

AN OVERVIEW ON BIOLOGICAL DIVERSITY ACT – 2002*

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Introduction:

Biodiversity encompasses the variety of all life on earth. India is one of the 17-mega diverse countries of the world. With only 2.5% of the land area, India already accounts for 7.8% of the global recorded species. India is also rich in traditional and indigenous knowledge, both coded and informal.

India is a Party to the Convention on Biological Diversity (CBD) (1992). Recognizing the sovereign rights of States to use their own biological resources, the Convention expects the Parties to facilitate access to genetic resources by other Parties subject to national legislation and on mutually agreed upon terms (Article 3 and 15 of CBD). Article 8(j) of the Convention on Biological Diversity recognizes contributions of local and indigenous communities to the conservation and sustainable utilization of biological resources through traditional knowledge, practices and innovations and provides for equitable sharing of benefits with such people arising from the utilization of their knowledge, practices and innovations.

Biological diversity is fundamental to agriculture and food production. From the millions of genes that serve as building blocks to the thousands of plants and animals that inhabit the earth, almost limitless combinations of organisms that make up natural ecosystems. Under the contextual reference of modern intensive agriculture demanding many farmers to adopt high yielding varieties of plants and animals, Biodiversity makes an essential contribution for feeding the millions of population of the world. When farming communities abandon diversity, varieties and breeds of animals extinct and the specialized useful traits may be lost. Agricultural diversity forms an important component for tackling

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unforeseen effects of climate change and is one of the essential key component for developing varieties and animal species with standing temperature extreme floods, droughts, outbreak of diseases reducing the crop productivity and directly causing untold hardship to farming community.

Biodiversity is a multi-disciplinary subject involving diverse activities and actions. The stakeholders in biological diversity include the Central Government, State Governments, institutions of local self-governmental organizations, industry, etc. One of the major challenges before India lies in adopting an instrument, which helps to realise the objectives of equitable sharing of benefits enshrined in the Convention on Biological Diversity.

Salient Features of the Biological Diversity Act - 2002:

- After an extensive and intensive consultation process involving the stakeholders, the Govt. of India has brought Biological Diversity Act, 2002.
- To regulate access to biological resources of the country equitable share in benefits arising out of the use of biological resources.
- To conserve and sustainable use of biological diversity.
- Setting up of National Biodiversity Authority (NBA), State Biodiversity Board (SBB) and Biodiversity Management Committee's. (BMC's).
- NBA and SBB are required to consult BMCs in decisions relating to bioresource / related knowledge within their Jurisdiction.
- To respect and protect knowledge of local communities traditional knowledge related to biodiversity.
- To secure sharing of benefits with local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources.
- All foreign nationals / organizations require prior approval of NBA for obtaining biological resources and / or associated knowledge for use.
- Indian scientists / individuals require approval of NBA for transferring results of research to foreign nationals / organizations.
- Conservation and development of areas of importance from the standpoint of biological diversity by declaring them as biological diversity heritage sites.
- Protection and rehabilitation of threatened species.

- Involvement of institutions of State Government in the broad scheme of the implementation of the Biological Diversity Act through constitution of committees.
- Protect India's rich biodiversity and associated knowledge against their use by foreign individuals and organizations without sharing benefits arising out of such use and check Biopiracy.
- Indian Industry needs prior intimation to SBB to obtain bioresource. SBB has right to restrict if found to violate conservation and sustainable use and benefit sharing.
- Provisions for notifying heritage sites by State Government in consultation with local body.
- Creation of National, State and Local Biodiversity Fund and its use for conservation of biodiversity.
- Prior approval is needed from NBA for IPRs in any invention in India or outside India on Bioresource

Biodiversity:

Biological Diversity means the variability among living organisms from all sources, including interalia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and this includes diversity within species, between species and of ecosystems. Biodiversity is defined as the variety and variability among living organisms and the ecological complexes in which they occur is measured at three levels viz., genes, species and ecosystem.

Convention on Biological Diversity:

The Convention on Biological Diversity (CBD) is a landmark in the environment and development field, as it takes for the first time a comprehensive rather than a sectoral approach to the conservation of Earth's biodiversity and sustainable use of biological resources. It was in the year 1984 that the needs to have in place a global convention on biological diversity started gaining momentum. In response, the United Nations Environment Programme (UNEP) in the year (1987) recognized the need to streamline international efforts to protect biodiversity. It therefore established an ad hoc working group to investigate "the desirability and possible form of an umbrella convention to rationalize current activities in the field. This group by 1988 concluded that a) the existing treaties were inadequate to address the issue of conservation and sustainable use and b) a new global

treaty on biological diversity was urgently needed. Organisations such as the World Conservation Union (IUCN) and the Food and Agricultural Organisation (FAO) contributed draft articles in addition to specific studies commissioned by the UNEP. The UNEP Secretariat prepared the first draft and the formal negotiating process was started in 1991. The Inter-governmental Negotiating Committee for a Convention on Biological Diversity (INC) was given the task of ensuring the adoption of the Convention. On May 22, 1992 the nations of the world adopted the CBD in Nairobi and on June 5, 1992 the CBD was tabled at the UN Conference on Environment and Development in Rio de Janeiro where a record 150 countries signed the Convention.

The Convention on Biological Diversity (CBD) was negotiated and signed by nations at the UNCED Earth Summit at Rio de Janeiro in Brazil in June 1992. The Convention came into force on December 29, 1993. India became a Party to the Convention in 1994. At present, there are 175 Parties to this Convention.

The main objectives of the Convention are:

- ◆ Conservation of biological diversity;
- ◆ Sustainable use of the components of biodiversity;
- ◆ Fair and equitable sharing of benefits arising out of the utilisation of genetic resources.

Re-affirming the sovereign rights of Parties over their own biodiversity, the Convention balances conservation with sustainable utilisation and access to and use of biological resources and associated knowledge with equitable sharing of benefits arising out of such use. The CBD offers opportunities to India to realise benefits from its rich biological resources and associated traditional knowledge.

The CBD stipulates that the parties, even though having sovereign rights over their biological resources, would facilitate access to the genetic resources by other parties subject to national legislation and on mutually agreed terms. The CBD also provides for equitable sharing of benefits arising from the utilisation of traditional knowledge and practices, with holders of such knowledge. This has made it necessary for a legislation to be put in place,

which lays down the framework for providing access, for determining the term of such access and for ensuring the equitable sharing of benefits.

Summary of Biological Diversity Act, 2002:

- 12 Chapters
- 65 Sections and many subsections
- Notified Notifications and Rules
- Chapter – I : Preliminary – Terminologies and Definitions
- Chapter – II : Regulations of access to Biological Diversity (3)
 - Certain persons not to undertake Biodiversity related activities without the approval of NBA (3)
 - Results of research not to be transferred to certain persons without the approval of NBA (4)
 - Section 3 and 4 not to apply to certain Collaborative Projects (5)
 - Application for IPR rights not to be made without approval of NBA (6)
 - Prior intimation to State Biodiversity Board for obtaining biological resource for by Indian citizen or a body corporate for the utilization of bioresources for commercial purpose (7)
- Chapter – III : Establishment of National Biodiversity Authority
- Chapter – IV : Functions and Powers of National Biodiversity Authority
- Chapter – V : Approval by the National Biodiversity Authority for understanding certain activities ie **Transfer of biological resource or associated knowledge.**
- Chapter – VI : Establishment of State Biodiversity Board
- Chapter – VII : Finance, Accounts and Audit of National Biodiversity Authority
- Chapter – VIII : Finance, Accounts and Audit of State Biodiversity Authority

- Chapter – IX : Duties of the Central and State Governments
 - Central Govt to develop strategic plan for conservation and sustainable use of biodiversity and bioresources (36)
 - Declaration of Biodiversity heritage sites by the State Government to protect the unique Biodiversity areas. (37)
 - Power of Central Government to notify threatened / endangered species. (38)
 - Power of Central Government to designate repositories (39)
 - Power of Central Government to exempt Normally Traded Commodities (40)
- Chapter – X : Constitution of State Biodiversity Management Committees
- Chapter – XI : Local Biodiversity Fund
- Chapter – XII : Miscellaneous
 - National Biodiversity Authority to be bound by policy directions as the Central Government may give in writing to it from time to time (48).
 - Power of State Government to give policy directions to the State Biodiversity Boards. (49)
 - Settlement of dispute between National Biodiversity Authority and State Biodiversity Boards (50)
 - Penalties (55)
 - Whoever contravenes or attempts to contravene the provisions of section 3 or section 4 or section (6) shall be punishable with imprisonment for a term which may **EXTENDS TO FIVE YEARS** or with fine which may extend to ten lakh rupees and where the damage caused exceeds **TEN LAKH RUPEES** such **FINE MAY COMMENSURATE WITH THE DAMAGE CAUSED OR WITH BOTH** [55(1)]
 - Whoever contravenes or attempts to contravene the provisions of section 7 or any order made under subsection (2) of section 24 shall be punishable with imprisonment for a term which **MAY EXTEND TO**

THREE YEARS or WITH FINE WHICH MAY EXTEND TO FIVE LAKH RUPEES OR WITH BOTH

Management structure of Biodiversity Act:

A three tiered structure at the national, state and local level is envisaged.

National Biodiversity Authority (NBA):

All matters relating to requests for access by foreign individuals, institutions or companies, and all matters relating to transfer of results of research to any foreigner will be dealt with by the National Biodiversity Authority.

State Biodiversity Boards (SBB):

All matters relating to access by Indians for commercial purposes will be under the purview of the State Biodiversity Boards (SBB). The Indian industry will be required to provide prior intimation to the concerned SBB about the use of biological resource. The State Board will have the power to restrict any such activity, which violates the objectives of conservation, sustainable use and equitable sharing of benefits.

Biodiversity Management Committess (BMCs) :

Institutions of local state government will be required to set up biodiversity management Committees in their respective areas for conservation, sustainable use, documentation of biodiversity and chronicling of knowledge relating to biodiversity.

NBA and SBBs are required to consult the concerned BMCs on matters related to use of biological resources and associated knowledge within their jurisdiction.

People's Biodiversity Register (PBR):

- The main function of the BMC is to prepare Peoples Biodiversity Register in consultation with local people.
- The Register shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal or any other use or any other traditional knowledge associated with them.

- Many of our local people or ecosystem people possess valuable knowledge of uses of biodiversity such as herbal remedies and vegetable dyes, much of the knowledge of the status and dynamics of biodiversity also resides with the people at grassroots.
- The tremendous valuation from place to place in the distribution and uses of biodiversity, the documentation has to be highly location specific and time specific.
- The PBR is a complex process involving a series of activities linked to each other in many different ways.
- All local bodies have the responsibility of documentation of local biological resources
- Comprehensive information on availability and knowledge of local biological resources, their medicinal or any other use or any other traditional knowledge associated with them.
- Data about the local *Vaid*s and practitioners using the biological resources.
- Details of the access to biological resources and traditional knowledge graded, details of collection fee imposed and details of the benefits derived and mode of their sharing.
- People's knowledge is of two kinds.
- Knowledge of uses that might find commercial application and that might need to be guarded with respect to IPR.
- Knowledge pertinent to prudent management of natural resources that might be widely shared with benefit to all concerned without any unfair commercial profits accruing to any party.
- The NBA and the SBB shall provide guidance and technical support to the BMC for preparing Peoples Biodiversity Registers (BDR.22,9)
- The Peoples Biodiversity Registers shall be maintained and validated by the BMC

Biodiversity Heritage Sites (BHS):

Biodiversity heritage sites (BHS) should include both wild and domesticated biodiversity and human cultural relations with such biodiversity. The question will arise, how biodiversity. Heritage sites are different from the concept of "Protected areas"? Protected areas is covered in The Wild Life Act. It is important to focus while declaring Biodiversity Heritage sites on some aspects like.

- Local communities would be central to such a process including in identifying and deciding on potentials of BHS.
- Both Traditional knowledge and modern scientific knowledge could be used for process of management of BHS
- Involvement of marginalized sections of communities including women should be ensured their involvement in BHS
- Government Institutions, NGO's, Teachers should facilitate local communities for capacity building for managing BHS
- Institutional linkages between and among the existing institutions like panchayats, gram sabhas, village/tribal council, urban wards should be planned for managing the BHS
- Without prejudice to any other law for the time being in force, the State Government may, from time to time in consultation with the local bodies, notify in the Official Gazette, areas of biodiversity importance as biodiversity heritage sites under this Act.
- The State Government, in consultation with the Central Government, may frame rules for the management and conservation of all the heritage sites.
- The State Government shall frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification.

Without prejudice to any other law for the time being in force, the State government may, from time to time in consultation with the local bodies, notify in the Official Gazette, areas of biodiversity importance as biodiversity heritage sites under this Act. [37 (1)]

The State Government, in consultation with the Central Government, may frame rules for the management and conservation of all the heritage sites. [37(2)] The State Government

shall frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification. [37(2)]

The National Biodiversity formed an Expert Committee to prepare the guidelines on establishment of Biodiversity Heritage site. The EC will decide on the type of ecosystems, landscapes and land and water uses and guidelines developed will be notified soon.

As per section 21(1) The National Biodiversity Authority shall while granting approvals under section 19 or section 20 ensure that the terms and conditions subject to which approval is granted secures equitable sharing of benefits arising out of the use of accessed biological resources, their by-products, innovations and practices associated with their use and applications and knowledge relating thereto in accordance with mutually agreed terms and conditions between the person applying for such approval, local bodies concerned and the benefit claimer.

The National Biodiversity Authority Constituted an Expert Committee to develop guidelines for benefit sharing for the access of biological resource occurring in India or associated knowledge there to for research or for commercial utilization or for biosurvey and bioutilization. The Authority while granting approval to any person for access or for transfer of results of research or applying for patent and IPR or for third party transfer of the accessed biological resource and associated knowledge may impose terms and conditions for ensuring equitable sharing of the benefits arising out of the use of accessed biological material and associated knowledge. No person who has been granted approval under section 19 shall transfer any biological resource or knowledge associated there which is the subject matter of the said approval except with the permission of the National Biodiversity Authority 20 (1).

Any person who intends to transfer any biological resource or knowledge associated thereto referred to in subsection (1) shall make an application from and in such manner as may be prescribed by the National Biodiversity Authority. 20(2)

The guidelines shall provide for monetary and other benefits such as royalty; joint ventures; technology transfer; product development; education and awareness raising activities institutional capacity building and venture capital fund. The formula for benefit

sharing shall be determined on case-by-case basis. The Authority will soon notify guidelines. There are few examples of benefit sharing in place in some countries.

National Biodiversity Authority (NBA) :

- Establishment of NBA.
- The head office of the NBA is established at Chennai.
- NBA consists of the following members.

Members of NBA:

- A Chairperson who shall be an eminent person having adequate knowledge on conservation and sustainable use of biological diversity.
- Three ex-officio members appointed by the Central Government. One representing the Ministry dealing with Tribal affairs. Two representing the Ministry dealing with Environment and Forests of whom one shall be the Additional Director General of Forests.
- Seven ex-officio members appointed by the Central Government to represent respectively the Ministries of the Central Government dealing with
 - Agricultural Research and Education
 - Biotechnology
 - Ocean Development
 - Agriculture and Cooperation
 - Indian Systems of Medicine and Homeopathy
 - Science and Technology
 - Scientific and Industrial Research
- Five non-official members appointed amongst specialists and scientists, representatives of industry, conservers, creators and knowledge holders of biological resources

Functions and Powers of NBA:

- Regulate activities, approve and advise the government of India on research, commercial, bio-survey and bio-utilization.
- Grant approval to Section 3,4 and 6.
- Certain persons not to undertake Biodiversity related activities without approval of National Biodiversity Authority (Section 3).
- Results of research not to be transferred to certain persons without approval of National Biodiversity Authority (Section 4).
- Application for IPR rights not to be made without approval of National Biodiversity Authority (Section 6).
- Perform such other functions as may be necessary to carry out the provisions of this act.

Approvals by NBA:

- Any person who intends to access or apply for a patent or any other form of IPR protection whether in India or outside India referred to sub-section (1) of Section 6 may make an application prescribed by NBA.
- Any person who intends to transfer any biological resource or knowledge associated thereto referred to sub-section (1) of Section 3 shall make an application in such form and in such manner as may be prescribed to the National Biodiversity Authority.
- Determination of equitable benefit sharing by National Biodiversity Authority.

State Biodiversity Board (SBB):

- Establishment of State Biodiversity Board in every State.
- State Government may by notification in the Gazette can establish the SBB in their State name e.g Tamil Nadu Biodiversity Board.
- No State Biodiversity Board shall be constituted for a Union Territory and in relation to Union Territory, the National Biodiversity Authority shall exercise the powers and perform the functions of a SBB for the Union territory.

Collaborative Research:

Collaborative research projects involving transfer or exchange of biological resources between government sponsored institutions and similar institutions in other countries will be exempted from this regulation.

Intellectual Property Rights:

Intellectual Property Rights relating to biological resources must be defined in order to ensure that the benefits derived from their use are equitably shared. Section 6 of the Act underlines this principle. In case of persons intending to apply for any form of Intellectual Property Right in or outside India for any invention based on any research or information on a biological resource found in India, prior permission of the NBA is required. The NBA may impose benefit sharing fee or royalty or conditions on the financial benefits arising out of commercial utilization of such right while granting permission. Section 21 provides for the determination of "equitable benefit sharing" which is also one of the objectives of the Act. NBA in consultation with local bodies can impose terms and conditions for securing equitable sharing of benefits.

National Biodiversity Fund:

A National Biodiversity Fund is being constituted for this purpose. The NBA will ensure that equitable benefit sharing is made during the utilization of biological resources and the knowledge relating to them. The amount of benefit sharing will be deposited in the National Biodiversity Fund and the amount shall be paid directly to such individuals or groups of individuals or organizations in accordance with the terms of any agreement in such manner as decided by the NBA. On behalf of the Central government, the NBA will take all measures to oppose Intellectual Property Rights granted outside India on any biological resource or associated knowledge originating from India.

Enforcement:

The section dealt with under chapter XII provides for enforcement in general and deals with penalty, cognizance of offences, offences by companies, appeal etc in particular. Section 58 provides that the offences under the Act shall be cognizable and non-bailable.

Any person, aggrieved by any determination of benefit sharing or order of the Authority under this Act may file an appeal to the High Court. The time allowed to prefer an appeal is 30 days from the date of communication to the aggrieved person of the Order of the Authority.

If any person contravenes any direction given or order made by the Central Government, the State Government, the National Biodiversity Authority or the State Biodiversity Board for which no punishment has been separately provided under the Act the person shall be punished with a fine which may extend to one lakh rupees and in case of a subsequent offence the fine may extend to two lakh rupees and in case of continuous contravention with additional fine which may extend to two lakh rupees everyday which the default continues.

Biopiracy:

To check biopiracy, the proposed legislation provides that access to biological resources and associated knowledge is subject to terms and conditions, which secure equitable sharing of benefits. Further, it would be required to obtain the approval of the National Biodiversity Authority before seeking and IPR based on biological material and associated knowledge obtained from India.

Exemptions provided in the Act:

The Biological Act, 2002 provides for the following exemptions:

- Exemption to local people and community of the area for free access to use biological resources within India.
- Exemption to growers and cultivators of biodiversity and to *Vaid*s and *Hakim*s to use biological resources.
- Exemption through notification of normally traded commodities from the purview of the Act.
- Exemption for collaborative research through government sponsored or government approved institutions subject to overall policy guidelines and approval of the Central Government.

Regulation of Access to Biological Diversity

- No person referred to in such-section (2) shall without previous approval of the NBA obtain any biological resource occurring in India or knowledge associated thereto for research or for commercial utilization or for bio survey and bio utilization (3(1))
- The persons who shall be required to take the approval of NBA under sub-section (3(1)).
 - A person who is not a citizen of India 3(2a)
 - A citizen of India, who is a non-resident as defined in clause (30) of section (2) of the Income tax act, 1961 (3(2b))
 - A body corporate, association or organization (3(2c))
 - Not incorporated or registered in India (3(2c I) or
 - Incorporated or registered in India under any law for the time being in force which has any non-Indian participation in its share capital or management. (3(2c II))

Results of research not to be transferred to certain persons without the approval of NBA

- No person shall without the previous approval of the NBA transfer the results of any research relating to any biological resources occurring in or obtained from India for monetary consideration or otherwise to any person who is not a citizen of India or citizen of India who is non-resident as defined in clause (30) of section 2 of the Income-tax Act, 1961 or a body corporate or organization which is not registered or incorporated in India or which has any non-Indian participation in its share capital or management. For the purposes of this section transfer does not include publication of research papers or dissemination of knowledge in any seminar or workshop if such publication is as per the guidelines issued by the Central Government (4).

Collaborative research projects:

- The provisions of section 3 and 4 shall not apply to collaborative research projects involving transfer or exchange of biological resources or information relating thereto between institutions including Government sponsored institutions of India and such

Institutions in other countries if such collaborative research projects satisfy the conditions specified in sub-section (5(3)).

- Collaborative research projects shall conform to the policy guidelines issued by the Central Government in this behalf (5(a)).
- Should be approved by the Central Government. (5(b)).

Application for Intellectual Property rights not to be made without the approval of NBA

- No person shall apply for any Intellectual Property Right, by whatever name called in or outside India for any invention based on any research or information on a biological resource obtained from India without obtaining the previous approval of the NBA before making such application. (6(1)).
- NBA while granting the approval under this section, impose benefit sharing fee or royalty or both or impose conditions including the sharing of financial benefits arising out of the commercial utilization of such rights. (6(2)).
- The provisions of this section shall not apply to any person making an application for any right under any law relating to protection of plant varieties enacted by parliament. (6(3)).
- Where any right is granted under law referred to in sub-section (3), the concerned authority granting such right shall endorse a copy of such document granting the right to the NBA. (6(4)).

Permission of commercial utilization of Bioresources

No persons who is a citizen of India or a body corporate or association or organization which is registered in India shall obtain any biological resource for commercial utilization or bio-survey and bio-utilization for commercial utilization except after giving prior intimation to the State Biodiversity Board concerned (7).

- Provided that the provisions of this section shall not apply to the local people and communities of the area including growers and cultivators of biodiversity and vaidas and hakims, who have been practicing in digenous medicine. (7)

Determination of equitable benefit sharing by NBA

- NBA shall while granting approvals under section 19 or section 20 ensures that the terms and conditions subject to which approval is granted secures equitable sharing of benefit arising out of the use of accessed biological resources, their by-products, innovations and practices associated with their use and applications and knowledge relating thereto in accordance with mutually agreed terms and conditions between the person applying for such approval, local bodies concerned and the benefit claimers

Conclusion

The intrinsic value of Biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values and its components are to be taken care properly for the better management of biological resources and biodiversity for the welfare of human beings for better, and healthier as well as peaceful living on earth. The conservation of biological diversity is a serious and common concern of human beings for better living. It should be recognized that the women in rural setup play a vital role in the conservation and sustainable use of biological diversity and affirming the need for the full participation of women at all levels of policy making and implementation for biological diversity conservation. Biodiversity is an important component for economic and social development and poverty eradication and overriding priorities of most of the developing countries in the world.

The conservation and sustainable use of biological diversity is critical importance of meeting of food, fodder, fiber, health, water and other needs of growing world population for which purpose, access to and sharing of both genetic resources and technologies are essential. It should be determined to conserve and sustainable use of biological diversity for the benefit of present and future generations.

Besides law enforcing forces and regulations of the Governments, it is always better to involve the people in a “Participatory Mode” including Tribal people, farmers, ecologists, illiterate villagers, for the conservation and protection of Biodiversity wealth of our great Nation. Awareness creation among people, school children, students and teachers in the colleges, Universities is very important to conserve the biodiversity wealth. Participatory

mode of involvement of the people at ground level to acquire more knowledge about the biodiversity conservation will help to maintain and sustain the bioresources and biodiversity. The involvement of local people and their willing participation alone could save the national wealth of biodiversity.

It is difficult to solve and manage and conserve the biological diversity by the State Government or Central Government alone but the people of our great nation have to be aware of our natural biodiversity wealth of our country and they should take all measures to conserve and protect our rich biodiversity not only for better living of our present generation but also for our future generations.

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