The Punjab Biodiversity Board (PBB) was notified on 23.12.04 under the chairmanship of Chief Minister, Punjab. The Vice-Chairman is Parliamentary Secretary, Agriculture. The board comprises five ex-officio members: Chief Secretary; Principal Secretary, Science, Technology & Environment; Financial Commissioner, Development; Principal Secretary, Forests & Wildlife and Director, Environment, Punjab State Council for Science & Technology as member convener. Five experts include representatives from Zoological Survey of India, Botanical Survey of India, Punjab Agriculture University; Brig. Sukhjit Singh (formerly Maharaja of Kapurthala, a well known wildlife conservationist and environmental activist) and Dr. G.S. Kalkat (former Vice-Chancellor, Punjab Agriculture University and renowned agriculturist). The secretariat of the board lies in PSCST, which provides technical assistance to the Secretary, Science, Technology & Environment on matters related to science, technology and environment.

The following activities have been pursued during the period 2005-06:

1. **Meeting of PBB**
   First meeting of Punjab State Biodiversity Board was held on 18.01.2006 under the chairmanship of Parliamentary Secretary, Agriculture, Government of Punjab who is the Vice-Chairman of the Board.

2. **Draft Biodiversity Rules**
   Draft State Biodiversity Rules were prepared and put up to the Board for approval. The rules are broadly approved by PBB members. The Department of Forests & Wildlife is scrutinizing the same w.r.t. provisions under Forest Act, 1988 and Wildlife Act, 1993. A copy of the draft rules was also submitted to NBA so that, if required, clarifications/modifications can be incorporated, before submitting the same to Legal Rememberancer, Punjab for vetting prior to being placed before the State Legislature for approval.

3. **Constitution of Expert Committees**
   The following Expert committees have been constituted:
Committee to identify biodiversity rich areas and heritage sites outside Protected Area Network (PAN), notified vide notification no. 9/1/2006-STE(1)/1397 dated 7.04.06, which consists of the following members:
1. Dr. G. S. Kalkat – Chairman
2. Member Secretary, Punjab Biodiversity Board – Convener
3. Principal Chief Conservator of Forests – Member
4. Director, Department of Agriculture, Punjab – Member
5. Chief Wildlife Warden – Member
6. Officer-in-charge, Zoological Survey of India, Dehradun – Member
7. Officer-in-charge, Botanical Survey of India, Dehradun – Member
8. Director, Research, PAU, Ludhiana – Member

The committee would identify heritage sites outside Protected Area Network (PAN) and the areas where Biodiversity Management Committees (BMCs) should be set up and preparation of People’s Biodiversity Register (PBRs) initiated.

Committee to identify commercially important flora and fauna, notified vide notification no. 9/1/2006-STE(1)/1400 dated 7.04.06, which consists of the following members:
1. Principal Chief Conservator of Forests – Chairman
2. Member Secretary, Punjab Biodiversity Board – Convener
3. Director, Department of Agriculture, Punjab – Member
4. Director, Department of Industries, Punjab – Member
5. Director, Health Services, Punjab – Member
6. Officer-in-charge, Zoological Survey of India, Dehradun – Member
7. Officer-in-charge, Botanical Survey of India, Dehradun – Member
8. Officer-in-charge, Zoological Survey of India, Dehradun – Member
9. Director, Research, PAU, Ludhiana – Member

Director, Research, H.P. Agriculture University, Palampur – Special Invitee

4. Celebration of International Biodiversity Day

(i) International Biodiversity Day (2005) was celebrated on 22nd May, 2005. The following programmes were taken up:
• State level essay and poster competition on Biological Diversity was organized for 1700 Eco-club students from schools all over the state on the following topics:
Poster competition:
- Biodiversity in Forests
- Wetland Biodiversity
- Medicinal Biodiversity in Punjab

Essay competition:
- Agriculture Biodiversity of the respective district
- Threat to Biodiversity
- Medicinal Biodiversity of the respective district
- Importance of Biodiversity to Man

More than 250 entries were received. Thirty best entries (five for each category) for poster & essay (English & Punjabi) from rural and urban school eco-clubs were awarded. The list of prize winners is placed at Annexure-I. Scientific Calculators (provided by UNESCO) were given away as prizes during the State Science Fair organized by State Institute of Science Education, Punjab.

- About 90 NGOs and schools/institutions were motivated to celebrate International Biodiversity Day. Institute of Ecology and Environment, Pathankot, Global College of Pharmacy, Ropar and Shivalik College of Pharmacy, Nangal organized lectures and exhibitions on biodiversity.
- Atma Ram Jain Girls Sr. Sec. School, Khanna, Jain High School, Khanna, Shastri Model School, Mohali, SD Sr. Sec. School, Sham Chaurasi and Government High School, Gobindpur Khunkhun, Hoshiarpur organized debates, skits on biodiversity, essay and poster competitions.

(ii) Proposal for celebrating International Biodiversity Day, May 22, 2006 has been prepared. For this, following activities are proposed:

- Organizing 17 district level and one state level Essay & Poster competition for 2550 Eco-clubs in the State. For this, District Education Officers have been asked to conduct district level competitions.
- Five Biodiversity orientation camps for 50 villages in Shivaliks (Biodiversity rich areas) have been proposed with the help of NGOs. NGOs have been identified
and dates and places have been fixed for organization of five village level camps in order to generate awareness about biodiversity amongst local residents:

<table>
<thead>
<tr>
<th>Village</th>
<th>District</th>
<th>Proposed date</th>
<th>NGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunera</td>
<td>Gurdaspur</td>
<td>20.05.06</td>
<td>Institute of Ecology &amp; Environment</td>
</tr>
<tr>
<td>Dolbaha</td>
<td>Hoshiarpur</td>
<td>20.05.06</td>
<td>Youth Services Club</td>
</tr>
<tr>
<td>Chohal</td>
<td>-Do-</td>
<td>21.05.06</td>
<td>-Do-</td>
</tr>
<tr>
<td>Dher</td>
<td>Ropar</td>
<td>24.05.06</td>
<td>Association for Social &amp; Rural Advancement (ASRA)</td>
</tr>
<tr>
<td>Paharpur</td>
<td>-Do-</td>
<td>26.05.06</td>
<td>-Do-</td>
</tr>
</tbody>
</table>

- An orientation meeting has been proposed in the council on 21.04.2006 for the selected local NGOs to motivate them for dissemination as well as collection of the following information:
  - Local agro diversity especially information on traditional crops & availability of traditional seeds.
  - Local medicinal plants used by the populations in day to day life and those harvested for commercial use.
  - Local traditional knowledge.
  - Local economically important plants (used in rope-making, paper-making, catechu, gum Arabica etc.) and their availability in specific areas.

For this, Questionnaire in English and Punjabi have been developed.

- A poster on Biological Diversity is being published in Punjabi for distribution amongst eco-clubs and NGOs.

5. **Data base Development**

The following data bases have been compiled:

(i) ‘State Biodiversity Strategy and Action Plan’ has been published by PSCST and a copy has been submitted to NBA. The Board has compiled the following information from secondary data:

- List of wild and domesticated flora and fauna in Punjab.
- List of Pre and Post Green revolution crop varieties used in Punjab.
- List of rare and threatened animals in Punjab.
• List of Protected areas in Punjab.

The information has been uploaded on the website www.punenvis.nic.in in collaboration with ENVIS center.

(ii) PSCST had taken up a study of Shivalik area of Punjab from 1998 to 2003 in collaboration with BSI, ZSI, IIRS and PAU. The report is under print. The following data w.r.t. wild flora and fauna in the Shivaliks has been compiled and put up to Punjab Biodiversity Board Members for their information:
• List of Biodiversity rich areas in Punjab Shivaliks.
• List of economically important and medicinal plants of Shivalik area.
• Importance Value of important plant species.
• Lists of major flora and fauna of Punjab Shivaliks, along with information on their common / rare / threatened / endemic status, their diagnostic features and general distribution in the area.
• Assessment of reasons for Biodiversity loss. These include urbanization & industrialization in Shivalik area, habitat fragmentation & loss, invasion of alien species, illegal hunting & over exploitation of resources.

(iii) PSCST has published ‘State of Environment – Punjab’ in 2005, which discusses the issues on Biodiversity conservation in the state at great length:
• It comprises a chapter on Biodiversity, which provides information on existing information w.r.t. Biodiversity conservation in the state and discusses the driving forces, which affect biodiversity in the state, the pressures on the ecological system, the current status, impacts and responses by the Government.
• A copy of the report has been submitted to National Biodiversity Authority. Copies have also been submitted to MoEF, GoI.

(iv) PSCST is nodal agency for wetland conservation in Punjab, which has 3 Ramsar sites (Harike, Kanjli and Ropar). The Ranjit Sagar Wetland has also been recently identified as a wetland of national importance at the instance of Hon’ble Governor of Punjab (This wetland falls with the states of Punjab, J&K and Himachal Pradesh). Following information compiled by the council, is available with PBB:
• List of natural and man-made wetlands in the state of Punjab.
• Data on flora and fauna of three important wetlands: Harike, Kanjli and Ropar along with information on their common / rare / threatened / endemic status, their diagnostic features and general distribution in the area.

• Biodiversity in five wetlands of state importance.

6. Biodiversity Information System

The above data has been consolidated in collaboration with ENVIS Centre, PSCST and a Biodiversity Information System has been set up. The information has been put up to PBB members and has been uploaded on net. A searcheable on-line data base has been developed, which is available on the above site. This includes:

• On-line searcheable data base for Shivaliks (Searcheable by Family, Genus and Species name and district wise distribution).

• On-line data base for Biodiversity outside Shivaliks (including cultivated crop varieties).

7. New proposals

A proposal for workshop on “Facilitating formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India” was prepared and submitted to NBA, which has been approved. Funds are yet to be released.

8. Infrastructure development

• The office of Punjab State Biodiversity Board is located in the Punjab State Council for Science & Technology. Existing infrastructure of the Council is being used.

• Project associate has been recruited.

9. Funds

Rs. 10 lacs have been received from National Biodiversity Authority, Chennai as seed money. A proposal for financial support from the State Government was submitted for 2005-06 and 2006-07. The same is pending before the State Planning Board.

10. Miscellaneous

• JD (Env.) visited Chennai on April 27-28, 2006 to attend the “State Biodiversity Board & Review meeting” organized by National Biodiversity Authority.

• Project Associate (ENVIS) attended National Conference on ‘Agro biodiversity’ organized by NBA in Feb., 2006.
• Project Associate (ENVIS Centre) participated in the “National Conference on Agrobiodiversity” organized by National Biodiversity Authority in February, 2006.

• Information about constitution of the Board was advertised through press. A Press-conference was taken by Principal Secretary, Department of Science, Technology and Environment, on 12.08.05 for the same purpose.
Future Activities Proposed

1. A workshop on ‘Facilitating formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India’ is proposed to be organized in July/August, 2006. Senior officers from the line departments e.g. Department of Environment, Forests & Wildlife, Agriculture, Horticulture, Animal Husbandry, Fisheries, Industries etc. from states of Punjab, Haryana, Himachal Pradesh, Chandigarh, Uttar Pradesh, Uttarakhand, Rajasthan, Jammu & Kashmir and Delhi would be invited to participate in the workshop.

2. International Biodiversity Day will be celebrated on/around May 22, 2006:
   - A poster on Biodiversity in Punjabi will be distributed amongst eco-clubs and NGOs.
   - Orientation workshop for NGOs will be organized (proposed on 21.04.06).
   - Five village level camps will be organized with the help of NGOs in order to generate awareness about Biodiversity in the Shivalik area among the general public. People will be provided orientation for constitution of BMCs.

3. A massive “Biodiversity awareness and capacity building programme” is proposed to be organized. Various target groups, which would be involved, are:
   - Panchayats
   - NGOs
   - Teachers
   - Students
   - General public
   - District level functionaries

4. Meetings of PBB and expert committees would be organized.

5. Action will be taken for constitution of BMCs in the State. For this, BDOs from the State will be oriented towards biodiversity awareness, SBSAP, constitution of BMCs, Role and activities of BMCs.

6. Literature on Biodiversity of Punjab in the form of brochures will be prepared to be distributed among masses to disseminate Biodiversity education and awareness.

7. The Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 will be translated in Punjabi.
Result of Essay & Poster Competitions organized by PSCST at World Biodiversity Day

1. Best Entries in Essay Competition in English-Urban

<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Class</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Himanshi</td>
<td>X</td>
<td>ST. Thomas Sr. Sec. School, Mission Road, Pathankot, Distt. gurdaspur</td>
</tr>
<tr>
<td>Ramanpreet Kaur</td>
<td>X</td>
<td>Shastri Model School, Phase- I Mohali</td>
</tr>
<tr>
<td>Anika Lamba</td>
<td>X</td>
<td>D.N. Model Sr. Sec. School, Moga</td>
</tr>
<tr>
<td>Inderpreet Kaur</td>
<td>VIII</td>
<td>Col. V. R. Mohan DAV Public School, Derabassi, Distt. Patiala</td>
</tr>
<tr>
<td>Navpreet Dhillon</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Nawanshahar</td>
</tr>
</tbody>
</table>

2. Best Entries in Essay Competition in English-Rural

<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Class</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pooja Rani</td>
<td>XII</td>
<td>Him Shikha Sr. Sec. School, Mamoon, Pathankot, Distt. Gurdaspur</td>
</tr>
<tr>
<td>Rajwant Kaur</td>
<td>XII</td>
<td>Govt. Girls Sr. Sec. School, (Kot Ise Khan), Moga</td>
</tr>
<tr>
<td>Amandeep Sharma</td>
<td>XII</td>
<td>Govt. Girls Sr. Sec. School, (Kot Ise Khan), Moga</td>
</tr>
<tr>
<td>Parveen Sharma</td>
<td>X</td>
<td>Sawan Sr. Sec. School, Chakki, Haryal, Gurdaspur</td>
</tr>
<tr>
<td>Amrinder Singh</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Banur, Patiala</td>
</tr>
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</table>


<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Class</th>
<th>School</th>
</tr>
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<tbody>
<tr>
<td>Neha Sharma</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Nawanshahar</td>
</tr>
<tr>
<td>Amandeep Kaur</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Nawanshahar</td>
</tr>
<tr>
<td>Manpreet Kaur</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Nawanshahar</td>
</tr>
<tr>
<td>Pawan Preet Kaur</td>
<td>IX</td>
<td>R. K. S. Public School, Moga</td>
</tr>
<tr>
<td>Harpreet singh</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Nawanshahar</td>
</tr>
</tbody>
</table>

4. Best Entries in Essay Competition in Punjabi-Rural

<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Class</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunita Rani</td>
<td>X</td>
<td>Govt. Sec. School, Gobindpur, Khun- Khun, Hoshiarpur</td>
</tr>
<tr>
<td>Jaspreet Kaur</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Banur, Patiala</td>
</tr>
<tr>
<td>Gurpreet Kaur Natt</td>
<td>X</td>
<td>Govt. Sr. Sec. School, Manauli, Roapar</td>
</tr>
</tbody>
</table>
5. Best Entries in Poster Competition-Urban

<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Class</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rajinder Kaur</td>
<td>VIII</td>
<td>Shastri Model School, Phase – I, Mohali</td>
</tr>
<tr>
<td>Simran Preet Kaur</td>
<td>X</td>
<td>Golden Sr. Sec. School, Gurdaspur</td>
</tr>
<tr>
<td>Amanpreet Kaur Saini</td>
<td>X</td>
<td>Shastri Model School, Phase – I, Mohali</td>
</tr>
<tr>
<td>Harjot Kaur</td>
<td>XI</td>
<td>Govt. girls Sr. Sec. School, Mandi Gobindgarh</td>
</tr>
<tr>
<td>Sarika</td>
<td>IV</td>
<td>Sai Grace Public School, Derrabassi</td>
</tr>
</tbody>
</table>

6. Best Entries in Poster Competition -Rural

<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Class</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manpreet Kaur Sohal</td>
<td>X</td>
<td>Govt. Sr. Sec. School, Manauli, Ropar</td>
</tr>
<tr>
<td>Mandeep Singh</td>
<td>VIII</td>
<td>National Public School, Passiwal, Ropar</td>
</tr>
<tr>
<td>Balwinder Kaur</td>
<td>VIII</td>
<td>Shiva Public School, VPO- Bhanam, Anandpur Sahib, Ropar</td>
</tr>
<tr>
<td>Gurpreet Kaur Dhiman</td>
<td>X</td>
<td>Govt. Sr. Sec. School, Manauli, Ropar</td>
</tr>
<tr>
<td>Avtar Singh</td>
<td>XII</td>
<td>Govt. Sr. Sec. School, Banur, Patiala</td>
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</tbody>
</table>