

From: Pradeep Mujumdar <ppmujumdar@gmail.com>
Subject: Re: Letter to MoES
Date: 22 August 2009 5:10:23 PM GMT+05:30
To: C S Manohar <manohar@civil.iisc.ernet.in>
Cc: faculty@ceas.iisc.ernet.in, nagesh@civil.iisc.ernet.in

Dear CSM,

The letter truly reflects all points that we agreed to in the meeting - it reads well and the tone is polite too. I can see the effort you have put in, in drafting the letter.

Some broad level comments <for consideration only - to do the changes if you and others feel OK>

1. Item 4 (e), which talks about what happened in the meeting here, may be considered for deletion. We are now essentially responding to the experts' comments on our revised proposal, and so we need not go into what transpired here when they came. This is best communicated orally to both Balaram and Shailesh Nayak (if there is an occasion). This item essentially points a finger at the experts' way of handling things here, which I feel is not necessary to bring out. It is likely that this letter will be sent to the experts.
2. The MTech programme that the expert committee is expecting us to formulate is in variance with the MTech programme that we had in mind when we included it in the proposal. This point need not be brought out in the letter now - but I think it is important to make it known that even at the end of three years when we indeed start talking about the MTech program, we will not be in a position to satisfy the experts' expectations.
3. The core faculty must be aware - and this point may be put across to Balaram also - that we may run the risk of not getting any funding at all against this proposal now, and may be rubbing the ministry the wrong way - it may have long term implications, not only for CEaS but also for other centers that may seek funding from MoES. While this need not be our concern now, we must be alert to the possibilities.
4. A minor editorial point : Item 4 (g) : 'We feel that holding such discussions...' there is no reference to 'discussions' earlier in the paragraph.
5. The last operative part : rather than ' how we could proceed further..' we may be more explicit .. ' on which option to pursue' or something like that.

Regards,

--ppm

On Sat, Aug 22, 2009 at 12:58 PM, C S Manohar<manohar@civil.iisc.ernet.in> wrote:

Dear all

The attached document is for your comments.

Please let me have your feedback by 12 noon, Monday.

Following this, I will finalize the draft and seek an appointment with the director.

Depending upon what Prof Balaram feels, I will add a last line to the letter stating that I could meet Dr Nayak personally to explain our position.

From: "C S Manohar" <manohar@civil.iisc.ernet.in>
Subject: **Fw: MoES Proposal**
Date: 23 August 2009 11:10:10 AM GMT+05:30
To: <faculty@ceas.iisc.ernet.in>, <nagesh@civil.iisc.ernet.in>
Cc: <pb@mbu.iisc.ernet.in>, <diroff@admin.iisc.ernet.in>, <raghubn@aero.iisc.ernet.in>, <dcenv@admin.iisc.ernet.in>
▶ 2 Attachments, 69.1 KB

Dear CEaS faculty members

This is further to the email that I have sent earlier (pasted below).

Kusala informed me last evening that she had called the Secretary of MoES and had briefed him about the contents of our response to the experts' comments and that he would shortly be receiving a letter from me outlining the options that we are considering. She mentioned that she was doing this since she has been asked by Dr Nayak to keep him informed of the developments at our end.

I find it objectionable that Kusala has chosen to talk to the funding agency (without my knowledge) about matters that the Centre is still discussing. To me this constitutes a breach of trust. In fact I had specifically requested her on an earlier occasion not to communicate informally with the funding agency on matters related to the proposal.

In view of this I have decided to withdraw myself from the coordination of the project proposal. I am marking a copy of this email to the Director and Divisional Chairman. By a separate mail I am also requesting the Director to relieve me from the Chairman's position of the Centre.

With best wishes

Yours sincerely

C S Manohar

Dr C S Manohar
Professor, Department of Civil Engineering
Chairman, Centre for Earth Sciences
Indian Institute of Science
Bangalore 560 012 India
Tel: 080 2293 3121 (office)
Fax: 080 2360 0404
Web: <http://civil.iisc.ernet.in/~manohar>
Email: manohar@civil.iisc.ernet.in (preferred)
manohariisc@yahoo.com

Residence
NE 215, Block 8
Indian Institute of Science Campus
Bangalore 560 012
Tel: 080 23606961

-----Original Message-----

From: C S Manohar

From: Pradeep Mujumdar <ppmujumdar@gmail.com>
Subject: Re: Fw: MoES Proposal
Date: 23 August 2009 11:24:30 AM GMT+05:30
To: C S Manohar <manohar@civil.iisc.ernet.in>
Cc: faculty@ceas.iisc.ernet.in, nagesh@civil.iisc.ernet.in

Dear Manohar,

I feel extremely proud of your academic uprightness.

For a while now (since the expert committee was constituted for the proposal), I was feeling uncomfortable with the large-scale informal exchanges with the expert members and the ministry without involving the Chairman of CEaS. In well established departments like Civil Engg, this would never be tolerated. If we start placing higher importance to our ability to get funding because of our personal contacts than our ability to do good, clean science upholding academic values, the institute is sure to slip into a path of rapid decay.

I fully stand by you in this decision of yours and for the sake of the Center I hope that the Director will find, if at all possible, an equally upright person of the same high academic capabilities.

With best wishes,
--ppm

On Sun, Aug 23, 2009 at 11:10 AM, C S Manohar <manohar@civil.iisc.ernet.in> wrote:
Dear CEaS faculty members

This is further to the email that I have sent earlier (pasted below).

Kusala informed me last evening that she had called the Secretary of MoES and had briefed him about the contents of our response to the experts' comments and that he would shortly be receiving a letter from me outlining the options that we are considering. She mentioned that she was doing this since she has been asked by Dr Nayak to keep him informed of the developments at our end.

I find it objectionable that Kusala has chosen to talk to the funding agency (without my knowledge) about matters that the Centre is still discussing. To me this constitutes a breach of trust. In fact I had specifically requested her on an earlier occasion not to communicate informally with the funding agency on matters related to the proposal.

In view of this I have decided to withdraw myself from the coordination of the project proposal. I am marking a copy of this email to the Director and Divisional Chairman. By a separate mail I am also requesting the Director to relieve me from the Chairman's position of the Centre.

With best wishes

Yours sincerely

C S Manohar

Dr C S Manohar
Professor, Department of Civil Engineering
Chairman, Centre for Earth Sciences
Indian Institute of Science



From: "Kusala Rajendran" <kusala@ceas.iisc.ernet.in>
Subject: **Re: Fw: MoES Proposal**
Date: 23 August 2009 1:59:53 PM GMT+05:30
To: "Pradeep Mujumdar" <ppmujumdar@gmail.com>
Cc: "C S Manohar" <manohar@civil.iisc.ernet.in>, faculty@ceas.iisc.ernet.in,
nagesh@civil.iisc.ernet.in
Reply-To: kusala@ceas.iisc.ernet.in

Dear PPM:

Viewed in the context of Manohar's allegation that I was communicating with the MOES without his knowledge, I feel that I am being largely held responsible for "the large-scale informal exchanges with the expert members and the ministry without involving the Chairman of CEaS".

This is unfortunate. It is true that I know the two members personally, but I have never interacted with them before or after the meeting, on this proposal.

I was most uncomfortable with the committee's request to meet the Director without the Chairman. I hope the faculty will respect my integrity, and believe that I was in no way using the personal contacts to get this project going.

I hope you will appreciate my sentiments as well, at the unfortunate turn of events.

Best regards

Kusala

Dear Manohar,

I feel extremely proud of your academic uprightness.

For a while now (since the expert committee was constituted for the proposal), I was feeling uncomfortable with the large-scale informal exchanges with the expert members and the ministry without involving the Chairman of CEaS. In well established departments like Civil Engg, this would never be tolerated. If we start placing higher importance to our ability to get funding because of our personal contacts than our ability to do good, clean science upholding academic values, the institute is sure to slip into a path of rapid decay.

I fully stand by you in this decision of yours and for the sake of the Center I hope that the Director will find, if at all possible, an equally upright person of the same high academic capabilities.

With best wishes,
--ppm

On Sun, Aug 23, 2009 at 11:10 AM, C S Manohar<manohar@civil.iisc.ernet.in> wrote:

Dear CEaS faculty members

This is further to the email that I have sent earlier (pasted below).

Kusala informed me last evening that she had called the Secretary of MoES

and had briefed him about the contents of our response to the experts'

From: "Kusala Rajendran" <kusala@ceas.iisc.ernet.in>
Subject: **Re: Fw: MoES Proposal**
Date: 23 August 2009 1:49:51 PM GMT+05:30
To: "C S Manohar" <manohar@civil.iisc.ernet.in>
Cc: faculty@ceas.iisc.ernet.in, nagesh@civil.iisc.ernet.in, pb@mbu.iisc.ernet.in,
diroff@admin.iisc.ernet.in, raghubn@aero.iisc.ernet.in, dcenv@admin.iisc.ernet.in
Reply-To: kusala@ceas.iisc.ernet.in



Dear Manohar:

I am shocked by your decision to quit the coordinatorship of the MOES project and the chairmanship of CEaS.

It is true that on a couple of occasions during the long period of the formulation of this project I have interacted with Dr. Shailesh Nayak, as he has shown a lot of personal interest in this and I have informed you about what transpired.

Your statement that "you had specifically requested me on an earlier occasion not to communicate informally with the funding agency on matters related to the proposal", implies a lack of discipline from my side, and it bothers me. You are well aware that certain interactions were not exactly solicited and they were quite unavoidable. Yet, there were only two occasions in the past, on minor matters like getting information on the status of the project or on the date of the meeting, that I have contacted MOES and I have always promptly reported to you.

Your message implies that I have disclosed the contents of the letter that is being formulated by us, as one of the recipients of your letter got a feeling that I have forwarded the response to the Secretary. Let me clarify. The only point I discussed with the secretary was on the stand of the MOES on the M.Tech program, since that had turned out to be the single point agenda of the expert committee. I did not discuss any other matter and this is what I reported to you. Let me reiterate that I did this only due to my anxiety about the direction in which the expert committee is moving. I did not mean to by pass the coordinator, nor pass on some information in advance.

I realize that someone who did not know the background of the development of this proposal would probably find me guilty of by-passing the coordinator. May be some of them would also find me guilty of passing information in advance and hold me responsible for "breach of trust", as you put it. I am deeply offended by the way you have placed me in a bad light, before the faculty members, and other members including the Director. I would like to get a hearing before the Director and the Divisional Chairman to explain my position.

I will be away from Aug 25 through Aug 28 but I am available for any discussion before or after that.

I apologize for the difficulty I have caused to you, and I honestly wish you would reconsider your decision to quit. This would be detrimental to the progress of the project as well as the growth of the Centre.

Best regards,

Kusala

Dear CEaS faculty members

This is further to the email that I have sent earlier (pasted below).

Kusala informed me last evening that she had called the Secretary of MoES and had briefed him about the contents of our response to the experts' comments and that he would shortly be receiving a letter from me outlining the options that we are considering. She mentioned that she was doing this since she has been asked by Dr Nayak to keep him informed of the developments at our end.

From: "Professor C S Manohar" <manohar@civil.iisc.ernet.in>
Subject: **CEaS matters**
Date: 24 August 2009 2:35:13 PM GMT+05:30
To: faculty@ceas.iisc.ernet.in, nagesh@civil.iisc.ernet.in
Reply-To: manohar@civil.iisc.ernet.in

Dear all

I met the Director and the Divisional Chairman.

I would continue to coordinate the activities related to the moes project proposal and also as the chairman of CEaS till the present activities are taken to a logical end.

The Director and Divisonal Chairman propose to meet the core faculty members individually.

The matter of present status of the MOES proposal was discussed. Director mentioned that if the grant is awarded contingent on starting an MTech programme we should consider not accepting the grant.

In view of this, I propose that the budget part of the proposal may now be fixed at the earliest and we will send the revised proposal that considers (possible) revisions to the budget and a covering letter that explains our position of the MTech programme.

I am aware many of you are travelling this week. Please confirm if we can target to send the documents by 31st of this month.

Yours sincerely
Manohar

Professor C S Manohar
Department of Civil Engineering
Chairman, Centre for Earth Sciences
Indian Institute of Science
Bangalore 560 012 India
Tel 91 80 2293 3121

--
This message has been scanned for viruses and dangerous content by MailScanner, and is believed to be clean.

From: "Prof. P P Mujumdar" <pradeep@civil.iisc.ernet.in>
Subject: **Re: MoES sanction letter**
Date: 8 October 2009 6:13:21 PM GMT+05:30
To: "C S Manohar" <manohar@civil.iisc.ernet.in>
Cc: faculty@ceas.iisc.ernet.in, nagesh@civil.iisc.ernet.in

Dear CSM,
My hearty congratulations to you.
--ppm

Dear all

The sanction letter from MoES has arrived: see attachment. I am sure that this is a big boost for the Centre and a great opportunity for us to excel.

Best wishes

Sincerely

Manohar

PS: I have learnt from Dr Maini (phone call) that the cheque has been signed and the bank should have sent a DD by now. I will check in the central office.

Dr C S Manohar
Professor, Department of Civil Engineering
Chairman, Centre for Earth Sciences
Indian Institute of Science
Bangalore 560 012 India
Tel: 080 2293 3121 (office)
Fax: 080 2360 0404
Web: <http://civil.iisc.ernet.in/~manohar>
Email: manohar@civil.iisc.ernet.in (preferred)
manohariisc@yahoo.com

Residence
NE 215, Block 8
Indian Institute of Science Campus
Bangalore 560 012
Tel: 080 23606961

--
This message has been scanned for viruses and dangerous content by MailScanner, and is believed to be clean.

--
Dr. P. P. Mujumdar
Professor and Chairman
Department of Civil Engineering
Indian Institute of Science
Bangalore 560 012
India

Phone : 91 80 2293 2323; 2669
Fax : 91 80 2360 0404; 2360 0290
E-mail : pradeep@civil.iisc.ernet.in
Web : <http://civil.iisc.ernet.in/~pradeep>

Dear Dr C P Rajendran

Subject: Your proposal "Paleoseismic history of the North Andaman from coral records"
(Proposal A)

As you are aware, the Centre had earlier forwarded a proposal entitled "Tectonics of the Andaman-Nicobar Arc: Constraints from Coral Proxies" to MoES (Proposal B). Dr Prosenjit Ghosh was listed as the PI and you and Prof Kusala Rajendran, among three others from outside IISc, were identified as the co-investigators. I understand that this proposal is presently under active consideration and has been received favorably by the MoES. Dr Prosenjit Ghosh however has been advised that he should obtain a support letter from MoEF for collection of corals. I also understand that efforts to obtain the MoEF clearance are underway.

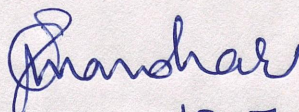
The present proposal (Proposal A), with yourself as PI and Prof Kusala Rajendran as co-investigator, appears to deal with a problem that is quite similar to the one considered in Proposal B. I find it unusual that there is considerable commonality between proposals A and B (please see the annexure in which the common features are made explicit and, as you would see, these commonalities extend to objectives and methods of study).

I would like to bring the following points to your attention:

1. Proposal A contains no reference to Proposal B nor does your covering note provide any clarification on this matter. What is the basis on which proposal A is being freshly submitted while proposal B is still under consideration?
2. Dr Prosenjit Ghosh, who was the PI for proposal B, is not an investigator in proposal A.
3. There were three more investigators for proposal B from outside IISc. Given that proposal A is very similar to proposal B, it is necessary to clarify the stand of these outside scientists on the new proposal.
4. In the section on Review of expertise and division of work (p.6), Proposal A states that you would be supported by Dr Prosenjit Ghosh in implementing the work. Your covering letter does not contain an endorsement from Dr Prosenjit Ghosh on this matter.
5. Based on the MoES response to Proposal B, a prior permission from MoEF is needed for collecting the corals. The documents related to proposal A do not address this requirement.
6. Proposal A mentions May 2010 as the date on which the proposal is prepared while the covering letter is dated 6th July 2010.
7. Prof Kusala Rajendran is listed as a co-investigator in the project document while the endorsement is requested for Prof Kusala Rajendran being Co-PI. Your covering letter requires endorsement from Prof Kusala Rajendran.

In the light of issues noted in annexure, points 1-4 listed above are matters of serious concern. Therefore, please be advised that I am not in a position to forward your proposal and I am returning herewith the documents that you submitted.

Yours sincerely


12-7-10

Annexure

Study area for Proposal A; only north Andaman. TrB: Nicobar Arc.

Comparison of two proposals from the Centre for Earth sciences

S.No	Matter	Proposal A	Proposal B
1	Title	Paleoseismic History of the North Andaman from Coral Records	Tectonic of the Andaman Nicobar Arc: Constraints from Coral Proxies
2	Investigator	C.P. Rajendran	Prosenjit Ghosh
3	Coinvestigator	Kusala Rajendran	C.P. Rajendran, Kusala Rajendran, T.N. Prakash, M.G. Takkar, P.M. Mohan
4	Date of submission	May-10	Feb-09
5	Broad Subject area	Earth Sciences	Earth Sciences
6	Total cost	3375250	5951000
7	Agency involved	Seismology Division Ministry of Earth Sciences	Seismology Division Ministry of Earth Sciences
8	Project summary	The North Andaman Nicobar area provides an ideal location to study the recurrences of the earthquakes	Existence of coral terraces and platform along the islands of the Andaman and Nicobar subduction zone, which has experienced large and great earthquakes in the past provides opportunity
9	Origin of the proposal	We had discussions on the feasibility at the MoES sponsored meeting at Port Blair in January 2009	Although this problem is of great academic and practical importance, so far no serious attempt to study them has been made. A Combined effort from isotope geochemist, earthquake geologist, geophysicist and marine geologist can address this problem from various perspectives. The state-of-the-art stable isotope laboratory at the Centre for Earth Sciences of the Indian Institute of Science has the capability to do the isotopic analysis of corals. We had discussions on the feasibility at the MoES sponsored meeting at Port Blair in January 2009
10	Definition of the Problem	The basic premise is that if there is a proxy indicator (coral) that reflects the variation in apparent sea level caused by vertical tectonism, then those signatures on the corals can be used as archives of tectonic history (e.g. Buddemeier and Taylor, 1998 and reference there in)	The great 2004 earthquake raised some the coral reefs > 1 m above the high tide level along the western margins where land was elevated (in the North Andaman); some previously exposed corals were submerged along the Nicobar margins. Changes in sea level and subsequent exposure of the corals above the sea level would cause changes in the primary objective will be to establish the usefulness of coral records from the Andaman-Nicobar Islands for mapping and dating the geographic distribution and amount of sea level changes caused by coseismic vertical tectonism associated with large subduction zone earthquakes. Subduction, seismicity, seismic and nonseismic vertical movements and tectonic evolution of arc systems are all closely related (Taylor et al., 1987). We intend to study the paleo-sea level records from the corals covering a time span of a few hundred to several thousands years to understand the deformation cycle associated with large subduction earthquakes which will also have implications on recurrence of large earthquakes. Shallow-living coral heads act as natural tide gauges whose surface morphology, and annual density bands will record the timing of even a few centimeters of persistent relative sea level change. There is always a maximum level above which they cannot survive and grow, called highest level of survival (HLS). Corals living below the HLS grow horizontally and upward until the tops of the
11	Objectives	The primary objective will be to establish the usefulness of coral records from the Andaman-Nicobar Islands for mapping and dating the geographic distribution and amount of sea level changes caused by coseismic vertical tectonism associated with large subduction zone earthquakes. Subduction, seismicity, seismic and nonseismic vertical movements and tectonic evolution of arc systems are all closely related (Taylor et al., 1987). We intend to study the paleo-sea level records from the corals covering a time span of a few hundred to several thousands years to understand the deformation cycle associated with large subduction earthquakes which will also have implications on recurrence of large earthquakes. Shallow-living coral heads act as natural tide gauges whose surface morphology, and annual density bands will record the timing of even a few centimeters of persistent relative sea level change. There is always a maximum level above which they cannot survive and grow, called highest level of survival (HLS). Corals living below the HLS grow horizontally and upward until the tops of the	the great 2004 earthquake raised some the coral reefs > 1 m above the high tide level along the western margins where land was elevated (in the North Andaman); some previously exposed corals were submerged along the Nicobar margins. Changes in sea level and subsequent exposure of the corals above the sea level would cause changes in the primary objective will be to establish the usefulness of coral records from the Andaman-Nicobar Islands for mapping and dating the geographic distribution and amount of sea level changes caused by coseismic vertical tectonism associated with large subduction zone earthquakes. Subduction, seismicity, seismic and nonseismic vertical movements and tectonic evolution of arc systems are all closely related (Taylor et al., 1987). We intend to study the paleo-sea level records from the corals covering a time span of a few hundred to several thousands years to understand the deformation cycle associated with large subduction earthquakes which will also have implications on recurrence of large earthquakes. Shallow-living coral heads act as natural tide gauges whose surface morphology, and annual density bands will record the timing of even a few centimeters of persistent relative sea level change. There is always a maximum level above which they cannot survive and grow, called highest level of survival (HLS). Corals living below the HLS grow horizontally and upward until the tops of the
12	Review of the status of research and development International and national	The pioneering studies on the vertical deformation for the two largest earthquakes in this century, the great 1960 Chilean and the 1964 Alaskan earthquake suggest vertical motions of up to 10 m extending over thousands of square kilometers (Plafker and Savage, 1970; Plafker, 1972). The studies from Japan suggested almost periodic recurrence of large subduction zone earthquakes (Fitch and Scholz, 1971; Matsuda et al., 1978). Vertical deformations associated with these earthquakes offered ideal sites to study the spatial and temporal patterns. Further, many of these seismically potential areas are located within regions of coral growth. MORE One of the major programs in reef paleoseismology is currently under way in Sumatra, Indonesia, the southern extension of the Andaman archipelago. They have combined coral sclerochronology with mass-spectrometric ²³⁰ Th/ ²³⁴ U dating (Zachariassen et al., 1999; JGR, 2008). They were able to relate the emergence of coral. National: The method described in this proposal is a novel approach to obtain high resolution tectonic records. The tectonic setting in the	The pioneering studies on the vertical deformation for the two largest earthquakes in this century, the great 1960 Chilean and the 1964 Alaskan earthquake suggest vertical motions of up to 10 m extending over thousands of square kilometers (Plafker and Savage, 1970; Plafker, 1972). The studies from Japan suggested almost periodic recurrence of large subduction zone earthquakes (Fitch and Scholz, 1971; Matsuda et al., 1978). Vertical deformations associated with these earthquakes offered ideal sites to study the spatial and temporal patterns. Further, many of these seismically potential areas are located within regions of coral growth. MORE One of the major programs in reef paleoseismology is currently under way in Sumatra, Indonesia, the southern extension of the Andaman archipelago. They have combined coral sclerochronology with mass-spectrometric ²³⁰ Th/ ²³⁴ U dating (Zachariassen et al., 1999; JGR, 2008). They were able to relate the emergence of coral. National: The method described in this proposal is a novel approach to obtain high resolution tectonic records. The tectonic setting in the
13	Review of Expertise	Supported by Prosenjit Ghosh as mentioned without any supportive letter	PI has expertise on working with Kerry Seih at Caltech and is an expert in isotope Geochemistry (Reference Ghosh et al., 2006, GCA)
14	Methodology/work element	Laboratory studies involve sample preparation, description and identification of frequency and number of growth bands. We will use X-radiography to measure density-band patterns and counting to establish the sclerochronologic record. For high resolution studies, CT (Computerised Tomography) scanning can also be employed. Density-band analysis requires no specific treatment of the sample other than cleaning of live tissue or other organic and detrital matter. However, X-radiography requires the sample to be cut into uniform thickness, using rock saw, which should be oriented as far as possible in the axis of skeletal growth and in appropriate dimensions. Density patterns images are usually obtained by X-ray film, for visual inspection and counting. X-ray equipment used for medical purposes can be used for maximum sensitivity and resolution. Photographs, radiographs, and field notes will be archived by the principal investigator for further use or for review by peers. Data analyses: Data Analysis: Data reduction involves simple counting of growth bands (band pair dimension) from	laboratory method: Laboratory studies involve sample preparation, description and identification of frequency and number of growth bands. We will use X-radiography to measure density-band patterns and counting to establish the sclerochronologic record. For high resolution studies, CT (Computerised Tomography) scanning can also be employed. Density-band analysis requires no specific treatment of the sample other than cleaning of live tissue or other organic and detrital matter. However, X-radiography requires the sample to be cut into uniform thickness, using rock saw, which should be oriented as far as possible in the axis of skeletal growth and in appropriate dimensions. Density patterns images are usually obtained by X-ray film, for visual inspection and counting. X-ray equipment used for medical purposes can be used for maximum sensitivity and resolution. Photographs, radiographs, and field notes will be archived by the principal investigator for further use or for review by peers
15	Plan of Action	The expected results of this project will mark the beginning of an approach to understanding the seismic processes in one of the unique regions of the world – the Andaman Archipelago. The outcome of this experiment will open a new window to seismic hazard assessment of the region. The interaction among researchers in difference disciplines will help identify and solve problems with greater understanding and insight. Spin-offs may also include fundamental data of sea level variations and other related factors like climate perturbations, which will be useful for future developmental activities in the region and also for the conservation of corals. Interaction with social groups and administrators, presentation of results in national seminars and dissemination of information in scientific journals are activities envisaged under this research program.	The expected results of this project will mark the beginning of an approach to understanding the seismic processes in one of the unique regions of the world – the Andaman Archipelago. The outcome of this experiment will open a new window to seismic hazard assessment of the region. The interaction among researchers in difference disciplines will help identify and solve problems with greater understanding and insight. Spin-offs may also include fundamental data of sea level variations and other related factors like climate perturbations, which will be useful for future developmental activities in the region and also for the conservation of corals. Interaction with social groups and administrators, presentation of results in national seminars and dissemination of information in scientific journals are activities envisaged under this research program.
16	Equipment proposed	Hydraulic concrete chainsaw, Portable rock cutter (section)	Hydraulic concrete chainsaw, Portable rock cutter (section)
17	Current Status	waiting for approval from IISc	The proposal was present at the 3rd meeting of the Programme Advisory Committee (PAC) on Seismicity Programme held on 26th & 27th Aug, 2009 at CMLRE, Cochin. The PAC Committee meeting held at Cochin discussed the proposal and took note of the experts' comments. It was felt that though the approach proposed by PI for deciphering tectonic vis-à-vis palaeoseismic episodes is fine, however, permission from MoEF is a pre-requisite for such a project. The committee recommended that PI should first obtain a support letter from MoEF. The project may be considered only after permission from MoEF is obtained by the PI for collection of corals'.
18	update		ZSI director has agreed for collaboration at ZSI base Car Nicobar (see supporting letter). PI is trying to convince Dr. Saylesh Naik (MOES) and Dr. Jairam Ramesh (MoEF)

T.N. Prakash
our former colleague
at CESS, a marine
geologist, a marine
collaborator at
university who did
a post-2004 survey
③ P.M. Mohan
our collaborator
at the port blair
and a marine

The difference is that proposal B will do isotope analysis.

Global Studies.

analysis is visual and is common to the interpretation of corals. Two methods branch off from here.

Difference in approach. Proposal A does only age of uplift. Proposal B is to do the analysis of isotope as a marker of uplift.