NATIONAL BIODIVERSITY AUTHORITY

Proceedings of the 42nd AUTHORITY MEETING

21st August, 2017

Venue

Conference Hall,
National Biodiversity Authority,
5th Floor, Ticel Biopark, CSIR Road,
Taramani, Chennai

Proceedings of the 42nd Authority Meeting of the National Biodiversity Authority on 21.08.2017

The forty second meeting of the National Biodiversity Authority (NBA) was held on 21st August, 2017 at the National Biodiversity Authority, Chennai under the Chairmanship of Dr.B.Meenakumari, Chairperson, NBA to consider the agenda items circulated to the Members *by* email (12.08.2017) and hard copy. The list of participants is placed as **Annex-I.**

2. At the outset, Shri T. Rabikumar, Secretary, NBA, welcomed the members to the 42nd authority meeting. Dr. B. Meenakumari, Chairperson, NBA also extended a warm welcome to all the members. Thereafter, Secretary, NBA updated the members about the activities carried out since the last meeting held on 27-03-2017 at the Indus conference hall of MoEF & CC, New Delhi.

Thereafter, the agenda items were taken up as under:

42.01: Confirmation of Proceedings of the 41st Authority meeting

The draft proceedings of the 41st Authority meeting of the National Biodiversity Authority held on 27th March, 2017 at New Delhi was circulated to the Members *vide* email dated 25th April, 2017 seeking their comments. In response, Dr Sujata Arora, Advisor, MoEF&CC and Dr. Manoj Kumar Modi, DBT have provided their comments. In view of the urgency alluded to the decision of the Authority with regard to India Biodiversity Awards, comments offered by Dr Sujata Arora and Dr. Manoj Kumar Modi were circulated among the Members, for which some of the members have offered their suggestions/comments and the same have been incorporated as appropriate. Representative of the MoEF&CC, Dr. J.R.Bhatt informed the house that the comments of Dr Sujata Arora, who participated in the 41st meeting on certain agenda items have not been properly incorporated and the agenda items having financial implications has to be circulated to the members, well in advance.

Decision:

a. The Members confirmed the proceedings of the 41st Authority meeting.

b. The Secretariat recorded Dr Sujata Arora's comments for compliance in future.

Action: Secretary, NBA

42.02: Action taken report of the 41st Authority meeting

The Secretary, NBA briefed the action taken on the decisions of the 41st Authority meeting, stating that on most of the items action has been taken and for the remaining items action is in progress.

- With regard to the Agenda item no. 41.08 (*report of the National Institute of Ocean Technology on alleged harmful effect of the seaweed (Kappaphycus alvarezii) on the coral reefs in the southern coastal districts of Tamil Nadu*), Dr J.R.Bhatt suggested the need to conduct further study to encourage the commercial cultivation of seaweeds in the country as stakeholders are approaching the Ministry in this regard. Noting that NBA has already dealt with the matter on impact of harmful seaweeds on coral reefs and came out with the report with the help of NIOT. He suggested that NBA may consult the National Institutes concerning the effect of cultivation of seaweeds & its invasive properties in the coastal ecosystem. Further, the outcome may be reported to the MOEFCC.

Decision:

a) NBA may consult the National Institutes / agencies in this matter for reporting to MoEF&CC.

Action: Secretary, NBA

42.03 & 42.16.01: To consider the Proceedings of the 43rd and 44th meetings of Expert Committee on ABS held on 18th April, 2017 and 8th & 9th August, 2017

The Secretary apprised the members about the 43rd and 44th Meeting of the Expert Committee (EC) on Access and Benefit Sharing (ABS) on 08 April 2017 and 8th & 9th August, 2017 respectively.

2. It was informed that a total number of 216 applications were placed (75 applications in 42nd EC and 141 applications in 43rd EC) before the EC of which 124 were recommended for approval. Subsequently, as per the decision of the 38th Authority, Form-III applications (43 numbers) which were recommended for approval by 43rd EC on ABS were cleared [draft agreement sent to applicants for execution] by the NBA Secretariat.

3. The Authority deliberated on the recommendations of the EC on ABS and approved the applications, with the following remarks:

a) Application in Form-I (No.511) submitted by Dr Fiona Rachel Savory: Taking into consideration of the recommendation of the EC, Authority, after discussion decided to inform the applicant the case as violation and no action is to be taken.

b) The Secretary, NBA informed the Members about the recommendation of the EC regarding communication of Authority's decisions to the applicants who have violated the provisions of the BD Act. In this connection, the Chairperson apprised the Members about the status of the proposal of considering giving a time period for people who have already accessed the biological resources and could not apply to NBA in proper time, and also considering post-facto approval for the cases recommended by EC as violations. This was referred to the Law Ministry from MoEF&CC for further advice and guidance. After discussing the matter, Members suggested that since the decision in this matter is taking time, the applicants may be informed of the decision of EC and directed NBA Secretariat to communicate the applicants that their applications fall under 'violation'.

c) Members advised the Secretariat to form a committee by drawing members from different ministries, stakeholders, industries to identify the lacunae noticed while implementing the provisions of the BD Act and come out with a broader consensus for taking remedial action.

d) Members emphasized that NBA should take steps to reduce the timeline for granting approval to the applications especially with respect to Form-I applications submitted by individual researchers and institutions fall under Section 3(2), to undertake purely academic/non-commercial research. In this regard, it was informed that in the 41st Authority meeting, the Authority authorized the Chairperson, NBA to consider the recommendation of the EC and convey approval to the applicants with respect to Form-I applications submitted by Individual researcher who falls under Section 3(2), to undertake academic / non-commercial research. Such approvals are to be placed before the Authority for ratification.

e) Members felt that there is a scope for further reducing the timeline for processing such applications which will encourage the applicants who approach NBA for conducting non-commercial research and also will pave way to establish better compliance by the users of the biological resources in future. After discussion, Members directed the NBA Secretariat to try forwarding the applications to the EC members electronically after receiving consent or otherwise from the SBBs. Based on the recommendations of the EC Members, NBA may convey approval to the applicants, later seeking ratification by Authority.

f) With regard to the EC's recommendation to dispense with the procedure for seeking consent or otherwise from the BMC for Form-IV applications, the authority noted that biological resources mentioned in the Form IV applications are already accessed by the applicants with the approval of NBA and proposed to be transferred to a third party. The Authority learnt that Form II and Form III have also been dispensed with the procedure of seeking consent or otherwise from BMC on similar grounds. The Authority observed that the Biological Diversity Rules 2004, stipulates the consultation of local body / BMC as referred in the Sub-Rule 3 of Rule 14. Whereas other Rules viz 17, 18, 19 deals with the procedure for disposal of transfer of results of research, IPR and third party applications respectively have not insisted to have consultation with BMC before disposal of the applications. Hence, the Authority directed that the procedure for seeking consent or otherwise

from BMC for Form-IV applications seeking approval for access to biological resources and associated knowledge already accessed under Form I has to be dispensed with. NBA shall seek consent or otherwise of the SBB/BMC only in case of Form I applications by individuals/entities covered u/s 3(2) requesting for access from a source other than government institutions/organisations.

g) Pursuant to the decision taken in the 41st Authority meeting, developing guidelines for non-monetary benefit sharing has been examined by the EC on ABS and the EC formed a sub-committee for this purpose. The report of the Sub-committee along with the draft guidelines was considered by EC. The Authority Members discussed the draft guidelines in detail and endorsed the EC's recommendations.

h) With regard to the recommendation of the EC concerning the issues on deposition and access of microorganisms by Indian and non-Indian Scientists/researchers for non-commercial research, a meeting was organized by the Department of Biotechnology on 20th December 2016 at New Delhi. The Members observed that NBA has streamlined the procedure for the speedy processing like online submission of application and the Authority has also delegated power to the Chairperson, NBA for disposing of Form-I application seeking approval for non-commercial research. Dr Yogesh Shouche expressed his concern on this issue and expressed the difficulties faced by the Indian Scientist / researchers in this regard. After discussion, the Members decided that for non-commercial research by accessing the type strains deposited in the repository outside the country which are strictly following the CBD / Nagoya Protocol, NBA Secretariat may develop a procedure with the help of Dr. Yogesh Shouche, Member and in consultation with the DBT within the frame work of BD Act. In addition, the Authority directed NBA to incorporate the accession number accorded by the Indian repository, in the Form C in order to confirm the deposition.

i) With regard to the recommendation of the EC concerning M/s. Sunev Pharma Solution Limited (App.no. 1056), the Chairperson, NBA apprised the members that

while submitting reply to the sec.19(3) notice to present the case before rejecting the application, the applicant informed that biological resources were accessed from China during 2001 to 2010 and the research took place during 2004-05. Further applicant stated before the EC during personal appearance that they had to resort to purchase from China due to delay in getting clearance from the State Biodiversity Boards for accessing the same, however, the applicant inadvertently submitted the invoice from a trader in Amritsar. The EC recommended for rejection of her plea as they have obtained patents in 5 countries (Europe, South Africa, USA, South Korea and Mexico) without obtaining prior approval of NBA. During the presentation, the applicant added that the herbal formulation invented by the applicant had won two awards internationally. Since the inventions contributed to the wellbeing of humanity, it is suggested that NBA may encourage this kind of inventions. The Chairperson has suggested that an affidavit can be obtained from the applicant with regard to place of access of biological resources as was done in similar cases and the application can be further processed.

Decisions:

a) The Authority approved the recommendations of the EC on the ABS applications.

b) The Authority decided to inform the Applicant Dr Fiona Rachel Savory (No.511) that it is a violation.

c) Authority decided to communicate its decision of rejection to the applicants who have contravened the provisions of the BD Act in writing.

d) Authority directed the Secretariat to take action on sl.no. (a) referred to above, without waiting for issuance of approved proceedings of the Authority.

e) Members decided that NBA Secretariat, may forward the application in Form-I to the members of the EC through electronically after receiving consent or otherwise from the SBBs in so far as access to the biological resources and/or TK is for conducting of non-commercial research by individual/ organization/ academic institution. Such applications may be approved by Chairperson and the cases may be submitted to the Authority for ratification.

f) The Authority decided to dispense with the procedure for seeking consent or otherwise from SBB/BMC for Form-IV applications.

g) The Authority endorsed the recommendation of the EC on the guidelines for non-monetary benefit sharing.

h) Members decided that NBA may facilitate the access of type strains deposited in the repository outside the country which is strictly following the CBD/ Nagoya Protocol through devising / simplifying the procedures, within the framework of the BD Act/Rules. NBA may take the help of Dr Yogesh Shouche, Member and DBT for expediting the matter.

i) Authority decided to have a provision to include the accession number accorded by the Indian repository, in the Form C.

Action: Secretary, NBA.

42.04: To consider Form-III applications cleared by the NBA Secretariat for ratification

Members ratified the action of the Secretariat in sending the draft agreements to the 43 applicants which were recommended for approval by the EC in its 43rd meeting held on 18.04.2017, as per the decision taken by the 38th Authority.

Decision:

The Members ratified the action taken by the Chairperson, NBA.

Action: Secretary, NBA

42.05: To consider the minutes of the Meeting of CEG held on 16th June, 2017 to develop the modalities for utilizing the benefit sharing amount accrued on the access of bovine cattle embryos

Secretary gave a brief account of the outcome of the benefit sharing accrued on the access of bovine cattle embryos. The Members approved the recommendation for distribution of the benefits sharing amount as contained in the report of the Core Expert Group, inter alia, pointing out that the amount prescribed as benefit sharing needs to commensurate with the value of the biological resources accessed. Members opined that in future besides the monetary aspect of the benefit sharing, more importantly the technology transfer (viz.,Ovum pickup technology) should be given weightage while arriving at the benefit sharing.

Decision:

a) The Members approved the recommendation of the CEG for utilizing the benefit sharing amount accrued on the access of bovine cattle embryos.

b) Authority directed the NBA Secretariat to add technology transfer (Ovum pickup) as non-monitory benefit sharing component in addition to the monetary benefit sharing component, while arriving at the benefit sharing, in all future cases of similar nature.

Action: Secretary, NBA

42.06: To consider the minutes of the meeting of the Core Expert Group for Implementing the Nagoya Protocol on ABS held on 3rd March, 2017

The Secretary, NBA gave an overview of the minutes of the CEG, stating that the outcome of the meeting with the officials of the DIPP on designating the Indian Patent Office as one of the Check points and follow up action required to be taken on this aspect and also about developing user country measures. He informed that for developing the user country measures and user obligations, it is likely to take longer time which needs more consultations at different levels for arriving at implementable solutions. As Core Expert Group is meant for handling the specific task within a limited period, the Secretary informed that the CEG recommended that since its term was expired on 31st March 2017, the Authority may consider extending the term of the CEG for a year and organizing its meetings more frequently so as to make a real headway in this direction.

2. The proposal for constitution of EC in place of CEG was agreed with broader mandates.

Decision:

a) The Authority approved to constitute an Expert Committee in place of CEG with a tenure of one year.

Action: Secretary, NBA

42.07: To consider the proposal of National Research Centre on Equines, Hisar to designate the National Centre for veterinary Type Cultures repository under section 39 of the BD Act.

The proposal of the Director, ICAR-National Research Centre on Equines, Hisar for designating the National Veterinary Type Cultures (NVTC) as a national repository under section 39 of the BD Act for safe deposit voucher specimens of veterinary / animal / rumen / diary microbial cultures and parts thereof, of news taxa discovered was

discussed at length. The Secretary informed that the Authority in its 32nd meeting decided not to consider any new proposal for inclusion in the list of designated repositories. He added that two repositories for keeping microbial specimens are already in place.

2. Dr Yogesh Souche suggested that such type of microbial strains may be deposited with IMTECH Chandigarh which is a designated repository under BD Act. Dr J.R.Bhatt highlighted the need of having a network of repositories throughout the country for better facilitation to researchers to keep specimens in repositories. Members observed that there is a need to evolve the guideline for eligibility conditions/ parameters for identification and notification of repositories. The Members also observed that these repositories may not be in a position to accept the vouchers specimens due to the constraint of space for storage in view of the huge samples already available with them and also the investments to be made to maintain the cultures/specimens and NBA may explore a way to establish a network of repositories for effective conservation of germplasm available across the country.

3. The members after discussion decided that the Director, ICAR-National Research Centre on Equines may be called for next meeting for making detailed presentation to decide further on this subject. The Authority also directed the NBA that a small group may be constituted for developing a guideline for eligibility conditions/ parameters for identification of repositories.

Decision:

a) Authority decided to invite the Director, ICAR-National Research Centre on Equines for next meeting to make detailed presentation for taking decision on this subject.

b) Authority decided to form a small group for developing a guideline for eligibility conditions/ parameters for identification of repositories.

Action: Secretary, NBA

42.08: To consider the draft clause (the obligations under the BD Act) developed by the Core Expert Group to incorporate in the sanction order of the funding agencies/departments

The draft clauses proposed by the CEG for incorporation in the sanction order by various funding agencies/departments like DBT, DST, MoES, ICAR, CSIR etc was discussed in depth and they suggested that instead of hosting the obligations of the principal investigators in the NBA website, it should be included in the sanction order by the funding agencies itself, which will ensure better compliance of the provisions of the BD Act. The Members appreciated the initiative by the NBA for reaching out the research community to enable compliance on the BD Act.

Decision:

a) Authority approved the draft clauses proposed by the CEG for incorporating in the sanction order by various funding agencies/departments.

b) The Authority directed the NBA to send a communication to this effect to all funding agencies.

Action: Secretary, NBA

42.09: Ratification of decisions on Form-B applications

Members ratified the approvals accorded by the Chairperson, NBA to the 16 Form-B applications as per the decision of the 32nd Authority.

Decisions:

The Authority ratified the action taken on Form B applications by the NBA Secretariat.

Action: Secretary, NBA

42.10: Details of Form-C applications received by the NBA

The Authority took note of the decision taken in the 37th meeting of the Authority held on 22nd March 2016 under agenda item 37.14.02, that nine (9) researchers / scientists have provided their prior intimation to NBA in Form-C for depositing of

microorganism since the last meeting.

42.11: To consider the applications for access to Red Sanders wood approved by the Chairperson, NBA

The Secretary informed the members that following the auction of Red Sanders by the Department of Revenue Intelligence (DRI) through STC and MMTC, through global tenders, NBA received 8 applications from foreign buyers seeking access to auctioned Red Sanders wood. As per the procedure approved by the Authority in its 32nd (32.07) and 33rd (33.04) meetings, the applications have been processed and approval accorded by the Chairperson, after receiving due benefit sharing component.

Decision:

a) The Authority ratified the approvals accorded by the Chairperson, NBA on the Form-I applications seeking access to Red Sanders wood.

Action: Secretary, NBA

42.12: To consider the proceedings of the First meeting of the Expert committee on Invasive Alien Species held on 12th January, 2017

The proceedings of the first meeting of the Expert Committee (EC) on Invasive Alien Species held on 12th January, 2017 at NBA Chennai was taken for discussion and the members observed that there is no particular law/regulation in the country with respect to management/mitigation of the Invasive Alien Species. The members suggested that the EC may give its report covering the existing legal provisions governing the Invasive Alien Species and suggest management measures and other related issues since there is no specific legal instrument for the issues related to management / governance of Invasive Alien Species at present.

2. The Members also decided that the NBA Secretariat may write to all the SBBs to provide list of Invasive Alien Species occurring within their jurisdiction, in each sector, like fisheries, agriculture, horticulture, etc. The inputs given by the SBBs shall be taken into consideration by the EC while drafting the report.

Decision:

a) Authority decided that the report of the EC may include management of invasiveness and legal provisions existing with regard to Invasive alien species in India.

b) NBA Secretariat may write to all the SBBs to provide the list of Invasive Alien Species occurring within their jurisdiction, in each sector, like fisheries, agriculture, horticulture, etc. The EC while drafting the report shall take their inputs also.

Action: Secretary, NBA

42.13: To consider the budget of estimate for the year 2017-2018

Authority considered and approved the Budget Estimate for the year 2017-2018 to tune of Rs 18.40 Crores under Grants-in-Aid for NBA.

Action: Secretary, NBA

42.14: Completion of Certificate Audit of Annual Accounts for the year 2016-2017

Authority has taken note of the statutory audit of annual accounts of NBA by the CAG. Authority also ratified the audited annual accounts of the NBA for the year 2016-2017.

Action: Secretary, NBA

42.15: Items for information

The Members took note of the activities / meetings undertaken by the NBA such as IDB celebrations, launch of Biodiversity Awards, participation of officials in the international conferences, visit of Secretary, MOEFCC to the NBA, visit of DG, ICAR & Secretary, DARE and exemption of NBA from the purview of IT Act.

2. During the discussion, Members expressed that the ICAR is conducting various programmes on agro-biodiversity related matters, through its institutions to implement their obligations under various international conventions / treaties. The Members suggested that there is a need to establish a linkage between the NBA and the ICAR

institutions as it will help both the organisations to address their mandates and obligations, more holistically, as well as effective implementation of the BD Act.

3. Dr.J.R.Bhatt, Advisor, MOEF&CC drawn reference to the Regional Consultation Workshop on Mainstreaming Biodiversity towards preparation of 6th National Report to CBD and SBBs are implementing the provisions of the BD Act at the ground level. He suggested that NBA may advise the SBBs to conduct stakeholder's meetings for gathering inputs on biological diversity related activities and achievements for the preparation of National report extending financial support if needed. He encouraged NBA/SBBs to report achievements like celebrating International Day for Biological Diversity, releasing of knowledge products, conducting awareness programmes, capacity building activities, etc., to CBD regularly which will place India as forerunner in implementing the objectives of the CBD.

Decision:

a) Members suggested that there is a need to establish a strong linkage between the NBA and the ICAR institutions for effective implementation of the BD Act.

b) Members directed NBA to request the SBBs to conduct consultation meetings with the stakeholder's for gathering inputs on biological diversity related activities and achievements for the preparation of the National Report to CBD.

c) Authority directed the NBA Secretariat to take appropriate steps in reporting to CBD regularly about the activities conducted/ organized on achievements and deliverable of NBA/SBB viz., celebration of International events, release of knowledge products and awareness tool kits, etc.

Action: Secretary, NBA

42.16: Any other item(s) with the permission of the Chair

42.16.02: To consider the summary of decision of the 13th meeting of the Expert Committee on Normally Trade Commodities held on 21st July, 2017

The Secretary informed that 8th Meeting of the EC on Normally Traded Commodities was held on 21st July, 2017 and the minutes of the meeting has been drafted and it would be circulated to the EC members for confirmation.

2. In this regard, the Members informed the Secretariat that considerable time has been lost to finalize the draft minutes of the Meeting. Dr. Bhatt was critical about the delay in finalizing the Proceedings/Minutes of the committee meetings and pointed out that the Ministry has issued internal circular that the minutes has to be finalized within 24 hours upon completion of the Meeting. He urged NBA to reduce the number of committees and also to expedite the reports to be submitted by the existing committees. Members directed the Secretariat to take appropriate action on the recommendations once the minutes are formally submitted by the ECs.

Action: Secretary, NBA

42.16.03: To consider the draft proceedings of the 8th meeting of the NBA's Expert Committee on Agrobiodiversity held on 1st August, 2017

The 8th meeting of the NBA's Expert Committee on Agrobiodiversity held on 1st August, 2017 under the chairmanship of Dr. R.S. Rana, former member, NBA discussed about the concerns raised about the Guidelines on International Collaborative Research Projects vide section 5 of the BD Act, access to genetic resources and sharing of benefits arising from commercial utilization, sending information on Digital DNA/Protein sequences of biological resources to internationally recognized databases abroad as required for publication purpose, protection of traditional knowledge of local communities associated with the animal breeds, developed and conserved by them, u/s 36 (5) of the Biological Diversity Act, 2002 and achieving National Biodiversity Target 7 [corresponding to Aichi Biodiversity Target 13] under Goal C of the Global Strategic Biodiversity Plan 2011 -2020 and made their recommendations.

2. The Secretary proposed that as the time line for convening the next meeting of the Authority may take a period of three months and some of the decisions require

follow-up action to handle the issue further, the recommendations as per the draft proceedings of the said meeting may be approved in principle so as to enable the NBA Secretariat to move further and upon finalizing the proceedings, the same will be placed before the Authority for ratification.

3. The Members considered the proposal and agreed to the same. In general, the Members suggested that NBA may request all the Expert Committees to come out with their reports/ recommendations within a stipulated time according to their ToRs. A suggestion was made to conduct Authority meetings in different states involving SBBs. It was also suggested that the Directorate of Forest Education may be sensitized to train the State Forest Service officers on the BD Act & Regulations.

Decisions:

a) The authority, in principle, approved the recommendations of the draft proceedings of the 8th meeting of the EC on Agro-biodiversity.

b) Members directed the NBA to urge all ECs to come out with their reports/ recommendations within stipulated time period according to the TORs.

Action: Secretary, NBA

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Annex-01

List of Participants

Official Members who participated			
1	**Dr (Mrs) B.Meenakumari** Chairperson, National Biodiversity Authority, Chennai	3	**Dr. Sanjay Kumar,** Director, Institute of Himalayan Bioresource Technology P O No:6, Palampur, Himachal Pradesh: 176061
2	**Dr. J.R.Bhatt,** Adviser / Scientist-G, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi - 110 003	4	**Dr. R. Kirubagaran** Scientist G, National Institute of Ocean Technology, Ministry of Earth Sciences, Velachery-Thambaram Main Road, Narayanapuram, Pallikaranai, Chennai - 600100
Non-Official Members who participated			
5	**Dr. Parimal Chandra Bhattacharjee,** A\3 Asiyana Housing complex Maligaon, Guwahati – 781011, Assam	7	**Shri Darshan Shankar** Chancellor Trans Disciplinary University C/o Foundation of Revitalization of Local Health Traditions (FRLHT) #74/2, Jarakabande Kaval, Post Attur via Yelahanka,Bangalore - 560 064
6	**Dr. Yogesh Shouche** Senior Microbiologist, National Centre for Cell Science Department of Biotechnology Lab, University of Pune Campus, University Road, Ganeshkhind, Pune, Maharashtra – 411 007	8	**Dr. Dinesh Misra,** No: 65, Sector 8 Gandhi Nagar, Gujarat - 382008
Members who did not participate			
9	**The Additional Director General of Forests,** Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road,New Delhi - 110 003.	13	**Dr. B. Rajender,** Joint Secretary (Seeds), Department of Agriculture Cooperation & Farmers Welfare, Room no. 297 D1, Krishi Bhawan Rajendra Prasad Road, New Delhi-110001
10	**Smt. Shomita Biswas,** Chief Executive officer National Medicinal Plant Board, Department of AYUSH, 3rd Floor, AYUSH Bhawan, B Block, G.P.O. Complex, I.N.A., New Delhi-110 023	14	**Dr. B.K Shukla,** Scientist G & Head Planning, Coordination and Performance Management, Department of Science & Technology, New Mehrauli Road, New Delhi – 110 016.

11	**Dr. Jeet Singh Sandhu**, Deputy Director General, Division of Crop Science, ICAR, Krishi Bhavan, Dr. Rajendra Prasad Road, New Delhi -110 001.	15	**The Director,** Ministry of Tribal Affairs, Room no. 216, J-Wing, 7th Floor, Shastri Bhawan, New Delhi – 110001
12	**Dr. Renu Swarup** Senior Advisor, Department of Biotechnology Ministry of Science & Technology, Govt. of India, Block No:2, 6-8th Floor, CGO Complex, Block No. 2 Lodhi Road, New Delhi 110 003.	16	**Prof. Umesh Rai** Director,Department of Zoology, South Campus, University of Delhi New Delhi- 110 007