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GOVERNMENT OF ASSAM

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## Biotechnology Policy For The State Of Assam, 2018-2022





Sarbananda Sonowal



Chief Minister, Assam  
Guwahati

# MESSAGE

It's a matter of immense pleasure and satisfaction for Government of Assam to present the Assam Biotechnology Policy 2018 – 2022. Biotechnology has brought significant impact in various sectors like healthcare, food, agriculture, energy, environment etc. It has now become a prime driver of global socio-economic growth.

Assam is a unique treasure of vast bio-resources. Large number of precious flora and fauna, rare medicinal plants, micro-organisms and many other bio-resources are spread across the valleys, forests and rivers like mighty Brahmaputra. With its distinctive geographical location, rich natural resource and human resource base, Assam provides a fertile ground for growth of biotechnology biotech based industries. We have decided to tap the biotechnology potential of the State in an effective way for growth of industries, local employment, enhancing rural livelihood and overall economy.

With this aim, Government of Assam has come up with this policy to create a dynamic biotech ecosystem in the State. Government of Assam is committed to encourage academics, research, innovation excellence in biotech sector in the State. This policy has various provisions to support biotech education, research, innovation and skill development. The policy also aims at creating a vibrant platform for innovators, start-ups and entrepreneurs through strong linkages among different stake holders. To encourage and accelerate State's industrialisation in biotech sector, the policy offers sound support and plenty of incentives and concessions for land and infrastructure, industries, technology acquisition, start-ups, incubators, biotech units, biotech parks and other related facts in this sector.

I am sure that the policy will definitely attract local as well as global investors and Assam will very soon emerge as a prime biotech investment destination.

(Sarbananda Sonowal)

**Keshab Mahanta**



**MINISTER**  
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# MESSAGE

I am extremely delighted and happy that the Government of Assam has come up with Assam State Biotechnology Policy 2018–2022. In recent years Biotechnology has emerged as one of the most advanced technologies enabling valued solutions in the fields of agriculture, healthcare, environment, food safety, energy, etc. In today's date biotechnology plays a crucial role for improvement of life and lifestyle.

The state of Assam is blessed with enormous bio-resources. This treasure of natural resources holds a great promise in bio-resource based socio-economic movement in the state. Government of Assam have decided to ensure effective utilization of biotech potential of the state for growth of industries and employment generation.

Government of Assam is committed to create a flamboyant environment for biotechnology education, research and industrialization. We are focusing on developing strong linkages among academia, research and industries to create a rising platform for innovators, start-ups and entrepreneurs. The policy offers a broad spectrum support and host of concessions and incentives for biotechnology education, research, skill development, land and infrastructure, technology acquisition & transfer, start-ups, incubators, biotech units, biotech parks, industries etc.

This policy is framed to fulfil the states expectation to boost industrialization based on immense potential of state's bio-resource and core areas through better market prospect and suitable incentives. I belief that this policy will attract country based as well as global investors. Assam, with such endeavours, will come up as a favoured destination for investment in biotech sector in near future.

  
(Keshab Mahanta)

**Rajiv Kumar Bora**



**Shri Rajiv Kumar Bora, IAS**  
Additional Chief Secretary,  
Science & Technology Department  
Government of Assam

# MESSAGE

The State of Assam has enormous scope and potential for growth and development of Biotechnology Sector. Being one of the 34 biodiversity hotspots in the world naturally gifted with rich biodiversity and vast natural resources, catalysed by the industry friendly environment, Assam is on the rise to become one of the major destinations for investments in Biotechnology Industry. The State is thriving to attain high capability in biotechnology education, research and commercialization and utilizing biotechnology to build up a sustainable industry ecosystem for creation of wealth, income generation, employment generation and promotion of equity.

The Biotechnology Policy for the State of Assam 2018–2022 is an outcome of intensive and extensive research and brainstorming. The draft policy was circulated across all stakeholders of the Biotechnology Sector and based on the suggestions and views received by the Government of Assam the Biotechnology Policy for the State of Assam was finalized. Now that the Biotechnology Policy for the State of Assam 2018–2022 is in force, the Government of Assam has opened up doors for investment opportunities with pro–industry policy measures where a win–win ecosystem will help both the investors and the State.

I hope that the Biotechnology Policy for the State of Assam 2018–2022 will usher in a new era of investment and growth in Biotechnology sector in Assam.

  
Rajiv Kumar Bora



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# Preamble

## **1. PREAMBLE**

Biotechnology is the most contemporary science and technology of research and development that has made significant progress. In recent years, a massive translation of biotechnology into economic benefits has been realized due to its application in the development of products, processes and services in agriculture, animal husbandry and fisheries, healthcare, energy, environment, and several other sectors.

### **1.1 BIOTECHNOLOGY: A TOOL FOR SOCIO-ECONOMIC DEVELOPMENT**

Biotechnology signifies any technique “which uses living organisms or parts thereof to make or modify products, improve plant and animal productivity or to develop micro-organisms for specific use”. It is one of the most application-oriented sciences that has been in use for bringing about changes in the production sectors. The Indian initiative in biotechnology has already attained a critical level. According to a recent report of European Business and Technology Centre (EBTC), the biotechnology sector is one of the fastest growing knowledge-based sectors in India and is expected to play a key role in shaping India’s rapidly developing economy. With numerous comparative advantages in terms of research and development (R&D) facilities, knowledge, skills, and cost effectiveness, the biotechnology industry in India has immense potential to emerge as a global key player. As per the first survey made by the Association of Biotechnology-Led Enterprises (ABLE) and Biospectrum (A cyber media publication), the size of biotech industry in India in 2002-03 was Rupees 2,345 crore. ABLE-Biospectrum 10th survey shows that the biotech industry in 2011-12 registered 18.5 percent growth contributing Rupees 20440.70 crore in revenues. The Biopharma sector contributed over 60% to the industry’s total revenues at Rupees 12,679 crore with a growth rate of 19% followed by Bioservices at Rupees 3,749 crore (15.5%), BioAgri sector at Rupees 3,050 crore (23%), BioIndustrial sector at Rupees 696 crore (11.2%) and Bioinformatics at Rupees 266 crore (9.6%).

### **1.2 THE BIOTECHNOLOGY POTENTIAL OF ASSAM**

Assam is one of the biodiversity hot spot regions and is very rich in plant, animal and microbial resources. It is considered as the genetic centre of origin of citrus and bananas. The state has vast species diversity as well as commercial strength in rice, tea, bamboo, rattan, jute, ginger, citrus and several other commercial crops. Several hundred species of medicinal and aromatic plants grow naturally in Assam, some of which are endemic to the State and highly valuable commercially. The state is also rich in orchid and other ornamental plant species. The microbial resources of the state are enormous and have economic potential. Muga and Eri silk of Assam is a distinctive bio-based industry. Aquatic and forest bio-resources are the other major engines for economic growth of the State. Biotechnology will offer excellent opportunities in augmenting value creation, wealth and employment not only in many of these areas but also lead in new vistas for application in agriculture, medicine and industry. The unique and vast bio-resource potential of Assam stands to provide tremendous economic benefit through commercialization of these resources using biotechnology. The natural resource based industries viz., petroleum, natural gas and coal also entail biotechnology intervention in terms of enhanced production, pollution control and several other aspects.

### **1.3 STATUS OF BIOTECHNOLOGY IN ASSAM**

The biotechnology industrial development in the state is yet to take place. However, initial entrepreneurial activity is growing in BioAgri sector like medicinal plant processing, tissue culture production of bamboo and banana, microbial based biofertilizer production, vermi-compost production, processed foods and mushroom production.

At present eight universities including two private, nine national level research institutes and one IIT are imparting biotechnology education in Assam. Courses offered by the universities and IIT include M.Sc, M.Tech, Ph.D and PG Diploma courses in biotechnology and allied areas. Several colleges are also offering undergraduate courses in biotechnology. The state produces nearly 300 numbers of human resources in biotechnology per annum that include B.Sc, B.Tech, M.Sc, Ph.D, and diploma holders.

The universities and research institutions are involved in biotechnological research and development (R&D) activities. Research activities for molecular characterization of diverse plant, animal and microbes of Assam are underway in these institutions. Substantial achievements have also been made in tissue culture propagation and genetic improvement work in a number of agricultural, horticulture and wild economic plant species. Research & development activities on bio–fuel, fermented food products, increasing productivity in livestock, poultry and fish, bio–surfactants, bioactive

compounds, bioremediation, biomedical areas and bioinformatics are presently getting momentum in Assam. Biotechnology teaching and research infrastructure in the state is growing in the positive direction. All the universities have quality manpower and expertise. Universities and institutions have good laboratory infrastructure and are getting financial support from the state, national and international funding agencies. In recent years, Department of Biotechnology, Ministry of Science & Technology, Govt. of India has funded 10 Bioinformatics infrastructure facilities and 64 Biotech–hubs that house equipment and other facilities in the universities, institutions and colleges of Assam to undertake teaching/training and research activities in the relevant fields. A specialized centre namely DBT–AAU Centre for Agriculture Biotechnology has recently been established at Assam Agriculture University, Jorhat with the financial support of DBT.

#### **1.4 BIOTECHNOLOGY INITIATIVE IN ASSAM**

Government of Assam has been providing financial support to the state universities for biotechnology infrastructure development. The government had also taken initiative for establishment of the “Guwahati Biotech Park” in the year 2008. Land for the same has already been provided by the government. The Guwahati Biotech Park is a registered society with main objective to promote research as well as develop entrepreneurship in the field of biotechnology and allied areas. The Government of Assam, through GBP, in the last few years, has been organizing many skill development workshops, industrial conclaves, entrepreneurship development programs, technical talks and biotech promotional events. An incubation centre is already functioning from a temporary campus within the Indian Institute of Technology, Guwahati. The construction work for the permanent building of the incubation centre is already underway at the new GBP campus, Amingaon

#### **1.5 KEY DRIVERS AND SPECIFIC FEATURES FOR BIOTECHNOLOGY POLICY FORMULATION**

It is apparent that biotechnology has interface with various sectors including agriculture, horticulture, animal husbandry, fishery, forestry, medicine and health care, environment, energy and so on. Biotechnology industries are contributing in the manufacturing sector and providing bio–services. These industries are capital and power intensive. Biotechnology industries require strong R&D support as well as technically trained manpower. Accomplishment in biotechnology education and research is a key element in expansion of industrial activity.



POLICIES



# The Policy

## **2. THE POLICY**

### **2.1 VISION**

The vision of this policy shall be to attain high capability in biotechnology education, research and commercialization and utilizing biotechnology to build up a sustainable industry ecosystem for creation of wealth, income generation, employment generation and promotion of equity.

### **2.2 POLICY OBJECTIVES**

- 1) To create a vibrant ecosystem in the state for the development of human resources and industrial ventures.
- 2) To promote education and research & development in biotechnology and allied areas.
- 3) To promote employment generation through application of biotechnology for enhancement of production and growth in agriculture and allied sectors.
- 4) To encourage biotech industries in the state through establishment of commercial biotechnology ventures.
- 5) To support biotechnology business for wealth creation and enhance the contribution of biotechnology sector to state's economy substantially.
- 6) To develop high quality infrastructure with the required support services for manufacturing units through state of art biotechnology parks.
- 7) To leverage the existing biological (Agriculture, horticulture, forest, animal etc.) and natural (Oil, coal, etc.) resources through use of biotechnology for socio economic development of the state

#### **2.2.1 DEFINITIONS OF BIOTECHNOLOGY UNIT AND RELATED TERMINOLOGIES**

- 1) Biotechnology unit/company: A unit engaged in manufacture of 'Biotechnology products' (as defined in 2 herein after). The term 'unit' refers to a legal / corporate entity (e.g. a Public or Pvt. Limited Company/ Partnership or Proprietorship Firm) with separate books of accounts and an independently located facility. 2) Biotechnology Product: A product, which uses or is derived by using (i) Living systems, (ii) Enzymes, (iii) Bio-catalysts and any of the following processes viz., (a) Genetic Engineering, (b) Cell Culture (c) Bioprocess engineering, (d) Protein Engineering, (e) Tissue Engineering, (f ) Microbial technology, (g) Bio-Informatics, (h) Genomics, (i) Bio-Transformation, (j) Molecular breeding, (k) Bio-Diagnostics, (l) Vaccine Technology, (m) Embryo Manipulations (subject to legal and ethical regulations), (n) Pharmacogenomics, (o) Proteomics or other cutting edge technologies and services included under broad discipline of biotechnology. 3) high-end Biotechnology: The technology that involves development of recombinant products, their refinement and modification, would be treated as high- end biotechnology. The high-end biotechnology would also take account of gene technology, animal cloning, nano-biotechnology, pharmaco-genomics, pharmacokinetics, new drug delivery mechanism, neuroscience etc. The definition of high-end Biotechnology would be subject to revision and modification from time to time on the basis of the developmental pace of biotechnology
- 4) Existing Biotechnology unit: A Biotechnology unit existing as a legal entity before the date of this policy.
- 5) new Biotechnology unit: A Biotechnology unit formed on or after the date of adoption of this policy. In case of any dispute arising out of interpretation of any definition, the interpretation of state Government shall be treated as final.

- 6) **Micro, Small and Medium Enterprises (MSME)** : MSME in Biotechnology Industry shall be construed as per the definition under the MSME Act 2006 (as amended from time to time) of the Government of India.
- 7) **Gross Fixed Capital Investment (GFCI)** : Gross Fixed Capital Investment (GFCI) for applicant units, means the investment made in building, plant and machinery and other related fixed assets including common infrastructure such as effluent treatment plant, testing facilities, shared data centre, excluding land and buildings, required to manufacture end products or provide services by eligible unit for setting up new unit or for undergoing expansion/diversification up to within one year from the date of production or till one year from coming to an end of this Policy, whichever is earlier. For deciding incentives, in case of Units, eligible GFCI made in building will be capped at 20% of total GFCI. The GFCI for parks will include investment in all facilities listed for the unit, except the building for any of the units if that is not a shared facility. For all units as well as parks and other category of applicants, the cost of land will not be included in computation of GFCI.
- 8) **Biotechnology Parks**
- Biotechnology Parks are facilities created mainly to promote tiny, small and medium biotech entrepreneurs. The Biotechnology Parks would provided a good template for the promotion of Biotech start up companies and the promotion of Public Private Partnerships.
- 9) **Horizontal Biotechnology Parks:** Horizontal Biotechnology Park means a site which is developed during the operative period of this Policy in minimum area of 10 Acres of which 70% of total saleable/leasable area is allotted to at least five Biotechnology units and minimum 60% of such area assigned for BT units is actually occupied with operational BT units within one year from coming to an end of this Policy.
- 10) **Vertical Biotechnology Parks:** Vertical Biotechnology Park means new development undertaken during the operative period of Policy in the nature of either a vertical development in the shape of a tower or a group of towers with minimum 1,00,000 sq. ft. of saleable/leasable area out of which 70% of saleable/leasable area is allotted or to be allotted to at least three Biotechnology or IT units; or a vertical development in the shape of a tower or a group of towers with minimum 3000 seat capacity built by any Biotechnology unit/IT unit of which 60% capacity is actually occupied within one year from coming to an end of this Policy.
- 11) **Biotech Start-up**
- An entity involved in crafting repeatable and scalable product or service making a positive impact in the society, where the solution is not obvious and success is not guaranteed.
- An entity shall be considered as a “Startup” if the entity is recognized as a “Startup” under the “Startup India” Initiative or fulfils all of the following conditions :
1. The date of the entity’s incorporation / registration is not prior to seven years. In case an entity is engaged in the biotech sector, the date of incorporation /registration should not be prior to ten years;
  2. Its annual turnover does not exceed Rs. 25 crore, for any preceding financial year;
  3. It is registered in Assam or employs at least 50 percent of its total qualified workforce from Assam;
- Such entity is not an extension of an existing family business; or formed by splitting up or reconstruction of a business already in existence.

## 12) **Biotechnology Incubator**

Biotechnology Incubator for the purposes of this Policy means an organization registered as an incubator, engaged in accelerating the growth of start-ups through host of support services and resources such as space, funding support, mentoring, market linkages and business management services, which incubates minimum 10 incubatees at a time and out of which minimum 60% are from Biotechnology sector. For new incubators being setup under this Policy, the incubator should get 06 incubatees within 2 years from the date of application out of which minimum 60% will be from Biotechnology sector to be eligible for this assistance.

### **2.2.2 PROMOTING HIGH-END BIOTECHNOLOGY INDUSTRY IN ASSAM**

The state has a vision of developing the capabilities for cutting edge technologies which would encourage wealth creation and help in acquiring global strengths. While low-end and conventional biotechnologies have their own relevance and potential, in terms of acceptability, employment generation and wide application, the key strengths would lie in the development of high-end biotechnology. High-end Biotechnology, is highly capital intensive with long gestation period, needs high research inputs and special infrastructure.

Therefore, the state would encourage R&D efforts in high end biotechnology.

### **2.2.3 ENTITLEMENT OF BENEFITS TO BIOTECHNOLOGY INDUSTRIES**

The Biotechnology industries, as per the eligibility conditions, would be entitled to the benefits, available as per the provisions of the various schemes, framed under this policy. They shall also be eligible for any relevant benefits under other policies of state government namely the industrial policy, the state agriculture policy (for agri-bio units), the state information Technology policy (for bioinformatics units) or any other relevant policy in force, subject to the condition that there shall not be any duplicity of concessions extended by the state government. Any unit which receives any benefit from the state government under any policy shall in a transparent manner, mandatorily submit the necessary details of the benefits received, to the executive committee.

### **2.2.4 REGISTRATION OF BIOTECHNOLOGY INDUSTRIES OR UNITS**

The biotechnology industries/companies/units engaged in the manufacture of biotechnology products need to register their facility with the Department of Science & Technology (DST), Government of Assam. The DST would provide a prescribed format of application for registration and will issue the Registration Certificate. The industries /companies/ units shall be able to claim any incentives or relaxations/concessions only on production of such a certificate.

## **2.3 STRATEGY**

The following key strategies have been identified to address Policy objectives:

### **2.3.1 ACADEMIC-INDUSTRY LINKAGE**

The state would facilitate to produce highly skilled manpower in Biotechnology according to industry requirement, by giving financial and technical assistance to colleges and Universities in Assam for industry oriented curriculum development in undergraduate and post graduate level, for promoting research and innovation as well as skill development.



### 2.3.2 PROCESS SIMPLIFICATION FOR INDUSTRY / SINGLE WINDOW CLEARANCE

The state would endeavor to create a congenial environment for Biotech Industry through process simplifications to enable clearing of feasible commercial biotechnology venture proposals. In this regard, it is worth mentioning that the state has already launched the ease of doing business reforms.

### 2.3.3 INFRASTRUCTURE FOR BIOTECH PROCESS AND PRODUCT DEVELOPMENT

The state would set up modern state of art infrastructure for biotechnology process and product development, in the form of Biotechnology parks, research facilities and common equipment centers. The state shall also create, start-up cells and incubation centers at the district science centers which are already functioning and owned by the Science and Technology Department.

### 2.3.4 FACILITATING ENTREPRENEURSHIP

The state would facilitate entrepreneurship in biotechnology by providing support in technology transfer, business management, capacity building, financial and fiscal incentives.

### 2.3.5 FACILITATING NETWORK AND LINKAGES AMONG STAKEHOLDERS

The state would facilitate and persuade networking and linkages among various stakeholders and partners.

### 2.3.6 FACILITATING PUBLIC-PRIVATE PARTNERSHIP

The state would encourage public-private partnership (PPP) for setting up large scale biotech industries as well as for conducting research and development.

## 2.4 THRUST AREAS

The following thrust areas have been identified for biotech development in the state:

- A) **Agriculture biotechnology:** The key activities in agriculture biotechnology would include (a) Development of transgenic crops resistant to biotic and abiotic stress; (b) Molecular breeding and production of genetically uniform quality seeds, (c) Developing Bio- fertilizers, Bio-pesticides, Bio-fuel and value added products, (d) Improvement of Banana, Citrus, Bamboo and Jute germplasm, (e) Tissue culture and bioprospecting of medicinal and aromatic plants, (f) Diagnostics for phyto-pathogen and (g) Tea biotechnology.
- B) **Animal biotechnology:** The key activities in animal biotechnology would include (a) increasing the production, availability and shelf life of animal feed and fodder, (b) development of nutritionally rich, high protein fish, (c) increasing productivity of livestock through biotechnological interventions like in vitro fertilization, embryo transfer technology, gene technology etc, (d) improving the health of productive animals through biotechnology based disease control mechanism and tools; (e) developing value added animal products, (e) developing better breeds/strains of livestock and poultry using known or new methods of biotechnology, (e) developing better strains of livestock species using known or new methods of biotechnology (transgenic cattle), (f) developing diagnostics, vaccines and therapeutics for major live stock and poultry diseases such as Foot and mouth disease, rabies, hemorrhagic septicemia, anthrax, classical swine fever, avian influenza, tuberculosis, brucellosis, salmonellosis, etc. (g) Establishment of cell lines and semen banking facilities for maintenance and propagation

- of superior quality germplasm, (h) Development of better methods for pisciculture to cultivate commercially important fish species, (j) Genetic improvement of indigenous high-yielding fish species and establishment of live gene bank of indigenous fish species.
- C) **Pharmaceutical biotechnology:** The key activities in pharmaceutical biotechnology would include (a) design and delivery of new therapeutic drugs, (b) development of diagnostic agents for medical tests, (c) development of bio-formulation such as antibodies, nucleic acid products and vaccines, (d) production of drug-precursor and active pharmaceutical ingredients (API), (e) bio-similars/proteins.
- d) **Traditional medicine and herbal technology:** The key activities would include (a) isolation and characterization of anti-microbial, anti-viral, anti-cancer agents from indigenous medicinal plants, (b) Development of standardized and safe herbal products, (c) R&D and manufacturing of health care food products and functional skin care products, (d) Development of high value therapeutic agents.
- E) **Bio-resource based industries for banana, pine apple, citrus etc.:** The activities in Bio- resource based industries would include (a) Production of processed food items of banana, pine apple, citrus and other indigenous fruits with enhanced shelf life, (b) Value addition and production of nutraceuticals and dietary supplements from banana, pine apple, citrus and other indigenous fruits, (c) Production of candied pineapple, pineapple juice, dried pineapple etc.
- f) **Microbial biotechnology:** The key activities in microbial biotechnology would include (a) Characterization, utilization and propagation of microbial resources including microbes related to production and processing of fermented food products, (b) Fermentation technology, (c) Enzyme technology and (d) Incorporation of microbes into traditional health beverages.
- g) **Processed foods:** The key activities in food processing would include (a) molecular characterization and value addition of food products of plant and animal origin, (b) improvement of food value and shelf life, (c) quality assessment and value addition in traditional processed foods, and (d) production and development of edible colour, (e) food products from exotic fruits and vegetables (f) value addition to tea based liquor (g) ready- to-drink health beverages (h) ready-to-eat food based on fermented rice and (i) silk-pupae (insect) based food items and their preservation.
- h) **Seri biotechnology:** The key activities in Seri biotechnology would include – (a) development of new/superior varieties of host plants having more nutritional properties, more foliage production, resistant to pests and diseases (b) molecular characterization of species and varieties of silkworm strains, (c) improvement of silk quality using biotechnological tools, (d) development of diagnostic kits for important diseases in the larvae, and (e) Genetic manipulation of silk protein genes for increased production of silk.
- i) **Petroleum biotechnology:** The key activities in petroleum biotechnology will include- (a) microbial application in hydrocarbon prospecting, (b) development of biotechnology based solutions for exploration of Oil and Gas, (c) petroleum bio-refining: the selective removal of sulfur, nitrogen, and metals, (d) bacterial hydrocarbon biosynthesis, (e) potential applications of bio-surfactants and bio-emulsifiers in the oil industry and (f) Microbial

based remediation of hydrocarbon contamination of soil and water; and all other activities through modern and biotechnology approach in the petroleum sector.

- j) **Medical biotechnology:** The key activities in medical biotechnology would be (a) development of prognostic and diagnostic kits and facilities, (b) development and commercialization of ELISA and nucleic acid based diagnostics, (c) methods to develop and use stem cell technology for therapeutic research and tissue regeneration for medical use, (d) undertaking reproductive health and contraceptive research, (e) developing strategies for prevention and cure of diseases induced by faulty diet and lifestyle like diabetes, heart disease and obesity, (f) Enzyme biotechnology and (g) R & D activities on woman health.
- k) **Bio-energy and Environmental biotechnology:** The key activities in bio-energy and environmental biotechnology would be (a) conversion of cellulose and agricultural wastes to produce fuels such as ethanol and butanol by active enzyme systems for their efficient degradation and subsequent fermentation (b) developing bio-indicators / bio-sensors for pollution control, (c) development of technologies for treatment of domestic, industrial and medical waste, (d) identification and development of bio-fuels and bio-energy sources, and (e) Bioremediation technologies.
- L) **Tea Biotechnology:** The key activities would include (a) Development of high-yielding organic cultivation, (b) Selection and characterization of water logging resistant cultivars of tea, (c) Bio-control strategies and formulation to combat pest and pathogen infestation, (d) Value addition and product improvement.



# Key State Initiatives Under The Policy

### **3. KEY STATE INITIATIVES UNDER THE POLICY**

In line with the policy objectives and in pursuance of the strategies mentioned, the following key initiatives shall be undertaken under this policy.

#### **3.1 DEVELOPING BIOTECHNOLOGY INFRASTRUCTURE**

The State Government would promote and facilitate both the public and the private sectors in developing essential high quality infrastructure such as Biotechnology Parks, Research and training facilities and other supporting infrastructure for production, testing, accreditation etc. There will be collaborative partnerships and provisions of incentives/concessions between the state and the private partners. The type and quality of the infrastructure will be chosen considering different agro-climatic, agro-economic and other socio-economic parameters specific for a region.

##### **3.1.1 Biotechnology parks and Incubation Centers**

The State Government proposes to facilitate and support development of general and sector specific biotechnology parks and incubation Centers. These shall be operative as per the following system:

- a) These will act as an instrument to aggregate Biotechnology industries.
- b) These may be a joint-venture of industries, academia and government with clearly specified responsibilities for each.
- c) These will be encouraged to operate as self-sustaining organizations for business support, business promotions, enabling start ups and technology support in biotechnology.
- d) In line with the state resource potential, the focus of the Biotechnology parks and incubation centers will be as per the thrust areas.
- e) The park and the centers will contain industrial, commercial and R & D infrastructure facilities for users.
- f) It will act as a technology provider to the small scale biotechnology units and also provide marketing support to the users.
- g) The incubation centers shall have all necessary infrastructures and equipment (both specific and shared) for students, researchers and start ups and also provide training and capacity buildings and academic-industry linkages

##### **3.1.2 Developing Academic and Research Infrastructure Facilities**

The State government would facilitate setting up laboratory facilities primarily in colleges and universities for human resource development and capacity building. This will ensure an environment conducive for teaching and R&D.

### **3.1.3 Decision Making assistance to Biotechnology units**

State Government intends to facilitate the interested private partners and collaborators, for development of biotechnology infrastructure facilities by providing decision support logistics, in the form of location and feasibility reports.

## **3.2 FACILITATING BIOTECHNOLOGY EDUCATION, RESEARCH AND INNOVATION**

### **3.2.1 Biotechnology education**

The state will provide fund for creation of biotechnology department in colleges and universities as well as intensify program support to biotechnology departments in the institutions.

### **3.2.2 Biotechnology research**

- a. The State Government intends to promote and develop the pace of Biotechnology research, encourage national and international partnerships and enable the conversion of research into useful technologies, products and processes.
- b. Financial assistance: To facilitate the academia for applied research, leading to entrepreneurship ventures and having commercializable outputs, the State Government on case to case basis may consider providing support to Universities/ Institutes and other Governmental organizations for industry funded research.
- c. The Biotechnology research will be entitled to avail the following benefits namely, Assistance to universities and R & D Institutions for modernization and addition in their facilities, Assistance for quality improvement and training, Assistance for setting up of Institutions for innovation and incubation, Facilitation cells for Patents and IPR and Council mode approach activities for specific product/industry/ research work.

## **3.3 MONITORING AND DISBURSEMENT OF INCENTIVES**

**3.3.1** All incentives under this policy shall be processed and disbursed by the Assam Biotechnology Council. The Council shall also monitor the incentives obtained by various BT units or parks under this policy and report the same to the executive committee.

**3.3.2** All incentives under this policy will require the recommendation of the executive committee and the approval of the apex committee, which shall be the Assam Biotechnology Council.

**3.3.4** Again, these incentives shall be provided subject to the condition that the park has not claimed similar incentives under any other scheme of Central/State Government earlier.

### **3.4 FACILITATING TECHNOLOGY DEVELOPMENT AND ENTREPRENEURSHIP SUPPORT**

Technology development and entrepreneurship support mechanism

The State proposes to facilitate the development of Biotechnology entrepreneurship in the following way:-

- 3.4.1** Institutional mechanism to develop a central database of existing, new and ready to transfer technologies including their status, source and accessibility.
- 3.4.2** Financial mechanism to provide fund for technology acquisition. The Science and Technology Department will facilitate acquiring and transfer of technologies, available at regional, national and international level, to small/medium industrial units. The acquisition of technology can be in any form including purchase of drawings and design, technology development through engaging Experts, technology development through Research and Development Institutions and Consultancy form or any other method.
- 3.4.3** A revolving fund titled “Technology Acquisition Fund” will be created for technology acquisition and the fund spent for technology acquisition will be recovered from participating units in a project depending upon the cost of purchase/development of technology.

### **3.5 FUND FOR BIOTECHNOLOGY INDUSTRY DEVELOPMENT**

- 3.5.1** The State Government proposes to create a fund called the “Assam Biotechnology Industrial Support Fund” for providing incentives to units coming up under this policy.
- 3.5.2** The fund shall be dedicated solely for supporting BT parks or BT businesses, BT incubators and BT start-ups.

### **3.6 BUSINESS SUPPORT CELLS**

- a. The State proposes to facilitate biotechnology businesses by providing a globally competitive investment environment. Towards achieving this goal, the following cells will be created as business support cells
  - i. Investment support cell
  - ii. IPR & patent cell
  - iii. R&D support cell
  - iv. Bio-economic cell
- b. These cells shall operate from the office of the Assam Biotechnology Council.

### **3.7 ACCREDITATION AND QUALITY CERTIFICATIONS**

- a. The State Government will encourage BT parks, units, incubators and start ups on infrastructure and process compliances.
- b. To obtain quality certifications, financial assistance will be provided to biotechnology based Small and Medium enterprises (SMEs) for obtaining ISO 9000 and ISO 14000 and for various other schemes like GMP, HACCP, TPM, JIT etc., in accordance with the provisions of current Industrial & Investment Policy of Assam.
- c. The assistance will be offered for reimbursement of the expenditure incurred towards the cost of acquiring equipment required for testing, quality up gradation, acquisition of quality marks, consultancy fee to firms etc

### **3.8 SINGLE WINDOW CLEARANCE THROUGH NODAL AGENCY**

- a. Biotechnology requires coordination among its multiple interfaces and stakeholder facilitation. The state proposes to provide a hassle free, investor friendly environment, facilitating coordination between interfacing agencies, departments and enabling stakeholder interaction.
- b. To execute this, a state level nodal agency shall be constituted. The nodal agency would be named as "Assam Biotechnology Council" (ABTC).
- c. This nodal agency will facilitate investors in implementing their projects expeditiously. It would act as agency for hand holding and providing effective liaison with various government agencies.
- d. Ensuring easy clearances and approval of various Government Departments shall be the responsibility of ABTC.
- e. Online portal for information on all proposals and communications.
- f. Dedicated coordination and legal teams for all procedural support.

### **3.9 NORTH EAST VISION GROUP ON BIOTECHNOLOGY**

North East Vision Group on Biotechnology will be created to lead and drive the Biotechnology Sector of Assam by leveraging the bioresources of the State. The Vision Group will also ensure implementation of the objectives of the Policy.

### **3.10 CENTRE OF EXCELLENCE IN BIOINFORMATICS AND APPLIED BIOTECHNOLOGY**

Government of Assam will facilitate establishment of Centre of Excellence in Bioinformatics and Applied Biotechnology to promote research and academic growth in the sector.



### **3.11 SAFEGUARDS**

Government of Assam shall frame appropriate safety regulation to restrict the generation of GMO/hazardous micro-organisms in the environment within permissible limits.

### **3.12 PROMOTING POLLUTION CONTROL**

Government of Assam will provide incentives to the companies possessing zero discharge certificates.

### **3.13 ANIMAL QUARANTINE FACILITY**

Government of Assam will set up an animal quarantine facility to facilitate high end and advanced biotechnological research under this policy

### **3.14 ASSAM BIOTECH CONCLAVE**

Government of Assam has been organizing the Assam Biotech Conclave through Guwahati Biotech Park to offer unique opportunities to understand the possibilities of industry oriented research and to start entrepreneurial venture in biotechnology and related areas in the north eastern region of India. This event shall be organized once in two years and shall reserve budget for the same in State Budget.



# Fiscal Incentives & Concessions

## 4. FISCAL INCENTIVES & CONCESSIONS

The fiscal incentives available under the Biotech Policy of Assam are given under various categories below.

### 4.1 COMMON INCENTIVES & CONCESSIONS FOR BIOTECHNOLOGY INFRASTRUCTURE

#### 4.1.1 Land and spaces

- a. The government will consider allotment of suitable government land for setting up biotechnology infrastructure in different districts of Assam, wherever there is feasibility.
- b. The Government may also acquire land for the purpose and land acquisition for biotechnology infrastructure will be done as per the Land Acquisition Act.
- c. For setting up Biotech Parks on PPP mode, the government may consider long-term land leases.
- d. The government may also set up Biotech Parks and lease out land or built up spaces to BT units.

#### 4.1.2 Common Incentives related To duties, Fee & GST

##### a. Stamp duty and registration fee

All biotechnology infrastructures like BT units or BT parks or BT start ups or BT incubators shall be provided full reimbursement of **stamp duty and registration** fee paid to the government during any registration of loan agreements, credit deeds, mortgage and hypothecation deeds for availing loan from government OR lease deeds or lease-cum-sale deeds or absolute sale deeds in respect of industrial plots or sheds or spaces

##### b. Reimbursement of land reclassification premium

All biotechnology infrastructures like BT units or BT parks or BT start ups or BT incubators shall be provided full reimbursement of **land reclassification premium** paid to the office of the collector while changing the class of land from agriculture to industrial class. This however will be subject to the provisions of the Assam Agriculture Land (regulation of reclassification and transfer for non-agriculture purpose) Act, 2015.

##### c. Full reimbursement of state GST

All biotechnology infrastructures like BT units or BT parks or BT start ups or BT incubators shall be provided **full reimbursement of state gst** paid by them to the state government during construction, setting out of the infrastructure.

#### 4.1.3 Incentives on Power tariff and Electricity duty

##### a. Power tariff subsidy

All biotechnology infrastructures like BT units or BT parks or BT start ups or BT incubators shall be provided power tariff subsidy at the rate of Rupees 2 (two) per unit in the billed amount of the unit as promotional incentive on reimbursement basis for a period of five years.

**b. Reimbursement for electricity duty**

All biotechnology infrastructures like BT units or BT parks or BT start ups or BT incubators shall be provided 100% reimbursement for electricity duty paid for a period of five years on co-terminus basis with the power tariff subsidy.

- c. Existing units undertaking expansion / diversification will be entitled for power tariff subsidy and electricity duty reimbursement only for additional power consumed, attributable to such expansion/ diversification.
- d. The above assistance will be available to eligible BT units on power purchased from the state electricity distribution companies or the power distribution licensees. The eligible BT units either generation power from its captive power plant or getting electricity through open access will not be eligible for this incentive.
- e. BT units will be provided uninterrupted power supply subject to feasibility.

**4.1.4 Incentives for Mega Projects**

The incentives available under the mega project scheme of the state industry department will also be applicable to the projects under the biotechnology sector which meet the criteria for mega projects under the Industrial Policy of Assam. They will also be eligible for any non-overlapping incentives under this policy too.

**4.2 SPECIAL INCENTIVES TO BIOTECHNOLOGY PARKS**

**4.2.1 Capital Subsidy**

- a. Horizontal Biotechnology Parks will be provided capital subsidy @ 30% of gross fixed capital investment (GFCI) in buildings, infrastructure facilities and equipments excluding cost of land, subject to a ceiling of Rupees 30 crores for Horizontal Biotechnology Parks
- b. Vertical Biotechnology Parks will be provided capital subsidy of Rs 400 per square feet for the built area subject to a ceiling of Rs 30 crores.

**4.2.2 Land purchase subsidy**

Biotechnology Parks will be provided land purchase subsidy @ 30% of the total registered sale deed value, if the land is purchased directly from the land owners, subject to a ceiling of Rs 5 (five) crores. This however shall be subject to the provisions laid down in the various enactments & executive orders of the revenue department as well as science and technology department. The land purchase subsidy shall be provided only after the establishment of the park as well as allotment & establishment of at least five units within the park.

- 4.2.3 Biotech Parks meeting the mega project criteria under the industrial policy will first have to claim incentives under the industrial policy and then claim non-overlapping benefits under this policy.

### 4.3 SPECIAL INCENTIVES FOR BIOTECHNOLOGY EDUCATION, RESEARCH AND INNOVATION

#### 4.3.1 Biotechnology Education

- a. The financial assistance for developing academic infrastructure will be to a maximum of Rupees 25 (twenty five) Lakhs to colleges, Rupees 50 (fifty) Lakhs in case of State Universities and up to Rs 1 (one) crore in the case of state research institutes.
- b. The financial assistance for training and capacity building will be to a maximum of Rupees 5 (five) Lakhs to colleges, Rupees 20 (twenty) Lakhs in case of Universities and up to Rs 30 (thirty) Lakhs in the case of research institutes.
- c. The financial assistance shall be provided to a maximum of ten institutions (colleges, universities or research institutions) per annum. The same institution cannot obtain another financial assistance for at least next three years under this policy.
- d. Such grants will be sanctioned strictly on the basis of institutional merit and are to be implemented within two years of release of the assistance from the ABTC.

#### 4.3.2 Biotechnology Research

To encourage biotechnology research, Govt. of India has provided many incentives. The state government also has resolved and thus proposes to play a similar facilitator role in coordinating the same. Following shall be the flagship incentives under this category:

1. **Co-financing for Industry Sponsored Research:** The Government of Assam proposes a matching contribution of up to Rupees 50 Lakhs for biotech related projects where there are significant socio-economic benefits and where an equal amount has been funded by private/public sector companies. The research outcomes will be reviewed by a research team constituted by the ABTC. However, this financing shall not be applicable even if funding has been received from any other government source, provided there is clear demarcation and no duplication.
2. **Research Grants:** The scheme aims at accelerating independent or collaborative or cluster research for market driven product development by scientists from Assam based research and/or academic institutions. Government proposes to offer financial assistance up to Rupees 25 Lakhs per project per annum towards covering scientist, technician cost or other miscellaneous expenditures, excluding any kind of instrument procurements. This will be approved on case to case basis by the ABTC constituted by the Government. The research-project however shall be of benefit to the State of Assam.

### 3. Assam Bio-Innovation Fellowships

To encourage local talent to conduct breakthrough research in the State, the Government proposes to launch “Assam Bio-innovation fellowships”. The objective of these fellowships is to incentivize joint research programs of Assam based institutions with researchers pursuing doctoral and post-doctoral in Assam-specific life sciences research in institutes/universities of repute in India. Government shall provide financial support not exceeding 5 Lakhs for a period of 12 months limited to 10 researchers per annum. The scheme will also be applicable to scientists interested in sabbatical research work. The program and engagement of the researchers shall be approved by the ABTC

4. **Patent Assistance:** Government of Assam proposes to provide financial assistance towards expenses incurred for filing/registration of product patents.
  - a. The financial assistance will be limited to 50% of the cost subject to a maximum of Rupees 10 Lakhs per domestic patent and Rupees 20 Lakhs per international patents.
  - b. Fees paid to patent attorney and patent service center will be eligible expenditure towards cost for assistance.
  - c. The assistance will be in the nature of reimbursement.
  - d. This assistance will be given only to those projects that are entirely developed within Assam or primarily developed in Assam or for projects approved by the ABTC.
  - e. Any BT units or BT start ups or BT incubators shall be eligible for this.
5. For ABTC funded research, if a patent is granted, the rights vested and royalty due to the Government of Assam shall be laid down by a separate legal agreement. Beneficiaries shall mandatorily sign the agreement before receiving the grant.
6. **Acknowledgement of government support:** For fully funded or partially funded assistance/grant/fellowships etc by the state Government, the grantee/recipient of the assistance shall mandatorily acknowledge the support of Government in any form of publication or patent or product developed under such support
7. Royalty sharing as per agreement/acknowledgment on state government funded projects/assistance for research/patent shall be in line with the existing norms of other funding agencies so as to protect government’s right on indigenous resources of the state.

#### 4.4 SPECIAL INCENTIVES FOR BIOTECHNOLOGY UNITS

The State proposes to encourage biotechnology business enterprise by providing globally competitive investment and environment.

#### 4.4.1 Capital Subsidy:

Eligible and functioning BT unit shall be entitled to the following capital subsidy on reimbursement basis:

- a. BT units will be provided capital subsidy @ 30% of gross fixed capital investment (GFCI) in buildings, infrastructure facilities and shared equipments excluding cost of land, subject to a ceiling of Rupees 10 crores per unit.
- b. Horizontal BT units will be provided land purchase/land lease subsidy @ 20% of the total registered sale deed value or total lease value, if the land is purchased directly from the land owners. This however shall be subject to the provisions laid down in the various enactments and executive orders of the revenue department. This shall however be subject to a ceiling of Rupees 5 crores per unit.

#### 4.4.2 Interest Subsidy

Eligible Biotechnology units shall be entitled to avail Interest subsidy at the rates and norms defined below:

- a. Interest subsidy assistance shall be eligible for a maximum duration of five years. Eligible Biotechnology units will be entitled to interest subsidy assistance from the date of making application or when actual interest repayment to the lending financial institutions, after moratorium if any, begins based on the choice of the unit. However, the unit will be entitled for interest assistance only if the interest repayment has begun during the operative period of the current Policy.
- b. BT units with borrowings up to Rupees 50 crores shall be entitled to an interest subsidy at the rate of 5% with a ceiling of Rupees 2.5 crores per annum.
- c. BT units with borrowings above Rupees 50 crores shall be entitled to an annual interest subsidy of Rupees 2.5 crores plus 2% of borrowings in excess of Rupees 50 crores, subject to an overall ceiling of Rupees 5 crores per annum.
- d. Interest subsidy as mentioned above shall be given only if the borrowing is from a bank or a financial institution based in India and is in Indian Rupee denomination. The amount of assistance so given as interest subsidy shall not exceed interest liability of eligible unit.

#### 4.4.3 Lease Rental Subsidy:

Eligible BT units (vertical units) taking developed laboratory space on lease for their operations will be provided lease rental subsidy, at the scale of 50 sq. ft. per employee, for five years on reimbursement basis at the following rates:

- a. Rupees 5/ sq. ft./ month for units up to 50 employees.
- b. Rupees 8/ sq. ft./ month for units with greater than 50 but up to 100 employees.

- c. Rupees 10/ sq. ft./ month for units with greater than 100 employees provided, that the lease rental subsidy shall not be more than the actual lease rental.
- d. The government may consider land lease rental subsidy also from time to time.

#### **4.4.4 Finishing School:**

Capital assistance up to 50% of the eligible project cost, subject to a ceiling of Rs fifty Lakhs will be given to units/ institute setting up an exclusive Biotechnology finishing school. Additional assistance of 50% of operating expenses subject to a ceiling of Rupees 5(five) Lakhs / module, with each module having duration of at least 4 to 6 months, having batch strength of at least 20 students will be given. Finishing school will have to run modules as approved by the ABTC. If a finishing school is availing assistance from any other Government organisation than quantum of assistance, then the total assistance provided shall be limited in such a way that the total assistance does not include 90% of the project cost.

#### **4.4.5 Market Development Support:**

Assistance to eligible Biotechnology MSME units for participation in International Trade Fairs outside India at the rate of 50% of expenditure towards (i) total rent of stall or rent of space and amount paid to organizer towards creation of stall and on rented space (ii) product literature/ catalogue and (iii) display material subject to maximum Rupees 50,000 will be provided. Eligible Biotechnology MSME units will be entitled to avail of this assistance maximum two times during the operative period of this Policy. The assistance would be in the nature of reimbursement. Biotechnology MSME units shall have to apply within three months from the date of participation for the assistance. Assistance to Industry Associations for participation in International Trade Fair as Assam Pavilion outside India @ 50% of total rent subject to a ceiling of Rupees 10 Lakhs will be provided. Minimum five industrial unit's participation will be necessary as part of group to get this assistance. Assistance shall be in the form of reimbursement and the association shall have to apply within three months from the date of such participation. Industry Associations organizing Seminars / Exhibitions / Workshops outside North East but within India will be provided support@ 50% of total rent subject to a ceiling of Rupees 2 Lakhs. Minimum five industrial unit's participation will be necessary as part of group to get this assistance. Assistance shall be in the form of reimbursement and the association shall have to apply within three months from the date of such participation.

### **4.5 SPECIAL INCENTIVES TO BIOTECHNOLOGY START UPS**

**4.5.1** The Start-ups require enhanced level of support during early stages. Once they have a product, start acquiring customers, they get the needed visibility and marketing linkages etc. to scale up. However, it is equally true that a majority of start -ups fail for many reasons, including due to lack of entrepreneurial skills, lack of objective assessment of market, ambiguity on product, competition, lack of ability to mobilise funding support or scaling



up, etc. Nonetheless, to ensure entrepreneurial spirit is nurtured, mentored and supported, enhanced incentives are prescribed during early stages in the life of a business/ venture. Accordingly, it is proposed that for a period of first two years the venture/business will be provided with enhanced support, with expectations that either the business model will prove itself and scale up to avail benefits as Biotechnology unit or will realise the lack of potential in the business plan to move on to alternative options.

**4.5.2** The Eligible Start-ups will have the option of availing assistance either under the start-up Policy of Industries Department or under the current Policy of the State Government. In addition to any incentives under any scheme of the Government of India, the eligible start-ups will be entitled to following incentives:

- a. **Marketing & Product development Assistance:** An assistance of Rupees 1 lakh will be provided to eligible start-ups for getting product prototype developed through outsourcing and an assistance of Rupees 1 lakh will be provided for marketing support.
- b. **Lease Rental Subsidy:** Eligible start-ups taking space on lease for their operations will be provided lease rental subsidy, at the scale of 50 sqft per employee, for two years on reimbursement basis at the rate of Rupees 15 per sqft per month.
- c. **Capital Incentives:** Eligible start-up will be provided capital assistance at the rate of 50% of capital expenditure excluding land, for setting up a pilot production facility subject to a ceiling of Rupees 50 Lakhs, within 2 years of making its application under this Policy.
- d. **Interest Subsidy:** Eligible start-ups will be provided interest subsidy at the rate of 9% per annum subject to ceiling of Rupees 2 Lakhs per year. Such interest subsidy shall be eligible for a maximum duration of two year Eligible start-ups will be entitled to interest subsidy assistance from the date of making application or when actual interest repayment to the lending financial institutions, after moratorium, if any, begins based on their choice. However, the start-up will be entitled for interest assistance only if the interest repayment has begun during the operative period of the current Policy.
- e. **Assistance for Procurement of Software/Journal:** Eligible start ups will be provided assistance in procuring software/journal subject to a ceiling of Rupees 50 Lakhs.
- f. **Patent assistance** same as for BT units but the percentage of assistance shall be up to 75%
- g. **Progression to other Policies:** Eligible Start-ups will be entitled to benefits under this Policy for a period of five years or till they cross any of the following milestones, whichever is earlier:

Number of employees – direct or indirect crosses 20

Turnover exceeds Rupees 25 crores per annum

An eligible start-up, on completion of its entitlement for benefits under this Policy as start-up shall be entitled to avail benefits under this Biotechnology Policy as a new unit, notwithstanding its continuing

operations at the end of two years. Investment made during the benefit period as start-up and scale up investment made within a period of 18 months, once the benefits under this Policy cease, will be taken as 'New Investment' for computing Gross Fixed Capital Investment (GFCI) under Biotechnology Policy of the State Government. The unit will be entitled to benefits under Biotechnology Policy as a new unit for full period and full amount of eligibility. Period of assistance as well as amount of assistance as start-up will be ignored while computing assistance and period of assistance under Biotechnology Policy. Any start-up choosing to scale up before completion of milestones mentioned above, will still be entitled to incentives as a new BT unit, however incentives availed as a start-up will be deducted from the incentives admissible as new BT unit.

- h. Skill Certification Grant:** Eligible start-ups will be provided skill certification grant at the rate of Rupees 5,000 per skill certification per person subject to over all ceiling of Rupees 20,000 per month per start-up. These assistance will be eligible for a maximum duration of two years.

#### **4.6 SPECIAL INCENTIVES TO BIOTECHNOLOGY INCUBATORS/INCUBATION CENTRES**

An eligible Biotechnology Incubator will be entitled to following incentives in addition to any incentives that they might be getting under any scheme of the Government of India:

##### **4.6.1 Capital Assistance:**

Eligible Incubators will be provided one-time capital assistance at the rate of 50% of Gross Fixed Capital Investment (GFCI) for setting up an incubator, subject to a ceiling of Rupees 1 Crore. Promoter's contribution should not be less than the support obtained from Government of Assam. Cost of land is not eligible for reimbursement under this assistance.

##### **4.6.2 Interest Subsidy:**

Eligible incubators will be provided interest subsidy at the rate of 9% per annum subject to ceiling of Rupees 2 Lakhs per year. Such interest subsidy shall be eligible for a maximum duration of two year. Eligible incubators will be entitled to interest subsidy assistance from the date of making application or when actual interest repayment to the lending financial institutions, after moratorium, if any, begins based on their choice. However, the incubator will be entitled for interest assistance only if the interest repayment has begun during the operative period of the current Policy.

##### **4.6.3 Lease Rental subsidy:**

Eligible incubators taking space on lease for their operations will be provided lease rental subsidy, at the scale of 50 sqft per employee, for two years on reimbursement basis at the rate of Rupees 15 per sqft per month.

##### **4.6.4 Assistance for Mentoring and Promotion of Inter Linkages:**

Eligible Incubators will be entitled to a mentoring assistance of Rupees 25 Lakhs per annum.

#### **4.6.5 Assistance for Procurement of software/journal:**

Government will support the procurement of key software required for development and testing purpose at the incubator attached with an educational institution or a university as recognized by UGC/ State Government/ AICTE at the rate of 50% of software cost subject to a ceiling of Rupees 50 Lakhs.

### **4.7 FUNDING & BUDGET SUPPORT**

#### **4.7.1 Technology Acquisition & Entrepreneurship Development Mechanism**

The State Government proposes to establish a fund titled the "TECHNOLOGY ACQUISITION FUND". The fund shall be provided from the state budget and will have an allocation of Rupees 5 (five) Crores for five years.

#### **4.7.2 Fund for supporting Industrial Incentives**

The State Government proposes to establish a fund titled the "ASSAM BIOTECHNOLOGY INDUSTRIAL SUPPORT FUND". The fund shall be provided from the state budget and will have an allocation of Rupees 400 (four hundred) Crores for five years. This fund shall be used to provide fiscal incentives to BT Parks, BT units, BT start-ups and BT incubators.

#### **4.7.3 Biotechnology Education and Research fund (BERF)**

The State Government proposes to establish a fund for education and research activities in the biotech sector, with the aim of developing quantity and quality human resources to support the industry. The fund shall be provided from the state budget and will have an allocation of Rupees 50 (fifty) Crores for five years.

#### **4.7.4 Biotech Venture Capital Fund cum Angel Investment Fund**

The State Government proposes to establish a venture capital fund for supporting start-ups and first generation entrepreneurs in the biotech sector, to support high-risk, high return entrepreneurship ventures of public importance. The fund shall also raise investments from the market and support through government bank guarantees. The contribution of the state government to the fund shall be provided from the state budget and will have an allocation of Rupees 25 (twenty-five) Crores for five years.



**Assam  
Biotechnology  
Council**

## 5. ASSAM BIOTECHNOLOGY COUNCIL

For facilitating rapid and assured implementation of Biotechnology policy, the State Government will set up the Assam Biotechnology Council (ABTC)

- a) The ABTC shall be a registered society under the Science and Technology Department, Government of Assam.
- b) The ABTC shall have an approved financial allocation under the State Budget.
- c) The ABTC will be the main body that shall implement the various provisions under the Assam Biotechnology Policy.
- d) It will scrutinize the scientific, technological and industrial viability and suitability of projects and proposals to be implemented in Assam.

The ABTC shall have the following committees

### 5.1 APEX COMMITTEE

- a. There shall be an Apex Committee to monitor the functioning of the Assam Biotechnology Council and to provide necessary approvals.
- b. The Apex Committee will have Chief Minister of Assam as the chairperson and Minister in Charge of Science & Technology Deptt as the Vice Chairperson.
- c. The Director, Assam Biotechnology Council will be its member-secretary
- d. The Apex Committee, shall also consist of other stake holders representatives.
- e. The Apex committee shall frame changes in the policy and also, review and monitor the execution of the policy objectives.
- f. The Apex committee shall have the power to sanction the disbursement of various incentives under this policy.

### 5.2 EXECUTIVE COMMITTEE

- a. The senior-most secretary of Science and Technology department, Government of Assam will be the chairperson of the Executive Committee and the Director, Assam Biotechnology Council will be it's member secretary.
- b. The executive committee shall also consist of other stake holders representative.
- c. The executive committee shall review and monitor the execution of the policy objectives.
- d. The executive committee shall have the power to recommend disbursement of various incentives under this policy to the apex committee

### 5.3 POLICY IMPLEMENTATION & GUIDELINES

- a. Science & Technology Department, Government of Assam will be responsible for the implementation of the policy.
- b. There shall be a Director. Assam Biotechnology Council, who along with his staff will be responsible for implementation of the policy. The Director shall be a senior government officer nominated by the Government of Assam.
- c. Any issues related to the interpretation of the policy will be decided by the Science & Technology Department, Government of Assam.
- d. Science & Technology Department will issue detailed guidelines for implementation of this policy.
- e. This is a dynamic policy and subject to changes as and when needs arise



# Policy Period

## **6. POLICY PERIOD**

This Policy shall come into force with effect from 1st January 2018 and shall remain in force for a period of five years upto 31st December 2022 or till the declaration of a new or revised Policy, whichever is earlier. Only those BT units or BT Parks which commence production/operations either during the operative period, or having applied for assistance under this Policy during the operative period, within one year from coming to an end of this Policy, shall be eligible for incentives.





# Appendix

## 7. APPENDIX

### 1. POLICY SUPPORT

“Biotechnology Policy of Assam” has been prepared in compliance with the strength and strategies of Biotechnology policy of the country. The policy provides clear focus on development of educational and research infrastructure, human resource development, entrepreneurship and biotechnology business. It is prepared based on consultative workshop and inputs from professional and technical experts. It contains the plan for infrastructure, research & development, education, entrepreneurship and business development.

### 2. POLICY PREPARATION

The “Biotechnology Policy of Assam” was formulated through a series of consultative programmes. The entire programme was supported by the Assam Science Technology and Environment Council and Dept. of Science and Technology, Govt. of Assam. The consultations were attended by the experts from the Assam Agricultural University, Gauhati University, Tezpur University, Indian Institute of Technology-Guwahati, CSIR-North East Institute of Science and Technology (NEIST), Jorhat, Institute of Advance Study in Science and Technology (Guwahati), Defense Research Laboratory (Tezpur), The Energy Research Institute (TERI-NE), OIL-Centre of Excellence for Energy Studies (Guwahati) and Guwahati Biotech Park. Several individual experts also have actively participated in the consultative programmes. The process for “Draft State Biotechnology Policy of Assam” formulation was initiated in the Year 2012 and completed in the year 2016 which was launched by the Hon’ble Chief Minister of Assam, Shri Sarbananda Sonowal at the Assam Biotech Conclave organized by Guwahati Biotech Park on 5th January, 2017 after incorporating the suggestions, views and comments of various Governments Departments viz., Finance, Agriculture, Industries & Commerce, Labour & Employment, Higher Education, Animal Husbandry & Veterinary and Fisheries and Gauhati University.





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