

ZOO's Climate Change Network: List of Members, CC articles and correspondence, comments.

Table of Contents

Messages

INVITATION : New network at ZOO & WILD - from the CBSG WAZA Task Force 16Aug2010	2
MESSAGE 2 - 21 August 2010	3
Message 3 - 1September 2010	5
To members of Species Futures 8 November 2010	8
Species Futures - Climate Change Network members 22 December 2010	9
Species Futures - Climate Change Network members 23 Dec 2010, 30 Dec 2010, 13 Jan 2011	9
PC Tyagi to Climate Change Network 13 January 2011	9
Decade on Biodiversity ...work for ZOO & WILD Networks 14January 2011	10
Dr. Surajit Baruah to Climate Change Network 18 January 2011	11
CCN mail of Dr. Pratibha Singh 1 February 2011	12
CCN reply to Dr. P.C. Tyagi's email 2 February 2011	12
Species Futures Network - Daniels presentation 28 February 2011	16
Article on Coral reef crisis 30 March 2011	16
Target Carbon dioxide 12 April 2011	16
Planetary boundaries 28 April 2011	16
An Educator's Guide 30 May 2011	16
Climate Change and Species Extinction 22 July 2011	17
Assistance to identify research gaps 6 September 2011	18
Global Warming and Wildlife 3 October 2011	20
Global Climate Change: Role of Livestock 1December 2011	21
Climate change on the status of Seychelles frogs 2December 2011	21
Climate change adaptation using traditional knowledge 27December2011	22
Book on Climate change 23January2012	22
IUCN SSC new Task force for Climate change 04February2012	23
A list of actions for Asia to combat climate change 02/03/2012	23
Online conference on Climate Change 06/03/2012	24
CLIMATE CHANGE NETWORK MEMBERS <u>as on 15 March 2012</u>	25

ZOO's Climate Change Network: List of Members, CC articles and correspondence, comments.

FIRST MESSAGES FROM ZOO TO YOU ... SOUTH ASIA CCNETWORK

INVITATION : New network at ZOO & WILD - from the CBSG WAZA Task Force **16Aug2010**

Greetings

The World Association of Zoos and Aquariums **WAZA** and the IUCN SSC Conservation Breeding Specialist Group **CBSG** have created a **Task Force** to better respond to the **threats to wildlife** that climate change poses. This is a serious issue and if you are interested in understanding more about what is known about climate change impacts on wildlife, please see the attachments on **species susceptibility to climate change** which we have from the IUCN SSC website.

The ZOO and WILD organisations support a range of 10 regional taxon and thematic networks including CBSG, and ZOO is a Member of WAZA. The South Asian Zoo Association SAZARC which we host is also a member of WAZA. We would like to integrate all of our captive and wild wildlife networks in facing this particular crisis for wildlife, which is so elusive, abstract, controversial and worrisome. The WAZA/CBSG CC Task Force won't solve **all** the problems of wildlife and climate change but with a climate change network we will have a far greater impact than working alone. All of the 1,700+ members of our various zoo and wildlife oriented groups are invited.

Below is a description and goals of the WAZA/CBSG Climate Change Task Force. Our goals will follow these while focused specifically on wildlife in all the countries of South Asia. We will be catalysts for your direct involvement and use that for improving our technical response, ability and capacity.

WAZA/CBSG Climate Change Task Force

A joint WAZA and CBSG response to the climate change threat facing wildlife. The WAZA/CBSG Climate Change Task Force was established to facilitate our community's response to the extreme gravity of the climate change threat facing wildlife and natural systems. The goals of the Task Force are to: Catalyse our community's engagement with the urgency of the climate change threat (inc. our own staff, partners, visitors and outreach constituencies from children through to world leaders); and Improve our technical response ability and capacity (inc. clarifying impact on our species and programmes, producing briefing and engagement materials and optimising our information dissemination networks etc).

The SouthAsia/CBSG/WAZA Climate Change Network will be based on the success of our other thematic and taxon networks without cloning them. Climate Change as a theme is difficult. It has become popular because big organizations tell us it is important, but it is so big and so associated with entrenched habits and favourite activities that only the most dedicated individuals might make sufficient sacrifices to make a small difference. Making a difference in this particular crisis requires almost everyone making sacrifices including everyone whose behaviour and preferences has brought us to this point.

If you are interested in becoming part of this as yet unnamed Climate Change Network please send an email to zooreach@zooreach.org simply stating your interest and you will automatically become a member. We will circulate a only 3 or 4 emails to our entire list before limiting it to those who have indicated interest. If, after joining, at any point, you want out ...you got it.

Till next mail,

Sally Walker, Sanjay Molur, B.A. Daniel, R. Marimuthu and Latha Ravikumar, Zoo Outreach Organisation ZOO, Wildlife Information Liaison Development WILD



MESSAGE 2 - 21 August 2010

Greetings again !

This is Message 2 to introduce our as yet unnamed CC Network and get feedback before we settle into action. We want this network to be very interactive. We thank all those who joined the network. We hope this mail will attract even more. Before getting into the message itself I want to 1. clarify the difference between the task force and our network and 2. request suggestions for (short) names for the network.

1. Clarification : This as yet unnamed Climate Change Network is not the WAZA and CBSG Climate Change Task Force ? it is a regional activity of it based on their request. We will be closely associated with the CBSG and WAZA Task Force and share its products with our network members, but we will organize our CC activities, research, educational material, etc. independently and appropriately for our South Asian networks.
2. Request : We need to find a name for this network that expresses our individuality. We need a name that may include South Asia but also should include a word or words that identifies us as professionals primarily interested in both *in situ* and *ex situ* wildlife conservation, whether it is flora, fauna, fungi, or those itty bitty things in the other kingdoms of life that scientists keep changing. This identity is in keeping with the TF mandate.

So please suggest some names that might be a clever way to identify our network. It can be a short name and a longer tagline. It doesn't have to make sense (YET) ? we are just brainstorming. Manoj Mishra characteristically came up with a good suggestion, e.g. Species Futures ... quite clever and appropriate. So try your hand at this and then we will winnow them down to a short list and "democratically" select a name.

MESSAGE, continued

ZOO held a few brainstorming sessions about issues within the CC subject and how this CBSG WAZA inspired Climate Change Network can be effective in changing attitudes and behaviour with regard to climate change.

First we decided that the network could be run using some of the most effective and popular activities of ZOO & WILD's other thematic and taxon networks.

Climate Change (CC) as a theme or issue is difficult compared to our other networks. CC has become "popular" because big organizations tell us it is important, but it is so big and so associated with entrenched habits and favorite activities that only the most dedicated individuals will make sufficient sacrifices to make even a small difference. Making a difference in this particular crisis requires everyone in industrialized society to make sacrifices, many of them very difficult. We have to exponentially increase the numbers of people who believe that climate change IS actually an issue – too many are still skeptical.

We discussed some of the difficulties facing us in bringing about behavioural and attitudinal change with relation to climate change:

- The **complexity** of climate change makes it difficult to understand its cause. Natural events, such as volcanic eruptions, variations in ocean currents, etc., can bring about climate change, but our concern now is human-induced climate-change and how to recover. ways to slow its progress. We have no control over natural events but we can control our own actions. Human beings altered the atmospheric content by 30% in 200 years by changing land use patterns and burning fossil fuel, etc. Another 200 years are required to reverse the damage, provided there is no further alteration to the atmosphere. The entire process of Climate change is difficult to understand because it is a progression, involving weather, winds and ocean currents, atmospheric gases and at least since the industrial revolution, human interference.
- Also, the fact is that Climate Change is an **abstract concept** and the **uncertainty** generated by what seems a theoretical framework brings about resistance. Our task is to see what IS changeable in an immediate sense and work toward that. A few of the difficulties are listed below.
 - o People are uncertain what they are dealing with
 - o Climate Change and Global Warming are often discussed together and thought to be exactly the same thing.
 - o People do not want to believe that Climate Change is real, that it is really happening;

- o People do not want to give up anything they currently do even if it hastens Climate Change, such as flying v/s taking a train or video-conferencing.

So, we need to focus on the human resistance to the reality of climate change that we might influence or change with education. We need to speak directly to this resistance and create dramatic models which generate attitudinal change.

- We discussed the misuse of the term "climate change", that is the tendency of individuals and organizations to claim certain actions significantly mitigate climate change. This tendency prevents people from being honest with themselves. Without being honest, we can't improve our action.

We discussed collecting and addressing examples of both commercial and conservation related organizations and individuals that claim their product or activities mitigates climate change but it really isn't. Mitigation measures which seem genuine can be studied and promoted as good things to do.

Example of self-deception: carbon credits. In a conference, we pay a small fee for a nametag that identifies us as having contributed carbon credits and therefore justified our international flight to the venue. We do this without even knowing for sure where the money is going. We do this because our colleagues are doing it but also because it helps absolve us of guilt and enjoy a conference convened at the expense of hundreds of thousands of gallons of oil.

Example of genuine mitigation: A conference could be convened as a virtual meeting over the internet? Or instead of bringing a famous speaker from another country, videoconferencing his speech, and even questions and answers can be done. PSG Tech in Coimbatore invited Dr Rajendra K. Pachauri, Chairman, Inter-governmental Panel on Climate Change for a public lecture using video-conferencing and it was a great success. A few such conferences wouldn't make an impact but imagine if it were enough to reduce the number of flights required around the world.

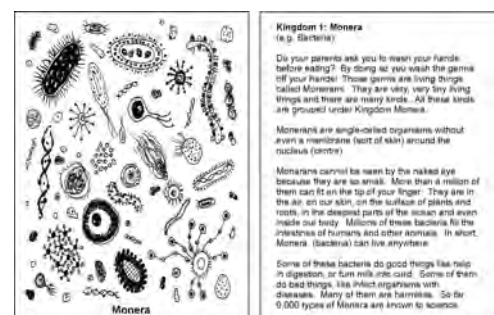
- We discussed that Climate Change has become a buzz word and CC mitigation a fashionable activity, taking examples of organizations and institutions confusing genuine climate change mitigation with things we would do anyway, to save money or for our own convenience. Such actions just make people feel better without bringing about awareness and change, and impede rather than help us understand and confront climate change.
 - o So what about developing a "standard" of genuine and good practice of climate change mitigation, and apply it to everything that we do thinking that it aids CC mitigation. That would make it possible to be honest about what we are doing.
 - o We could then focus on specific tools and methods for Climate Change mitigation which had passed the "standard" for effective CC mitigation.

What do YOU think of these ideas ? We want-to hear from you.

Our next message will be about working with groups of youngsters and developing ideas and teaching material which would catch their attention. Then we will try and get to working interactively on some of the concepts introduced today as well as effective learning material for kids.

Till next mail, let us hear from you.

Best wishes
Sally, Sanjay, Daniel, Marimuthu



Message 3 - 1September 2010

Dear Colleagues:

This is message 3 and from henceforward we will not send messages to anyone who has not signed up.

This is, as promised in our first and second message, for the benefit of our network members who do not want to get climate change messages. Anyone interested in wildlife and climate change can still join but they will have to initiate. We will write only to people who have said "I want to join."

This message will be my last for awhile. Next Dr. B.A. Daniel, from our office will put up 3 messages and then Sanjay and Marimuthu will do. We would also like to hear from the final Members of this Network, those who have joined so far and those from the greater network who respond to this mail. Then we will be a smaller group and will have more freedom and diversity possible. For example we can set up small committees within our network and work on some problems and tasks.

I have a task for you now. You know, when a person crosses a certain age, even the age 21 or so, they are already kind of set in their ways. They have established habit patterns and it takes great effort to try and even change our own bad habits much less anyone else. Children are not like that...they are still teachable and it is not so hard for them to change. Perhaps we could start by thinking of ways to invest energy in kids by creating innovative educational materials and activities. We might get more return for our investment if we focus on children a bit.

Our group, Sanjay, Daniel, Marimuthu and me, brainstormed some activities people might want to work on for children's education. These are below. We'd like to assign a task for everyone who has joined or will join responding to this message, to select one of the themes or activities below and try to create something ... a game, an essay, a drama, a song ... anything that could be used to entertain and stimulate children, and at the same time, direct their attention toward what we need to do as concerned citizens to address climate change.

- Initiate contributory exercises in making children's literature about climate change with the whole network. Start projects via email, such as a packet, or a story and take contributions from any who care to contribute. This will bring new ideas for the difficult task of creating appropriate and effective youngsters teaching material and also keep some network members focused on the problem and a useful approach.
- Think of clever products that would remind people about the importance of climate change, such as create a thermometer keychain with reminder slogan on CC.
- Create CC songs frisky song, sad song, hip hop song, c&w song for use in education programmes. This can also be done with mass brainstorming sessions.
- Make a collection of audio video documents on CC evidences in South Asia
- School / college level small project ideas
- just listing topics only for people to get project ideas
- Drama themes on cc
- Create suggested email trailers catchy slogans change every week. - Same suggestion for SMS messages
- Developing Power Point presentations for distribution
- Identifying Ultimate problem : Reaching/convincing Common man to bring about attitudinal and behavioural change.

Or contribute new ideas.

Well, that's all from me for awhile. Daniel will take care of you for the next three weeks. If you have Messages for the whole group, you can submit them and we will pass them on.

I should close by announcing that Manoj Misra's title for our network seems most creative and appropriate for our interest in species and climate change ... his suggestion for our name is

SPECIES FUTURES

Ta Daaaaaaaaa !!!!

Congratulations Manoj. We will use others' suggestions to come up with a tag like to go with this name.

Best wishes,
Sally Walker and the ZOO Crew

Species Futures' Members list - 20 Sep 2010 (will be updated)

Title, Name, Place

1. Dr. A. Madhavan Kaimal, Thrissur, Kerala
2. Dr. A.K. Chakravarthy, Bangalore, Karnataka
3. Dr. A.K. Gupta, Agartala, Tripura
4. Dr. A.M.K. Mohan Rao, Hyderabad, Andhra Pradesh
5. Mr. A.S. Vastrad, Dharward, Karnataka
6. Mr. Achyut Aryal, Pokhara, Nepal
7. Dr. AJ Solomon Raju, Visakhapatnam, Andhra Pradesh
8. Dr. Alexandar, Pondicherry
9. Mr. Anand Pendharkar, Mumbai, Maharashtra
10. Mr. Anil Kumar Nair, Kota, Rajasthan
11. Dr. Anisuzzaman Khan, Bangladesh
12. Mrs. Anjali Watson, Sri Lanka
13. Dr. Arabinda Kumar Saha, Bangladesh
14. Mr. Arjun Thapa, Nepal
15. Mr. Ateeq Ahmad, USA
16. Dr. B. Vijitha Perera, Sri Lanka
17. Dr. B.K. Tyagi, Madurai, Tamil Nadu
18. Dr. Bahar Baviskar, Jaogaon, Maharashtra
19. Mr. Bhim Acharya, Chitwan, Nepal
20. Dr. Bijaya Kumar Kabi, Kendrapara-Dist, Orissa
21. Mr. Brij Kishore Gupta, New Delhi
22. Dr. Chander Shekhar, Karnal, Harayana
23. Dr. Chelmala Srinivasulu, Hyderabad, Andhra Pradesh
24. Mr. Chittaranjan Baruah, Gauhati, Assam
25. Mr. Cyril Rufus K., Chennai, Tamil Nadu
26. Mrs. D.H. Tanuja, Mysore, Karnataka
27. Dr. D.K. Sharma, Guwahati, Assam
28. Dr. D.N. Das, Itanagar, Arunachal Pradesh
29. Dr. Dhruvajyoti Basu, Lucknow, Uttar Pradesh
30. Mr. Digambar Gadgil, Nashik, Maharashtra
31. Director, Tata Steel Zoological Park Jubilee Park, Jameshedpur, Jharkhand
32. Dr. Feroz Md. Shafiqul Islam, UAE
33. Dr. G.N. Vankhede, Amravati, Maharashtra
34. Ms. Gawsia Wahidunnessa Chowdhury, Bangladesh
35. Mrs. Geeta Seshamani, New Delhi
36. Mr. Girish Janney, Shimoga, Karnataka
37. Mr. H. Bandula Jayaneththi, Sri Lanka
38. Dr. H.R. Parsani, Saradar Krishnagar, Gujarat
39. Mr. Hari Adhikari, Nepal
40. Ms. Indira Sampath, Secunderabad, Andhra Pradesh
41. Dr. Jacob V. Cheeran, Trichur, Kerala
42. Dr. Jayanta Das, Guwahati, Assam
43. Mrs. Jessie Jeyakaran, Chennai, Tamil Nadu
44. Dr. Jihosuo Biswas, Guwahati, Assam
45. Dr. K. Rajmohana, Calicut, Kerala
46. Mr. K.G. Sivaramakrishnan, Madurai, Tamil Nadu
47. Dr. K.S. Sreepada, Mangalagangothri, Karnataka
48. Dr. K.V. Gururaja, Bangalore, Karnataka
49. Mr. Karthikeyan R., Madurai, Tamil Nadu
50. Mr. Kazi Ahmed Kabir, Bangladesh
51. Mr. Kishor Malekar, Kolhapur, Maharashtra
52. Dr. Komal Powar, Mumbai, Maharashtra
53. Dr. Korad Vishakha, Pune, Maharashtra
54. Mr. Kulachandra Aryal, Nepal
55. Dr. Latha Tampi, Thiruvananthapuram, Kerala
56. Dr. Leena, Mahesana, Gujarat
57. Mr. Liankima Lailung, Aizawl, Mizoram
58. Prof. M.A. Aziz, Bangladesh
59. Dr. M.L. Thakur, Shimla, Himachal Pradesh
60. Dr. Manjramkar, Mumbai, Maharashtra
61. Mr. Manoj Misra, New Delhi
62. Mr. Md. Hasanuzzaman, Bangladesh
63. Dr. Mir Mansoor, Srinagar, J&K

64. Dr. Mithra Dey, Silchar, Assam
65. Mr. Mohan Madwaqanna
66. Mr. Mohammed Samsoor Ali, Madurai, Tamil Nadu
67. Dr. Mohammed Zahoor Chishti, Srinagar, J&K
68. Mr. Mohmed Husain Khatri, Bhuj, Gujarat
69. Mr. Muhammad Mahmood-ul-Hassan, Pakistan
70. Dr. Mukesh K. Chalise, Nepal
71. Dr. N. Arun Nagendran, Madurai, Tamil Nadu
72. Dr. Nabajit Das, Guwahati, Assam
73. Dr. Naim Akhtar, New Delhi
74. Dr. Nandkishor More, Lucknow, Uttar Pradesh
75. Mr. Neelim Kumar, Chandigarh, Punjab
76. Dr. Neena Singla, Ludhiana, Punjab
77. Dr. P. Venkata Rami Reddy, Bangalore, Karnataka
78. Dr. P.C. Tyagi, Dehradun, Uttarkhand
79. Mr. P.S. Easa, Thrissur, Kerala
80. Dr. Partap Singh Kataria, Silchar, Assam
81. Dr. Parthankar Choudhury, Silchar, Assam
82. Mrs. Payal Bhojwani Molur, Coimbatore, Tamil Nadu
83. Mrs. Payal Narain, New Delhi
84. Mr. Pranab Bujarbarua, Kamrup, Assam
85. Mrs. Pratibha Singh, Lucknow, Uttar Pradesh
86. Dr. Pushpa Raj Acharya, Nepal
87. Mr. Rabi Wenju, Nepal
88. Mr. Rafaqat Masroor, Pakistan
89. Mr. Rajan Subedi, Nepal
90. Dr. Rajeev Chauhan, Etawah, Uttar Pradesh
91. Mr. Rajendran Balasundaram, Pondicherry
92. Dr. Raju Vyas, Vadodara, Gujarat
93. Mr. Rameshwor Ghimire, Nepal
94. Mr. Rashid Y Naqash, Srinagar, J&K
95. Mr. Rauf Ali, Pondicherry
96. Dr. Ravi Chellam, Bangalore, Karnataka
97. Mr. Ravi Sharma Aryal, Nepal
98. Mrs. Renuka, Sri Lanka
99. Dr. Rina Chakraborty, Kolkata, West Bengal
100. Ms. Roopali Raghavan, Chennai, Tamil Nadu
101. Dr. S. Krishnan, Chennai, Tamil Nadu
102. Ms. S. Mamatha, Mysore, Karnataka
103. Dr. S. Manickavasagam, Chidambaram, Tamil Nadu
104. Dr. S. Suthakar Isaac, Tirunelveli, Tamil Nadu
105. Mr. S.K. Patnaik, Bhubaneswar, Orissa
106. Mr. S.K. Shina, Bhubaneswar, Orissa
107. Dr. Sabitry Bordoloi, Guwahati, Assam
108. Dr. Sabyasachi Dasgupta, Garhwal, Uttarakhand
109. Mr. Saibal Sengupta, Guwahati, Assam
110. Dr. Sajeev T.K., Kochi, Kerala
111. Dr. Salam Rajesh, Imphal, Manipur
112. Mr. Samir K. Sinha, Patna, Bihar
113. Mr. Sampath S. Seneviratne, Sri Lanka
114. Mr. Sanjan Thapa, Nepal
115. Dr. Satya Prakash Mehra, Udaipur, Rajasthan
116. Dr. Satya Priya Sinha, Dehradun, Uttarkhand
117. Mr. Satyajit Bayan, Barpeta, Assam
118. Mr. Selvin Samuel, Tirunelveli, Tamil Nadu
119. Mr. Shaik Hussain, Hyderabad, Andhra Pradesh
120. Mr. Shivaraj Bhattarai, Nepal
121. Mr. Shrawan Kumar Sinha, Bhubaneswar, Orissa
122. Mr. Snehal Patel, Surat, Gujarat
123. Mr. Srinivasan Krishnan Iyer, Chennai, Tamil Nadu
124. Dr. Sumit Dookia, Jodhpur, Rajasthan
125. Dr. Sunita Pradhan, Darjeeling, West Bengal
126. Dr. Surajit Baruah, Guwahati, Assam
127. Ms. Suzan Khan, Bangladesh
128. Dr. Syed Ali Ahasan, Bangladesh
129. Prof. T.C. Narendran, Calicut, Kerala

130. Ms. Tanuja Shrestha, Nepal
 131. Mr. Tek Bahadur Pajja Pun, Nepal
 132. Mrs. Uma Ramaswamy, Coimbatore, Tamil Nadu
 133. Mrs. Usha Lachungpa, Gangtok, Sikkim
 134. Dr. V. Elangovan, Lucknow, Uttar Pradesh
 135. Mr. Venkatesh Kumar, Pollachi, Tamil Nadu
 136. Dr. Vijay Kumar, Kangra, Himachal Pradesh
 137. Dr. Wipula Yapa, Sri Lanka
 138. Dr. Zakirul Farid, Bangladesh
 139. Dr. Saral Mitra, Kolkata, West Bangal
 140. Dr. Yuvana Satya Priya, Lucknow, Uttar Pradesh
 141. Mr. K. Sivakumar, Dehradun, Uttarkhand
 142. Dr. Wolfgang Dittus, Sri Lanka
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Species Futures - Baseline information on CC mitigation practices **23 October 2010**

To Members of Species Futures

Dear colleagues

Thank you very much for your response to our previous message. Please find members responses which are attached with mail for your reading. Until we form a web module to share and interact among us you will be receiving all communications through email. It is encouraging to note that you are interested to volunteer your time and resource that will help to build up this network.

One of the points that we discussed in our earlier communication is, the need to focus on the human resistance to the reality of climate change that we might influence or change with education; and to develop a standard of genuine and good practices of climate change mitigation.

Effective way to document and to create the baseline information on evidence of climate change and good practices of climate change mitigation from this region is to do a short survey among the members to understand the existing literature/practices that are known to you and organisations to which you are associated.

Please find a survey form attached that has just five simple questions for you to reply.

It will be very helpful if you could give your response by filling out and sending the survey form back to us. Your reply will definitely help us to create the baseline information. Till next mail, let us hear from you.

Best wishes

BA Daniel and the ZOO Crew

To members of Species Futures **8 November 2010**

Dear colleagues

In response to the request for the survey of Baseline information on CC mitigation practices, we received appreciable number of response from Species Futures members and thanks to all who had replied to it.

Please find the replies attached with this in excel document. We appreciate receiving more response to the survey and hence the same survey form is attached with this.

You will also find another word document containing a communication received from Challenging Climate Newsletter No 1. Hope you find this news letter useful.

With best wishes

B.A. Daniel and the ZOO Crew

Species Futures - Climate Change Network members 22 December 2010

Dear CCN Colleagues:

A thousand apologies for not being in touch. Our intent is to write to you every week with something new from the field. My brain stopped working and the weeks went by without my noticing. I am sorry. It wasn't "my turn", however, so let that be my excuse rather than age, brain damage, etc.

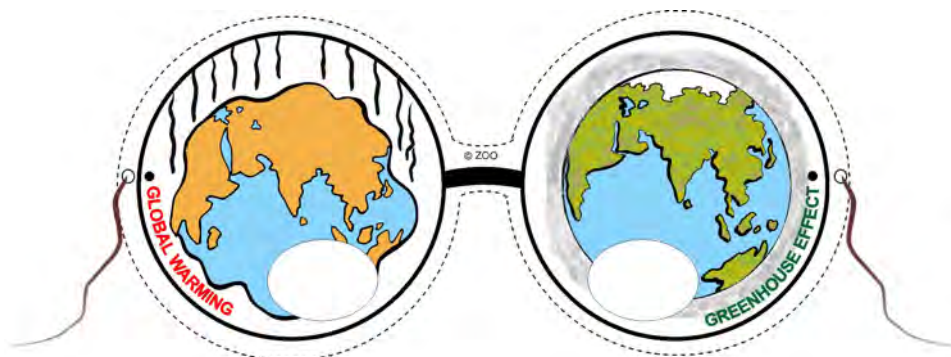
The new and wonderful item we have to report, and one reason we all neglected you, is that we organised our 10 Anniversary Annual SAZARC conference in Nepal and all four of us in the ZOO cc network monitors attended. In keeping with our self-imposed mandate, about 80% of the conference was training with some great trainers and working groups on the same topics. Our training them was 21st Century Crises, including Climate Change, Emerging Diseases, and Terrorism. Dr. Wendy Foden from the Climate Change group at Species Survival Commission in IUCN was our Resource person and she did a wonderful job. Her task was to give a simple overview of Climate Change and then focus on Species Susceptibility with special reference to zoo management. We followed her talks with working groups on the topics she covered. All of this will be in the February ZOOS' PRINT (web based) and you will all get ZOOS' PRINT now unless you write and ask to be dropped.

But to make up for the lost weeks in which all of us were busy getting ready for the conference and recovering, I will send some material that Dr. Foden presented. It was a great honor to have her for the whole week of the conference, and hear research results that had not been publicly shared to any group at that time. We can't share that also, until it is published.

HELP US OUT : if any of you, our members of the Climate Change group would like to contribute something they have found useful and interesting on Climate change, please send it to Pravin <pravin@zooreach.org> and after we here at ZOO see it, we will circulate it to the other members.

Again, my apologies ... we need your help to stay on target.

Best wishes,
Sally Walker and the ZOO Crew



Species Futures - Climate Change Network members 23 Dec 2010, 30 Dec 2010, 13 Jan 2011

[Dr. Wendy Foden's presentations](#) to the 10th South Asian Zoo Association (SAZARC) Conference.

With permission we sent Wendy Fodens presentations to Climate Change Network Members
Sally and the ZOO Crew

PC Tyagi to Climate Change Network 13 January 2011

Dear ZOO CC Network members:

Dr. P. C. Tyagi, IFS, has written the following mail for all of us. You can reply or query him individually if you want but if you send your comments to zooreach (zooreach@zooreach.org), we can circulate it to the whole network. Apologies to Tyagi for the delay in circulating his message. We were waiting for a mass mailing programme. We'll try and do better.

Thanks very much.
Sally Walker for the ZOO CC Network

From: pc tyagi <pctyagi@wii.gov.in>
Date: 24 December 2010 11:46:17 AM GMT+05:30
To: ZOO <zooreach@zooreach.org>
Subject: Re: Climate Change Network members

Dear CC Network Members,

I have been visiting Sanctuary, National parks in Northern and southern India and trying to assess how the management practices can be modified to mitigate carbon loss and enhance capture through biological process. Some of the points discussed during intense discussion with resource managers are being shared for evolving ideas, thoughts and strategy to combat climate change Criteria for addressing issues relating to Climate Change & Carbon capture in the PAs (Protected Areas)

Is the PAs being consciously managed to adapt to climate change?

1. Water scarcity due to (potential) increasing aridity is being addressed through development of large water bodies
2. Assisting in developing techniques for large carnivore translocation/reintroduction which will help in later movement of such species to new and developing habitats if and when climate change reduces the PAs to an unsuitable habitat. The small size of the landscape does not allow the regular approaches to adaptation to climate change as such alternate approaches are being thought of.

Is the PAs being consciously managed to prevent carbon loss and to encourage further carbon capture?

1. Baseline data on Carbon dioxide capture/ sequestrating (developing GIS and remote sensing capabilities for quantifying carbon credits of CDM projects) in PAs
2. Degraded areas + land gained from relocation of villages are being targeted for gaining carbon credits
3. Instead of agriculture if people are willing to do horticulture crops in the Buffer/Peripheral areas then the PAs would facilitate for claiming carbon credits
4. Minimizing fires, minimizing of habitat modification, locking carbon in dead wood by not allowing it into the fuel wood cycle; reducing fire wood use by providing LPG and bringing in electric water pump, creation of water bodies increases riparian forest which captures carbon through increased tree growth, . Beneficiaries will be peripheral villages and relocated villages
5. Bringing about change from agriculture to horticultural crops will facilitate additional income to people and also improve micro-climate and improve tree cover.
6. By reducing local people dependence on fuel wood and reducing fires and improving locking of carbon in growing tree helps secure carbon and reduce production of carbon

Praveen Chandra Tyagi IFS

Professor & Scientist-F /Department of Landscape Level planning and Management,
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Decade on Biodiversity ...work for ZOO & WILD Networks 14January 2011

Dear Z.O.O. Network, SAZARC, and other colleagues ...

See below . . . from Gerald Dick, Executive Director, WAZA ... be sure and pass on to your zoo, field, academic and other colleagues, suggest they also follow-up and have a look at all the links in the material in the url as well.

Sally Walker and Sanjay Molur

Colleagues

Yesterday the UN General Assembly has declared 2011 to 2020 as the UN Decade on Biodiversity. For WAZA this offers a perfect opportunity to have a long-term 10 years' scope of international cooperation and communication.

A related release has been posted on the web: <http://www.waza.org/en/site/pressnews-events/press-releases/united-nations-decade-on-biodiversity-20112020>

Best wishes and Happy 2011!!

Gerald Gerald Dick, PhD, MAS

Executive Director, WAZA Executive Office

Dr. Surajit Baruah to Climate Change Network 18 January 2011

Dear ZOO CC Network members:

Dr. Surajit Baruah has sent the following climate change related United Kingdom Climate Impacts Programme newsletter link for all of us.

Thanks very much.

Sally Walker for the ZOO CC Network

Dear CC Network team, ZOO

Forwarding the newsletter of the UK Climate Impact Programme (<http://www.ukcip.org.uk/news/>) for your kind information

regards

Dr. Surajit Baruah M.Sc. Ph.D.

STATE COORDINATOR WWF-India Assam and Arunachal Pradesh State Office

-----Forwarded by Surajit Baruah/wwfindia on 01/10/2011 07:38PM -----

To: sbaruah@wwfindia.net

From: UKCIP (UK Climate Impacts Programme) <stephanie.ferguson@ukcip.org.uk>

Date: 01/10/2011 07:02PM

Subject: UKCIP news for January

Dear Colleague,

To view this newsletter online, please go to <http://www.ukcip.org.uk/news/>

1. UKCIP Climate Digest.
2. December 2010 coldest on record for UK, but globally 2010 is another warm one.
3. Weather resilience for your business a professional approach, 10 February, 6-9pm, Said Business School, Oxford.
4. UKCIP restyled site goes live.
5. Climate change and the South West of England updated study.
6. Adapting Through Natural Interventions new study.
7. You have to laugh...

1. UKCIP Climate Digest.

For the latest UKCIP Climate Digest, go to <http://www.ukcip.org.uk/climate-digest/cd-dec-2010/> for a summary of recent research relevant to climate change impacts and adaptation. You can also view the last six issues. To search earlier issues go to <http://www.ukcip.org.uk/climate-digest/> and use the search facility on the right.

2. December 2010 coldest on record for UK, but globally 2010 is another warm one.

Provisional figures from the Met Office suggest that December 2010 was the coldest December on record for the UK as a whole, with a mean temperature of -1.0 degree C, compared to the long-term average of 4.2 degrees C. December was also unusually sunny and dry. More information is at <http://www.metoffice.gov.uk/news/releases/archive/2011/cold-dec>. While 2010 looks likely to be a colder year than average for the UK, this is in marked contrast to the global temperature, which looks set to show 2010 as one of the warmest on record. <http://www.metoffice.gov.uk/corporate/pressoffice/2010/pr20101202b.html> http://www.wmo.int/pages/mediacentre/press_releases/pr_904_en.html <http://www.ncdc.noaa.gov/sotc/global/#year-to-date>

3. Weather resilience for your business a professional approach 10 February, 6-9pm, Said Business School, Oxford.

In the past weeks we have seen just how vulnerable our lifestyles can be to extreme weather. It is timely that UKCIP, Oxfordshire County Council and Climate South East are collaborating to provide this free event on weather resilience for small to medium sized businesses. It will help SMEs to think about weather resilience and how to get it. Key features include: examples of how SMEs are developing to cope with whatever the climate throws at them; sharing expert knowledge on building resilience to weather and what to expect from climate change; advising on innovation hot-spots that respond to extreme weather; and reporting on a new business resilience tool. Places are limited, so to register please visit www.bookwhen.com/ukcip

4. UKCIP restyled site goes live.

UKCIP has restyled its website to improve its navigation and to better reflect the needs of those using the

site. Most of the information from the old site is still there, and it should be easier to find. We brought together all the case studies in one place, so that you can search across all sectors and themes. Another change is that you will be asked to complete a simple registration form the first time you use a UKCIP resource (such as the Adaptation Wizard). This is simply a way of us trying to get better information about who is using our site and we will not pass your details on to anyone else or use it for any sort of marketing purpose. You will normally only need to register once to get access to all tools on the UKCIP site. We hope you like the new site (at the same address www.ukcip.org.uk) and we'd welcome any feedback to enquiries@ukcip.org.uk

If you have a link to the UKCIP website on your own website, please check it, as it may now be broken or only link to our home page.

5. Climate change and the South West of England – updated study.

An update to Climate SouthWest's 2003 study on the impacts of climate change for South West England has now been produced. Warming to the idea: building resilience to extreme weather and climate change in the South West, is now available online at <http://www.oursouthwest.com/climate/scopingstudy.htm>. The update incorporates the latest climate projections (UKCP09) and reflects current understanding of the key issues and adaptation opportunities for the South West. The report confirms that the region needs to address its current and future vulnerabilities to weather and climate to respond effectively to the impacts of climate change.

Replace thick line above

6. Adapting Through Natural Interventions new study.

Climate East Midlands has launched the findings of the Adapting Through Natural Interventions study, undertaken by consultants Aecom. The report considered how the natural environment can help us adapt to a changing climate and also incorporated a scoping study for a decision-making tool to help quantify the socio-economic benefits of different kinds of natural environment interventions. The report can be downloaded at <http://www.climate-em.org.uk/resources/item/adapting-through-natural-interventions-project-report/>

7. You have to laugh...

UKCIP staff (and no doubt lots of enews readers) cheered when we saw an Armstrong and Miller sketch (TV comedy series in the UK) that successfully explained the difference between climate and weather. You can take a look at it here <http://www.youtube.com/watch?v=TQlHaGhYoF0> and they even appear to have the right graphs in the leaflet. Enjoy.

Chris West

Director, UKCIP

Based at the University of Oxford and principally funded by DEFRA, UKCIP helps organisations assess how they will be affected by climate change, so they can prepare for its impacts.

CCN mail of Dr. Pratibha Singh 1 February 2011

Dear ZOO CC Network members,

Dr. Pratibha Singh, UP State Biodiversity Board has shared a [PowerPoint Presentation](#) on Climate change.

Thank you Dr. Pratibha Singh.

Sally Walker for the ZOO CC network

CCN reply to Dr. P.C. Tyagi's email 2 February 2011

Dear Colleagues of ZOO CC Species Futures Network

Several people responded to Dr. Tyagi's mail. We are late in circulating these responses; they are pasted below. Very sorry. We need a better system and will see to it soon.

Sally, Sanjay, Daniel, Marimuthu

from **ZOO CC Species Futures Network**

Reply to Dr. P.C. Tyagi's email

From: Satya Prakash <spmehra@yahoo.com>

Dear Friends & Prof. Tyagi,

Instead of responding to each one of points raised, I would like to present my personal views on the PAs from Rajasthan (main emphasis on southern parts of state).

As per my studies and review of literature (both scientific as well as other literature which includes documents from princely state and the then letters of British Workers on the natural heritage of the then princely states), I found that there are lot of habitat changes took place in PAs which were more accessible and near to human settlements (eg. Mt Abu WLS). Similarly, PAs with rich diversity are in the same phase of deterioration (eg. Sitamata WLS) which may due to several reasons from political to lack of management. Surprisingly, PAs within urban sprawl such as Sajjangarh WLS is still maintaining the same vegetation as in the past (Ref: archive literature). Then, let's take the larger side - Aravallis as a whole - Massive plantation work had been carried out on the papers is well known (the actual situation is also known). We all are aware of the forest types which are more or less deciduous nature.. once in a year majority of the forests of Aravallis shed their leaves and one could observe leafless (lack of green parts) trunks with decrease in rate of photosynthesis (need further refrence). Along with these, urban sprawls are continued, development works especially related to construction of roads are on heights...

Here is my main concern.....

- 1. PAs are hotspot of indigenous vegetation (in cae of Aravallis) then why not to check their further deterioration...**
- 2. Where are the studies which present that particular species (deciduous forests) is sequestering highest carbon and are native to site of plantation...?**
- 3. Why horizontal urban sprawls, which clears major forests**
- 4. In such cases if the faunal species representing the whole of habitat are relocated then what will be th eprobability of their survelliance....**

In such conditions, it is the need of the time to check further degradation by hook and crook methods sidlining the political motives even if intervention of Honorable Supreme Court of India is required then one should go for it

In another views, I will quote examples of the small sections (forest around NH 76 - From Udaipur to Abu &/or Chittor to Udaipur) of forest cover of southern Rajasthan the tourist trio - Chittor-Udaipur-Mt Abu....

The development took place due to ambitious projects of government to link tourist sites and we got a very good roads for these three tourist spotes (four-lane NH 76) which is good for the area..... Even the plantation done by contractors along the road side is showing the concerns of road builders.

The green cover was safe due to fear of tribals (as the roads were narrow and passing through valleys, no one could run or drive fast) and one could observe a vast green cover while crossing these tourist spots. With the good road network what is the security of habitat, will the fear of tribals reamain as such or???????

Further, plantation of non-native/ non-indigenous species by road contractors will solve the problems on larger scale especially where the studies on carbon sequestering species is lacking..... We are replacing indigenous species whose trunks/ branches may be good carbon sequesters at the time of leafless conditions on the name of plantation or simply greening the cleared area.

Here is my concern for such conditions....

- 1. Let the traditional heritage of plant-man association be revived....**
- 2. Plantations for particular site should be as according to the native species rather then centrally approved list....**
- 3. Startup studies of carbon sequestration by every species (as according to local ecological setup) so that atleast we could recommend the species for plantation in cleared area... if such stuies are available then application should be there....**

In another issue of **linking livelihood (agriculture practices) with the natural heritage.....**

We are fortunate enough to induct such move in our area. With the efforts of our local team of youth in Abu Hills, we could able to protect the habitats of one of the threatened species of bird. Fortunatly today the number is two-fold for the species... and the tem members are earning from the species. In another case, we encouraged few families to practice medicinally important herbs commonly available on Abu Hills as they are having rich demand in the southern Rajasthan. Herb oil is developed with the mixing of around twenty herbs locally available which is having a market value.. Thus, we solved our two purpose - one conserving the species and another livelihood from the local natural resources.

Similarly, we started involving *Banjara* community to earn from their traditional art of making artifacts from the locally available *Saccharum* species in rural areas of Bharatpur (around Keoladeo NP). With the pace of time they cleared all the grasses for the agricultural works, but now they realized that the

presence of this is equally important. They started planting the species all around their agricultural fields and started making artifacts (in the preliminary phase). The market of their artifacts was linked up with the tourist places both within Bharatpur and other Jaipur, Udaipur & Mt Abu. We are waiting for the assessment of their income....

This is not new concept but as we feel that in the present society setup and educational system where degrees are having more weightage than the knowledge (if you wish to earn high) it is better to generate livelihood at local level from their traditional works which is more towards sustainable practices..... based on "Aranya Samskruti" & concept of "Prakruti Purush".

Regards

Satya Prakash Mehra

Ph. D., M. Sc.

Urban Habitat Forum Fellow 2009

Managing Director (Projects & Activities) - Rajputana Society of Natural History (RSNH)

Life Member - NIEP, RASE, RSNH, BD, PFA

Member - Compassionate Citizen, ERN-WTI, CFA

Ex-Employee - Supreme (Switzerland/UAE/Afghanistan), WWF-India (Keoladeo NP, Bharatpur & Mt Abu WLS, Sirohi), BNHS (Mumbai)

Independent Environmental Writer

Mo: 091 9414165690

Please Note: These are my personal views...

From: nand kishore more <nkmore2000@yahoo.com>

The points raised by Dr Tyagi are important and hence debatable. However the suggestion for locking carbon in the dead wood is fine. Green wood/growing trees naturally mitigates carbon through photosynthesis. Secondly for providing alternative fuel instead of firewood in fact is a policy matter involving even MFP. Lets debate so that some policy initiatives may take place.

Regards

More Nandkishor

Associate Professor

Dept of Environmental Science

B B A Central University

Lucknow-226025

Cell:9335922569

From: Manoj Misra <manojmisra@peaceinst.org>

With all due respects to Dr Tyagi's motivation and efforts to gather relevant information from PAs, we have a fundamental issue with the manner the queries have been designed and asked.

There are inherent serious assumptions associated with many of the queries which must be enumerated and debated before a proper questionnaire could lead to raising right kind of queries with useful results.

Just to give two examples.

a) It is asked that whether the PAs are working on creation of large water bodies to offset the likely impact of increase in aridity resulting from Climate Change.

Now in a country with such vast diversity of biomes in which the PAs are located how can such a generic query hold true?

b) Consciously promoting horticulture over agriculture in villages is like asking people to change their food habits from eating grains to eating fruits as their staple diet. There are strong implication of conversion of farmlands into alternate land uses and these must be kept in mind before such sectoral issues are addressed.

I suggest if I may that at the very least the underlying assumptions driving the queries may be made clear right from the beginning before queries are put.

Hope this is found useful.

Best wishes,

manoj misra

From: Saroj Patnaik <saroj_p9@yahoo.com>

Dear CC Network Members,

I am sorry for delayed response to Dr Tyagi's suggestion which are indeed quite relevant to meet the situation that may arise due to climate change particularly when P.A.s are involved. I may have the following few suggestion to supplement his suggestion.

- 1) All seasonal streams, particularly in hilly tracts need be suitably treated by soil and moisture conservation measures to ensure longer availability of water/soil moisture to prevent soil loss and stimulate vegetative growth.
- 2) Instead of electricity/LPG the people living in the surrounding of P.A.s may be encouraged and provided subsidy for using renewable energy for their cooking, heating and pumping needs.
- 3) Horticulture is certainly a good alternative. It will be still better if the crop demands less water.

Sincerely,

S.K.Patnaik

81, Fishery Lane,

Budheswari Colony, Bhubaneswar - 751006. India

Phone : +91-674-2313364, Mobile : 09437036606

Email : saroj_p9@yahoo.com

Dr. P.C. Tyagi's email

Dear CC Network Members,

I have been visiting Sanctuary, National parks in Northern and southern India and trying to assess how the management practices can be modified to mitigate carbon loss and enhance capture through biological process. Some of the points discussed during intense discussion with resource managers are being shared for evolving ideas, thoughts and strategy to combat climate change Criteria for addressing issues relating to Climate Change & Carbon capture in the PAs (Protected Areas)

Is the PAs being consciously managed to adapt to climate change?

1. Water scarcity due to (potential) increasing aridity is being addressed through development of large water bodies
2. Assisting in developing techniques for large carnivore translocation/reintroduction which will help in later movement of such species to new and developing habitats if and when climate change reduces the PAs to an unsuitable habitat. The small size of the landscape does not allow the regular approaches to adaptation to climate change as such alternate approaches are being thought of.

Is the PAs being consciously managed to prevent carbon loss and to encourage further carbon capture?

1. Baseline data on Carbon dioxide capture/ sequestrating (developing GIS and remote sensing capabilities for quantifying carbon credits of CDM projects) in PAs
2. Degraded areas + land gained from relocation of villages are being targeted for gaining carbon credits
3. Instead of agriculture if people are willing to do horticulture crops in the Buffer/Peripheral areas then the PAs would facilitate for claiming carbon credits
4. Minimizing fires, minimizing of habitat modification, locking carbon in dead wood by not allowing it into the fuel wood cycle; reducing fire wood use by providing LPG and bringing in electric water pump, creation of water bodies increases riparian forest which captures carbon through increased tree growth, . Beneficiaries will be peripheral villages and relocated villages
5. Bringing about change from agriculture to horticultural crops will facilitate additional income to people and also improve micro-climate and improve tree cover.
6. By reducing local people dependence on fuel wood and reducing fires and improving locking of carbon in growing tree helps secure carbon and reduce production of carbon

Praveen Chandra Tyagi IFS

Professor & Scientist-F /Department of Landscape Level planning and Management,

/Wildlife Institute of India

PO Box No. 18 Chandrabani

Dehradun-248 001

Phone : 91-135-2640111-115 Extn: 247 (O),

Fax - 0135-2640117

Species Futures Network - Daniels presentation 28 February 2011

Dear ZOO CC and Species Futures Network members,
Dr. B.A. Daniel, has shared a [PowerPoint presentation](#) on Climate change.

Sally Walker for the ZOO CC network

Article on Coral reef crisis 30 March 2011

Dear CC Network members:

Here is an article on 'Coral reef crisis written by J.E.N. Veron et al, published in Marine Pollution Bulletin. Impacts of global warming, mass bleaching of coral reefs and mortality, Carbondioxide level and ocean acidification, impact on reef biota, sea level changes, water quality, biotic responses, and remedial actions are discussed in this. You will find this article useful. Enjoy. Best wishes BA Daniel

Target Carbon dioxide 12 April 2011

Dear CC network members:

Here is an article "Target Atmospheric CO2: Where Should Humanity Aim?" by James Hansen et.al published in The Open Atmospheric Science Journal.

You may find it interesting.

with regards
B.A. Daniel

Planetary boundaries 28 April 2011

Dear CC Network members:

Scientists have made first attempt to identify and quantify a set of nine Planetary boundaries (climate change, stratospheric ozone, land use change, freshwater use, biological diversity, ocean acidification, nitrogen and phosphorus inputs to the biosphere and oceans, aerosol loading and chemical pollution) as the safe biophysical boundaries outside which, they believe, the Earth System cannot function in a stable state. The scientists first identified the Earth System processes and potential biophysical thresholds, which, if crossed, could generate unacceptable environmental change for humanity. They then proposed the boundaries that should be respected in order to reduce the risk of crossing these thresholds.

The study suggests that three of these boundaries (climate change, biological diversity and nitrogen input to the biosphere) may already have been transgressed. In addition, it emphasizes that the boundaries are strongly connected — crossing one boundary may seriously threaten the ability to stay within safe levels of the others.

Please find full article "Planetary Boundaries: Exploring the Safe Operating Space for Humanity" published in Ecology and Society 14(2): 32.

You will find this article useful. Enjoy.

Best wishes
BA Daniel

An Educator's Guide 30 May 2011

Dear ZOO CC Network members,
Please find attached An Educator's Guide: "Climate Change Our Global Experiment" for your interest.

You will find this article useful.

Best wishes

Climate Change and Species Extinction 22 July 2011

Dear ZOO CC Network members,
Please find below an article published by The Independent/UK on "Climate Change could Kill One in 10 Species by End of the Century" for your interest. You will find this article useful.

Best wishes

ZOO CC Network

Published on Tuesday, July 12, 2011 by [The Independent/UK](#)

<http://www.commondreams.org/headline/2011/07/12-1>

Climate Change Could Kill One in 10 Species by End of the Century

by Steve Conner, Science Editor

Climate change is speeding up the rate at which animals and plants are becoming extinct. By the end of the century, one in 10 species could be on the verge of extinction because of the effects of global warming, a study has found.

The findings support the view that the earth is currently experiencing a global mass extinction where the rate at which species are being lost is many times greater than the historical extinction rate. It is the sixth great mass extinction in the history of life on earth. Scientists said that previous predictions of how fast species are being lost because of climate change match the actual observed losses. They calculate that around 10 per cent of species alive today could be facing extinction by 2100.

Ilya Maclean and Robert Wilson, of the University of Exeter, examined nearly 200 previous predictions about how climate change may affect the extinction of species and compared them with about 130 reports of changes already observed.

The aim was to judge the accuracy of estimates made by scientists in the past about climate change predictions in relation to species extinction. They concluded that the observed threats matched well with the actual threats, based on real observations.

"We tried to see whether predictions were backed up by things that have already happened and this was what we found," Dr Maclean said.

Rising temperatures, changing patterns of rainfall and increasing acidity of the oceans are all having an impact on the viability of vulnerable species. In the oceans, for instance, rising acidity threatens the survival of the polyp organisms that make coral reefs while increasing temperatures are sending some mountain species of plants and animals to higher altitudes.

"Our study is a wake-up call for action. The many species that are already declining could become extinct if things continue as they are. It is time to stop using the uncertainties as an excuse for not acting. Our research shows that the harmful effects of climate change are already happening and, if anything, exceed predictions," Dr Maclean said.

"The implications are that unless we do something to reverse climate change impacts by lowering levels of carbon dioxide, or help species cope with climate change, we could be looking at a lot of extinctions by the end of the century. It's further evidence that we are experiencing a global mass extinction," he said.

The study, published in the journal Proceedings of the National Academy of Sciences, found that global warming ranks alongside habitat loss and invasive species as a major threat to endangered animals and plants. It concluded that the speed at which the climate is likely to change in the future threatens to overwhelm the rate at which species are able to adapt.

"By looking at such a range of studies from around the world, we found that the impacts of climate change can be felt everywhere, and among all groups of animals and plants," said Robert Wilson, the study's co-author.

"From birds to worms to marine mammals, from high mountain ranges to jungles and to the oceans, scientists seem to have been right that climate change is a real threat," Dr Wilson said. "We need to act

now. This means cutting carbon emissions and protecting species from the other threats they face, such as habitat loss and pollution."

Assistance to identify research gaps 6 September 2011

Dear ZOO CC members,
Dr. K. Sivakumar from WII is soliciting suggestions to identify research gaps for the research project that he is planning to do East Godavari Ecosystems and its services. Please find his e-mail below.
BA Daniel,
ZOO CC network

Dear All ZOO CC Members, We are planning to carry out a study on 'Impact of climate changes on East Godavari Ecosystem and its Ecosystem Services'. I understand that there were several studies have been carried out in this region especially on biodiversity and even on climate change impact. Therefore, before initiating our proposed study in the region we have decided to identify the research gaps in this field. Any suggestions from the members are most welcome. Regards, Siva K. Sivakumar, M. Phil., Ph.D., Scientist, Department of Endangered Species Management, Wildlife Institute of India, P.O. Box. 18, Chandrbani, Dehradun 248001, India Tel: +91 135 2640111 to 2640115, Fax: +91 135 2640117 Web: http://oldwww.wii.gov.in/faculty/sivakumar/sivakumar_cv.pdf

Assistance to identify research gaps 12 September 2011

Dear ZOO CC Network members
Please find some replies that we received for the request mail of Dr. Sivakumar.

ZOO CC Network

My suggestion to Dr. Shivakumar is that since it is known that work has been done on climate change issues carried out by different organisations. Why not those institutions get connected and get the subject matters and reports from respective institutions. So he can know what are the gap on which he can start his project and there will be no repeatation. I hope some of the institution will contact in this regards.

with best wishes,
Dr SP Sinha, Consultant Wildlife, Dehradun
sinhasp1@gmail.com

very good idea and necessary too. please let us know the date and time.

Dr. Mithra Dey
Reader, Dept. of Ecology and Environmental Science, Assam University, Silchar-788011, Assam
mithradey@rediffmail.com

Dear Daniel,

Thanks for the email. I think in the region we need to have a proper monitoring system to understand the changes. By developing biotic indices, it is easier to assess the quality of wetlands. If we could develop a strong and easy process then it will be easy to engage managers to take and adopt it for long term monitoring. You must be aware of that the HKH project initiated the system (biotic index using macro-invertebrates) for the rivers in the region. However, we need to have more research and proper implementation.

With best regards.

Gawsia
Assistant Professor, Noakhali Science and Technology University, Sonapur, Noakhali 3802
gawsia@gmail.com

Mail Sent from ZOO

Dear ZOO CC members,

Dr. K. Sivakumar from WII is soliciting suggestions to identify research gaps for the research project that he is planning to do East Godavari Ecosystems and its services. Please find his e-mail below. BA Daniel, ZOO CC network

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Regards,
Siva

K. Sivakumar, M. Phil., Ph.D.,
Scientist,
Department of Endangered Species Management,
Wildlife Institute of India, P.O. Box. 18, Chandrabani, Dehradun 248001, India
Tel: +91 135 2640111 to 2640115, Fax: +91 135 2640117
Web: http://oldwww.wii.gov.in/faculty/sivakumar/sivakumar_cv.pdf

Assistance to identify research gaps 29 September 2011

To Dr. Shivakumar,

Thanx for asking comment on your nice idea. Actually, whenever the research projects are being formed and being implemented, some gap might be lying inside that. So keep that in mind. Regarding ecosystem research, one should includes some parts for mass awareness. As the climate is not in our control, but our population is our assest and we can use it for our wellbeing. So to let them awared, the climate my be balanced...So think on it please..

Hasan

MD. HASANUZZAMAN, PhD Student (SAARC Scholar) , Department of Animal Nutrition, COVAS, CSK HPKV, HP (176 062), India
anikzaman@yahoo.com

Dear Dr. Siva K,

1. Generally long term studies are not quite common in India. Since you have rich experience evidenced by your publications, you can compile the existing data on various ecosystems and plan for future compilation also.

2. Studies on ecosystem services are limited especially in our country. However, data can be retrieved from the existing literature and interacting with local inhabitants. So a strong basic data will leave hope for future work.

Thanking you,

With regards,

Lt. Dr. N. Arun Nagendran, Asst. Professor of Zoology & Coordinator, Bioresources Management Division, Thiagarajar College, Madurai - 09
narunnagendran@gmail.com

This is a very good proposal but climate change is a slow and long term process. A good comparison with the earlier data is needed for realising and authentication of the process and its effect. If there is no earlier data then present data should be treated as the first milestone for this project. Regular monitoring at least for 10 yrs is needed for making a comment on climate change. Effect of so many parameters on the biology of micro flora and fauna has to be studied in some fixed monitoring stations.

Dr. Rina Chakraborty, Former Scientist 'E' & HOO, Zoological Survey of India, Kolkata
sujitrinazsi@yahoo.co.in

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Regards,

Siva

K. Sivakumar, M. Phil., Ph.D.

Scientist

Department of Endangered Species Management

Wildlife Institute of India

P.O. Box. 18, Chandrabani, Dehradun 248001, India

Tel: +91 135 2640111 to 2640115, Fax: +91 135 2640117

Web: http://oldwww.wii.gov.in/faculty/sivakumar/sivakumar_cv.pdf

Global Warming and Wildlife 3 October 2011

Dear ZOO CC Network members,

Please find below an article published by HealthNewsDigest.com on "Global Warming and Wildlife" for your interest.

Best wishes

ZOO CC Network

Global Warming and Wildlife

HealthNewsDigest.com) - Although perhaps the best known examples, polar bears certainly aren't the only wildlife species already suffering as a result of global warming. With the sea ice that they depend upon as hunting platforms and places to rest during long swims quickly melting, polar bears were added to the federal list of threatened species in 2008. This contentious listing decision was significant in that it represented the first time the federal government acknowledged that global warming was not only having a noticeable effect on the environment but could also be blamed for the decline of particular species. Environmentalists claimed the listing was reason enough to reign in our carbon emissions sharply, but of course that has yet to happen.

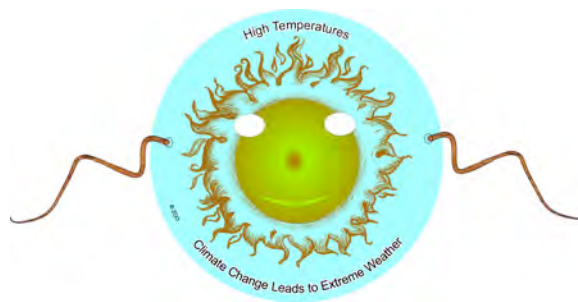
While all organisms on the planet are affected in one way or another by climate change, some are more at risk than others. "Species with small population sizes, restricted ranges, and limited ability to move to different habitat will be most at risk," reports the National Audubon Society. "Similarly, different habitats and ecosystems will be impacted differently, with those in coastal, high-latitude, and high-altitude regions most vulnerable."

Audubon, which is primarily concerned with birds, recently published a report based on 40 years of data that found some 60 percent of the 305 avian species in North America during winter have been on the move in recent decades shifting their ranges northward by an average of 35 miles, as habitat shifts thanks to warming temperatures. The Brant (a coastal bird), the Ring-necked Duck (a water bird), and the American Goldfinch (a land bird), all moved about 200 miles north over the last four decades. While it's questionable whether some birds will find suitable habitat to the north we may have paved that piece of land over the picture looks even more grim for those species not willing or able to abandon old roosts. Also, Audubon reports that the timing of reproductive events (egg-laying, flowering, spawning) across different interdependent species is occurring earlier than ever "in some cases interrupting delicate cycles that ensure that insects and other food are available for young animals."

Another leading conservation group, Defenders of Wildlife, details how a long list of other North American fauna is in decline as a result of global warming. The gray wolf, trout, salmon, arctic fox, desert bighorn

sheep, desert tortoise, Edith's checkerspot butterfly, golden toad, Hawaiian monk seal, lobster, manatee, painted turtle, penguin, streamside salamander and western toad are just a few of the species on Defenders' list that are negatively impacted by our profligate fossil fuel use. Meanwhile, the Wildlife Conservation Society adds the Irrawaddy dolphin of Southeast Asia, the Arctic's musk ox, the ocean-going hawksbill turtle and others to the list of species that are "feeling the heat" from global warming.

While it may seem futile given the scope of the problem, everyone can still take steps to be part of the solution. Switch out your incandescent bulbs for compact fluorescents or, even better, the new generation of LED bulbs. Bike, walk and take mass transit more; drive your car less. Telecommute when you can. Try to source as much of your food and other goods locally to cut down on carbon-heavy transcontinental freight shipping. If not for yourself, do it for the polar bears, turtles, foxes and toads.
http://www.healthnewsdigest.com/news/Environment_380/Global_Warming_and_Wildlife.shtml



Global Climate Change: Role of Livestock 1December 2011

Dear ZOO CC Network members,
 Please find an article by Naqvi and Sejian 2011 Published in Asian Journal of Agricultural Sciences.

Best wishes
 ZOO CC Network

Global Climate Change: Role of Livestock

S.M.K. Naqvi and V. Sejian
Asian Journal of Agricultural Sciences 3(1): 19-25, 2011

Climate change is seen as a major threat to the survival of many species, ecosystems and the sustainability of livestock production systems in many parts of the world. Green house gases (GHG) are released in the atmosphere both by natural sources and anthropogenic (human related) activities. An attempt has been made in this article to understand the contribution of ruminant livestock to climate change and to identify the mitigation strategies to reduce enteric methane emission in livestock. The GHG emissions from the agriculture sector account for about 25.5% of total global radiative forcing and over 60% of anthropogenic sources. Animal husbandry accounts for 18% of GHG emissions that cause global warming. Reducing the increase of GHG emissions from agriculture, especially livestock production should therefore be a top priority, because it could curb warming fairly rapidly. Among the GHGs, CH₄ is considered to be the largest potential contributor to the global warming phenomenon. Ruminant livestock such as cattle, buffalo, sheep and goats contributes the major proportion of total agricultural emission of methane. Indian livestock system is a large contributor to GHGs and therefore also to the global warming phenomenon. Methane emission from enteric fermentation from Indian livestock ranged from 7.26 to 10.4 MT/year. In India more than 90% of the total methane emission from enteric fermentation is being contributed by the large ruminants (cattle and buffalo) and rest from small ruminants and others. Generally CH₄ reduction strategies can be grouped under two broad categories such as management and nutritional strategies. Although the reduction in GHG emissions from livestock industries are seen as high priorities, strategies for reducing emissions should not reduce the economic viability of enterprises if they are to find industry acceptability.

Climate change on the status of Seychelles frogs 2December 2011

Dear ZOO CC Network members,
 Please find the recently published article on "The potential effects of climate change on the status of Seychelles frogs (Anura: Sooglossidae)" by Justin Gerlach published in the international, open access

Attached is a low-resolution pdf file, in case you want a high resolution you can visit the Journal of Threatened Taxa web site (www.threatenedtaxa.org) and download it for free.
<http://www.threatenedtaxa.org/ZooPrintJournal/2011/November/o261926xi112153-2166.pdf>

Best,
ZOO CC Network

Climate change adaptation using traditional knowledge 27December2011

Climate change adaptation using traditional knowledge

Water management from rivulets is an example of adaptation to address drought, writes CEC member Pradip Dey of India.

This recent practice of water management from rivulets, which is an excellent example of adoption to address drought has evolved from the experience of the farmers of Jharkhand and has been used only for the last about 8 years. Methodology involves collection of primary data through participatory approach involving several tribes of East Indian plateau principally belonging to Ho, Santhal, Munda, Oraon, and Lohra who own vast wealth of indigenous farming knowledge from time immemorial.

The seepage water from the fields which flows in small rivulets is collected by constructing a bund in the lower reaches of the rivulets and where water can be stored. Depending upon the availability of drainage water, similar bunds may be constructed at many points along the length of the rivulets. This stored water is reused very judiciously for typical rabi (winter) crops (i.e., mixed cropping of cabbage/cauliflower + mustard + tomato) grown in beds and irrigation is provided for each bed mainly by carrying water in small drums. The farmers harvest all the three crops simultaneously in the rabi season.

Many of the tribal practices in the world are being vanished over the years due to rapid urbanisation and Jharkhand is no exception. Hence, it is utmost essential to document all the information related to protection of natural ecosystem and local environment available among the indigenous communities before they are lost. This strategy, especially in allowing adaptation and resilience to climate change related to water scarcity may be integrated in policy framework.

CONTACT: Pradip Dey; e-mail: pradipdey@yahoo.com

Reference: Dey, P. and Sarkar, A.K. 2011. Revisiting indigenous farming knowledge of Jharkhand (India) for conservation of natural resources and combating climate change. Indian J. Traditional Knowledge 10(1): 71-79.

<http://www.iucn.org/about/union/commissions/cec/?8900/Climate-change-adaptation-using-traditional-knowledge>

Book on Climate change 23January2012

Dear ZOO CC network members,
Please find PDF of a presentation 'Convenient Solutions to an inconvenient truth' by Kathy Mac Kinnon.

Convenient Solutions to an Inconvenient Truth Ecosystem-based Approaches to Climate Change

Current efforts to address climate change focus mainly on reducing GHG emissions by adopting cleaner energy strategies and on reducing the vulnerability of communities at risk by improving infrastructure to meet new energy and water needs. This book offers a compelling argument for including ecosystem-based approaches to mitigation and adaptation as an essential pillar in national strategies to address climate change. Such ecosystem-based strategies can offer cost-effective, proven and sustainable solutions that contribute to, and complement, other national and regional adaptation strategies. Global warming and changes in climate have already had observed impacts on natural ecosystems and species. Natural systems such as wetlands, mangroves, coral reefs, cloud forests, and Arctic and high-latitude ecosystems are especially vulnerable to climate-induced disturbances. However, enhanced protection and management of biological resources and habits can mitigate the impacts and contribute to solutions as nations and communities strive to adapt to climate change. Biodiversity is the foundation and mainstay of agriculture, forests, and fisheries. Biological resources provide the raw materials for livelihoods, agriculture, medicines, trade, tourism, and industry. Forests, grasslands, freshwater, and

marine and other natural ecosystems provide a range of services often not recognized in national economic accounts but vital to human welfare: regulation of water flows and water quality, flood control, pollination, decontamination, carbon sequestration, soil conservation, and nutrient and hydrological cycling.

The World Bank's mission is to alleviate poverty and support sustainable development. Climate change is a serious environmental challenge that could undermine these goals. Since the Industrial Revolution the mean surface temperature has increased an average 0.6 degrees Celsius due to the accumulation of greenhouse gases (GHGs) in the atmosphere. Most of this change has occurred in the last 30 to 40 years, and the rate of increase is accelerating. These rising temperatures will have significant impacts at a global scale and at local and regional levels. While reducing GHG emissions and reversing climate change are important long-term goals, many of the impacts of climate change are already in evidence. As a result, governments, communities, and civil society are increasingly concerned with anticipating the future effects of climate change, while searching for strategies to mitigate, and adapt to, its current and future effects.

To download full pdf of the book go to:

<http://climatechange.worldbank.org/climatechange/content/convenient-solutions-inconvenient-truth>

Best
BA Daniel
ZOO CC Network

IUCN SSC new Task force for Climate change 04February2012

Dear ZOO CC network members,
IUCN SSC established a new Task force for Climate change. Please see the announcement below.

Best
BA Daniel
ZOO CC Network

News from the IUCN Species Survival Commission and the IUCN Species Programme

January 2012

HEADLINE NEWS

New SSC Climate Change Taskforce established

Professor Steven Williams from James Cook University (based in Townsville, Australia), and Dr James Watson, Leader of the Climate Adaptation Team at the Wildlife Conservation Society (based in New York, USA) have been appointed as Co-Chairs of this new SSC Taskforce. The key objectives of the CCTF are to:

- design a strategy to help the SSC respond to climate change impacts;
 - develop the ongoing work on species' susceptibility to climate change into IUCN guidelines to inform conservation actions;
 - provide information and recommendations about enhancing species adaptation to climate change; and
 - keep under constant review the overall IUCN Programme of Work on climate change, with a view to ensuring that biodiversity concerns remain central and promote coordination of climate change responses between SSC Specialist Groups, SSC partner organizations and other IUCN Programmes areas
- The CCTF steering committee will meet in March to determine a long-term workplan. For more information contact James (jwatson@wcs.org) and Steve (stephen.williams@jcu.edu.au).
-

A list of actions for Asia to combat climate change 02/03/2012

Dear ZOO CC Network members,
Please find a note on "**What can we do? A list of actions for Asia to combat climate change**".

Attached is a pdf file, also can be downloaded from

<http://www.izea.net/education/climate%20change-South%20Asia-%20list%20of%20actions%20to%20combat%20climate%20change.pdf>

Best,
B.A. Daniel
ZOO CC Network

Online conference on Climate Change 06/03/2012

Dear ZOO CC network members,

Please find an announcement about an Online Climate Conference. You may find this interesting to take part.

CLIMATE 2012 - The World's CO₂-friendly Scientific Online Climate Conference - 5 to 9 November 2012

Online at <http://www.climate2012.de>

CLIMATE 2012 presents emerging issues related to climate variation, climate change and climate smart technologies, with a focus on African-Caribbean-Pacific countries, especially Small Island Developing States.

The deadline for abstracts/proposals is 15 April 2012.

Enquiries: info@climate2012.de

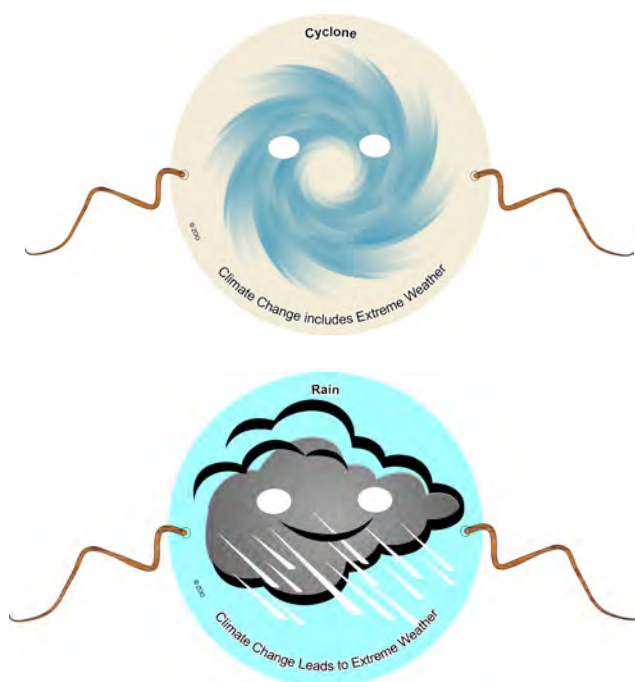
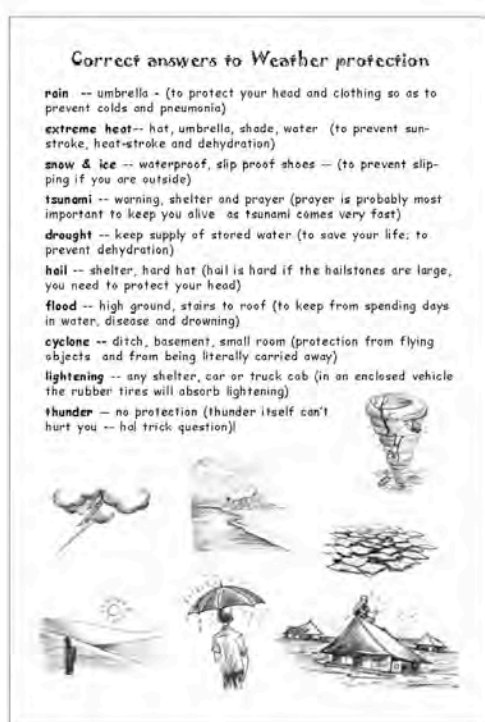
Web address: <http://www.climate2012.de>

Sponsored by: Hamburg University of Applied Sciences + DIREKT project

Best

BA Daniel

ZOO CC Network



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