Goals, objectives or targets related to nutrition:

Overall goal: Health status of Yemeni people is improved through strengthening nutritional intervention by 2020.

Targets: Serious nutritional problems to be solved in this moment are malnutrition/under nutrition; including anemia, vitamin A deficiency, iodine deficiency, rickets, zinc deficiency and household insecurity.

Conduct the following nutrition interventions:

Control of child undernutrition
- Reduce the prevalence rate of undernutrition among infant and young children
- Improve infant and young child feeding
- Improve dietary habit affecting nutritional status of infant and children
- Contribute improving household food security
- Improve dietary habit affecting nutritional status of infant and children
- Reduce the risk of infectious diseases
- Reduce the prevalence of LBW
- Prevent the deterioration of malnutrition cases at early stage

Control of low birth weight
- Reduce the prevalence of low birth weight
- Reduce the prevalence of malnourished pregnant women
- Reduce cases of early and frequent pregnancies
- Reduce number of pregnant women having habit of smoking cigarette /shisha and chewing qat
- Improve the services of nutrition screening and counseling for pregnant women
- Increase the access rate of monitoring and providing special care for low-birth weight babies
Control of maternal undernutrition
- Reduce the prevalence of undernutrition among women of reproductive age
- Improve dietary diversity and modification for pregnant and lactating mothers
- Detect under-nutrition of pregnant mothers at early stage and provide appropriate counseling
- Prevent early pregnancy and frequent pregnancy
- Improve the life custom of women which can be a risk factor of maternal health and nutrition such as heavy work load, smoking and chewing qat

Control of rickets
- Eliminate the prevalence of rickets among children under five
- Increase the rate of children exposure to sunlight for children and pregnant mother
- Increase the consumption of foods rich with vitamin D and calcium in children and pregnant mothers
- Increase the rate of detection and treatment cases for children with rickets symptoms at early stage

Control of iron deficiency anemia
- Reduce the prevalence of anemia among children under five and women of reproductive age
- Improve the quality and diversity of diet to increase the intake and bioavailability of iron
- Promote the use of iron fortified food
- Increase the access of iron/folate tablets among pregnant and lactating women
- Reduce the risk factor of parasitic infestation (Malaria, Schistosomiasis, Helminthes)

Control of vitamin A deficiency
- Decrease the prevalence rate of vitamin A deficiency disorder among children under five and mothers
- Increase the consumption of vitamin A rich food
- Increase the covering of foods fortified with vitamin A
- Increase the coverage of vitamin A capsule for children and mothers

Control of iodine deficiency
- To eliminate Iodine Deficiency Disorders in Yemen
- To ensure all the people can access iodized salt

Control of zinc deficiency
- Reduce of the prevalence of zinc deficiency
- Clarify the severity and the target group/area of zinc deficiency
- Increase the zinc intake among people with high risk of zinc deficiency
- Reduce the risk factor of high excretion of zinc

School nutrition
- Reduce the prevalence of undernutrition among school children aged from 6 to 15 years
- Improve food intake of school children quantitatively and qualitatively
- Decrease the incidence of infectious diseases which interrupt the nutritional status of school children
- Reduce the prevalence of malnutrition at early stage

Nutrition for emergency situation
- Reduce the critical risk of death and malnutrition during emergency situation
- Improve the situation of food shortage in the people who suffer from natural or man-made disasters (flood, drought, earthquake, war, food price crisis, etc)
- Prevent death cases from malnutrition under emergency situation

Strategies

Strategies and activities related to nutrition:

**Strategy:** In order to reach overall goal, the Government of Yemen have to tackle all kinds of malnutrition and their risk factors through effective and systematical nutrition intervention with well-trained health workers and other corporative stakeholders.

Control of child undernutrition

- Promote and protect breast feeding for infants and young children.
  - Promote exclusive BF for the first 6 months timely and BF for at least 2 years with complementary food
- Campaign through mass media
- Education and counseling mothers regarding BF

- Protect from commercial promotional practices undermining optimal BF practices
- Implement the prime minister decree on regulation of BF promotion and protection
- Appoint inspectors for monitoring
- Monitor commercial promotional practice by inspectors

- Develop the system of breastfeeding promotion at birth facilities
- Assessment of candidate hospitals
- Profile necessary support and supplies
- Increase awareness for director of hospitals and head of section to promote BF
- Training doctors and nurses of selected hospitals
- Implement monitoring and evaluation

- Promote appropriate complementary food with locally available.
- Implement education and counseling for mothers at health facility and community levels

- Strengthen support from families, communities and health care systems for lactating mothers.
- Mobilize mothers group
- Advocate community people
- Advocate community and religious leaders

- Improve working environment for lactating mothers
  - Update a law of working environment for pregnant and lactating mothers (crèches, BF break, maternity leave and paternity leave)
  - Campaign for the improvement of working environment

- Capacity development at health facility and community levels
  - Prepare training
  - Prepare education material
  - Prepare the guideline of infant and young child feeding

- Identify nutritional problems due to culturally related dietary habits
  - Conduct KAP study
  - Conduct campaigns to improve nutritional habits

- Increase the awareness and knowledge of balanced diets, nutritious foods and good dietary habit
  - Conduct campaign to good dietary habit
  - Disseminate the existing dietary guideline through health facilities

- Enhancing collaboration with agriculture and other relevant sectors to promote or improve household food security
  - Establish the taskforce or committee to develop a road map for household food security
  - Conduct the activities to promote the following issues:
    a) Food production at household level
    b) Food storage and preservation skills
    c) Utilization of various foods
    d) Income generation for purchasing foods

- Improve knowledge, skill and practice of hygiene
  - National campaign through mass media
  - Education on health and hygiene at health facility and community levels

- Improve safe water supply, sanitation and housing
  - Collaboration with the sector of water supply, sanitation and housing

- Increase the access to health services
Immunization services
- Infectious diseases (measles, Diarrhea, ARI, HIV, Vector born diseases) control
- Provision of ORS
- Vitamin A supplementation

- Strengthen growth monitoring activities including nutrition counseling at the all health facilities and at community level
  - Develop guideline of monitoring and counseling
  - Develop training material
  - Develop manual for growth monitoring and nutrition counseling
  - Conduct training for healthy worker and health volunteers
  - Conduct monitoring and evaluation

- Improve the capability of treatment for moderate and severe malnutrition cases at health and medical facilities
  - Conduct training health workers for treatment of moderate malnutrition
  - Conduct training medical doctors for the treatment of severe malnutrition
  - Establish monitoring, and recording system for treatment for severe malnutrition
  - Integrate the protocols of management of malnutrition with the curricula of medical schools

Control of low birth weight

- Create awareness of the importance of additional dietary intake and nutritious foods during pregnancy.
  - National campaign through mass media
  - Nutrition education at health facility and community levels
  - Provide education material
  - Train health workers and volunteers

- Promote community and family supports for maintaining a good care and dietary habit
  - Educate community people by health workers and volunteers, with involvement of religious leaders.

- Ensure iron supplementation for pregnant women
  - Review the guideline of reproductive health for iron/folic supplementation
  - Train health workers and volunteers for distribution of iron/folate tablets
  - Activate the role of health facilities for distribution of the iron/folate tablets
  - Involve health volunteers for the distribution
  - Strengthen logistic system and monitoring for delivery of iron/folate tablets

- Promote the service provision of reproductive health
  - Implementation by Reproductive Health Sector
• Promote social mobilization to aware of the importance of stopping smoking and chewing qat
  - National campaign through mass media
  - Educate community people, with the involvement of religious leaders

• Promote the screening system of nutritional status during pregnancy
  - Review the guideline of screening and counseling for maternal malnutrition

• Strengthen the capacity of health workers in screening and counseling for maternal malnutrition
  - Develop the education manual for screening and counseling for health workers
  - Train health workers
  - Provide the service of the screening and counseling at health facilities

• Strengthen the service provision of monitor and special care for low birth-weight babies
  - Develop a manual of special care for LWB baby
  - Implement regular growth monitoring and counseling at health facilities and at communities
  - Encourage mothers with LBW baby to access the services of growth monitoring and counseling

Control of maternal undernutrition

• Create awareness of the importance of additional dietary intake and nutritious foods during pregnant and lactating period AND Promote community and family supports for maintaining a good health care and dietary habit
  - National campaign through mass media
  - Train health workers and volunteers
  - Nutrition education and counseling at health facility and community levels

• Promote the screening system of nutritional status during pregnancy
  - Review the guideline of screening and counseling for maternal malnutrition

• Strengthen the capacity of health workers in screening and counseling for maternal malnutrition
  - Train health workers
  - Develop the education manual for screening and counseling for health workers
  - Provide the service of the screening and counseling at health facilities

• Promote the service provision of reproductive health
  - Implementation by Reproductive Health Sector
• Promote social mobilization to aware of the importance of reducing heavy work load and stopping smoking and chewing qat
  - National campaign through mass media
  - Educate community people, with involvement of religious leaders

Control of rickets

• Create the awareness of the importance of appropriate exposure to sunlight
  - conduct nationwide education activities

• Create the awareness of the importance of the consumption of VD/Ca rich foods, aware the community on correct practices of food habits AND promote the implementation of prime minister decrees on regulation of BF protection and oil and ghee fortification.
  - Train health workers and volunteers how to prevent rickets
  - Nutrition education for community people by health workers and volunteers
  - Monitoring activities of both decrees mentioned in components of Child Undernutrition and VAD

• Strengthen the screening and treatment capacity of health workers for rickets
  - Prepare training manuals and education materials of rickets
  - Train health personnel and volunteers on the detection and management of rickets
  - Implement screening and counseling for rickets at health facilities
  - Refer the case of severe rickets to appropriate hospital

Control of iron deficiency anemia

• Increase awareness about iron intake: iron rich foods and dietary modification for raising iron bioavailability based on local food resources. Promote dietary practices to improve dietary diversity and modification.
  - National campaign for dietary diversity and modification through mass media and IPC
  - Nutrition education at health facility and community level
  - Develop education material
  - Train Health workers and volunteers

• Advocate the wheat flour producers and traders about the regulation of iron fortification as well as the importance of iron fortification
  - Development of IEC training material
  - Orientation workshop to wheat flour producer and traders
  - Technical training for iron fortification

• Strengthen the monitoring system of producing and marketing the wheat flour of iron fortification.
  - Establish the monitoring system of producing and marketing iron-fortified flour
  - Develop a guideline of monitoring and evaluation
- Train a monitoring personnel
- Implement the monitoring evaluation regularly

- Improve the current market share of iron-fortified flour
- Advocate dealers and traders of wheat flour

- Raise awareness of the community about the benefit of using iron fortified foods
- Encourage to use fortified food at health facility and community levels
- Develop education material

- Create awareness of anemia and importance of iron/folic acid supplementation
- National campaign through mass media
- Nutrition education at community level

- Strengthen the government logistic system to distribute iron/foliate tablets for pregnant and lactating women
- Develop a guideline of iron/folic supplementation
- Train health workers and volunteers for distribution of iron/folate tablet
- Activate the role of health facilities for distribution of the iron/folate tablets
- Involve health volunteers for the distribution
- Strengthen logistic system and monitoring for delivery of iron/folate tablets

- Promote the treatment of anemia children with iron syrup/tablet
- Follow IMCI/CTC guideline

- Create awareness about improving living conditions in sanitation, hygiene and environment
- National campaign through mass media
- Health education at health facility and community levels

- Strengthen the control programs of parasitic infestation
- Train health workers and health volunteers
- Promote deworming activities for preschool children at community level
- Promote deworming activities for pregnant women during second trimester of pregnancy
- Involve health volunteers to dose the drug of schistosomiasis control for preschool children at community level
- Expand existing national program of malaria and schistosomiasis controls

Control of vitamin A deficiency
Create the awareness of the people about the importance of intake of vitamin A rich food for mothers and children

- Prepare education material about nutrition including vitamin A rich food
- Train health workers and health volunteers about nutrition education at communities
- Educate community people about nutrition and vitamin A and add it in school curriculum

Promote dietary modification to improve the quality and diversity of foods

- National campaign for increased home production, consumption and preservation of VA rich foods
- Support the productive families to produce VA rich foods

Promote the implementation of food fortification with vitamin A

- Develop a guideline of food fortification with vitamin A for production
- Train the responsible person of the factories which were registered on producing the oil fortified and vegetable fat with vitamin A
- Establish monitoring system to ensure quality of fortification
- Implement monitoring activities for vitamin A fortification
- Provide technical support the producers and monitoring organizations to ensure sustainability

Create awareness of the people about the importance of vitamin A supplementation for children under 5 and mothers

- National campaign for vitamin A supplementation

Develop the implementation system for the national program of vitamin A supplementation for children under 5 and postpartum mothers

- Prepare the guideline of vitamin A supplementation
- Strengthen the logistics system of vitamin A capsule distribution
- Ensure the procurement of VA capsule

Promote the implementation of vitamin A supplementation for children and postpartum mothers

- Coordinate with EPI sector to implement the VA supplementation
- Train health workers and community health volunteers how to manage the VA supplementation at community level
- Conduct monitoring and evaluation of the national program of VA supplementation

Control of iodine deficiency

- Improve the awareness about iodine deficiency and iodized salt among people

- Produce education material about iodine deficiency and iodized salt
- Train health workers and health volunteers how to create awareness of the importance of iodized salt
- Use mass media to encourage using iodized salt
- Implement education of IDD and iodized salt through schools
Increase the coverage of sufficiently iodized salt in the markets
- Produce a technical manual of salt iodization at factory level
- Conduct a refresher courses to salt factory to improve the skills so that they can produce adequately iodized salt
- Encourage the salt factory to have capability of the measurement of iodine
- Encourage shop keepers and retailers to deal with only iodized salt

Strengthen the monitoring of salt iodization
- Conduct periodic monitoring at salt producer and markets
- Train local council and food inspectors at the district level on enforcement of salt iodization law
- Collect the monitoring data to analyze the situation of iodized salt at factory and market level
- Train laboratory technician
- Support equipment to central laboratories for assessment of iodine of salt and urine

Strengthen monitoring the use of iodized salt at household level (monitoring should be done at least once a year)
- Collect samples from households by school children and volunteers.
- Conduct regular mini-survey on the use of iodized salt

Control of zinc deficiency
- Conduct assessment of zinc status of Yemeni people through food consumption study
  - Conduct survey to assess food consumption
  - Analyze the data to estimate zinc status

- Increase the accessibility of zinc fortified food to raise zinc intake
  - Do a feasibility study on the appropriate vehicle to fortify with zinc
  - Advocate decision makers about the importance of zinc
  - Modify the current micronutrients decree to add the zinc fortification
  - Incorporate the guideline for zinc fortification with the micronutrients general guidelines
  - Encourage private sectors which can produce fortified foods
  - Conduct technical training courses for food producers
  - Increase awareness of people to consume zinc-fortified foods

- Increase the accessibility of zinc supplementation for the treatment of diarrhea and severe malnutrition
  - Study on the feasibility of zinc supplementation for the target group
  - Develop the guideline of zinc supplementation for treatment
  - Train health workers and volunteers how to use the zinc supplementation
  - Ensure the logistic of zinc supplementation
  - Implementation of zinc supplementation at health facilities and community levels
• Promote dietary modification to raise zinc intake and bioavailability. 1) Promote the consumption of animal-source foods for the people facing at high risk of zinc deficiency. 2) Raise awareness about reducing inhibitors of Zn absorption, like phytate, by central or household food processing methods to enhance Zn bioavailability.

- Nutrition education at health facility and community level
- Develop IEC material for nutrition message

- Strengthen the implementation of diarrhea control program
  - Distribution of ORS
  - Education for people how to prevent risk of diarrhea
  - Include the education of hygiene into general training course
  - Collaborate with IMCI program for the activities of diarrhea control

### School nutrition

• Increase awareness among school children and their parents about the importance of dietary intake for the physical and mental development of children

  - Develop education materials in related with nutrition for school children and their families
  - Conduct training course for school teachers how to educate nutrition for children and their families
  - Revitalize introduction of the curriculum of health and nutrition education through basic and secondary education
  - Provide message of nutrition by teaches at parents meeting
  - Conduct a week campaigns in each year about good nutrition for school children
  - Mass media messages through mainly radio programs
  - Community activities through motivating children to educate their parents about good nutrition

• Promote the consumption of appropriate breakfast and lunch among school children

  - Develop dietary guideline for school children
  - Conduct social mobilization of dietary intake and habit of school children through different types of campaigns
  - Provide message of nutrition by teaches at parents meeting

• Promote knowledge, attitude and practice to prevent infectious diseases

  - Educate school children on health and hygiene at school class
  - Educate school canteen providers about the food sanitation regulation

• Reduce the risk of helminthes infestation

  - Develop the program of parasitic infestation control at school level

• Improve safe water supply and sanitary facilities
- Provide safe water supply and sanitary facilities in collaboration with local authority

- Refer to under-nutrition of children

**Nutrition for emergency situation**

- Strengthen food aid system
  - Develop an implementation plans and guidelines for different situations
  - Develop logistics system

- Ensure the affected people have access to minimal nutritional requirements, in particular young children and women
  - Conduct the assessment of situation (areas, magnitude and population)
  - Estimate necessary amount of food for affected people
  - Manage an supervised food distribution
  - Implement monitoring and evaluation

- Initiate partnership for providing food aid
  - Take a quick action for communication with internal and external partners
  - Conduct food aid in good collaboration with the partners

- Strengthen treatment service for severe malnutrition
  - Develop the manual for treatment of severe malnutrition during emergency
  - Train medical staff members who are involved in treatment of severe malnutrition at the fields
  - Supply the necessary items for nutritional treatment

- Promote breastfeeding for infant and young children to reduce the risk of infection and death
  - Advocate the affected people about the importance of breastfeeding

- Prevent food contamination
  - Advocate the affected people to deal with foods hygienically

**M&E Indicators**

**M&E Indicators related to nutrition:**

**The overall goal is to be reached by the year 2020**

- To reduce the prevalence of undernutrition among children under five to half of the current level by the year 2020
- % of infant of 0-6months with exclusive breastfeeding
- Prevalence of under-nutrition (underweight, stunting, wasting) in <5 children
- % of children (2 - 5 years) who keep the recommendation of the dietary guideline
- % of households with the luck of food
- Incidence of infectious diseases (diarrhea, ARI, measles, vector borne diseases)
- Prevalence of LBW
- % of under five children with severe malnutrition

- Reduce the prevalence of LBW to less than 15% by the year of 2020
- % of pregnant women with adequate body weight gain
- Prevalence of anemia among pregnant women
- Average age of first pregnancy
- Frequency of pregnancy
- % of pregnant women smoking and chewing qat
- % of pregnant women accessing the services of nutrition screening and counseling
- % of LBW babies receiving monitoring and special care services

- Reduce the prevalence of undernutrition (BMI) of women to 15% by the year 2020
- Detection rate of undernourished mothers at early stage
- % of mothers accessing services of counseling
- % of teenagers pregnancy
- The average of birth space
- % of pregnant and lactating mothers who have a custom of smoking or chewing qat

- Eliminate the case of rickets among children under five by 2020
- % of children exposure to sunlight
- % of children and pregnant mothers consuming vitamin D rich foods
- Detection rate of rickets case at early stage among children
- % of children with rickets receiving treatment

- To reduce the prevalence of anemia to 40% by the year 2020
- % of people consuming iron rich foods
- % of people consuming food fortified with iron/folate
- % of wheat flour fortified with iron in the market
- % of pregnant and lactating women using iron tablet
- Prevalence of malaria, schistosomiasis and helminth

- To reduce the prevalence of vitamin A deficiency to half of the current level by the year 2020
- Frequency of the intake of vitamin A rich foods
- % of vitamin A fortified foods in the markets
- Coverage of Vitamin A supplementation

- To eliminate Iodine Deficiency Disorders by the year 2020
  - % of households consuming iodized salt
  - Coverage of iodized salt in the market

- Reduce the prevalence of zinc deficiency
  - % of zinc deficiency among Yemeni
  - Decreased % of people with risk of zinc deficiency
  - % of children suffering from diarrhea

- To reduce the prevalence of underweight and stunting to half of the current level by the year 2020
  - Food intake of school children (?)
  - WT/age-HT/age
  - Learning achievement
  - Incidence of intestinal parasitic diseases
  - Prevalence of malnutrition among children under five

- Reduce the critical risk of death and malnutrition during emergency situation
  - % of the affected people who accessed food aid
  - % of severe malnutrition who died after natural and man-made disasters happened

Reference:

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Policy topics:
- Low birth weight
- Stunting in children 0-5 yrs
- Wasting in children 0-5 years
- Underweight in children 0-5 years
- Underweight in women

Partners in policy implementation:
- Government
  - Education and research
  - Environment
  - Food and agriculture
  - Health
  - Industry
  - Nutrition council
- Social welfare
- Sub-national
- Women, children, families
  - Details:

- Bilateral and donor agencies and lenders
  - Japan International Co-operation Agency (JICA)
    - Details:
      - Bilateral and donor agencies and lenders: Japan International Co-operation Agency (JICA)

- UN agencies
  - United Nations Children's Fund (UNICEF)
  - World Food Programme (WFP)
  - World Health Organization (WHO)

- National NGO(s)
  - Details:
    - National NGOs

- Other
  - Details:
    - Other: EPI section, Family Health Doctor, Midwives, Health Workers, Volunteers