

Strategic Plan of AYUSH Department of Ministry of Health and Family Welfare

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Chapter -1 Introduction to Department and AYUSH & its Divisions

India's economy is about to touch double digit annual growth rate but it also continues to be the homeland of around one third of the world's poor. Therefore, Indian Government attaches highest priority to the agenda of broad based inclusive growth, which is vital to achieve the overall progress of the country. This can be brought about only if governance is inclusive by ensuring active and effective healthcare for all the sections of the society.

The Indian System of Medicine is of great antiquity. It is the culmination of Indian system medicine which represents a way of healthy living valued with a long and unique cultural history, as also amalgamating the best of influences that came in from contact with other civilizations, be it Greece (resulting in Unani Medicine) or German (Homeopathy). Like the multifaceted culture in our country, traditional medicines have evolved over centuries blessed with a plethora of traditional medicines and practices.

Modern day stressful lifestyles have lead to a rise in lifestyle diseases all over the world. It has been realized that no single system of medicine can address the health care needs of modern society. India with its rich tradition of medicinal wisdom coupled with its strong capability in modern medicine and modern science is well placed to provide answers to increasing lifestyle related disorders, which are particularly amenable to the holistic healing systems of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy.

Department of Indian Systems of Medicine and Homoeopathy (ISM&H) was created in March,1995 and re-named as Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) in November, 2003 with a view to providing focused attention to development of Education & Research in these systems of medicine. The Department continues to lay emphasis on upgradation of AYUSH educational standards, quality control and standardization of drugs, improving the availability of medicinal plant material, research and development and awareness generation about the efficacy and safety of the systems domestically and internationally.

Encouragement to scientific research and education, laying down pharmacopoeial standards to ensure quality drugs and raw material, evolving good laboratory practices, following good manufacturing practices, regulating education standards, supplementing the efforts of State Governments in setting up speciality clinics of AYUSH in allopathic hospitals and AYUSH wing in District Allopathic hospitals, creating awareness through organization of Health 'Melas' and other information, education and communication are just some of the ways in which the department has been helping in the growth and wider reach of Indian Systems of medicine and Homoeopathy.

The Central Acts are in place to regulate education and practice, manufacture of drugs for sale and enforcement mechanism. Ayurveda, Siddha Unani and Homoeopathy drugs are covered under the purview of Drugs and Cosmetics Act, 1940. Since most of the medicines of

AYUSH sector are made from medicinal plant materials, the Department has set up a National Medicinal Plants Board to promote cultivation of medicinal plants and ensure sustained availability of quality raw material. A separate National Policy on Indian Systems of Medicine and Homoeopathy is in place since 2002.

In India the rationale and demand for a quantum jump in Governmental expenditure on healthcare is widely expressed. At present India's public expenditure on healthcare is only about 1% of the GDP. This accounts for 26% of all healthcare expenditure in the country. Article 47 of the Directive Principles of the constitution provides that "The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties." The requirement of increasing the public component of healthcare in India is a duty of the Nation. The Planning Commission recognises the need and has included a demand to raise public healthcare expenditure in India to 2% of the GDP in the XIth Plan Document. It is reiterated in the National Health Policy.

India's impressive economic growth and changing profile as an emerging superpower implies that the transition to a higher level of development and concomitant substantially increased level of Governmental involvement in healthcare is on the anvil and has to be considered actively as part of the modernization process of the country.

The Department by virtue of provisions of Allocation of Business Rules, 1961 (Second Schedule) has been assigned responsibility of formulating of policy and policy issues for development and propagation of Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy.

AYUSH Department carries out its mandate through seven key areas of activity, namely AYUSH services, Medicinal Plants, Research, Human Resource Development, International Collaboration, IEC and Drugs administration. The prominent functions include improvement of the Health Delivery mechanism, improving AYUSH Educational standards in close coordination with the Central Council for Indian Medicine (CCIM) and Central Council for Homoeopathy (CCH), National Institutes and other stakeholders, Research initiatives including overseeing 5 Research Councils, Collaborative Research Projects with reputed institutes both within and outside the country, interdisciplinary research and Drugs related issues.

Chapter 2 Aspirations of AYUSH Department and its Division

2.1 Vision, Mission and Objectives of AYUSH Department

The Department has laid the following vision, and aspirations of respective divisions to ensure realization of the Health and Family Welfare Ministry's goal of achieving "health for all".

Visions: To position AYUSH systems as the preferred systems of living and practice for attaining a healthy India.

Mission

- To mainstream AYUSH at all levels in the Health Care System.
- To improve access to and quality of Public Health delivery through AYUSH System.
- To focus on Promotion of health and prevention of diseases by propagating AYUSH practices.
- Strengthening Pharmacopoeial Laboratory of Indian Medicines (PLIM)
- Partnership with the Quality Council of India(QCI)
- Strengthening of Pharmacopoeial Commission of Indian Medicines (PCIM)
- Motivation to Pvt. Drug industry & support industrial cluster of Ayush
- Proper enforcement of provisions of D&C Act 1940 and Rules1945 thereunder relating to the ASU drugs throughout the country

2.2 Aspirations of AYUSH Divisions

2.2.1 Provision of AYUSH Services

- Delivery of Quality AYUSH health care services to entire population.
- AYUSH to be integral part of the health delivery system by mainstreaming of AYUSH.
- To ensure healthy population through AYUSH intervention.
- To ensure creation of enabling uniform legal framework for the practice of AYUSH practices, therapies
- Utilization of Trained AYUSH Doctors at all levels of Health Care services.

2.2.2 Medicinal Plants

- To ensure sustained availability of quality raw material from medicinal plants.
- To ensure conservation of medicinal plants.
- Capacity building in medicinal plants sector.
- To ensure fair remuneration to medicinal plant collectors and cultivators.
- To ensure free and fair market trade for medicinal plants.

2.2.3 Research

- To promote quality research in AYUSH with the objective of validating the system scientifically, safety and efficacy of AYUSH remedies.
- To encourage research for validation of fundamental principles of AYUSH Systems.
- Encourage development of new drugs for high priority diseases of national importance.
- Preservation through documentation of local health traditions and folklore for their utilization for new drug development.
- Promote inter-disciplinary research.
- Protection of intellectual property rights (IPR) in AYUSH systems.
- Encourage research in preventive and promotive health through AYUSH.

2.2.4 Human Resources Development

- To ensure availability of quality education and training to AYUSH doctors / Scientist / Teachers.
- To ensure availability of quality paramedical, pharmacy and nursing education and training in AYUSH.
- To provide availability of opportunity for quality AYUSH education throughout the country
- To empower AYUSH professionals with improved skills and attitudes.
- To promote capacity building of institutions, COEs, National Institutes etc.

2.2.5 Information , Education and Communication

- Propagation & promotion of AYUSH within the country
- Global acceptance of AYUSH formulation as drugs.
- To disseminate AYUSH practices and therapies for better health.
- To encourage behavior change through communication for better health.

2.2.6 International Collaboration

- Propagation & promotion of AYUSH outside the country and ensure global acceptance as a system of medicine.
- To collaborate with International bodies like WHO for cross disciplinary standardization, global recognition and propagation of AYUSH system.
- Global legal recognition of qualifications and practice in AYUSH
- Promote collaborative research and education in AYUSH with other countries.
- Protection of Traditional Knowledge

2.2.7 Drugs Administration

- To accelerate the Pharmacopeial / standardization work on AYUSH drugs.
- To ensure availability of high quality AYUSH drugs.

- To ensure enabling legal framework for production and distribution of safe and quality AYUSH drugs.
- To create Regulatory infrastructure in Centre & State Govt.
- To encourage AYUSH drug industry to produce high quality AYUSH medicine for national & International needs.

Chapter 3 Assessment of the situation

At the time of the creation of the World Health Organisation (WHO), in 1948, health was defined as a “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. This definition of holistic health is very well understood by Indian Systems of medicine since beginning. Even though WHO’s definition of health is holistic, in practice health has been understood with a primary focus on the curative or “treatment of disease”.

In 1974 the path breaking Lalonde Report in Canada suggested that with a curative approach the concept of health care should also include preventive measures usually labeled as public health consisting of measures which prevent disease like sanitation and safe drinking water.

It has since been widely recognized that there are four general determinants of health namely, human biology, environment, lifestyle and healthcare services consisting of both curative and preventive activities. Such an holistic approach to health validates the principles of the AYUSH systems which primarily deal with preventive, promotive and rehabilitatory measures. Such a holistic concept of health needs to be promoted in India, which our present strategic plan proposes to carry forward.

3.1 External Factors and their Impact

3.1.1 External Factors and their Impact on AYUSH Department

The factors which affect the AYUSH systems are:

- Priority accorded to Health in general and AYUSH in particular by State Governments and extent of resource allocation.
- Relevant Acts & Regulation on Education, Practice & Drug Control
- Inter -sectoral support of various Govt. Deptts. e.g. Industry, Education, Agriculture, Forest, DST/DBT/HRD
- International regulations on Traditional Knowledge, Genetic Resources and acceptability of traditional systems of medicine.
- Expectations of consumers, and their experience with Allopathic system
- Requirements and practices of AYUSH practitioners

3.1.2 External Factors and its Impact on AYUSH Divisions:

Some of the constrains that each of the thematic areas face in furthering the cause of promotion and validation of AYUSH Systems are listed below.

3.1.2.1 Provision of AYUSH Services

- Poor infrastructure of existing AYUSH Hospitals & Dispensaries in Govt. sector / Public sector.
- Although 75% population is being served by AYUSH medical system, but there are no well-defined systems for the documentation of their services / practices.
- Existing Laws of clinical practice by Doctors restricts AYUSH practitioners for the use of modern systems of USG / X-ray, medicines like emergency medicines & procedures like conduction of deliveries and related procedures.
- Non- availability of Quality AYUSH drugs at affordable price.
- Non availability of Trained paramedical staff like AYUSH Nurses, Pharmacists, Panchkarma masseurs etc.
- Non availability of proven AYUSH drugs for National Health programmes.
- Improper enforcement of provisions of D&C Act 1940

3.1.2.2 Medicinal Plants

- Fast depletion of medicinal plant resources in forest and wild areas; Non availability of good quality of raw material.
- Fast growing demand of herbal drugs, nutraceuticals, cosmetics and veterinary herbal health care products.
- Cultivation, collection & Trade of Medicinal Plant sector is unorganized .
- At present the cultivation of medicinal plants etc. is not a viable or attractive proposition.
- Non availability of data on demand and supply of medicinal plants.
- Lack of support price of Medicinal Plants through appropriate policy.

3.1.2.3 Research

- Inadequate trained Human Resources, infrastructure & funding in AYUSH Research
- Inadequate quality AYUSH drugs for research
- Absence of a separate Research policy of the Department
- Lack of focus areas of research

3.1.2.4 Human Resources Development

- Adequate regulations and standards under IMCC Act, 1970 and HCC Act, 1973.
- Lack of availability of quality institutions at national level, State Govt. level as well as in private sector.
- Inadequate infrastructure and training institutes for Nursing, Pharmacist & other paramedics in AYUSH.
- There is a growing demand of good quality AYUSH education from within as well as outside the country and related institutions like AYUSH educational institutes, hospitals and clinical establishments including Spa and Wellness centers.
- Lack of training facilities to handle emergency cases by AYUSH Doctors.
- Non existence of training institutions for CME and for improvement of skills.

3.1.2.5 Information, Education and Communication

- Indifferent attitude of the allopathic practitioners and manufacturers.
- Lack of awareness amongst scientific committee, allopathic doctors and masses.
- Lack of scientific validation adversely impacts promotion of research in AYUSH.
- Dissemination is largely confined to creation of awareness of strengths of AYUSH systems.
- Lack of supporting Data on the strengths and usage of AYUSH practices.
- Lack of financial resources for IEC material.

3.1.2.6 International Collaboration

- Lack of International support as the AYUSH is specific to India.
- There is explicit policy on propagation of AYUSH in foreign countries.
- No strategy to propagate AYUSH in Asian & other developed countries, where the system is recognized and entry is easy.
- Need for certification mechanism for Ayush products to ensure export of assured quality products.
- International requirement on practice and registration of Ayush drugs abroad are not favourable due to commercial interest.
- Although Ayush demand is increasing but Ayush educational institutions are lacking in world-class standards to attract foreign students.
- No posting of Ayush Officers in international agencies like WHO, FAO, UNICEF etc.

3.1.2.7 Drugs Sector

- Inadequate availability of quality raw materials of plant, animal, metal mineral origin.
- Weak regulatory enforcement mechanism in State & Centre.
- Weak R& D
- Inadequate Lab. facilities for testing and compliance of Pharmacopoeial standards.
- Resurgence of natural products market worldwide.
- Lack of motivation in pharma sectors for improving quality
- Inadequate Govt. support for AYUSH pharma Sector for development of infrastructure etc.
- Export potential of ASU drug is minimal.

3.2 Identification of Key Stakeholders & the basis of linking together

3.2.1 Key Stakeholders of AYUSH Department

Key stakeholders have been enlisted below under the various spectrum of activities by the Department based on areas of interest.

3.2.2 Key Stakeholders of AYUSH Division

3.2.2.1 Provision of AYUSH Services

NRHM set-up at Central, State and District levels, Department of Health & Family Welfare, States/UTs, Commissionerates / Directorates of AYUSH States/UTs, private / NGO AYUSH Health service providers, research organizations, other Central Govts. Agencies i.e. ESI, armed forces, Ministry of Labour, drug manufacturers, public/consumer/patient, NGO working in AYUSH systems.

3.2.2.2 Medicinal Plants

NMPB, State M.P.B, Agriculture / Horticulture Universities, CSIR, ICAR, Traders of Medicinal Plants, Farmers, Drug Industry.

3.2.2.3 Research

ICMR,CSIR,DBT, DST, Ayush Teaching Colleges, Medical Colleges, National Institutes, Manufacturer of drugs, Pharma Industry

3.2.2.4 Human Resources Development

State Government and nodal ministries, statutory bodies -CCIM, CCH, other Central Govt. , department - Health, HRD, WCD, etc. , Ayush educational institutes, hospitals and clinical establishments including Spa and Wellness centres, AYUSH Teachers, doctors and paramedical staff, Govt. / Pvt. Ayush Colleges, National Institutes, IIM- Ahmadabad, ICMR, IIM-Jammu.

3.2.2.5 Information, Education and Communication

Doordarshan, other TV-Channels, Radio Channels, Print Media, State Governments.

3.2.2.6 International Collaboration

National Institutes, CSIR, ICMR, Indian Embassies / missions, WHO, NGOs, Foreign Universities

3.2.2.7 Drugs Administration

Private drug industry, cooperatives, PSUs, drugs manufacturer, scientific and industrial , institutions, financial institutions, regulatory agencies, collaboration with international agencies on quality assurance, quality council of India , pharmaxecil, associations of drug manufacturers., medicinal plant clusters, department of Industrial development, commerce, foreign trade, CSIR, DBT, CCRAS, CCRUM, CCRH.

3.3 SWOT analysis

Although the various Indian systems of Medicine have existed for a long time its growth and predominance has not been commensurate with their potential to supplement the deficit in the health care delivery system.

3.3.1. SWOT analysis of AYUSH Department

Strengths :

- Legal recognition
- Age old and time tested well documented system, long history of safe use.
- Deep rooted in Indian culture.
- Cost effective
- No side effects
- Easily available in the form of flora & fauna- Accessible.
- Large number of AYUSH practitioners.(8.00 lakhs)
- Policy support of Central & State Govts already exists.
- Duly supported by Acts & Regulation on Education, Practice & Drug Control, IMCC Act 1970, HCC Act 1973, Drugs and Cosmetic Act 1940.

Weaknesses

- Poor infrastructure of clinical establishment.
- Poor investment of resources zones (30%) as compared to allopathy .
- Lack of Scientific temperament, in teaching, clinical practice.
- Lack of international support on scientific / financial aspects.
- Lop sided development of AYUSH infrastructure i.e. education & health care facilities.
- Unorganized drug industry.
- Small range of drugs / products which caters to only specific / few diseases.
- Lack of skilled manpower including para-medics and also lack of AYUSH facilities as grass-root level.
- Lack of awareness about AYUSH System and its strength.
- Lack of standardization of classical medicines.
- Lack of documentation of validation of clinical practices.
- Inadequate regulation in the fields of drugs; education and yoga;.
- Poor implementation machinery in the regulation of Drug / quality.
- Inadequate manpower in States/UTs & Central offices for effective administration of AYUSH.
- Sense of feeling that career advancements in the AYUSH Sector is limited.

Opportunities :

- Solution for life style disorderly which constitute large percentage of medicines.
- Shift towards preventive medicine, thus imbining AYUSH easier.
- World scenario shifting towards herbal medicines.

- Yoga as a discipline has immense potential and is already being practised in different parts of the world .
- Ayurveda is already present in most of the European countries, US, etc although in different forms.
- World over the shift is towards National Medicine like AYUSH.

Threats

- Allopathic practitioners & Allopathy drug industry opposed to the share of business.
- Lack of proper certification to ensure supply of quality drugs in the market.
- Preservation of Traditional Knowledge since west is eyeing developments in Yoga & Ayurveda.
- Need for scientific temperament, for assuring faith on AYUSH discipline in peoples mind.

3.3.2 SWOT analysis of AYUSH Divisions :

3.3.2.1 Provision of AYUSH Services

Strengths

- Large number of AYUSH doctors
- Availability of AYUSH facilities in NRHM set up

Weaknesses

- The available 3,133 AYUSH hospitals and 22,975 AYUSH dispensaries in the states/UTs are inadequate to cater population of 119 Crores in the country.
- The State Health expenditure for AYUSH is lower than 5% of the total health expenditure in most of the States/UTs.
- The collocation of AYUSH facilities under NRHM initiated from April, 2005 onwards has not been given due share of AYUSH.
- The Ayush manpower posted under NRHM is approximately 9578 as on 30.09.2010 after 5 years of implementation of NRHM, which is much less than the target.
- The drug procurement for collocated facilities under NRHM is irregular and not as per the need of the facility.

Oppurtunities

- Growing need for AYUSH facilities

Threats

- Lack of integration of AYUSH in the NRHM set up

3.3.2.2 Medicinal Plants

Strength

- India is repository of more than 6,000 medicinal plants for Himalayan to Marine, desert to rain forest ecosystems
- India has an ancient heritage of herbal medicinal sciences like Ayurveda, Siddha, Unani and Sowa-rigpa etc.
- There is large numbers and varieties of manufacturing units like herbal drugs, neutraceuticals, cosmetics and veterinary herbal health care products.
- There are many Research & Development institutes of international standards in the field of medicinal plants located in different parts of India.
- India has more than 8 lakhs practitioners using herbal products.
- The traditional use of herbals is a part and parcel of our Indian culture and household.

Weakness

- Collectors and farmers are not organized and exploited by middleman.

- The Research & Development institutes pertaining to medicinal plants sector work in isolated manner.
- Poorly developed local market.
- Poor processing of finished products.
- Non availability of good agro-technique for cultivation of many medicinal plants
- The medicinal plants based health care systems of India like Ayurveda, Siddha etc. are not recognized by many countries, this is a hurdle in scientific and official propagation of herbal healing sciences.
- Farmers and Collectors are poor and they are not aware of GACF, GFCF, and organic certification.
- No standard developed for certification for sustainability
- Not significant marketing support to collectors and farmers. At times they get only 5% of the value of finished products.

Opportunities

- According to WHO Survey about 80% of the world population is using Herbal preparation as a remedial measures and day by day the demand of herbal products is increasing.
- Many of the synthetic drugs are with some or other adverse side/after effects. In place of such drugs alternative safe herbal drugs may be substituted.
- In metabolic disorders and life style related diseases herbal based drugs are more effective and safe as compared to synthetic drugs.
- The development of medicinal plants sector may generate many sustainable livelihood systems.
- The society can be made healthy by providing Quality Herbal Drugs to prevent the disease and to maintain good health. It will reduce the financial burden of the society.
- Some Medicinal Plants can be grown even in extreme condition e.g. Isabgol in desert, Atees in sub-alpine area, Senna in Arid areas.
- Some region e.g. North-Eastern states it could prove to be a game changer.
- Many new drugs may be developed from the traditional knowledge associated with medicinal plants.

Threats

- If potential of medicinal plants are not tapped then we may lose our great ancient herbal knowledge and heritage.
- In this competitive world if quality of raw material and finished herbal products is not maintained we may lose the business opportunities and faith of the society in the herbal healing sciences.
- Over exploitation of the raw material for the forest resources can lead to extinction of available resources and may be forced to use substitute / adulterations in future.
- Excess use of chemical fertilizer and pesticides are reducing the quality of raw material and fertility of soil.
- If Traditional Knowledge associated with medicinal plants sector is not revitalized, the science developed over thousands of years may die out without any chance of redemption.

3.3.2.3 Research

Strength

- The AYUSH systems are well regulated and well accepted in India.
- The Research councils and other organizations are already working on various subjects of standardization, new drug development etc.
- Inter-institutional collaboration is in place.
- Scientists from basic sciences and other streams are interested in AYUSH research and are coming forward for collaborative research.

Weakness

- Limited infrastructure and HR with Research councils and institutions under AYUSH.
- Very few Research papers on AYUSH published in high impact peer viewed international Journals.
- Limited International Patents on AYUSH.
- No provision for developing HR in AYUSH research.
- The budget provision is low to undertake high impact research.
- No major well reputed foreign collaboration partner.

Opportunities

- The councils and AYUSH institutes have gained enough experience to develop collaborative research projects with other national and international research organizations.
- The other research councils, institutes as well as foreign agencies are willing for collaborative research with AYUSH research councils and institutes.
- The issue of IPR generated out of research out come needs to be protected appropriately.

Threats

The research projects designed and conducted without proper consideration of AYUSH fundamentals may give incorrect results giving wrong signals about efficacy of AYUSH systems

3.3.2.4 Human Resource Development

Strengths

- The AYUSH education is regulated in the country.
- The minimum standards are laid down
- The syllabus for every system is uniform throughout the country.
- The professional education exists at graduate as well as postgraduate level.

Weaknesses

- Adequate infrastructure and the quality education do not exist in most of the institutes.
- Provision for training of supporting staff is lacking.
- The facility for education is not evenly distributed throughout the country.
- Inadequate provision for HR development in education sector.
- Need of sensitization about AYUSH at school level before entering into AYUSH professional Courses.
- Limited interaction between AYUSH and other educational streams.
- No regulation for Yoga and Naturopathy.
- Non-availability of sufficient AYUSH postgraduate.
- Increasing demand for AYUSH education at international level.
- Increasing awareness about AYUSH systems.

Opportunities

- Immense potential for the education sector of AYUSH
- By development of skilled HR a unique National health care Delivery system can be built in the country

Threats

- Violation of minimum standards leading to inferior quality education.
- Application of Modern science parameters to AYUSH systems being impractical may lead to dilution of the system.
- Poor pay scales of Teachers.

3.3.2.5 Information, Education and Communication

Strengths

- The Government is committed to promote and propagate AYUSH.
- Since the AYUSH system of medicine is safe, effective and affordable, it is expected to get support from all stakeholders.
- AYUSH has succeeded to a large extent in creating awareness amongst people. The Dept has initiated various schemes to propagate & promote AYUSH systems.
- Research councils and National institutes of AYUSH systems have the capacity to validate the strengths of our systems.
- National campaigns through print and electronic media appear to have made considerable impact behaviour change through communication for better health. A survey is being carried out by Indian Institute of Mass Communication (IIMC) to assess the actual impact.

Weakness

- AYUSH has been promoted more as a brand
- Strengths have not been propagated

Oppurtunities

- scope for highlighting the preventive and promotive aspects

Threats

- If not propagated the right way may lead to aversion to the systems

3.3.2.6 International Collaboration

Strengths

- The Government is committed to promote and propagate AYUSH for creating world-wide awareness.
- Since the AYUSH system of medicine is safe, effective and affordable, it is expected to get support from all stakeholders.
- AYUSH has succeeded to a large extent in creating global awareness amongst people.
- The Dept has initiated various schemes to propagate & promote AYUSH systems.
- AYUSH information cell has been set up in Malaysia and is under-consideration for Trinidad and Tobago.
- At International forums, Department has made impressive presentations and has well developed infrastructure, laws, rules & regulations for all aspects of AYUSH systems. This can help other countries to devise the same for themselves. Implementation of GMP, GLP and procuring practises will help the industry to make product dossier according to country situation for export.
- Department of AYUSH is providing fellowships to foreign nationals and inviting them to study AYUSH systems in Indian Institutes. This helps to disseminate the practices and therapies.

- Research councils and National institutes of AYUSH systems have the capacity to validate the strengths of our systems.

Weaknesses

- most of the councils & institutes don't provide quality papers/ products to be shared with other countries.
- Acceptance of AYUSH as a system of medicine is confined to a few countries due to lack of scientific validation and inability to showcase the strengths of our system.

Oppurtunities

- Immense oppurtunity of collaborative research with foreign univeresities/institutes

Threats

- Platform created till date will be lost if focussed action is not taken

3.3.2.7 Drugs Administration

Strengths

- Long history of continuous use of medicine by human beings, for example Ayurveda, Siddha and Yoga (one thousand BC)
- People have full faith in AYUSH drugs and practices
- Drugs and recipes are available throughout the country
- Simple home remedies/kitchen garden recipe- practiced throughout the country.
- Cost effective and affordable drugs
- Safe and minimum side effects of ASU drugs
- Simple and indigenous technology for ASU drugs
- ASU drugs manufacturing drug industry helping the poorer sector of the society.
- Based on simple concepts and practices, formulation of new drug is an easy job.
- Practitioners have liberty to make different permutation, combination and new combinations for patient specific conditions.
- Very rich medicament of 1000 drugs of Plants, mineral, metal, animal and marine products.
- Medicines are very compatible to human biology.
- Multiple ingredient formulation act on multiple target of disease causing factors. So capable to provide Holistic treatment.
- Many dosage forms (more than 25 nos)- suitable to all age group people/ all type of individual temperament.
- All over the world there is a trend to go for natural medicines – which is suitable for AYUSH drugs/medicines
- ASU Drugs have great potential to give solution to life style disorders of modern age with minimum side effects. As life style and metabolic disorders are increasing day by day.
- Full Central/State Govt. recognition for AYUSH system.

Weakness

- Lack of uniformity of Quality standards
- Inadequate infrastructure of QC labs/manpower expertise
- Inadequate enforcement infrastructure at Central and State level

- Majority is small scale industry – not many big players
- Lack of scientific temperament in drug manufacturing industry.
- Low R&D investment in drug industry
- Lack of conceptual clarity in the approach of Drug Development in AYUSH sector.
- Lack of appropriate tools and technology to standardize multiple ingredient formulations.
- Lack of scientific approach for system to validate on Holistic aspects.
- Inadequate teaching and training of AYUSH related Pharmaceutical Sciences.
- No Pharmacy council of ISM&H to develop and regulate the pharmacy education.
- No international support on scientific/financial/managerial aspects of the sector.
- Increase population, urbanization is creating lot of pressure on natural resources – needed for AYUSH drugs.
- Financially/Economically – very small sector presently.
- Many dosage forms of medicines are not user friendly in the modern life style e.g. decoctions and other bulky medicines
- Lack of emergency and fast acting medicines.
- Lack of parental medicines for certain conditions where oral administration of drug is not possible
- Poor documentation of the efficacy of the treatment provided
- Poor pharmaco vigilance /lack of remedies in case of ADR
- Lack of information on Pharmacology, Pharmaco kinetics of ASU drugs
- Variation in the practices/use of plants, metals in different parts of the country.
- Poor Govt. support in terms of budgetary allocation to support the drug related sector.
- Lack of proper scheme for financial support to ASU drug industry- to attract the entrepreneur

Opportunities

- Enormous business potential to provide good quality, safe and natural AYUSH medicine at national and international level.
- Many solutions to provide answer to life style/ metabolic disorders where in allopathic medicines have limitations.
- Opportunity to globalize AYUSH indigenous concepts and practices.
- Indian – diaspora and Indian medicines can go together in many foreign countries.
- Opportunity to spread Indian Medicines, Indian foods, and Indian culture across the globe.
- AYUSH can help to improve the economy of the poor India.
- Eco friendly and natural approach of ASU system will increase the acceptability.

Threats

- If AYUSH drug will not adopt scientific method of development – it will lack behind and may be under shadowed by TCM/ Korean and Japanese medicines
- People in India will also ignore AYUSH if the quality of product is not improved.
- Industry will lose business if it will not provide quality products to consumers
- Country/Individual will pay heavily on Chinese based medicine for health problem which will increase great economic loss to the nation.
- People will lose their post and position in AYUSH pharma sector

Chapter - 4 Outline of the Strategy

4.1 Spectrum of potential strategies

4.1.1 Strategies of AYUSH Department

1. To ensure acceptability, it is necessary to integrate AYUSH in NRHM in at least all the PHCs & CHCs.
2. Ensure massive plantation in wastelands and forest area through intensive and extensive farming.
3. Intercropping .
4. Research focus on selected diseases to ensure mapping and establish clinical efficiency- life style disorders.
5. Documentation and validation of efficacy of AYUSH therapies in various disease conditions
6. Uniform syllabus for students with stress on modern techniques rather than adhering to classical / archaic literature only.
7. Regulation of drug industry- proper support to industry, Proper enforcement of Drug Act.
8. Involve State Governments / Drug industry actively to extend the reach of AYUSH.
9. Extensive involvement of Agriculture & Horticulture Deptts for cultivation in medicinal plant sector.
10. Target should be 50 major, 50 minor medicinal plants to focus cultivation – quantity should be in Metric tons and not in hectares.
11. Semi processing, intermediates, extracts should be areas of focus.
12. District Krishi Kendras should be nodal point for Medicinal Plants
13. Motivate young scientists to work in AYUSH R&D
14. Motivate corporate sector towards AYUSH
15. Educate politicians & Bureaucrats on the merits of AYUS & H and social benefits.
16. Cultivate the team spirit in various stakeholders to work for the development of the sector.

4.1.2. Strategies of AYUSH Division :

4.1.2.1 Provision of Ayush Services

Delivery of quality AYUSH health care services to entire population

1. To support the efforts of the state Govts./UTs to upgrade all the stand alone AYUSH hospitals & dispensaries in the country and open new units.
2. To extend the Co-location to cover the public health facilities like PHCs/CHCs and DHs so that, various systems of health care are available at single window.

3. To enhance the production of medicines as per essential drug list by public sector undertakings and to strengthen the supply chain management by these public sector undertakings.
4. State govt. pharmacies are strategically supported to enhance the production capacity of quality AYUSH drugs.
5. More AYUSH doctors and paramedics should be recruited to the public health facility.
6. Mechanism to document health statistics by hospitals and private practitioners
7. Telemedicine in AYUSH in all State capitals
8. Easy availability of AYUSH drugs in market, motivating all chemists to keep ASHU drugs also.
9. Involvement of the corporate sector for developing AYUSH Healthcare infrastructure.

AYUSH to be integral part of health delivery system

1. Uniform guidelines are required to be developed for the involvement of AYUSH doctors under public health programmes like RCH, RNTCP, NLEP, Malaria control programme, Blindness control programme etc.
2. For capacity building of entire AYUSH doctors one national level institute may be designated, which in turn may identify the training needs of AYUSH doctors, paramedics including pharmacists and therapists in delivering public health services.
3. State and district level institutions including AYUSH colleges may be identified for effective percolation of the capacity building to the field functionary.
4. Increasing AYUSH share in NRHM towards salaries and drugs because presently due to non-availability of AYUSH drugs AYUSH doctors are used for Allopathy medicine.

To ensure healthy population through AYUSH intervention

1. Uniform guidelines incorporating AYUSH strength in BCC modules may be prepared.
2. Healthy diet and beneficial medicinal plants for health may be widely propagated and made available in the AYUSH health care facilities.
3. The intervention through AYUSH for curbing the menace of non-communicable and life style diseases through selected intervention at AYUSH Hospitals/Dispensaries/College Hospitals.
4. Development of potent pain-killers, antibiotics and anesthetics in AYUSH through dedicated institutions.
5. Reimbursement facilities for all AYUSH drugs and therapies in public and reputed private hospitals.
6. Mediclaim facility in AYUSH.

To ensure creation of enabling uniform legal framework for the practices of AYUSH practices and therapies

1. Harmonization of all related legal provisions which make an impact on the practice of AYUSH medicines in the country may be undertaken with respective stake holders.
2. To bring AYUSH practitioners under the definition of Registered Medical Practitioners under all acts of the land. Presently Ayush practitioners cannot handle USG and use emergency medicines
3. Evolving legal frame work allowing AYUSH practitioners for modern diagnostic tools and methods, emergency Medicines and Medicines relating to the National Health programmes.
4. Legal frame work to limited use of drugs in emergencies and in rural areas, in government sector to start with, with strict monitoring to prevent misuse of provisions.

4.1.2.2 Medicinal Plants

1. To organize collection, cultivation, processing and marketing of medicinal plants
2. To enhance cultivation of medicinal plants with providing species which are in high demand
3. Resource augmentation of medicinal plants in forest areas
4. Ensuring sustainable harvesting areas from forests
5. Establishing network of medicinal plants w.r.t. RET species
6. To encourage in-situ conservation areas for field gene banks
7. To strengthen network of herbal gardens in three years
8. To impart training to farmers/ growers
9. To impart training to SMPB, State Mission, Facilitation Centres
10. To involve JFMCs/Village Panchayat in processing and marketing of medicinal plants
11. To organize medicinal plants processing, marketing through establishing medicinal plants cluster/zone
12. To provide marketing support/minimum support price on Medicinal Plants
13. State of art research, quality testing support etc.

Medicinal plants being one of the key sectors on which the AYUSH sector depends heavily, it would be necessary to follow the detailed outline given below:

- To start cultivation of medicinal plants and ensure yield in tonnage.
- Resource augmentation in forest areas
- Increase in sustainable harvesting areas from forests
- Establish MPCAs
- To encourage *in-situ* conservation areas
- To establish herbal gardens per annum
- To impart training to farmers/ growers
- To impart training to SMPB, State Mission, Facilitation Centres
- To undertake state of art research and provide quality education
- To involve JFMCs/Village Panchayats per year in processing and marketing of medicinal plants
- To organize medicinal plants processing, marketing through establishing medicinal plants cluster/zone in every State
- To provide marketing support for medicinal plants

4.1.2.3 Research

1. Restructuring and strengthening the Research Councils and National Research Institutes
2. By collaborating with the organizations interested in AYUSH systems
3. By encouraging medical colleges and AYUSH Colleges to undertake collaborative research.
4. Identification and validating the local health traditions and folklore related to AYUSH.
5. By establishing Advanced Centres for Yoga in premier medical Institutes of the country.
6. TKDL Project
7. Planning of clinical research trials and scientific research studies on priority diseases.
8. To conduct RCT studies in Clinical research wherever there is a positive outcome and published in peer reviewed journals.
9. To conduct observational research in the areas where AYUSH has strength but no scientific methodological research has been carried out
10. To conduct exploratory studies in the areas where other systems have a limited role.
11. Development of infrastructural facilities in all the research Institutes/Units under the Council in a phased manner. Central Research Institutes (CRI's) & Regional Research Institutes (RRI's) will be targeted first.
12. To develop Centres of Excellence in Central Research Institutes on various diseases conditions including veterinary disciplines
13. Development of human resource through regular Continuing Medical Education programme (CME's).
14. To develop young scientist promotion scheme for encouraging MD/PhD students to take up research in homoeopathy and other AYUSH systems.
15. Scientific validation of 20 classical formulations in diseases conditions including Vitiligo, Psoriasis, Viral Hepatitis, Bronchial Asthma, Rheumatoid Arthritis, Diabetes, Sinusitis Malaria, Hyperlipidemia and Filariasis
16. Safety evaluation of 20 classical formulations
17. Preclinical study on 10 new drugs
18. Preliminary Clinical studies on 10 disease conditions with new formulations including Vitiligo, Psoriasis, Inf. Hepatitis, Bronchial Asthma, Rheumatoid Arthritis, Diabetes, Sinusitis Malaria, Hyperlipidemia, Filariasis
19. Clinical validation of 10 folklores
20. Development of SOPs of 5 regimental therapies wherever applicable.
21. Validation of fundamentals of Ayurveda, Siddha, Yoga & Naturopathy, Unani medicine Documentation of practices

In a nutshell the entire orientation of Research in Ayush would be to ensure modernization of curriculum to transform from classics to scientific orientation.

4.1.2.4 Human Resource Development

1. Introduction of AYUSH education at different levels including school, general graduate as well as at Allopathy education.

2. Developing facility for training and education in Pharmacy, Nursing, Massage and Panchakarma therapies etc.
3. Training to Anganwadi workers, ASHA, Dai and related workers for deep penetration of AYUSH in health care.
4. Training to AYUSH practitioners in modern diagnostics.
5. Promotion of e-learning
6. Enhancement in funding provision under centrally sponsored Schemes for development of AYUSH institutions and hospitals.
7. Encouraging reputed AYUSH organisation to start paramedical, nursing, pharmacy courses in AYUSH
8. Establishment of Central and State training institutes in AYUSH for all training programs.
9. Expanding the scope of ROTP and CME scheme for upgrading the skills of AYUSH professionals to meet the needs of the day.
10. Mechanism to documentation of case studies in hospitals and PG institutions.
11. Legal frame work for equal opportunities to AYUSH doctors to pursue the short-term/summer/crash courses in allied medical fields to upgrade the knowledge and skill to meet any kind of challenges.
12. National commission for human resources should be established.
13. To establish more PG seats in all the subjects and to establish AYUSH colleges especially in J&K. and North Eastern states
14. Modernization of curriculum to transform from classics to scientific orientation.
15. Appropriate provision of infrastructure, manpower including trained paramedics, Panchakarma masseurs etc.
16. To setup stand-alone-AYUSH hospitals at districts/sub-division, block level hospitals in all the States and dispensaries to be setup proportionate to population at least one at Panchayat level.
17. District level specialty hospital on Ksharasutra, Panchakarma etc.
18. Creating Yoga Therapy facility in each district of the country.
19. Setting up of Yoga Therapy Centres in modern medicine hospitals (preferably District level Hospitals)
20. Setting up of Yoga Therapy Centres in modern medicine hospitals (preferably District level Hospitals)
21. Integrating Yoga in National Health Programmes and NRHM programme
22. Integrating Yoga in the school curriculum, Initially by Administrative Order by the Department of AYUSH but Later by Central enactment by empowering the IYA
23. Uniform curriculum for AYUSH nursing, pharmacists, Panchakarma therapists in all States.
24. Modification of available syllabus/ Preparation of standard, uniform syllabus of different courses in Yogam, devising paramedical courses in Yoga.
25. Encouraging the private sector to take up the task of running the courses in Yoga.
26. Training of Trainers.
27. By conducting the seminars. Workshops and conferences to disseminate the existing latest knowledge in the field from time to time.
28. Training programmes in research methodology, drug development, biostatistics, regimental therapy, quality control, drug standardization, IPR
29. Starting of PG Diploma courses in clinical subjects

4.1.2.5 Information, Education and Communication

1. To disseminate the strength of AYUSH system of Medicines for common man.
2. To share validated results of AYUSH systems with stakeholders.

4.1.2.6 International Collaboration

3. Assistance of Indian Embassies/ High Commissions to be taken to propagate AYUSH systems in other countries.
4. To share validated results of AYUSH systems with other countries and international forums.
5. To enhance collaborative research to establish acceptable standards in drugs/ education.
6. Negotiations with regulatory authorities of concerned countries for registration of AYUSH products and recognition of degrees.
7. Strategic initiations like signing of MOUs with other countries for recognition of AYUSH systems i.e. education, practice and medicines.
8. To explore the scope of exchange of experts to share the expertise on the Traditional systems of medicine.
9. All the stakeholders such as Industry, FICCI, Ministries/ Departments, NGOs, Associations, Individual, International bodies, Research Organizations may be contacted and informed of the strategy of AYUSH for propagation, registration & recognition of systems abroad and develop a plan for implementation.
10. To conduct International seminars, workshops, health awareness programmes & training to build knowledge and capabilities and to exhibit/ promote our strength in AYUSH. The AYUSH courses may be modified for foreign nationals according to their requirement.

4.1.2.7 Drugs Administration

1. Focus on 5 areas of major disease burden where AYUSH drugs are effective and focus to produce medicines of good quality to meet the national requirement.
2. Financial support and handholding of the drug industry.
3. Infrastructure building on production of drug and quality control.
4. Infrastructure building on quality assurance and quality control
5. HRD relating to the production, quality control and enforcement.
6. Propagation and marketing strategies.
7. Strengthening of enforcement and quality control infrastructure.
8. Fasten the pharmacopoeial work.
9. All the issues need to be addressed in mission mode of implementation.
10. Setting up of specialized laboratories / pharmacies for preparation of standardized Bhasmas / purified metals / minerals as per SOPs laid down in Pharmacopoeia / Classics. It should be legally mandatory for all the industries / pharmacies manufacturing Ayurvedic drugs to purchase Bhasmas / Metals / Minerals from these laboratories only.

11. Medicinal Plant parts / products should also be identified and authenticated by some Govt. controlled agency prior to use by the industry and it should be legally mandatory for all the industries / pharmacies manufacturing Ayurvedic drugs.
12. The manufacturing and testing should be done under the supervision of Rasashastra / Bheshajya Nirman / Dravyaguna.
13. Development of monograph for single drugs
14. Development of SOPs for compound drugs
15. Standard of Extracts
16. Minerals / Metals Monographs
17. Animal products
18. Bhasma etc.
19. Extra Pharmacopoeial monographs
20. Marker compounds
21. Biological activities
22. Development of Pharmacopoeial standards of single plants, materials and compound formulations where not available

The entire spectrum of strategies can be implemented in the order of priority indicated above. Therefore, the strategy prioritisation is not being indicated separately.

4.2 Plan for engaging Stakeholders

4.2.1 Plan for engaging Stakeholders of AYUSH Department

Various schemes of the Department including the 7 broad spectrum of activities is proposed to be implemented primarily with the support of the State Governments, other nodal Department of Govt. of India including Department of Commerce, Department of Health, Department of Pharmaceuticals, and other International Organization like WHO.

4.2.2 Plan for engaging Stakeholders of AYUSH Divisions:

4.2.2.1 Provision of Ayush Services

The Department will engage the State Governments in putting into place a dedicated set up for AYUSH services. The State Governments will in turn ensure implementation of the schemes through its network at Districts, tehsils level. The other stakeholders including AYUSH educational Institutes shall supplement the State Governments in putting into place the deficient infrastructure and services.

4.2.2.2 Medicinal Plants

The NMPB through State Governments will encourage State Medicinal Plants Boards, State Forest Departments to impart training to farmers, growers to start cultivation of medicinal plants. The State Governments through the Forest Department will ensure resource augmentation in forest areas and also Increase in sustainable harvesting areas inside forests. The industry and the drug Manufacturers association will join hands with other stakeholders in

organizing medicinal plants processing, marketing by establishing medicinal plants cluster/zone through State Mission on Medicinal Plants.

4.2.2.3 Research

Department of AYUSH will draft a research policy including plan for developing HR in consultation with reputed research organisations. The Research Councils, Universities and other reputed Institutions shall collect the information and prepare database of existing research work/clinical studies/hospital records, etc. The Department will encourage reputed organisations including international bodies/Universities, Research Councils and other stakeholders for developing research methodology and to undertake research accordingly.

4.2.2.4 Human Resource Development

The Department in consultation with the State Governments, and other stakeholders will identify institutes for Training purposes. The role of these stakeholders /institutions will be to work on the introduction of quality in AYUSH education at different levels, including at graduate and post-graduate levels, in AYUSH and Allopathic medical institutions of the Government and private sectors.

4.2.2.5 Information, Education and Communication

All the stakeholders such as Industry, FICCI, Ministries/ Departments, NGOs, Associations, Individual, International bodies, Research Organizations will be approached to develop a plan for propagation and promoting AYUSH way of life.

1. **Industry, FICCI, CII etc:** Their core agenda is to promote AYUSH drugs as herbal drugs and to acquire larger share in the global market. The Department expects that as the demand for Herbals increases, and in response to demands of consumers, the industry will have to comply with the policies of the regulatory authorities.
2. **NGOs, Associations, Individuals:** Dept of AYUSH will have close interaction with these bodies for furtherance of these systems.
3. **International bodies:** will be engaged through participation and discussion at different international Forums like WHO, UN etc.
4. **Research Organizations:** Although AYUSH systems of Medicine are called time tested systems, yet research is needed to revalidate the concepts and drugs efficacy. This is more important in current scenario because acceptance of these systems is to be established. There are many research organizations, working in this area and have concrete results which need to be shared.

4.2.2.6 International Collaboration

1. **Industry, FICCI, CII etc:** Their core agenda is to promote AYUSH drugs as herbal drugs and to acquire a larger share of the global market. As of now, AYUSH drugs are being supplied as food supplements. The Department expects that as the demand for Herbals increases, and in response to demands of consumers, the industry will have to comply with the policies of the regulatory authorities.
2. **Other Ministries/ Departments:** MEA and M/o Commerce as nodal ministries/ departments espouse the cause of promotion of national interest in the international arena. Close liaison with them will be maintained.
3. **NGOs, Associations, Individuals:** The NGOs, Associations and Individuals working in other countries propagate & promote AYUSH system. Dept of AYUSH will continue to have close interaction with these bodies for furtherance of our interests.
4. **International bodies:** Participation and discussion at different international Forums like WTO, WIPO, WHO etc. on AYUSH related issues will continue to give AYUSH a global impetus.

4.2.2.7 Drugs Administration

1. Raw material cluster to be formed and implemented through Department and States and Drug Manufacturing Association.
2. The manufacturing units may be encouraged by subsidy/making availability of raw material through Department and States and Drug Manufacturing Association.
3. The enforcement mechanism of State and Central level to be strengthened.
4. Certified quality of raw material to be made available through Department and States and Drug Manufacturing Association.

Involvement of private organization/industries/Research organization in R&D through Department and States and Drug Manufacturing Association.

4.3 Plan to build knowledge and capabilities

4.3.1 Plan to build knowledge and capabilities of AYUSH

It would be necessary to sensitize officers of the Department with suitable training modules to enable them to improve performance on all the different spectrum of activities.

4.3.2 Plan to build knowledge and capabilities of AYUSH Divisions:

4.3.2.1 Provision of Ayush Services

Awareness exercise has to be initiated with all AYUSH functionaries in State Governments and ensure their participation in improving Ayush health care infrastructure.

4.3.2.2 Medicinal Plants

It would be necessary to impart training to farmers/ growers on best agriculture practices and also to SMPB, State Mission, Facilitation Centres. Further involvement of JFMCs/Village Panchayat in processing and marketing techniques of medicinal plants needs to be put in place.

4.3.2.3 Research

Orientation sessions with top notch research institutions engaged in research would need to be worked out to provide exposure to our research councils, U.G. , P.G. students and other stakeholders.

4.3.2.4 Human Resource Development

The training needs in HRD include developing facility for training and education in Pharmacy, Nursing, Massage and Panchakarma therapies; training to Anganwadi workers, ASHAs, Dais and related workers, AYUSH practitioners in modern diagnostics; establishment of State training institutes in AYUSH, expanding the scope of ROTP and CME scheme for upgrading the skills of AYUSH personnel to meet the needs of the day, training mechanism for documentation of case studies in hospitals and PG institutions.

4.3.2.5 Information, Education and Communication

The training needs in IEC include conducting health awareness programmes to share knowledge and capabilities and to exhibit and promote the strengths of AYUSH.

4.3.2.6 International Collaboration

The training needs in IC include conducting International seminars, workshops, health awareness programmes & training to build knowledge and capabilities and to exhibit and promote our strength in AYUSH. The AYUSH courses may be modified for foreign nationals according to their requirements.

4.3.2.7 Drugs Administration

To strengthen the enforcement mechanism, training shall be imparted to the scientific staff of State Drug Testing Laboratories for ASU drugs, Govt. approved Drug Testing laboratories for ASU drugs for updation of scientific skills and on new methods of analysis, and to the inspectors of the State Drug Licensing Authorities (ASU drugs) on GMP and other related aspects.

4.4 Prioritization of Strategies

4.4.1 Prioritization of Strategies of AYUSH Department

The listing of potential in para 4.1 above is already in order of priority based on suitability, feasibility and acceptability. The strategies mentioned above have been prioritized and will be pursued in the following inter-se order:

1. Strengthening Human resource Development
2. Strengthening Ayush services
3. Research
4. Medicinal Plants and Drugs
5. IC/IEC

Chapter 5 Implementation Plan

5.1 Detailed Implementation Plan

5.1.1 Detailed Implementation Plan of the Department of AYUSH

This comprises a sum of the implementation plans of respective divisions, which are listed below. Overall coordination will be done under the guidance of Secretary, AYUSH.

5.1.2 Detailed implementation plan of AYUSH Divisions

5.1.2.1 Provision of Ayush Services

- The Centrally Sponsored Scheme for Development of AYUSH Hospitals and Dispensaries will be amended to include additional components for supporting the efforts of State Governments in opening of new AYUSH Hospitals and Dispensaries.
- The Manpower Component under NRHM flexipool will be shifted to CSS of Department of AYUSH scheme, so that the Department of AYUSH can support the efforts state Governments for co-location based on actual needs.
- A comprehensive facility survey, including quality of patient care services, will be conducted to know the actual infrastructure available in the states.
- Indian Medicines and Pharmaceuticals Limited (IMPCL) will be expanded by setting up of new regional units across the country to cater the growing demand of quality medicines.
- Provision of higher remuneration and defined job responsibility for AYUSH doctors posted in public health facilities will be proposed to State NRHM authorities.
- A National centre will be designated as centre for capacity building of AYUSH Human Resources. This centre may design, coordinate with the states and implement various training programmes. They may also coordinate with various national institutes like NIHFWS, NHRM, IGNOU, PHFI and other public health institutes.
- State AYUSH colleges will be encouraged under plan scheme for undertaking public health training under AYUSH.
- Guidelines will be finalized for the involvement of the AYUSH doctors and paramedics under national health programmes with the inter-sectoral coordination from various programme divisions under NRHM.
- Field functionaries like ASHA/ANM/AWW/MPW will be sensitized and incentivized on the delivery of AYUSH services and selected medicines. The proposed centre of National Centre will be given the task of implementing such trainings.
- An integrated AYUSH health delivery protocol for the treatment of common conditions like worm infestation and anemia will be provided to state NRHM missions for implementation in all districts of the country.
- Provide material on healthy living for inclusion in the school curriculum.

- The AYUSH educational institutions will be encouraged to organize health camps in rural areas where specific targets and the patient input received may be recorded in a structured format.
- Initiate a pilot scheme for providing financial assistance in the form of soft loans, fiscal incentives to Post-graduates in ASU & H streams recognized by CCIM and CCH for commencing and expanding specialized clinical practice.
- AYUSH will pursue with all concerned so that needful amendments in relevant acts are done by the concerned administrative Ministries / Departments in order to ensure the Harmonization of all related legal provisions that impact on the practice of AYUSH systems in the country.

5.1.2.2 Medicinal Plants

The Implementation strategy for the Medicinal Plants sector comprise the following:

- Through State Mission (Horticulture/Agriculture Department) on Medicinal Plants, formulate and implement comprehensive annual action plan with due emphasis on of medicinal plant inter-cropping and under cropping plants
- Resource augmentation for important medicinal plants including RET species through State Forest Department (SFD) at identified sites.
- Proper research and extension support to State Forest Department (SFD)
- developing field gene bank through State Forest Department (SFD)
- increasing awareness, ex-situ conservation and recreation through Government, Semi-Government/NGOs.
- Development of a National Medicinal Plants Garden
- Assist State Missions, State Medicinal Plants Boards, State Forest Departments in cultivation collection, storage, primary processing of medicinal plants
- Provide knowledge, skill, experience and techniques for implementing the schemes of NMPB through National level agencies and other implementing agencies
- Support research projects of premier agencies like CSIR, ICAR, ICFRE, ICMR, Agriculture University etc.
- To establish International Institute of Medicinal Plants Management
- Develop institutional arrangements for processing and marketing of medicinal plants by promoting clusters approach
- Provide facility of preparing extracts at each such cluster/zone
- Incentivizing marketing and support for necessary infrastructure
- Provide testing facility of medicinal plants
- To provide minimum support price of medicinal plants
- Include in their scheme for promotion of the cultivation of foreign plants used in homoeopathy.
- Involve Agriculture department; Agri- universities, Distt. Krishi Kendras in Medicinal plants work
- To start cultivation of medicinal plants over 40,000 hectares annually and ensure realization of targetted yield in tonnage.
- Resource augmentation in forest areas over 8,000 hectares per annum and ensure its sustainable harvest
- Establish 20 MPCAs per annum
- To encourage *in-situ* conservation areas
- To establish 50 herbal gardens per annum

- To impart training to farmers/ growers
- To impart training to SMPB, State Mission, Facilitation Centres
- To undertake state of art research and provide quality education
- To involve 400 JFMCs/Village Panchayats per year in processing and marketing of medicinal plants
- To organize medicinal plants processing, marketing through establishing medicinal plants cluster/zone in every State

5.1.2.3 Research

- A research policy will be formulated by Department.
- Establish mechanism for Research Governance for coordination, monitoring and utilization of research findings.
- Develop a data base on best available Research evidence
- To develop various funding schemes for-
 - i. Research fellowships for PG/ PhD scholars,
 - ii. Sponsorship for post doctoral research training at International institutes
 - iii. Provision for presentation and publication of AYUSH research at International level,
 - iv. Small research projects grants,
 - v. Mega research projects grants,
 - vi. Grants / soft loans for Industrial research,
 - vii. Grants for international collaborative research
- Establish a separate center for epidemiological studies in AYUSH which forms the back bone for all the future strategies.
- Improve the visibility of research data in collaboration with NKN (National Knowledge network)
- Collaborate with strong national / International partners for High Impact Research.

The following phase wise concrete plan for validation of AYUSH systems is proposed:

- Standardization
- Safety/ toxicity and biological activity
- Clinical Trial of classical medicines as well as investigational new drugs.
- Multi-centric trials shall be conducted on classical and investigational new drugs in the disease area, especially where conventional medicine have no satisfactory treatment and AYUSH medicines have strength
- Collaboration with designated institutes in respective fields reputed research organization like ICMR, AIIMS, CSIR, DRDO, University Departments and NGOs, AYUSH institutions of State in collaboration with institutes of research Councils, Collaboration with academic/research institutes and Collaborative research with reputed academic/research institutions.
- Strengthening Intramural Research program

The List of Priority Diseases are the following:

- Preventive Cardiology (Atherosclerosis, Hypertension, Dyslipidemia)
 - Diabetes Mellitus and its complications
 - Metabolic Syndrome
 - Malaria

- Anaemia
- Mental Health
- Geriatric Health
- Reproductive & Child Health (RCH)
- Malnutrition in children
- MDR-TB (Adjuvant treatment to ATT)
- HIV/AIDS (Adjuvant treatment to improve Quality of life)
- Quality of life (QOL) in chronic and refractory illness
- Osteoporosis, Osteoarthritis & Rheumatoid Arthritis
- Study of drug interaction of different systems
- Exploring combined drug therapy in diseases like TB, Cancer and HIV/AIDS etc
- Research on priorities of Swasthavritta, Rasayana (Anti-ageing) treatment and Geriatric disorders.

5.1.2.4 Human Resource Development

- Support the State Governments under plan scheme for the development of educational institutes in terms of infrastructure and training needs.
- The proposed National Commission for AYUSH Human Resources to have a board for education regulation, another board for accreditation of the institutions and the professional councils under it. This commission inter-alia will also deal with Pharmacy and para-medical education in AYUSH.
- Introduce in the north-eastern States a scheme for setting up of new AYUSH educational institutes in the public sector on sharing basis.
- Developing a separate institute for training of trainers and developing educationists in AYUSH sector.
- A national centre will be designated for Capacity building of AYUSH HR. The centre will co-ordinate with other National training Centres and State level institutions.
- Developing crash inter-disciplinary courses in AYUSH for other streams of higher education.
- Development of specialization courses.
- Opening more job opportunities to AYUSH graduates in sector of Public health, management, etc.
- Laying down realistic minimum standards for AYUSH institutes.
- Provision of reward for institutions showing excellence in education.
- Develop legislative support for empowering AYUSH professionals to practice their skills.

5.1.2.5 Information, Education and Communication

- Propagation of AYUSH systems through conducting health awareness programmes/ participation in shows in India; using electronic and print media to promote AYUSH.
- Department will launch Integrated programmes for Behaviour Change Communication for generation of awareness on health promotion through AYUSH.
- Dissemination of research findings on healthy living, and treatment of lifestyle diseases and those conditions where cure is not available under Allopathy.

5.1.2.6 International Collaboration

- Focus on high impact countries for acceptance of AYUSH systems. A list has been made according to AYUSH activities undertaken in the countries. First priority will be given for collaboration in education, practice and research in the countries where AYUSH systems are legally recognized.
- To get scientifically validated research results, Dept will accelerate the projects and research activities where research organizations/ Councils work together on specific priority disease conditions. These results will be shared with international community to establish our strength.
- Indian Embassies/ High Commissions to be approached for highlighting IC activities of AYUSH.
- Collaboration with international Institutes/ organization/ universities of repute through signing of MoUs to promote research in high priority areas.
- Deputing Indian experts in key decision making international forums to resolve issues for accelerating/ promoting standardization, global recognition and propagation of AYUSH systems.
- Calling the experts of Traditional Medicine from abroad to make them aware about progress of our systems.
- Propagation of AYUSH systems through conducting health awareness programmes/ participation in shows abroad; using electronic and print media to promote AYUSH.

5.1.2.7 Drugs Administration

- Handholding of the drug industry to meet quality norms.
- Infrastructure building on quality assurance and quality control
- HRD relating to the production, quality control and enforcement.
- Strengthening of enforcement and quality control infrastructure.
- Speed up the pharmacopoeial work.
- Promote pharmacies at district level and promote value addition on AYUSH formulations .
- Setting up of at least 10 pharmacies in the line of IMPCL in different geographical zones of the country
- Setting up of specialized laboratories/pharmacies for preparation of standardized Bhasmas / purified metals / minerals as per SOPs laid down in Pharmacopoeia / Classics. It should be legally mandatory for all the industries / pharmacies manufacturing Ayurvedic drugs to purchase Bhasmas / Metals / Minerals from these laboratories only.
- Plant parts/products should also be identified and authenticated by some Govt. controlled agency prior to use by the industry and it should be legally mandatory for all the industries / pharmacies manufacturing Ayurvedic drugs.
- The manufacturing and testing should be done under the supervision of Rasashastra / Bhashajya Nirman / Dravyaguna.
- Development of Pharmacopoeial standards of single plants, materials and compound formulations where not available
- Mapping the unique strengths of AYUSH vis-à-vis different diseases groups
- Focus on disease with a major national burden where AYUSH drugs are effective and focus to produce medicines of good quality to meet the national requirement.

5.2 Resource Requirements

5.2.1 Resource Requirements for AYUSH Department

The resources allocated to the Department under the 11th Plan, i.e. Rs. 4000 crores would require to be increased to about 8000 crores to service the 7 defined spectrum of activities, namely Ayush services(Rs. 1600 crores), Medicinal Plants(Rs 3000 crores) for creating more posts, developing appropriate organizational structure, Research(Rs 1000 crores), IEC/IC(Rs. 400 crores), Drugs(Rs. 1200 crores) and Human Resource Development (Rs.1000 crores). However, these are only projections and actual requirement will depend on various success indicators and achievements on annual basis reflected in Annual Plans and Performance Budget .

5.2.2 Resource Requirements for AYUSH Divisions

The indicative breakup in respect of activities indicated above are given below:

5.2.2.1 Provision of AYUSH Services-

Rs. 1600 crores for various AYUSH services including skill manpower.

5.2.2.2 Medicinal Plants-

Rs. 3,000 Crores for entire gamut of medicinal plant activities including skilled personal manpower

5.2.2.3 Research-

Rs. 1000 Crores

5.2.2.4 Human Resources Development –

Rs. 1000 Crores

5.2.2.5 Information, Education and Communication –

Rs. 200 Crores

5.2.2.6 International Collaboration-

Rs. 200 Crores

5.2.2.7 Drugs Administration -

Rs. 1200 crores. Considering that Drugs sector happens to one of the key constituents of the strategy, this is expected to fuel the existing total business of the AYUSH drugs, extracts, intermediates, raw drugs food supplements from about Rs. 10000 crore to Rs. 30000 crore per year in the coming five years.

5.3 Tracking and Measurement Mechanism

5.3.1 Tracking and Measurement Mechanism for AYUSH Department

It is envisaged that the growth of PHC, CHC, District Hospitals network will be monitored on a quarterly basis by a duly empowered mechanism in the State specially to be set up for the purpose to ensure requisite delegation, priority and timely completion. The Empowered Committee will invariably have the participation of an Area Officer from the Department who shall keep the Secretary informed of the developments.

In respect of other areas of action, time bound achievement of the broad targets indicated in the Plan shall be monitored on a monthly basis by a High Power Committee headed by Secretary. It is also proposed to have a quarterly meeting headed by Cabinet Secretary, with concerned Ministries and State Government representatives.

5.3.2 Tracking and Measurement Mechanism for AYUSH Division:

5.3.2.1 Provision of Ayush Services-

quarterly review of targets at the level of Secretary (AYUSH) including participation of all Mission Directors of States and Principal Secretary Health

5.3.2.2 Medicinal Plants-

Quarterly review chaired by Secretary with CEO, NMPB and State Medicinal Plants Board, Ayush Drug clusters and other stakeholders

5.3.2.3 Research-

Monthly review of Research targets at the level of the Head of Research Councils and bi-monthly meetings chaired by concerned Joint Secretary. Secretary to Review on a six-monthly basis with stakeholders

5.3.2.4 Human Resource Development-

Bi-monthly review at the level of Joint Secretary with Mission Director of States, State Health Department officials and other stakeholders

5.3.2.5 Information, Education and Communication-

Review at the level of Secretary on a quarterly basis

5.3.2.6 International Collaboration-

Quarterly review at the level of Secretary with various Councils and other stakeholders

5.3.2.7 Drugs Administration-

Monthly review of targets at the level of Advisor of the concerned discipline, followed by review at the level of Joint Secretary and Secretary with relevant stakeholders on a bi-monthly and quarterly basis, respectively.

Chapter 6 Linkages between strategic Plan and RFD

The strategy and implementation plan outlined delineate the high level goals to be achieved and direction of actions to be pursued. They shall constitute the basis for drawing up Detailed Implementation Plans, specifying the time frames, quantitative and qualitative targets to be achieved and resources to be earmarked; and shall suitably be reflected while framing the Department's RFD.

Chapter 7 Cross departmental and cross functional issues

The objectives of the Department can be achieved successfully only if there is strategic partnership with concerned stakeholders handling the seven broad themes. Basically the process has to commence with the convergence of programmes under NRHM. The process should be gradually but eventually extended to encompass Ministry of Health and Family Welfare, Department of Commerce, Department of Pharmaceuticals, etc.

Since most of the State Governments have shown limited enthusiasm in empowering the State Health societies on AYUSH themes, it would require launching of innovative schemes on the part of the Department for motivating the States for expediting and increasing their participation. There should be also schemes so as to encourage State Health Societies to voice AYUSH interests to their respective State Governments.

The potential challenge during the XIIth Plan is healthcare which will need to have a two pronged strategy of both preventive and curative healthcare. It is in this context that AYUSH systems with its strong preventive regimen can guide the health care system by providing easy solutions for the increasing number of lifestyle related disorders.

Department of Ayush in collaboration with D/o Health should also coordinate with critical units for ensuring Public Health including sanitation, Hygiene, Safe Drinking Water and Nutrition. Since the system of preventive health has been predominantly absent in the health delivery system, it is imperative that Department of Ayush in collaboration with Department of Health takes lead in developing a working relationship with other Ministries to ensure synergy and outcomes.

Cross functional linkages with Departments

The strategy being for the organization as a whole, emphasis on any Division will not be relevant.

Organisational Review and Role of agencies and wider public service

The Strategy developed above, though similar in many respects aims to do away with the deficiencies experienced in the past. Further, a public interface has been developed in the form of a Citizen's charter and a Grievance Redressal Mechanism (CPGRAMs) which will continue to provide continuous inputs on the efficacy of AYUSH department's interventions.