Bibliography


http://wwweci.ox.ac.uk/research/climate/mediacoverage.php.


251


APPENDICES
Appendix-I

Questionnaire for students

Media and Climate Change issues: A study of perceptions of post graduate students in Agartala, Tripura.

SL:

Dear respondent friend,

You may be aware that climate change is increasingly being felt now-a-days. In its latest assessment report, the Intergovernmental Panel on Climate Change (IPCC) concluded that the global climate is, in fact changing at a very fast pace, and this change will affect the lives of human beings including that of flora and fauna in this planet in a number of ways. This questionnaire builds on the above-mentioned theme and is intended to collect information on climate change perceptions among students in Agartala and to assess the role of media in adaptation/mitigation regarding climate change issues.

I would like to assure you that all the information collected will be kept in the strictest confidence and will be used only for a purely academic research purpose. This exercise would take only 15(fifteen) minutes of your time. This questionnaire is not meant to judge your knowledge but only to find out what you think and feel about climate change issues. Although, you are free to participate or reject from participating in this exercise, if you leave any question untouched, it will make the questionnaire invalid. Hence, if you feel/think, that you do not know a particular issue, do not leave it blank or jump to next question simply. If you encounter any difficulty in such cases, you should tick the “Do not know” option (but do not leave any question untouched). If you choose not express your opinion for any question, the whole questionnaire booklet will be rendered useless for statistical purposes. Hence, please attempt all the questions. Also, please, do not copy or refer from your friends; your individual opinion is sought and will be greatly appreciated.

Remember, there are no right or wrong answers in this questionnaire, only what is needed is your honest opinion about the issues. If you are interested to know the results of this research survey or you have any query, you may contact the researcher at this mail: - climatechange.tripura@gmail.com.
Respondent’s personal information (Please tick where applicable)

i). Could you please mention the Faculty to which you belong to:
   c). Arts and Commerce

ii). Could you please mention your present class of study:
   a). PG Student  
   C). Research Scholar

iii). Could you please mention your age group:
   a). Below 25 yrs.  

iv). Could you please mention the caste you belong to:
   a). ST  
   b). SC  
   c). OBC  
   d). General

v). Could you please mention the place of your residence/birth:
   a). Urban area  
   b). Rural Area

vi). Could you please mention the approximate annual income of your family:
   a). Below Rs. 1,80,000.00  
   b). Above Rs. 1,80,000.00

vii). What was your medium of instruction during your school days?
   a). Vernacular  
   b). English.

viii). Did you have Environmental Studies as a subject in your school curriculum?
   a). Yes  
   b). No

ix). Please mention your Gender:
   a). Male  
   b). Female
1. **How much time** do you usually spend daily on the following mass media? (Please tick one box per row).

<table>
<thead>
<tr>
<th>Media habits</th>
<th>a) Use it less than 15 minutes</th>
<th>b) Use it more than 15 minutes</th>
<th>c) Do not use daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Reading newspapers.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii). Reading magazines.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii). Listening to radio.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv). Watching TV/cinema.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v). Internet surfing.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **What types of programmes do you like to watch most** in TV? (Please choose top three and mention your preference by putting 1...2...3 in the box).

<table>
<thead>
<tr>
<th>a) Reality Shows</th>
<th>b) Soaps and serials</th>
<th>c) News</th>
<th>d) Entertainment/Cinema/Music Videos</th>
<th>e) If, Others (Please mention)</th>
</tr>
</thead>
</table>

3. **Which sections of the newspaper do you like to read most?** (Please choose top three and mention your preference by putting 1..2..3 in the box).

<table>
<thead>
<tr>
<th>a) Political News</th>
<th>b) Sports News/Entertainment</th>
<th>c) Employment News/News/News/</th>
<th>d) Editorial/Opinion News/News/News/</th>
<th>e) If, Others (Please mention)</th>
</tr>
</thead>
</table>

4. Are you **aware of** the phenomenon called climate change?  
   a). ☐ Yes  
   b). ☐ No

5. Have you ever **heard/seen/read** any media report on climate change before responding to this survey?  
   a). ☐ Yes  
   b). ☐ No
6. Are you aware that climate change is also known by a different term called global warming?
   a). ☐ Yes  b). ☐ No

7. Which of the two terms – climate change or global warming, are you more concerned with?
   a). ☐ Climate Change  b). ☐ Global Warming  c). ☐ Neither of the two

8. What is your main source of information on climate change (please mention)

9. Personally, how well do you feel you are informed about different issues of climate change? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>Issues</th>
<th>a) Very well informed</th>
<th>b) Fairly well informed</th>
<th>c) Not very well informed</th>
<th>d) Not at all informed</th>
<th>e) Do not know/unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Causes of climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>ii). Consequences of climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>iii). Ways in which we can fight climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

10. You may have come across media reports that the world’s temperature is going up slowly and climate is changing over the years. What is your personal opinion on this, do you think climate change is actually happening around? (Please tick one box below).
    a). ☐ Yes happening around  b). ☐ Not happening around  c). ☐ Do not know/unsure

11. How important is the issue of climate change to you personally? (Please tick one box below).

<table>
<thead>
<tr>
<th>a) Very important</th>
<th>b) Quite important</th>
<th>c) Not at all important</th>
<th>d) Not very important</th>
<th>e) Do not know/unsure</th>
</tr>
</thead>
</table>
12. Please indicate the medium used most frequently by you as a source of information on climate change? (Please tick one box per row).

<table>
<thead>
<tr>
<th>Sources</th>
<th>Frequency of the medium used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) Very often</td>
</tr>
<tr>
<td>i). Radio</td>
<td></td>
</tr>
<tr>
<td>ii). TV</td>
<td></td>
</tr>
<tr>
<td>iii). Cinema / documentaries.</td>
<td></td>
</tr>
<tr>
<td>iv). Newspapers.</td>
<td></td>
</tr>
<tr>
<td>vi). Internet /Websites.</td>
<td></td>
</tr>
<tr>
<td>viii). School/Teachers.</td>
<td></td>
</tr>
<tr>
<td>ix). Family/neighbours/ friends/colleagues.</td>
<td></td>
</tr>
<tr>
<td>x). Publications/leaflets/brouchers from NGOs.</td>
<td></td>
</tr>
<tr>
<td>xi). Events (e.g. conferences/seminars and the like).</td>
<td></td>
</tr>
</tbody>
</table>

13. Please indicate how much you learned about climate change from each of the following sources? (Please tick one box per row).

<table>
<thead>
<tr>
<th>Sources</th>
<th>How much you learned from that medium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a) A lot</td>
</tr>
<tr>
<td>i). Radio</td>
<td></td>
</tr>
<tr>
<td>ii). TV</td>
<td></td>
</tr>
<tr>
<td>iii). Cinema / documentaries.</td>
<td></td>
</tr>
<tr>
<td>iv). Newspapers.</td>
<td></td>
</tr>
<tr>
<td>vi). Internet /websites.</td>
<td></td>
</tr>
<tr>
<td>vii). Academic books/ research journals.</td>
<td></td>
</tr>
<tr>
<td>ix). Family/neighbours/ friends/colleagues.</td>
<td></td>
</tr>
<tr>
<td>x). Publications/leaflets/brouchers from NGOs.</td>
<td></td>
</tr>
<tr>
<td>xi). Events (e.g. conferences/seminars and the like).</td>
<td></td>
</tr>
</tbody>
</table>
14. Please indicate the medium that you would trust most to give you reliable information on climate change? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>Sources</th>
<th>a) Strongly distrust</th>
<th>b) Somewhat distrust</th>
<th>c) Neither trust nor distrust</th>
<th>d) Somewhat trust</th>
<th>d) Strongly trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Mass Media (e.g. Radio, TV, newspapers etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii). Government reports.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii). Business and industry reports.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv). Publications from environmental NGOs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v). Publications from scientists.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi) Teachers/family/neighbours/friends/colleagues.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. After seeing the news of recent floods and natural disaster that happened in Uttarakhand, what thoughts and feelings come to your mind? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>Feelings</th>
<th>a) Extremely sure</th>
<th>b) Very sure</th>
<th>c) Somewhat sure</th>
<th>d) Not sure at all</th>
<th>d) Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Climate change is rapidly happening in India.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii). Climate change is rapidly happening elsewhere in the world.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii). Climate change is likely to create similar havoc in the northeastern states and especially in Tripura which is one of the vulnerable states in India.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. If nothing is done to reduce climate change immediately, how serious of a problem do you think it will be for the World? (Please tick one box below).

<table>
<thead>
<tr>
<th>a) Very serious</th>
<th>b) Somewhat serious</th>
<th>c) Not so serious</th>
<th>d) Not serious at all</th>
<th>e) Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Have you ever seen any advertisement on climate change? If yes, please mention where have you seen...
18. Do you feel the mass media in our country is able to explain to you about the following issues regarding climate change? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>Issues</th>
<th>a) Completely</th>
<th>b) A lot</th>
<th>c) A moderate amount</th>
<th>d) A little</th>
<th>e) Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Different causes of climate change.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii). Different consequences of climate change.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii). Different solutions to reduce climate change.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. When the question of accuracy, clarity of explanation of scientific & technological information on climate change comes, where do you mostly prefer to watch news?
   a).□ I usually prefer to watch news in Doordarshan.
   b).□ I usually prefer to watch news in private cable TV channels (e.g. NDTV, Aaj Tak and the like).
   C).□ Prefer neither of the two.

20. When the question of accuracy, clarity of explanation of scientific & technological information on CLIMATE CHANGE comes, what do you like to read?
   a).□ I usually prefer to read newspapers.
   b).□ I usually prefer to read magazines.
   c).□ Prefer neither of the two.

21. When the question of accuracy, clarity of explanation of scientific & technological information on CLIMATE CHANGE comes, what do you mostly prefer to read?
   a).□ I usually prefer to read mainstream national English newspapers (e.g. The Times of India, The Hindu and the like).
   b).□ I usually prefer to read local vernacular daily newspapers (e.g. Dainik Sambad, Syandan Patrika and the like).
   c).□ Prefer neither of the two.
22. Which of the following do you consider to be a contributing factor of CLIMATE CHANGE? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>Cause of climate change</th>
<th>a) Very likely</th>
<th>b) Somewhat likely</th>
<th>c) Not very likely</th>
<th>d) Unlikely</th>
<th>e) Do not know/unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Widening of the ozone hole due to punching of it by rockets and spaceships.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii). CO₂ emission from vehicles/industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii). CO₂ emissions from power plants.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv). Air pollution.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v). Greenhouse gases released due to agriculture and animal husbandry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi). Burning of fossil fuels in the form of petrol, diesels, coal that is used in vehicles for transportation and functioning of businesses and industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii). Loss of forests which is a natural sink-tank of carbon dioxide.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23. If nothing is done to combat CLIMATE CHANGE in the future, how much do you think it will hurt you personally?

<table>
<thead>
<tr>
<th>A great deal</th>
<th>A lot</th>
<th>A moderate amount</th>
<th>Not at all</th>
<th>Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

263
24. From what you have seen, read or heard in the mass media, what is your perception of consequences of CLIMATE CHANGE, if nothing is done to combat it immediately? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>Perceptions consequences of climate change</th>
<th>a) Very likely</th>
<th>b) Somewhat likely</th>
<th>c) Not very likely</th>
<th>d) Unlikely</th>
<th>c) Do not know /unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Climate change may cause melting of ice caps, sea level rise and environmental refugee problem may happen due to forced migration and displacement of large section of population from the coastal areas.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) Causes ill health e.g. skin disease, breathing problems, etc will aggravate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii) Increase in famines and food scarcity will happen due to climate change.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv). Unpredictable monsoons/deficit rainfall.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v) Extinction of species, drought/desertification and shortage of drinking water.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi) Problem of natural disasters like, floods, cyclones and cloudbursts like that happened in Uttarakhand will increase.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii) Rise in vector borne diseases (e.g. malaria, filarial, typhoid) and spread to newer places.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>viii). Television and news media greatly exaggerate the facts and make the problems of climate change sound worse than they are.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
25.  From your mass media exposure, to what extent do you agree/disagree with the following ways to mitigate Climate Change? (Please tick the box that applies on each row).

<table>
<thead>
<tr>
<th>Perceptions regarding ways to mitigate climate change</th>
<th>a) Strongly agree</th>
<th>b) Agree</th>
<th>c) Neither agree nor disagree</th>
<th>d) Disagree</th>
<th>e) Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). I think that reducing greenhouse gases and carbon dioxide could really help in solving the problem of climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>ii). I think that making changes in people’s lifestyle could help reduce climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>iii). I feel that I could do something to solve the problem of climate change e.g.-switching off from fossil fuels use to renewable energy (wind, solar) that can really help in solving the problem of climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>iv). I do not know what could be done to help fight climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>v). It is not a single person’s duty but it is government’s responsibility to prevent climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>vi). The actions of a single person like me would not make any difference in stopping climate change.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>vii). New technologies would be invented by scientists which would solve the problem of climate change, without people having to make any changes in life.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

26.  Do you feel that the mass media in our country is expressing due concerns about the impact of climate change in India? (Please tick one box below).

<table>
<thead>
<tr>
<th>a) Very concerned</th>
<th>b) Fairly concerned</th>
<th>c) Least concerned</th>
<th>d) Not at all concerned</th>
<th>e) Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

27.  How large an influence do you think mass media have on sensitizing the youths of our country for creating public opinion and taking action in combating climate change? (Please tick one box per row below).

<table>
<thead>
<tr>
<th>a) Very Large</th>
<th>b) Large</th>
<th>c) Small</th>
<th>d) Very small</th>
<th>e) Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
28. “The mass media is often accused as too alarmist about climate change which is not happening, there is just more reporting of it in the media these days”. Do you agree or disagree with this statement? (Please tick one box below).

<table>
<thead>
<tr>
<th></th>
<th>a) Strongly agree</th>
<th>b) Agree</th>
<th>c) Neither agree nor disagree</th>
<th>d) Disagree</th>
<th>e) Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. According to your understanding, in a developing country like India, which mass medium (like radio, TV) is the best source of information when it comes to coverage of climate change issues? (Please tick 1=Yes, 2=No, 3=Do not know, in the box given below).

<table>
<thead>
<tr>
<th></th>
<th>a) Radio</th>
<th>b) TV</th>
<th>c) Internet</th>
<th>d) Books/Journals</th>
<th>e) Traditional folk media (e.g. jatra, puppet shows, dance &amp; drama)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. What have you personally done in the last six months to ventilate your concerns about climate change in the mass media that you are subscribing? (Please tick 1=Yes, 2=No, 3=Do not know in the box given below).

<table>
<thead>
<tr>
<th></th>
<th>a) Written letters to editors of newspapers on climate change.</th>
<th>b) Contributed articles on climate change in newspapers/magazines.</th>
<th>c) Contributed Radio/TV skit on climate change to be broadcast.</th>
<th>d) Posted comments/started discussion forums on climate change issues on social media (e.g. Facebook, Twitter).</th>
<th>e) Done nothing.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. What measures would you like to suggest to the mass media organizations so as to create extensive public awareness among the youth of Tripura regarding climate change? (Please tick 1=Yes, 2=No, 3=Do not know.. in the box given below).

<table>
<thead>
<tr>
<th></th>
<th>a) Should have separate page in the daily newspapers exclusively devoted to climate change.</th>
<th>b) Should have specific time slots devoted to climate change programmes on broadcast medium.</th>
<th>c) Extensive training programmes should be there for the reporters/correspondents to cover climate change.</th>
<th>d) Media organizations should institute awards for best climate change reports.</th>
<th>e) Should encourage Climate Change coverage by sensitization workshops for journalists.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
32. Would you be prepared to change your behaviour to reduce your contribution to climate change in any of the following ways? (Please tick one box, (1 = already did, 2 = planning to do in short run, 3 = planning to do in long run, 4 = not sure when I am planning to do it, and 5 = never planning to do it).

<table>
<thead>
<tr>
<th>Behavioural intentions to mitigate climate change</th>
<th>a) Already did</th>
<th>b) Planning to do in the short term</th>
<th>c) Planning to do in the long term</th>
<th>d) Not sure when I am planning to do it</th>
<th>e) Never planning to do it</th>
</tr>
</thead>
<tbody>
<tr>
<td>i). Replace conventional light bulbs with low-consumption bulbs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii). Acquire more energy-efficient domestic appliances even if costs more.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii). Take environmental aspects into account when acquiring High-budgeted items (e.g. a car, a house).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv). Reducing car journeys and using public transport and bicycles or adopt carpool so as to help cut emissions of carbon dioxide.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v). Planting trees in my house so as to capture carbon dioxide and help afforestation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi). Reuse /recycle some materials like glass, paper, bags, which can help prevent environmental waste accumulation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii) Reducing energy use in the home and classrooms by switching off electrical appliances like lights, fans, etc which are not in use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>viii).Willing to pay more for green products, services or technology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for participating in the survey.

Your responses will help me in suggesting measures in combating climate change.
Appendix-II

Questionnaire for interview with Journalists

Namaskar, I am a faculty in the Journalism and Mass Communication department of Tripura University. I am working on a research project on media and climate changes issues in Agartala and would like to request you to share your thoughts in this regard. Your valuable inputs will enrich my study. Please allow me ask you some questions. I shall be grateful for your co-operation.

a) Name:
b) Age: Sex:
c) No. of years in your profession:
d) Name of the Organization:
e) Designation:
f) Educational qualification:

Q1: As a journalist, do you think newspapers/mass media in Tripura report adequately on topics like global warming and climate change frequently? Is it a relevant issue to be covered by the journalists of our state?

Q2: Which mass media do you think is effective in creating awareness on climate change and global warming?

Q3: Do you feel the mass media in our state is expressing due concerns about climate change issues?

Q4: In what way do you think mass media can project climate change as an important issue?

Q5: Do you think mass media can support initiatives on environmental education? If yes, in what ways can the mass media in Tripura support environment awareness?

Q6: How do you describe the quality of environmental reporting in Tripura?

Q7: In reporting on environmental issues, how do you prefer to write? (For example: as a feature, news item, interview etc.) Do you encounter any difficulty in reporting on environment?

Q8: Do you think training in environmental issues is required for journalists? If yes, what type of training do you think is useful to journalist to improve reporting?

Q9: If you report on environmental issues, do you think that you will receive recognition among your colleagues/peers/journalists? Is your establishment supportive of reporting on climate change? Have you encountered any difficulty in this regard?

Q10: What have you done in the last six months to ventilate your concerns about climate change issues in the mass media you are working in? What do you do in order to sensitize your readers/viewers on topics like global warming and climate change? Do you come across any difficulty in this regard?

Q11: How can journalists contribute in reducing climate change and global warming? What suggestions you would like to give in this regard?

Thank you for sharing your valuable thoughts with me.
Appendix-III

Questionnaire for interview with School Teachers

Namaskar, I am a faculty in the Journalism and Mass Communication department of Tripura University. I am working on a research project on media and climate changes issues in Agartala and would like to request you to share your thoughts in this regard. Your valuable inputs will enrich my study. Please answer the following questions. I am grateful for your co-operation.

a. Name:
b. Age:
c. No. of years in your profession:
d. Designation:
e. Name of School:
f. Address:

Q1: As a teacher what do you feel is the relevance of environmental studies in schools?

Q2: What do you do in order to sensitize your students on topics like global warming and climate change? Do you come across any difficulty in this regard?

Q3: What do you feel are the causes of climate change and how could it affect us if we do not take any actions about it?

Q4: What are your views about reducing climate change and global warming? Do you feel, your students are fully aware of it? Do you observe any actions taken by them to mitigate the problem of global warming?

Q5: How can students and teachers contribute in reducing climate change and global warming? Please mention.

Q6: What suggestions would you like to give, so as to make environmental studies more interesting subject among the students?

Thank you for sharing your valuable thoughts with me.
Appendix-IV

Questionnaire for interview with College and University Lecturers

a) Name:
b) Age:
c) No. of years in your profession:
d) Department:
e) Address:

Q1: As a Faculty of the Department of (as the case may be) of College (as the case may be) / Tripura University, and an eminent educationist in the state, what do you feel is the relevance of environmental studies in our educational system? Do you feel that it should be taught to our students? Is it necessary in higher classes in our colleges and university level?

Q2: What do you do in order to sensitize your students on topics like global warming and climate change? Do you come across any difficulty in this regard?

Q3: Do you feel the mass media in our state is expressing due concerns about climate change issues? How much of reporting have you personally seen/read about climate change issues in the media in the last six months?

Q4: What are your views about reducing climate change and global warming? Do you feel your students are fully aware of it? Do you observe any actions taken by them to mitigate the problem of global warming?

Q5: In what ways can mass media sensitize the students so that they can contribute in reducing climate change and global warming? Please mention.

Q6: What suggestions would you like to give, so as to make environmental topics like climate change more interesting subject among the students?

Thank you for sharing your valuable thoughts with me.
GLOSSARY

A
AMC  Agartala Municipal Corporation
ANM  Auxiliary Nurse and Midwifery
ASHA  Accredited Social Health Activist

B
BCC  Behaviour Change Communication
BBC  British Broadcasting Corporation
BRIC  Countries like – China, India, Brazil, and South Africa are called BRIC
B.Ed  Bachelor of Education

C
CDM  Clean Development Mechanism
CO₂  Carbon dioxide
CFC  Chlorofluorocarbon
CFL  Compact Fluorescent Lamp
CFP  Carbon Foot Prints
CC  Carbon Credits
COP  Conference of Parties to the UNFCC
CNG  Compressed Natural Gas
CNN  Cable News Network

D
DD  Doordarshan
DICAT  Directorate of Information and Cultural Affairs, Govt of Tripura

E
EvS  Environmental Studies Programme
EU  European Union
EFCs  Ecological Footprint Calculators

F
GHG  Greenhouse Gases
GDP  Gross Domestic Product
GM  Genetically Modified

H
IPCC  Intergovernmental Panel on Climate Change
IEC  Information Education Communication
IEA  International Energy Agency
IFRC  International Federation of Red Cross and Red Crescent Societies
INCCA  Indian Network for Climate Change Assessment
ISRO  Indian Space Research Organization
IIED  International Institute for the Environment and Development
IIMC  Indian Institute of Mass Communication

K
KAP  Knowledge, Attitude & Practice
LDC  Least Developed Countries
M  Mean value
MoEF  Ministry of Environment & Forests, Govt of India
MSNBC  It is an American basic cable and satellite channel
MTV  Music Television Channel
N  Total number of sample or population
NGO  Non Governmental Organization
NDTV  New Delhi Television (Premier Private Cable TV Channel)
NE  North Eastern States of the Indian Union
NEP  New Environmental Paradigm
NAPCC  National Action Plan on Climate Change
NASA  National Aeronautics and Space Application Centre
O  Other Backward Class
P  Statistical Packages for Social Sciences
Q  Sea Level Rise
R  Reducing Emissions from Deforestation and Degradation
S  Scheduled Caste
ST  Scheduled Tribe
SPSS  Statistical Packages for Social Sciences
SLR  Sea Level Rise
SD  Standard Deviation
T  Tata Energy Research Institute
TT  Technology Transfer
TRPs  Television rating Points
U  United Nations Organization
UN  United Nations used as shortened for UNO
UNEPF  United Nations Environment Programme
UNFCC  United Nations Forum for Climate Change
UK  United Kingdom
USA  United States of America
UG  Under Graduate programme of study
UKDFID  UK Department for International Development
V  World Commission on Environment and Development

272
A Study on Postgraduate Students’ Perception of Mass Media in Creating Awareness of Climate Change in Agartala, capital city of Tripura in India

Upadhyaya Deepak
Department of Journalism and Mass Communication, Tripura University, Suryamaninagar, Agartala, West Tripura District, INDIA

Abstract

Media is a mirror of the world. We know about the world basically through the prism of mass media. We are living in a mediated world. It is needless to say that whatever perception one acquires about world issues like climate change is basically a creation of the mass media. In this context, the perceptions and importance attached to climate change by the media in their coverage of the issue leads the people to prioritize climate change accordingly in their personal life. No sooner than climate change has been recognized as one of the most burning problems of the present century by the media, public concern has also amplified worldwide. But ironically, awareness of climate change is abysmally poor amongst Indians even though the country ranks only after China and America in terms carbon dioxide emissions. This paper is a humble attempt to know the perceptions of climate change and the role of mass media among the post-graduate students of Tripura, India.

Keywords: Climate change, mass media, perceptions, postgraduate students.

Introduction

In ancient Indian literature the earth was always revered as mother, but presently global warming, also known as climate change, in the scientific circles, has defiled the mother earth beyond repair. Global warming has assumed the status of one of the most debated environmental issues in mass media in the present times. The excessive heating of the earth’s atmosphere caused by a high concentration of greenhouse gases in the atmosphere is known as global warming. Global warming is responsible for temperature fluctuations of the atmosphere and oceans over the recent decades due to addition of carbon dioxide emitted by every human activity. Unregulated carbon dioxide emission by all the countries is a major cause of warming of earth and of grave concern. Behind industrial and agricultural activities, greenhouse gases are released in the upper atmosphere which traps the heat escaping from earth and it leads to massive climatic changes and sea level rise. Also rapidly increasing population in every country exerts tremendous pressure by way of emission of carbon dioxide and other heat trapping gases in the atmosphere. The world is rapidly experiencing warming effects which will have disastrous outcomes like the recent flash floods in Uttarakhand. Two thirds of the disasters that are presently happening in South Asia are climate related and of late, there has been a phenomenal increase in the intensity and severity of such climate related disasters in India as well. The IPCC disclosure implore that the global warming induced environmental hazards may endanger the existence of humanity, for instance, failure of Asian monsoon may affect disproportionately crop growth and availability of soil water in India. But the question still persists: who is responsible for the given imbroglio? Scientists across the globe hold our race guilty for the same.

Media coverage is helpful in informing the public about the causes and consequences of climate change. Media can also go a long way in motivating action in favour of climate change mitigation. The interplay between mass media and international climate change negotiations at many a UN Summits since Rio Conference has helped to outline the perceptions of the people on climate change issues. Media can help in forging consciousness about the perils climatic changes and motivated individuals in turn may demand proper policy interventions from the government to address the problem of climate change. In tune with the above, Krosnick et al. report that if the people have access to knowledge and information on climate change, it may lead to increased involvement for mitigation and adaptation measures. It has been recognized that the public relies on the media, more than any other source, to gain information on issues like climate change. Media coverage is helpful in informing the public about the causes and consequences of climate change. Media can also go a long way in motivating action in favour of climate change mitigation. The interplay between mass media and international climate change negotiations at many a UN Summits since Rio Conference has helped to outline the perceptions of the people on climate change issues. Media can help in forging consciousness about the perils climatic changes and motivated individuals in turn may demand proper policy interventions from the government to address the problem of climate change. In tune with the above, Krosnick et al. report that if the people have access to knowledge and information on climate change, it may lead to increased involvement for mitigation and adaptation measures. It has been recognized that the public relies on the media, more than any other source, to gain information on issues like climate change. This is why McComas and Shanahan have also mentioned that mass media coverage is correlated to the awareness of climate change issues in the public perception which is further dependent on the cultural custom and traditions of the society where it functions. On the contrary, individuals, who are found to be unaware of the causes of climate change, seldom strive to engage themselves with effective mitigation measures. In this context, Whitmarsh mentions that the issue of climate change may be less most important to individuals who do not understand it and these individuals often found to prioritize environmental problems lower than other issues. Media exposure has an unswerving impact on the knowledge and awareness of individuals, as it often goads us what to think and which issues are to be given priority in our daily life. The mass media is a powerful catalyst in the agenda setting process of a country and it goes a long way in demanding preventive measures in the form of policy...
legislations to achieve emission reduction benchmarks as required in the Kyoto Protocol. Hence, mass media’s coverage of climate change issues significantly shapes people’s perspectives and can impact people’s behaviour\cite{12}. The media can also contribute a lot in greening the earth by sensitizing the public, especially the youths and students of a developing country like India to adopt a low carbon dioxide lifestyle.

**Material and Methods**

A close-ended questionnaire was survey was administered on the post-graduate students of Tripura University in between September 2013 to October 2013. The post-graduate students were chosen from all the science, arts and commerce subjects under Tripura University as it is the only university in the government sector catering to higher education needs of the citizens of the state. More than 850 questionnaires were distributed randomly, out of which 657 valid questionnaires were returned. This sample consisted 45% male and 55% female students whose age group was in between 21 to 35 years.

The youths in India are the most media-savvy section of the population. Though, a significant number of research studies have been conducted to aimed at decoding the perception of climate change among the masses in the West\cite{8,9,15}, but there is a dearth of studies in the context of a developing country like India. The students are the future leaders of the society and hence, this study aims to explore the awareness of climate change issues among the students of Tripura University undergoing post-graduate courses in different streams of science, arts and commerce. Also efforts were made to analyze the role of mass media in this regard.

**Results and Discussion**

The findings revealed that nearly 86.30% of the respondents have ‘seen/heard or read’ something on ‘climate change’ before receiving the survey. They were quite aware of it. Yet, only 82.19% of the respondents revealed that they are ‘sure’ of climate change happening around in the present times.

It was also found that the respondents felt that the terms ‘climate change’ and global warming to be two different phenomenon. The students were ‘more familiar’ with the term ‘global warming’ than ‘climate change’. Further, as many as 69.25% students revealed that they are ‘more concerned’ with ‘global warming’. Thus we see that global warming and climate change connote different issues among the study respondents. From this we can infer that global warming was placed in a higher position of concern among the perception of the students.

The study also found that as many as 56.16% students have described that ‘mass media’ were their major source of information on climate change awareness. However, it was found that ‘new media’ like the ‘internet’ and ‘interpersonal communication sources’ like ‘friends and family’ had identical role in dissemination of information on climate change.

If we combine ‘fairly well’ and ‘very well’ categories of respondents, we find only 32.11% of the respondents could be considered to be ‘fairly well informed’ regarding the causes of climate change, while as large as 62.55% students were ‘not well informed’ about it. Similarly, it has been revealed that about 58.90% of the respondents were ‘not well informed’ regarding the consequences of climate change. Also it was found that only 31.81% students were ‘well informed’ about the ways to mitigate climate change.

But interestingly, the study reveals that nearly 72.75% of the students perceived climate change was an ‘important issue to them personally’. Similarly, it was found that about 80.97% students are of the opinion that if nothing is done to reduce climate change; it will be a ‘serious problem for the world’.

![Figure-1 Map of Tripura](image1.png)

![Figure-2 Geographical position of Tripura in Indian Union](image2.png)
Regarding the proximity effect of news media, figure -3 reveals the proximity and what the students perceived that climate change was ‘rapidly happening in India’ as the news of Uttarakhand flash floods were fresh in the memories of the students.

Figure - 4 reveals that mass media took the pole position in terms of spreading awareness on climate change while the students perceive that different consequences of climate change are more often covered by the mass media. This finding is in line with most of the previous research\(^8\) which says that event oriented’ or ‘disaster frame’ is the most prominent frame in climate change reporting across the West. Ironically this frame takes the upper hand of the ‘precaution frame’ which ought to have been at the center-stage in climate change discourse.

It was apparent from the results that most of the students would seek information from TV, newspapers and the Internet respectively very often than other sources.
When queried about the perception of trustworthiness of the different sources of information on climate change, the students, as shown in figure-5, have revealed that ‘publications from the scientists’ are ‘strongly trusted’ by them followed by ‘mass media reports’ on climate change. Thus we can infer that, despite of a rat - race for garnering TRPs, the mass media outlets are reckoned with trust by the masses.

The study also revealed that as many as 70.47 % of the students prefer ‘private Cable TV channels’ over ‘Doordarshan’, the government broadcaster to give them reliable information on climate change. Thus we can infer that a public service broadcasting unit, being under government control Doordarshan does not command much confidence on certain matters of public interest. Only a small minority of 21.92 % preferred ‘Doordarshan’ over ‘Cable TV channels’.

On another context, the study found that that ‘national newspapers’ were preferred over ‘local newspapers’ by the respondents to give them accurate information on climate change issues. Similarly, it was found that 66.97 % students prefer reading ‘newspapers’ over ‘magazines’ to give them better information on climate change. It can be inferred from the above that newspapers are still held in high esteem by the respondents in comparison to current affairs magazines. Though we can witness a boom in magazine journalism in India but the menace of paid news has undermined the profession of journalistic in the recent times.
Conclusion

The youths can be truly called the future custodians of the earth, its environment and common property resources. Youths symbolize action, speed change and dynamism. If they are motivated to become environmentally conscious citizens, we can really halt the global warming problem to a large extent. Climate change is also a developmental issue of great concern for a developing country like India where the proportion of the younger generation is at the vanguard of economic development. This study reveals that there are some grey areas in climate change awareness among the students under study. We can infer that it may be even more miserable in rural areas or in case of junior grade students. Now or never, if we want to tackle global climate change seriously, we have to adopt a low carbon lifestyle. Much more has to be done to educate the student community on the issues of climate change, mitigation and adaptation. Occasional awareness creation seminars on World Environment Day are far from adequate.

Environmental awareness needs to be cultivated in our country and it cannot be left to chance or casual appearance in mass media reportage. It would be pertinent to propose to the policy makers that schools and colleges in the state of Tripura should do more to fill this gap by mainstreaming climate change and global warming issues into curriculum with a view to providing students with the skills to pursue adaptive strategies in order to cope with the problems that climate change may set forth.

Studies have revealed that not only the amount of information available but also the kind of framing by the media is significant in construction of perception regarding climate change issues among the public and media has a tremendous reinforcing effect in this regard. Positive approach in diffusion of climate change communication by media is the need of the hour. Newspapers and television may complement the teacher beyond the classroom. The mass media can successfully advocate climate change across the length and breadth of a vast country like India. It is needless to say that mass media is an important tool for making information accessible to the people at a cheaper and convenient way. Along with the public broadcaster, private Cable television channels may well air public service ads to contribute their share in awareness generation process. Social media is also a force to be reckoned with. By degrees, Face book, Twitter and other Internet based news media are becoming very popular among the youths of the country, so it can also offer a cost effective medium to spread the message on climate change. Policy makers should seriously think of roping these social media in the fight against climate change.

Due to constraints of time and resources, larger samples could not be considered. Future researchers would do well by including larger sample of students from colleges and schools as well for a conclusive finding. Under the above circumstances, all conclusions are necessarily tentative and open to debate. Nevertheless, the study could suggest the policy makers to take note of the findings to get a nuanced picture for better diffusion of climate change information.

References

7. Dirixx A. and Gelders D., To frame is to explain: A deductive frame analysis of Dutch and French climate change coverage during the annual UN Conferences of parties, Public Understanding Science, 19, 732-742 (2010)


