for information. Policy decisions combine sophisticated technical knowledge with complex social and political realities, but defining public policy itself has confronted various problems. Some scholars have simply understood the policy to be whatever governments choose to do or not to do. Others have spelt out definitions that focus on the specific characteristics of public policy.

Lowi and Ginsburg in Fischer and Miller (2006), for example, define public policy as “an officially expressed intention backed by a sanction, which can be a reward or a punishment.” As a course of action (or inaction), public policy can take the form of “a law, a rule, a statute, an edict, a regulation or an order.” The origins of the policy focus are usually attributed to the writings of Harold Lasswell, considered to be the founder of the policy sciences. Lasswell (1951) envisioned a multidisciplinary enterprise capable of guiding the political decision processes of post-World War II industrial societies. He called for the study of the role of “knowledge in and of the policy process.”

The challenge of being interdependent breeds laxity which is common in public policy implementation. Many policy players here choose a ‘wait and see’ attitude. Another challenge of public policy is the fear of failure. Given that, to others, it is action or inaction. And most

often than not, it is normal to fail. Failure here may in other terms mean unpopularity of a course of action due to the general view of implementers or just the changes in the environment to affect what was initially popular to lack people’s goodwill.

Defining policies as general directives on the main lines of action to be followed fail to give them authoritative force and renders their enforcers as feeble actors at citizens’ mercy. By understanding the concept of policy as denoting among other elements guidance for action, it might hence mean; a declaration of goals, course of action(s), general-purpose; and authoritative decision. It becomes a binding document which a government signs with the people. Like any other law, therefore, lack of fulfillment means failure.

2.2.1.1.2. The Challenges arising out of who is involved:

The question about who is involved in another area from which challenges arise. The multi- sectoral activity makes it laden with challenges.

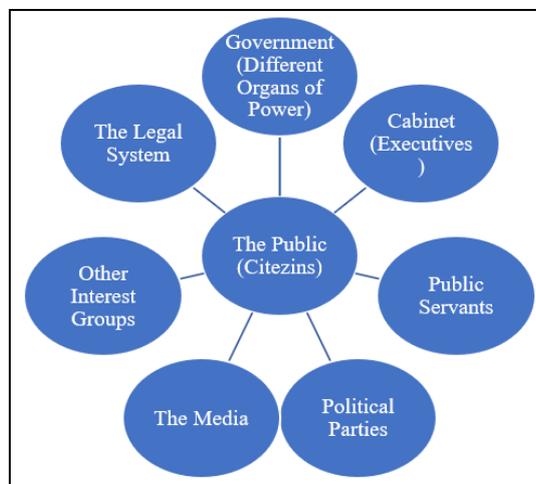


Figure 1: Stakeholders in the Policy Cycle.
 Source: Juma and Onkware (2015)

Policy analysis involves “systematic and data-based alternative to intuitive judgments about the effects of policy or policy options”. Defining policy as the study of the causes, processes, formation, implementation and consequences of public policy implies the focus is purely on stakeholders. This basis of policy understanding posits with it the inherent conflicts among the different stakeholders as the model shows, there are / or rather bound to occur silent tensions, go slow, open defiance, etc. that hinder policy implementation.

Additional to this is the perfect bureaucracy in action, which in the case where interests are thwarted then leads to corruption- a syndrome synonymous with developing states. With many stakeholders also, the question of time factor is another challenge, hence will the policies

remain relevant! What of the time value of money as far as policy costs are involved? That is cost relevance.

Detailed evaluation again about who is involved in policy formulation may require deep delving into the characteristics of the mentioned stakeholders to know their likely challenges in the process of policy initiation, making, and implementation, (Juma & Onkware 2015).

2.2.1.1.3. The Challenges Arising Out of How Policies Formulated:

The formulation procedures and dissect through to arrive at the likely weaknesses. In his analogy, he identifies the formulation of policies as likely to take routine method, being analogous, or being creative, Jones (1970). In this discourse, the business is to come up with possible challenges thus focusing on weaknesses. These same challenges will also cover the issue of types and models of public policy.

First, the case of routine formulation implies a repetitive and essentially changeless process of reformulating similar proposals within an issue area. The result of this is policymakers and implementers are likely to experience boredom, inhibition, and similar syndromes which translate to inefficiency and unproductive service. Secondly, the analogous formulation where there is a tendency of creating a new problem by relying on what was done in the past may lead to underutilization of skilled and expert human capital which ultimately leads to the same misnomers as in the point above.

The idleness then causes the person to engage in alternatives for self-actualization to fill the existing gap that the organization subjects them to. In this case, the past becomes the stone upon which all casting is done. Third and last for this part of the discussion is the creative formulation which involves treating any problem with sheer lack of precedence (avoiding historical factors).

This belief is that historical factors are archaic and hence have no place in the present. This may pose numerous challenges of resistance from the status quo, and the reality that societies don't change that fast. All organizations, institutions, systems, and cultures have a life tied knightly with the past which can only be shed gradually. Therefore policies must bear some link despite its bearing much creativity in the contemporary. Does creativity do away with the structures, beliefs, values, and systems at a go? Probably not hence attachment is necessary as new adoptions are incorporated. It is using new and creative methods in an old fashioned environment which requires tact and seeking available local goodwill.

Juma and Onkware (2015) found that these challenges can be generally and broadly be identified as;

- a) Level of expertise and knowledge of field and discipline,
- b) The understanding of Public Policy is (derived from the definitions); is the outcome of struggle? Or actions of government/ non-actions which is a philosophical dimension.
- c) Systemic, structural, and institutional limitations (challenges),
- d) The role of actors/stakeholders, both internal and external,
- e) The cross-cutting nature of public policies,
- f) The political interference, dependence, and will as determined by the interests of the ruling elite,
- g) Globalization and international regimes (has been seen in SAPs, Millennium Development Goals (MDGs), now Sustainable Development Goals (SDGs); but also through immigration policies world over,
- h) Other challenges are the Developing Country Syndrome (e.g. development strategies, unwarranted adoptions of external policies, internal fluidity,... etc.), and
- i) The issue of the presence of adequate policy legal frameworks and their abidance.

2.2.2. Policy Evaluation:

Policy evaluation can be as complex as formulation. Why? The retrospective analysis of any public policy or government action is bounded by several real-world constraints, such as time, budget, ethical considerations, and policy restrictions, (Juma & Onkware, 2015).

2.2.3. Gaps in The Literature to be Filled:

There was no updated data and information about the household food security status and also there is a lack of studies concerning the policy of food security and nutrition in the State. This research work is an effort tried to fill some of the mentioned gaps.

3. DATA AND METHODOLOGY

3.1. Study Area:

3.1.1. Geographical Background of AlQadarif State:

AlQadarif State is located in the eastern part of Sudan and extends over an area of about 72,000 km² (Figure 2). The state is bordered to the east by Ethiopia and Eritrea. The four Sudanese states surrounding AlQadarif State are Khartoum, Kassala, Gezira and Sinnar. The

mean temperature in the AlQadarif town is 29°C, the mean maximum is 37°C and the mean minimum is 21°C. May is the hottest month of the year. The area is characterized by a unimodal rainfall season most of which primarily occurs from June to September and controlled by the nature of the Inter-Tropical Convergence Zone. The annual rainfall in the area ranges between less than 300mm in the North to more than 800mm in the South (Sulieman 2013).

Analysis of climatic records from AlQadarif Meteorological Station by Sulieman and Elagib (2012) showed that there is significant warming of the climate, increasing rainfall variability and seasonality and intensifying aridity conditions during the start and end of the wet season. Also, there is an increase in rainfall concentration.

Harrison and Jackson (1958), classified the vegetation cover of the study area into three major vegetation zones: semi-desert vegetation cover in the north followed by low woodland savannah in the central part of the state and high woodland savannah in the far south. However, the study area affected by changes in the climate factors such as temperature and rainfall, this climate changes affects agriculture production particularly sorghum production.

Berry (2015a), found that there is a positive relationship between sorghum and rainfall, this means an increase in rainfall enhances sorghum production; while its decrease results in poor sorghum yield. On the other hand, both maximum and minimum temperature showed a negative relationship. This implies that an increase in temperature beyond the optimum level (high temperature of about 26-30°C and low temperature of about 10-15°C) results in a decline in sorghum production and vice versa.

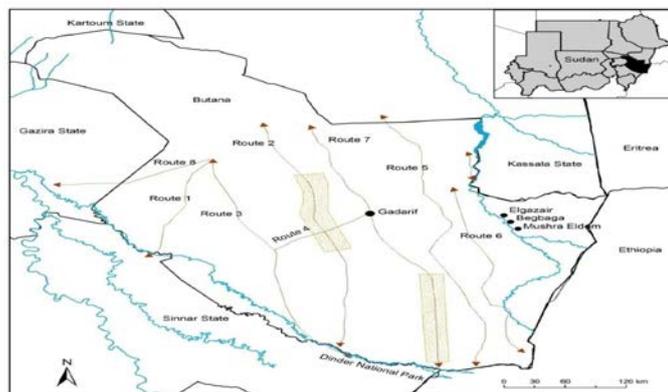


Figure 2: Map of AlQadarif State.
 Source: Sulieman (2013)

3.1.2. Population and Land Use:

According to the 2008 census, the total population of AlQadarif State is 1,336,662 persons with an annual population growth rate of 4.7 per cent, which is higher than the national

growth rate (CBS 2012a) Followed agriculture, livestock rearing is the second economic activity in different forms, namely traditional seasonal transhumant, village livestock raising and, as a recent element, livestock raising by large scale mechanized merchant-farmers investing surplus wealth in sheep and cattle.

Collecting and trading forest products and charcoal burning are other traditional forms of economic activity. Thus, the people derive their livelihood income from a mixture of combinations of the three main forms of land use: agriculture, grazing and forest utilization. Livestock production in the state is dominated by pastoral and agro-pastoral traditional systems.

3.1.3. Mechanized Rain-Fed Agriculture

Agricultural mechanization was introduced in the AlQadarif Region in 1944 when a government project was started to meet the food needs of army units stationed in the British colonies in eastern Africa during the Second World War. The idea behind this line of thought was to attract capital from the Arab World with the abundance of land and available manpower to increase food production to the extent of creating self-sufficiency for the region and beyond. The World Bank and other interested parties followed suit realizing the potential that such an arrangement may offer by mainly focusing on the expansion of agricultural production (Sulieman 2013).

3.1.4. Irrigated Agriculture:

One of the largest irrigated schemes partially belong to AlQadarif State, Rahad Scheme is one of the schemes through which the government chooses to expand the agricultural production (Bushara and Abuagla 2016).

3.2. Research Methodology:

3.2.1. Secondary Data/ Information:

3.2.1.1. Policy document review:

- **Step 1:** all the related documents concerning food security and nutrition policies and strategies have been collected from the key institutions such as Ministry of Agriculture and Forests (MoAF) strategies 2012 -2016 and annual plan, Ministry of Animal and Fisheries (MoAF), Ministry of Economics, Finance and Investment (MoEF) and

Ministry of Health (MoH). Also, the food security and nutrition policy documents review and policy analysis report were used (FSPS-CB 2014b).

- **Step 2:** those documents and the FAO report has been reviewed and then used to update the status of the availability and the quality of the policies/ strategies in the AlQadarif state.

3.2.2. *Questionnaire Development*

Three questionnaires were structured, targeting three levels,

- a) the questionnaire for policymakers at the state level, to investigate the challenges and constraints that face the FSN policies/strategies development and implementation and at the state level,
- b) a questionnaire for the policymakers at the localities level to investigate the challenges and constraints that face the FSN policies/strategies development and implementation and at the locality level,
- c) a questionnaire for the technical staff/officials, to investigate how do they implement the FSN policies/strategies at the state and locality levels,

3.2.3. *Sampling:*

- a) The questionnaire for the policymakers at state level, distributed among the ministers of the key line ministries, all the General Managers, Planning & Statistics directors in the key line institutions & the secretariat of strategic planning council, the questionnaire covered many questions to investigate the availability of the policy document in the institution and the state as a whole, to find out the objectives of this policy/strategy if any, what is the process has been used to achieve those objectives, what were the challenges or constraints that faces the implementation and what were the sources used to finance the operation action, the sufficiency of those sources and what were the monitoring and evaluation mechanisms used.
- b) The questionnaire for the policymakers at localities level, distributed among all commissioners (Moatamad), all the executives Managers, public committee coordinators and local councils if it is there, the questionnaire in this level is not different from the state level, also there was question about the availability of policy document in the locality level, the constraints and so on.

- c) The questionnaire for the officials/technical staff targeted the employees in the key line institutions such as production manager/MoAF, Manager of MoFEI, the staff of Technical Secretariat of Food Security and some of the general secretariat of Strategic planning, etc. The officials at the localities have been met such as agricultural director, health director, and education director. That questionnaire has been used to find out the awareness about food security policies/ strategies among the officials and how they deal with food security issues.

3.2.4. Data analysis:

The SPSS software used to analyze primary data collected through a questionnaire (three questionnaires). Descriptive statistics using percentages and frequencies employed to give some insights about FSN situation in the state, and challenges that face the implementation. Chi-square used to test the association between policymakers opinion at the state and locality level for Availability of FSN policy in the state.

4. RESULTS AND DISCUSSION

4.1. Food Security Policy Documents review:

To conduct this research firstly we have to identify the institutions that have a Food Security and Nutrition concerns and related to the food security and nutrition policies. Then, the availability of the documents of Food Security and Nutrition Policies has been examined. The key line ministries and other institutions concerning food security policy in the state are listed below;

- a) Ministry of Agriculture and Forestry. B.Ministry of Animal Resources and Fisheries.
b.Ministry of Health.d. Ministry of Finance, Economics and Investment.e.Ministry of Planning Construction and Public Utility.f.General Secretariat for Strategic Planning.g.Crop Markets.h.Chamber of Zakat. I Agriculture Bank of Sudan.j.Micro Finance Fund.k.National and International NGOs.

4.1.1. Availability and quality of the policy documents of Food Security

4.1.1.1. Availability of policy documents:

The available food security policy documents in AlQadarif State were related to; Ministry of Animal Resources and Fisheries as a document for the food security policy of - livestock sector, the document prepared in a format addressing food security policy through

the four pillars in 2014 annual plan. Availability pillars addressed directly as well as accessibility, utility and stability in this policy document. The second document was related to the Ministry of Health.

There are two policy documents in the Ministry one document for nutrition programs addressing nutrition policy intervention and another document for public health programs, these policies formulated as programs and activities in line with National Nutrition Policy of 2009 in Sudan (FSPS-CB 2014b).

The Food Security and Nutrition policy in other line ministries were embedded within the overall policy guidelines of the sector in the five years strategic plan of 2012 – 2016. For example, the Ministry of Planning Construction and Public Utility formulates the sector strategy that involves different sub-sectors objectives and it includes a policy statement by each sub-sector. These sub-sectors are roads, construction development, energy and communication, each sub-sector contains vision, policies and challenges.

Table (1) summarizes results related to the availability of food and nutrition policies documents in relevant ministries in AlQadarif state. It is clear from the table that only two institutions have their document concerning food security and nutrition policies, which are Ministry of Animal Resources and Fishery and Ministry of Health - Nutrition policy/public Health which uses a national document. All institutions have no monitoring and evaluation mechanisms.

The following Figure (3) shows that the majority of the respondents, 68 %, out of 105 respondents of the FSN technical staff said there was no policy document or strategy in the State level concerning the FSN issues. Only 3% of them did not know whether there was a policy or not, and this result did not match with the fact there are two ministries had an FSN policy document as shown in Table (1) and this indicates inefficiency because all the respondents should be aware of the FSN situation in the State, they are all policymakers in the key line institutions or technical staff.

This result may reflect that there are some weaknesses in the FSN policy training programs, and it is not as effective as desired. Besides, this problem may come from the nature of the FSN policy; most of the ministries did not have a separate document concerning FSN policies. However, it is embedded in the ministry strategic plans to serve its objectives apart from the others line ministries.

Table 1: Availability of food security policy documents in AlQadarif State

Ministry	FSP Document	Five year of Strategic Plan	Annual Plan	FSP - M&E reports
Ministry of Agriculture and Forestry	No	2012 – 2016	Yes	No
Ministry of Animal Resources and Fishery	Yes	2012 – 2016	Yes	No
Ministry of Health - Nutrition policy/public Health	2008 (National Nutrition Document)	2012 – 2016	Yes	No
Ministry of Finance and Economics	No	2012 – 2016	Yes	No
Ministry of Planning Construction and Public Utility	No	2012- 2016	Yes	No
Ministry of Finance and economics and investment	No	2012 – 2016	Yes	No
General Secretariat for Strategic planning	No	2012 – 2016	Yes	No

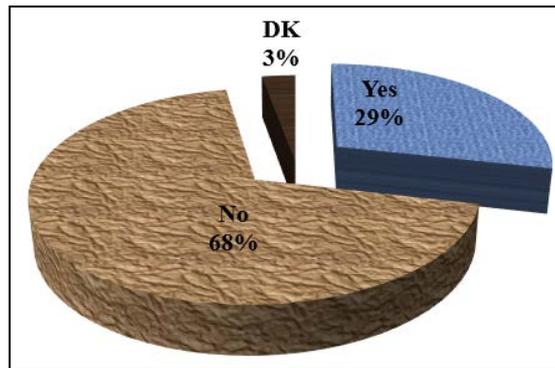


Figure 2: The Distributions of Line Institution Respondents According to Their Answers about the Availability of State Policy Document.
 Source: Authors' presentation based on research survey.

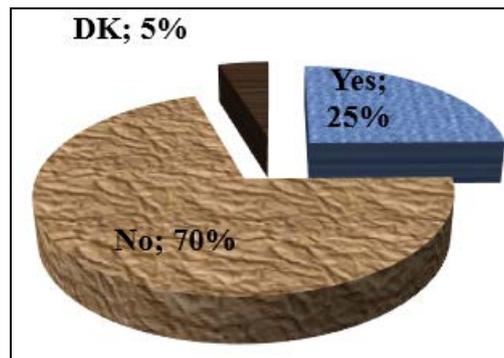


Figure 3: The Distributions of the Respondents According to Their Answers about the Availability of Policy Document at the Locality level.
 Source: Authors' presentation based on research survey.

Figure 3 shows that the majority of the respondents, 70 % of 36 respondents from all policymakers in localities, said there is no policy document or strategy in the state and localities level concerning the FSN issues and only 5% of them do not know whether there is a policy or not, also it means the FSN training programme to raise their awareness is not efficient.

- **Chi Test:**

Two hypotheses have been tested in this section and are:

- H_0 : there is FSN policy.

- H₁: there is a FSN policy.

We have used this scale to test the answers

	Agree	Neutral	Do not Agree
The weight	3	2	1

Table 2: Chi Test Statistics State level

	State policy
Chi-Square	18.500
Df	2
Asymp. Sig.	.000

Table 2 shows the calculated Chi-Square for the state level, which is 18.500 with a degree of freedom level 2, and the tabulated in (0.05) level of significance, was 5.991, so we reject the null hypothesis which was there is FSN policy /strategy for the state level

Table 3: Chi Test Statistics Locality Level

	Locality policy
Chi-Square	12.500
Df	2
Asymp. Sig.	.002

Table 3 shows the calculated Chi-Square for the locality level, which is 12.500 with a degree of freedom level 2, and the tabulated in (0.05) level of significance, was 5.991, so we rejected the null hypothesis which was there is FSN policy/strategy for the locality level.

This test confirmed the result of FSN policies/ Strategies absence in a separate document, so it a high time to develop a strategy for the state concerning FSN.

By reviewing all FSN documents available in the state, some gaps in these documents were noticed, which are:

- There is no available specific single food security policy document in the state.
- There is no proper multi-sectoral policy document at all line ministries in the state except Ministry of Animal Resources and Fishery.
- Lack of identified responsible key institutions to formulate food security policy (Food Security Committee and Food security strategy development taskforce).

Table 4: Cross Tabulation Chi test for Association Between Policy Makers Opinion at the State and Locality Level for Availability of FSN Policy in the State.

	There is an FSN Policy			total	Sig.
	Do not Agree	Do not Know	Agree		
State Policy Makers	24	2	22	48	.000
Locality Policy Makers	16	26	6	48	
Total	40	28	28	96	

Table 4 shows that there was a significant association between policymakers opinion at the state and locality level for the availability of FSN policy in the state.

This test confirmed the above descriptive result of FSN policies/ Strategies documents absence in a separate document, so it is a high time to develop a strategy for the state concerning FSN.

4.1.1.2. Document Availability Gaps:

All the documents concerning food security and nutrition policies and strategies have been collected from the key institutions such as MoAF strategies 2012 -2016 and annual plan, MoAF, MoEFI, MoH. Also, food security and nutrition policy documents review and policy analysis reports.). (FSPS-CB 2014b) have been used. Those documents and the FAO report had been reviewed and then used to update the status of the availability and the quality of the policies/ strategies in the AlQadarif state, however, the main finding from this review is that there are some gaps which are:

- a) There is no available specific single food security policy document for the whole State.
- b) There is no proper multi-sectoral policy document at all line ministries in the State except Ministry of Animal Resources and Fishery.
- c) Lack of identified responsible key institutions to formulate food security policy.
- d) Lack of policy harmonization and coordination mechanism between different line ministries regarding food security in the State.

4.1.1 Documents Framework Quality:

4.1.1.3. Policy Documents Framework Quality

The available and predictable documents related to food security policies and strategies in AlQadarif State are lacking quality formulation and preparation. The proper document might contain; introduction and background information of the problem justification to formulate policy, problem diagnoses and current situation analysis, a section for principle measures,

strategic goals, objectives and priorities of food security policy, a section for institutional set up with their role and responsibilities and section for monitoring and evaluation process.

Like general performance, all related policy documents were lacking these mentioned sections on the prepared documents. The Ministry of Animal Resources and Fishery prepared food security policy document according to four pillars approach, food availability, accessibility, utility and stability, but it is still lacking proper policy document format as in the above paragraph.

4.1.1.4. Policy Documents Framework Quality Gaps

The available food security policy documents are poorly formulated in term of policy document format and major contents; therefore there is a clear gap between the document standards content or format and the prepared policy document of all line Ministries in the State.

4.2. Policy challenges:

The food security and nutrition policies have faced by some serious obstacles and challenges, those challenges are mainly related to policy implementation such as Institutional setup and inter-sectoral coordination, finance, absence of specialized database and the weak systems of monitoring and evaluation and early warning.

4.1.2 Food Security Policies Coordination Mechanisms:

The State political leadership has a great interest in FSN and trying to improve the situation, so the Governor of the State (Wali) established a committee to do the job in September 2013, the members of the committee are as follows:

Table 5: Food and Nutrition Committee

1	The Minister of Agriculture and Forestry	President
2	The General Directorate of Ministry of Agriculture and Forestry	Member
3	The General Directorate of Ministry of Animal Resources and Fisheries	Member
4	The General Directorate of Ministry of Finance, Economics and Investment	Member
5	The General Directorate of the Ministry of Social Affairs	Member
6	The General Directorate of the Ministry of Health	Member
7	The General Directorate of Ministry of Construction and Planning	Member
8	The General Secretary of strategic planning general secretariat	Secretary
9	The Weather Forecasting Manager	Member
10	The Secretary of Food Security Technical Secretariat	Member
11	The General Secretary of Zakat Chamber	Member

4.1.2.1 Food Security and Nutrition Inter-sectoral Coordination Mechanisms and Institutional Setups:

Also, within the Food Security Policy and Strategy-capacity building programme which has been held in the State by the Food and Agriculture Organization of United Nations (FAO),

a Technical Secretariat has been established, to deal with the Food Security and Nutrition issues.

The SFSTS had been established in September 2013 and are fully functional, it is composed of Six technical staff seconded from State line Ministries:

4.1.2.2 State Food Security Technical Secretariat (SFSTS):

- a) SFSTS Coordinator.
- b) Agriculture Officer.
- c) Livestock and Fisheries Officer.
- d) Market & trade Information Officer.
- e) Health & Nutrition Officer.
- f) Data & Information Management Officer (DIMO).

Despite the true willing of the State Politian to improve the institutional setup and coordination framework, some weaknesses in this side might come from the historical biased to the agricultural production as food security strategy, this weakness also appear in South Africa as a result of a historical bias towards agricultural production as the strategy for food security, the Department of Agriculture has stewardship of food security in the South African government. In that department, responsibility has been allocated to a directorate that is “institutionally weak”, with no real ability to compel other directorates (Koch 2011).

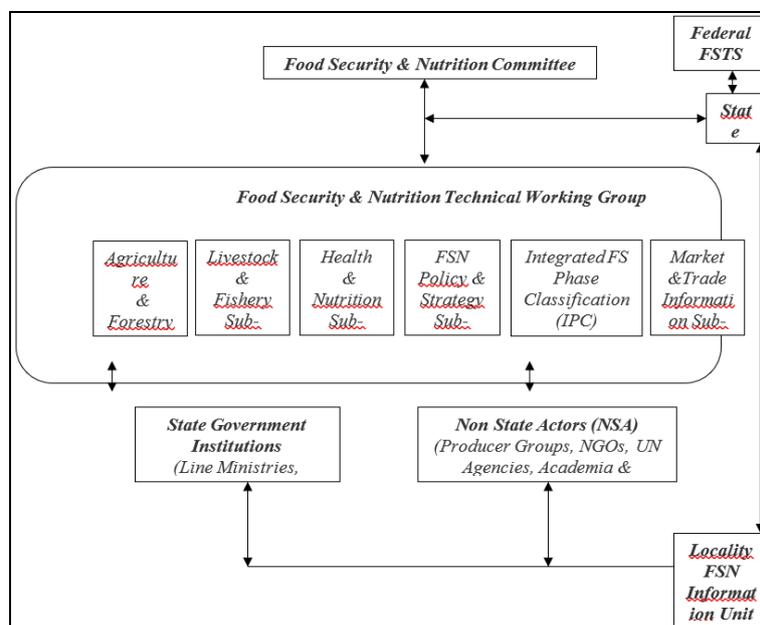


Figure 4: AIQadarif FSN Institutional Setup and Coordination Framework.
 Source: State (2015)

Despite the true willing of the State Politician to improve the institutional setup and coordination framework, some weaknesses in this side might come from the historical biased to the agricultural production as food security strategy, this weakness also appear in South Africa as a result of a historical bias towards agricultural production as the strategy for food security, the Department of Agriculture has stewardship of food security in the South African government. In that department, responsibility has been allocated to a directorate that is “institutionally weak”, with no real ability to compel other directorates (Koch 2011).

Despite of the fact that there is a body concerning food security and nutrition issues, Food Security and Nutrition Committee (FSNC), the respondents as a policymakers and officials at both levels, state and localities, have a weak knowledge of that body and its role, the following figures reflect figure(5) this result.

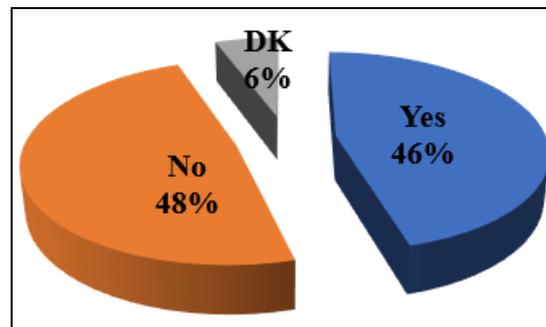


Figure 5: The existence of the Food Security and Nutrition body (FSN Body) in the State, According to the Distribution of the Respondents (Technical Staff in the State).

Source: Authors' presentation based on research survey.

Figure 5 shows that less than half of the respondents at the technical staff level, only 46%, know that there is a body FSN body in the state (FNSC) and 54% of them did not know this body. This result indicates a real problem in the flow of information, in addition to weak involvement of technical staff in the food security issues as part of a complete system, their concerns about food security and nutrition came only from their institution point of view apart from the other key line institutions.

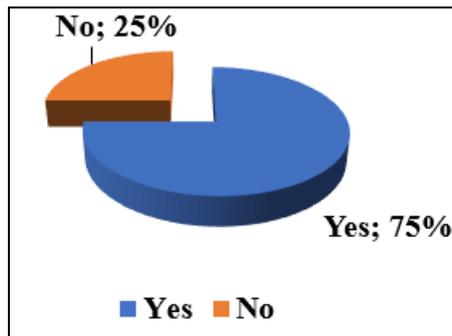


Figure 6: The Existence of the Food Security and Nutrition body (FSN Body) in the State, According to the Distribution of the Respondents (FSN Policy Makers, State Level).

Source: Authors' presentation based on research survey.

Figure 6 shows that 75 % of the policymakers in the State said that there was a food security body in the state (FNSC), this good percentage may come from the fact that almost all the policymakers in the state are members of the (FNSC), 25 % of the respondents did not know this body, those who did not know the existence of this body mostly not familiar with this body because they were new in their positions.

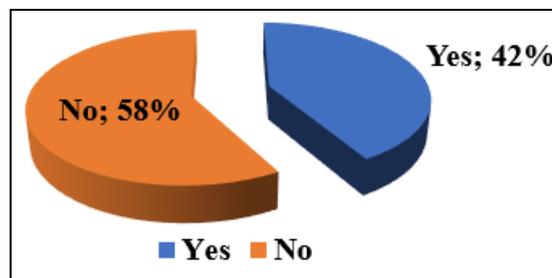


Figure 7: The Existence of the Food Security and Nutrition Body (FSN Body) in the State, According to the Distribution of the Respondents (FSN Policy Makers, Locality Level):

Source: Authors' presentation based on research survey.

Figure 7 shows that only 42 % of the policymakers in the locality level said that there was a Food security body in the State (FNSC), 58% of the respondents did not know this body, and this may because they were not members in this body, in addition to the weak flow of information.

The two figures (6 and 7) shows that there is a gap between the policymakers at the state level and the policymakers at the locality level, less than a half of the policymakers at locality level, 42%, did not aware about the FSN body in the state.

4.1.2.3 Chamber of Zakat

The chamber of Zakat has a great role in dealing with the FSN issues in the state. According to respondents, at the technical staff, answers about the role of the Zakat chamber,

the following figure 4.7 shows that the majority of the respondents, 94%, agreed with the opinion that Zakat helps in FSN Issues, and only 6% of them did not agree with that opinion.

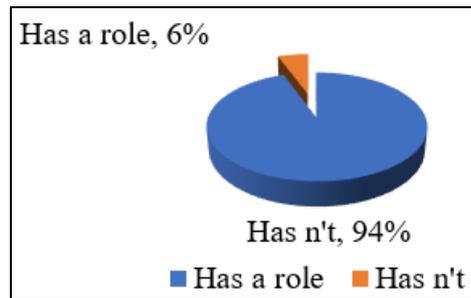


Figure 8: The Role of Zakat Chamber in the FSN issues in the State, According to the Distribution of the Respondents (Policy Makers, Locality Level).
 Source: Authors' presentation based on research survey.

Figure 8 shows that the majority of the policymakers of the FSN policies in the localities, 94% of them, believe that the Chamber of Zakat plays a very important role in helping in improving the FSN situations.

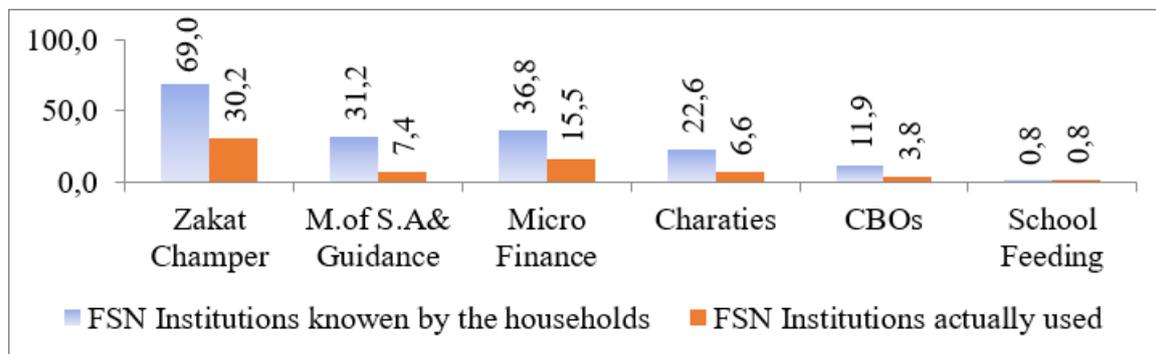


Figure 9: FSN Institutes that Known by the Population and that Utilised by the Population.
 Source: Author's presentation based on research survey.

Figure 9 Shows that the majority of the respondents at the household level (69%) are aware of the role of Zakat chamber in poverty alleviation, however, only 30.2% received some aid from the chamber of Zakat. Regarding Microfinance, 36.8% of the respondents are aware of the role of microfinance institutions in food security, however, only 15.5 % benefit from the microfinance, this result explained by the researcher due to difficulties in getting collateral to receive finance.

Only 8% of the respondents believed that there was a school feeding programme, and only those 8% has already get benefit from this service.

4.1.2.4 Food Security and Nutrition Inter-sectoral Coordination Mechanisms

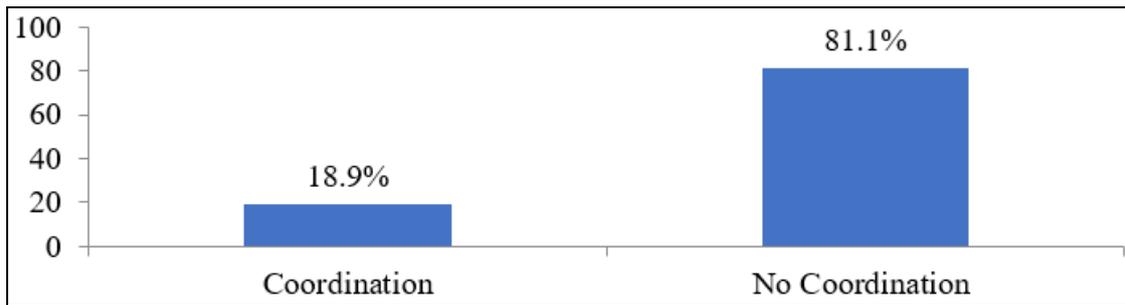


Figure 10: The inter-sectoral coordination mechanisms efficiency at the locality level.

Source: Authors' presentation based on research survey.

Figure 10 shows that the majority of the respondents, 81.1 % of the 36 policymakers at locality level, said there is no inter-sectoral coordination between the FSN institutes in the state, and only 18.9% of them believe that there is a coordination between the FSN institutions, and this result may come from the result in figure 7 that only 42% of the policymakers at locality level even know about the existence of a coordination body at state level.

However, this reflects the fact that there is an FSN state institutional setup and coordination framework but it is not popular, this may result from the absence of FSN policy document for the State and lack of information flow, every institute looks to the FSN situation from its point of view.

4.1.2.5 Coordination Challenges:

The main challenges that face this work are:

- a) Most of those members are changeable, this creates some difficulties in coordination and information flow, in the last three months, the General Secretary of Strategic Planning General Secretariat has been replaced three times.
- b) The chamber of Zakat follows a Federal Strategy and their implementation is according to the central plans that came from the headquarter.

4.1.3 Finance

Finance is a very important element in the process of policy formulation and implementation, the lack of finance may affect the policy in many ways, such as delaying in scheduled activities, cut the size or cancelling some activities and so on, in the most of African countries finance is one of the constraints of the implementing programs or projects concerning food security. In South Africa, for example, there is uncertainty about the financial resources that have been made available to tackle food insecurity in general and the IFSS in particular.

Within the IFSS, a major financial challenge is related to the different departments involved in implementing the programs that are part of the strategy. Since each of the four pillars falls under a line department with dedicated budget allocation, additional resources have not been forthcoming. This leads to an aversion to working within the IFSS framework.

In AlQadarif State finance mainly comes from Governmental resources and it took time to be available.

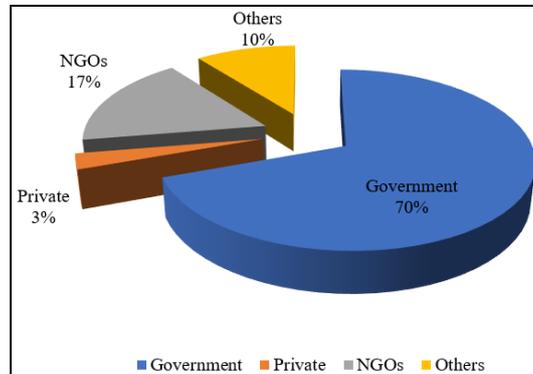


Figure 11: The Source of Finance According to the Distribution of the Respondents (Technical Staff).

Source: Author's presentation based on research survey, (Appendix 7.9).

Figure 11 shows that the majority of the technical staff of the FSN in the State, 70% of them, believe that the main source of finance is the Government either from national Government or State Government, and the lowest percentage of them only 3%, said that the private sector contribution in the process of policy development and implementation.

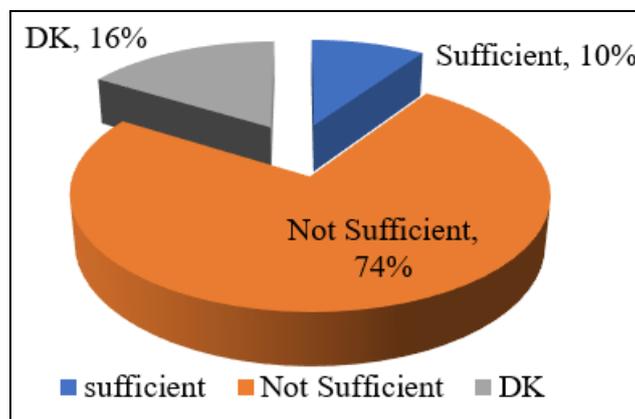


Figure 12: The Sufficiency of Finance According to the Distribution of the Respondents (Technical Staff).

Source: Authors' presentation based on research survey.

Figure 12 shows that 74% of FSN technical staff in the state, said that the finance was not sufficient, only 10% of the respondents believe it was enough and rest of them not sure whether it was enough or not.

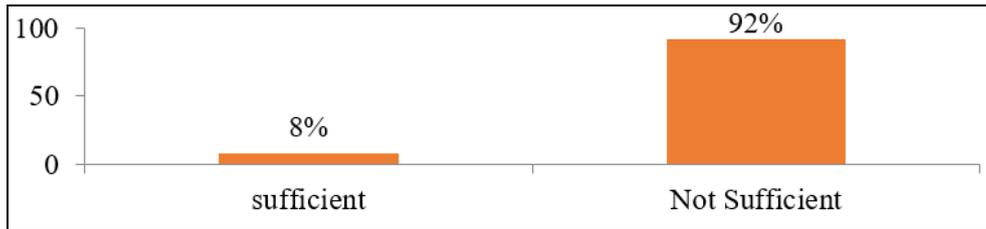


Figure 13: The Sufficiency of Finance According to the Distribution of the Respondents (State Policy Makers).

Source: Authors' presentation based on research survey.

Figure 13 shows that 92% of FSN policymakers in the State said that finance is not sufficient, only 8 % of the respondents believe it is enough. In the coming figures will see the reason for the in the sufficiency of finance according to the respondent's answers.

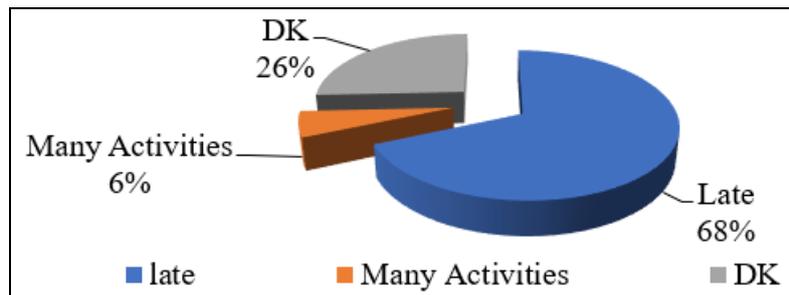


Figure 14: The Reasons for Finance Insufficiency According to the Distribution of the Respondents (FSN Technical Staff).

Source: Authors' presentation based on research survey.

Figure 14 shows that 68 % of FSN technical staff in the state, said that the finance came late, so they could not implement the policies as they hope, only 6 % of the respondents have too many activities to be done. And the rest of them don't have a clue of why it is not enough.

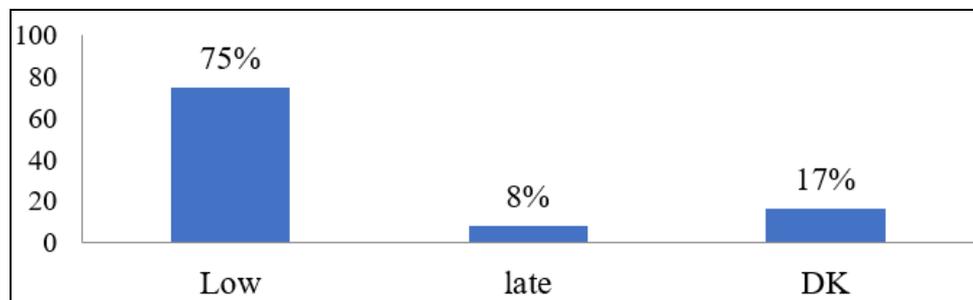


Figure 15: The Reasons for Finance Insufficiency According to the Distribution of the Respondents (State FSN Policy Makers).

Source: Authors' presentation based on research survey.

Figure 15 shows that 75 % of FSN policymakers in the State, said that the finance was low, so they could not implement the activities that should be done, only 8 % of the respondents said it came late. And the rest of them, 17%, don't have any specific reason why

it is not enough and this ignorance may reflect the weaknesses of the Monitoring and Evaluation (M&E) mechanisms.

4.1.4 Monitoring and Evaluation System (M&E):

As we noticed earlier in this paper in Table 1, there is no clear food security and nutrition policy for the state, and the policies inserted in the strategies of each institution to achieve the objectives of the institution - and somehow formulated into action plans - such as increasing the cultivated area or the productivity, or decreasing the ratio of infections of some diseases and so on, due to this fact there is weakness in evaluating and monitoring system, actually, no M&E system has been found it is just some progress reports clarifying what has been done of those action plans.

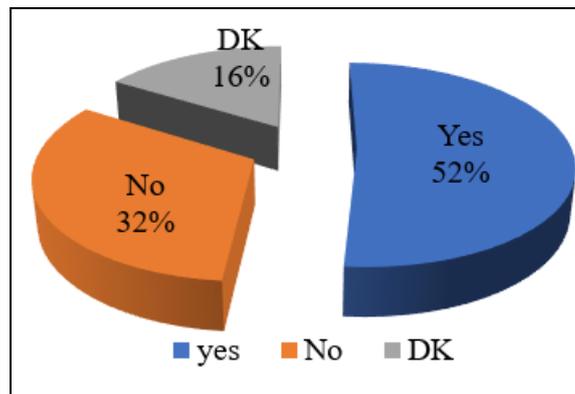


Figure 16: The Existence of the Monitoring and Evaluation Mechanism, According to the Distribution of the Respondents (Technical Staff in the State).

Source: Authors' presentation based on research survey.

Figure 16 shows that only 52 % of technical staff in the State said that there are monitoring and evaluation mechanisms concerning FSN, this result may reflect a problem of institutional setup and lack of coordination with others, 32 % of the respondents said there was no mechanism at all. And the rest of them, 16%, don't know if there was any mechanism or not and that may reflect the weaknesses of the M&E mechanisms.

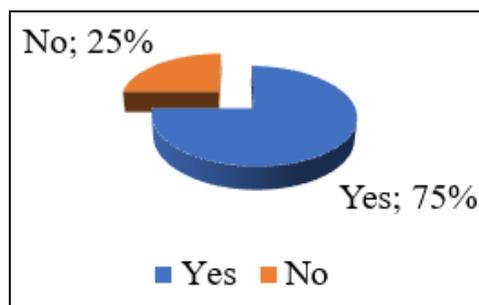


Figure 17: The Existence of the Monitoring and Evaluation Mechanism, According to the Distribution of the Respondents (FSN State Policy Makers).

Source: Authors' presentation based on research survey.

Figure (17) shows that 75 % of the policymakers in the State said that there are monitoring and evaluation mechanisms concerning FSN, 25 % of the respondents said there is no mechanism at all.

The two figures (16 and 17) indicate that there is a gap between the policymakers and their technical staff, almost 50% of the technical staff is not aware of the mechanisms used in monitoring and evaluation related to the FSN.

4.1.5 Early warning system:

The early warning system is one of the essential tools in predicting the disasters emergencies, in our consideration such as famine, the next figure (18), shows the availability of such system in the state.

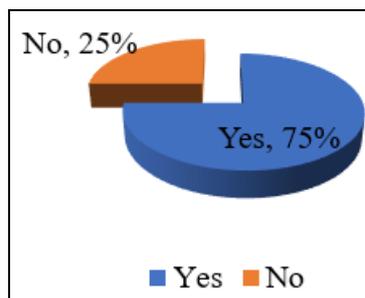


Figure 18: The Availability of the Early Warning System (EWS) in the State (Policy Makers, Locality Level).

Source: Authors' presentation based on research survey.

Figure 18 shows that 75% of the policymakers in the locality level said that they have some sort of early warning systems, these systems were mainly the disaster and emergency committees in the localities and only 25% of them, did not have this type of systems.

4.1.6 Food Security and Nutrition Database:

Databases have a great value to the policymakers, and it is very important in making a solid background and to come up with some conclusions and key information that helps the policymakers and decision takers in making right choices and make a good decision, the following figures (19, 20 and 21) shows that there is a lack of databases even in level of the institutions.

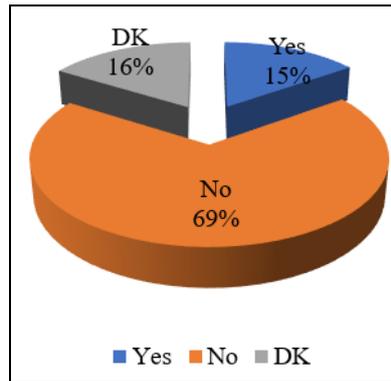


Figure 19: The Availability of the Food Security and Nutrition Database (FSN Database) in the State, According to the Distribution of the Respondents (Technical Staff in the State).
 Source: Authors' presentation based on a research survey

Figure 19 shows that the majority of respondents, 69%, said there was no any FSN database in the state and only 15% of them believed that there is a database, and the rest of the 16% did not know if there were database or not.

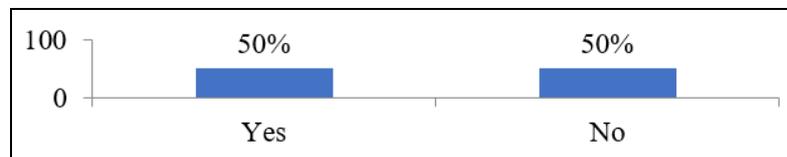


Figure 20: The Availability of the Food Security and Nutrition Database (FSN Database) in the State, According to the Distribution of the Respondents (Policy Makers in the State).
 Source: Authors' presentation based on research survey.

Figure 20 shows that 50% of respondents, said there was no any FSN database in the State and the other half believed that there a was a database, and this may reflect the lack of coordination and harmonization among the line institutes.

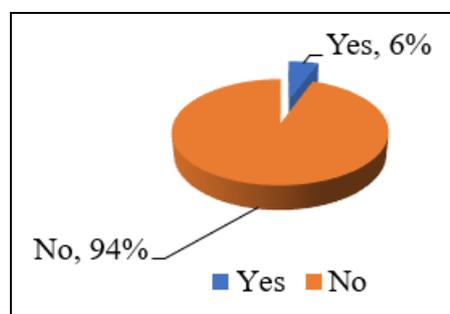


Figure 21: The Availability of the Food Security and Nutrition Database (FSN Database) in the Localities, According to the Distribution of the Respondents (Policy Makers in the Localities).
 Source: Author's presentation based on research survey.

Figure 21 shows that the majority of the respondents, 94%, do not have any FSN database in their localities and only 6% of respondents, said there was a database that concerning FSN issues in their localities.

Figure 17 and 18 reflect that State Government interest in the FSN situation but this did not extended to all localities of the State.

4.1.7 The legal framework:

In an interview with the secretariat of the state legislative council (2016), he said the State took many steps in the way to ensure food security and nutrition, by issuing some regulations and laws, by the State Legislative Council such as:

- The law to prevent the use of potassium bromide in bread, 2005.
- The law of adding iodine to salt.
- The law of AlQadarif microfinance institution, 2008.
- The law of food control, 2008.
- The law of agricultural cycle, 2012.
- The law of supporting crop protection department, 2007.
- The law of animal disease control, 1997.
- The law banning the use of plastic bags, 2013.
- The law of nomads and livestock routes, 2016.
- The law of mechanized agriculture corporation, 2014.
- The law of banning cultivation of crops after the northern irrigation line of 2016.
- The law of public health, 2008.
- The law of environment conservation, 2008.

All the above laws are helping in developing and implementing the policies and strategies of food security and nutrition. The main challenge faced the legislation side was the weak contribution of the stakeholders in drawing those laws, this problem also has been found in South Africa despite Legislation, which clearly defines the authority, responsibility, organizational structure and working procedures of the inter-ministerial committee responsible for implementing the IFSS programme, but the stakeholders, are absent. (Koch 2011).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions:

From all the previous information the following have been concluded:

- a) There is no separate FSN policy document in the State, except for the MoARF.
- b) All the existed state FSN policies are stemmed from the state five- year strategic plan 2012-2016. This means all these policies are designed and implemented using the top-bottom approach, even the strategy going to be built by the task force because most of the task force members are government employees.
- c) Zakat chamber has a great role in dealing with the FSN situation in the State.
- d) The Government has a good willing in developing good food security and nutrition policy and took steps ahead (established SFSTS, SFSC).

5.2. Recommendations:

Some interventions in all FSN dimensions may be recommended as following:

a) Availability side:

- Use the new technologies to increase the productivity of the crops, such as: using improved seeds, fertilizers, new techniques, and fallow etc.
- Use new technologies to increase the productivity of animal productions.
- Increase the storing capacity.
- Insert some of the transformation industries.
- Improve the quantity of the drinking water.

b) Accessibility side:

- Connect the rural areas to the electricity network.
- Connect production areas with good roads net.
- Ease the collateral conditions to get microfinance, and follow the implementation.
- Expand the direct and indirect aids from MoSA.

c) Utilization side:

- Improve the public health situation.
- Improve the quantity of the drinking water.
- Improve the quality of the drinking water.

d) Sustainability side:

- Build an FSN policy/strategy to put the conservation of the natural resource in consideration (here an administrative secretary is recommended to follow the execution of the regulations issued by the State Legislative Council).
- Give the SFSTS a power to conduct their recommendation and follow the implementation (for this an independent full-time General Director is highly recommended to lead FSN).

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