

# Annual Progress Report 2020-2021

Submitted by



**Arunachal ENVIS Hub**  
**Department of Environment & Forests**  
**Government of Arunachal Pradesh**  
**Itanagar**

Submitted to:



**Government of India**  
**Ministry of Environment, Forests & Climate Change**  
**(MoEF&CC), EI-Division**  
**Agni Wing-650,6<sup>th</sup> floor**  
**Indira Paryavaran Bhawan**  
**JorBagh Road, New Delhi-110003 (India)**

# Annual Progress Report (APR) 2020-2021

## Submitted to:



Government of India  
Ministry of Environment, Forests & Climate Change  
(MoEF&CC), EI-Division  
Agni Wing-650,6<sup>th</sup> floor  
Indira ParyavaranBhawan  
JorBagh Road, New Delhi-110003 (India)

## Submitted by



**Arunachal ENVIS Hub**  
**Department of Environment & Forests**  
**Government of Arunachal Pradesh**  
**Itanagar**

# Contents:

## 1. Information/ Knowledge Products:

### 1.1 ENVIS Newsletters/Special edition published during the Financial Year (2020-21):

- 1.1.1 ENVIS Newsletter for the month of July-Sept, 2020 .....1-2
- 1.1.2 ENVIS Newsletter for the months of Oct-Dec 2020.....3-4
- 1.1.3 ENVIS Special edition on GSDP training Course on title” Propagation and Management of Bamboo.....5-6
- 1.1.4 Pamphlet on land Cover and Land use map of Papumare district.....7
- 1.1.5 ENVIS Newsletter for the months of January-March 2021.....8-9
- 1.1.6 Pamphlet on Soil map of Papumare district.....10

## 2. Maintenance of ENVIS Website:

- 2.1 Reconstruction of ENVIS Website ([www.arpervis.org.in](http://www.arpervis.org.in)).....11
- 2.2 Upgraded and redesigned for user friendly .....12
- 2.3 Upgraded mobile friendly user.....12
- 2.4 Updates all ENVIS related activities since its establishment.....13

## 3. Summary of programme activities organized/conducted by the Arunachal ENVIS Hub during FY-2020-21.....14-16

- 3.1 Online Environmental Quiz was held for the students of Class VI-X to commemorate the World Environment Day 2020 on theme- “Biodiversity”organised by ENVIS Hub, Deptt. of Environment & Forests on 3<sup>rd</sup> June’2020 on occasion of WED 2020.....17-23
- 3.2 SafaiAbhiyan/Cleanliness DriveOrganised in collaboration with State Climate Change Cell and Youth Mission for Clean River Association (YMFCRA) at SENKI River, Near NeraNatung Govt. College Itanagar on 4<sup>th</sup> June 2020 .....24-25
- 3.3 Mass Plantation Programme and Cleaning of Senki River were conducted at 138 BN CRPF campuses at Senki View, Itanagar. The programme was organised by the Arunachal ENVIS Hub/State Climate Change Cell, Deptt. of Environment & Forests along with Govt. officials and Local publics on 4<sup>th</sup> June’ 2020.....26-31
- 3.4 A webinar conducted in collaboration with State Climate Change Cell to mark the theme (“Ozone for **life**: 35 years of ozone layer **protection**”) of 2020 World Ozone Day. ....32
- 3.5 Online Literary activities on Essay, Drawing and Painting competition held to commemorate World Ozone Day 2020.....33-36
- 3.6 Observed Environmental important dayviz, World Earth Day, World Wetland Day, World Water Day, Meteorological day etcduring FY-2020-21.....37-38
- 3.7 Developed Maps based on Environmental Parameter (9x9Km), Arunachal Pradesh.....39-47
- 3.8 Field Trips to concerned DFO Office (Viz: Namsai, Wakro, Pasighat, and Aalo,) for purpose of inspection and Data collection from Automatic Weather Station (AWS) installed by State Climate Change Cell department of Environment & Forests .....48-50
- 3.9 Summary of training imparted under Green Skill Development Programme (GSDP) by Arunachal ENVIS Hub during FY\_2020-21:.....51-86
- 3.10 A two days inception workshop on Stakeholders consultation of preparation of revised State Action Plan on Climate Change (SAPCC).....87-89
- 3.11 Summary of ISBIED report till date .....90

1. Information/ Knowledge Products:

1.1 ENVIS Newsletters/Special edition/Calendar published during the Financial Year (2020-21):

Arunachal ENVIS Hub has published three (3) Newsletters for the Financial Year 2020-21 on status of Environment & its Related Issues.

1.1.1 ENVIS Newsletter for the month of July-September, 2020-21.



[www.arpervis.org.in/Publication/ Newsletter](http://www.arpervis.org.in/Publication/Newsletter)

Pic:1- Front Page





<p><b>CHIEF EDITOR</b></p> <p><i>Shri G. Kumar, IFS</i> PCCF (Env &amp; CC) Department of Environment &amp; Forests Government of Arunachal Pradesh</p>	<p><b>ASSOCIATES</b></p> <p><i>Shri Dohu James,</i> Programme Officer, ENVIS</p> <p><i>Shri Tanu Siram,</i> Information Officer, ENVIS</p> <p><i>Shri Padam Sonar,</i> IT Officer &amp; GIS Expert, ENVIS</p> <p><i>Shri Ani Dai,</i> Data Entry Operator, ENVIS</p>	<p><i>Cover design &amp; Layout:</i> Team ENVIS</p> <p><i>Website:</i> <a href="http://www.arpervis.org.in">http://www.arpervis.org.in</a></p>
<p><b>EDITORS</b></p> <p><i>Shri Dagmik Riba, IFS</i> Director Environment Department of Environment &amp; Forests Government of Arunachal Pradesh</p> <p><i>Shri D Dohu Robin</i> Co-ordinator, ENVIS Hub Department of Environment &amp; Forests Government of Arunachal Pradesh</p>		

ENVIS Centre Arunachal Pradesh on status of Environment publishes newsletter on quarterly basis with the support from Ministry of Environment, Forests & Climate Change. This newsletter is aimed at disseminating environment, forests & wildlife information among the environment enthusiasts, students and public at large.

Please send your valuable suggestions, comments & queries to,

**ENVIS ARUNACHAL CENTRE**  
On status of Environment & its Related Issues  
Office Complex of PCCC,  
Department of Environment & Forests  
Government of Arunachal Pradesh  
Itanagar – 791111

Email: [envisarunachal@gmail.com](mailto:envisarunachal@gmail.com)

Visit: <http://arpervis.org.in/>

Tel(O): 0360-2292367

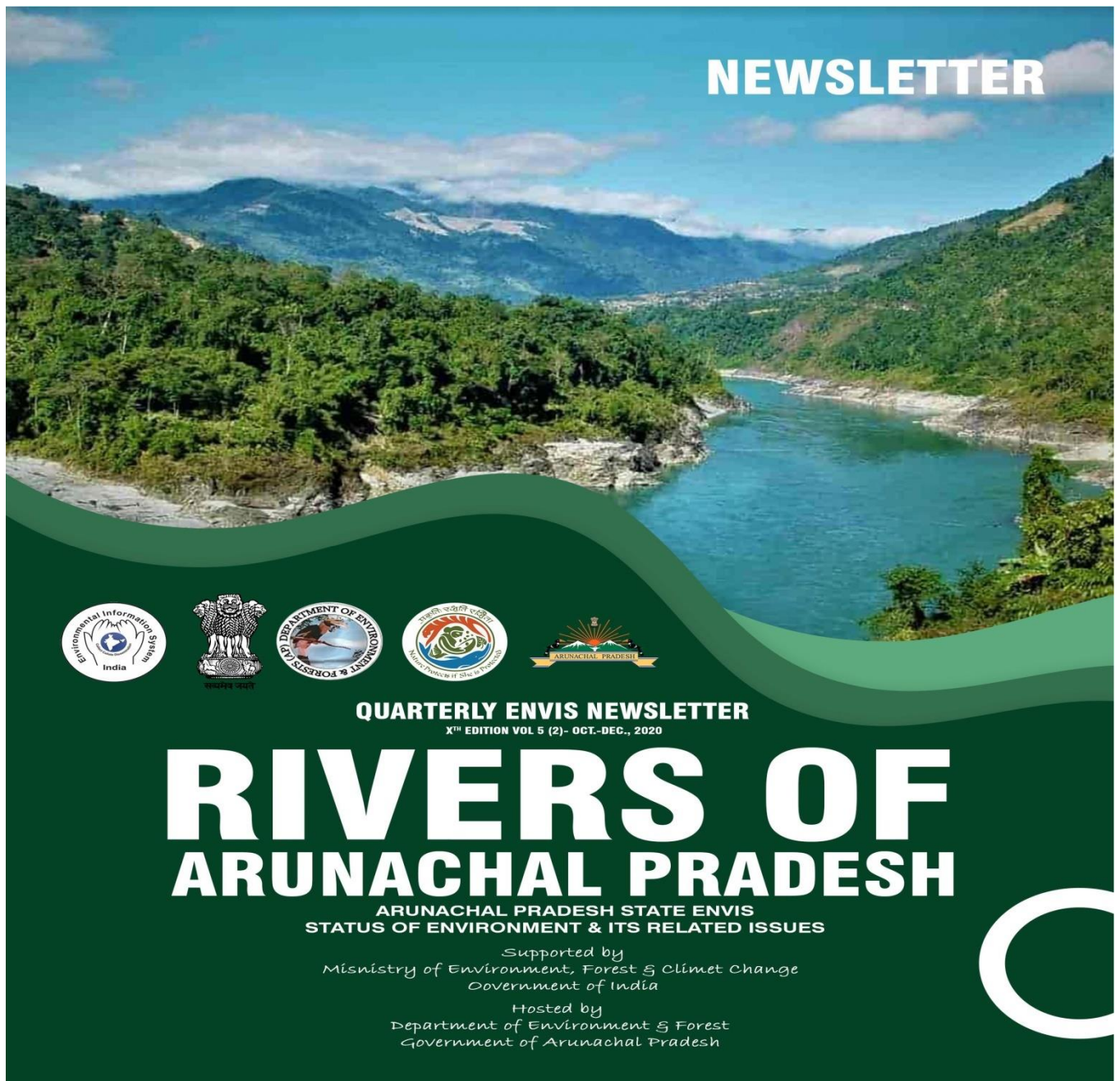
**ENVIS Team**

Shri D. Dohu Robin  
Coordinator cum  
Deputy Director (ENV)

Programme Officer: Shri Dohu James  
Information Officer: Shri Tanu Siram  
IT Officer/GIS Expert: Shri Padam Sonar  
Date Entry Operator: Shri Ani Dai

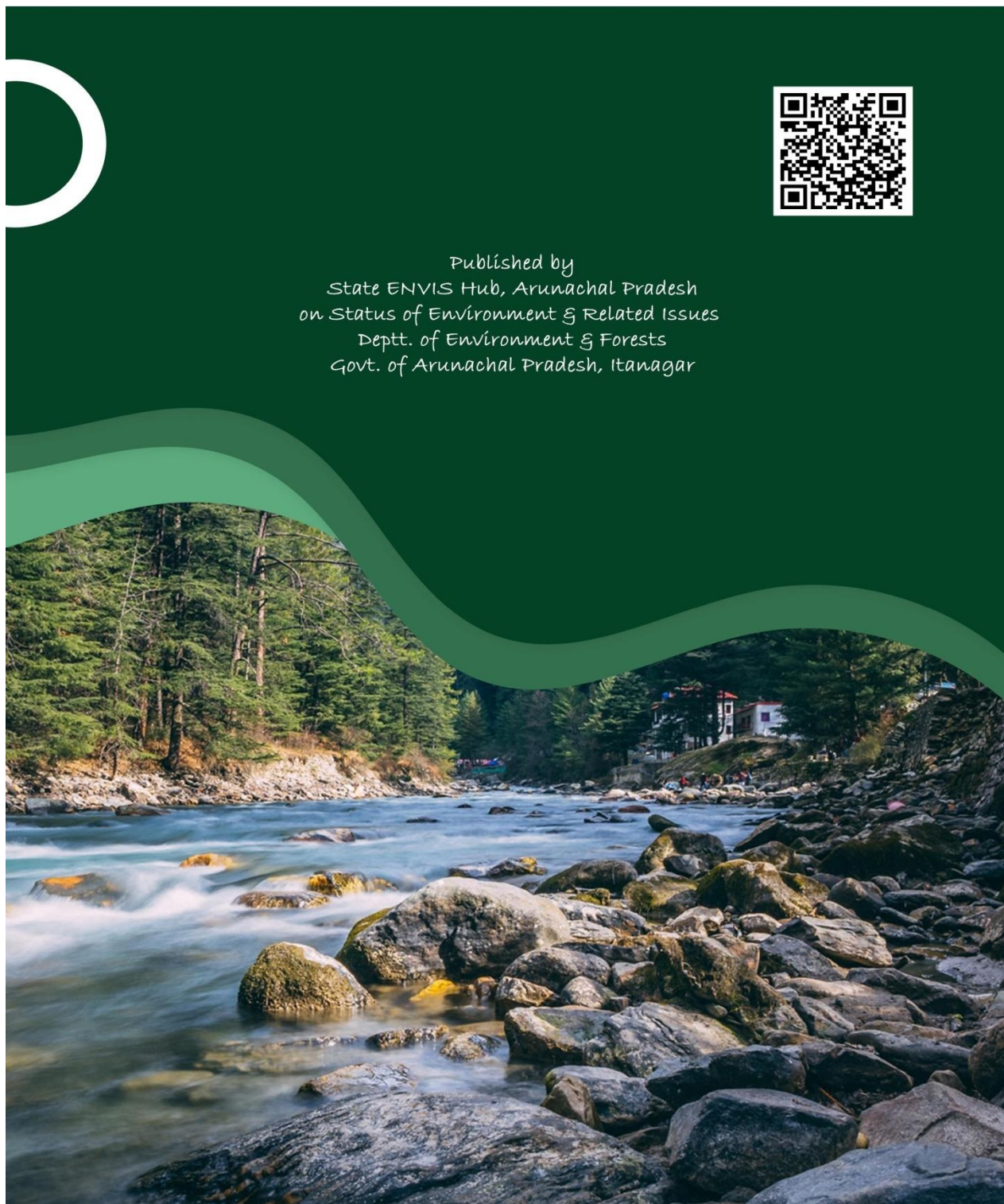
Pic: 2- Front Page

1.1.2 ENVIS Newsletter for the Months of Oct-Dec 2020



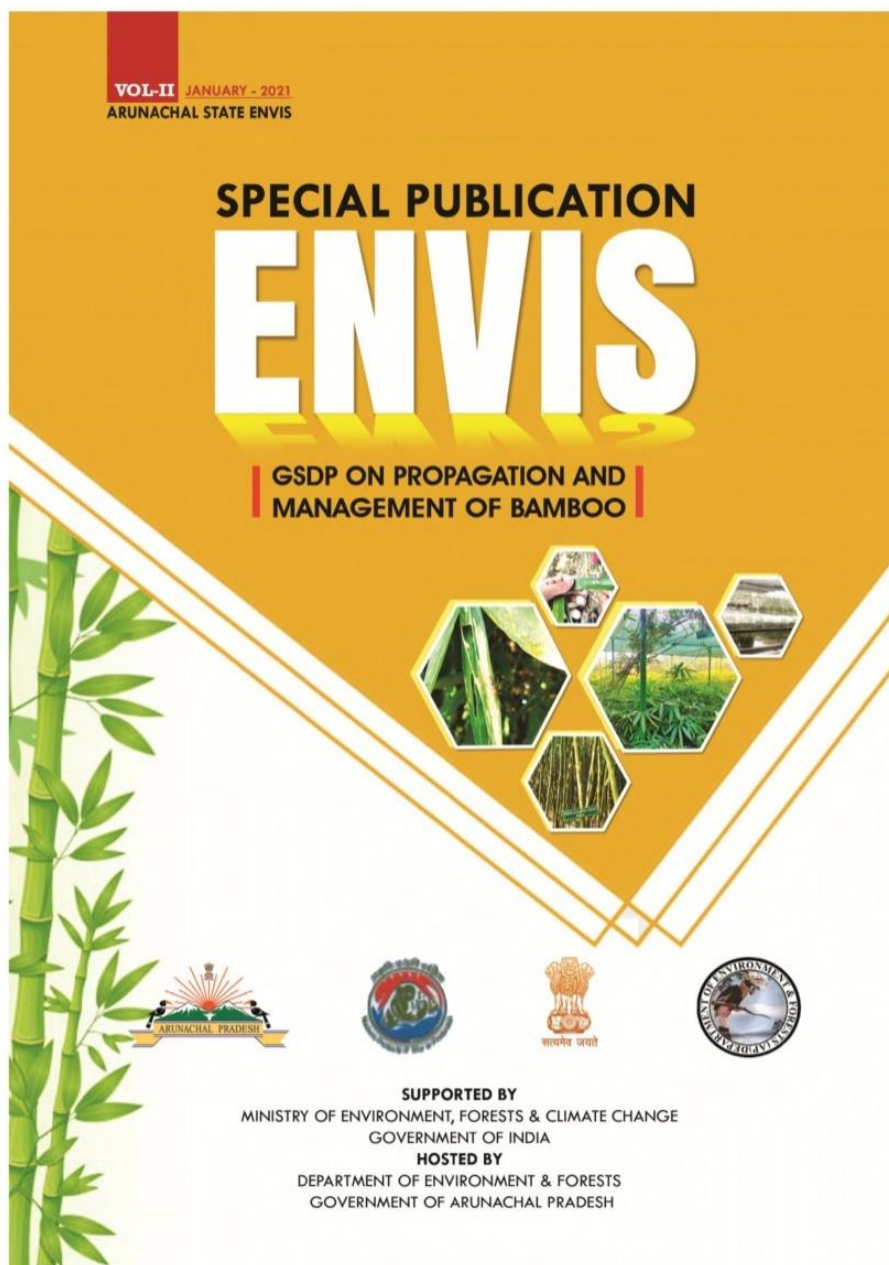
Pic: 3: Front Page





Pic: 4- Back Cover

1.1.3 ENVIS Special edition on GSDP training Course on title”  
Propagation and Management of Bamboo



Pic.5: Front Page

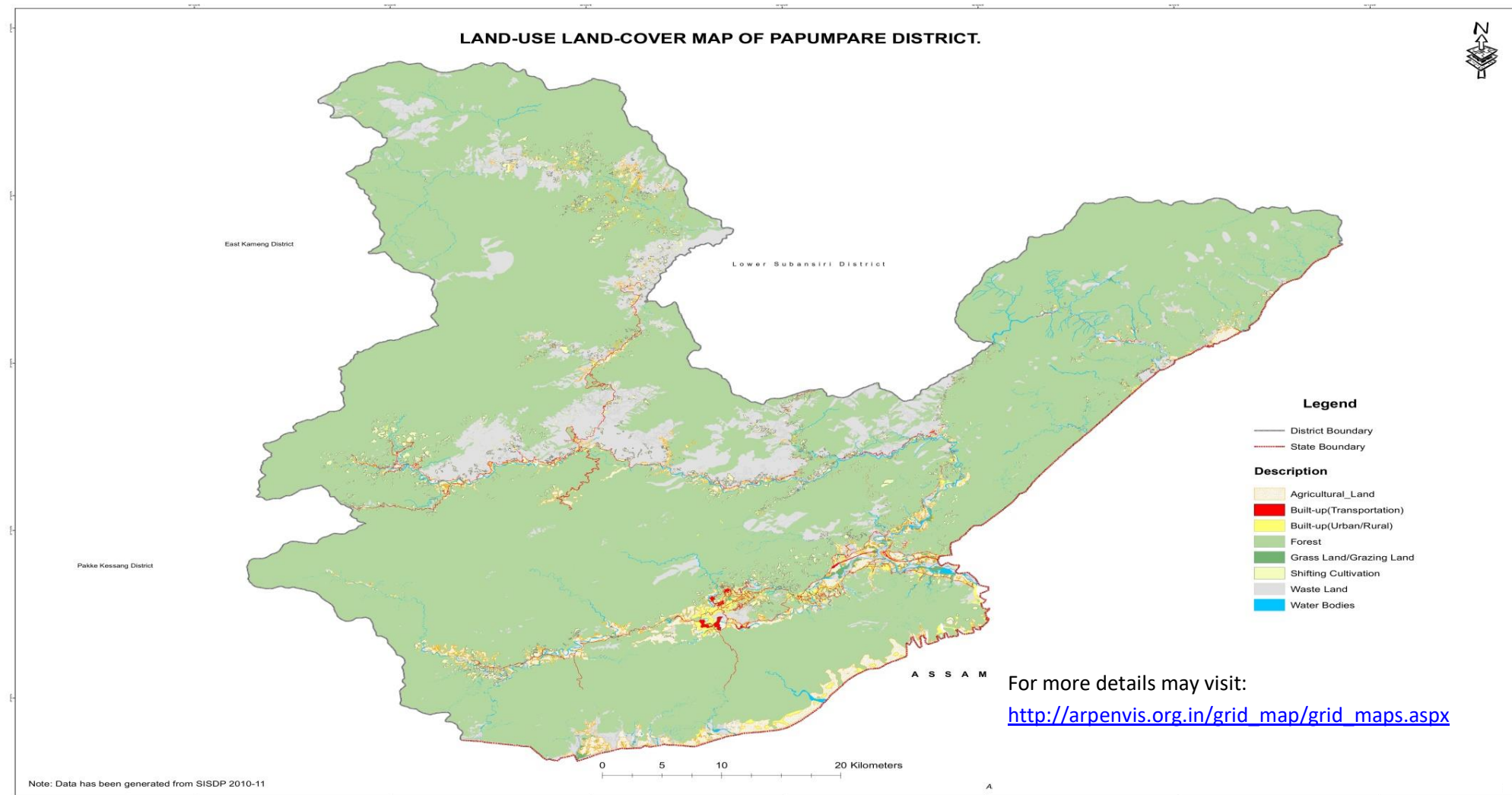


*Pic:-6- GSDP Trainees*

[http://arpenvis.org.in/news/publication/7th-Vol-4\(1\)-Apr-June\\_2019.pdf](http://arpenvis.org.in/news/publication/7th-Vol-4(1)-Apr-June_2019.pdf)



1.1.4 Pamphlet on land Cover and Land use map of Papumare district of Arunachal Pradesh.





1.1.5 ENVIS Newsletter for the months of January-March 2021



Pic: - 7: Front Cover

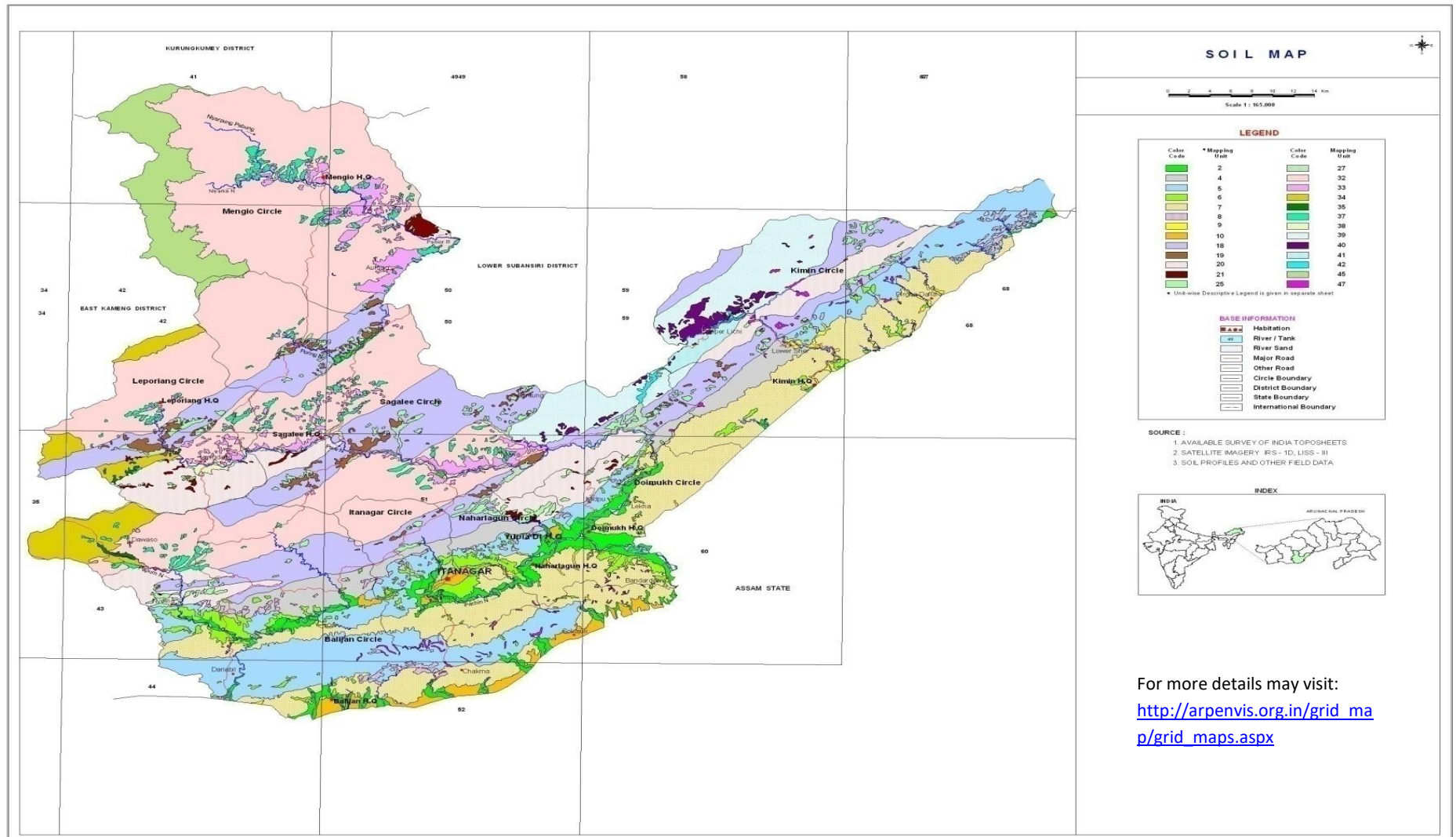


Published by  
State ENVIS Hub, Arunachal Pradesh  
on Status of Environment  
(Deptt. of Environment & Forest)

Pic: -8:- Back Cover



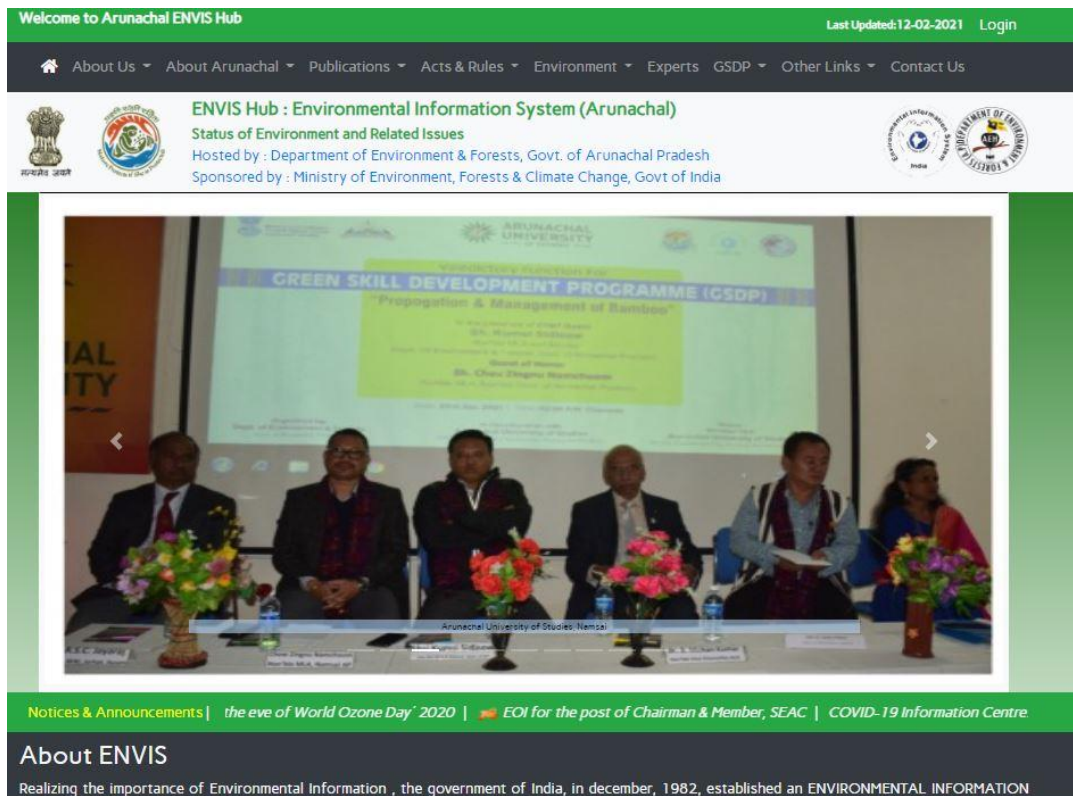
1.1.6 Pamphlet on Soil map of Papumpare district of Arunachal Pradesh



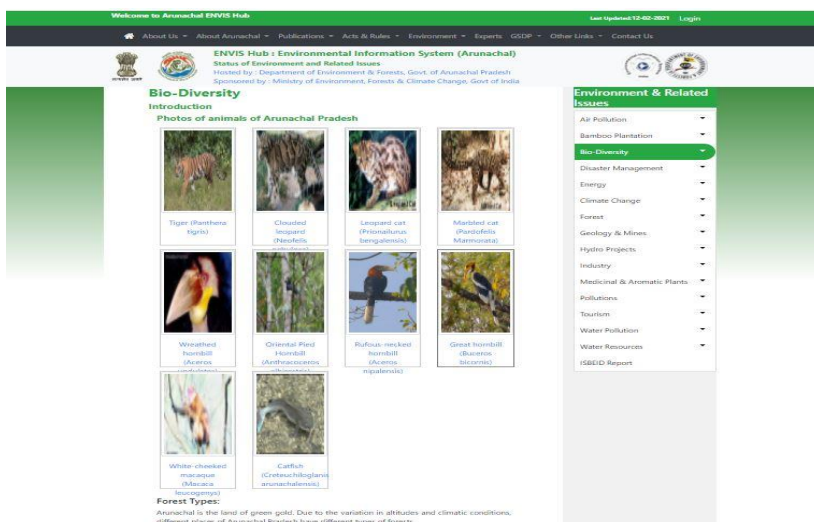
For more details may visit:  
[http://arpervis.org.in/grid\\_map/grid\\_maps.aspx](http://arpervis.org.in/grid_map/grid_maps.aspx)

## 2 Maintenance of ENVIS Website:

### 2.1 Reconstruction of ENVIS Website ([www.arpervis.org.in](http://www.arpervis.org.in))



Pic. 9. Website (New)



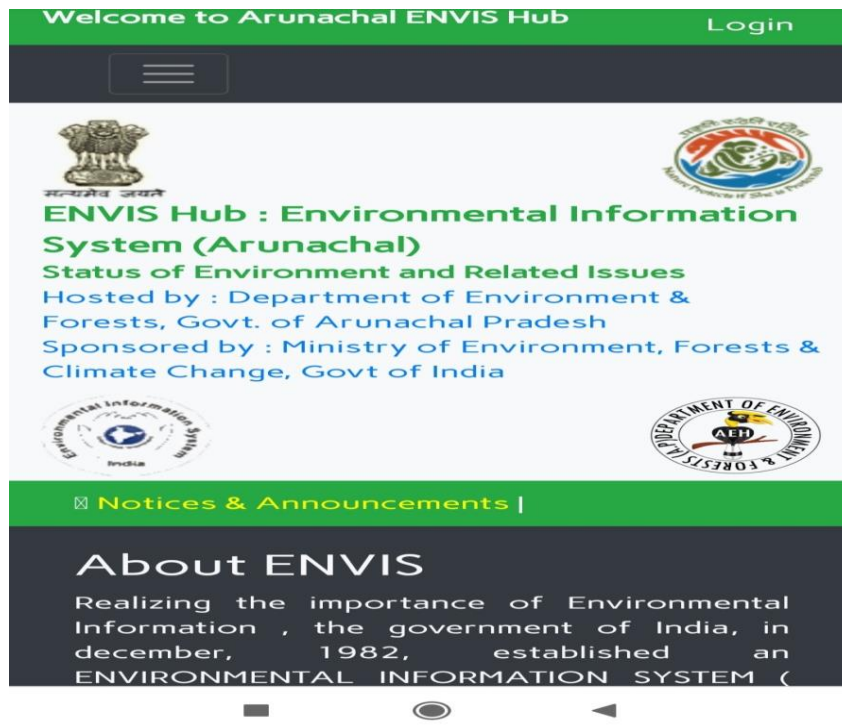
Pic 10. Biodiversity based on Arunachal Pradesh updated on Website (New)

2.2. Upgraded and redesigned for USER FRIENDLY website: www.arp.org.nic.in



Pic: 11- redesigned for USER FRIENDLY website

2.3 Upgraded to mobile friendly user



Pic.12. Mobile Friendly website



2.4 Updates all ENVIS related activities since its establishment



About ENVIS

Realizing the importance of Environmental Information, the government of India, in december, 1982, established an ENVIRONMENTAL INFORMATION SYSTEM ( ENVIS) as a planned programme. ENVIS is a decentralized system with a network of distribution oriented centers ensuring integration of national efforts in environmental information collection, collation, storage, retrieval and dissemination to all concerned, presently the ENVIS network consist of focal point at the ministry of environment and forest, ENVIS centers setup in different orga nisations in the country in selected areas of environment.

*"We won't have a society, if we destroy the environment."*

— Margaret Mead

Latest Updates

NEWS	NOTIFICATION	PUBLICATION
<ul style="list-style-type: none"> <li>• Valedictory session of GSDP Course concluded on 23 Jan 2021.</li> <li>• Winner's Results for World Ozone Day, 2020</li> <li>• GRIDS map created by ENVIS Hub (9 by 9) KM.</li> <li>• Online Quiz competition on WED' 2020, 3rd-4th June</li> <li>• Interview conducted for suitable candidates for undergoing GSDP training on Bamboo Crafts and Pollution Monitors.</li> <li>• World Environment Day on 05 June 2019.</li> <li>• Valedictory session of GSDP Course concluded on 21 Feb 2019.</li> <li>• Valedictory session of GSDP Course concluded on 28</li> </ul>	<ul style="list-style-type: none"> <li>• Online Poster/Essay Competition on World Ozone Day, 2020</li> <li>• EDI for the post of Chairman &amp; Member, SEAC</li> <li>• Launching of GSDP training on Pollution Monitors: Air &amp; Water- 21 Oct 2019</li> <li>• Result of interview "Pollution Monitors: Air &amp; Water"</li> <li>• Circular "Pollution Monitors: Air &amp; Water"</li> <li>• Installation of Automated Weather Station (AWS) on various districts of Arunachal Pradesh.</li> <li>• Notification_GSDP_Pollution Monitors</li> <li>• Circular GSDP Pollution Monitors</li> <li>• Notification Selection Committee for GSDP</li> </ul>	<ul style="list-style-type: none"> <li>• 8th Edition Vol-3(2) Oct-Mar 2018</li> <li>• 5th Edition Vol-3(1) Apr-Sep 2019</li> <li>• 4th Edition Vol-2 (2) Jan-Mar 2018</li> <li>• ENVIS Annual Calendar 2019</li> <li>• ENVIS Annual Table Calendar 2018</li> <li>• ENVIS Annual Calendar 2018</li> <li>• 4th Edition Vol-2(2) for Period (Jan-March 2018)</li> <li>• 3rd Edition Vol-2(1) for Period (July-Dec 2017)</li> <li>• 2nd Edition Vol-1(2) for Period (Jan-June 2017)</li> <li>• 1st Inaugural Edition Vol.1(1) July-Dec 2016</li> </ul>

Pic.13. ENVIS Activities Updated



3 Summary of programme activities organized/conducted by the Arunachal ENVIS Hub during FY-2020-21

S I · N o	Programme activities organized/conducted	Dates	No. of Participants	Topics/Outcome	Report Published
1.	Organized Online Environmental Quiz was held for the students of Class VI-X to commemorate the World Environment Day 2020 on theme- “Biodiversity” organised by ENVIS Hub, Deptt. of Environment & Forests to mark the WED 2020	3 <sup>rd</sup> June’2020	30Nos	<ul style="list-style-type: none"> <li>• Theme- “Biodiversity”</li> <li>• Winners were given E-certificates with prizes</li> <li>• Disseminate Environmental Awareness through competition digitally among students, teachers and etc.</li> </ul>	<p>Media report (<a href="https://arunachal24.in/arunachal-plantation-and-cleaning-programme-of-senki-river/">https://arunachal24.in/arunachal-plantation-and-cleaning-programme-of-senki-river/</a>)  <a href="https://arunachaltimes.in/index.php/2020/06/06/wed-quiz-competition-held/">https://arunachaltimes.in/index.php/2020/06/06/wed-quiz-competition-held/</a></p> <p>Progress Report has been submitted to Envis Secretariat, MoEF&amp; CC, Govt. of India on dated 5<sup>th</sup>June 2020.</p>
2.	Organized SafaiAbhiyan/Cleanliness Drive Organised in collaboration with State Climate Change Cell and Youth Mission for Clean River Association (YMFCRA) at SENKI River, Near NeraNatung Govt. College Itanagar	June 4, 2020	50Nos	<ul style="list-style-type: none"> <li>• Theme- “ Biodiversity”</li> </ul>	<p>Media report (<a href="https://arunachal24.in/arunachal-plantation-and-cleaning-programme-of-senki-river/">https://arunachal24.in/arunachal-plantation-and-cleaning-programme-of-senki-river/</a>)</p> <p>Progress Report has been submitted to Envis Secretariat, MoEF&amp; CC, Govt. of India on dated 5<sup>th</sup> June 2020.</p>

## Annual Progress Report 2020-21

3.	Mass Plantation Programme and Cleaning of Senki River were conducted at 138 BN CRPF campuses at Senki View, Itanagar. The programme was organised by the Arunachal ENVIS Hub/State Climate Change Cell, Deptt. of Environment & Forests along with Govt. officials and Local publics	4 <sup>th</sup> June' 2020	150 Nos.	<ul style="list-style-type: none"> <li>• Theme- “ Biodiversity”</li> <li>• Plant more and more saplings to preserve and protect environment as conservation of natural environment is important for wellbeing of present and future generations</li> </ul>	<p>Media report (<a href="https://arunachal24.in/arunachal-plantation-and-cleaning-programme-of-senki-river/">https://arunachal24.in/arunachal-plantation-and-cleaning-programme-of-senki-river/</a> )</p> <p>Progress Report has been submitted to Envis Secretariat, MoEF&amp; CC, Govt. of India on dated 5<sup>th</sup>June 2020</p>
4.	A webinar conducted in collaboration with State Climate Change Cell to mark the theme (“Ozone for life: 35 years of ozone layer protection”) of 2020 World Ozone Day	16 <sup>th</sup> Sept 2020	50	Theme “ Ozone for the: 35 years of Ozone Layer protection” of 2020 world Ozone Day	-
5.	Online Literary activities on Essay, Drawing and Painting competition held to commemorate World Ozone Day 2020	Sept 16 <sup>th</sup> – Oct 14 <sup>th</sup> Oct 2020	14 Nos	Ozone for Life for poster competition and Climate Change & Ozone Depletion for Essay Writing competition	<a href="https://arunachal24.in/itanagar-world-ozone-day-2020-celebration-concludes/">https://arunachal24.in/itanagar-world-ozone-day-2020-celebration-concludes/</a>
6.	Observed Environmental important day viz, World Earth Day, World Wetland Day, World Water Day, Meteorological day etc during FY-	-	-	-	-

## Annual Progress Report 2020-21

---

	2020-21				
7.	Developed GRID Thematic Maps of 9 x9 KM, Arunachal Pradesh	-	7 Nos	-	<a href="http://arpenvis.org.in/grid_map/grid_maps.aspx">http://arpenvis.org.in/grid_map/grid_maps.aspx</a>
8.	Field Trips to concerned DFO Office (Viz: Namsai, Wakro, Pasighat, and Aalo,) for purpose of inspection and Data collection from Automatic Weather Station (AWS) installed by State Climate Change Cell department of Environment & Forests	21 <sup>st</sup> -25 <sup>th</sup> Jan 2021	-	Purpose of inspection and collecting Automatic Weather Station Datas installed by State Climate Change Cell at DFOs Office	-

3.1 **Online Environmental Quiz was held for the students of Class VI-X to commemorate the World Environment Day 2020 on theme- “Biodiversity” organised by ENVIS Hub, Deptt. of Environment & Forests on 3<sup>rd</sup> June’2020 on occasion of WED 2020.**

To commemorate the World Environment Day 2020 on the year theme: “Biodiversity”, Online Environmental Quiz was held for the students of Class VI-X to commemorate the World Environment Day 2020 on theme- “Biodiversity” organised by ENVIS Hub, Deptt. of Environment & Forests on 3<sup>rd</sup> June’2020 on occasion of WED 2020.

Class 12 student of Doimukh-based BKM School, DohuYakap stood first, while Class 8 student of the government middle school in Chimpu, DohuYaku secured the second position in an online quiz competition themed ‘Biodiversity’,

Class 6 student of Little Flower School, Itanagar, DohuYadam stood third, while Class 10 student of the Aalo GHSS, Tobi Ngomdir secured the fourth position.

Altogether 30 students from Class 6 to 12 from 23 different schools of the state took part in the three-day competition.

The winners of the competition were awarded E-certificate through their registered email id.

**Photo Gallery**



**Pic: 14. Poster for Online Quiz Competition**

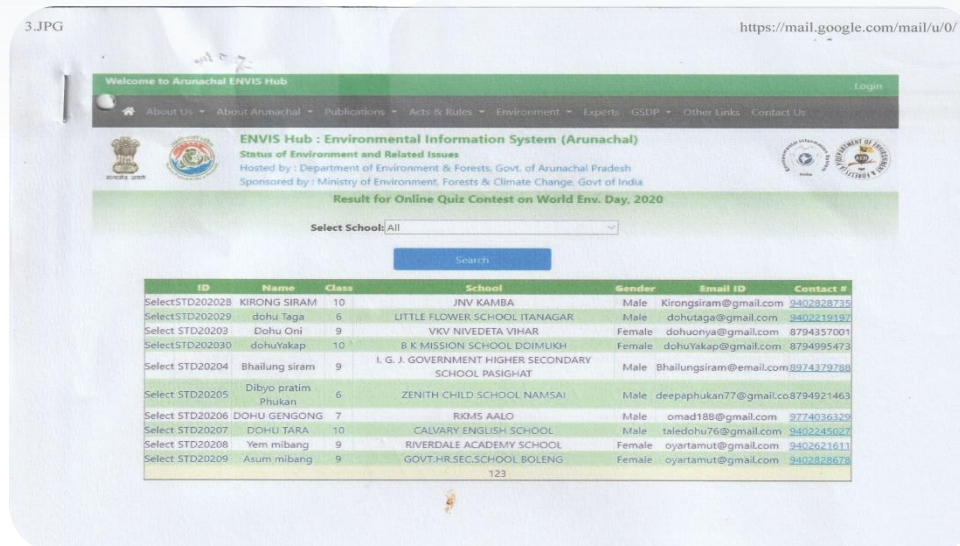
# Annual Progress Report 2020-21

<table border="1"> <thead> <tr> <th colspan="2">Result of : Rido Nancy</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Rido Nancy</td></tr> <tr><td>Class</td><td>6</td></tr> <tr><td>School</td><td>VKV SHERGAON</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:09:10</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>29</td></tr> <tr><td>Correct Answered</td><td>18</td></tr> <tr><td>Marks Obtained</td><td>18</td></tr> </tbody> </table>	Result of : Rido Nancy		Name	Rido Nancy	Class	6	School	VKV SHERGAON	Gender	Female	Time Taken	00:09:10	Total Questions	30	Total Attempt	29	Correct Answered	18	Marks Obtained	18	<table border="1"> <thead> <tr> <th colspan="2">Result of : Droima Dungkharpa</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Droima Dungkharpa</td></tr> <tr><td>Class</td><td>6</td></tr> <tr><td>School</td><td>GOVT. MIDDLE SCHOOL, JYOTINAGAR</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:13:50</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>29</td></tr> <tr><td>Correct Answered</td><td>16</td></tr> <tr><td>Marks Obtained</td><td>16</td></tr> </tbody> </table>	Result of : Droima Dungkharpa		Name	Droima Dungkharpa	Class	6	School	GOVT. MIDDLE SCHOOL, JYOTINAGAR	Gender	Female	Time Taken	00:13:50	Total Questions	30	Total Attempt	29	Correct Answered	16	Marks Obtained	16	<table border="1"> <thead> <tr> <th colspan="2">Result of : DOHU OMI</th> </tr> </thead> <tbody> <tr><td>Name</td><td>DOHU OMI</td></tr> <tr><td>Class</td><td>9</td></tr> <tr><td>School</td><td>VKV NIVEDITA VIHAR</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:12:32</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>24</td></tr> <tr><td>Correct Answered</td><td>18</td></tr> <tr><td>Marks Obtained</td><td>18</td></tr> </tbody> </table>	Result of : DOHU OMI		Name	DOHU OMI	Class	9	School	VKV NIVEDITA VIHAR	Gender	Female	Time Taken	00:12:32	Total Questions	30	Total Attempt	24	Correct Answered	18	Marks Obtained	18	<table border="1"> <thead> <tr> <th colspan="2">Result of : Snehal Jha</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Snehal Jha</td></tr> <tr><td>Class</td><td>9</td></tr> <tr><td>School</td><td>SINGHAD SPRING DALE SCHOOL</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:15:40</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>12</td></tr> <tr><td>Marks Obtained</td><td>12</td></tr> </tbody> </table>	Result of : Snehal Jha		Name	Snehal Jha	Class	9	School	SINGHAD SPRING DALE SCHOOL	Gender	Female	Time Taken	00:15:40	Total Questions	30	Total Attempt	30	Correct Answered	12	Marks Obtained	12	<table border="1"> <thead> <tr> <th colspan="2">Result of : Ome Messar</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Ome Messar</td></tr> <tr><td>Class</td><td>9</td></tr> <tr><td>School</td><td>GOOD SHEPHERD SCHOOL NAHARLAGUN</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:01:11</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>29</td></tr> <tr><td>Correct Answered</td><td>18</td></tr> <tr><td>Marks Obtained</td><td>18</td></tr> </tbody> </table>	Result of : Ome Messar		Name	Ome Messar	Class	9	School	GOOD SHEPHERD SCHOOL NAHARLAGUN	Gender	Female	Time Taken	00:01:11	Total Questions	30	Total Attempt	29	Correct Answered	18	Marks Obtained	18	<table border="1"> <thead> <tr> <th colspan="2">Result of : dohu yaku</th> </tr> </thead> <tbody> <tr><td>Name</td><td>dohu yaku</td></tr> <tr><td>Class</td><td>8</td></tr> <tr><td>School</td><td>GOVT SCHOOL CHIMPU</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:02:01</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>25</td></tr> <tr><td>Marks Obtained</td><td>25</td></tr> </tbody> </table>	Result of : dohu yaku		Name	dohu yaku	Class	8	School	GOVT SCHOOL CHIMPU	Gender	Female	Time Taken	00:02:01	Total Questions	30	Total Attempt	30	Correct Answered	25	Marks Obtained	25
Result of : Rido Nancy																																																																																																																													
Name	Rido Nancy																																																																																																																												
Class	6																																																																																																																												
School	VKV SHERGAON																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:09:10																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	29																																																																																																																												
Correct Answered	18																																																																																																																												
Marks Obtained	18																																																																																																																												
Result of : Droima Dungkharpa																																																																																																																													
Name	Droima Dungkharpa																																																																																																																												
Class	6																																																																																																																												
School	GOVT. MIDDLE SCHOOL, JYOTINAGAR																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:13:50																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	29																																																																																																																												
Correct Answered	16																																																																																																																												
Marks Obtained	16																																																																																																																												
Result of : DOHU OMI																																																																																																																													
Name	DOHU OMI																																																																																																																												
Class	9																																																																																																																												
School	VKV NIVEDITA VIHAR																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:12:32																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	24																																																																																																																												
Correct Answered	18																																																																																																																												
Marks Obtained	18																																																																																																																												
Result of : Snehal Jha																																																																																																																													
Name	Snehal Jha																																																																																																																												
Class	9																																																																																																																												
School	SINGHAD SPRING DALE SCHOOL																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:15:40																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	12																																																																																																																												
Marks Obtained	12																																																																																																																												
Result of : Ome Messar																																																																																																																													
Name	Ome Messar																																																																																																																												
Class	9																																																																																																																												
School	GOOD SHEPHERD SCHOOL NAHARLAGUN																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:01:11																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	29																																																																																																																												
Correct Answered	18																																																																																																																												
Marks Obtained	18																																																																																																																												
Result of : dohu yaku																																																																																																																													
Name	dohu yaku																																																																																																																												
Class	8																																																																																																																												
School	GOVT SCHOOL CHIMPU																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:02:01																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	25																																																																																																																												
Marks Obtained	25																																																																																																																												
<table border="1"> <thead> <tr> <th colspan="2">Result of : Abungo Singh</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Abungo Singh</td></tr> <tr><td>Class</td><td>7</td></tr> <tr><td>School</td><td>DAWN PUBLIC HIGH SCHOOL</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:05:49</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>24</td></tr> <tr><td>Correct Answered</td><td>10</td></tr> <tr><td>Marks Obtained</td><td>10</td></tr> </tbody> </table>	Result of : Abungo Singh		Name	Abungo Singh	Class	7	School	DAWN PUBLIC HIGH SCHOOL	Gender	Male	Time Taken	00:05:49	Total Questions	30	Total Attempt	24	Correct Answered	10	Marks Obtained	10	<table border="1"> <thead> <tr> <th colspan="2">Result of : Lucy Game</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Lucy Game</td></tr> <tr><td>Class</td><td>10</td></tr> <tr><td>School</td><td>GHSS AALO, WEST SIANG</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:13:06</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>25</td></tr> <tr><td>Correct Answered</td><td>19</td></tr> <tr><td>Marks Obtained</td><td>19</td></tr> </tbody> </table>	Result of : Lucy Game		Name	Lucy Game	Class	10	School	GHSS AALO, WEST SIANG	Gender	Female	Time Taken	00:13:06	Total Questions	30	Total Attempt	25	Correct Answered	19	Marks Obtained	19	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu Oni</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu Oni</td></tr> <tr><td>Class</td><td>9</td></tr> <tr><td>School</td><td>VKV NIVEDITA VIHAR</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:10:57</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>23</td></tr> <tr><td>Correct Answered</td><td>18</td></tr> <tr><td>Marks Obtained</td><td>18</td></tr> </tbody> </table>	Result of : Dohu Oni		Name	Dohu Oni	Class	9	School	VKV NIVEDITA VIHAR	Gender	Female	Time Taken	00:10:57	Total Questions	30	Total Attempt	23	Correct Answered	18	Marks Obtained	18	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dibyo pratim Phukan</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dibyo pratim Phukan</td></tr> <tr><td>Class</td><td>6</td></tr> <tr><td>School</td><td>ZENITH CHILD SCHOOL NAMSAI</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:10:27</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>16</td></tr> <tr><td>Marks Obtained</td><td>16</td></tr> </tbody> </table>	Result of : Dibyo pratim Phukan		Name	Dibyo pratim Phukan	Class	6	School	ZENITH CHILD SCHOOL NAMSAI	Gender	Male	Time Taken	00:10:27	Total Questions	30	Total Attempt	30	Correct Answered	16	Marks Obtained	16	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu yadam</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu yadam</td></tr> <tr><td>Class</td><td>6</td></tr> <tr><td>School</td><td>CHIMPU VALLEY SCHOOL</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:01:43</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>24</td></tr> <tr><td>Marks Obtained</td><td>24</td></tr> </tbody> </table>	Result of : Dohu yadam		Name	Dohu yadam	Class	6	School	CHIMPU VALLEY SCHOOL	Gender	Female	Time Taken	00:01:43	Total Questions	30	Total Attempt	30	Correct Answered	24	Marks Obtained	24	<table border="1"> <thead> <tr> <th colspan="2">Result of : Aseng Dai</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Aseng Dai</td></tr> <tr><td>Class</td><td>10</td></tr> <tr><td>School</td><td>GANDHI SCHOOL</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:04:15</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>9</td></tr> <tr><td>Marks Obtained</td><td>9</td></tr> </tbody> </table>	Result of : Aseng Dai		Name	Aseng Dai	Class	10	School	GANDHI SCHOOL	Gender	Female	Time Taken	00:04:15	Total Questions	30	Total Attempt	30	Correct Answered	9	Marks Obtained	9
Result of : Abungo Singh																																																																																																																													
Name	Abungo Singh																																																																																																																												
Class	7																																																																																																																												
School	DAWN PUBLIC HIGH SCHOOL																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:05:49																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	24																																																																																																																												
Correct Answered	10																																																																																																																												
Marks Obtained	10																																																																																																																												
Result of : Lucy Game																																																																																																																													
Name	Lucy Game																																																																																																																												
Class	10																																																																																																																												
School	GHSS AALO, WEST SIANG																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:13:06																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	25																																																																																																																												
Correct Answered	19																																																																																																																												
Marks Obtained	19																																																																																																																												
Result of : Dohu Oni																																																																																																																													
Name	Dohu Oni																																																																																																																												
Class	9																																																																																																																												
School	VKV NIVEDITA VIHAR																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:10:57																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	23																																																																																																																												
Correct Answered	18																																																																																																																												
Marks Obtained	18																																																																																																																												
Result of : Dibyo pratim Phukan																																																																																																																													
Name	Dibyo pratim Phukan																																																																																																																												
Class	6																																																																																																																												
School	ZENITH CHILD SCHOOL NAMSAI																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:10:27																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	16																																																																																																																												
Marks Obtained	16																																																																																																																												
Result of : Dohu yadam																																																																																																																													
Name	Dohu yadam																																																																																																																												
Class	6																																																																																																																												
School	CHIMPU VALLEY SCHOOL																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:01:43																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	24																																																																																																																												
Marks Obtained	24																																																																																																																												
Result of : Aseng Dai																																																																																																																													
Name	Aseng Dai																																																																																																																												
Class	10																																																																																																																												
School	GANDHI SCHOOL																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:04:15																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	9																																																																																																																												
Marks Obtained	9																																																																																																																												
<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu Yame</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu Yame</td></tr> <tr><td>Class</td><td>9</td></tr> <tr><td>School</td><td>ROYAL INTERNATIONAL SCHOOL NAHARLAGUN</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:04:20</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>26</td></tr> <tr><td>Correct Answered</td><td>18</td></tr> <tr><td>Marks Obtained</td><td>18</td></tr> </tbody> </table>	Result of : Dohu Yame		Name	Dohu Yame	Class	9	School	ROYAL INTERNATIONAL SCHOOL NAHARLAGUN	Gender	Female	Time Taken	00:04:20	Total Questions	30	Total Attempt	26	Correct Answered	18	Marks Obtained	18	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu paku</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu paku</td></tr> <tr><td>Class</td><td>10</td></tr> <tr><td>School</td><td>RAMAKRISHNA MISSION NAROTTAM NAGAR</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:13:10</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>27</td></tr> <tr><td>Correct Answered</td><td>20</td></tr> <tr><td>Marks Obtained</td><td>20</td></tr> </tbody> </table>	Result of : Dohu paku		Name	Dohu paku	Class	10	School	RAMAKRISHNA MISSION NAROTTAM NAGAR	Gender	Male	Time Taken	00:13:10	Total Questions	30	Total Attempt	27	Correct Answered	20	Marks Obtained	20	<table border="1"> <thead> <tr> <th colspan="2">Result of : DOHU GENGONG</th> </tr> </thead> <tbody> <tr><td>Name</td><td>DOHU GENGONG</td></tr> <tr><td>Class</td><td>7</td></tr> <tr><td>School</td><td>RKMS AALO</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:11:50</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>27</td></tr> <tr><td>Correct Answered</td><td>22</td></tr> <tr><td>Marks Obtained</td><td>22</td></tr> </tbody> </table>	Result of : DOHU GENGONG		Name	DOHU GENGONG	Class	7	School	RKMS AALO	Gender	Male	Time Taken	00:11:50	Total Questions	30	Total Attempt	27	Correct Answered	22	Marks Obtained	22	<table border="1"> <thead> <tr> <th colspan="2">Result of : dohu tame</th> </tr> </thead> <tbody> <tr><td>Name</td><td>dohu tame</td></tr> <tr><td>Class</td><td>7</td></tr> <tr><td>School</td><td>RAMAKRISHNA MISSION AALO</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:21:09</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>26</td></tr> <tr><td>Correct Answered</td><td>14</td></tr> <tr><td>Marks Obtained</td><td>14</td></tr> </tbody> </table>	Result of : dohu tame		Name	dohu tame	Class	7	School	RAMAKRISHNA MISSION AALO	Gender	Male	Time Taken	00:21:09	Total Questions	30	Total Attempt	26	Correct Answered	14	Marks Obtained	14	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu yadam</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu yadam</td></tr> <tr><td>Class</td><td>6</td></tr> <tr><td>School</td><td>LITTLE FLOWER SCHOOL ITANAGAR</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:01:41</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>29</td></tr> <tr><td>Correct Answered</td><td>21</td></tr> <tr><td>Marks Obtained</td><td>21</td></tr> </tbody> </table>	Result of : Dohu yadam		Name	Dohu yadam	Class	6	School	LITTLE FLOWER SCHOOL ITANAGAR	Gender	Female	Time Taken	00:01:41	Total Questions	30	Total Attempt	29	Correct Answered	21	Marks Obtained	21	<table border="1"> <thead> <tr> <th colspan="2">Result of : KIRONG SIRAM</th> </tr> </thead> <tbody> <tr><td>Name</td><td>KIRONG SIRAM</td></tr> <tr><td>Class</td><td>10</td></tr> <tr><td>School</td><td>JNV KAMBA</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:01:04</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>15</td></tr> <tr><td>Marks Obtained</td><td>15</td></tr> </tbody> </table>	Result of : KIRONG SIRAM		Name	KIRONG SIRAM	Class	10	School	JNV KAMBA	Gender	Male	Time Taken	00:01:04	Total Questions	30	Total Attempt	30	Correct Answered	15	Marks Obtained	15
Result of : Dohu Yame																																																																																																																													
Name	Dohu Yame																																																																																																																												
Class	9																																																																																																																												
School	ROYAL INTERNATIONAL SCHOOL NAHARLAGUN																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:04:20																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	26																																																																																																																												
Correct Answered	18																																																																																																																												
Marks Obtained	18																																																																																																																												
Result of : Dohu paku																																																																																																																													
Name	Dohu paku																																																																																																																												
Class	10																																																																																																																												
School	RAMAKRISHNA MISSION NAROTTAM NAGAR																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:13:10																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	27																																																																																																																												
Correct Answered	20																																																																																																																												
Marks Obtained	20																																																																																																																												
Result of : DOHU GENGONG																																																																																																																													
Name	DOHU GENGONG																																																																																																																												
Class	7																																																																																																																												
School	RKMS AALO																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:11:50																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	27																																																																																																																												
Correct Answered	22																																																																																																																												
Marks Obtained	22																																																																																																																												
Result of : dohu tame																																																																																																																													
Name	dohu tame																																																																																																																												
Class	7																																																																																																																												
School	RAMAKRISHNA MISSION AALO																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:21:09																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	26																																																																																																																												
Correct Answered	14																																																																																																																												
Marks Obtained	14																																																																																																																												
Result of : Dohu yadam																																																																																																																													
Name	Dohu yadam																																																																																																																												
Class	6																																																																																																																												
School	LITTLE FLOWER SCHOOL ITANAGAR																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:01:41																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	29																																																																																																																												
Correct Answered	21																																																																																																																												
Marks Obtained	21																																																																																																																												
Result of : KIRONG SIRAM																																																																																																																													
Name	KIRONG SIRAM																																																																																																																												
Class	10																																																																																																																												
School	JNV KAMBA																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:01:04																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	15																																																																																																																												
Marks Obtained	15																																																																																																																												
<table border="1"> <thead> <tr> <th colspan="2">Result of : TOBI NGOMDIR</th> </tr> </thead> <tbody> <tr><td>Name</td><td>TOBI NGOMDIR</td></tr> <tr><td>Class</td><td>10</td></tr> <tr><td>School</td><td>GHSS AALO, WEST SIANG</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:09:58</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>29</td></tr> <tr><td>Correct Answered</td><td>23</td></tr> <tr><td>Marks Obtained</td><td>23</td></tr> </tbody> </table>	Result of : TOBI NGOMDIR		Name	TOBI NGOMDIR	Class	10	School	GHSS AALO, WEST SIANG	Gender	Female	Time Taken	00:09:58	Total Questions	30	Total Attempt	29	Correct Answered	23	Marks Obtained	23	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu Yakum</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu Yakum</td></tr> <tr><td>Class</td><td>9</td></tr> <tr><td>School</td><td>VKV NIVEDITA</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:02:40</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>25</td></tr> <tr><td>Correct Answered</td><td>21</td></tr> <tr><td>Marks Obtained</td><td>21</td></tr> </tbody> </table>	Result of : Dohu Yakum		Name	Dohu Yakum	Class	9	School	VKV NIVEDITA	Gender	Female	Time Taken	00:02:40	Total Questions	30	Total Attempt	25	Correct Answered	21	Marks Obtained	21	<table border="1"> <thead> <tr> <th colspan="2">Result of : Dohu Tado</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Dohu Tado</td></tr> <tr><td>Class</td><td>8</td></tr> <tr><td>School</td><td>GHSS BOASHIMLA</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:09:02</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>28</td></tr> <tr><td>Correct Answered</td><td>10</td></tr> <tr><td>Marks Obtained</td><td>10</td></tr> </tbody> </table>	Result of : Dohu Tado		Name	Dohu Tado	Class	8	School	GHSS BOASHIMLA	Gender	Female	Time Taken	00:09:02	Total Questions	30	Total Attempt	28	Correct Answered	10	Marks Obtained	10	<table border="1"> <thead> <tr> <th colspan="2">Result of : Rido Tassi</th> </tr> </thead> <tbody> <tr><td>Name</td><td>Rido Tassi</td></tr> <tr><td>Class</td><td>8</td></tr> <tr><td>School</td><td>RAMAKRISHNA MISSION SCHOOL</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:09:07</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>11</td></tr> <tr><td>Marks Obtained</td><td>11</td></tr> </tbody> </table>	Result of : Rido Tassi		Name	Rido Tassi	Class	8	School	RAMAKRISHNA MISSION SCHOOL	Gender	Male	Time Taken	00:09:07	Total Questions	30	Total Attempt	30	Correct Answered	11	Marks Obtained	11	<table border="1"> <thead> <tr> <th colspan="2">Result of : dohu taga</th> </tr> </thead> <tbody> <tr><td>Name</td><td>dohu Taga</td></tr> <tr><td>Class</td><td>6</td></tr> <tr><td>School</td><td>LITTLE FLOWER SCHOOL ITANAGAR</td></tr> <tr><td>Gender</td><td>Male</td></tr> <tr><td>Time Taken</td><td>00:01:35</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>23</td></tr> <tr><td>Marks Obtained</td><td>23</td></tr> </tbody> </table>	Result of : dohu taga		Name	dohu Taga	Class	6	School	LITTLE FLOWER SCHOOL ITANAGAR	Gender	Male	Time Taken	00:01:35	Total Questions	30	Total Attempt	30	Correct Answered	23	Marks Obtained	23	<table border="1"> <thead> <tr> <th colspan="2">Result of : dohuYakup</th> </tr> </thead> <tbody> <tr><td>Name</td><td>dohuYakup</td></tr> <tr><td>Class</td><td>10</td></tr> <tr><td>School</td><td>B K MISSION SCHOOL DOIMUKH</td></tr> <tr><td>Gender</td><td>Female</td></tr> <tr><td>Time Taken</td><td>00:01:15</td></tr> <tr><td>Total Questions</td><td>30</td></tr> <tr><td>Total Attempt</td><td>30</td></tr> <tr><td>Correct Answered</td><td>26</td></tr> <tr><td>Marks Obtained</td><td>26</td></tr> </tbody> </table>	Result of : dohuYakup		Name	dohuYakup	Class	10	School	B K MISSION SCHOOL DOIMUKH	Gender	Female	Time Taken	00:01:15	Total Questions	30	Total Attempt	30	Correct Answered	26	Marks Obtained	26
Result of : TOBI NGOMDIR																																																																																																																													
Name	TOBI NGOMDIR																																																																																																																												
Class	10																																																																																																																												
School	GHSS AALO, WEST SIANG																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:09:58																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	29																																																																																																																												
Correct Answered	23																																																																																																																												
Marks Obtained	23																																																																																																																												
Result of : Dohu Yakum																																																																																																																													
Name	Dohu Yakum																																																																																																																												
Class	9																																																																																																																												
School	VKV NIVEDITA																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:02:40																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	25																																																																																																																												
Correct Answered	21																																																																																																																												
Marks Obtained	21																																																																																																																												
Result of : Dohu Tado																																																																																																																													
Name	Dohu Tado																																																																																																																												
Class	8																																																																																																																												
School	GHSS BOASHIMLA																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:09:02																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	28																																																																																																																												
Correct Answered	10																																																																																																																												
Marks Obtained	10																																																																																																																												
Result of : Rido Tassi																																																																																																																													
Name	Rido Tassi																																																																																																																												
Class	8																																																																																																																												
School	RAMAKRISHNA MISSION SCHOOL																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:09:07																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	11																																																																																																																												
Marks Obtained	11																																																																																																																												
Result of : dohu taga																																																																																																																													
Name	dohu Taga																																																																																																																												
Class	6																																																																																																																												
School	LITTLE FLOWER SCHOOL ITANAGAR																																																																																																																												
Gender	Male																																																																																																																												
Time Taken	00:01:35																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	23																																																																																																																												
Marks Obtained	23																																																																																																																												
Result of : dohuYakup																																																																																																																													
Name	dohuYakup																																																																																																																												
Class	10																																																																																																																												
School	B K MISSION SCHOOL DOIMUKH																																																																																																																												
Gender	Female																																																																																																																												
Time Taken	00:01:15																																																																																																																												
Total Questions	30																																																																																																																												
Total Attempt	30																																																																																																																												
Correct Answered	26																																																																																																																												
Marks Obtained	26																																																																																																																												

Pic: 15: Results of the participants



# Annual Progress Report 2020-21



Pic: 16: Details of the participants





**Pic: 17- Certificate**

**Celebration of World Environment Day organized by Arunachal ENVIS Hub, Department of Environment & Forests, Govt. of Arunachal Pradesh ( 3<sup>rd</sup> June -5<sup>th</sup> June 2020)**

To Commemorate the World Environment Day, 2020 Arunachal ENVIS Hub, along with Climate change cell, Department of Forests & Environment, NGO's , Govt. Officials, 138 BN CRPF and Local Publics had organised a three days Mass Plantation, Cleanliness Drive programme from 3<sup>rd</sup> June to 5<sup>th</sup> June 2020.

1<sup>st</sup> day on June 3 Mass awareness and Cleanliness drive was being conducted along the Senki River stretches near DeraNatung Govt. College & Rajiv Gandhi Polytechnic, Itanagar. Shri D. Dohu Robin, Dy. Director (Env&CC) & ENVIS Coordinator, and Shri S.D Loda, Chairman Youth Mission for Clean River, speaks on the occasion the importance of awareness programme and appeal the general public to be responsible in protecting and conserving the environment.

Next day on 4<sup>th</sup> June' 2020 Mass Plantation Programme and Cleaning of Senki River was conducted at 138 BN CRPF campus at Senki View, Itanagar. The programme was organised by the Arunachal ENVIS Hub/State Climate Change Cell, Deptt. of Environment & Forests along with Govt. officials and Local publics.

An NGO Youth Mission for Clean River, Senki River was the local organiser and event manager for the occasion. In spite of inclement weather the programme was successfully conducted by following social distancing norms.

The programme started with brief address by Shri. D. Riba, Director (Env). He clarified that peoples are confused between Van Mahotsava and World Environment day (WED). Van Mohatsava is a national programme on plantation and WED is United Nation programme, celebrated globally on June 5. In 1987, The United Nation Environment Programme (UNEP) started true selection of host country. In 2018 India was the host country. This year Columbia is the host country in partnership with Germany under the shadow of the UNEP. He stressed to spare time for nature and active participation in water conservation activities. He also urged to use eco-friendly & biodegradable products as a part of the celebration.

Shri. S.D Loda, Chairman of the YMCR-AP in his address stated we want to live but we are destroying our mother nature. Everyone including wild animals starting from lower animals to human has the right to live. He thanked and complete hope on the DoEF, GoAP& CRPF for their full co-operation in observing the programme a befitting manner.

Shri.ParasNath, Commanding Officer, CRPF, Senki Camp also spoke on the occasion. He opined that environment needs to be clean to lead a happy and healthy life. He articulates that planting trees are essential in upgrading the environment.

Shri.TanuSiram, Information Officer (ENVIS) highlighted about the Online Environmental Quiz being hosted by Arunachal ENVIS Hub (AEH),DoEF, GoAP Itanagar during this period to observe WED. He informed that the competition was held only for the students of Class VI-

X only. The winners of will be given E-certificate through their registered email id. The result can be checked through [www.arpervis.org.in](http://www.arpervis.org.in). He also discoursed that Arunachal ENVIS Hub is planning to conduct such more activities in future such as Essay Writing, Drawing & Painting Competition, Poster, Poem Writing, Logo design etc in any environmental events like World Ozone Day etc.

Key note Address was given by Shri. R. K Singh, PCCF &PrI. Secy. (Environment & Forests), GoAP. He stresses on Digital activities to be carried out on such occasion by observing the COVID-19 guidelines. He highlighted that clean Senki River Mission Project has been converged to take up cleanliness and plantation activities on eve of observing WED, 2020. He highlighted that Environment has been improved due to lockdown. He urges everyone must participate in such event with full cooperation to fight pollution and do excellent works to generate awareness, better dissemination of information about environment & its related issues respectively.

Vote of thanks was made by D. Dohu Robin, Dy. Director (Env) & Programme Coordinator (ENVIS & State Climate Change Cell (SCCC)) to all for coming ahead inspite of bad weather.

After formal Inauguration programme, there was Mass plantation Drive was carried at CRPF Camp premises near Senki River, Itanagar by Shri. R. K Singh, PCCF &PrI. Secy. (Environment & Forests), G. Kumar, PCCF (Envt Climate Change cum Wildlife & Biodiversity), Shri. D. Riba, Director cum Jt. Secy. (Env& Forests), Shri. ParasNath, Commanding Officer, CRPF, Senki Camp, Harish Dy. Commandant & Sunil Asstt.Commandant, CRFP Jawan, and Shri. D. Dohu Robin, Dy. Director (Env) to mark the occasion.

The event was coordinated by Sh. Dohu Robin, Dy. Director (Env& CC) with his team members from Arunachal ENVIS Hub and State Climate Change Cell. All the officers and field staffs of PCCF Office actively participated for the World Environment Day event.

### Photo Gallery







**Pic 18 : From left Shri D. Riba, Director (Env), Shri. G. Kumar, PCCF (Env& CC), Shri R.K. Singh, PCCF, HoFF&Prnl Secy. (E & F),**



**Pic 19: Govt. Officials, NGOs, Youth and Local Public on the Occasion of WED 2020.**



**Pic 20: Shri. RK Singh, PCCF, HoFF&Prnl. Secy (E&F), Govt. of Arunachal Pradesh, speaks on the Occasion of World Environment Day, 2020.**

**3.2. Organized SafaiAbhiyan/Cleanliness Drive Organised in collaboration with State Climate Change Cell and Youth Mission for Clean River Association (YMFCRA) at SENKI River, Near NeraNatung Govt. College Itanagar.**

On June 3 Mass awareness and Cleanliness drive was being conducted along the Senki River stretches near DeraNatung Govt. College & Rajiv Gandhi Polytechnic, Itanagar. Shri D. Dohu Robin, Dy. Director (Env&CC) & ENVIS Coordinator, and Shri S.D Loda, Chairman Youth Mission for Clean River, speaks on the occasion the importance of awareness programme and appeal the general public to be responsible in protecting and conserving the environment.

D. Dohu Robin, ENVIS Coordinator spoke to the media person about the management and success story of the grant event organized by Arunachal ENVIS Hub. He thanks all the active participants and felt overwhelms for participated in the events. Also he urged people to noted down how detrimental using single used plastic to our rivers ecosystem

The event was coordinated by Sh. Dohu Robin, Dy. Director (Env& CC) with his team members from ENVIS and Climate Change Cell. All the officers and field staffs of PCCF Office actively participated for the World Environment Day function.

An NGO Youth Mission for Clean River, Senki River was the local organiser and event manager for the occasion. In spite of inclement weather the programme was successfully conducted by following social distancing norms.

**Photo Gallery:**



Pic 21: Shri D. Dohu Robin, Dy. Dir(Env) & ENVIS Coordinator along with youth during Mass Cleaning Awareness programme on the occasion of WED. 2020





Pic 22: Shri D. Dohu Robin, Dy. Dir (Env) & ENVIS Coordinator with Shri. S.D. Loda, Chairman, Youth Mission on Clean River (YMCR) during Mass Cleanliness Drive.



Pic 23: Group Photo During Mass awareness programme



**3.3 Mass Plantation Programme and Cleaning of Senki River were conducted at 138 BN CRPF campuses at Senki View, Itanagar. The programme was organised by the Arunachal ENVIS Hub/State Climate Change Cell, Deptt. of Environment & Forests along with Govt. officials and Local publics:-**

To Commemorate the World Environment Day, 2020 Arunachal ENVIS Hub, along with Climate change cell, Department of Forests & Environment, NGO's , Govt. Officials, 138 BN CRPF and Local Publics had organised a three days Mass Plantation, Cleanliness Drive programme from 3<sup>rd</sup> June to 5<sup>th</sup> June 2020.

On 4<sup>th</sup> June' 2020 Mass Plantation Programme and Cleaning of Senki River was conducted at 138 BN CRPF campus at Senki View, Itanagar. The programme was organised by the Arunachal ENVIS Hub/State Climate Change Cell, Deptt. of Environment & Forests along with Govt. officials and Local publics.

More than 150 Nos were participated in the plantation drive programme by maintaining Standard Operation Procedure (SoPs) of the Pandemic CoviD 19.

Mass plantation Drive was carried out by Shri. R. K Singh, PCCF &PrI. Secy. (Environment & Forests), G. Kumar, PCCF (Envt Climate Change cum Wildlife & Biodiversity), Shri. D. Riba, Director cum Jt. Secy. (Env& Forests), Shri. ParasNath, Commanding Officer, CRPF, Senki Camp, Harish Dy. Commandant & Sunil Asstt.Commandant, CRFP Jawan, and Shri. D. Dohu Robin, Dy. Director (Env) to mark the occasion.

The event was coordinated by Sh. Dohu Robin, Dy. Director (Env& CC) with his team members from Arunachal ENVIS Hub and State Climate Change Cell. All the officers and field staffs of PCCF Office actively participated for the World Environment Day event.



Pic 24: Shri D. Dohu Robin, Dy. Director (Env) & ENVIS Coordinator, during World Environment Day 2020.





Pic 25: Planting on the occasion of World Environment Day, 2020 by Shri. D. Riba, Director (Environment)), Govt. of Arunachal Pradesh,





Pic 26: Planting on the occasion of World Environment Day, 2020 by Shri. RK Singh, PCCF, HoFF&Prnl. Secy (E&F), Govt. of Arunachal Pradesh,



Pic 27: Shri G. Kumar, PCCF (Env& CC), along with Officers from State Climate Change Cell on the Occasion Of World Environment Day 2020.





Pic 28: Shri D. Dohu Robin, Dy. Director (Env) & ENVIS Coordinator along with the ENVIS team on the Eve of World Environment Day 2020.



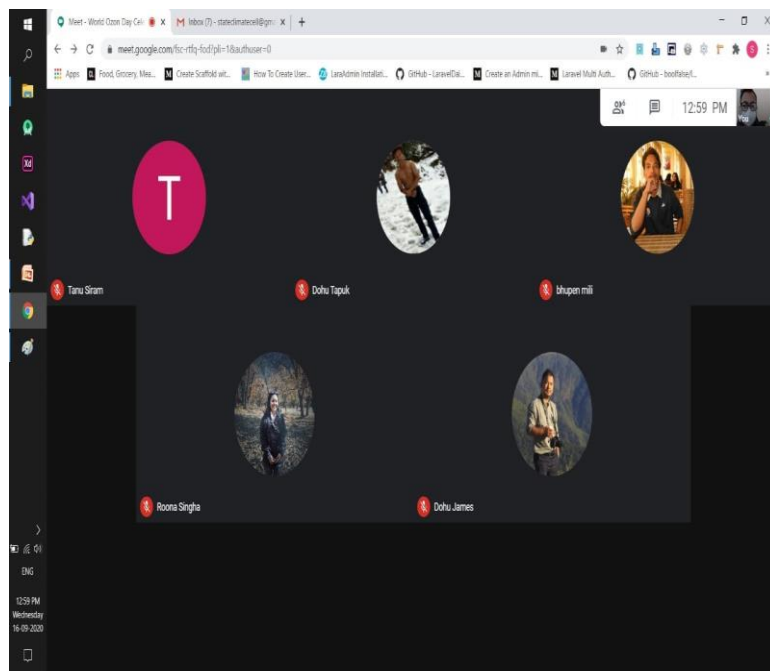
**3.4. A webinar conducted in collaboration with State Climate Change Cell to mark the theme (“Ozone for life: 35 years of ozone layer protection”) of 2020 World Ozone Day**

A webinar was organised by the Department of Environment & Forests, Govt. of Arunachal Pradesh on the occasion of World Ozone Day celebration’ 2020 under the theme “Ozone for Life” on 16th September 2020 in Google Meet September 2020 in Google Meet (<https://meet.google.com/fsc-rtfq-fod>) from 1200 hrs to 1330 hrs.

The objective of the Webinar was highlighted by the Director (Environment) cum ENVIS Coordinator which was mainly to promote Awareness and Education regarding the importance of Ozone layer to the students, teachers and common people.

A PowerPoint presentation was made by Y. Johnson Singh, Project Scientist of the Climate Change Cell highlighting the background history and science behind Ozone and World Ozone day celebration and the importance of the ozone layer for the life on planet earth.

Deliberations were held and viewpoints on the issue of the protection of ozone layer were put up by the participants. Students, Research Scholars and departmental staffs from the State as O/o PCCF, Itanagar well as other States participated in the webinar, which was a great success.



Pic 29: - Y.J Singh Project Scientist, State Climate Change Cell PPT Presentation ENVIS Officials ENVIS Information Officer, Programme Officer took part actively in the session.

### **3.5 Literary activities on Essay, Drawing and Painting competition held to commemorate World Ozone Day 2020**

An Online Literary competition conducted successfully for commemorating this year Theme of World Ozone Day 2020 " *Ozone for llife-35 years of Ozone Layer Protection*"organised by ENVIS Centre, Department of Environment & Forests, Govt. of Arunachal Pradesh, Itanagar.

Earlier, Participation was invited amongst the school students through ENVIS Website and Other Social Media in the URL generated <https://forms.gle/Gmkk9ugjan1fuWD>) on dated 15<sup>th</sup> September 2020 for participating "Poster and Essay Writing Competition" to commemorate the World Ozone Day 2020(16<sup>th</sup> September).

The last date for receiving online scan documents of Essay & Poster was kept as dated 14<sup>th</sup> Oct' 2020 due to COVID 19 issues.

The following were the list of the winners.

#### **Essay Competition (Senior)**

1<sup>st</sup>Position- Miss. DohuYakum, D/o Dohu Robin, Class X (Ten) Vivekananda Kendra Vidyalaya(VKV) School Nivedita, Seijusa

2<sup>nd</sup>Position - Miss AsumMibang, Class XII (Sc), Govt.Hr. Sec School, Boleng,

#### **Poster Competition (Junior)**

1<sup>st</sup> Position - Mr.Niya Kino, Class 8 (Eight)HutoEnglish School Nirjuli

Altogether 14 Nos of students across state participated who were given prize mney @ Rs. 2500/- , Rs.1500/- for 1<sup>st</sup>& 2<sup>nd</sup> and Rs. 500/- as consolation to all participants through online bank transfer in A/c.

The Certificate was awarded by Shr. G. Kumar, IFS, PCCF (Env& CC) in presence of Shri. D. Dohu Robin, Director (Environment) cum ENVIS Coordinator at PCCF office Complex, Itanagar in presence of Guardian on dated. 5<sup>th</sup> Nov 2020.



**Pic 30: PCCF (Env&CC) felicitated certificate in presence of Director (Env) & ENVIS Coordinator to the winners of competition**

**WORLD OZONE DAY**  
16<sup>th</sup> September, 2020

"Join us to celebrate and take part in Online Literary Activities"

Theme: - **"Ozone for Life-35 Years of Ozone Layer Protection"**

Details of the activities to be conducted are as follows:-

Details	Poster Making	Essay Writing
Group	Group A:- Class 5-8	Group B:- Class 9-12
	1 <sup>st</sup> Prize: -2500, 2 <sup>nd</sup> :- 1500	1 <sup>st</sup> Prize: -2500, 2 <sup>nd</sup> :- 1500
	Topic: - <b>"Ozone for Life-35 Years of Ozone Layer Protection"</b>	Topic:- <b>"Climate Change and Ozone Depletion"</b>

**Instructions:**

- This competition is open to Indian citizens only. A participant may take part in any one event. Entry should be done from one email ID only.
- Essay may be written in English, It should not exceed 300 words.
- The poster should be made on an A4 size paper only. Any colouring medium is allowed.
- Digital editing of poster is not permitted.
- Send a good resolution scanned copy of the Essay (in PDF format) or Poster (in PDF/JPEG format).
- Winners may be asked to submit the original poster/essay and proof of date of birth or school ID card, if required.
- Entries with unclear or low resolution images and incomplete information regarding the participant will be rejected.
- Participants should submit their entry (Poster/Essay by filling the google form only. Google link given below.

Link: - <https://forms.gle/Gmkk9ugian1hfuWDA>

**Note: -** *The result will be declared on the website [www.arpenvis.org.in](http://www.arpenvis.org.in) two best essays and posters from each group will feature on the website. Cash Prize and E-Certificate distribution details will be emailed to the winners.*

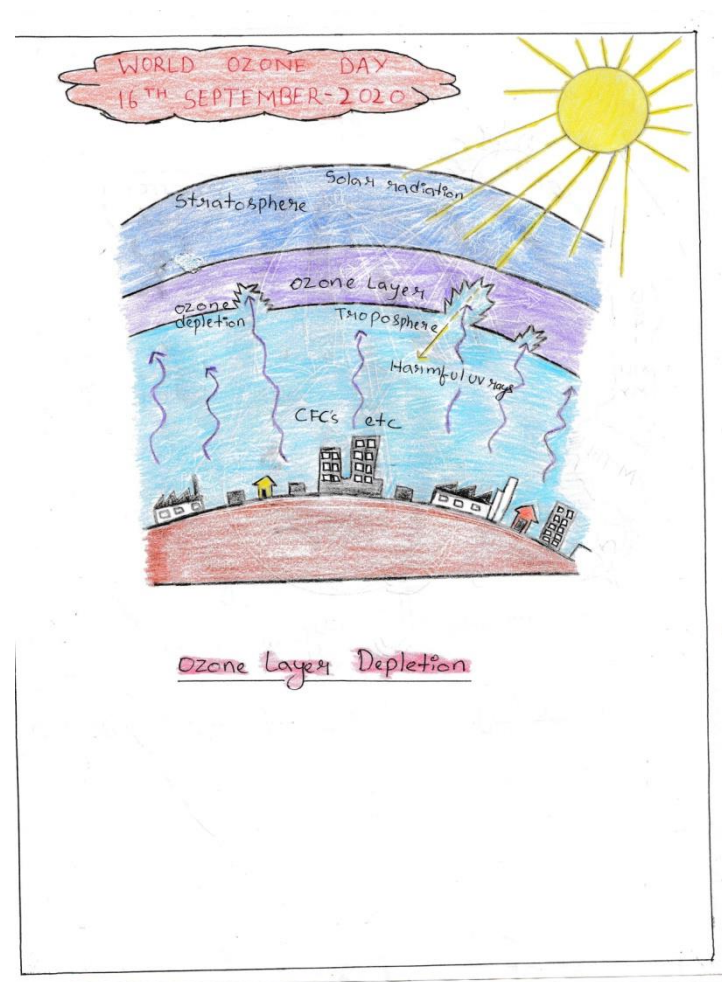
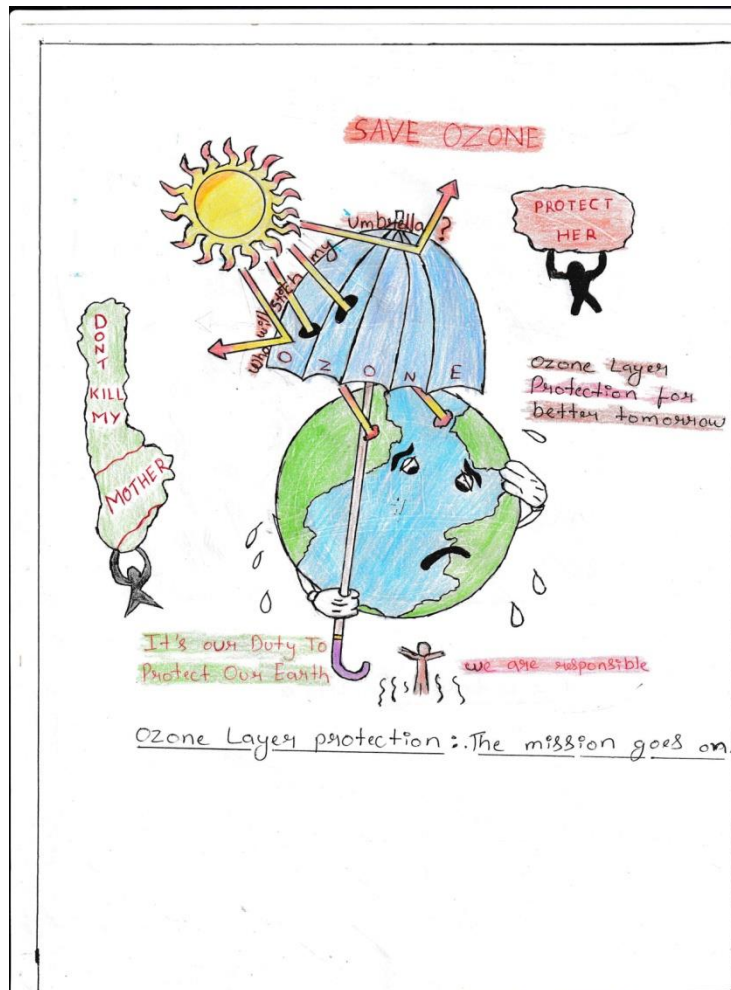
Last date and time of submission: **21<sup>st</sup> September 2020 (Monday); 5.30 p.m.**  
For further queries, please contact [envisarunachak@gmail.com](mailto:envisarunachak@gmail.com)

(ENVIS Coordinator)  
*[Signature]*

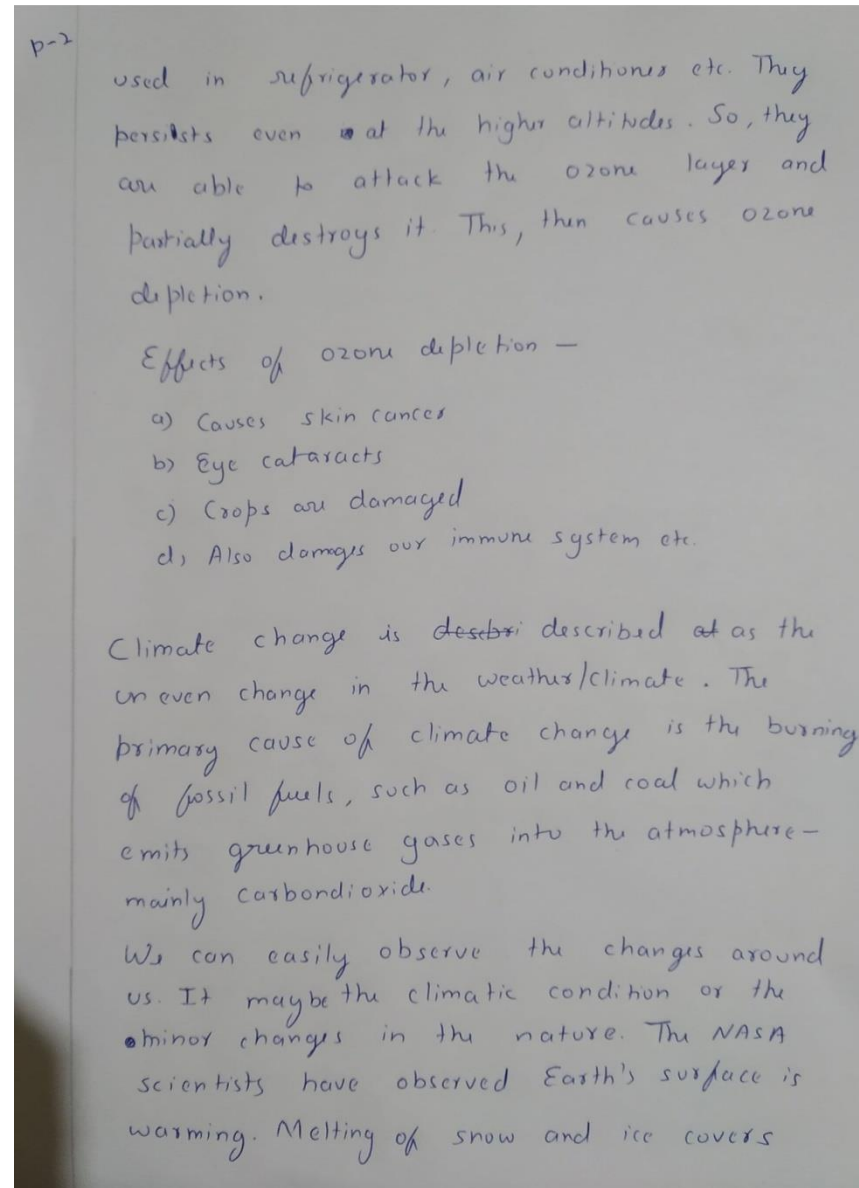
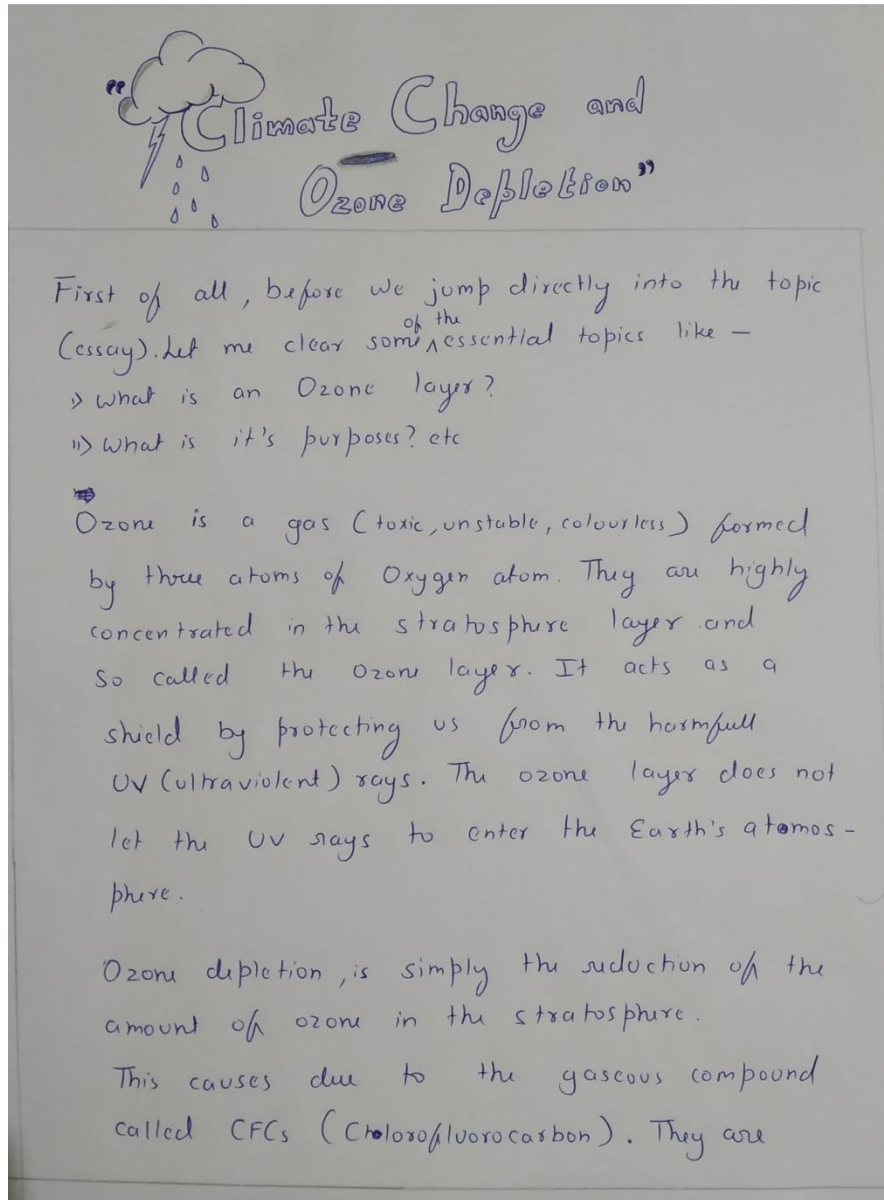
Arunachal ENVIS Hub, Department of Environment & Forests,  
Government of Arunachal Pradesh

Supported by

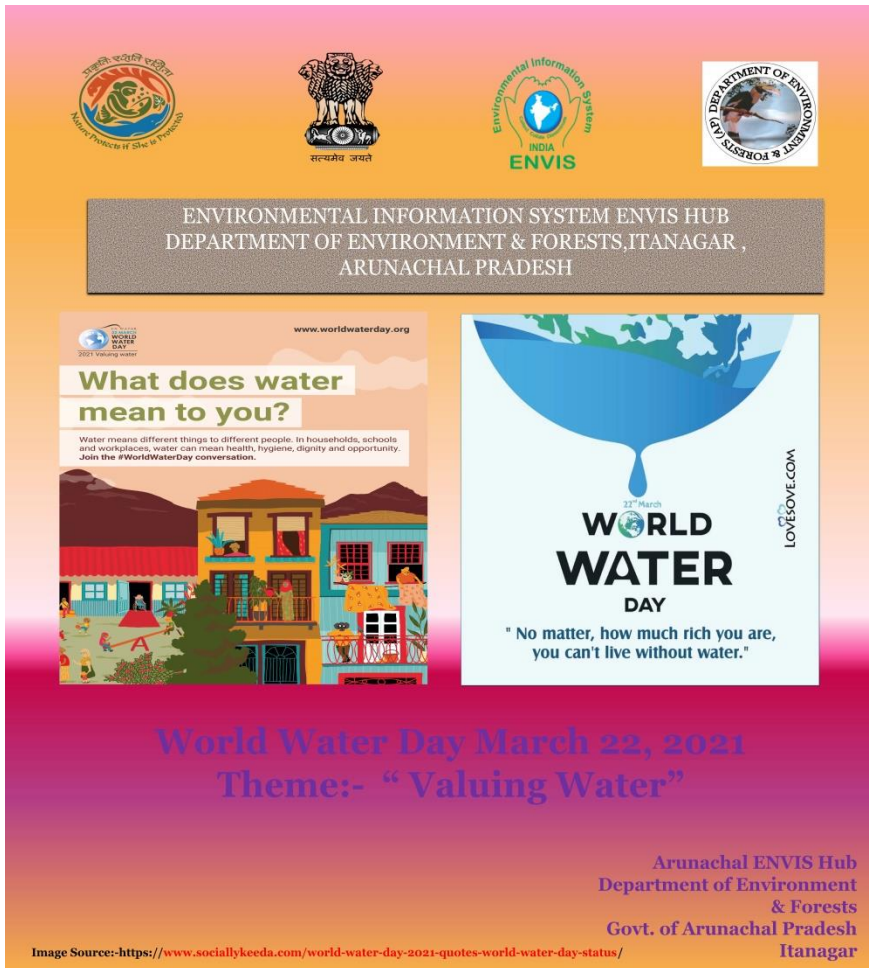




Pic 31: Drawing 1<sup>st</sup> Winner



**3.6 Observed Environmental important day viz, World Earth Day, World Wetland Day, World Water Day, Meteorological day etc  
FY-2020-21**



ENVIRONMENTAL INFORMATION SYSTEM ENVIS HUB  
DEPARTMENT OF ENVIRONMENT & FORESTS, ITANAGAR,  
ARUNACHAL PRADESH

**What does water mean to you?**

Water means different things to different people. In households, schools and workplaces, water can mean health, hygiene, dignity and opportunity. Join the #WorldWaterDay conversation.

22<sup>nd</sup> March  
**WORLD WATER DAY**  
"No matter, how much rich you are, you can't live without water."

**World Water Day March 22, 2021**  
Theme:- "Valuing Water"

Arunachal ENVIS Hub  
Department of Environment & Forests  
Govt. of Arunachal Pradesh  
Itanagar

Image Source:-<https://www.sociallykeeda.com/world-water-day-2021-quotes-world-water-day-status/>

Pic 33: World Water Day 2021



**World Wetland Day: 2<sup>nd</sup> February, 2021**

World Wetlands Day is observed every year on February 2. It is celebrated to raise global awareness about the vital role of wetlands for people and our planet. This day also marks the date of the adoption of the Convention on Wetlands on February 2, 1971, in the Iranian city of Ramsar on the shores of the Caspian Sea.

Wetlands are found in all countries across climatic zones - from the polar regions to tropical belts and from high altitudes to coastal areas and the arid and dry deserts. According to WWF-India, wetlands are one of the most threatened of all ecosystems in India. Loss of vegetation, salinization, excessive inundation, water pollution, invasive species, excessive development, and road building, have all damaged the country's wetlands. As of December 2020, there are 42 recognized Ramsar sites in India.

**World Wetlands Day 2021: Theme**  
This year's theme for World Wetlands Day 'Wetlands and Water,' highlights the importance of wetlands as a source of freshwater and encourages action to restore them and stop their loss. This is especially important as we mark the UN Decades of Ocean Science and Ecosystem Restoration (2021-2030).

**About Wetlands:**  
Wetlands are land areas that are saturated or flooded with water either permanently or seasonally. Inland wetlands include marshes, ponds, lakes, fens, rivers, floodplains, and swamps. Coastal wetlands include saltwater marshes, estuaries, mangroves, lagoons, and even coral reefs. Fishponds, rice paddies, and saltpans are human-made wetlands.

On this day, environmentalists and community protectors come together to celebrate their love for nature. This is done through seminars, exhibitions, and special on-ground campaigns.

February 2  
World WETLANDS DAY

**World Wetlands Day February 2**  
Theme:- "Wetlands and Water"

Arunachal ENVIS Hub  
Department of Environment & Forests  
Govt. of Arunachal Pradesh  
Itanagar

Image Source:- <https://kater.in/world-wetlands-day-quotes-slogan-message-quotes-logs-images/World-Wetland-Day-images-Photo-Pics-44-Wallpaper>

Pic 34: World Wetland Day





Every year, the Earth Hour is celebrated worldwide on the last Saturday of March month to show support for the fight against climate change and commitment towards a better planet. Earth Hour 2021 is being marked on March 27, 2021. The Earth Hour 2021 theme will focus on “Climate Change to Save Earth.”

The Day is a worldwide movement organized by the World Wide Fund for Nature (WWF), encouraging individuals, communities, corporates, and households to turn off their lights for one hour, from 8:30 to 9:30 p.m. It was started as a lights-off event in Sydney, Australia, in 2007 to raise awareness for energy consumption and its effects on the environment.

**“Join Million of People Around the World”**



### Earth Hour 2021: 27 March

Arunachal ENVIS Hub  
Department of Environment  
& Forests  
Govt. of Arunachal Pradesh  
Itanagar

Image Source: [adda247.com/earth-hour-2021-27-march/](https://adda247.com/earth-hour-2021-27-march/) <https://www.chaitanyabharatnews.com/earth-hour-2021-know-why-earth-hour-is-celebrated-1-hour-black-out/>

Pic 35: Earth Hour Day 2021

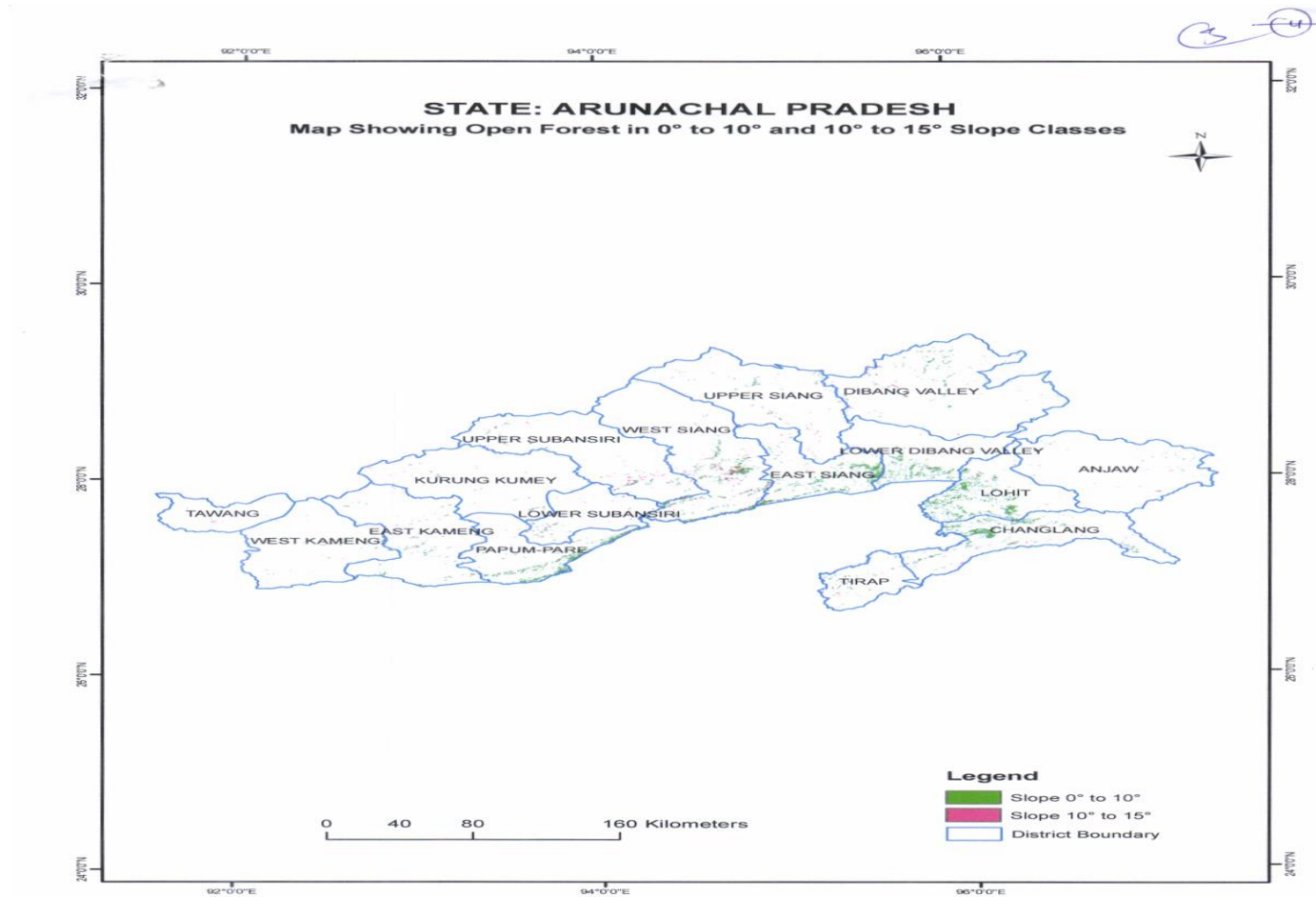
### **3.7. Developed Maps based on Environmental Parameter (9x9Km), Arunachal Pradesh**

This FY-2020-21, the Arunachal State ENVIS Hub developed all total 8(Eight) Grid Map/Thematic based on Environmental parameter. Following are the list of map developed this year 2020-21.

1. Open Forest in 0 to 10 degree and 10 to 15 degree Slopes Classes
2. CAT (2x2) KM under Dibang RF, Under Dibang FD
3. CAT of Dutangphu Chu (2x2) KM at Mechuka under Along FD
4. CA land identified for Dibang Multi-Purpose HEP 2500 MW - I
5. CA land identified for Dibang Multi-Purpose HEP 2500 MW – II
6. Soil Map Papumpare district
7. Land use and Landover map Papumpare district
8. Drainage Map of Papumpare district

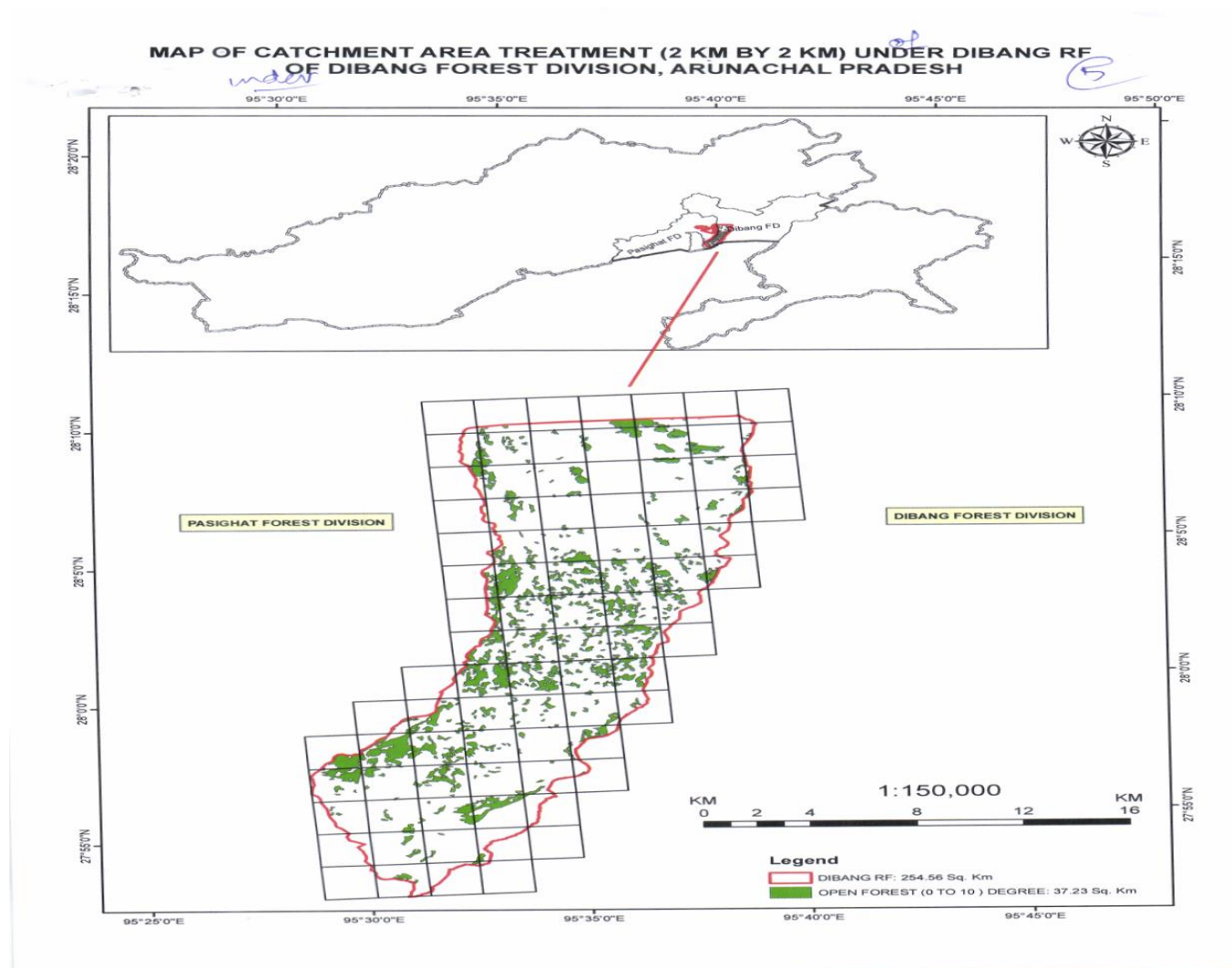
Details may visit at [www.arpervis.in/grid\\_maps.aspx](http://www.arpervis.in/grid_maps.aspx)

1. Open Forest in 0 to 10 degree and 10 to 15 degree Slopes Classes

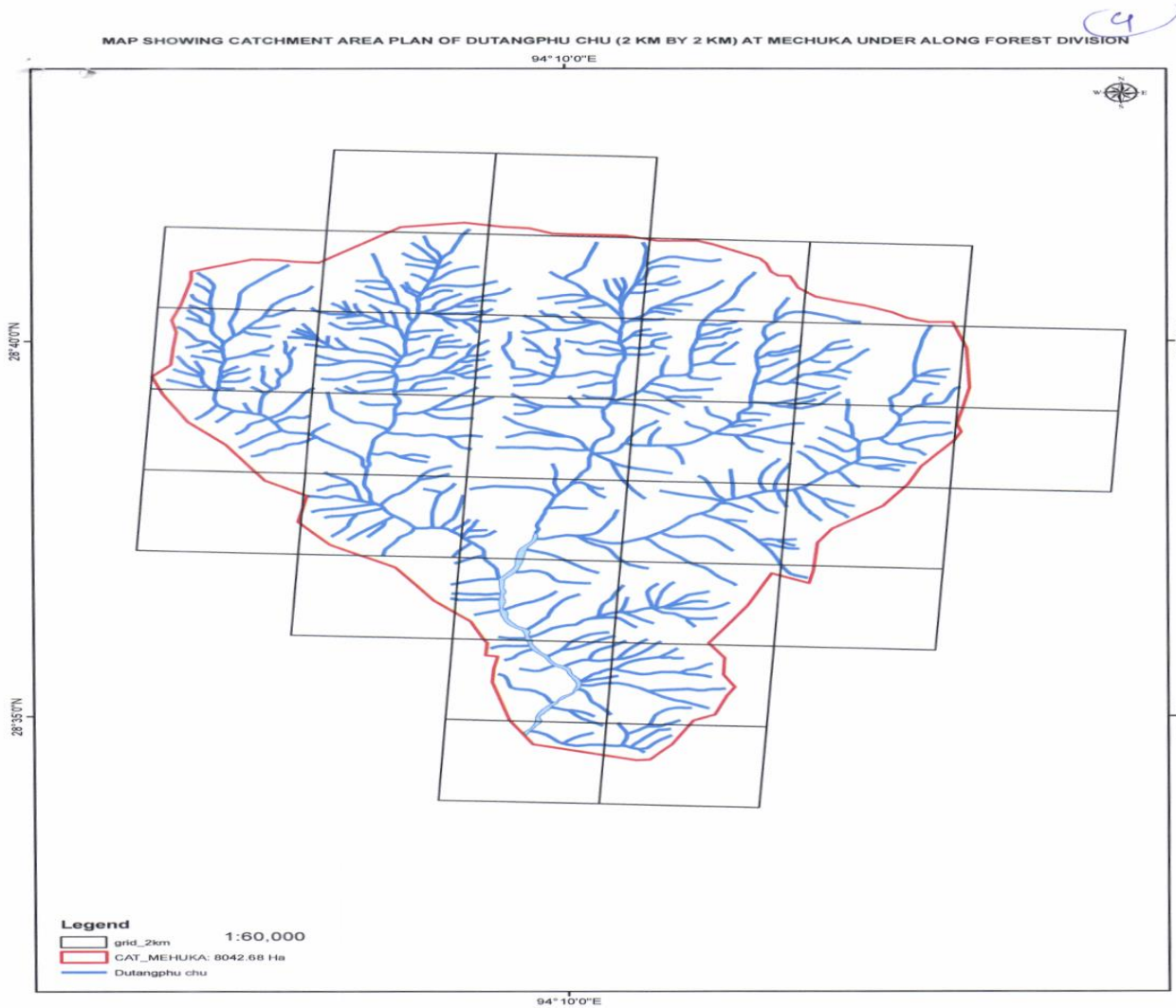




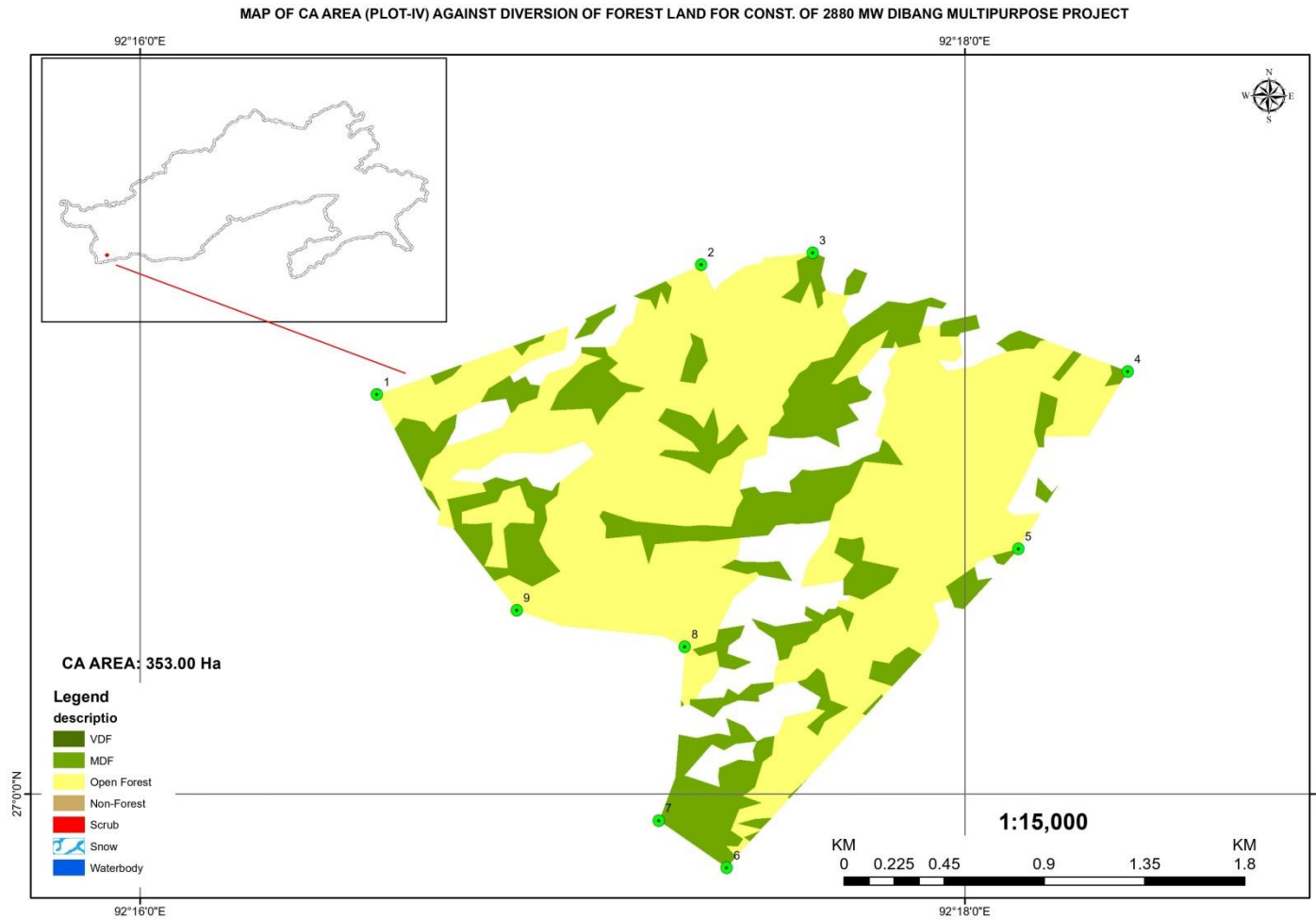
2. CAT (2x2) KM under Dibang RF, Under Dibang FD



3. CAT of Dutangphu Chu (2x2) KM at Mechuka under Along FD

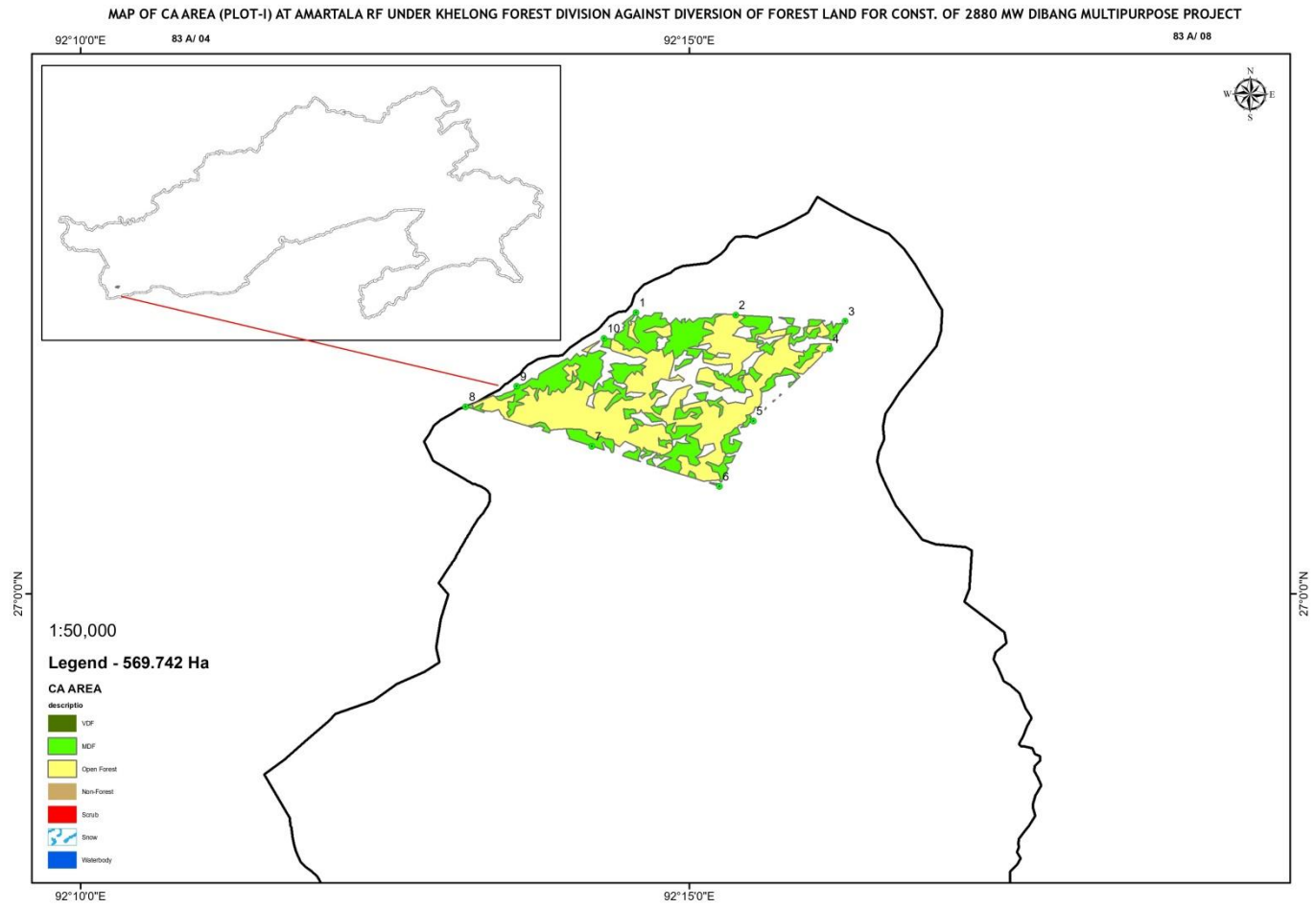


4. CA land identified for Dibang Multi-Purpose HEP 2500 MW - I

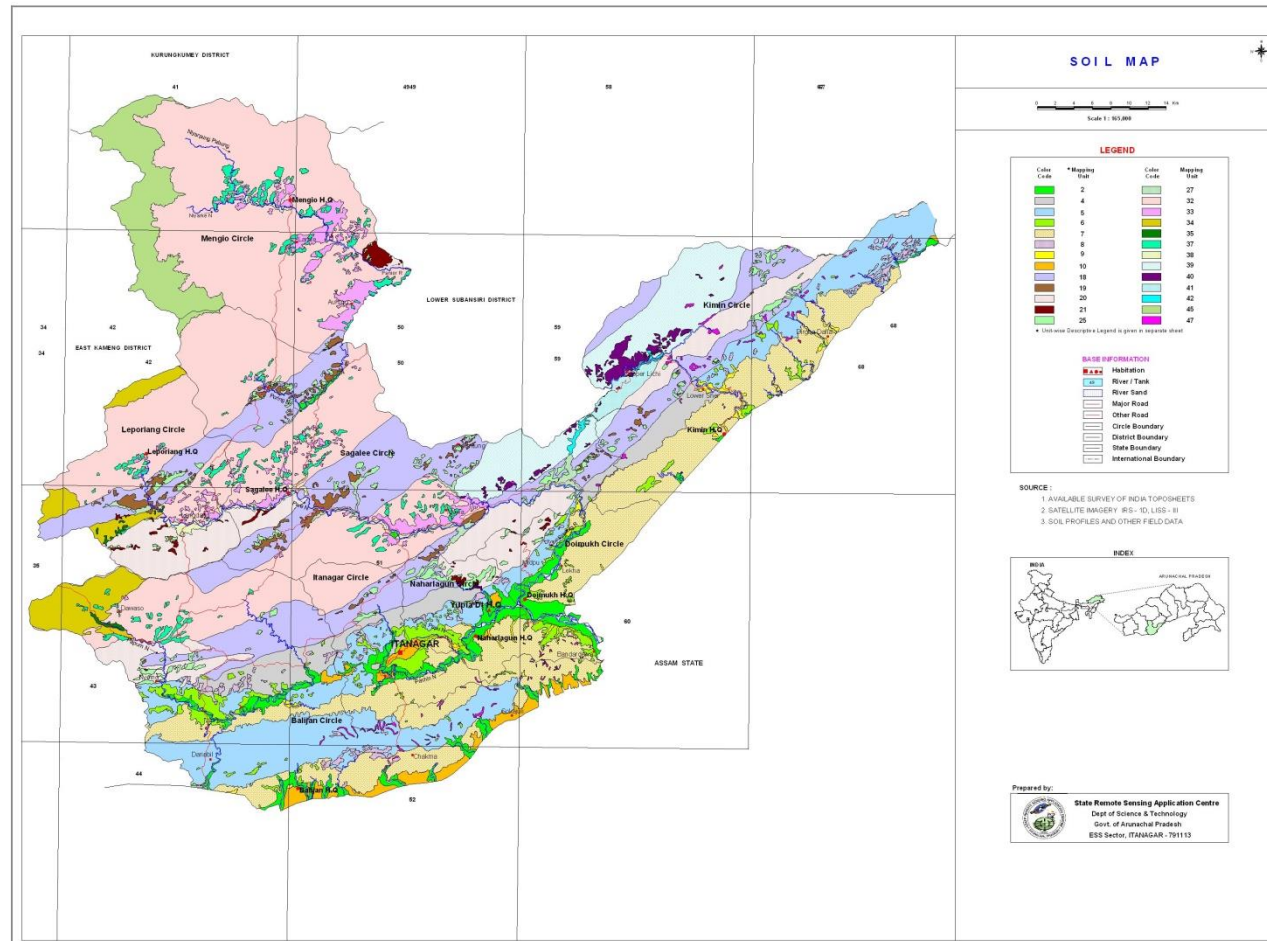




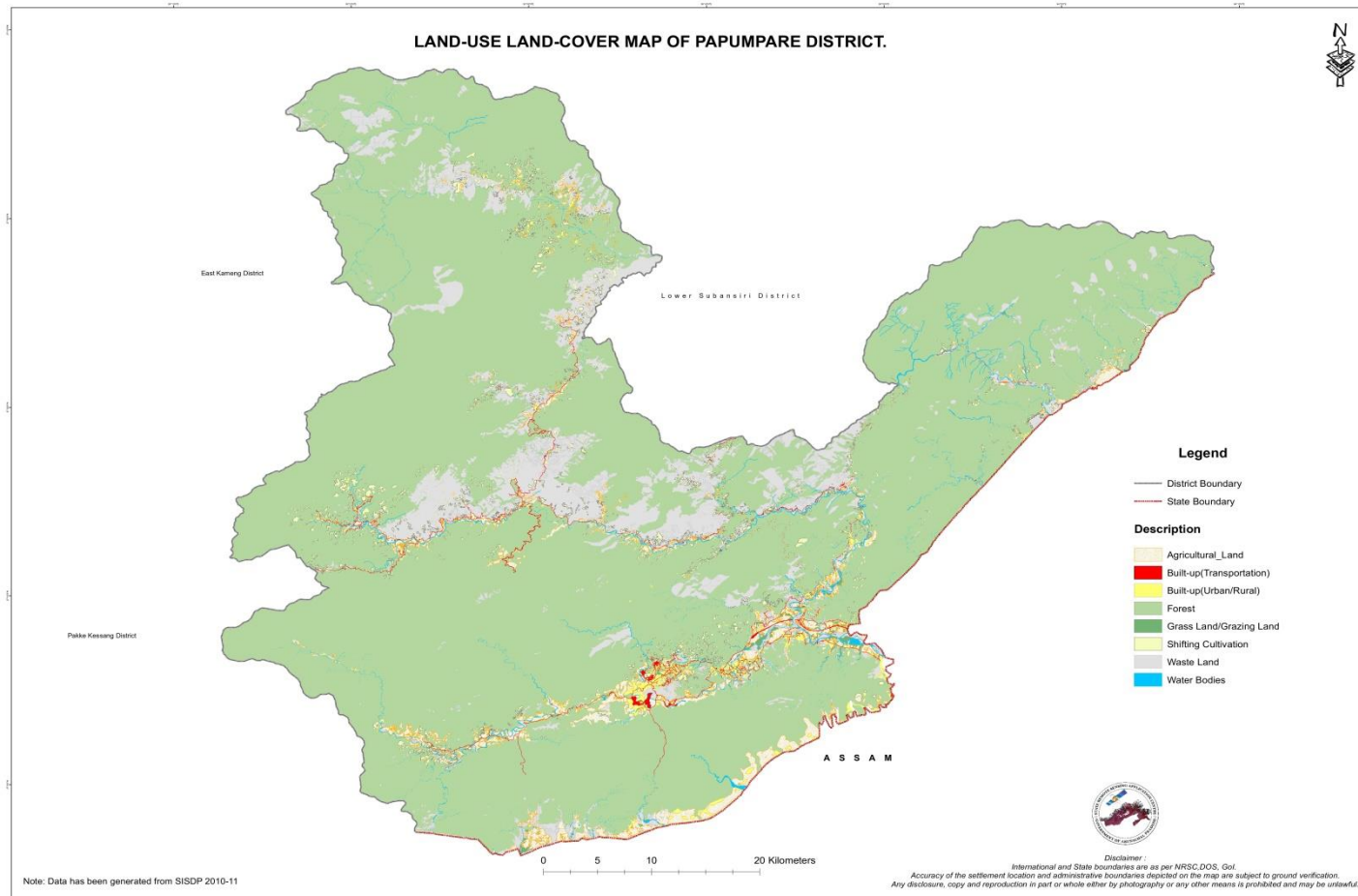
5. CA land identified for Dibang Multi-Purpose HEP 2500 MW – II



6. Soil Map Papumpare district

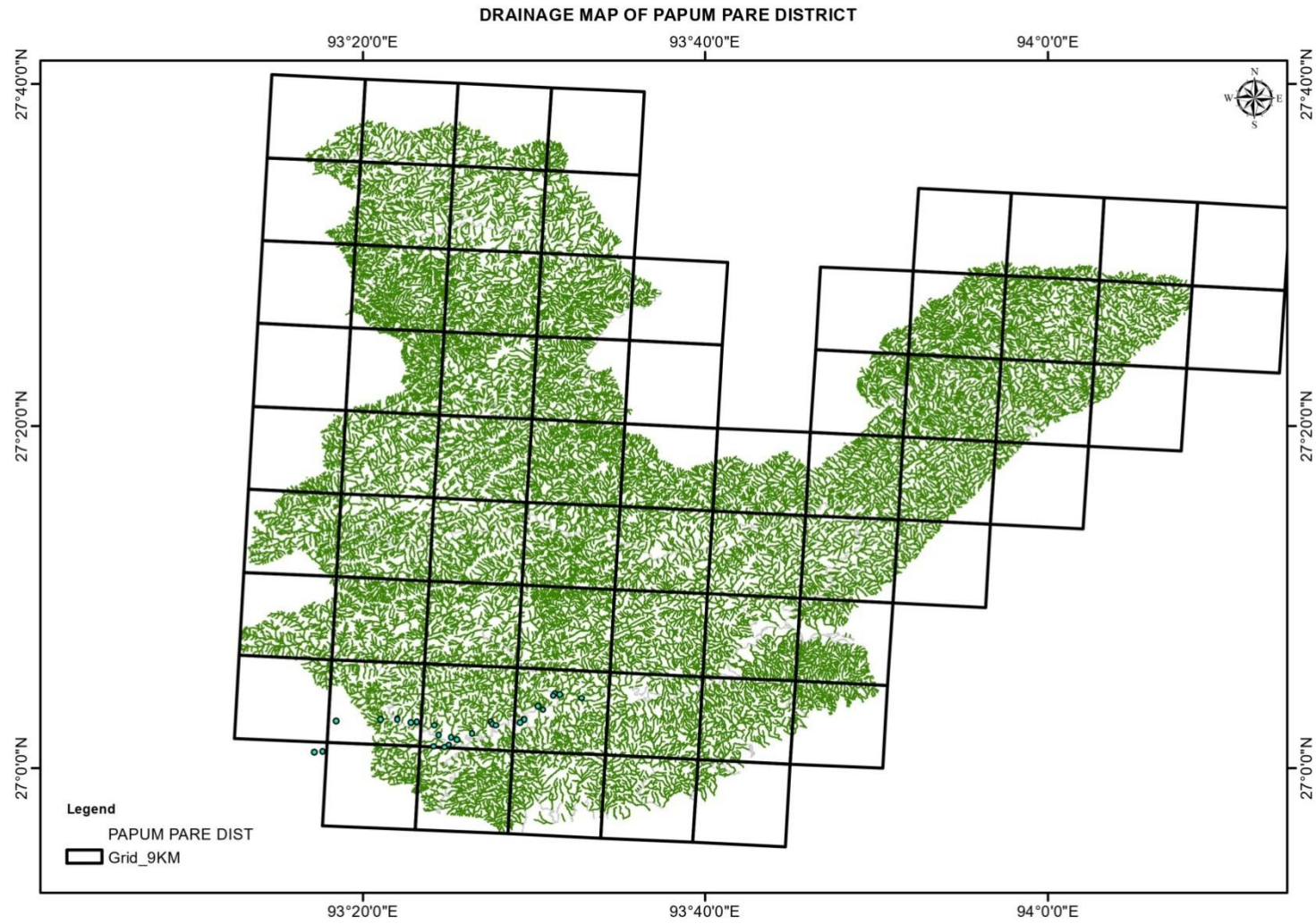


7. Land use and Landover map Papumpare district





### 8. Drainage Map of Papumpare district



**3.8 Field Trips to concerned DFO Office (Viz: Namsai, Wakro, Pasighat, and Aalo,) for purpose of inspection and Data collection from Automatic Weather Station (AWS) installed by State Climate Change Cell department of Environment & Forests**

**1.1 Inspection of Automatic Weather Station across Districts in Arunachal Pradesh**

Acurite's Automatic Weather Station (AWS) under the initiatives of State Climate Change Cell, Department of Environment and Forests, Government of Arunachal Pradesh have so far been installed across 9 locations at DFO/RFO office in the State. The Acurite's high-precision 5-in-1 Weather sensor gives outdoor environmental information. It accurately measures different outdoor conditions, including the temperature in oC or oF, relative humidity, rainfall, wind speed and direction, atmospheric pressure, heat index, dew points and storm alert. It also gives weather forecast for the next 24 hrs.

Installations that have been completed so far are as follows.



Pic 37 : With RFO DFO Office Aalo



Pic 38 : AWS installed at DFO Office Pasighat



Sl No.	Locations	Date of inspection	Latitude and Longitude	Altitude
1	DFO Office Likabali	23rd Jan 2021	N 27 <sup>0</sup> 39'33.38" E 094 <sup>0</sup> 42'31.28"	188m
2	DFO office, Pasighat	22 <sup>nd</sup> Jan 2021	N 28 <sup>0</sup> 03'49.98" E 095 <sup>0</sup> 19'17.83"	177m
3	DFO Office, Aalo	22 <sup>nd</sup> Jan 2021	N 28 <sup>0</sup> 10'18.40" E094 <sup>0</sup> 48'00.82"	1530m
4	DFO Office, Namsai	21 <sup>st</sup> Jan 2021	N 27 <sup>0</sup> 40'07.21" E095 <sup>0</sup> 51'18.51"	150
5	DFO Office, Kamlang	21 <sup>st</sup> Jan 2021	N 27 <sup>0</sup> 48'36.74" E096 <sup>0</sup> 01'56.65"	422



Pic 39: - Shri. Jewel Purkayastha, Engineer and Partner, M/s Trans North East Infrastructure &Solution, Guwahati assisting AWS Operator of Aalo hands on training for data update and maintenance for AWS installed at DFO Aalo.



**3.9. Summary of training imparted under Green Skill Development Programme (GSDP) by Arunachal ENVIS Hub during FY 2020-21**

**Progress Report**

**On**

**“Green Skill Development Programme (GSDP) on  
Propagation and Management of Bamboo”**

A 240-hour Green Skill Development Programme (GSDP) on bamboo Propagation and Management’ was conducted at the Arunachal [University](#) of Studies (AUS) from 5<sup>th</sup> Dec 2020 to 15<sup>th</sup> Jan 2021 by the Arunachal Envis Hub, Dept. of Environment & Forests, GoAP. The programme is being funded by the union Ministry of Environment, [Forest](#) & Climate Change (MoEF&CC), Govt. of India.

The ENVIS Hub had identified Arunachal University of Studies (AUS) Namsai as Institute for impartation of Certificate Course for Green Skill Development Programme (GSDP) on “Propagation and Management of Bamboo 240 Hours as per allocation made through MoEF&CC, GoI.

All total 18 students have been trained under the programme and accordingly certificates were distributed for successfully completed the training programme.

**Inaugural Session:**

Inaugural programme of Green Skill Development Programme (GSDP) on Bamboo Propagation and Management for 240 Hrs. was held at Seminar Hall at Arunachal [University](#) of Studies (AUS), Namsai on 5<sup>th</sup> December 2020.

Augmenting the programme D. Dohu Robin in his address expressed integration of line departments like Industries, Agriculture, Horticulture, Textiles and Handicrafts and others to come up with plans for future way forward.

He further expressed satisfaction on learning that the AUS is engaging resource persons from the Rainforest Institute, Jorhat, and other renowned institutes for imparting training to the students.

## Annual Progress Report 2020-21

---

The inaugural programme was attended by Vice Chancellor Prof. O.P.Sharma, Arunachal [University](#) of Studies; D. Dohu Robin, Director Environment and Climate Change cum ENVIS Coordinator, DoEFGovt of Arunachal Pradesh; Dr. Rani Jha, Director of [Science](#) and Technology and Skill Development Programme Coordinator (Arunachal [University](#) of Studies); Kapil Bisht, Programme Coordinator (Arunachal [University](#) of Studies), Jumsor Rime, Assistant Director Textile and Handicraft Namsai; B.R. Dey, Assistant Director Industries Namsai; H.N.Dubey, Director Public Relation (Arunachal [University](#) of Studies); Dr. Chaowlani Manpoong, Resource Person and Assistant [Professor](#) (Agriculture), Arunachal [University](#) of Studies.

**The first week** (5th – 12th Dec 2020) of the training program was kicked off by a general introductory session of all the students in the morning [10.00AM] on the first day. This was initiated by Dr. Rani Jha, Director of Science & Technology, Agricultural Sciences, Skill Development Programme Coordinator along with Mr. Kapil Bisht, Programme coordinator, AUS, Namsai. An introductory session on types of Bamboo, its wide applications as building material, furniture making, cosmetics, handicraft manufacture, basketry, etc. was given.



*Pic 40: Dr. Rani Jha briefed about Bamboo and its usefulness.*

Trainees were found to be extremely interested and asked questions on how the training program will help them grow in their careers. The later part of the day was handled by Prof.

B. Khongia, Ex-Professor, Horticulture, Assam Agriculture University, Jorhat. His vast knowledge in the field of agroforestry and cultivation of Bamboo species was easily seen while he interacted with the young trainees.

*Pic 41: - Prof. B. Khongia, Ex-Professor, Horticulture, Assam Agriculture University, Jorhat lectured on agroforestry and cultivation of Bamboo species.*

Trainees got excited and discussed on Gibberellins, plant growth hormones and if it can be used for bamboo like others. Flowering stages were also discussed in due course. The days



plan was to teach the trainees about the various propagation methods for Bamboo – first theoretically and then proceed in the afternoon with the practical of how bamboo can be grown in field. As we all know that although Bamboo can be found easily in the front and backyard of almost every household in the North-East, it is surprising that almost none of them here are aware of all the possible methods for propagation for bamboo.



After telling the various techniques of growing bamboo additional knowledge was given on how to enhance the growth by the use of growth hormones which are commercially available.



The afternoon session was taken to the fields where Prof. Khongia along with Dr. Rani Jha, Skill Development Programme Coordinator, AUS have prepared for showing students how Bamboo can be Successfully taken as a career.



Traditionally bamboo is grown right from its roots in a pit (2ftx2ftx2ft) half filled with top-most fertile soil, inclined at 60 deg angle and then filled the rest with remaining soil. Preferred would be to use soil pre-mixed with decomposed cowdung [Traditional Method]. Another method is Layering, where lateral placing of nodes with fertile shoots are placed in soil 1/2ft and covered with soil [Layering Method].



Culm cutting is a tedious method of plantation where hole is made in between nodes and filled with Indole-3-butyric acid solution (preferred) [200mg in 1L water] or Boric acid solution to soak it thoroughly and placed it in a pre-prepared pit, cover with soil and let it grow.



The last method is Branching, where any number of bamboo can be grown from a single culm of bamboo by cutting it between 4-5 nodes and dipping it in solution of Indole-3-butyric acid for 2-3 min before covering with a mixture of soil, sand and decomposed cow dung followed by covering it all with a plastic bag. It is important to remember that no matter which method is used for propagation of bamboo, regular irrigation is a must in all.

The third day of the training was taken care by Prof. G. N. Hazarika, Ex-Director of Research, Assam Agriculture University, Jorhat and Prof. B. Khongia together. They both taught the trainees of the various cultivating practices and the choice of species in general in the region.

Dr. Chowhani Manpoong, Assistant Professor, Arunachal University of Studies took the fourth day class in the week. Being an agroforestry specialist and soil scientist, he told the students about different kinds of soil types, moisture requirements.





He then took all the trainees to a nearby bamboo cultivation area. Showing them the difference between the extent of soil moisture and hardness one encounters when in any other field to that of a bamboo area made all difference. It was clearly shown that bamboo plantation enhances the moisture content which would eventually be beneficial to the other plants in the vicinity.



The fallen off leaves from the bamboo also serves as a good eco-manure for a lot of plants. It has earlier been shown by farmers all over the world that the average production of garlic, turmeric, mushrooms etc. is found to be better. This is primarily due to the fact that bamboo leaves are rich sources of proteins and provide the required nutrients.





## Annual Progress Report 2020-21

---

The fifth day of the week was more about vermicompost for productivity and enhancement of bamboo cultivation. This was followed by a class from Mr. Boppa Linggi, Assistant Professor at Arunachal University of Studies telling the trainees about various diseases that might infect bamboo. It is important to mention that bamboo plants are prone to very few kinds of infections.



Some of them are leaf blight. This is a phenomenon wherein the leaves start to become brown post maturing and slowly start to decompose and fall off the plant. The last day of the week was taken care by Dr. Rani Jha, Director of Science & Technology, Director of Agricultural Sciences and Skill Development Programme Coordinator at Arunachal University of Studies. She told the trainees of the origin of the work bamboo and classification in detail of the subfamily.



A clear difference between trees and grass (bamboo) was also been highlighted. A more pictorial representation of the various types of bamboo (running or clumping) under various temperature conditions around the world was shown during the day.



Why and how bamboo can be taken up as the career was emphasized. High-end products, bamboo in technology (electric powered tricycle), bamboo in cars (Lexus), textile products of bamboo and military applications all over the world was shown. The week ended with trainees getting motivated and seeing the potential of Bamboo cultivation and future of it.

### **Week-2 [13<sup>th</sup> – 19<sup>th</sup> Dec 2020] at AUS, Namsai**

After the exciting first week of the training program on Propagation and Management of Bamboo at the Arunachal University of Studies, the second week was focused more on the management of bamboo. The first day of this week begun with trainees getting introduced about the basics of Insects and Pests of Bamboo by Dr. Monjeet Sonowal, Assistant Professor at the Department of Zoology, Arunachal University of Studies. Students were taught the definition of what a pest or insect means, the broad classification of the animal kingdom and





the placement of insects and pests in it, followed by some of the common examples of each category of insects and pests varieties that infests various plants including bamboo.

The second day of the week was taken care by Mr. Abinash Hazarika, Panchajanya Kutir Udyog, Handicraft expert from Teok, Assam. He told the trainees that the bamboo items made by him were also displayed at various fairs in Delhi and Guwahati and are being sold at great price. This is primarily due to the ever growing awareness of people towards environmental benefits of bamboo and its products.



He discussed in detail about the vast scope of bamboo products. Some of the items displayed on the day were bamboo Vase, Bamboo Music System with USB port (made with a combination of bamboo and coconut shell) and a model of NaamGhar (Assam) among others. Students were fascinated by the products that can be made with bamboo and interacted with the expert on how to get trained in the craft making. They were told about some of the short courses which are run at regular intervals by the center and the state government and are completely free. The students may enroll in these courses after the regular selection process. A few of the certificate courses among these are also of advanced nature wherein apart from handicraft training furniture and weaving products are also involved.





Dr. Monjeet Sonowal took classes the next two days. He focused on identification of the types of pests. A large group of pests and insects found on bamboo are the same ones found in and on many other crops and plants. Termites one of the commonest insects are easily found at the base of almost all types of plants big or small ones including bamboos. They tend to get into the soil and causes destruction of the shoot and root system. Large numbers of crop protection practices followed in various crops are targeted on preventing pests and insects infestation right from the beginning.



These practices come under the general category of Insects and Pests Management also known in short as IPM. Pest management is an important step which is being taken to prevent losses in crop production. The majority of insects found on bamboo attacks the foliage and culm. They feed on the sap. An ideal method of pest management in bamboo is to go for use

of green manure and mixed agriculture. Growing garlic or turmeric on the fallen shoots of bamboo can prevent growth and infestation of pests and insects in bamboo.



The last few days of the week was fully utilized in the practical on-field training. These sessions were taken by Dr. Rani Jha, Director - Science and Technology, Agricultural Sciences and Skill Development Program Coordinator at the Arunachal University of Studies. First trainees were asked to collect pictures and samples of insects and pests from a nearby clump of bamboo. This was a practical session pertaining to the Insects and Pests Management in Bamboo. The picture of an infested foliage of bamboo below shows, a colony of Rice Mealy Bugs (white ones), Udonga Montana Distant – a seed pest (black ones) and leaf eating caterpillar (black and orange ones) are shown below. All these insects feed on the foliage and sap of bamboo.



Bamboos are also sometimes seen to be infected with fungus in extreme moist atmospheres. A typical picture of the same is shown below. The culm and the leaves both can get infected with the fungi. They reduce the growth of culm and thereby reduction in bamboo farm production.



Bamboo leaves are often used by insects to lay eggs (shown below). The leaf serves as a source of food as well as provides the necessary center for larvae growth. A typical set of cocoons are shown in the picture below.





Flies of various types are commonly found on bamboo laying eggs and feeding on its leaves. One of the common varieties is shown below.



The last day of the training in the week was engaging trainees in the actual plantation of bamboo rhizome, culm and branches. For this, all the trainees were divided into smaller groups. Each group was then given the task of cutting culm into 3-4 node segments.



One segment was then planted by layering technique while the other segment was cut from the top to make an incision of about 1-inch square (culm cutting technique) which was filled with an aqueous boric acid solution (200 mg boric acid in 1 L of water).

Covering the cut with a cellophane tape or cellotape such that the solution does not fall off the newly made incision. This was then planted into the soil. Every group has repeated the process to learn the methodology of bamboo plantation.



It is worthwhile to mention here that already some of the trainees have passed on the information about growing bamboo, the cost benefits associated with it and the methods thereon to their friends and family.



The future of bamboo cultivation can take a major turn if new generation picks up this as their career option.

### **Week-3 [21th – 26th Dec 2020] at AUS, Namsai**

With each passing day of the training program on Propagation and Management of Bamboo, trainees are getting more excited about what more lies ahead of them. While in the first week we had Ex-Professors from Assam Agriculture University coming and teaching the trainees about bamboo, the second week had seen Handicraft expert from Jorhat and Faculties from the Arunachal University of Studies telling trainees how bamboo management can be done effectively and about scope of bamboo small scale industry. This week we had experts from the Rain Forest Research Institute (RFRI) Jorhat, Dr.Rajib Kr. Kalita, Scientist F & Head of Extension Division and Training, and Mr.Kumud Borah, Technical Officer participating in the training as the resource persons.



Dr.Kalita gave an insight on how Bamboo nursery can be established along with its propagation and management. Rhizome is subdivided into monopodial and sympodial types. General growth pattern is from the terminal bud or lateral bud.





Flowering pattern has been majorly studied for bamboo species. In India most of the bamboo flowers anywhere between 35-60 years. Cultivation of bamboo is by seeds (sexual germination), planting rhizome, by cutting branches, culm cutting and tissue culture. Among these, cultivation of bamboo by seeds is less prominent as flowering of bamboo is quite rare and it occurs after several years. Nursery is developed in various sizes depending upon the need of bamboo.



The trainees got a hands-on experience in plucking the branches properly for cultivation. Cutting the branches in the correct size of inter-nodes in between by using proper tools and depth of soil is also shown. Dr.Kalita had brought a few saplings of bamboo along with him on the day which he led the trainees to plant at the AUS agriculture field.



Dr.KumudBohra told the students that proper selection of bamboo species for cultivation is very important. Nursery and farms growth is vital but target should be in to maintain natural bamboo forests owing to its numerous other applications.



The second day of the week was focused more on bamboo charcoal. For this Dr.Kalita emphasized that bamboo charcoal can be produced from fresh bamboo, to unused bamboo pieces and also by the residues obtained from bamboo industry. Bamboo charcoal also finds its usage as fuel in common household.



Bamboo charcoal is well known for water purification and to eliminate water impurities and smell. A typical method to obtain bamboo charcoal is burning bamboo in a closed container at around 600-800 degree celcius. The types of kiln used for producing bamboo charcoal is Pit kiln, drum kiln and brick kiln.

Among these brick kiln is the most effective one which produces minimal ash. Bamboo charcoal finds applications is water purification, as cosmetics, air purifier, etc.

The third day of this week was taken care by Dr.ChowlaniManpoong, Assistant Professor at the Arunachal University of Studies, Namsai. He taught the students basics of Agroforestry. Forest Management is of prime importance to conserve and improve the forest site and nearby land resources. A proper combination and growth of trees also ensures right kind of agricultural crops production in the region and proper breeding of animals dependent upon it. The ever depleting forest in the country is a major concern. Bamboos can play a significant role in conserving these depleting forest areas and conserving the natural resources therefore.





On the fourth day of the week, trainees were taken for a field visit to the Bamboo Plywood factory in Namsai under the supervision of Dr. Rani Jha, Director of Science & Technology, Agricultural Sciences and Skill Development Programme Coordinator at the Arunachal University of Studies. The factory was established in the year 1918 by BARD Company (British Establishment). Initially it was established in Assam as timber plywood factory but after the ban by the Supreme Court in the year 1996, it was converted to Bamboo plywood factory and was shifted to Namsai, Arunachal Pradesh.



The factory in-charge of the bamboo board factory showed the trainees how bamboo poles are first cut into small pieces using cross-cutting machine, followed by splitting it into four equal pieces vertically. Knotcutting machine cuts the uneven knots. Flattening machine 1

and 2 and planner machine 1 and 2 make the bamboo splints. These splints are then arranged between the bamboo plywood obtained from Nagaland in a phase-core-phase style, pressed and made into bamboo boards. The boards are then steamdried followed by sun drying. A coating of resin was put on these boards. Two types of resins are made one commercial consisting of Formalin, caustic soda and urea and the second one is the water-proof resin made with formalin, caustic soda and phenol.



It is worthwhile to mention here that the Plywood factory was once the second largest factory in Asia. Its storage ground is still one of the largest found in the region. Lack of funds has caused the factory to not be able to function to its full capacity. Though the people working in the factory are still hopeful that things would change for better. The facility also showcases bamboo houses which can be screwed in or out when needed and be shifted to a different location within no time.



The last day of the training in the week was once again taken care by Dr. Rani Jha. The class was started by rehearsing a verse from Rig Veda “Bestow upon us a hundred bamboo clumps”. This tells us that our ancient culture has realized the value of bamboo long time back. Bamboo was used as medicine, food and other activities since early ages in the Indian civilization. Where a common timber plant takes more than 20-30 years to mature, bamboo takes just 4-5 years to reach its full height. Some species of bamboo are known to grow 1.5 m/day. Thus bamboo as one of the fastest growing plant of earth, has tremendous potential.



The steep rise in the market of bamboo and its products in recent times is primarily due to the realization of its environmental value among others by the consumers. There has been a constant rise in the demand and therefore supply of bamboo. Still the gap between demand and supply of bamboo raw material is huge and this gap needs to be reduced by development of effective and varied species of bamboo nurseries and farms. A trivia on bamboo has been shown wherein, it was told to the trainees that bamboo filament was used by Edison in manufacturing of the light bulb. Graham Bell's first phonograph needle was made of bamboo. Artificial bamboo teeth have already found a place in dentistry due to its low cost and durable nature. In short, a great opportunity lies ahead for bamboo propagation both by nursery development and by proper farming. The new generation of entrepreneurs have to step in to bridge this gap of demand and supply of bamboo now and in near future.



### **Week-4 [28th Dec 2020 – 2nd Jan 2021] at AUS, Namsai**

By the end of third week students have become aware of the vast potential of the bamboo field. The fourth week which was completely taken care by our Senior Resource Person - Dr. Rani Jha, Director of Science & Technology, Agricultural Sciences, Skill Development Program Coordinator, Arunachal University of Studies, therefore focused on commercialization of bamboo and bamboo products. The reasons of how bamboo has lost its value over time and why it has again picked up the importance. Once the fortune of the nation especially in the North-East, bamboo has slowly and steadily started to disappear due to massive deforestation, grazing of animals, growing population and the need for housing. Cutting down trees for everyday use as for fuels, to make furniture, etc. has led to destruction of environment, a reason for the global climate change, a matter of extreme concern.

The week started with a field visit to the Bamboo Cluster at Kakopathar, Assam maintained by Cane and Bamboo Technology Center (CBTC), Guwahati. Dr. Rani Jha, Director of Science & Technology, Agricultural Sciences, Skill Development Program Coordinator, Arunachal University of Studies under her supervision took the trainees to see how the training of the local youths is connected to the propagation and marketing of bamboo products. This place serves as a training ground for the local youths and entrepreneurs. It was a delight to see that the center has hired a lot of handicapped artisans. These artisans are no short of talent when it comes to comparing with the otherwise people. We met a middle-aged trainer who was completely handicapped from one of his hands hailing from Namsai, Arunachal Pradesh. He showed us his work on wooden and bamboo covers for Dao. He also showed us walking sticks made of bamboo with wonderful carvings on its head and neck region.

We met several other trainers who were either handicapped from both the legs or completely deaf, to name a few, but all were doing their training jobs without any visible hindrances. Trainees got impressed and deeply motivated by the presence of such artisans especially looking after their work of art. This also proved again that no amount of handicapped nature of body can stop a real determined person to achieve what they want to at any point of age or time.



The week continued with teaching the trainees how to get the bamboo and the bamboo products to the market. What all factors matter the least and the most. How to know which products have the best sale value. Classy products have always more appeal than the regular products be it of wood or of bamboo. Packaging of the products is equally important. Eco-friendly packaging has gained invaluable place lately.

Wine cases made of bamboo are often showcased in corporate parties and business meetings not just in India but also abroad in other countries.



As the training goes by, it is also important to analyze and assess the absorbance capacity of the trainees. This would help us to know which points are needed to be revisited during the future course of the training program. The remaining days of the week was thus utilized in tests, quizzes, one-on-one interaction of trainees with the resource person (Dr. Rani Jha). Trainees were taken back to the road from when they have started the Propagation and Management of Bamboo course. They were asked questions on the basic of existence of bamboo, climatic requirements of bamboo growth, soil quality needed for optimum bamboo cultivation, etc. Various propagation methods and the depth of knowledge in each method of propagation.





It was interesting to see that trainees have not only been able to grasp the immense knowledge shared by the various resource persons but are also inquisitive to the idea of taking up bamboo as a career option. They have found the field valuable, approachable but at the same time are looking at it from an outside the box kind of view. Today's youth is clever not to take the word of mouth but also sits and analyzes it well if the thing said is indeed correct for them or for others.



The various types of kiln used to produce bamboo charcoal which mirrored the conventional stove made and used for centuries in the villages. Bamboo vinegar which finds a lot of other special applications in the market. Use of unwanted bamboo or residues from the bamboo factory for the manufacture of high quality bamboo charcoal. Post-combustion processing of bamboo charcoal using clay in a 3:1 ratio and converting them to briquette of various shapes and sizes. The last day of the week was a seminar day for the trainees. All the trainees were asked to prepare a 15-20 min talk on their journey till date. In the morning, they were all seated in the classroom and asked to make bullet points first. Then breaking each bullet point into sub-points. The most interesting thing in the training program. The most interesting day of the training program. Some trainees were found to be interested in research and development aspects of bamboo. In one of the talks by a trainee, she emphasized on her interest in propagation methodologies for the seed formation. It is worthwhile to mention here that bamboo flowers once after several years and thus production of seeds is also rare. After flowering bamboo plant dies. Tissue culture and Biotechnology can play a major role in assisting to solve these germination and flowering problems. One other student mentioned that

before joining this course he has seen bamboo in his front and backyard but has never truly understood the utility of it except for just a few ones seen around. He also has never thought that bamboo cultivation and/or production of charcoal or bamboo products are such high in demand and can be taken up as a career.

These views and ideas of trainees clearly made the day and the success of the training program is undoubtedly seen through the eyes of these youths who have become a valuable partner to the Propagation and Management of bamboo training program.

Next week, the trainees will be getting exposed to the wide species of bamboo at the Rain Forest Research Institute, Jorhat during their Field Visit to the institute. They are all excited and have been asking questions about what all to expect from this field trip. Dr. Rani Jha, has already briefed them about the 60+ species of bamboo housed at RFRI, Jorhat. The Tissue Culture labs will be a start to the new dimensions of plantlife, a mix of species creation with hybrid properties. Bamboo nursery will be another excitement to look forward to at the RFRI, Jorhat.

### **Week-5 [4th Jan 2020 – 9th Jan 2021] at AUS, Namsai**

Even before this week began, the trainees have been enthusiastically asking the Resource Person Dr. Rani Jha, Director of Science & Technology, Agricultural Sciences, Skill Development Program Coordinator, Arunachal University of Studies to know how the week is planned for them. They were asking questions on what must be prepared on their part so they can get maximum benefit from the training program. In this week, the entire team consisting of the Program Coordinator cum Resource Person Dr. Rani Jha along with all the trainees have prepared for a trip to the Rain Forest Research Institute (RFRI) at Jorhat, Assam. They all geared up and started the journey early in the morning from Namsai. The trip was enjoyable with trainees singing and dancing on the way to Jorhat. Entering into the city of Sivasagar and then Teok. It is worthwhile to mention that one of our Resource Person for Bamboo Handicraft was from Teok. At this time the Program Coordinator gave instructions to all the trainees about proper way of documentation of the research material they all are going to witness at the Research Institute. Proper sampling techniques are also discussed. Careful observation followed by queries clearance is always a method to understand, learn and remember the concepts. Trainees were encouraged to ask questions at all point of time when asked to do so to any of the scientists they would be meeting at the RFRI Institute.



After reaching the RFRI Institute gate, Mr.Kumud Borah welcomed all the trainees. They were led to their Guest House and after freshening up all had a wonderful meal. Post lunch session, trainees were led to the field trip to the Bamboo World. The RFRI Institute has a collection of 62 species of bamboo, which they have established in Bambusetum. Spread over an area of 1 HA.





Mr.Kumud Borah and Mr.DebojitNeog, Technical Officers at RFRI were the tour instructors. Mr.Debojit told the team about the various types of bamboo in the Bambusetum. He told the fundamentals of creating this bambusetum. First survey of the various types and species of bamboo is done in the entire north-east. All these species were then collected and planted in the bambusetum area. The species are then screened based on their clump area, culm height, culm thickness, color, leaf size, nodal length, intermodal space, etc. The best species were then taken further for propagation. The trainees got an opportunity to see exotic variety of bamboos as well as normal ones found in the region. Some species were from Vietnam, America, Mexico, etc.



A climber variety of bamboo can be seen in the photograph above. These bamboo are not much of economic value but are more of ornamental uses. They can be grown in low sun areas as well. The study continued with trainees getting to know about the sheath and blade continuity. Ligule is the area connecting the sheath from the blade, sometimes these are attached and sometimes they are merely hanging on to each other. Auricle is the ear shape region on the outside of the joint of sheath and blade.

In some bamboos the auricle is missing entirely.





Usually the age of bamboo is determined by if the sheath is attached to the culm or not. However, in some bamboos the sheath remained stuck to the culm for prolonged age. This also affects the usual color development of bamboo.

Bambusabalcooa is a species wherein, the roots are aerial in nature. As can be seen below, roots form a ring around the nodal region with threads of individual roots coming off of each ring.





Bambusabambos is another variety with aerial roots. Another important aspect of classification and identification of bamboo is the way it branches out from the nodal region. The newly formed branches may be bifocal or multifocal. The branching pattern may also be facing up or down.

Bambusanutans is having a zig-zag type of branching pattern. These types of bamboo are commonly found in the jungles of the North-East region on the country.

A typical ornamental cup shaped bamboo species is being depicted below. This bamboo is having very small inner diameter and therefore do not find much economic importance. However, they may be used for the manufacture of handicraft of certain shapes which needed curved outer boundaries.







A rare event in the life of bamboo is flowering. Students got an opportunity to see the bamboo flower from a very close proximity. In the picture here we can see bamboo flower with seeds inside it. It is interesting to note here that most of the bamboo flowers after which they all die. In these instances the flowers give rise to seeds which can be used for sexual germination. However, there are few bamboo species which also flowers but do not produce seeds. Therefore, they survive the flowering season well. They may also flower several times without getting to the end of the plant.





Bamboo nursery is probably one of the most important parts of bamboo species propagation and conservation. At RFRI trainees got to see and experience a wide variety of bamboo species propagation in the nursery. The nursery can be small or large. But its location is very important. The nursery must be located close to the place of use to save on transportation and damage cost. It also should not be located in low-lying areas.

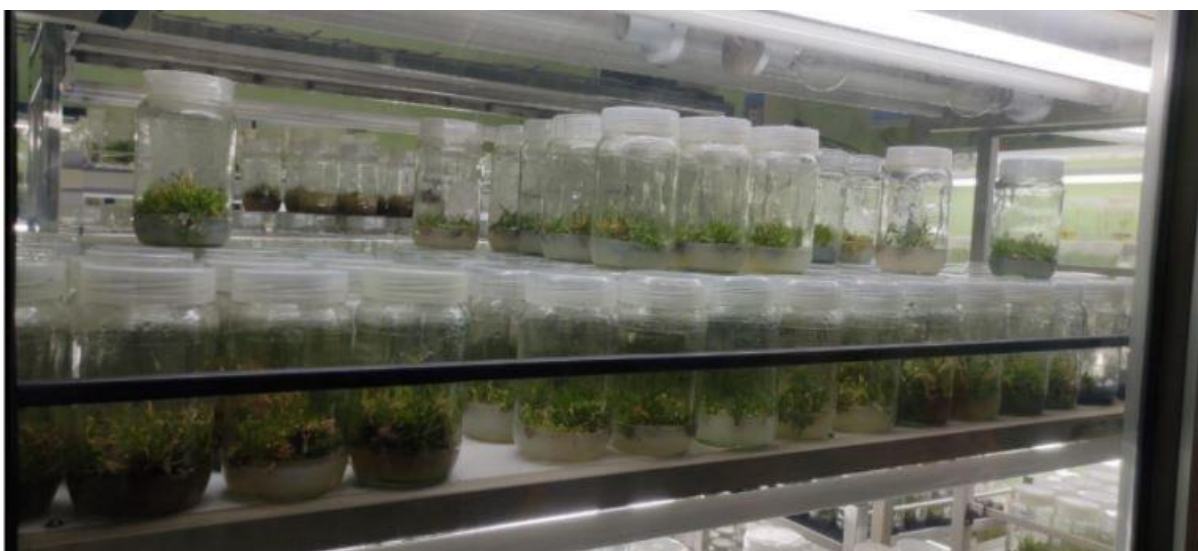


The trainees got hands on experience of how bamboo propagation is done. They all learned modified methods of how branching method and layering methods may be utilized for bamboo propagation. Culmcutting method is probably the more preferred method after



seeding for bamboo propagation. Earlier, the trainees have learned to make incision on bamboo internode to introduce Indole-3-Butyric acid (a plant hormone) or boric acid (a less effective substitute for Indole-3-butyric acid). In here they learned that the injection technique may also be utilized wherein two fine holes are made on the nodal region through which the plant hormone is introduced into the culm using disposable syringe.

Tissue culture is one method by which any plant can be grown from a small part of the plant into numerous plants. Bamboo propagation widely uses tissue culture technique.



Tissue culture lab, managed by Mr. P. B. Goswami, Technical Officer was shown to the team. Culture media is prepared using essential nutrients and a small bamboo branch is placed inside it. After a few month time period the single branch gives rise to multiple branching. Multi-proliferation technique is then utilized to separate out each bamboo shoot and transplanted in the nursery. This method is generally used for the propagation of economically valued species. Also, endangered species of bamboo is grown using the tissue culture method in order to conserve them and simultaneously to propagate them in regions other than its native place. Trainees also got a chance to see the Bamboo composite center managed by Dr. R. D. Borthakur. Here they saw brick kiln which is used for the pyrolysis (burning in the absence of air or oxygen) of Bamboo to produce bamboo charcoal. Bamboo charcoal is then crushed by using a hand grinder and mixed in a 100:25 ratio of bamboo charcoal : adhesive mixture which can be a form of starch like cassava, maida or rice water.

They are then hand pressed to form briquettes. One briquette can burn up to 4-5hr. The cost of briquettes is almost 4-6 times that of bamboo charcoal.



Later, Dr. R. S. C. Jayaraj, Director, RFRI gave an overall view of Bamboo research and development work at RFRI. He also interacted with the trainees actively. Trainees asked the Director about the career prospects of bamboo field at and outside of the institute.



During the latter part of the week, trainees got to analyze and assess the knowledge gained at the RFRI institute. They were asked to compare the pictures of various bamboo seen at the institute with the ones found in the nearby vicinity of namsai area.

Trainees took a trip to the various bamboo clumps around the deobeel area. They were able to see bambusa bamboos which is a thorny bamboo variety. This species of bamboo is often grown in the areas where elephant attacks to the crops are commonly seen. Due to the thorny nature of the bamboo, elephants tend to stay away from these areas and thereby protecting the agricultural crops and wealth of the people.

Dr. Rani Jha, told the students about the concept of horse-shoe type of cultivation and propagation of bamboos. In this pattern, the new shoots grow from the outside of the old culms in the clump. Therefore, the culms on the outside may be harvested for the food. The harvesting of the culms are done from the inside out mechanism so that older culms are cut first for commercial value. It is also important to know here that, bamboo culms of age between 1-2 years are only good for propagation. Whereas, bamboos of age between 3-5 years are generally used for other applications mainly construction due to maximum tensile strength. The shiny nature of bamboo is also found in Jatibamboo to some extent. Trainees documented and have presented their work in the classroom. They have also spoken about the various economical important applications of bamboo and which ones can be truly beneficial in the areas they all belong to. In future each one of them would like to go to their native places and make the farmers aware of how uncultivated lands or the land which is not used anymore for the production of food crops or vegetables can be used for the cultivation of bamboo.

### **Valedictory Session:-**

The valedictory function of a 'green skill development programme (GSDP) on propagation and management of bamboo' was held at the [university](#) seminar hall, Arunachal University of Studies Namsai on 23<sup>rd</sup> Jan' 2021.

The programme was graced by Sh. Kumsi Sidisow Hon'ble MLA and Advisor Deptt. Of Environment & Forests Govt. of Arunachal Pradesh, who along with Chau Zingnu Namchoom Hon'ble MLA, 47 Namsai Assembly Constituency (Arunachal Pradesh), VC, AUS Namsai, Director (Environment), Director, RFRI, Jorhat, DFO Namsai, Asst. Director Skill Development, GoAP, Namsai etc.

During the function, the participants were felicitated and certificates of completion of the training programme were awarded to them.



**Photo Gallery Valedictory Session:-**



***Pic 43:- Group Photo with trainees***



***Pic 44:- Distribution of Certificate to Trainees by Hon'ble MLA cum Advisor to Minister (Env&Forests)Shri.KumsiSidisow***



***Pic 45:- Address by VC, AUS Namsai***



***Pic 46:- Distribution of Certificate to Trainees by ChauZingnuNamchoom Hon'ble MLA, 47 Namsai Assembly Constituency(Arunachal Pradesh)***



***Pic 47:- Address by trainees expressing his satisfaction and positive feedback for the GSDP Training***

### **3.9 ENVIS Officials participated for two days in the Stakeholders consultation of preparation of revised State Action Plan on Climate Change (SAPCC) held from 25<sup>th</sup> January to 29<sup>th</sup> January 2021 at D.K Convention Hall, Itanagar**

The State Climate Change Cell in collaboration with IORA Ecological Solution, New Delhi organized four days stakeholders' consultation workshop for "*Revision of State Action Plan on Climate Change (SAPCC) Arunachal Pradesh*" from 25<sup>th</sup> January to 29<sup>th</sup> January 2021 at D K State Convention Centre, Itanagar. The workshops involved officers from 41 line departments from the Government of Arunachal Pradesh.

#### **Background of the workshop:**

In 2009, the process for development of State Action Plans on Climate Change (SAPCCs) were initiated in Indian States and Union Territories (UTs) to support the implementation of the National Action Plan on Climate Change (NAFCC, 2008) at sub national level. Formulation of State Action Plans on Climate Change (SAPCCs) has been an important milestone in developing domestic policies around climate change in India and they are the guiding documents for planning climate change actions for all the states.

Since the introduction of the first SAPCCs, there have been significant advancements in our understanding of the science of climate change (IPCC AR5, 2014) and as well developments in the international and national policy paradigm, notably the milestone Paris Agreement achieved under the UNFCCC COP negotiations in 2015 (PA, 2015) and India's submission of its Nationally Determined Commitment to PA, 2015. Given these developments, in 2018, the Ministry of Environment Forests and Climate Change (MoEFCC) directed all Indian States and UTs to update their respective initial State Action Plans on Climate Change (SAPCCs). The updated SAPCCs need to be synergised with India's NDC commitments and as well the 17 Sustainable Development Goals (SDGs) in line with the international SDG Agenda 2030.

In Arunachal Pradesh, the Department of Environment and Climate Change has engaged IORA Ecological Solutions as a technical agency to support the revision of its SAPCC. As part of the review and revision process of the Arunachal Pradesh State Action Plan on Climate Change released in 2011 (hereafter referred to as AP SAPCC 1.0), stakeholder consultations need to be carried out to identify, validate and prioritize sector-specific climate risks and vulnerabilities of the State and design appropriate climate adaptation and mitigation

strategies to address the risks. The revised SAPCC will also quantify actions, corresponding financial requirements, identify probable funding sources, and implementation arrangements, while developing M&E Frameworks to track progress and provide feedback for improvement of the updated Arunachal Pradesh State Action Plan (AP SAPCC 2.0).

### **Objectives of the Consultation workshop:**

The AP SAPCC 2.0 will be designed following the Common Guideline for Revision of State Action Plan on Climate Change issued by the Ministry of Environment, Forest and Climate Change, to align with national and state government priorities and climate change concerns. To facilitate this revision process, rounds of sector-specific stakeholder consultations need to be conducted with the objectives of:

- Familiarising the stakeholders to level of climate exposure experienced historically and the projected trends for future at State and District levels, as per the new climate change science assessments
- Assessing the consequent climate risks and vulnerabilities at sectoral level
- Identifying climate adaptation and mitigation actions for each sector
- Prioritizing the districts for implementation of actions and quantification of actions [for short (3 years), medium (5 years) and long-term (10 years)]
- Mapping probable funding sources

The 11 sectors prioritized by the Government of Arunachal Pradesh to mainstream climate change adaptation and mitigation actions into the developmental planning of the State and for inclusion in AP SAPCC 2.0 are:

- |                            |                          |
|----------------------------|--------------------------|
| 1. Agriculture             | 7. Disaster Management   |
| 2. Water                   | 8. Energy                |
| 3. Forestry & Biodiversity | 9. Transport             |
| 4. Habitats                | 10. Industry             |
| 5. Human Health            | 11. Knowledge Management |
| 6. Tourism                 |                          |

### **Outcome of the Stakeholders Consultation workshop:**



Officials from 40 line departments participated in the stakeholder's consultation workshop. Issues on climate change, vulnerability, and adaptation were discussed followed by group activity for each of the sectors. Present vulnerability and adaptation measures for each of the sectors were formulated. The final report of SAPCC Arunachal Pradesh to be submitted by Mid 2021.



**Pic 48: A. J Kurian, PCCF (Env& CC) inaugurated the session in presence of G. Kumar, PCCF (WL & BD), Rajesh, PCCF (RE & CEO Campa), D. Dohu Robin, Director (Env& CC).**

## 1. Summary of ISBIED report till date

Arunachal ENVIS Hub has started collecting data from concerned line department for compilation, disseminate and upload in ISBIED portal since 2017-2021. For which a stakeholders meeting was also conducted for data sharing in connection with NES GRIDSS etc.

Data whichever collected from secondary sources are under compilation, Examine and upload in the ISBEID portal. This year due to pandemic CoVID 19 the process could not be gone as per action plan.

**Indian State-level Basic Environmental Information Database (ISBEID)**  
Ministry of Environment, Forest And Climate Change

**Demography**

**Demography Report for ARUNACHAL PRADESH State**

Year	State	District	Total Population (Millions)	Males (Millions)	Females (Millions)	Density (People/Sq Km)	Area (Sq Km)	Coastal Area (Sq Km)	Sex ratio	Literacy (%)	Attending School (%)	Crude Birth Rate	Crude Death Rate	Source
2011	ARUNACHAL PRADESH	ANJAW	21,167	11,507	9,660	3	6,190	0	855	59	0	0	0	Fig 0 denotes No Data found
2011	ARUNACHAL PRADESH	CHANGLANG	1,48,226	76,948	71,278	32	4,662	0	962	84.9	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	DIBANG VALLEY LOWER	54,080	28,053	26,027	14	3,900	0	941	88.4	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	DIBANG VALLEY UPPER	8,004	4,414	3,590	1	9,129	0	814	84.1	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	KAMENG EAST	78,690	38,775	39,915	19	4,134	0	1045	54.8	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	KAMENG WEST	83,947	46,155	37,792	11	7,422	0	799	78.2	0	0	0	Figure 0 Denotes No Data Found
2011	ARUNACHAL PRADESH	LOHIT	1,45,726	76,221	69,505	28	5,212	0	921	80.8	0	0	0	Fig 0 Denotes No Data found
2011	ARUNACHAL PRADESH	PAPUM PARE *	1,76,573	89,182	87,391	51	2,875	0	993	84.7	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	SIANG EAST	99,214	50,116	49,098	28	3,603	0	980	80.1	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	SIANG UPPER	35,320	18,699	16,621	5	6,590	0	877	79.2	0	0	0	Figure 0 Denotes No Data Found
2011	ARUNACHAL PRADESH	SUBANSIRI LOWER	83,030	41,843	41,187	24	3,508	0	980	85.5	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	SUBANSIRI UPPER	83,448	41,758	41,690	12	7,032	0	1010	64	0	0	0	Figure 0 Denotes No Data Found
2011	ARUNACHAL PRADESH	TAWANG	49,977	29,151	20,826	23	2,172	0	865	59	0	0	0	Figure 0 Denotes No Data found
2011	ARUNACHAL PRADESH	TIRAP	1,11,975	57,604	54,371	47	2,362	0	974	81	0	0	0	Figure 0 Denotes No Data found
	<b>Grand Total</b>		<b>11,79,377</b>	<b>6,10,426</b>	<b>5,68,951</b>	<b>298</b>	<b>68,791</b>	<b>0</b>						

Date: 16/04/, 2021

Place: Itanagar

**ENVIS Coordinator**  
**Arunachal ENVIS Hub**  
**Department of Environment & Forests**  
**Itanagar**