ETHIOPIAN HEALTH AND NUTRITION RESEARCH INSTITUTE

A FIVE YEAR, BALANCED SCORE CARD BASED STRATEGIC PLAN (2010-2015 G.C)

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III. Acronyms

AAU	Addis Ababa University
ABC	Activity Based Costing with HIV/AIDS
AHRI	Armuer Hansen Research Institute
AIDS	Anti-Immuno Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
AWD	Acute watery Diarrhoea
BPR	Business Process Reengineering
BSC	Balanced Score Card
BSS	Behavioural Survey & Surveillance
CDC	Centre for Disease Prevention and Control
DDT	Dichlorodiphenyltrichloroethane
DPT	Diphtheria, Pertussis and Tetanus
EARI	Ethiopian Agricultural Research Institute
EDHS	Ethiopian Demographic and Health Survey
EHNRI	Ethiopian Health and Nutrition Research Institute
ENI	Ethiopian Nutrition Institute
EOC	Emergency Operation Center
EORI	Essential Oil Research Institute
EPA	Environmental Protection Authority
EPRP	Emergency Preparedness and Response plan
EQA	External Quality Assessment
ERF	Emergency Response Fund
FELTP	Field Epidemiology and Laboratory Training Program
FIND	Foundation for Innovative New Diagnostics
FMOH	Federal Ministry of Health
FSNRD	Food Science and Nutrition Research Department
GD	General Director
GDP	Gross Domestic Product
GF	Global Fund
GOE	Government of Ethiopia
HACCP	Hazard Analysis & Critical Control Points
HBV	Hepatitis B
HCV	Hepatitis C\
HEP	Health Extension Package
HIV	Human Immuno Deficiency Virus
HIVDR	Human Immuno Deficiency Virus Drug Resistance
HMIS	Health Management Information System
HRM&GSD	Human Resource Management and General Service Directorate
HSDP	Health Sector Development Program
HSRD	Health System Research Directorate
IBC	Institute of Biodiversity Conservation
ILRI	International Livestock Research Institute
INDRD	Infectious & Non-infectious Disease Research Directorate
IT	Information Technology
JICA	Japan International Cooperation Agency
LIS	Laboratory Information System

MoAD ----------	Ministry of Agricultural Development
MODS----------	Microscopic–Observation Drug-Susceptibility
MoFED ----------	Ministry of Finance and Economic Development
MoST----------	Ministry of Science and Technology
NA----------	Not Available
NGO's ----------	Non Governmental Organization
NNP ----------	National Nutrition Program
NNS ----------	National Nutrition Strategy
NRIH ----------	National Research Institute of Health
NTRL ----------	National Tuberculosis Reference Laboratory
NVI ----------	National Veterinary Institute
PBS----------	Population Based Survey
PEST----------	Political, Economical, Social and Technological Analysis
PFMED ----------	Plan, Finance, Monitoring & Evaluation Directorate
PHE ----------	Public Health Emergency
PHEM ----------	Public Health Emergency Management
PHEMC ----------	Public Health Emergency Management Center
PHEMDGDO ----------	Public Health Emergency Management Deputy General Director Office
PLWHA----------	People living with HIV/AIDS
PM ----------	Privative Maintenance
PMTCT----------	Public Health Emergency Management Technical Force
PR----------	Progress Report
PRO ----------	Public Relation Office
RDT ----------	Rapid Diagnostic Test
RHB ----------	Regional Health Bureau
RLCBD ----------	Regional Laboratory Capacity Building Directorate
RR----------	Research Report
RTTDGDO----------	Research and Technology Transfer Deputy General Director Office
SERO ----------	Scientific & Ethical Review Office
SOP ----------	Standard Operation Procedure
SPM----------	Strategic Planning Management
STI ----------	Sexually Transmitted Infections
SWOT----------	Strength, Weakness, Opportunity and Threat Analysis
TB ----------	Tuberculosis
TMMRD ----------	Traditional & Modern Medicine Research Directorate
TOR----------	Term of Reference
TOT ----------	Training of Trainers
TTRTD ----------	Technology Transfer & Research Translation Directorate
TTF ----------	Technical Task Force
UNDP ----------	United Nation development Program
UNICEF ----------	United Nations International Children's Education Fund
VDPD ----------	Vaccine and Diagnostic Production Directorate
WB ----------	World Bank
WHO ----------	World Health Organization

I. Foreword

This strategic plan, which is developed in line with the principles of Balanced Score Card, is believed to enhance the activities of the Institute through addressing major public health priority areas with sustained clear focus, momentum and coordination to excel in the Institute's core activities with measureable performance and set targets.

The preparation of this strategic plan has consulted the HSDP and other national and international relevant documents. Views of the concerned EHNRI's staff members and opinions of stakeholders and partners have been also incorporated in the identification of most critical issues for the entire five-year plan of the Institute.

In order to fulfill the mission and vision of the Institute, this strategic plan is mainly geared towards the improvements of problem solving research, public health emergency management, national public health laboratory network, and management and leadership. It is also envisaged to work closely and foster partnerships and collaborations with all concerned stake holders of the health sector.

I believe that the initiation of such a new and comprehensive strategic plan and direction, essentially a dynamic process, would give all our partners as well as staff members of the Institute the opportunity to get hold of reference points as well as feel the sense of commitment to realize shared vision.

Finally, I take the pleasure to express my gratitude to the Institute's Strategic Plan Development Team for their unreserved effort in the preparation of the document.

Tsehaynesh Messele Ph D

Director General,

EHNRI

1. Executive Summary

The Ethiopian Health and Nutrition Research Institute (EHNRI) was established under the Regulation No.4/1996 following the merger of the former National Research Institute of Health (NRIH), the Ethiopian Nutrition Institute (ENI) and the Department of Traditional Medicine under the Ministry of Health. The primary objective of the Institute is to conduct research on priority areas of health and nutrition problems and contribute to the national effort of disease prevention and control.

Recently, through Business Process Reengineering (BPR), the EHNRI has undergone structural transformation with the formation of two core processes; namely Research and Technology Transfer and Public Health Emergency Management. The vision and mission of EHNRI have been clearly defined to fulfill its mandate as the newly envisioned Ethiopian Public Health Institute that will emphasize public health and nutrition research, as well as public health emergency management. EHNRI is also mandated to produce vaccines for major infectious diseases and to improve public health laboratory system at a national scale.

This five-year strategic plan was initiated by EHNRI management and has been developed in accordance with the Balanced Score Card (BSC) principles. Based on the mission and vision of EHNRI, the environmental scan and the customers' value propositions, four strategic themes, also referred to as pillars were identified as follows: Research and Technology Transfer, Public Health Emergency Management, Public Health Laboratory Service and Management and Leadership. In order to achieve these strategic results, 17 strategic objectives were formulated. The objectives are continuous action-oriented for the improvements required to realize the strategic results. Each objective was designed with performance measures and initiatives according to the four prospective of BSC.

The strategic plan for Research and Technology Transfer addresses public health research priority areas in infectious and non infectious diseases, food science and nutrition, traditional medicine, environmental health, hygiene and occupational hazards and health systems. As the need for non biomedical research increases, the strategic plan for Research and Technology Transfer also focuses on health systems. Added to these, as the need of non biomedical research in health is an essential area to be dealt with, research undertaking in health system has been given due emphasis.

Vaccine production for major infectious diseases, production of diagnostic reagents and kits through technology transfer, promotion of indigenous knowledge in traditional medicine, and the development of locally consumed food items are among the strategic directions of EHNRI.

The Public Health Emergency Management pillar focuses on disease outbreaks and nutritional emergencies with emphasis on risk-based preparedness and capacity building. The strategic plan for Public Health Emergency Management also emphasizes early detection and response to public health emergency threats.

Additionally, EHNRI has made strong and sustained efforts to coordinate and share information. Many of the activities identified in the strategic plan are assumed to establish strong, functional coordination and collaboration as well as timely and appropriate information dissemination to all concerned.

The Ethiopian national laboratory system is also a strategic priority. EHNRI will support laboratories through capacity building, quality assurance programs, infrastructure development, training and maintenance. EHNRI will conduct regular monitoring and evaluation of laboratory services in an effort to improve services and meet acceptable laboratory standards. As a result, EHNRI aims to develop an affordable and sustainable system, whereby quality laboratory services are accessible to all Ethiopians while also providing reliable and high-quality results to guide and support clinical decision making throughout the country.

Effective management of the BSC system and placing priority on human resource development are necessary for the successful implementation of the strategic plan. The

budget breakdown set for different activities planned to be addressed during the five-year period is also shown in the document in detail.

The development of the BSC strategic plan for 2010-2015 was developed in line with the priority areas of the Health Sector Development Program (HSDP IV). The BSC strategy was created to provide a forum to discuss and address health promotion and disease prevention among policy makers, health care professionals, researchers and the community. The BSC strategy promotes opportunities that encourage collaboration among national and international partners working to address health problems in accordance with Ethiopia's needs and priorities.

2. Background

The major health problems in Ethiopia emanate largely from a number of complex and interwoven factors, which include low socioeconomic status, unique socio-cultural attitudes and practices, and geographical setting of the country. Although the majority of prevailing diseases are preventable, they are ubiquitously distributed throughout the country, causing considerable suffering and death. A high population growth rate of about 2.9 % per year, typically influenced by cultural and religious attitudes, greatly contributes to the increasingly challenging health needs in Ethiopia.

According to regularly documented evidence by the Federal Ministry of Health (FMOH), infectious diseases account for 60-80% of health problems and are major causes of morbidity and mortality in Ethiopia. More specifically, HIV/AIDS/other STIs, malaria, tuberculosis, acute respiratory infections and diarrheal diseases are among the ten top causes of morbidities and mortalities.

Data from vital health indicators demonstrate exceedingly high annual death rates among children and child bearing women that are attributable to infectious diseases. Women and children constitute about two-third of the entire population. The Ethiopian Demographic Health Survey (EDHS) 2005 reported 123 per 1,000 deaths of children under the age of five and 673 maternal mortality deaths per 100,000 live births, However, these data showed a reduction in deaths for children (166 per 1,000) under the age of five and mothers (978 per 100,000 live births).

As disease causing agents alter, it is necessary to reexamine past and current disease control strategies to most effectively respond to evolving disease causing agents. As drug resistant strains of microorganisms develop, the treatment of many infectious diseases becomes increasingly challenging. The emergence of multidrug resistant strains of bacteria such as *Mycobacterium tuberculosis*, *Streptococcus pneumonia, Staphylococcus aureus, Neisseria gonorrheae,* Shigella spp, among many others is a serious challenge. Additionally, the vector mosquito, *Anopheles gambiae* s.l, is becoming increasingly resistant to DDT while *Plasmodium falciparum* has already developed resistance towards the once curative drug. Lack of adequate

evaluation on currently used drugs and a systematic surveillance of drug resistance on major infectious diseases in Ethiopia calls for an immediate action.

Millions of Ethiopian people suffer from hunger, disease, environmental degradation, and other related problems. Ethiopia has one of Sub-Saharan Africa's highest rates of malnutrition; almost 57% of under-five mortality in Ethiopia is related to severe and mild to moderate malnutrition. There are several underlying causes for malnutrition in Ethiopia; among the main causes are inadequate access to food, inadequate care for mothers and children, insufficient health services and unhealthy living environments. In addition to macronutrient malnutrition, micronutrient deficiencies of vitamin A, iron and iodine are also major nutritional problems of public health significance.

The per capita calorie supply, as indicated by some surveys is less than 70% of the recommended daily requirement. According to EDHS 2005, the national average prevalence for stunting is 47%,, approximately 38% of the children are underweight and 11% of the children are wasted. Studies on breast-feeding and weaning practices revealed that the problem of early stunting in Ethiopia is mainly due to delayed introduction of complementary foods in the first year of life. Therefore, there is a need to improve the prevailing nutritional status and ensure the general well being of the population.

Food, nutrition, and health security are complementary. Data from the EDHS 2005 indicate that households with adequate food and nutrition status are often less because of inadequate micronutrients, maternal knowledge=, about child care, health services and sanitation.

For the last few years, efforts to improve nutrition of women and children in Ethiopia were not harmonized, were fragmented and sectors were duplicating efforts. Since 2008, the Government of Ethiopia (GOE) committed itself to address the nutritional problems of the country. To realize this, the Ethiopian Government had developed the National Nutrition Strategy (NNS) to use as a guiding framework to develop a harmonized and cohesive response to this urgent nutrition situation. Consequently, the National Nutrition Program (NNP) was launched in 2009 to reduce the burden of malnutrition through harmonized, comprehensive,

large scale national efforts. The NNP is expected to contribute to a significant reduction in the proportion of Ethiopians suffering from malnutrition and poverty.

In spite of the GOE efforts to introduce modern health care delivery systems to rural populations, most people living in rural areas rely more heavily on traditional, indigenous care delivery systems than on modern health care delivery systems. Indigenous, traditional medicine is used largely because it is easily available, inexpensive and generally trusted. The recent WHO report indicates that traditional medicine is extensively used for primary healthcare (90%) in Ethiopia, the highest figure recorded so far. Traditional medicine remains an omnipresent reality in the life among the majority of Ethiopia's population, reflecting considerable cultural continuity and persistently poor accessibility and quality of most modern health services.

Because traditional medicine is so widely practiced throughout Ethiopia, it is not only important to understand indigenous medicinal practices, but it is also necessary to document, inventory and conserve traditional medicinal knowledge. Ethiopia has remarkable medico-magical literature which has little parallel in Africa. The country's rich sources of medical history comprise of medical texts, medico-magical scrolls, referred to as "gadle," or live of saints, chronicles and traditional medicine lore. These sources have not been systematically studied; it is therefore recommended that these sources of cultural and historical medicinal information are studied to develop an understanding and to ensure access to such resources.

The GOE has formally recognized the value of traditional medicine in the health system through the development of series of policies promoting the traditional medicine in the country. Despite the development of these policies, it is difficult to enable the practice of traditional healing because legal and regulatory frameworks, including registration for traditional medicines and traditional health practitioners do not exist.

In Ethiopia, epidemic-prone diseases pose serious public health threats in many parts of the country. Disease outbreaks, such as malaria, measles, meningitis, relapsing fever, acute watery diarrhea, acute respiratory tract infections and severe malnutrition continue to occur.

Meanwhile, prevailing chronic problems due to deep-rooted poverty are coupled with recurrent disasters, such as droughts, famine and flood. Such instability and disease outbreaks result in significant social, economic and crises. And pose constant challenges to the provision of health security for the people of Ethiopia.

Emergence and outbreaks of infectious diseases externally influenced the Ministry's public health activities from 2005-2009. Among national and international concerns were avian influenza, due to its pandemic potential, natural disasters and social trends affecting the risk of disease emergence and outbreak.

The Public Health Emergency Management (PHEM) is one of eight core processes selected by the Ministry during BPR –based restructuring process in 2009. The PHEM primarily aim to identify and select unusual public health events on a timely basis and to promptly respond to arising public health emergencies; as well as to ensure recovery in the aftermath of incidents.

The PHEM core process will help to determine health risk management which can best contribute to preventing and preparing of disasters in Ethiopia. The PHEM core process was also designed to maximize collaboration to manage health emergencies and epidemics. Furthermore, the PHEM process aims to strengthen FMOH's leadership role to ensure the collaboration and coordination among sectors in the area of risk reduction, information exchange and response to emerging diseases. The FMOH is mandated to provide leadership in setting norms and standards and developing and endorsing policies and regulation to ensure that health services are not below the accepted standards. The FMOH, expects that issues related to protecting public health in Ethiopia will be visibly shared by all sectors and not left to be shouldered by one Ministry

The Government of Ethiopia has also planned to realize its health policy through a series of Health Sector Development Programs (HSDP). By and large, the public health and nutrition problems of the country are complex. The Government recognized the need to institute a more cost effective and efficient health care system that will contribute to the overall socioeconomic development of the country. Among these being, rural and, sustainable

development, poverty reduction, capacity development strategies and civil service reform programs.

The first of the series of programs, HSDP-1, was developed for the years covering 1990 to 1994 E.C. HSDP-1 was comprised of eight major components:

A. Health care delivery and Quality of Care
B. Health Facility Rehabilitation and Expansion
C. Human Resources Development
D. Strengthening Pharmaceutical Services
E. Strengthening Health Sector Management, Management Information Systems, Information,
F. Education and Communication
G. Health care Finance
H. Monitoring and Evaluation.

The HSDP-2 covered 1995 to 1997 E.C, and was a continuation and scaling up of the HSDP-1. . It is further characterized by the introduction of the new Health Extension Package (HEP). The HEP provides a package of essential services for disease prevention and targets households at the Kebele level through a trained cadre of health workers. HSDP-3 was undertaken from 1998 until 2002 E.C. The HSDP-3 served as a comprehensive national plan and also as a guiding framework for regions and woradas to. Plan and implement health Sector development activities. The major goals of HSDP-3 were to improve maternal health, reduce child mortality and combat HIV/AIDS, malaria, TB and other diseases. Ultimately, HSDP-3 aimed to improve the health status of the Ethiopian people and to achieve the Millennium Development Goals.

The National HSDP is designed to comply with the overall health policy and to emphasize the prevention and control of diseases such as HIV/AIDS, malaria, TB, nutritional problems and emerging diseases. The Ethiopian Health and Nutrition Research Institute (EHNRI) serves as the leading research and service component of the Ministry of Health. EHNRI contributes to the health development strategy and functions to achieve objectives set forth throughout the

HSDP by strengthening medical laboratories in Ethiopia, providing referral laboratory services and conducting applied research on health and nutrition.

2.1 Major Achievements of EHNRI in the Past Five Years

2.1.1 Research and Technology Transfer

- Numerous research activities in the fields of infectious diseases, nutrition and traditional medicine have been conducted, resulting in copious peer reviewed publications in both national and international journals. Some HIV/AIDS, malaria and TB research and surveillance findings have provided information of national relevance for control efforts. Other findings have provided base line data or useful inputs to the formulation of wider projects to be carried out nationally.

- As the package for global elimination of polio, a collaborative surveillance of polio was conducted by EHNRI, the Japanese International Cooperation Agency (JICA), the World Health Organization (WHO) and the Local and International Rotarians.

- EHNRI is fulfilling a leadership role in the accelerated facilitation, coordination and implementation of NNP. Under the NNP, EHNRI prepared several reports, including the nutrition communication frame work, nutrition training needs assessment and human resource need for nutrition. Additionally, EHNRI has been preparing for the implementation of operational research.

- A national survey capturing vitamin A, iodine and iron deficiencies was conducted to examine the nutritional status of people living with HIV/AIDS (PLWHA), who did not start ART in order to provide them nutritional counselling. Accordingly, nowadays a similar research is ongoing in PLHWA who have already started ART.

- Research on investigating traditional medicine is gaining interest among researchers. EHNRI collaborated with 45 traditional healers to conduct joint research on traditional medicine and therapies in Ethiopia. However; due to the problems related to the implementation of bilaterally signed memorandum of understanding, the study could

not be continuing. One of the main reasons for the disruption of the research was the reluctant of traditional healers to submit herbal remedies based on the signed agreement. It is in fact, planned by the traditional and modern medicine research directorates to reinitiate and strengthen the collaborative research efforts between the Institute and registered traditional healers individually or through their association that can facilitate the cooperation.

- Through the support from international organizations, such as the WHO and World Bank, laboratories are becoming better equipped with both human resources and supplies.

2.1.2 Public Health Emergency Management (PHEM)

Since its recent inception, the PHEM process has already undertaken the following activities:

- Establishment of PHEM system ranging from the central to community levels.
- Provide trainings and other technical support to regions on the management of public health emergency.
- Provide logistic, vaccine and medical supplies during outbreaks and epidemics and dispatch disease investigation teams to the affected areas.
- Launched EFLTP Masters program in cooperation with Addis Ababa University (AAU) and the Centre for Disease Control and Prevention (CDC) to satisfy the need of epidemiologists in the nation.

2.1.3 Public Health Laboratory Quality System

- The Public Health Laboratory Service has been and continues to work collaboratively with CDC to conduct national surveillance studies of HIV/AIDS, STI and TB. The two agencies are also working collaboratively to strengthen laboratories at the central and regional levels.

- EHNRI has made significant progress in developing its capacity in order to support the national laboratory system and to bring ART laboratory services to health facilities throughout the country. Automated analyzers have been installed and are functional in 118 laboratories to conduct ART monitoring. Additionally, more than 350 health centre laboratories are now receiving ART monitoring laboratory services through the referral linkage system. Different specialized laboratory tests, such as DNA-PDR, viral load and TB liquid culture has been introduced to regional laboratories; the majority of these labs are currently providing monitoring and referral linkage services.

- EHNRI has rolled out various trainings for several laboratory testing. For instance, a Training of Trainers (TOT) for regional laboratories has been facilitated. In addition, EHNRI conducted external quality assessment (EQA) programs that have been implemented for rapid tests, CD4, clinical chemistry and haematology, AFB microscopy, malaria and DNA-PCR. Furthermore, the Institute has undergone several changes to improve its capacity to fulfil a leadership role in public health laboratory services. Among these, the formation of a Regional Laboratory Capacity Building Directorate, which is in charge of developing the country's laboratory network can be mentioned.

- Based on the consensus reached between the Ethiopian Ministry of Health and the Foundation for Innovative New Diagnostics (FIND), which is a Geneva-based non-profit organization, a Memorandum of Understanding was signed between EHNRI and FIND aiming to establish a state-of-the-art National Tuberculosis Reference Laboratory (NTRL) on 29th January 2008. The NTRL is comprised of one laboratory in a Specialized TB Hospital (St Peter's) and four Regional Tuberculosis Reference Laboratories). FIND, in collaboration with WHO, has established a Regional Lot Testing Laboratory for Malaria Rapid Diagnostics Tests (RDT) at EHNRI. This laboratory has been functioning since February 2009 and has the capacity to carry out rapid and high-quality performance evaluation of RDT that have been received from African countries for further investigation. This centre also provides a secondary storage and retesting of RDT services to ensure that they remain function until the expiration dates.

2.1.4 Management and Leadership

EHNRI has undergone institutional restructuring in line with Business Process Re-engineering (BPR) to improve and expand its role in national health development. The vision, mission and strategic objectives of the institute have been clearly stated and organizational structure which is required to accomplish its expanding new responsibilities have been made. More specifically, EHNRI is mandated to conduct public health emergency management, establish and maintain quality laboratory systems and craft a research priority on public health problems.

3. Development Process of the Strategic Plan

The Strategic planning process is aimed to produce a document that enables EHNRI to address public health and nutrition issues. In this five year strategic planning process, the Balanced Score Card (BSC) management and planning system has been used as an instrument.

In order to design planning templates and to guide the development of the plan a team, which comprises eight professionals of the Institute was formed by the management of the Institute. To substantiate the draft strategic plan, relevant inputs were taken from documents and experiences at EHNRI, HSDPs, FMOH guidelines and other records. EHNRI staff members from various fields have been participated in brainstorming sessions to provide necessary input and expertise. In order to align the five year strategic planning of the Institute with the upcoming HSDP 4, the group participated in 5-day retreat program, which is organized by FMOH , to engage in detailed discussions with various FMOH's agencies.

Ahead of its completion, the document was disseminated to all concerned bodies and a workshop, which took three days and organized by the institute, to collect the input. Inputs of the workshop, which was found to be constructive, have been incorporated into the final strategic plan of the Institute.

The BSC framework utilized a nine-step approach to success. These nine steps were employed to guide the development of the strategic plan and are outlined below:

Step one: Assessment of the organization and climate and analysis of customer and stakeholders

Step two: Formulated the value of customer proposition, strategic themes (also referred to as pillars,) strategic results and perspectives. This information was used to formulate objectives.

Step three: High level objectives were translated into strategic objectives. Unlike other SPM objectives, the objective in the BSC embodies continuous action-oriented improvement.

Step four: The strategic objectives were linked in causal effect relationships to produce a strategic map of the institute. The map shows how the organization creates value to both the customers and stakeholders.

Step five: Indicators and targets were developed to measure and monitor progress being made towards the objectives. Different kinds of measures were developed for each strategic objective. The corresponding targets for each measure were set.

Step six: Strategic initiatives. Strategic initiatives are formulated. Short term or long term projects were assigned to each strategic objective. Projects were prioritized based on the HSDP, and their potential to significantly impact organization and provide benefits. For every initiative, the activities, descriptions, deliverables and resource requirements were included. Since there is no explicit costing mechanism in the BSC system, Activity Based Costing (ABC) was used in this planning development. As a result of step six, EHNRI's organizational balanced score card system was built. The remaining three steps are important for the rollout and implementation of the plan.

Step seven: Automate the score card to improve communication within the organization. This step was not considered in the development of this plan.

Step eight: Cascading refers to the alignment with the organizations shared vision. The term, "cascading" functions to make the strategy actionable by both directorates and individuals. In this strategic plan document, cascading was incorporated only at the tier two, or directorate, level.

Step nine: Evaluation is essential to track the success of the implemented plans. In step eight, an evaluation plan was developed. Through continues monitoring and evaluation necessary changes to the strategic elements will be ensured.

4. Organizational Assessment

4.1 SWOT Analysis

SWOT, customer and stakeholder/collaborator analysis were analysed in detail. These are shown in appendix I. The list below illustrates the pains and enablers identified by the SWOT analysis.

4.1.1 Pains

Among the identified points of concern, five most critical issues (pains) were selected to be addressed in order to achieve the objectives set for the plan period.

A. Lack of strategic thinking
    - A shared vision between management and staff is lacking.
    - There is a lack of focus on problem solving public health research
    - Programmatic areas need to be prioritized.
    - There is failure to achieve overall goals and objectives.
    - Activities were limited to short term planning.

B. Limited capacity in conducting research, research output dissemination and public health emergency management,

    If these issues are not properly addressed, the likely consequences will be:

    - High level scientific Professionals skill will remain low.
    - Quality and scope of research, public health laboratory services and emergency responses will be adversely affected.
    - Limited contribution to the improvement of public health and nutrition.
    - Limited community benefit from health research.
    - Limited international collaboration.

C. Failure to prevent and control recurrent epidemics and minimize associated health, social and economic crisis.Lack of appropriate health management system.
    - Lack of skilled manpower.
    - Compromised performance.
    - Inadequate monitoring and evaluation.
    - Inefficient budget utilization in some programs
    - Lack of financial resources in other programs
    - Staff attrition

D. Poor quality assured laboratory services:
    - Limited capacity of laboratories to provide ranges of test services
    - Lack of awareness in quality system management
    - Lack of proper documentation

E. Limited implementation capacity of regions for PHEM
    - Slow implementation of BPR at national and regional level
    - Varying implementation levels of the new system among regions.

4.1.2 Enablers

The following are the enablers obtained from the SWOT and PEST analysis to achieve the objectives set for the plan period.

- The implementation of BPR
- Long years of research experience
- Presence of committed host government support
- Continuous support from development partners
- Establishment of PHEM system and structure
- Initiation of the EFLTP program
- Strong capacity to support the national laboratory system

5. Vision, Mission and Core Values

5.1 Vision

"To see healthy, productive and prosperous Ethiopians".

5.2 Mission

"To protect and promote the health of the Ethiopian people by addressing priority public health and nutrition problems through problem-focused research, public health emergency management, establishing and maintaining a quality laboratory system."

5.3 Core Values

- **Customer satisfaction:** We serve our customers to their best satisfaction with respect and courtesy.
- **Creativity and innovation:** We believe in creative and innovative thinking to address public health problems.
- **Evidence based decision:** We generate high quality research findings for evidence based decisions.
- **Research ethics and professional commitment:** We work with integrity and do no harm to patients and keep the maximum benefit of research to them.
- **Transparency and communication:** We are reachable, accessible and open to communication.
- **Continuous learning and improvement:** We recognize scientific and technical staff as our most important resources and therefore we believe in learning, growth and excellence.
- **Collaboration and partnership:** We are committed for scientific collaboration and partnership.
- **Team work:** We work as a team in harmony with maximum knowledge sharing.
- **Accountability:** We focus on results.

6. Strategy

6.1 Customer Value Proposition

Table 1 Customer value proposition from different angles

PRODUCT/ SERVICE DELIVERED TO CUSTOMERS	ATTRIBUTE	IMAGE	RELATIONSHIP
Research based information Vaccine Biological products Food products Early warning and health event monitoring information PHE response, rehabilitation and recovery Strengthen regional lab capacity Referral lab service	The products/ services that EHNRI provides has the following features: • High efficacy • Problem solving, • Authentic research • Timeliness • Proactively • Quality assured Lab. Service/setting	The image that EHNRI wants to create upon the customers has the following characteristics: • Problem solver • Scientific • Citizens-focused	The relationship that EHNRI aims to achieve with the customers can be expressed as: • Passionate • Professional • Cooperative • Dependable • Accessible

6.2 Strategic Themes (Pillars) and Strategic Results

The strategic themes also referred to as 'pillars of excellence,' build the foundation of the institute. EHNRI must excel in the four pillars listed below in order to meet its vision, mission and the expectation of its internal and external customers. A strategic result was formulated for each pillar of excellence.

EHNRI's Four Pillars of Excellence are:

A. Excellence in Research and Technology Transfer
B. Excellence in Public Health Emergency Management
C. Excellence in Public Health Laboratory Quality
D. Excellence in Management and Leadership

6.2.1 Pillar I. Excellence in Research and Technology Transfer

Evidence based information about the public health in Ethiopia is severely lacking. Problem solving research that is aligned with priority areas and that satisfies ethical standards is needed to generate high quality scientific information. At present, national data on disease burden, distribution, type, and transmission dynamics of various infectious diseases are limited. Knowledge about the prevalence of non-infectious diseases and environmental risk factors, as well as occupational hazards is extremely limited. Few reports have been written describing antimicrobial resistance levels of various drugs used against infectious diseases, as well as limited reports about insecticides used to control disease vectors. Clinical trials are needed to improve existing preventive measures and to validate available diagnostic techniques. The impact of disease reduction, elimination and/or eradication strategies should be assessed and an evaluation of immunization programs for vaccine preventable diseases and other interventions should be conducted. Furthermore, an investigation of genetic and immunologic features of human-pathogen interactions would help scientists to understand disease initiation, progression or protection in light of current scientific and technological developments that provide powerful tools to generate valuable information for disease control efforts.

Nutritional problems are also major public health concerns that necessitate further understanding to implement appropriate intervention measures. Micronutrient interventions need to be assessed, monitored and evaluated; including community nutrition intervention programs. These intervention programs necessitate systematic investigation to control and eradicate malnutrition in Ethiopia. The combined effect of nutrition and infectious and non-infectious diseases is virtually unknown. To prevent micronutrient and macronutrient deficiencies, evaluation of food products and fortification of foods, are necessary. Food security and safety studies will be conducted to enhance access to safe food among households and to facilitate the export of safe food commodities.

There is a crucial need of scientific evidence from pre-clinical and clinical studies to justify the use of traditional medicine in the official health care delivery system. Traditional medicine requires more research to ensure the efficacy, safety and quality of traditional medicines for the prevention and cure of diseases. The ultimate goal will be to generate evidenced based information and develop scientifically standardized traditional medicine products that will complement modern medicine.

Non-biomedical research is also necessary to understand and improve the health system. By focusing on social factors and medico legal aspects of health, as well as the organizational structure and process, health human resource and health service delivery systems and cost of the health care.

The transfer and adoption of technological methods is important to make the finished/unfinished products available. Technology transfer and adoption enables the efficient use of resources and ensures a sustainable supply of required products. For example, vaccine production is one major process of technology transfer. More deaths of children are due to vaccine preventable diseases. Through the implementation of these vaccine production programs, the local production of essential vaccines would prevent the need to import vaccines and reducing unnecessary costs. In addition to that, the local production of vaccines would minimize interruption of regular supplies and avoid emergency delivery delay in the

event of epidemics. Other biological products used for disease diagnosis and therapy will be produced through the transfer of technology that can be applied at the local level.

There is widespread agreement that health services research should be more accessible and useful to policy makers and other key stakeholders at all levels. The connection between health researchers and important target audiences will be strengthened. Information needs of end users will be identified and mechanisms for promoting effective research dissemination will be developed.

6.2.2 Pillar – II. Excellence in Public Health Emergency Management

The public health system is continually challenged by recurrent and unexpected disease outbreaks. Ethiopia is facing the challenges of managing the health consequences from natural and human made disasters, emergencies, crises and conflicts. These problems continue to disrupt the health care system. Successful detection and response to these challenges is becoming increasingly complicated. Ethiopia's public health infrastructure requires adequate attention and allocation of resources to be sufficiently prepared, enable early detection, and to respond and recover rapidly from the impacts of these challenges.

Public Health Emergency Management (PHEM) is the process of anticipating, preventing, preparing for, responding to and recovering from the impact of epidemics and health consequences of natural and manmade disasters. The PHEM is one of eight core process adopted by the Ministry of Health and one in which EHNRI aims to excel. The result of this strategic team is to protect the community from health consequences posed by public health emergencies.

Investigations of diseases are now more complex in nature than they were in the past because of a variety of new pathogens, risk factors and outbreaks. These diseases cross jurisdiction and national boundaries; often raising political and economic concerns. The ability to quickly recognize and respond to widely dispersed disease outbreaks is a challenge to the public health system, particularly in an era of increasing natural disaster, global population mobility, emergence of new infectious agents and the wide distribution of manufactured foods.

6.2.3 Pillar –III. Excellence in Public Health Laboratory Quality System

Laboratory standardization for integrated diagnosis of diseases will be necessary for all levels of the laboratory system to define the services required at each facility. This can be done through infrastructure upgrades, trainings, quality assurance, equipment maintenance, supply chain initiatives, and other strategies to assist the regional laboratories and upgrade their ability to provide laboratory services for integrated diseases. Standardization and building capacity at the regional and federal laboratories will enhance their abilities and quality in performing specialized and referral tests, and implement Regional External Quality Assessment Scheme. Different guidelines, manuals, SOPs and formats have to be developed to standardize the laboratory system and standards will be set such that all critical health issues can be addressed by Ethiopia's laboratory system.

6.2.4 Pillar –IV. Excellence in Management and Leadership

EHNRI is responsible for carrying out various duties in terms of public health research, emergency management, and public health laboratory development at a national scale. This mandate requires a functioning and efficient management system. To improve the management system of EHNRI, the Institute necessitates organizational restructuring to streamline work flow. In this strategic plan, managerial issues were prioritized and have been incorporated into the strategic plan according to BSC principles.

6.3 Strategic Results

Table 2. Strategic Themes and Results

Strategic Themes	Strategic Results
Excellence in research and technology transfer	Evidence based information and research products
Excellence in Public Health Emergency Management	Protected citizens from the health consequences of emergencies
Excellence in public health laboratory quality System	Improved quality assured laboratory service
Excellence in Management and leadership	Efficient management system

6.4 Strategic Perspectives

The Balanced Scorecard Strategic perspectives represent the different views of the organization. These help to ensure that strategies and measures are balanced. Perspectives are the different performance directions in which the strategic results are approached (translated into a more actionable strategy). The strategic perspectives selected in this strategic plan document are customers, internal process, finance, learning and growth.

The figure below summarizes the vision, mission, core values, perspectives and strategic pillars of the institute, and is called the promise house of EHNRI.

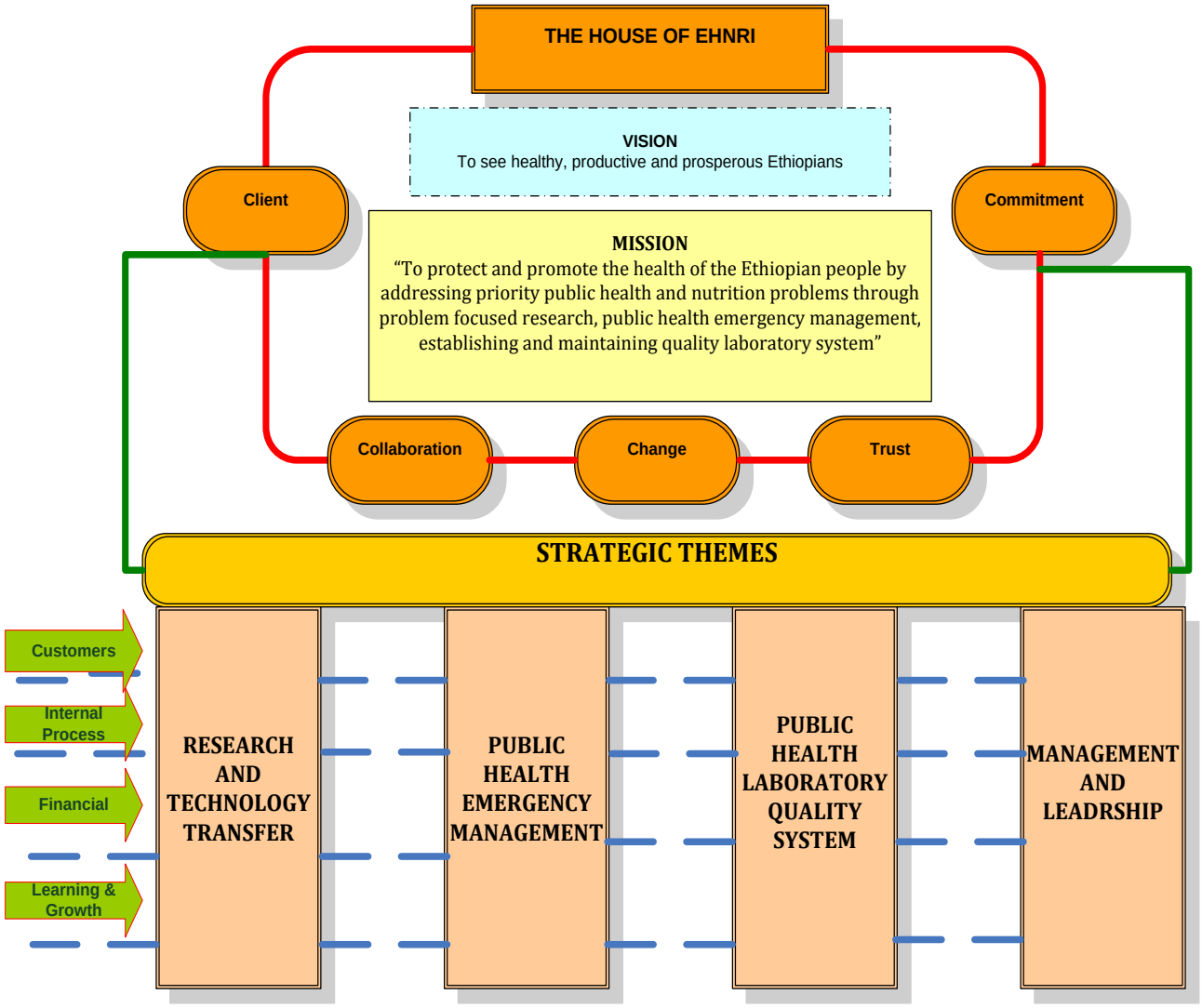

Fig. 1 EHNRI's Performance House

7. Strategic Objectives

The below stated 17 strategic objectives to be achieved in the coming five years are formulated. These objectives are believed to make the backbone of EHNRI and clearly outline the work that needs to be done in order to achieve the set forth strategic results.

OBJECTIVE 1: Improve evidence-based decision making

Information generated from infectious and non infectious disease, nutrition, traditional medicine, environmental risk factors, occupational hazard and health system research will be properly documented at the central level. All evidence-based information will be interpreted, organized and disseminated in a proper manner for appropriate use by policy makers, stakeholders and the community.

OBJECTIVE 2: Increase the availability of vaccines, supplementary foods and other biological products

The local production of vaccines and other biological products through technology transfer will ensure that sufficient quantities are available. The importation of vaccines that are used in immunization programs in Ethiopia is limiting in terms of cost and delivery time. Delays in delivery can be a matter of life and death; especially at a time when there are disease outbreaks. Through increased technology transfer, human resource development and financial capacity, EHNRI will be able to produce other biological products, such as anti sera, conjugates, nutritional products and formulated traditional medicines on a large scale that will be made available to the communities in need.

OBJECTIVE 3: Improve PHE communication response, rehabilitation and recovery

The strengthening of PHEM communication response, rehabilitation and recovery aims to early verification of outbreaks and epidemics, and the ability to contain and rehabilitate communities and health systems.

Communication response:

- Communicate information about daily and weekly activities, risk of given events, alters or warning messages to all stakeholders.

- Provide the public, public officials and key partners with needed health and risk information during and after events of public health emergencies. These lines of communication will inform the community and stakeholders about potential health risks and recommended actions.

Rehabilitation:

- Conduct rapid assessments and investigate outbreaks (epidemiological, laboratory and environmental).

- Implementation of control, preventive and supportive measures, including case management, quarantine and isolation, mass prophylaxis and environmental management.

Recovery:

- Identify the extent of damage caused by an incident, conduct thorough post-event assessments.

- In coordination with relevant stakeholders, determine and provide support for recovery and restoration activities to minimize future loss from a similar event.

OBJECTIVE 4: Improve and maintain quality assured laboratories

Laboratory accreditation will be a significant milestone for the provision of quality laboratory services and will ensure the implementation of quality system management standards. The implementation of the laboratory accreditation process will improve the quality of disease diagnosis, prevention and curative services at individual and community levels.

Obtaining national and/or international accreditation of laboratories at tiers throughout the system as a means of improving and ensuring adherence to high quality standards and

activate the accreditation process for laboratories. The presence of quality-assured laboratory services in Ethiopia will not only strengthen case management but also support decision making and epidemic response.

OBJECTIVE 5: Improve national disease, nutrition and environmental survey and surveillance data

Through improved survey and surveillance data, EHNRI aims to reduce maternal, infant and child mortality and to generate information on resistant infections. The occurrence of different diseases, infections and their levels of resistance will be studied through periodical or one time surveys. Surveying the trends of major priority diseases, such as HIV, TB, malaria and other viral and bacterial diseases, will help to design programs aimed at reducing mortality and morbidity, build capacity and effectively allocate human, material and financial resources. Survey and surveillance data will also aid policy makers at the national, regional and woreda levels to implement tools and mechanisms developed to reduce mortality and morbidity. More specifically, survey and surveillance data generated for microbial and insecticide resistance will help to facilitate the development of cures and prevent the spread of resistant infections throughout communities. Surveys collecting data on nutritional, traditional medicine and other related issues will be performed to identify their contributions to improving public health at the community level. . Micronutrient deficiency data are also vital to ensure the health of the public and will be used to determine the magnitude of nutritional deficiency diseases in Ethiopia. The level and magnitude of micronutrient deficiency in Ethiopia needs to be clearly identified and reliable information is needed to develop micronutrient interventions.

OBJECTIVE 6: Increase problem solving research on disease, nutrition, traditional medicine and modern drugs

The objective in this area will focus on research that will be vital to improve diagnosis and intervention of infectious and non infectious diseases. New or existing diagnostic techniques will be developed or evaluated before their wide use is made available throughout the country. Clinical trials of newly developed medicines and alternative traditional treatments will be investigated. A national-level evaluation of nutritional intervention strategies will be carried out at research level prior to their implementation. The development or evaluation of

new vaccines and biological products, such as immunoglobulin, among others that are necessary for disease management will be investigated. Host parasite relationships using modern immunological and molecular biological techniques will be addressed. Research development in genomics will be strengthened to enrich information obtained from surveillance projects and other similar undertakings. Research will be conducted to investigate the conventional causes and genetic factors for changes in vector-based disease transmission for major disease vectors.

OBJECTIVE 7: Improve research on health system and intervention evaluation

The expansion and decentralization of health services programs require continuous monitoring and evaluation. As such, the generation of evidence-based information on health and health-related systems is essential. Evidence-based information on health and health-related systems are vital to the improvement of Ethiopia's health care delivery system at the community level. Evidence based information can be achieved through operational research on the delivering capacity, quality and accessibility of the health system. Assessing health service capacity (human resources, infrastructure, material and financial), accessibility (physical and service) and quality will help to efficiently identify, address and improve existing gaps. These data will ascertain the impact health service programs may have in reducing infection and disease burden or mortality and morbidity at the community level. The assessment and information generation of environmental and occupational hazards will also increase community awareness in the occurrence, protection and handling of hazardous material for both health care workers as well as the community.

OBJECTIVE 8: Enhance the production of vaccines and standardize plant-based medicine and food products

Technology transfer of research findings developed in other courtiers is an important area that will contribute to improved public health of the nation. The transfer of vaccine production technology will enable the local production of vaccines with given standards for quality and will make vaccines available in country at low cost. Similarly, the production of vital biological products and diagnostic kits through technology transfer will reduce cost and enhance Ethiopia's ability to provide diagnostic services in sustained manner.

OBJECTIVE 9: Improve PHE early warning

The aim of early warning is to provide advance information of an incoming threat in order to facilitate the adoption of measures to reduce its potential health impact. However, not all emergencies and disasters are equally susceptible to early warning.

This objective aims to develop an Integrated Public Health Surveillance System that will combine communicable disease surveillance, nutrition surveillance and monitoring of health events from many other hazards. The Integrated Public Health Surveillance Systems will provide advanced information of an incoming threat through alert networks, periodic warnings via written or electronic bulletins to all responsible bodies to mitigate potentially adverse health impacts facilitate the adoption of measures. This will lead to the possible mechanism for the early detected and identified public health emergencies.

Integrated disease surveillance

Surveillance is the continuous systematic collection, analysis, interpretation, and dissemination of health data for the purpose of describing and monitoring health events, setting priorities, and assisting the planning, implementation, and evaluation of public health interventions and programs. Understanding and use of public health surveillance will assist health workers at the *Woreda* level and health units to set priorities, plan interventions, mobilize and allocate resources, detect epidemics early, initiate prompt response to epidemics, and to evaluate and monitor health interventions. Public health surveillance also helps to assess long term disease trends.

Nutrition surveillance

Nutrition surveillance is the continuous collection and analysis of nutritional status data. This information provides warning of impending crisis and aids in policy development and programmatic decision making aimed at improving the nutrition status of the population. This ongoing analysis generally employs methods distinguished by their practicality, uniformity; and frequently their rapidity, rather than complete accuracy. The main purpose of nutrition surveillance is to detect changes in trends, distributions of diseases or events in order to initiate investigative or control measures.

Laboratory surveillance

The detection and control of intentional and natural outbreaks and epidemics of infectious diseases require rapid and specific identification of pathogens and their source of infection. To enable this, PHEM offices at different levels need to create strong linkages among the national, regional and health facility laboratories. Surveillance of diseases and events from laboratories is critically important to early detect the occurrences of unusual increases.

Laboratories will also investigate any change to the environment that increases the risk of transmission or dissemination of diseases and events through environmental tracking.

Event monitoring/ surveillance

Event-based surveillance is the organized and rapid capture of information about events that pose potential risks to public health. This information can be rumours and other ad-hoc reports transmitted through formal channels, such as established routine reporting systems, and informal channels, such as media, health worker and nongovernmental organizations reports, including:

- Events related to the occurrence of disease in humans, such as a cluster of cases of a disease or syndromes, unusual disease patterns or unexpected deaths, as recognized by health workers and other key informants in the country.
- Events related to potential exposure for humans, such as events related to diseases and deaths in animals, contaminated food products or water, and environmental hazards including chemical and radio-nuclear events.

OBJECTIVE 10: Improve Risk identification and PHE preparedness

Risk identification and PHE preparedness may be strengthened by assessing and determining the nature and extent of risk through an analysis of potential hazards. An evaluation of existing risk conditions and the environment on which they depend is necessary. Based on identified risks, improving detection preparedness and prevention and response capabilities for existing and emerging epidemic-prone diseases of national and international concern as well as other events is crucial. The major activities are:

Improve risk identification and management

The aim of vulnerability analysis is to establish a database that focuses on the expected effects of potential hazards, relief needs and available resources. These analyses should become the basis for maintaining and updating an essential informational tool for development planning purposes. Vulnerability assessment utilizes structured data collection geared towards understanding the levels of potential threats, needs and immediately available resources. Vulnerability analysis is a continuing, dynamic process of assessing hazards and risks that could threaten the population and the system. Assessing vulnerabilities also helps to determine how to respond.

Improve human resource and physical capacity

Based on the risk assessment output, capacity building activities shall be carried out in order to effectively mitigate, prepare for identified risks and respond to any occurrence of PHE events. Capacity building activities include: producing enough capable human resources and establishing and/or strengthening systems related to PHEM (Surveillance system, Communication, Logistics etc).

The human resource capacity building component involves: Coordinated training of PHEM leaders in the Field Epidemiology and Laboratory (FELTP) masters program and training of trainers of the PHEM at the national level. These trainings will be further cascaded through RHBs to Woredas and to all health workers who are engaged in PHEM activities. Building the physical capacity, either through establishing new systems or strengthening already existing system, at all levels is critical component of the PHEM system. The Emergency Response Fund (ERF) system also needs to be established. Following an emergency, the PHEM centre relies on donor contributions to undertake emergency/ epidemic response activities. Contributions, however, can often be unreliable, uneven and late. Early and predictable funding is essential to prevent situations from spiralling out of control, saving resources and, more importantly, saving lives. An ERF will be established at the national level and is essential to ensure that funds are available immediately in response to disasters and emergencies. The fund provides

an easy and centralized way to support the Canter's life-saving efforts during outbreaks/epidemics in the country.

Improve the logistics management system

The logistics management system focuses on stockpiling drugs, vaccines (Buffer stocks), PPE, EHK, medical supplies required for prevention and control of epidemics and nutritional supplements. This system has to be augmented with securing funds for related operational activities. This includes efficient mobilization & utilization of resources.

Preparation and distribution of documents

Short and long term plans, guidelines, manuals, formats, procedures and protocols should be prepared and distributed to all health workers concerned; especially to the lowest levels.

OBJECTIVE 11: Enhance laboratory quality system

Laboratory standardization for integrated diagnosis of diseases will be necessary for all levels of the laboratory system to define the services required at each facility. This can be done through infrastructure upgrades, trainings, quality assurance, equipment maintenance, supply chain initiatives and other strategies to assist the regional laboratories and upgrade their abilities to provide laboratory services for integrated diseases. Standardization and capacity building of the regional and federal laboratories will enhance their abilities to perform quality specialized and referral tests, as well as to implement the Regional External Quality Assessment Scheme. Different guidelines, manuals, SOPs and formats have to be developed to standardize the laboratory system. Standards will be set such that all critical health issues that can be addressed by Ethiopia's laboratory system.

All laboratories will be included in external quality assessment schemes at the national and regional level through improving laboratory standards and participate them with different quality assurance systems such as external quality assessment schemes which increase the confidence of health care practitioners to use laboratory data.

Objective 12: Strengthening the diagnostic capacity of laboratories

It is essential to provide support to regional, federal and peripheral laboratories in order to enable them to accomplish their responsibilities. Laboratory support includes infrastructure upgrades, training programs, quality assurance programs, laboratory equipment maintenance and other strategies that will assist the laboratories and improve their ability to provide laboratory services for integrated diseases. However, a significant gap remains between their current state and laboratory standards; fulfilling these gaps will play a great role in establishing and strengthening public health laboratory services in the country. These systems will be reviewed to identify opportunities for integration. A robust sample referral network will allow the country to achieve the vision of a tiered laboratory network with strong linkages between each level, regardless of the sample type.

OBJECTIVE 13: Improve efficient mobilization & utilization of resources

The mobilization of financial and material resources from different funding organizations and governments will facilitate public health and nutrition research as well as the technology transfer process. Additionally, an efficient logistic and procurement system will be established and a proper follow up mechanism for resource utilization will be in place.

The duplication of research would unnecessarily deplete the country's meager resources. There is a need to conduct research through efficient use of human, financial and material resource as well as time. Upon review of international and national activities, harmonization of partnerships will augment the efficient use of limited resources. Priority areas for Ethiopia will be identified and biomedical and other related research activities will be conducted in areas that have not previously been covered. The efficient production, harmonization and utilization of research products can help to improve the health of the community with reduced cost.

Several preconditions have to be maintained in order to improve the equipment and consumable procurement system; among procured items are chemicals, reagents and other supplies. To ensure proper procedures and processes are followed, there is also a need to

strengthen the monitoring and evaluation of both ongoing and planned research programs and projects. In the case of deficiencies, a plan needs to be in place to proceed with corrective measures and the potential for increased research partnership.

The ERF is essential to ensure that funds are available immediately in response to disasters and emergencies. The Fund provides an easy and centralized way to support the Centre's life-saving efforts during outbreaks/epidemics in the country. Whether in response to a headline disaster or disease outbreaks, the ERF permits the centre to respond rapidly and equitably to save lives.

OBJECTIVE 14: Improve human resource management.

This includes calibrating employees capacity through upgrading their knowledge and skill, on job training and mentoring. Designing appropriate and full package career structure and incentive mechanisms and also creating conducive working environment will be given a special attention.

OBJECTIVE 15: Improve the project management system

In the past, the management system did not adequately address priority areas among communities, nor did it solve problems caused by major diseases and infections of public health importance. Therefore, the research and project management system for priority diseases, including the issue of nutrition, needs to be addressed. A comprehensive system that produces relevant, high quality and applicable data for problem solving is needed. Developing a capacity continuously for the sustainable improvement of the programs is significant. The improvement of public health and nutrition research systems at differing levels will aid health care programs to develop methodologies and mechanisms. Health care programs need to assess problems, identify gaps, analyze causes of problems and gaps, interpret and disseminate results. Either operational or basic researches generate evidence-based information that would be used for the prevention, control and treatment of diseases and infections. To strengthen research capacity and reduce duplication, setting the research agenda is helpful to reinforce national and international partnerships.

Research designs, ethical consideration of the research participants, proper use of laboratory animals and scientific considerations will be given priority to put public health oriented researches in place.

OBJECTIVE 16: Strengthen the capacity of technical facilities

Technical facilities need to be strengthened nationally in order to meet needs and to deliver products to the public and Technology transfer. It is also a key to the production of vaccines, supplementary nutrition, formulated traditional medicines and anti sera. The ability for Ethiopia to produce its own technologies may be achieved through the transferring of technology from abroad, developing technology at a national level or transferring technology down to the health care delivery points. Technology transfer may also be further supported by the development of human resource for the adopted technologies. Future use of technology transfer could support the establishment of a national research data base that could facilitate dissemination and availability of information.

Objective 17: Enhance coordination and collaboration

Through this objective coordination and collaboration with local and international partners will be strengthened to maximize efforts on health research, public health emergency management and public health laboratory quality service in line with the strategic plan document.

Table 3. List of strategic objectives under each respective theme

Perspective	*List of Objectives*	*Themes*
Customer	Objective 1: Improve evidence based research outcomes for policy decision making	Research and technology transfer
	Objective 2: Increase the availability of vaccines, plant-based medicines, complementary foods and other biological products	
	Objective 3: Improve PHE communication, response and recovery	Public Health Emergency Management
	Objective 4: Increase and maintain quality assured laboratories	Public Health Laboratory Service
Internal process	Objective 5: Improve national survey and surveillance data on disease, nutrition and environmental problems	Research and Technology Transfer
	Objective 6: Increase problem solving research on disease, nutrition, traditional medicine and modern drugs	
	Objective 7: Improve research on health system and intervention evaluation	
	Objective 8: Enhance the production of vaccines, standardized plant based medicine and food product	
	Objective-9.Improve PHE early warning	Public Health Emergency Management
	Objective-10. Improve risk identification and PHE preparedness	
	Objective 11: Enhance laboratory quality system	Public Health Laboratory Service
	Objective 12: Improve the diagnostic capacity of laboratories	
Finance	Objective 13: Improve efficient mobilization & utilization of resources	Management and Leadership
Learning and Growth	Objective 14: Improve human resource management	
	Objective 15: Improve project management system	
	Objective-16: Strengthen the capacity of technical facilities	
	Objective-17. Enhance coordination and collaboration	

8. Strategic Map

The strategic map below presents a visual representation of the strategy employed by EHNRI. The map illustrates how the Institute plans to achieve its mission and vision by means of a linked chain of continuous improvements. It is a diagram that describes how the Institute creates values by connecting strategic objectives in explicit cause and effect relationships with each other in the four BSC objectives.

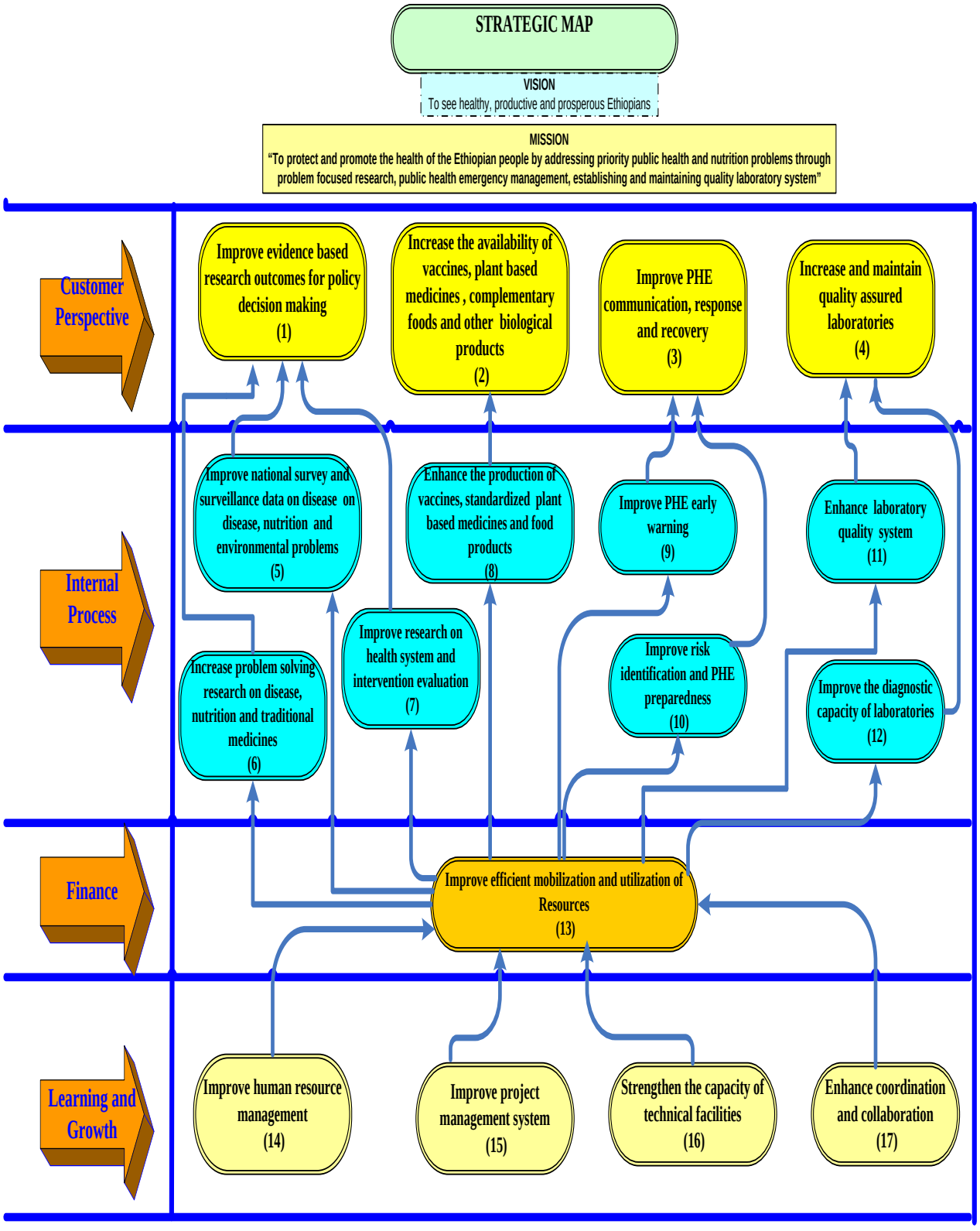

Fig.2. Strategic Map

9. PERFORMANCE MEASURE

Table 4. List of performance measures under each objective

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan (in EC)				
						2003	2004	2005	2006	2007
OBJECTIVE 1: ***Improve evidence based research outcomes for policy decision making***										
Number of research outcomes for policy changes	Output	-	RR	No	5	2	2	2	2	2
Number of National relevant research outcomes disseminated (technical reports)	Output	-	RR	No	40	25	30	35	40	40
Number of research findings disseminated	Output	-	RR	NO	75		19	21	24	28
OBJECTIVE 2: ***Increase the availability of vaccines, plant based medicines, complementary foods and other biological products.***										
Number of doses of availed cell culture	Output	-	RR	No		30,000	85,000	100,000	120,000	140,000
Number of doses of availed cell culture rabies vaccine for human use	Output	-	RR	No				10,000	10,000	10,000
Number of doses of availed	Output	-	RR	No	5000	5000	5000			
Number of doses of availed	Output	-	RR	No	20000	2000	2000			
Number of	Output			Dose						1,00
Number of doses of Anti-sera for rabies	Output	-	RR	No			31,500	37,500	39,000	40,500
Number of bottles of trans-	Output	-	PR	No	0	1000	1000	-	-	-

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
Number of regional laboratories strengthened to produce trans-isolate media	Output	-	PR	No	0	5	-	7	7	7
Number of complementary foods availed	Output	-	RR	No	NA		1			1
Number of standardized plant based human and veterinary medicines	Output	-	RR	No	NA					3
OBJECTIVE 3: ***Improve PHE communication, response and recovery***										
Percent of health events communicated to relevant bodies within specified period.	Output	Health events communicated/total number of identified health events	PR	%	NA	80	90	95	100	100
Percent of Risk profiles communicated to relevant bodies within specified period.	Output	Risk profiles communicated/total number of identified risk	PR	%	NA	60	80	90	100	100

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
Proportion of PHE with prevention and control measures initiated within 48hrs of identification of risk and characterization of threats	Output	PHE with prevention and control measures initiated within 48hrs/total number of identified risks and characterized threats	PR	Time	24hrs	6hrs	3hrs	3hrs	3hrs	3hrs
Proportion of rehabilitated and recovered affected population and/or health system after major PHE	Output	Number of affected community and /or health system recovered to total affected communities and health system	PR	%	NA	100	100	100	100	100

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 4: ***Increase and maintain quality assured laboratories***										
Number of Quality assured (Accredited) laboratories	Output	-	PR	No	0	39	79	158	249	345
OBJECTIVE 5: ***Improve national survey and surveillance data on disease, nutrition and environmental problems***										
Number of anti microbial and insecticide resistance Surveys conducted on priority diseases /vectors	Output	-	RR	No	2	5	4	3	1	7
Number of national surveys/ surveillances on infectious and non infectious diseases	Output	-	RR	No	3	8	8	8	9	6
Number of national surveys on environmental risk factors on public health	Output	-	RR	No	0	4	3		1	2
Number of national surveys/ surveillances on nutrition and traditional medicine	Output	-	RR	No	1	8	5	6	7	1

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 6: ***Increase problem solving research on disease, nutrition and traditional medicine and modern drugs***										
Number of evaluations conducted to improve diagnostic technologies	Output	-	RR	No	1	6	5	7	9	6
Number of evaluations and studies conducted to improve food processing technologies and quality	Output	-	RR	No	0	2	3	1	2	3
Number of researches on infectious diseases, community nutrition and traditional medicines	Output	-	RR	No	200	8	4	6	6	5
Number of studies on clinical trials and preventive measures	Output	-	RR	No	0	0	0	2	2	3
OBJECTIVE 7: ***Improve research on health system and intervention evaluation***										
No of health system/ intervention evaluation conducted	Output	-	RR	No	2	2	3	3	3	3

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 8: ***Enhance the production of vaccines, standardized plant based medicine and food product***										
Number of vaccines produced through technological transfer	Output	-	RR	No	1	1		1	1	1
Number of vaccines produced from local isolates	Output	-	RR	No	NA					3
Number of standardized plant based medicines developed	Output	-	RR	No.	0				3	3
Number of standardized food products developed	Output	-	RR	No.	0		2			1
Number of indigenous foods technologies documented	Output	-	RR	No	NA	1				
Number of food composition tables and dietary menu developed	Output	-	RR	No	0	2	1		1	
Number of different experimental animals produced	Output	-	PR	No	10,000	5,000	5,500	6000	6500	7000

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE-9. ***Improve PHE early warning***										
Percent of weekly surveillance reports that are received complete and timely at PHEM-C	Process	Complete and timely report received / total report received	PR	%	80	80	90	90	90	90

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE-10. ***Improve risk identification and PHE preparedness***										
Percent of threats/ risks mapped and communicated to the Regions and partners	output	Number of identified threats, risk mapped and communicated /Total number of risks, threats identified	PR	%	0	25	50	75	100	100
Percent of identified risks with EPRP prepared	output	Number of identified risks with EPRP /No. of identified risks	PR	%	30	50	100	100	100	100
Proportion of PHE with adequate stockpiles of drugs and medical supplies as per the guideline	Output	Number of PHE identified with adequate stock of supplies /Number of identified risks	PR	%	90	100	100	100	100	100
Proportion of PHE specific guidelines developed and distributed	Input	Number of PHE specific guidelines developed and distributed / Identified Public health threats, risks	PR	%	25	50	100	100	100	100
Number of health professionals trained on management of public health emergencies	Input	-	PR	No	47	287	280	260	260	287

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 11: ***Enhance laboratory quality system***										
Number of developed and revised guidelines, manuals and format types	Output	-	PR	No	14	9	8	11	10	11
Number of laboratories with	Output	-	PR	No	0	20	20	25	30	40
Number of laboratories	Output	-	PR	No	100	100	120	120	130	140
OBJECTIVE 12: ***Improve The diagnostic capacity of laboratories***										
Number of enabled laboratories for specialized and referral services	Output	-	PR	No	120	50	75	80	85	95
Proportion of laboratories linked for ART referral tests	Output	-	PR	No	420	40	50	75	75	90
Number of trained personnel	Output	-	PR	No	630	1402	1481	1655	1740	1816
Proportion of laboratories getting curative maintenance	Output	Number of labs getting service/Total number of laboratories	PR	%		80	84	90	95	97
Proportion of preventive maintenance services provided	Output	PM provided/PM expected	PR	%	0	20	35	60	70	90
Number of iodized salt quality control laboratories strengthened	Output	-	PR	No	0	7	7	14	14	-

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 13: ***Improve efficient mobilization & utilization of resources***										
Proportion of mobilized resources as per plan	Output	Actual mobilized resource /the planned resource	RR	%	20	100	100	100	100	100
Proportion of performance compliance in line with the standard	Output	Number of issues handled as per set standards /Total number of issues having standards	RR	%	100	100	100	100	100	100
OBJECTIVE 14: ***Improve human resource management***										
Number of employee developed with Long term & short term training programs	Output	-	PR	No	NA	55	62	77	77	66
Proportion of Employees Recruited as per the request	Output	Number of Employees Recruited/ total request	PR	No.	NA	80	85	90	95	100
Proportion of Employees Retained	Output	Number of employees retained/ Number of total permanently recruited employees	PR	%	89	92	92	95	98	98

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 15: ***Improve project management system***										
Proportion of researches with public health relevance	output	Number of operational researches of national relevance / total number of researches	RR	%	50	70	100	100	100	100
Number of National and international research partnership established	Output	-	RR	No.		1	1	1	1	1
Number of Monitoring conducted	Output	-	PR	No.	-	6	6	6	6	6
Number of Evaluation conducted	Output	-	PR	No.	-			1		1

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
OBJECTIVE 16: ***Strengthen the capacity of technical facilities***										
Number of developed technical capacities for vaccine production	Output	-	RR	No	1	1	1	1		1
Number of developed National capacity for biological products	Output	-	RR	No	0		1	1	1	1
Number of developed national data base	Output	-	RR	No	0	1	2			
Number of developed technical facilities	Output	-	RR	No	-	6	3	3	3	3
Number of developed research outcomes dissemination system	Output	-	RR	No	1	1			1	
OBJECTIVE-17. ***Enhance coordination and collaboration***										
Proportion of PHEM stakeholders involved in at least 9 of the monthly meetings of the PHEMTTF	Input	Number of participation in at least 9 meetings /Total number expected to be involved in PHEM TTF	PR	%	50	80	100	100	100	100

Indicator	Type of Measure	Formula	Data Source	Unit of Measure	Baseline	Plan				
						2003	2004	2005	2006	2007
Number of national and international research partnership established	Output	-	PR	No.	26		30			40
Proportion of research partnership maintained	Output	Number of partnership maintained/ Number of research collaborations established	PR	%	100	100	100	100	100	100

10. Initiatives and Scope/Content

Table 5. List of initiatives and scopes/contents under each performance measure

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 1: ***Improve evidence based research outcomes for policy decision making***								
Performance Measure-1. Number of research outcomes for policy change								
Preparing policy briefs	Development of policy briefs for disease prevention and controls	TTRTD	No	2	2	2	2	2
Performance Measure-2. Number of national relevant research outcomes disseminated (technical reports)								
Disseminating different nationally relevant research reports	Sending different research outcomes reports for stakeholders	All Directorates	No	25	30	35	40	40
Performance Measure-3. Number of research findings disseminated								
Disseminate research information	Research findings presented on national and international conference	All Directorates	No		3	5	7	10
	Research findings disseminated on peer reviewed journals	All Directorates	No		10	10	10	10
	Research findings disseminated through the institute's News letter	All Directorates	No		2	2	3	4
	Research findings disseminated through Web site	All Directorates	No		4	4	4	4

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 2*: Increase the availability of vaccines, plant based medicines, complementary foods and others biological products*								
Performance Measure-1. Number of doses of availed cell culture rabies vaccine								
Availing rabies vaccine	Rabies vaccine distribution	VDPD	Dose	25,000	85,000	125,000	120,000	140,000
Performance measure 2: Number of doses of availed prophylactic rabies vaccines								
Availing prophylactic rabies vaccines	Prophylactic rabies vaccine distribution	VDPD	Dose			10,000	10,000	10,000
Performance measure 3: Number of doses of availed meningococcal meningitis vaccine								
Availing meningitis vaccine	meningococcal meningitis vaccine distribution	VDPD	Dose					1,000,000
Performance Measure 4. Number of doses of availed Anti-sera for rabies								
Availing Anti-sera for rabies	Distribution of anti-sera for rabies	VDPD	Dose		31,500	37,500	39,000	40,500
Performance measure 5:Number of bottles of trans-isolate media distributed								
Produce and distribute Trans isolate media	Preparing and distribution of trans-isolate media to health facilities	INDRD	***bottles***	1000	1000	-	-	-
Performance Measure- 6:Number of regional laboratories strengthened to produce trans-isolate media								
Strengthen regional laboratories to produce TI media	Conduct TOT on how to produce TI media	INDRD	No		14	16	16	16
	Quality assessment of TI media produced by regional labs	INDRD	No		-	7	7	7
Performance Measure -7: Number of complementary foods availed								
Development of complementary foods	Preparation of manual for development of complementary foods	FSNRD	No		1			1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure -8: Number of standardized plant based medicines for human and veterinary use								
Number of standardized plant based medicines for human and veterinary use	Prepare and avail full-fledged document of production and other pharmaceutical details on formulated plant based medicines for human use	TMMRD	No					2
	Prepare and avail full-fledged document of production and other pharmaceutical details on formulated plant based veterinary medicine	TMMRD	No					1
Objective-3. ***Improve PHE Communication, response and recovery***								
Performance Measure 1. Percent of health events communicated to relevant bodies within specified period.								
Timely dispatch of alert and /or warning	Equip regional PHEM heads with communication tools	PHEMC	No	11	11	11	11	11
	Prepare and distribute weekly disease or event reports (bulletin)	PHEMC	No	52	52	52	52	52
	Disseminate information to the public after the occurrence of PHE	PHEMC	Hour	12	6	1	1	1
	Alert stakeholders after 30 minutes of case investigation	PHEMC	%	50	90	90	90	90
	Create and update roster of partners and stakeholders that require communication	PHEMC	%	60	100	100	100	100

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure 2. Percent of Risk profiles communicated to relevant bodies within specified period.								
Risk communication	Communicate risk profile with aversion/ minimizing action after assessment to relevant stakeholders	PHEMC	%	100	100	100	100	100
Performance Measure 3. Proportion of PHE with prevention and control measures initiated within 48hrs of identification of risk and characterization of threats								
Outbreak investigation and mitigation	Verification of PHE rumours within 3hrs from initial notification	PHEMC	%	100	100	100	100	100
	Confirm suspected disease outbreaks with laboratory investigation	PHEMC	%	80	80	80	90	90
	Institute preventive and control measures for identified risks and characterized threats	PHEMC	%	100	100	100	100	100
Performance Measure 4. Proportion of rehabilitated and recovered affected population and/or health system after major PHE								
Recovery and Rehabilitation	Assess the health impact of major event /emergencies	PHEMC	%	30	50	75	90	100
	Liaison with offices /agencies that work on rehabilitation activities	PHEMC	%	100	100	100	100	100
	Provide psycho-social support	PHEMC	%	100	100	100	100	100
	Rehabilitating affected health system	PHEMC	%	100	100	100	100	100

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 4 : ***Increase and maintain quality assured laboratories***								
Performance Measure-1. Number of quality assured (accredited) laboratories								
Enabling laboratories to fulfil WHO/AFRO accreditation scheme	Enabling labs to WHO/AFRO Accreditation scheme Star 1	RLCBD	No	20	40	80	120	160
	Enabling labs to WHO/AFRO Accreditation scheme Star 2	RLCBD	No	16	20	50	80	120
	Enabling labs to WHO/AFRO Accreditation scheme Star 3	RLCBD	No	3	17	20	35	45
	Enabling labs to WHO/AFRO Accreditation scheme Star 4	RLCBD	No		2	7	10	15
	Enabling labs to WHO/AFRO Accreditation scheme Star 5	RLCBD	No			1	4	5
Accreditation of laboratories with other international accreditations (JCI)	Assessment of laboratories by the international accreditation body	RLCBD	No			1	4	5
Accreditation of labs with national accreditation body	Assessment of laboratories by national accreditation body	RLCBD	No		80	100	120	160
	Certification of laboratories	RLCBD	No		80	100	120	160
OBJECTIVE ***5: Improve national survey and surveillance data on disease, nutrition and environmental problems***								
Performance Measure 1: Number of anti microbial & insecticide resistance surveys conducted on priority diseases /vectors								
Conduct anti-microbial and insecticidal resistance surveys	Conduct early warning indicators for HIVDR	INDRD	No	1	1	1	1	1
	Conduct prevention monitoring for HIVDR	INDRD	No	1		1		1
	Conduct threshold survey for HIVDR	INDRD	No	1		1		1
	Conduct national TB drug resistance survey	INDRD	No		1			1
	Conduct national malaria drug resistance survey	INDRD	No		1			1
	Conduct national drug resistance survey on other bacterial disease	INDRD	No	1				1
	Carry out post-marketing survey on norfloxacillin & ciprofloxacillin brands	TMMRD	No		1			
	National insecticide resistant survey	INDRD	No	1				1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure 2: Number of national surveys/surveillances on infectious and non infectious diseases								
Conduct different national surveys/surveillances on infectious and non infectious diseases	National TB prevalence survey	INDRD	No	1				
	National ANC/PMTCT HIV survey	INDRD	No		1		1	
	National Population Based Survey (PBS) for HIV, HBV and HCV	INDRD	No		1			
	National Behavioural Survey and surveillance HIV(BSS)	INDRD	No	1			1	
	National malaria survey	INDRD	No	1			1	
	National surveillance on HIV/TB co-infection	INDRD	No	1	1	1	1	1
	National sero-survey on most-at-risk population for HIV	INDRD	No	1				1
	Conduct AIDS related mortality survey	INDRD	No			1		
	National virological survey on polio, measles and Rubella	INDRD	No	1	1	1	1	1
	National survey on Influenza and other respiratory viruses.	INDRD	No	1	1	1	1	1
	National survey on Rotavirus	INDRD	No	1	1	1	1	1
	National survey on neglected diseases such as onchocercheasis, fliariasis, relapsing fever	INDRD	No			1		
	Entomological survey on mosquitoes and other potential vectors for disease transmission	INDRD	No		1			1
	National survey on level & determinants of other zoonotic diseases	INDRD	No				1	

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Conduct different national surveys/surveillances on infectious and non infectious diseases	National survey of rabies virus in Ethiopia	INDRD	No			1		
	National survey on level and determinants of breast and cervical cancer	INDRD	No		1		1	
	National survey on level and determinants of diabetics, asthma and hypertension	INDRD	No			1		
Performance Measure 3: Number of national surveys/surveillances on environmental risk factors on public health								
Conduct surveys on environmental risk factors on public health	Conduct survey on Organo-chlorine Pesticide Pollution & exposure in the environment.	INDRD	No		1			1
	Conduct survey on occupational health risk/ noise pollution in selected work areas	INDRD	No	1				
	Study on the occurrence and exposure of environmental, occupational hazards for health and toxic chemicals and contaminants.	INDRD	No	3	1			1
	Investigate reduction strategy for contaminated environmental risk factors for health.	INDRD	No				1	
	Conduct household well water quality assessment	INDRD	No		1			
Performance Measure 4: Number of national surveys/surveillances on nutrition and traditional medicine								
Conduct different national surveys & surveillances on nutrition	Conduct survey on heavy metals contamination in food and water	INDRD	No	1				1
	Conduct National Nutrition Program (NNP) end line survey	FSNRD	No				1	
	Conduct National iodine deficiency disorder (IDD) evaluation survey	FSNRD	No		1			

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
	Conduct National vitamin A deficiency (VAD) survey	FSNRD	No			1		
	Conduct National iron deficiency anaemia (IDA) survey	FSNRD	No			1		
	Conduct National zinc deficiency disorder (ZDD) survey	FSNRD	No				1	
	Conduct National mycotoxin survey on ground-nut and spices	FSNRD	No				1	
	Conduct evaluation on National Nutrition Program (CBN)	FSNRD	No	1	1	1	1	
	Conduct National food consumption survey	FSNRD	No	1				
	Study on breast feeding and complementary feeding trend at national level	FSNRD	No	1				
	National nutrition program-operational researches	FSNRD	No	3	3	3	3	
Conduct different national survey & surveillance on traditional medicine	National survey on knowledge, attitude and practice of the community, traditional health practitioners and modern health practitioners towards traditional medicine.	TMMRD	No	1				
OBJECTIVE 6*: Increase problem solving research on disease, nutrition and traditional medicine and modern drugs*								
Performance Measure -1: Number of evaluations conducted to improve diagnostic technologies								
Evaluation of new diagnostic technologies	Evaluation of rapid test kits for HIV	INDRD	No		1			1
	Evaluation of rapid test kits for rabies	INDRD	No	1				
	Scaling up of rabies diagnostic services in regional laboratories	INDRD	No	1		5	7	4
	Evaluation of MODS for M. Tuberculosis	INDRD	No		1			
	Evaluation of diagnosis methods of tuberculosis in children	INDRD	No	1				
	Evaluation of mobile CD4 testing devise	INDRD	No	1				

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
	Evaluation of rapid test kits for malaria	INDRD	No		1		1	
	Evaluation of diagnostic technology for the identification of recent HIV infection	INDRD	No		1			
	Evaluation of molecular/immunological platform (for additional 5 diseases)	INDRD	No	1	1	1	1	1
	Evaluation of rapid test kits for HBV	INDRD	No	1		1		
Performance measure 2: Number of evaluations and studies conducted to improve food processing technologies and quality								
Evaluation of food processing technologies	Effective method of processing and promoting locally available micronutrient rich foods	FSNRD	No				1	
	Identify and evaluate new food processing technologies that can be used at community level	FSNRD	No					1
	Determination of shelf life of foods	FSNRD	No	1	1	1	1	1
	Study on fortification of essential nutrients in complementary foods	FSNRD	No		1			
	Study on imported premix for fortification and existing fortified food products in Ethiopia	FSNRD	No		1			
	Post harvest quality evaluation and improvement of coffee	TMMRD	No	1				1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure -3: Number of researches on infectious diseases, community nutrition and traditional medicine								
Identifying health related problems and their biological causes	Immunological, virological and bacteriological consequences of tuberculosis and HIV co-infection	INDRD	No	1	1	1	1	**1**
	Study the association between infectious and non infectious diseases	INDRD	No			1		
	Determine the impact of disease co-infections on diagnosis and treatment	INDRD	No				1	
	Molecular epidemiology on HIV, TB and malaria	INDRD	No		1	1	1	
	Molecular epidemiology of rabies virus in Ethiopia	INDRD	No			1		
	Study on acute watery diarrhoea (AWD)	INDRD	No		1		1	
	Investigation and management of an unidentified liver disease in North-western Tigray	TMRD	No	1				
Identification of food safety and nutritional problems for intervention	Study on hazard analysis and critical control points (HACCP) of municipality water	FSNRD	No	1				
	Study on hazard analysis and critical control points (HACCP) of selected food industry	FSNRD	No				1	
	Study on the role of nutrition in chronic health problems (Hypertension and diabetics diseases)	FSNRD	No					1
	Study on the interaction of nutrition and major diseases (HIV, malaria and TB)	FSNRD	No			2		
	Iodine retention study on iodated salt	FSNRD	No	1				
	Study on safety of vegetables grown in Addis and its surrounding areas	FSNRD	No	1				

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Identification of nutritional problems for intervention	Prevalence and drug resistance patterns of *S. concord* among children in selected orphanages and health institutions in Addis Ababa, Ethiopia	FSNRD	No	1				
	Study on health effect of fluoride intake and mitigation mechanism	FSNRD	No	1				
Scientific evaluation of traditional medicines	Phytochemical, efficacy and safety study on traditionally used medicinal plants used against leishmaniasis	INDRD	No	1				
	Phytochemical, efficacy and safety study on traditionally used medicinal plants used against tuberculosis	TMMRD	No					1
	Phytochemical, efficacy and safety study on traditionally used medicinal plants used against asthma and/or diabetics	TMMRD	No				1	
	Phytochemical, efficacy and safety study on selected medicinal plants used against diarrhoea	TMMRD	No					1
	Phytochemical, efficacy and safety study on traditionally used medicinal plants used to treat rabies	INDRD	No		1			
	Documentation of traditional medical knowledge and preparation of pharmacopoeia	TMMRD	No					1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure -4: Number of studies on Clinical trials and preventive measures								
Identifying appropriate drugs and vaccines for therapeutics and intervention	Efficacy study of bed net and insecticide on vector control	INDRD	No			1		
	Conduct advanced clinical monitoring	INDRD	No			1		
	Conduct vaccine trial on priority diseases	INDRD	No				1	
	Conduct drug trial on priority diseases	INDRD	No				1	
	Conduct clinical trial on formulated plant based medicines against hypertension	TMMRD	No					1
	Conduct clinical trial on formulated plant based medicines against helmintics	TMMRD	No					1
	Conduct clinical trial on formulated plant based medicine against malaria	TMMRD	No					1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 7: ***Improve research on health system and intervention evaluation***								
Performance Measure-1: Number of health system/intervention evaluation conducted								
Conduct research on health system & heath related interventions	Identify barriers to and opportunities for successful health extension program implementation at urban, rural and pastoralist communities	HSRD	No		1			
	Maternal and Child Health (ICCM)	HSRD	No	1				
	Assessment of health care delivery and quality of care: Coverage and delivery of ANC services	HSRD	No		1			
	Facility based retrospective study on non communicable disease	HSRD	No	1				
	Evaluate referral system linkage at different levels of health facilities	HSRD	No		1			
	Identify the most effective individual, family and community level interventions for preventing, treating mental illness	HSRD	No				1	
	Evaluate the methods to enhance the protection of privacy and confidentiality in health care delivery.	HSRD	No			1		
	Assess the existing practices of health workforce development and identify the best approach.	HSRD	No			1		
	Evaluation on the coverage of vaccination programs	HSRD	No					1
	Study on delivery and utilization of rabies vaccine	HSRD	No				1	
	Health facility assessment	HSRD	No			1		
	Basic health supplies tracking and stock management study	HSRD	No					1
	Assessment of the health system and policy environment as critical complement to tracking intervention coverage for maternal and child health	HSRD	No					1
	Customer satisfaction survey at selected health facilities	HSRD	No				1	

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 8: ***Enhance the production of vaccines, standardized plant based medicine and food product***								
Performance Measure 1: Number of vaccines produced through technological transfer								
Production of rabies vaccine	Produce cell culture rabies vaccine for animal use	VDPD	No	1				
	Mass production of cell culture rabies vaccines for animal use	VDPD	Dose	30,000	60,000	100,000	120,000	140,000
	Produce cell culture rabies vaccine for human use	VDPD	No			1		
	Mass production of cell culture rabies vaccines for human use	VDPD	No			10,000	10,000	10,000
	Mass production of Fermi rabies vaccine for animal use	VDPD	Dose	5,000	5,000	5,000		
	Mass production of Fermi rabies vaccine for human use	VDPD	Dose	20,000	20,000	20,000		
Production of Meningococcal vaccines	Produce trivalent(A,C&W135) Meningococcal vaccines	VDPD	No				1	
	Mass production of trivalent(A,C&W135) Meningococcal vaccines	VDPD	Dose					1,000,000
Production of Pentavalent vaccines	Produce DTP vaccines	VDPD	No					1
	Transfer technologies to produce Hib and Heb	VDPD	No					1
Production of anti-sera for rabies	Produce rabies anti-sera	VDPD	No		1			

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure 2: Number of vaccines produced from local isolates								
Developing vaccine from locally circulating rabies virus strains	Generate candidate rabies vaccine strain	VDPD	No					2
Development of snake anit-venum from locally available snake species	Production of snake anti- venum from locally available snake species	VDPD	No					1
Performance Measure 3: Number of standardized plant based medicines developed								
Produce plant based medicine products for health promotion	Development of plant based products against microbial infection of skin	TMMRD	No				1	1
	Development of plant based water clarifying product	TMMRD	No					1
	Development of plant based products against livestock skin parasites	TMMRD	No				1	1
	Development of plant based mosquito larvicidal product						1	
Performance Measure 4: Number of standardized food products developed								
Produce food products for health promotion	Development of food products using less exploited food crops	FSNRD	No		1			
	Development of complementary food for children	FSNRD	No		1			1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance measure 5: Number of indigenous food technologies documented								
Documentation of indigenous food	Documentation of indigenous food of ethnic groups	FSNRD	No	1				
Performance measure 6: Number of food composition tables and dietary menu developed								
Development of food composition table and dietary menus	Expansion and updating of food composition table	FSNRD	No				1	
	Development of dietary menus for major health disorders for institution and individuals	FSNRD	No	2	1			
Performance measure 7: Number of different experimental animals produced								
Production of different experimental animals for experiment	Produce different experimental animals	INDRD	No	5,000	5,500	6,000	6,500	7,000
OBJECTIVE 9: *Improve PHE early warning*								
Performance Measure 1: Percent of weekly surveillance reports that are received complete and timely at PHEM-C								
Quality data management	TOT for surveillance data managers on the reporting formats and data management	PHEMC	No	22	22	22	22	22
	Equip PHEM offices with communication equipments	PHEMC	No	11	11	11	11	11
	Avail reporting formats at all level	PHEMC	%	100	100	100	100	100
Use of information technology	Integrate the weekly reporting with the new HMIS software at woreda level	PHEMC	%	-	20	30	50	60

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 10. ***Improve risk identification and PHE preparedness***								
Performance Measure 1. Percent of threats/ risks mapped and communicated to the Regions and partners								
Risk management	Vulnerability assessment and risk mapping of the major public health emergencies	PHEMC	No	1	1	2	2	2
	Implement prophylaxis and/ or prevention activities for the risks identified accordingly	PHEMC	%	100	100	100	100	100
	Conduct risk management trainings	PHEMC	No	1	1	2	2	2
Performance Measure 2. Percent of identified risks with EPRP prepared								
Pre-planning	Prepare EPRP based on the identified risks	PHEMC	%	100	100	100	100	100
	Prepare the annual national requirement / contingency plan	PHEMC	No	2	2	2	2	2
Performance Measure 3. Proportion of PHE with adequate stockpiles of drugs and medical supplies as per the guideline								
Stockpiling of resources	Identify PHE that require stockpiles of drugs and medical supplies every year	PHEMC	year	1	1	1	1	1
	Stock analysis and identify gaps for those list of PHE frequently	PHEMC	month	6	3	3	3	3
	Secure the drugs, vaccines, and medical supplies for the gaps identified	PHEMC	%	90	90	90	100	100

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure 4. Proportion of PHE specific guidelines developed and distributed								
Avail relevant guiding documents	Identify priority disease that require a detailed and separate guideline and update/prepare the guidelines for the identified PHE	PHEMC	No	2	2	2	2	2
	Ensure printing and distribution to the RHBs	PHEMC	%	100	100	100	100	100
Performance Measure 5. Number of health professionals trained on management of public health emergencies								
Human resource capacity building	In partnership with universities and other partners, coordinate the training of Masters degree in Field Epidemiology (FELTP)	PHEMC	No	20	40	40	40	13
	Train regional PHEM staff on PHE including guidelines	PHEMC	No	287	280	260	260	287
OBJECTIVE 11: ***Enhance Laboratory Quality System***								
Performance Measure – 1: Number of developed and revised guidelines, manuals and format types								
Develop and revise laboratory quality system guidelines, manual, standards and formats	EQA guidelines for integrated diseases (malaria, HIV, TB, …)	RLCBD	No	3	2	3	2	2
	Laboratory quality manual	RLCBD	No	1	1	1	1	1
	Laboratory referral linkage manual	RLCBD	No	1		1		1
	SOPs, Job aids, Reporting and recording formats for HIV, TB, Malaria, etc… diseases (assumption: 7 packages for different diseases)	RLCBD	No	4	5	6	7	7
Establishment of system for national laboratory accreditation	Establish accreditation body	RLCBD	No	1				
	Establish national laboratory quality standard	RLCBD	No	1				1
Standardizing trainings	Need assessment and prioritization of lab trainings	RLCBD	No	1		1		1
	Develop/revise training curriculum and modules	RLCBD	No	3	3	4	4	5
	Develop/revise training guidelines	RLCBD	No		1		1	
Performance Measure-2. Number of laboratories with standard data management system								
Establishing data management system	Develop and distribute database for EQA, training and equipment maintenance to laboratories	RLCBD	No	6	8	10	11	13

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
	Establish Lab Information System (LIS) software for hospital laboratories	RLCBD	No	20	20	25	30	40
Performance Measure-3. Number of laboratories evaluated with External Quality Assessment Scheme								
Increase laboratories participated in EQA	Importing and distributing panel samples of different tests to laboratories	RLCBD	No	100	120	120	130	140
	Preparation of different test panel types	RLCBD	No	-	2	2	1	1
	Supportive supervision of EQA participating laboratories	RLCBD	No	50	60	60	75	80
OBJECTIVE -12: ***Improve the diagnostic capacity of laboratories***								
Performance Measure-1. Number of enabled laboratories to provide special and referral services								
Enabling laboratories to perform special and referral tests	Providing ART machines to Health centres	RLCBD	No	150	100	50	75	50
	Enabling central, regional and federal laboratories to perform referral tests (TB liquid culture, viral load, DNA PCR, epidemic prone disease diagnosis…)	RLCBD	No	7	2	3	2	2
	Enabling regional laboratories to implement regional external quality assurance (REQAS) for the laboratories at their region	RLCBD	No	7	2	3	2	2
Performance Measure -2: Proportion of health facilities linked to ART referral laboratories								
Strengthening referral linkage	Strengthen laboratories with laboratory networking (Logistic and IT technology: Fax, computer, Internet …)	RLCBD	No	60	75	80	95	100
	Mapping of health facility laboratories for referral tests(using geographical information system /GIS/)	RLCBD	No	75	95	**100**		
Performance Measure -3: Number of trained personnel								
Conducting prioritized trainings	Training of laboratory personnel on integrated disease diagnosis	RLCBD	No	85	100	120	130	135
	Training of laboratory manager/supervisors on laboratory management	RLCBD	No	85	100	120	130	135
	Training of laboratory personnel on quality management system	RLCBD	No	100	120	140	160	200

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Conducting prioritized trainings	Training of laboratory personnel on equipment preventive maintenance	RLCBD	No	85	100	120	130	135
	In-service training of biomedical engineers on the currently available integrated laboratory service equipment (n=11 regions including the 2 administrative cities)	RLCBD	No	20	30	40	40	40
	Training of laboratory personnel on specialized tests like viral load and deoxyribonucleic acid polymerase chain reaction (DNA PCR)	RLCBD	No	20	23	24	24	25
	Training on epidemic prone diseases	RLCBD	No	85	100	120	130	135
	Training on gap analysis and comprehensive accreditation support of laboratories	RLCBD	No	85	100	120	130	135
	Training on microbiological diagnosis (culture & sensitivity)	RLCBD	No	25	30	50	55	60
	In-service training of laboratory personnel on occupational health and safety	RLCBD	No	85	100	120	130	135
	Training on laboratory sample handling and transportation	RLCBD	No	25	25	25	25	25
	Regular coaching and supervision of in-service trainings at regions	RLCBD	No	6	8	11	11	11
	Pre-service training on ART monitoring and integrated disease diagnosis for 5 Universities	RLCBD	No	600	600	600	600	600
	Training on TB liquid culture	RLCBD	No	16	20	20	20	20
	TOT training on ILED microscopy (for TB, malaria and others diagnosis)	RLCBD	No	80	25	25	25	25
Performance Measure -4: Proportion of laboratories getting maintenance services								
Provision of maintenance services	Response to service and maintenance requirements of laboratories	RLCBD	No	80	84	90	95	97
	Service agreements with manufacturers/vendors for automated analyzers	RLCBD	No	3	2			
	Establish regional maintenance centres	RLCBD	No	5	2			

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure -5: Proportion of preventive maintenance services provided								
Provision of maintenance services	Provision of preventive maintenance services to major lab equipments	RLCBD	No	20	35	60	70	90
Performance Measure-6. Number of iodized salt quality control laboratories strengthened								
Strengthen public health laboratories for iodized salt quality control	Enabling public health laboratories to control the quality of iodized salt	FSNRD	No	7	7	14	14	-
OBJECTIVE-13: *Improve efficient mobilization & utilization of resources*								
Performance Measure -1. Proportion of mobilized resources as per plan								
Establish efficient resource mobilization system	Mobilization of resources for research and technology transfer	RTTDGDO	%	100	100	100	100	100
	Mobilization of resource for Public health emergency management	PHEMDGDO	%	100	100	100	100	100
	Mobilization of resources for public health laboratory service	RLCBD	%	100	100	100	100	100
	Mobilization of resources for management and leadership	PFMED	%	100	100	100	100	100
	Install finance software	PFMED	No	1				
Establish efficient procurement system	Develop operational annual procurement plan	PFMED	No	1	1	1	1	1
	Establishing stock data base	PFMED	No	1				
	Prepare and revise purchasing guidelines	PFMED	No	1			1	
Establish emergency response fund (ERF)	Legislate the establishment of the ERF	PHEMC	%	100	-	-	-	-
	Preparation of utilization SOP	PHEMC	%	-	100	-	-	-
	Secure the fund	PHEMC	Birr	10,000,000	10,000,000	15,000,000	15,000,000	10,000,000

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance Measure -2: Proportion of performance compliance in line with the standard								
Regulating implementation of all activities of the Institute	Conduct audit and inspection	Audit Service	%	100	100	100	100	100
	Conduct anti-corruption follow up	Anti-corruption Officer	%	100	100	100	100	100
	Regulate legal compliance of activities	Legal service	%	100	100	100	100	100
OBJECTIVE 14: ***Improve human resource management***								
Performance Measure -1. Number of employee developed with Long & short term training programs								
Developing professionals with long term training	Train Employees trained in MSc (MPH, MD+ MPH, MA) and PhD Programs	HRM&GSD	No	15	22	27	27	16
	Train Employees with short term trainings	HRM&GSD	No	40	40	50	50	50
Performance Measure -2. Proportion of Employees Recruited as per the request								
Filling Vacancies with Employees	Recruiting Employees as per the request	HRM&GSD	%	80	85	90	95	100
Performance measure 3: Proportion of employees retained								
Retaining the skilled manpower's in the institute	Review Career Structure	HRM&GSD	No	1				
	Produce and implement Incentive guideline	HRM&GSD	No	1			1	
	Expand Transport Service coverage	HRM&GSD	%	50	70	80	90	100
	Continue existing canteen subsidy	HRM&GSD	%	100	100	100	100	100
	Construct Sport and other healthy recreational facilities entertainment	HRM&GSD	No	3	3	2	1	1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 15: *Improve project management system*								
Performance Measure -1. Proportion of researches with public health relevance								
Evaluating the scientific and ethical standards of researches	Scientific and ethical proposals submitted according to the standards set by SERO	SERO	%	95	98	100	100	100
	Follow-up of scientific and ethical progress of research projects	SERO	%	100	100	100	100	100
Public health oriented research projects	Prioritize projects with public health research agenda	SERO	%	70	80	90	95	95
Performance Measure -2. Number of National and international research partnership established								
Establishing partnership	Establishing partnership/collaborative research activities		No		1	1	1	1
Performance measure -3: Number of Monitoring conducted								
Monitoring research projects, laboratory quality building and PHEM activities	Conduct quarterly monitoring of projects	PFMED	No	4	4	4	4	4
	Conduct Supportive Supervision(SS)	PFMED	No	1	1	1	1	1
	Conduct annual review meeting	PFMED	No	1	1	1	1	1
Performance measure -4: Number of Evaluation conducted								
Evaluation of research projects, laboratory service and PHEM activities	Conduct the process evaluation of the institute 5 years' SPM	PFMED	No			1		
	Conduct the summative evaluation of the institute 5 years' SPM	PFMED	No					1

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
OBJECTIVE 16: ***Strengthen the capacity of technical facilities***								
Performance Measure ***-1. Number of developed technical capacity for vaccine production***								
Vaccine production capacity building	Develop quality-control lab for vaccine production	VDPD	No	1				
	Develop vaccine production facilities for Meningitis	VDPD	No		1			
	Develop vaccine production facilities for DTP	VDPD	No			1		
	Develop vaccine production facilities for Hib and HeB	VDPD	No					1
Performance Measure -2. ***Number of developed National capacity for biological Products***								
Development of biological products for diagnosis and intervention	Transfer biological products production technology	VDPD	No		1	1	1	1
	Partnership with international with appropriate companies	VDPD	No		1	1	1	1
Performance Measure -3. ***Number of developed national database***								
Developing databases	Establishing research database	TTRTD	No	1				
	Establishing public health laboratory database	RLCBD	No		1			
	Establishing Public health emergency management database	PHEMC	No		1			

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Performance measure 4: Number of developed technical facilities								
Establish and maintain emergency operation centre (EOC)	Equip the EOC with IT and communication tools needed	PHEMC	%	90	100	-	-	-
	Ensure the full functionality of the EOC	PHEMC	%	60	100	100	100	100
Build IT capacity of the Institute	Modernize the IT system of the Institute	IT	%	100	100	100	100	100
Build technical facilities	Improve library service	PRO	No	1				
	Building training facility	PFMED	No				1	
	Building laboratory animal breeding facilities	INDRD	No	1				
	Strengthening of herbarium , botanical garden and conservation of medicinal plants	TMMRD	No					1
	Strengthening and equipping of Insectaries	INDRD	No		1			
	Building stock ware-house	PFMED	No		1			
Build Bio-safety system	Strengthen laboratory safety system	HR &GSD	No	1	1	1	1	1
	Build safe laboratory sewerage system	HR &GSD	No		1			
	Develop dangerous chemical disposal system	PFMED	No		1			
Performance Measure -5. Number of developed research outcomes dissemination system								
Develop research dissemination tools	Development of a scientific journal of the institute	TTRTD	No				1	
	Publish scientific newsletter	TTRTD	No	1	2	4	4	4

Initiative	Scope/content	Responsible	Unit	Target (in EC)				
				2003	2004	2005	2006	2007
Objective-17. *Enhance coordination and collaboration*								
Performance Measure 1. Proportion of PHEM stakeholders involved in at least 9 of the monthly meetings of the PHEMTTF								
Strong coordination and collaboration	Establish multidisciplinary coordinating team (PHEM TTF) to handle PHE	PHEMC	%	100	-	-	-	-
	Prepare TOR for the taskforce	PHEMC	%	100	-	-	-	-
	Conduct monthly meetings to review activities	PHEMC	No	12	12	12	12	12
	Sign memorandum of understanding with key stakeholders	PHEMC	No	4	5	-	-	-
Performance Measure 2. Number of national and international research partnership established								
Establishing partnership	Establishing partnership/collaborative research activities	GD	No	10	20	30	40	50
Performance measure 3: *Proportion of research partnership maintained*								
Maintaining partnerships	Maintaining national and international research partnerships	GD	%	100	100	100	100	100

11. BUDGET

Table 6. COST ESTIMATED/REQUIRED BUDGET (Birr)

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 1: Improve evidence based research outcomes for policy decision making						
Performance Measure-1. Number of research outcomes for policy change						
Preparing policy briefs	Development of policy briefs for disease prevention and controls	240000	240000	240000	240000	240000
total budget		240000	240000	240000	240000	240000
Performance Measure-2. Number of National relevant research outcomes disseminated (technical reports)						
Disseminating different nationally relevant research reports	Sending different research outcomes reports for stakeholders	–	–	–	–	–
Performance Measure-3. Number of research findings disseminated						
Disseminate research information	Research findings presented on national and international conference	80,000	80,000	80,000	80,000	80,000
	Research findings disseminated through on peer reviewed journals	80,000	80,000	80,000	80,000	80,000
	Research findings disseminated through the institute's News letter	80,000	80,000	80,000	80,000	80,000
	Research findings disseminated through web-site and mass media	25,000	25,000	25,500	25,500	25,500
total budget		265,000	265,000	265,500	265,500	265,500

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 2: Increase the availability of vaccines, plant based medicines, complementary foods and others biological products						
Performance Measure-1. Number of doses of availed animal rabies vaccine						
Availing rabies vaccine	Rabies vaccine distribution	–	–	–	–	–
total budget		–	–	–	–	–
Performance measure 2: Number of doses of availed prophylactic rabies vaccines						
Availing prophylactic rabies vaccines	Prophylactic rabies vaccine distribution	–	–	–	–	–
total budget						
Performance measure 3: Number of doses of availed meningococcal meningitis vaccine						
Availing meningitis vaccine	meningococcal meningitis vaccine distribution	–	–	–	–	–
total budget		–	–	–	–	–
Performance Measure-4. Number of doses of availed Anti-sera for rabies						
Availing Anti-sera for rabies	Distribution of anti-sera for rabies	–	–	–	–	–
total budget		–	–	–	–	–
Performance Measure -5:Number of tubes of trans-isolate media distributed						
Produce and distribute Trans isolate media	Preparing and distribution of trans-isolate media to health facilities	122,000	22,500			
total budget		122,000	22,500			
Performance Measure- 6:Number of regional laboratories strengthened to produce trans-isolate media						
Strengthen regional laboratories to produce TI media	Conduct ToT on how to produce TI media	40,000	42,000	43,000	44,000	49,000
	Quality assessment of TI media produced by regional labs	14,000	14,000	105,000	105,000	105,000
total budget		54,000	56,000	148,000	149,000	154,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure 7: Number of complementary foods availed						
Development of complementary foods	Preparation of manual for development of complementary foods		60,000			60,000
total budget			60,000			60,000
Performance measure 8: Number of standardized plant based medicines for human and veterinary use						
Number of standardized plant based medicines for human and veterinary use	Prepare and avail full-fledged document of production and other pharmaceutical details on formulated plant based medicines for human					100,000
	Prepare and avail full-fledged document of production and other pharmaceutical details on formulated plant based veterinary medicine					50,000
total budget						150,000
Objective-3. Improve PHE Communication, response and recovery						
Performance Measure 1. Percent of health events communicated to relevant bodies within specified period.						
Timely dispatch of alert and /or warning	Equip regional PHEM heads with communication tools	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
	Prepare and distribute weekly disease or event reports (bulletin)	26,000	26,000	26,000	26,000	26,000
	Issue information to the public after the occurrence of PHE	100,000	100,000	100,000	100,000	100,000
	Alert stakeholders after 30 minutes of case investigation	25,000	25,000	25,000	25,000	25,000
	Create and update roster of partners and stakeholders that require communication	0	0	0	0	0
total budget		1,651,000	1,651,000	1,651,000	1,651,000	1,651,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure 2. Percent of Risk profiles communicated to relevant bodies within specified period.						
Risk communication	Communicate risk profile with aversion/ minimizing action after assessment to relevant	100,000	100,000	100,000	100,000	100,000
Total budget		100,000	100,000	100,000	100,000	100,000
Performance Measure 3.Proportion of PHE with prevention and control measures initiated within 48hrs of identification of risk and characterization of threats						
Outbreak investigation and mitigation	Verification of PHE rumors within 3hrs from initial notification	180,000	180,000	180,000	180,000	180,000
	Confirm suspected disease outbreaks with laboratory investigation	100,000	100,000	100,000	100,000	100,000
	Institute preventive and control measures for identified risks and characterized threats	180,000	180,000	180,000	180,000	180,000
Total budget		460,000	460,000	460,000	460,000	460,000
Performance Measure 4. Proportion of rehabilitated and recovered affected population and/or health system after major PHE						
Recovery and Rehabilitation	Assess the health impact of major event /emergencies	132,000	396,000	528,000	660,000	792,000
	Liaison with offices /agencies that work on rehabilitation activities	0	0	0	0	0
	Provide psycho-social support	100,000	100,000	100,000	100,000	100,000
	Rehablitate affected health system	500,000	500,000	500,000	500,000	500,000
total budget		732,000	996,000	1,128,000	1,260,000	1,392,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 4: Increase and maintain quality assured laboratories						
Performance Measure-1. Number of Quality assured (Accredited) laboratories						
Enabling laboratories to fulfil WHO/AFRO accreditation scheme	Enabling labs to WHO/AFRO Accreditation scheme Star 1	100,000.00	200,000.00	400,000.00	600,000.00	800,000.00
	Enabling labs to WHO/AFRO Accreditation scheme Star 2	80,000.00	100,000.00	250,000.00	400,000.00	600,000.00
	Enabling labs to WHO/AFRO Accreditation scheme Star 3	15,000.00	85,000.00	100,000.00	175,000.00	225,000.00
	Enabling labs to WHO/AFRO Accreditation scheme Star 4	-	10,000.00	35,000.00	50,000.00	75,000.00
	Enabling labs to WHO/AFRO Accreditation	-	-	5,000.00	20,000.00	25,000.00
Accreditation of laboratories with other international accreditations (e.g	Assessment of laboratories by the international accreditation body	0	0	5000	20000	25000
Accreditation of labs with national accreditation body	Assessment of laboratories by national accreditation body	5000	5000	5000	5000	5000
	Certification of laboratories	0	400000	500000	600000	800000
total budget		200,000.00	800,000.00	1,300,000.00	1,870,000.00	2,555,000.00

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 5: IMPROVE NATIONAL SURVEY AND SURVEILLANCE DATA ON DISEASE, NUTRITION, TRADITIONAL MEDICINE & ENVIRONMENTAL PROBLEMS						
Performance Measure 1: Number of anti microbial & insecticide resistance surveys conducted on priority diseases /vectors						
Conduct anti-microbial survey	Conduct early warning indicators for HIVDR	200,000	220,000	240,000	260,000	280,000
	Conduct prevention monitoring for HIVDR	600,000		660,000		720,000
	Conduct threshold survey for HIVDR	330,000		360,000		390,000
	Conduct national TB drug resistance survey	80,000				88,000
	Conduct national malaria drug resistance survey	1,000,000				1,100,000
	Conduct national drug resistance survey on other bacterial disease	200,000				220,000
	Carry out post-marketing survey on norfloxacillin & ciprofloxacillin brands	110,000	22,000			
total budget		2,520,000	242,000	1,260,000	260,000	2,798,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure 2: Number of national surveys/surveillances on infectious and non infectious diseases						
Conduct different national surveys/surveillances on infectious and non infectious diseases	National TB prevalence survey	20,000,000				
	National ANC/PMTCT HIV survey		5,000,000		5,500,000	
	National Population Based Survey (PBS) for HIV, HBV and HCV		50,000,000			
	National Behavioural Survey and surveillance HIV(BSS)	15,000,000			15,000,000	
	National malaria survey	1,000,000			1,000,000	
	National survey on HIV/TB co-infection	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
	National sero-survey on most-at-risk population for HIV	15,000,000				15,000,000
	Conduct AIDS related mortality survey			5,000,000		
	National virological survey on polio, measles and Rubella	500,000	500,000	550,000	550,000	600,000
	National survey on Influenza and other	3,000,000	3,000,000	3,500,000	3,500,000	4,000,000
	National survey on Rotavirus	150,000	150,000	150,000	200,000	200,000
	National survey on neglected diseases such as onchocercheasis, fliariasis, relapsing fever			1,000,000		
	Entomological survey on mosquitoes and other potential vectors for disease transmission		300,000			500,000
	National insecticide resistant survey /timing/	400,000				600,000
	National survey on level & determinants of other zoonotic diseases				600,000	
	National survey of rabies virus in Ethiopia			800,000		
	National survey on level and determinants of breast and cervical cancer		600,000		800,000	
	National survey on level and determinants of diabetics, asthma and hypertension			1,000,000		
Total budget		57,050,000	61,550,000	14,000,000	29,150,000	22,900,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure 3: Number of national surveys/surveillances on environmental risk factors on public health						
Conduct surveys on environmental risk factors on public health	Conduct survey on Organochlorine Pesticide Pollution & exposure in the environment.	800,000	200,000	800,000	200,000	
	Conduct survey on occupational health risk/ noise pollution in selected work areas	100,000		100,000		
	Study on the occurrence of and risk factor for environmental and occupational hazards for	800,000				500,000
	Investigate reduction strategy for contaminated environmental risk factors for health.				1,000,000	
	Conduct household well water quality assessment	150,000	150,000			
Total budget		1,850,000	350,000	900,000	1,200,000	500,000
Performance Measure 4: Number of national surveys(/surveillances) on nutrition and traditional medicine						
Conduct different national survey & surveillance on nutrition	Conduct survey on heavy metals contamination in food and water	500,000				800,000
	Conduct National Nutrition Program (NNP) end line survey				3,900,000	
	Conduct National IDD evaluation survey		300,000			
	Conduct National VAD survey			350,000		
	Conduct National IDA survey			300,000		
	Conduct National ZDD survey				350,000	
	Conduct National mycotoxin survey on ground-nut and spices				200,000	
	Conduct evaluation on National Nutrition Program (NNP)	200,000	200,000	200,000	200,000	
	Conduct National food consumption survey	250,000				
	Study on breast feeding and complementary feeding trend at national level	200,000	64,000			
	Establishing nutrition database (reports)	175,000	175,000	125,000	125,000	
	National nutrition program-operational researches	2,177, 500	2,177, 500	2,177, 500	2,177, 500	
Conduct different national survey & surveillance on traditional medicine	National survey on knowledge, attitude and practice of the community, traditional health practitioners and modern health practitioners towards traditional medicine.	129,720	155,664	171,230		
Total budget		1,454,720	894,664	1,146,230	4,775,000	800,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 6: INCREASE PROBLEM SOLVING RESEARCH ON DISEASE, NUTRITION AND TRADITIONAL MEDICINE						
Performance Measure -1: Number of evaluations conducted to improve diagnostic technologies						
Evaluation of new diagnostic technologies	Evaluation of rapid test kits for HIV		1,000,000			1,000,000
	Evaluation of rapid test kits for rabies	500,000				
	Scaling up of rabies diagnostic services in regional laboratories	144,000	3,176,000	784,000		
	Evaluation of MODS for M. tuberculosis		1,000,000			
	Evaluation of diagnosis methods of tuberculosis in children	404,000	404,000	404,000	404,000	404,000
	Evaluation of mobile CD4 testing devise	300,000				
	Evaluation of rapid test kits for malaria		800,000		900,000	
	Evaluation of diagnostic technology for the identification of recent HIV infection		1,000,000			
	Evaluation of molecular/immunological platform (for additional 5 diseases)	100,000	100,000	100,000	100,000	100,000
	Evaluation of rapid test kits for HBV			200,000		
Total budget		1448000	7,480,000	1,488,000	1,404,000	1,504,000
Performance measure 2: Number of evaluations and studies conducted to improve food processing technologies and quality						
Evaluation of food processing technologies	Effective method of processing and promoting locally available micronutrient rich foods					40,000
	Identify and evaluate new food processing technologies that can be used at at community level					30,000
	Determination of shelf life of foods	50,000	50,000	50,000	50,000	50,000
	Study on fortification of essential nutrients in complementary foods	100,000				
	Study on imported premix for fortification and existing fortified food products in Ethiopia		50,000			
	Post harvest quality evaluation and improvement of coffee	161,200	111,200	111,200	111,200	61,200
Total budget		311,200	211,200	161,200	161,200	181,200

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure -3: Number of researches on infectious diseases, community nutrition and traditional medicine						
Identifying health related problem and their biological causes	Immunological, virological and bacteriological consequences of tuberculosis and HIV coinfection	4,000,000				
	Study the association between infectious and non infectious diseases			3,000,000		
	Determine the impact of disease confections on diagnosis and treatment				2,000,000	
	Molecular epidemiology on HIV, TB and malaria		5,000,000	6,000,000	8,000,000	
	Molecular epidemiology of rabies virus in Ethiopia			3,000,000		
	Study on acute watery diarrhea (AWD)		800,000		800,000	
	Investigation and management of an unidentified liver disease in North-western Tigray	600,000			700,000	
Identification of food safety and nutritional problems for intervention	Study on hazard analysis and critical control points (HACCP) of municipality water		10,000			10,000
	Study on hazard analysis and critical control points (HACCP) of selected food industry				30,000	
	Study on the role of nutrition in chronic health problems (Hypertension and diabetics diseases)					50,000
	Study on the interaction of nutrition and major diseases (HIV, malaria and TB)			5,000,000		
	Iodine retention study on iodated salt	35,000	35,000			
	Study on safety of vegetables grown in Addis and surrounding areas	30,000				
	Prevalence and drug resistance patterns of S. Concord among children in selected orphanages and health institutions in Addis Ababa, Ethiopia	175,000				
	Study on health effect of fluoride intake and mitigation mechanism		450,000			

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Scientific evaluation of traditional medicines	Phytochemical, efficacy and safety study on traditionally used medicinal plants used against leishmaniasis	856,000	881,680	908,130	935,374	963,436
	Phytochemical, efficacy and safety study on traditionally used medicinal plants used against tuberculosis	500,000	500,000	400,000	400,000	200,000
	Phytochemical, efficacy and safety study on traditionally used medicinal plants used against asthma and/or diabetics	561,000	200,000	92,800		
	Phytochemical, efficacy and safety study on selected medicinal plants used against diarrhoea	50, 000	100, 000	40, 000	40, 000	20, 000
	Phytochemical, efficacy and safety study on traditionally used medicinal plants used to treat rabies	120,000	30,000			
	Documentation of traditional medical knowledge and preparation of pharmacopoeia			20,000	30,000	100,000
Total budget		6,021,000	7,906,680	18,420,930	12,895,374	1,323,436
Performance Measure -4: Number of studies on Clinical trials and preventive measures						
Identifying appropriate drugs and vaccines for therapeutics and intervention	Efficacy study of bed net and insecticide on vector control			1,000,000		
	Conduct advanced clinical monitoring		200,000	200,000	200,000	
	Conduct vaccine trial on priority diseases				500,000	
	Conduct drug trial on priority diseases				500,000	
	Conduct clinical trial on formulated plant based medicines against hypertension	108,929	1,068,429	393,429	168,425	168,425
	Conduct clinical trial on formulated plant based medicines against helmintics	856,000	941,600	1,035,760	1,139,336	1,253,239
	Conduct clinical trial on formulated plant based medicine against malaria	1,145,000	1,259,500	1,385,450	1,523,995	1,676,394
Total budget		2,109,929	3,469,529	4,014,639	4,031,756	3,098,058

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 7: IMPROVE RESEARCH ON HEALTH SYSTEM AND INTERVENTION EVALUATION						
Performance Measure-1: Number of health system/intervention evaluation conducted						
Conduct research on health system & heath related interventions	Identify barriers to and opportunities for successful health extension program implementation at urban, rural and pastoralist communities		500,000			
	Maternal and Child Health (ICCM)	500,000	1,000,000	1,000,000		
	Assessment of health care delivery and quality of care: Coverage and delivery of ANC services		500,000			
	Facility based retrospective study on non communicable disease	100,000				
	Evaluate referral system linkage at different levels of health facilities		200,000			
	Identify the most effective individual, family and community level interventions for preventing, treating mental illness				400,000	
	Evaluate the methods to enhance the protection of privacy and confidentiality in health care delivery.			300,000		
	Assess the existing practices of health workforce development and identify the best approach.			500,000		
	Evaluation on the coverage of vaccination programs					500,000
	Study on delivery and utilization of rabies vaccine				250,000	
	Health facility assessment	600,000	900,000			
	Basic health supplies tracking and stock management study					500,000
	Assessment of the health system and policy environment as critical complement to tracking intervention coverage for maternal and child health					300,000
	Customer satisfaction survey at selected health facilities				300,000	
Total budget		1200000	3100000	1800000	950000	1300000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 8: ENHANCE THE PRODUCTION OF VACCINE, STANDARDIZED PLANT BASED MEDICINES, FOOD PRODUCTS AND OTHER BIOLOGICAL PRODUCTS						
Performance Measure 1: Number of vaccines produced through technological transfer						
Production of rabies vaccine	Produce cell culture rabies vaccine for animal and human use	800,000	550,000			
	Mass production of cell culture rabies vaccines for animal use	1,000,000	7,000,000	1,800,000	1,200,000	7,650,000
	Mass production of cell culture rabies vaccines for human use					
	Mass production of Fermi rabies vaccine for animal use					
	Mass production of Fermi rabies vaccine for human use					
Production of Meningococcal vaccines	Produce trivalent(A,C&W135) Meningococcal vaccines	1,500,000	2,000,000	500,000	1,500,000	
	Mass production of trivalent(A,C&W135) Meningococcal vaccines					1,650,000
Production of Pentavalent vaccines	Produce of DTP vaccines		4,600,000	7,000,000	19,900,000	3650000
	Transfer technologies to produce Hib and Heb			2,300,000	3,200,000	9,000,000
Production of anti-sera for rabies	Produce rabies anti-sera	3,600,000	2,700,000	3,600,000	2,450,000	7,400,000
Total budget		6,900,000	16,850,000	15,200,000	28,250,000	29,350,000
Performance Measure 2: Number of vaccines produced from local isolates and anti Snake Venum						
Developing vaccine from locally circulating rabies virus strains	Generate candidate rabies vaccine strain	_	2,000,000	1,000,000	1,000,000	1,000,000
Development of snake anit- venum from locally available snake species	Production of snake anti- venum from locally available snake species	_	500,000	500,000	500,000	500,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure 3: Number of standardized plant based medicines developed						
Produce plant based medicine products for health promotion	Development of plant based medicine against microbial infection of skin	118,533	64,300	64,300	64,300	64,300
	Development of plant based water clarifying product	116,046	177,651	71,536		
	Development of plant based products against livestock skin parasites	814,000	838,420	863,572	889,479	916,164
	Development of plant based mosquito larvicidal	102,710				
Total budget		1,151,289	1,080,371	999,408	953,779	980,464
Performance Measure 4: Number of standardized food products developed						
Produce food products for health promotion	Development of food products using less exploited food crops		40,000			
	Development of complementary food for children				60,000	
Total budget		0	40,000	0	60,000	0
Performance measure 5: Number of indigenous food technologies documented						
Documentation of indigenous food	Documentation of indigenous food of ethnic groups	33,000				
Total budget		33,000	0	0	0	0
Performance measure 6: Number of food composition tables and dietary menu developed						
Development of food composition table and dietary menus	Expansion and updating of food composition table				100,000	
	Development of dietary menus for major health disorders for institution and individuals	20,000	10,000			
Total budget		20,000	10,000	0	100,000	0

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance measure 7: Number of different experimental animals produced						
Production of different experimental animals for experiment	Produce different experimental animals	195,000	260,000	325,000	390,000	525,000
Total budget		195,000	260,000	325,000	390,000	525,000
OBJECTIVE 9: IMPROVE PHE EARLY WARNING						
Performance Measure 1: Percent of weekly surveillance reports that are received complete and timely at PHEM-C						
Quality data management	TOT for surveillance data managers on the reporting formats and data management	88,000	88,000	88,000	88,000	88,000
	Equip PHEM offices with communication	300,000	300,000	300,000	300,000	300,000
	Avail reporting formats at all level	500,000	500,000	500,000	500,000	500,000
Use of information technology	Integrate the weekly reporting with the new HMIS software at woreda level	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Total budget		1,888,000	1,888,000	1,888,000	1,888,000	1,888,000
OBJECTIVE 10. IMPROVE RISK IDENTIFICATION AND PHE PREPAREDNESS						
Performance Measure 1. Percent of threats/ risks mapped and communicated to the Regions and partners						
Risk management	Vulnerability assessment and risk mapping of	145,200	145,200	277,200	277,200	277,200
	Implement prophylaxis and prevention activities for the risks identified accordingly	66,000	66,000	132,000	132,000	132,000
	Conduct risk management trainings	168,000	168,000	168,000	168,000	168,000
Total budget		379,200	379,200	577,200	577,200	577,200

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance Measure 2. Percent of identified risks with EPRP prepared						
Pre-planning	Prepare EPRP based on the identified risks	144,000	144,000	144,000	144,000	144,000
	Prepare the annual national requirement /	48,000	48,000	48,000	48,000	48,000
Total budget		192,000	192,000	192,000	192,000	192,000
Performance Measure 3. Proportion of PHE with adequate stockpiles of drugs and medical supplies as per the guideline						
Stockpiling of resources	Identify PHE that require stockpiles of drugs and medical supplies every year	-	-	-	-	-
	Stock analysis and identify gaps for those list of	-	-	-	-	-
	Secure the drugs and medical supplies for the	70,700,000	70,700,000	70,700,000	70,700,000	70,700,000
Total budget		70,700,000	70,700,000	70,700,000	70,700,000	70,700,000
Performance Measure 4. Proportion of PHE specific guidelines developed and distributed						
Avail relevant guiding documents	Identify priority disease that require a detailed and separate guideline and update/prepare the	420,000	420,000	420,000	420,000	420,000
	Ensure printing and distribution to the RHBs	960,000	960,000	960,000	960,000	960,000
Total budget		1,380,000	1,380,000	1,380,000	1,380,000	1,380,000
Performance Measure 5. Number of health professionals trained on management of public health emergencies						
Human resource capacity building	In partnership with universities and other partners, coordinate the training of Masters	374,800	512,000	904,000	904,000	904,000
	Train regional PHEM staff on PHE including	1,148,000	1,120,000	1,040,000	1,040,000	1,040,000
Total budget		1,522,800	1,632,000	1,944,000	1,944,000	1,944,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 11: Enhance Laboratory Quality System and Standardize Labortories						
Performance Measure – 1: Number of developed and revised guidelines, manuals and format types						
Develop and revise laboratory quality system guidelines, manual, standards and formats	EQA guidelines for integrated diseases (malaria, HIV, TB, …)	10000	10000	10000	10000	10000
	Laboratory quality manual	9000	9000	9000	9000	9000
	Laboratory referral linkage manual	9000		9000		9000
	SOPs, Job aids, Reporting and recording formats for HIV, TB, Malaria, etc… diseases (assumption: 7 packages for different diseases)	17000	20000	23000	26000	29000
Establishment of accreditation body	Establish accreditation body	90,000	20,000	20,000	20,000	25,000
	Develop and revise accreditation standards	4000	2000	3000	2000	2000
Standardizing trainings	Need assessment and prioritization of lab trainings	3000	3000	3000	4000	4000
	Develop/revise training curriculum and	3000	3000	3000	4000	5000
	Develop/revise training guidelines		3000		4000	
Total budget		145000	70000	80000	79000	93000
Performance Measure-2. Number of laboratories with standard data management system						
Establishing data management system	Develop and distribute database for EQA, training and equipment maintenance to	3,000	4,000	4,000	4,000	4,000
	Establish Lab Information System (LIS) software for hospital laboratories	1,000,000	1,000,000	1,250,000	1,500,000	2,000,000
Total budget		1,003,000	1,004,000	1,254,000	1,504,000	2,004,000
Performance Measure-3. Number of laboratories evaluated with External Quality Assessment Scheme						
Increase laboratories participated in EQA	Importing and distributing panel samples of different tests to laboratories	250,000	250,000	250,000	250,000	250,000
	Preparation of different test panel types	30,000	35,000	35,000	40,000	40,000
	Supportive supervision of EQA participating laboratories	20,000	20,000	25,000	25,000	25,000
Total budget		300,000	305,000	310,000	315,000	315,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 12: IMPROVE THE DIAGNOSTIC CAPACITY OF LABORATORIES						
Performance Measure-1. Number of enabled laboratories to provide special and referral services						
Enabling laboratories to perform special and referral tests	Providing ART machines to Health centres	10,573,250	10,573,250	7048833	5286625	3524416
	Enabling central, regional and federal laboratories to perform referral tests (TB liquid culture, viral load, DNA PCR, epidemic prone disease diagnosis…)	210,000	90,000	90,000	60,000	60,000
	Enabling regional laboratories to implement REQAS for the laboratories at their region	70000	30000	20000	10000	0
Total budget		10,853,250	10,693,250	7,158,833	5,356,625	3,584,416
Performance Measure -2: Proportion of health facilities linked to referral laboratories						
Strengthening referral linkage	Strengthen laboratories with laboratory networking (Logistic and IT technology: Fax,	300000	375000	400000	475000	500000
	Mapping of health facility laboratories for	150000	190000	200000	0	0
Total budget		450000	565000	600000	475000	500000
Performance Measure -3: Number of trained personnel						
Conducting prioritized trainings	Training of laboratory personnel on integrated disease diagnosis	25500	30000	36000	39000	40500
	Training of laboratory manager/supervisors on laboratory management	25500	30000	36000	39000	40500
	Training of laboratory personnel on quality management system	30000	36000	42000	48000	60000
	Training of laboratory personnel on equipment preventive maintenance	25500	30000	36000	39000	40500
	In-service training of biomedical engineers on the currently available integrated laboratory service equipment (n=11 regions including the 2 administrative cities)	6000	9000	12000	12000	12000
	Training of laboratory personnel on specialized tests like viral load and DNA PCR	6000	6900	7200	7200	7500
	Training on epidemic prone diseases	25500	30000	36000	39000	40500
	Training on gap analysis and comprehensive accreditation support of laboratories	25500	30000	36000	39000	40500

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
	Training on microbiological diagnosis (culture & sensitivity)	81,000	85,000	90,000	95,000	100,000
	In-service training of laboratory personnel on occupational health and safety	25500	30000	36000	39000	40500
	Training on laboratory sample handling and transportation	183,000	183,000	183,000	183,000	183,000
	Regular coaching and supervision of in-service trainings at regions	1800	2400	3300	3300	3300
	Pre-service training on ART monitoring and integrated disease diagnosis for 5 Universities	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000
	Training on TB liquid culture	68,000	70,000	70,000	70,000	70,000
	ToT training on ILED microscopy (for TB, malaria and others diagnosis)	142,500	45,000	45,000	45,000	45,000
Total budget		3260800	502300	553500	582500	608800
Performance Measure -4: Proportion of laboratories getting maintenance services						
Provision of maintenance services for laboratories	Response to service and maintenance requirements of laboratories	1005000	1105500	1216050	1337655	1471421
	Preventive equipment maintenance of laboratories					
	Service agreements with manufacturers/vendors for automated analyzers	4500	3000			
	Establish regional maintenance centres	450000	180000			
Total budget		1459500	1288500	1216050	1337655	1471421
Performance Measure -5: Proportion of preventive maintenance services provided						
Provision of maintenance services	Provision of preventive maintenance (PM) services to major lab equipments	10000	17500	30000	35000	45000
Total budget		10000	17500	30000	35000	45000
Performance Measure-6. Number of iodized salt quality control laboratories strengthened						
Strengthen public health laboratories for iodized salt quality control	Enabling public health laboratories to control the quality of iodized salt	212,052	248,487	50,000	50,000	
Total budget		212,052	248,487	50,000	50,000	

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE13: IMPROVE EFFICIENT MOBILIZATION AND UTILIZATION OF RESOURCES						
Performance Measure -1. Proportion of mobilized resources as per plan						
Establish efficient resource mobilization system	Mobilization of resources for research and technology transfer	_	_	_	_	_
	Mobilization of resource for Public health emergency management	_	_	_	_	_
	Mobilization of resources for public health laboratory service	_	_	_	_	_
	Mobilization of resources for management and leadership	_	_	_	_	_
	Install finance software	700,000				
Establish efficient procurement system	Develop operational annual procurement plan	_	_	_	_	_
	Establishing stock data base	100,000				
	Prepare and revise purchasing guidelines	_			_	
Establish Emergency Response Fund (ERF)	Legislate the establishment of the ERF	_				
	Preparation of utilization SOP	_	60,000	_	_	_
	Secure the fund	_	_	_	_	_
Total budget		800000	60000	0	0	0
Performance Measure -2: Proportion of complaint performance						
Regulating implementation of all activities of the Institute	Conduct audit and inspection	_	_	_	_	_
	Conduct anti-corruption follow up	_	_	_	_	_
	Regulate legal compliance of activities	_	_	_	_	_

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 14: IMPROVE HUMAN RESOURCE MANAGMENT						
Performance Measure -1. Proportion of employee developed with Long and Short term training programs						
Developing professionals with long and short term training	Number of Employees trained in MSc (MPH, MD+ MPH, MA) and PhD Programs	2,250,000	3,415,331	4,090,331	3,265,331	1,840,331
	Train Employees with Short Term Training Programs	4,340,000	4,340,000	5,425,000	5,425,000	5,425,000
Total budget		6,590,000	7,755,331	9,515,331	8,690,331	7,265,331
Performance Measure -2. Number of Employees Recruited						
Filling Vacancies with Employees	Recruiting Employees as per the request	40,000	40,000	40,000	40,000	40,000
Total budget		40,000	40,000	40,000	40,000	40,000
Performance measure 3: Proportion of employees retained						
Retaining the skilled manpower's in the institute	Review Career Structure	–				
	Produce and implement Incentive guideline	–			–	
	Expand Transport Service coverage	–	–	–	–	–
	Continue existing canteen subsidy	–	–	–	–	–
	Construct Sport and other healthy recreational facilities	–	–	–	–	–
Total budget		–	–	–	–	–

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 15: IMPROVE PROJECT MANAGEMENT SYSTEM						
Performance Measure 1. Proportion of researches with public health relevance						
Evaluating the Scientific and Ethical standards of researches	Scientific and ethical proposals submitted according to the standards set by SERO	_	_	_	_	_
	Follow-up of scientific and ethical progress of research projects	_	_	_	_	_
Public health oriented research projects	Prioritize projects with public health research agenda	_	_	_	_	_
Performance Measure 2: Number of National and international research partnership established						
Establishing partnership	Establishing partnership/collaborative research activities		400,000	400,000	400,000	400,000
Total budget						
Performance measure 3: Number of Monitoring conducted						
Monitoring research projects, laboratory service and PHEM activities	Conduct quarterly monitoring of projects	_	_	_	_	_
	Conduct Suportive Supervision(SS)	90,000	90,000	100,000	100,000	100,000
	Conduct annual review meeting	200,000	200,000	200,000	200,000	200,000
Total budget						
Performance measure 4: Number of Evaluation conducted						
Evaluation of research projects, laboratory service and PHEM activities	Conduct the process evaluation of the institute 5 years' SPM			200,000		
	Conduct the summative evaluation of the institute 5 years' SPM					400,000
Total budget				200,000		400,000

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
OBJECTIVE 16: Strengthen the capacity of technical facilities						
Performance Measure 1. Number of developed technical capacity for vaccine production						
Vaccine production capacity building	Develop quality-control lab for vaccine production	630,000				
	Develop vaccine production facilities for Meningitis		2,000,000			
	Develop vaccine production facilities for DTP			2,000,000		
	Develop vaccine production facilities for Hib and HeB					2,000,000
Total budget		630,000	2,000,000	2,000,000	0	2,000,000
Performance Measure 2. Number of developed National capacity for biological Products						
Development of biological products for diagnosis and intervention	Transfer biological products production technology		500,000	500,000	500,000	500,000
	Partnership with international with appropriate companies		200,000	200,000	200,000	200,000
Total budget			700,000	700,000	700,000	700,000
Performance Measure 3. Number of developed national database						
Developing technical facilities	Establishing research database	_				
	Establishing public health laboratory database		_			
	Establishing Public health emergency management database		_			
Total budget		_	_	_	_	_

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Performance measure 4: Number of developed technical facilities						
Establish emergency operation centre (EOC)	Equip the EOC with IT and communication tools needed	3,430,000	-	-	-	3,430,000
	Ensure the full functionality of the EOC	100,000	100,000	100,000	100,000	100,000
Build technical facilities	Strengthening institutional web-site	30,000				
	Improve library service	_				
	Building training facility				_	
	Building laboratory animal breeding facilities	210,000				
	Strengthening of herbarium , botanical garden and conservation of medicinal plants					700,000
	Strengthening and equipping of Insectaries		500,000			
	Building stock ware-house		500,000			
Building occupational Bio-safety system	Strengthen laboratory safety system	30,000	30,000	30,000	30,000	30,000
	Build safe laboratory sewerage system		500,000			
	Develop dangerous chemical disposal system		500,000			
Total budget						
Performance Measure -5. Number of developed research outcomes dissemination system						
Develop research dissemination tools	Development of a scientific journal of the institute				500,000	
	Publish scientific newsletter	_	_	_	_	_
Total budget						

Initiatives	Content/activity	Required Budget (Birr)				
		2003	2004	2005	2006	2007
Objective-17. Enhance coordination and collaboration						
Performance Measure 1. Proportion of PHEM stakeholders involved in at least 9 of the monthly meetings of the PHEMTTF						
Strong coordination and collaboration	Establish multidisciplinary coordinating team (PHEM TTF) to handle PHE	-	-	-	-	-
	Prepare TOR for the taskforce	-	-	-	-	-
	Conduct monthly meetings to review activities	21,600	21,600	21,600	21,600	21,600
	Sign memorandum of understanding with key stakeholders	-	-	-	-	-
Total budget		21600	21600	21600	21600	21600
Performance Measure 2: Number of national and international research partnership established						
Establishing partnership	Establishing partnership/collaborative research activities	-	-	-	-	-
Performance measure 3: Proportion of research partnership maintained						
Maintaining partnerships	Maintaining national and international research partnerships	-	-	-	-	-

12. Appendices

Appendix-I. Detail SWOT and PEST analysis

Internal environment		
Factors	**Strength**	**Weakness**
MANAGEMENT		
Organizational structure	Organizational structure is now process based through BPR and	Implementation is slow
Strategic plan	Available	Not implemented
Processes, systems and Procedures		
• Planning	Exist	Poor implementation
• M&E	Exist	Poor implementation
• Reporting	Exist	Focus on activities only and poorly organized
• MIS and transparency	Exist	weak
• Mandate	Exist	No clear mandate
• Delegation	Exist	Inadequate delegation
• Empowerment	Exist	No empowerment
HUMAN RESOURCES		
• Skill	Exist	Limited
• Availability of qualified	Exist	Limited high level professionals
• Values, attitudes and	Exist	weak
• Physical work environment	Good	Poor waste disposal system, limited occupational safety etc
• Staff development	Career structure, training,	Inadequate training opportunity promotional procedures

Factors	Strength	Weakness
• Performance appraisal	Exists	Poor implementation & discriminatory
• Salary and benefit	Exists	Salary scale: wide gap (administration Vs scientific)
• Staff retention	Exists	Benefit: Limited (Serious brain drain and turn over)
FINANCIAL RESOURCES		
• Financial control and budgeting	Compatible with the government system	Under/over estimation of budget lines
• Budget utilization	Fairly good	Inadequate utilization
• Adequacy of financial resources	Exist	Not adequate
• Monitoring and evaluation	Exist	Inefficient
PHYSICAL FACILITY		
• Offices /labs	Exist	Inadequate
• Transport and logistics	Exist	Inadequate
• Communications	Adequate	Under utilization
RESEARCH ACTIVITIES AND SERVICE DELIVERY		
• Adequacy	Limited	Inadequate in scope
• Users satisfaction	Efficient in service delivery	Users need not fully met
• Efficiency and innovation for improvement	Exists	Limited calibre in research
• Complaint handling system	Exists	Inefficient
• Collaboration	Exists	Limited National and International

External environment (PEST)		
FACTORS	**OPPORTUNITIES**	**THREATS**
POLITICAL		
Government policies	Availability of policies in: • National health and drug • Science and Technology • Capacity Development and Rural Development	• Regulations emanating from policies are not fully in place
Regionalization	Regional Health Bureau and Decentralization will strengthen research, epidemic containment and public health laboratory net work	Inadequate capacity at regional level.
Donors policy	The government encourages donors. Resource availability for capacity building in health research	Most funds are donor driven rather than demand driven Dependency
ECONOMIC		
GDP	Increase in GDP favours investment in health and nutrition research	Decline in GDP reduces investment in health and nutrition research
Natural and manmade disaster	None	Increased mortality and morbidity decreased allocation resources
Globalization	Enhancement of knowledge and technologies for further quality service Increase competition	Staff attrition Fast spread of infectious of disease
SOCIAL		
Beliefs and values of the community	Strong positive attitude towards the Institute	Over expectation
TECHNOLOGY		
Communications	Availability of modern and ever improving information technology	Cost incurred on advanced technology
Laboratory equipment and supplies	Availability of state of the art laboratory facility at different levels	Ever increasing cost of equipment and supplies

Appendix-II. Stakeholder and collaborator analysis

Stake holder	Stake holder expectation	Likely reaction and impact if expectation is not met	Institutional response
Board and senior management	To achieve institutional goal	Change management and restructuring to improve performance	-Implement in accordance with the directive of the Board of Directors -Assess the situation and take appropriate corrective measures -Design an appropriate human resource management system and capacity building of staff. -Modify/re-plan.
EHNRI staff	Capacity building , conducive working environment, and motivation	Poor staff performance Staff attrition, Low institutional performance	-Put in place transparency and accountability -Creating conducive working environment and attractive career structure, recognition to meritorious individuals
General public	Quality, expanded and affordable services (diagnostic/analytic, consultancy, training Reliable information on major health and nutrition problems Early detection and timely response of public health emergencies Quality and expanded laboratory service and products	Loss of credibility of the Institute	Situation analysis and taking appropriate action
FMOH/	Reliable information on major health and nutrition problems Early detection and timely response of public health emergencies Quality and expanded laboratory service and products Adherence to the rules for the regulation of effective, safe and quality herbal products.	-Strengthening of Regional and Specialized Hospitals laboratories will be hampered and services will be poor -Policy relevant evidence based information will be limited -Increased incidence of diseases, disease outbreaks and malnutrition -FMOH will take corrective measures -Reject registration and recognition of products of herbal remedies	-Undertake situation assessment and take corrective measures

Stake holder	Stake holder expectation	Likely reaction and impact if expectation is not met	Institutional response
RHB	Technical assistance and collaborative research	-Poor performance of health and nutritional service at regional level -Inefficient public health emergency management -Loss of credibility on EHNRI and appeal to appropriate body for action	-Improve working relationship and communication
Ministry of Education	Research collaboration and teaching in higher learning institutions	-Poor quality research performance and collaboration -Poor human resource development -Loss of credibility	-Readjust and take appropriate measure -Improve working relationship and communication
Ministry of Agriculture	-Evidence based information on disease epidemics (malaria etc.) and nutrition -Collaboration on common interests like zoonotic diseases, nutrition issues and public health emergency management	-Inefficient public health emergency response such as zoonotic diseases, malaria epidemics and nutritional emergencies -Loss of credibility on EHNRI and appeal to appropriate body for action	-Promote and improve collaboration and communication.
MOFED	-Timely report on finance utilization -Proper planning, finance utilization	-Negative implication on budget allocation	-Proper utilization of allocated fund. -Taking corrective measures with regard to budget utilization
MOST	-Adherence to scientific and ethical standards in biomedical research -Compliance to national intellectual property right rules and guidelines	-Rejection and/or pending of research proposals (financial support) -Creativity and innovation will be affected	-Strengthen in-house research and ethical clearance committee -Compliance with the IPR, ethical guidelines and standards
Government Communication Agency	Evidence based information	-Under utilization of research outcomes -The Institute will be held responsible -The public would be exposed to preventable health problems	Provide timely and reliable information
Traditional medicine practitioners	-Scientific evaluation of traditional medicine and therapies	-Loss of interest and trust to collaborate with the Institute -Loss of the indigenous knowledge -Increase in the number of quack traditional healers, mal practice and remedies of poor quality, un safe and less or ineffective remedies may be employed by the healers. Loss of interest on the traditional medicine by the public	

Appendix-III. Collaborators and area of collaborations

Collaborators	Current status of collaboration	Fields of collaboration	Relative advantage
Funding Agencies (CDC,WHO,GF,WB,UNICEF,UNDP,Etc)	Exists	-Build/upgrade Institutional implementation capacity -Joint research	Capacity building
IBC	Existing	Joint research on medicinal plants	-Get new experience on ex- and in-situ conservation, --- -genetic diversity of medicinal plants, field gene bank
MOAD	Existing	Joint research on ethno-veterinary medicine, human nutrition and public health emergency management	Get new experience, nutritional value of improved variety food crops and better emergency management
ILRI	future	Joint research	Information generation
NVI	Existing	Joint research and exchange of technical expertise on vaccines	Knowledge and experience sharing
AHRI	Existing	Joint research and exchange of technical expertise	Knowledge and experience sharing
Red Cross Society of Ethiopia	Existing	Joint research, quality control and emergency response	Information generation, supportive service
Faith based organizations	future	Information on health and nutrition	Awareness creation
Ministry of water resources	Existing	Research collaboration , laboratory services, evidence based information	Safe water supply, Disease prevention and control, Timely meteorological Information
EARI, MOAD, ICB (Biodiversity), EORI (Essential oil research institute) School of Pharmacy, School of Public Health, Faculty of Medicine, Faculty of Science (Chemistry and Biology depts. and National herbarium), Faculty of Veterinary Medicine, AAU	New	Joint research on ethno-veterinary medicine, human nutrition	Get new experience, nutritional value of improved variety food crops
Ministry of Defence	Existing	Emergency management, laboratory services and training	Logistical support
Ministry of Trade & Industry, food industries	Existing	Research collaboration and laboratory testing of industrial food products	Availability of research materials and relevant information

Collaborators	Current status of collaboration	Fields of collaboration	Relative advantage
Civic and professional associations	Future	Research collaboration and evidence based information	Awareness creation and capacity building
Private health institutions	Future	Research collaboration and evidence based information, laboratory services, information exchange	Health information exchange and health care delivery
EPA	Future	Research collaboration and evidence based information, laboratory services	Environmental information exchange
Traditional practitioners	Existing	Research collaboration	Knowledge transfer
NGOs	Future	Collaborative research, service and funding	Information generation and access to remote areas
International universities and research institutions	Existing	Research collaboration and funding	Capacity building

Appendix IV. Participants of the strategic planning process

A. Name and address of participants of Stakeholder Review Meeting that discussed on the draft Five –Year Strategic Plan /2010-2015/ held in Dire International Hotel, Adama, Ethiopia from May 10 to 12, 2010

No	Name	Organization
1.	Abebe Bekele	EHNRI
2.	Abel W/tensay	EHNRI
3.	Abel Yeshanneh	EHNRI
4.	Abiyot Bekele	EHNRI
5.	Abraham Ali,Dr	EHNRI
6.	Addis Mulugeta	UCSD-E
7.	Addis Teshome	EHNRI
8.	Adugna Woyessa	EHNRI
9.	Alemayehu Abate	EHNRI
10.	Alemayehu Nigatu	SCMS
11.	Almaz Abebe, Dr	EHNRI
12.	Almaz Merdekrose	UNIEF
13.	Amaha Kebede, Dr	EHNRI
14.	Amare G/Yesus, Colonel	MOD
15.	Arega Zeru	EHNRI
16.	Aregash Samuel	EHNRI
17.	Asefa Deresa, Dr	EHNRI
18.	Aseged Woldu, Dr	EHNRI
19.	Asmamaw Guta	Mot
20.	Ato Wondwossen Girmay	Bilogical Society of Eth.
21.	Ato Tadesse Nigatu	EHNRI
22.	Berekat H/giorgis, Dr	ICAP

No	Name	Organization
23.	Berhane Beyene	EHNRI
24.	Betru Tekle, Dr	HAPCO
25.	Cherinet Aboye, Dr	EHNRI
26.	Dadai Jima, Dr	EHNRI
27.	Derege Teshome	EHNRI
28.	Desta Kassa	EHNRI
29.	Dilnesaw Zera	EHNRI
30.	Dr Akram Eham	WHO
31.	Elias Asfaw	EHNRI
32.	Endashzw Shsro	SNND RHB
33.	Endris Mohammed	EHNRI
34.	Esayas Gelaye	NUI
35.	Eshetu Lemma, Dr	EHNRI
36.	Fikadu Mindaye	MOTI
37.	Fikrewold Haddis	EPHA
38.	Firdu Egi	EHNRI
39.	Gemechu Haile	EHNRI
40.	Getachew Addis,Dr	EHNRI
41.	Getachew Belay	EHNRI
42.	Gezahegn Tesfaye	Malaria Consortium
43.	Giorgio Rosaeio	FIND
44.	Gonfa Ayana	EHNRI
45.	Gudeta Tibosso, Dr	EHNRI
46.	Habtamu Fufa	EHNRI
47.	Haftom Mamo	EHNRI

No	Name	Organization
48.	Hussein Mohammed	EHNRI
49.	Hussien Faris	EHNRI
50.	Isreal Tareke, Dr	WHO
51.	Kekbessa Urga	EHNRI
52.	Kisse Mudie	EHNRI
53.	Mamuye Hadis, Dr	EHNRI
54.	Markos Abebe, Dr	AHRI
55.	Meaza Dmissie	ACTPH
56.	Mekbebe Getahune	EHNRI
57.	Mekdes Gebeyehu	MSH-TBCAP
58.	Mekdes Mebea	Chemical Society Eth.
59.	Mekonnen G/Selassie, Dr	A.A Health Bureau
60.	Mekonnen Tesfamariam	CRS Ethiopia
61.	Melese Abdesa	AAU(FSCN)
62.	Melke Tadesse	EHNRI
63.	Mengistu Kefele	EHNRI
64.	Milka Theodros	FMO,MSD
65.	Mulalem Agonafer	EHNRI
66.	Negero Gemeda	EHNRI
67.	Negussie, Dr	MSH
68.	Ralegn Howe, Dr	HHRI
69.	Solomon Shiferaw	SPH-AAU
70.	Solomon shimeles	EHNRI
71.	Solomon Zewdu, Dr	THU
72.	Tehaynesh Messel, Dr	EHNRI

No	Name	Organization
73.	Tesfaye Hailu	EHNRI
74.	Teshaynesh Elias	EHNRI
75.	Teyay Abrele	ICAP
76.	Tilahun Muchie	EHNRI
77.	Workenesh Ayele, Dr	EHNRI
78.	Wubshet Mamo	I-TECH
79.	Yenew kebede	CDC
80.	Zenebech Adella	EHNRI

B. Strategic Plan Development Team Members

1. Dr. Eshetu Lemma /Scientific and Ethical Review Office/
2. Ato Arega Zeru /Plan, Finance and Monitoring & Evaluation Directorate/
3. Ato Addis Teshome/ Plan, Finance and Monitoring & Evaluation Directorate /
4. Ato Elias Asfaw / Plan, Finance and Monitoring & Evaluation Directorate /
5. Ato Hussien Faris /Plan, Finance and Monitoring & Evaluation Directorate/
6. Dr. Belete Tegbaru /Infectious and Non-infectious Diseases Research Directorate/
7. W/ro Aregash Samuel /Food and Nutrition Research Directorate/
8. Dr. Getachew Hadis /Traditional Medicine and Modern Drug Research Directorate/
9. Ato Getachew Belay /Laboratory Capacity Building Directorate/
10. Ato Haftom Taame /Public Health Emergency Management/
11. Ato Abiyot Bekele /Public Health Emergency Management/