

BEYOND HORIZON



*Highlights of
Draft Biotechnology Policy 2007*

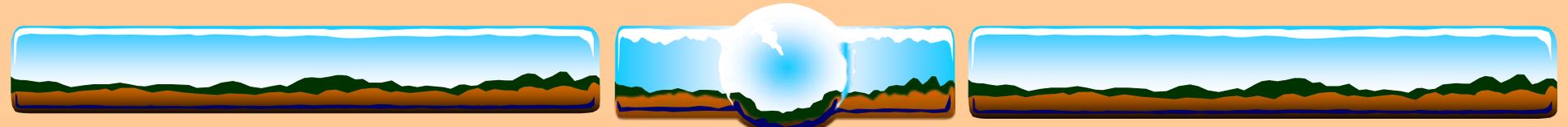
BIHAR



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- ❖ **Department Of Biotechnology (SECRETARIATE**
- ❖ **Department Of Biotechnology (DIRECTORATE)**

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Emerging Biotechnology Scenario

- **Biotechnology is the path breaking technological revolution of this millenium. It has been said that the 21st century will belong to biotechnology. Research in this area in recent times has revolutionized the way in which scientists view living matter.**
- **Biotechnology mean any technique, which uses living organisms or parts of organisms to make or modify products, improve plant or animal productivity or to develop micro-organisms for specific use.**



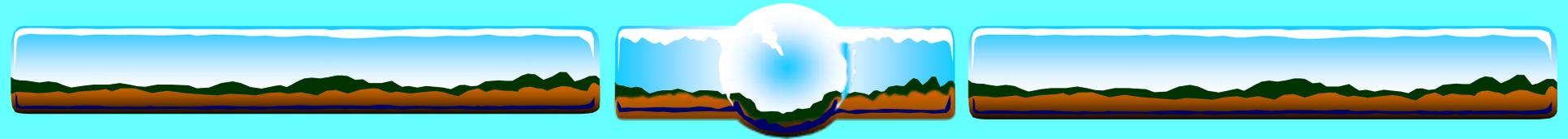
GLOBAL BIOTECH SECTOR

- ❑ To quote Bina Shaw Majumdar, Chairperson, BIOCOM India “The Global Biotech sector is a \$40 Billion industry with a market capitalization of \$375 Billion”. It has been forecast that by 2025, this ratio will be skewed in favour of Biotech drugs, which are expected to assume a 75% share.



Biotechnology and The State of Bihar

- ❖ **Biotechnology can be a boon for India in general and Bihar in particular in which a large proportion of population depend upon agriculture for their livelihood. Very low per hectare yield, limited arable land for expansion of cultivation and increasing demand for food and fibre need BIOTECHNOLOGY.**
- ❖ **Large base of population and a desire for higher standard of living as well as arresting rapid depletion of forest cover and waste management are also in need of the development of Biotechnology.**



Biotechnology involves the following disciplines as :

- **Biology (plant, animal, microbial)**
- **Biochemistry**
- **Molecular biology**
- **Genetics**
- **Chemical engineering and,**
- **Computer sciences.**



Biotechnology has made profound impact in the following fields :

- Health***
- Food***
- Agriculture***
- Medicine***
- Industries***
- Forestry***
- Fishing***
- Energy***
- Treatment of waste Materials***
- Live Stock rearing, etc.***



BIOTECHNOLOGY MAY HELP IN

- New Products*
- New Processes*
- Traditional Items in to modern one.*
- Cheaper Cost*
- Life Style Change*
- Medical Surveillance*
- Understanding the Genetic of diseases such as :-*

Cerebral vascular diseases, emphysema, bronchitis, pneumonia, influenza, cancer, diabetes, AIDS, and liver diseases are increasingly becoming leading causes of death in India. Genetics is involved in all of these

The header consists of three horizontal panels. The left and right panels show a landscape with green hills and brown soil under a blue sky. The middle panel features a white globe with blue oceans and green continents, set against a blue sky and brown soil background.

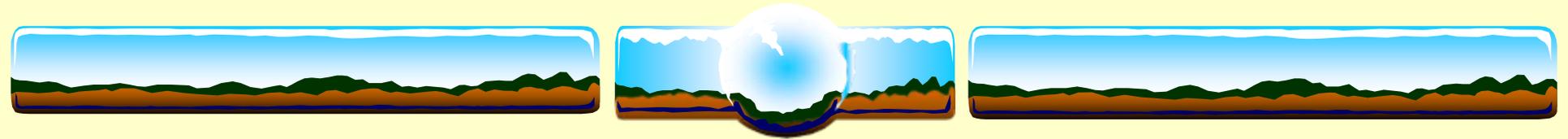
VISION

“Our Vision is to use revolutionary tools provided by Bio-Technology to help converge our states diverse biological resources to useful products and process accessible to our people for economic development, employment generation and women empowerment.”



MISSION

- ❖ To use Biotechnology for rejuvenating the economy of the state through agriculture.
- ❖ To Conserve and commercial exploitation of bio-resources.
- ❖ To promote diversified farming of high value cash crops.
- ❖ Well directed and sharply focused effort for attaining new height in biotechnological research and product development.
- ❖ Scientific and technological empowerment of human resource to ensure social justice through equitable sharing of benefits.
- Promoting welfare of rural population, women and weaker section of the society.



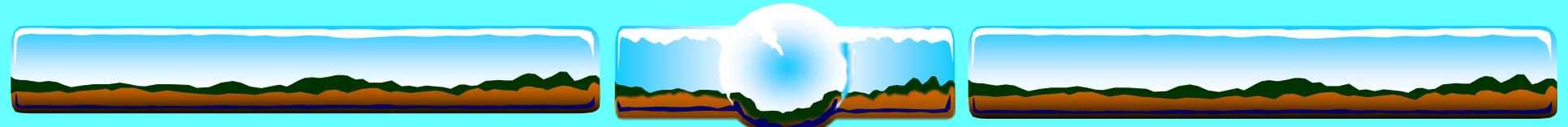
THRUST AREAS:

- **Agricultural/Horticultural Biotechnology**
- **Biotechnology & Forestry**
- **Microbial Biotechnology**
- **Aquatic Biotechnology**
- **Animal / Dairy Biotechnology**
- **Environmental Biotechnology**
- **Biotechnology and Public Health**
- **Industrial Biotechnology**



OBJECTIVES

- ❖ **Conservation of biodiversity and the sustainable use of its biotic resources.**
- ❖ **Production of high-yielding, draught and pest-resistant seeds for agriculture and horticulture crops suited to different agro-climatic zones.**
- ❖ **Enhancement of the productive potential of the aquatic eco-system.**
- ❖ **Promote environmentally safe technologies for pollution abatement, especially treatment of urban waste and industrial effluents.**
- ❖ **Generation and use of different types of bio-energy.**
- ❖ **To prepare detail inventory of bio-resources of the state by involving academia, NGO's and other players..**
- ❖ **Conservation of state's biodiversity and sustainable exploitation of bio-resources .**
- ❖ **To ensure food availability, safety and security.**
- ❖ **To eliminate malnutrition**
- ❖ **To protect environmental health**



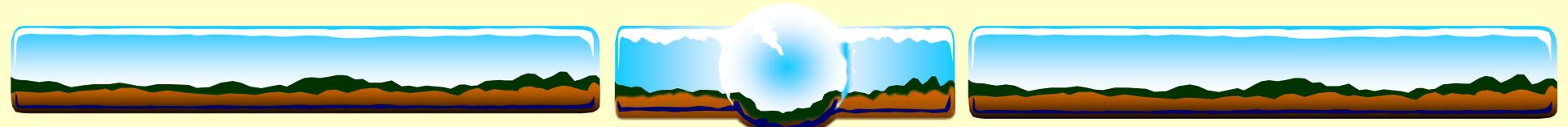
OBJECTIVES

- ❖ Assist in health care for all by 2020.
- ❖ To improve animal wealth of the state.
- ❖ To expand forest cover of the state through social and agro forestry.
- ❖ To focus on the human resource development in the area.
- ❖ To create congenial environment for encouraging R&D in biotechnology and related fields through development of infra-structure and appropriate incentives.
- ❖ To develop high quality infra-structure with the required support services by setting up appropriate biotech parks in the various parts of the state.
- ❖ To promote agro industries in a big way.



OBJECTIVES

- ❖ To develop regulatory framework safeguarding the health of the people and environment with impending the growth of science and industry.
- ❖ Development of Bio informatics.
- ❖ Development of Bio diversity.
- ❖ To facilitate the flow of venture capital.
- ❖ To create awareness about Intellectual Property Rights.



ACTION PLAN FOR IMMEDIATE IMPLEMENTATION

Approaches

1. Provide support to Universities to conduct M.Sc. (Bio-Technology), B.Tech. (Bio-Technology) and B.Tech (Bio-Informatics) programmes.
2. Revive research projects approved by Department of Bio-Technology Govt. of India for Bio-Tech.
3. Create a Bio-Technology Development Board to identify areas of application of existing technology to agricultural farming, Poultry farming, fish farming and dairy farming of the State so that relevant time bound research projects can be taken up at various institutions to develop the required techniques.
4. Proper incentives be provided for the development of Bio-Technology units in the State along the lines of those provided in other states.



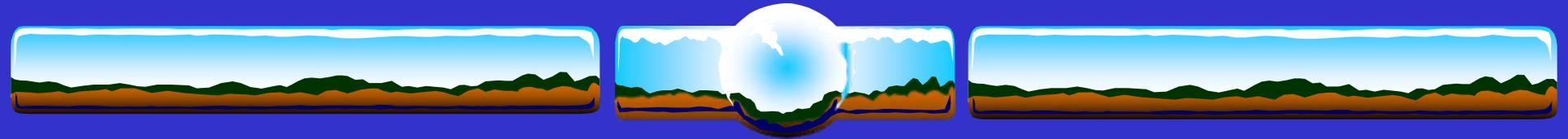
ACTION PLAN

- **Formation of state Biotechnology Department and Directorate as Central Nodal Agency**
- **Identification of state Bio-resources and their mapping in order to create reliable data base.**
- **Conservation characterization propagation and improvement of endangered State's biodiversity.**
- **Cataloging of medicinal and aromatic plants found in the state and their commercial exploitation.**
- **Promotion of organic farming, bio-fertilizer and vermi-composting.**
- **Establishment of mechanism of standardization of value added agro products for the purpose of export.**
- **Wasteland reclamation through social and agro forestry**



ACTION PLAN

- To help State Pollution Control Board for Bio-remediation and bio-control of pollution.
- To revive water-bodies of state and promotion of high value aquaculture as well as value addition to fish and fisheries products.
- Creation of an attractive and viable Biotechnology industrial policy.
- Creation of Bio-technology industrial board with a mandate of single window clearance and development of industrial infrastructure.
- Establishment of centre/centres of excellence for research and training in high- end biotechnology in the field of agriculture and medicine.
- Strengthening of existing institution of higher learning.
- Establishment of Bio-Villages for empowerment of rural poor and women.
- Establishment of rural technology parks for technology demonstration and transfer.
- Establishment of technology city.



BIOTECHNOLOGY AND PUBLIC HEALTH

- In the areas of public health two important developments, viz, biotechnology and information technology have vast applications. The concept of disease causation has changed from host centric to holistic.
- New medical treatments based on biotechnology include a therapeutic products (hormones, regulatory proteins, antibiotics) bio-prenatal diagnosis of genetic diseases, e. vaccines, d. immuno diagnostics and DNA probes for disease identification and gene therapy.



BIOTECHNOLOGY AND INDUSTRY

- ❖ In the state of Bihar biotechnology based industries are practically non-existent. In view of the potential of biotechnology there is an urgent need to promote and provide infrastructure for both low and high end biotechnology based industries vis-a-vis economic regeneration of the state.
- ❖ Low end biotechnology consists of value addition to agricultural products and other processing and service industries for which technologies are available off the shelf.
- ❖ High end biotechnology comprises of recombinant DNA technology based industries like genetically modified food and organism, transgenic plants and animals, monoclonal antibody production, antibiotic and enzyme production, fermentation technology and bioinformatics.

INCENTIVES

The proposed incentives are based on Industrial Policy of Bihar

- ❖ Incentive granted on land/Shed:
- ❖ The Biotechnological Units located in Bihar Industrial Area Development Authority / Export Promotion Industrial Park / Food Park / Agri-Export Zone would be eligible for the following incentive / subsidy. These facilities / concession to the industrial units will be made available only after the commencement of production.

Sl.	Biotechnological Industry	Grant
1.	Small/Tiny bio-units/Financial Limit.	50% or 7.50 lacs (Maximum)
2.	Alarge/medium/mega units/Financial	25% or 15 lacs (Maximum)



INCENTIVES

LABOUR CONCESSIONS

- ❖ A system of self-certification will be introduced for the biotech industry under various Factories and Labour Acts.
- ❖ Exemption of biotech units from the provisions of Contract Labour Act 1970, in so far as non-core activities are concerned (with concurrence of Government of India).
- ❖ Set up exclusive Special Industrial Tribunals for Biotech Parks to give top priority to the settlement of disputes that may arise in units located in the Biotech parks.

Stamp duty and Registration fee:

- ❖ Tiny, small, medium and large scale industries which are to be established in the industrial area / shed and outside the area of the Authority will enjoy the full (100%) exemption in stamp duty and registration fee in lease / sale / transfer. This facility will be granted only for the first time and thereafter will not be granted.

Project- Report Incentive:

- ❖ Reimbursement of the cost incurred in the project report preparation by the industrial units at the rate of 50% subject to a maximum of Rs.75,000/- will be made available provided, the project report is prepared by any of the firms recognised by the Industry Department. The reimbursement will be made to the unit after commencement of the production.



INCENTIVES

Financial assistance for Technical-know-how

- ❖ If an entrepreneur obtains Technical Know-how from any recognised National research center / laboratory or institution to establish or to expand his industry, he will be reimbursed 30% (maximum Rs. 15.00 lacks) of the fee paid to the institution/organization for the technical know-how. This facility will be provided to the unit after commencement of production.

ZERO VAT:

- ❖ Zero VAT means the production of items, which do not attract VAT. Such units which produce items attracting zero Vat and Pay income tax would be eligible for incentive upto a maximum utilization of 70% of the installed capacity (maximum limit) as per para (vi) above. Incentive will be payable after the inspection/recommendation by a committee constituted under the chairmanship of the Director Industries on the basis of inspection and recommendation by technical officer of the Department.



Besides aforesaid subsidy / concessions,

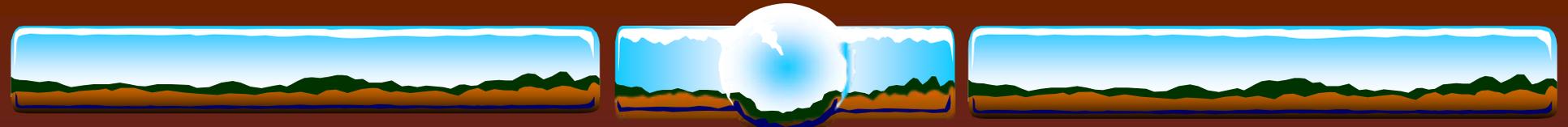
the following exemptions will be provided

- ❖ **a. 100% exemption for seven years in luxury tax for seven years.**
- ❖ **b. 100% exemption in electricity duty for seven years.**
- ❖ **c. 100% exemption in conversion charge.**
- ❖ **d. 100% exemption in market Fee for seven years.**

S.C / S.T / Women / Handicapped

a. Under this category, entrepreneurs will avail 5% additional grant / exemption/subsidy than the limit fixed under this policy.

b. Up to a turnover limit of Rs.30 lakhs per annum S.C / S.T. / Women / Handicapped category entrepreneurs who run small and tiny industries will avail 100% subsidy of the deposited amount in the account of Government in the form of VAT for a period of ten years.



The following incentives may be considered which are applicable to other states

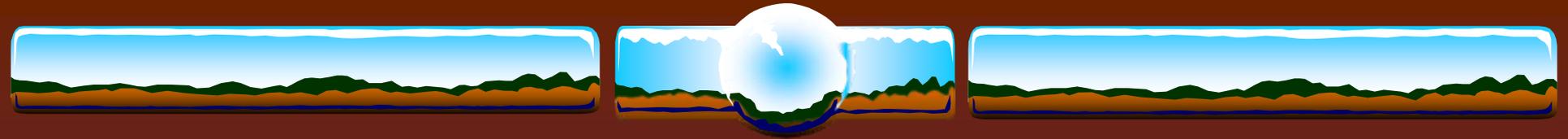
- ❖ **LAND FOR HOUSING (A.P.Govt. Biotech Policy)**

Government will provide Government land at concessional rate, wherever suitable land is available for developing housing and recreation facilities for personnel working in Biotech field in designated areas

- ❖ **SPECIAL CONCESSION TO BIOTECH PARKS (U.P Biotech Policy 2004)**

Property transaction in the designated biotechnology park shall be exempted from stamp duty. There shall be no stamp duty on lease and financial instruments of units located in such parks.

- ❖ **DEPRECIATION ALLOWANCE ON PLANT AND MACHINERY SETUP BASED ON INDIGENOUS TECHNOLOGY (Uttaranchal Biotech Policy)**



The following incentives may be considered which are applicable to other states

- ❖ For each job created by the Biotech-Industrial units Govt. may provide a maximum of Rs. 40,000/- or two month salary whichever is more in their second year of operation. [Biotech Policy A.P. Govt.]
- ❖ **Land and grants for training institutes:**
Government will allot government land either free of cost, or at a concessional rate and give grants for capital expenditure to institutes of Training in the field of Biotechnology and related areas on a case-by-case basis.
- ❖ **Mega Projects :**
Mega projects will be offered a unique package of concessions including concessions mentioned elsewhere in this policy for a maximum period of 10 years. . Special incentives will be offered on a case by case basis to mega projects with an investment of more than Rs. 50 crores in a new company or in the expansion of an existing company which provide employment to more than 250 persons technically qualified in the area of biotechnology or allied fields.



CREATING AND ENABLING ENVIRONMENT

- Government of Bihar may set up a Biotechnology Advisory Committee, with Dr. Suraj Bhan, Secretary, Department of Biotechnology, Government of India as Patron and eminent scientists and experts such as Dr. D. Balasubramanian, Dr. M.V. Rao, Dr. A. Venkateswarlu, Dr. P. Puspangadam, Dr. V. Prakash, Dr. Lalji Singh and Dr. Syed Hasnain as members to advise the Government of Bihar on the promotion and development of biotechnology in the State.
- Appointment of a suitable consultant would be made for the development of Biotechnology applications.



VENTURE CAPITAL

A venture capital fund of Rs. 200/- crore could be created with the equity participation of State and Central Governments as well as financial institutions to promote the Biotech industries in the state

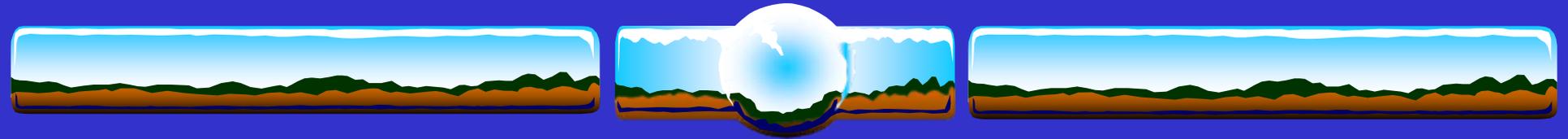
EDUCATION AND TRAINING

- The existing educational facilities shall be expanded by encouraging universities and colleges to set up facilities for under-graduate and post-graduate level programs in Biotechnology.
- Technical institutions including agriculture and veterinary colleges, engineering colleges and polytechnics shall be encouraged to introduce Degree and Diploma level programs for Molecular Biology biotechnology, bio-informatics, bio-ethics and related fields.
- Technician level courses shall be introduced at it is and para medical schools.
- A Human Resource plan for the Biotechnology sector shall be prepared.



INTELLECTUAL PROPERTY RIGHTS

- Keeping in view the importance of IPR in spurring research and innovation in a Knowledge Society, Government of Bihar will play a proactive role in creating awareness throughout the state.
- The Bihar Govt. in collaboration with the Technology Information, Forecasting and Assessment Council (TIFAC), an autonomous agency of the Department of Science & Technology of Govt. of India and the Confederation of Indian Industry will set up a Bihar Technology Development Centre (BTDC).
- For development of a database on world wide patents, providing patent search facilities for local scientists and entrepreneurs and creating an awareness of Intellectual Property Rights in Bihar and an innovative mind set amongst its people.

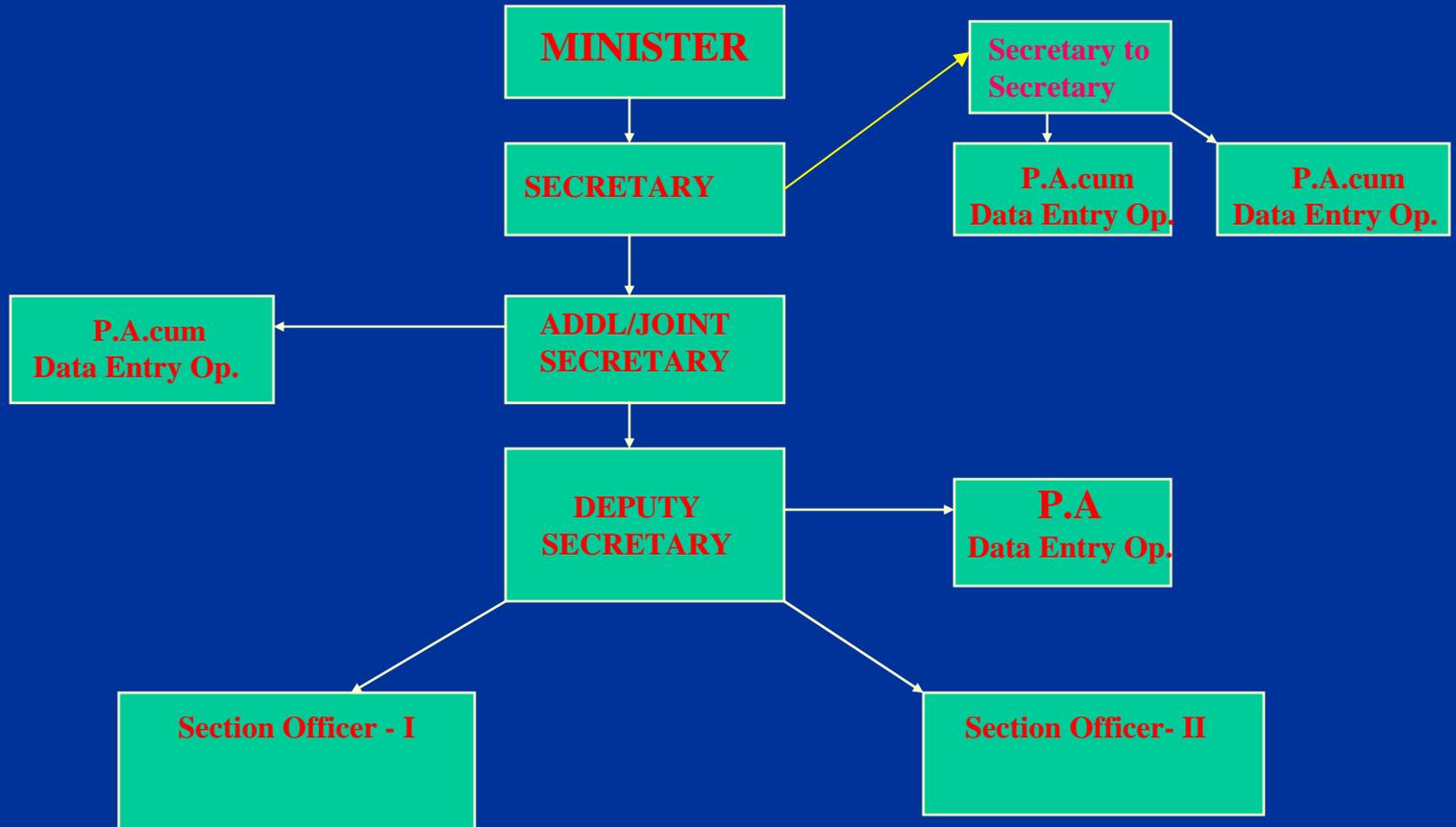


BOARD

❖ BIHAR BIOTECHNOLOGY BOARD

Government of Bihar may set up the Bihar Biotechnology Development Board, with the Chief Minister as Chairman and Ministers in charge of Industry, Agriculture, Environment and Forestry, Animal Husbandry and Fisheries, Medical and Health, Energy, Information Technology, Education and Revenue as members. Members of the Biotechnology Advisory Committee, besides eminent scientists, experts, industrialists and consultants in the field of biotechnology will also be members of the board.

**GOVT. OF BIHAR
DEPARTMENT OF BIOTECHNOLOGY
(SECRETARIATE)**





GOVT. OF BIHAR
DEPARTMENT OF BIO TECHNOLOGY
(DIRECTORATE)

1.

DIRECTOR CUM SPL.SECRETARY (Bio Tech)

P.A.cum Data Entry Op.

CHIEF CONSULTANT/ADVISER (BIOTECHNOLOGY)

P.A.cum Data Entry op.

Consultant I
Agri/Horticultur
e Biotechnology

Consultant II
Biotechnology &
Forestry

Consultant III
Mircrobial
Biotechnology

Consultant IV
Aquatic
Biotechnology

Consultant V
Animal/Dairy
Biotechnology

Consultant VI
Environmental
Biotechnology

Consultant VII
Biotechnology &
Public Health

Consultant VIII
Industrial
Biotechnology

Dy. Consultant I
Agri/Horticultur
e Biotechnology

Dy. Consultant
II Biotechnology
& Forestry

Dy. Consultant III
Microbial
Bitotechnology

Dy. Consultant IV
Aquatic
Biotechnology

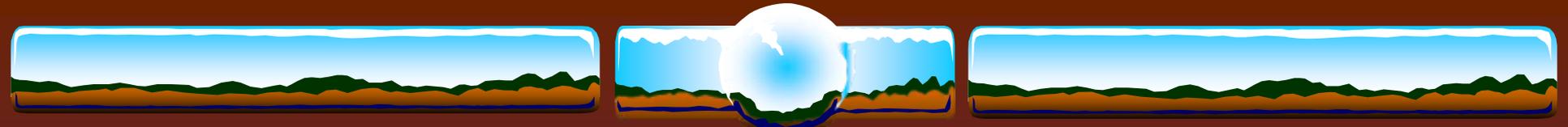
Dy. Consultant
V
Animal/Dairy
Biotechnology

Dy. Consultant VI
Environmental
Biotechnology

Dy. Consultant VII
Biotechnology
&Public health

Dy. Consultant
VIII
Industrial
Biotechnology

Assitt.Programmer
cum data entry
operator



ACKNOWLEDGEMENT

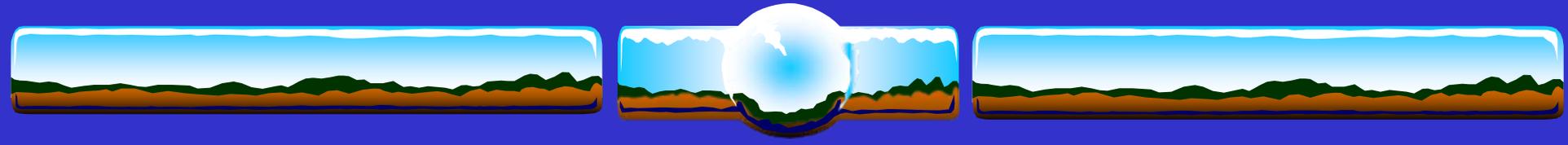
Dear Mr. Ajay Kumarji,

”Thank you very much for sending a copy of the document ‘Biotech Policy ‘for Bihar. I have gone through the document. The document is well written. Considering the fact that this has been put up within such a short time without much hands on experience on Biotechnology, the quality of the document is excellent and efforts that have gone into are commendable.”

Dr LALJI SINGH
Director,

Centre for Cellular & Molecular Biology (CCMB), Hyderabad 500 007, India

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- ❖ **Dr.M.K.Uday,**
General Manager, CDOT.



Thanks