

## SUDAN WATER MANAGEMENT AND CLIMATE CHANGE ADAPTATION

- **MAJOR THREATS AND CHALLENGES:**

The encroachment of Saharan southward rapidly is the biggest environmental threats in Sudan. Because of its significant impact on the management of water resources and the apparent reversal of the parameters of climate change. The biggest threats and challenges of water resources in Sudan are as follows: lack of efficient management of existing water resources, they are not used optimally in irrigation, which do not use modern irrigation methods that reduce water losses. Also there are no effective programs for water harvesting in areas of scarcity of water for use in irrigation and other domestic uses. Contamination of fresh water sources by the industrial waste in some large industrial cities, thereby hindering the natural uses. The arrival of some of wastewater to natural stocks of drinking water in some areas. Red sea water polluted by mega oil tankers transiting to this vital corridor. The uses of water resources in the generation of electric power, is enter these sources in conflict with irrigation use in agricultural projects. The production of electrical power can be using clean energy sources (solar radiation, wind speed) available in Sudan. One of the big challenges in the field of water resources management in Sudan, the exploitation of water sources, underground reservoirs (Nubian Sandstone, Gazira formations, Um rawaba formations).

The phenomenon of climate change seems in, rain line transition to South, the temperature rise by 0.5 ° C. Leading to affect of plant biological processes, and led to low productivity of essential food from agricultural crops in the traditional production areas (Kordofan, Darfur). Causing this phenomenon, slight emission of some greenhouse warming gases from some of: agricultural, industrial and service sources.

- **FEDERAL MINISTRY OF AGRICULTURE AND IRRIGATION (FMAI) FRAMEWORK FOR THE NATIONAL POLICY:**

Federal Ministry of Agriculture and Irrigation works in the context of achieving the national policy of environmental by: a balance use of non-renewable resources, optimal use of available environmental resources (water, earth, ... etc.), plans and policy development aimed guidance to the clean environmental uses, protect the public balance environmental through the activation of the institutions concerned, the appropriate use of modern technology to preservation of the environment, by encouraging national initiatives in this area.

- **FEDERAL MINISTRY OF AGRICULTURE AND IRRIGATION : BACKGROUND, MISSION AND STRATEGY:**

Federal Ministry of Agriculture and Irrigation (**FMAI**) is an active member of the Higher Council for the Environment and Natural Resources (**HCENR**), government apparatus responsible for maintenance of the environment and protection of natural resources.

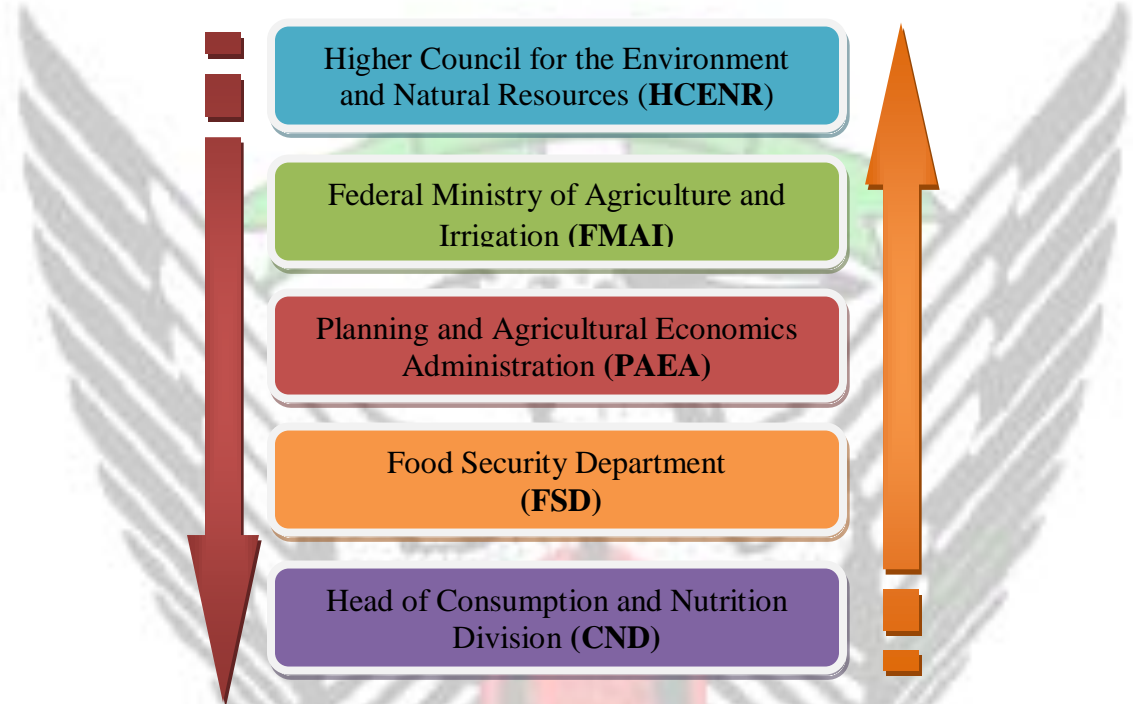
Ministry of Agriculture and Irrigation, implemented her an environmental role through specialized institutions related to the environment: irrigation, land uses, forests, natural pastures, food security (food safety, quality and an environmentally).

Ministry of Agriculture and Irrigation, implemented the national environment strategy, and carry out all the tasks entrusted to it.

- **MY POSITION AND DUTIES WITHIN MINISTRY OF AGRICULTURE AND IRRIGATION:**

I am working through food security department - Consumption and Nutrition Division, prepare specialized reports on food security in Sudan, which deals with food safety and quality from an environmental perspective, and its adaptation to specific national standards.

- **AN ORGANIZATION CHART INDICATING MY PRESENT POSITION:**



- **CURRENT INTERESTS AND VISION IN THE FIELD OF ENVIRONMENTAL MANAGEMENT:**

Activating protecting natural resources methods, maintaining the environmental balance, use of modern irrigation methods to dismiss of water losses, activating programs of water harvesting, production clean energy using resources of: solar radiation, wind, ... etc., reduce the use of fossil fuels (oil, coal Stone) to help in reducing greenhouse gases emissions harming the ozone layer, to reduce the effects of climate change, activating the environment and natural resources legislation in Sudan.

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