

TSUNAMI

Linking Insurance and Science

**Minutes of the Eleventh Management Board Meeting
held at the Royal Society, 6 Carleton House Terrace, London
14:00 to 16:30 on Monday, 21 June 1999**

Attendees	:	Simon Jennings	- Benfield Greig
		David Simmons	- Benfield Greig
		Dougal Goodman	- British Antarctic Survey (Chairman)
		Paul Brand	- Catlin
		Mike Cooper	- CGU Group
		David Crichton	- CGU Group
		Peter Taylor	- DP Mann
		Jonathan Norman	- Guy Carpenter
		Dickie Whitacker	- Guy Carpenter
		Stephen Mobbs	- University of Leeds (for presentation)
		Julia Graham	- Royal & SunAlliance
		Peter Stirling	- Royal Society
		Lance Garrard	- TSUNAMI
		James Orr	- TSUNAMI (Secretary)
		Simon Groves	- Wren

Actions:

- Dougal Goodman to meet individually with Board members on developing strategy paper to be presented at next Board Meeting.
- TSUNAMI to review financial position on direct costs, to advise whether any release of surplus budget can be used to support additional research.
- TSUNAMI to develop the Wind Hazards Project with Stephen Mobbs and the consortium companies.
- TSUNAMI to promote the Economic Risks Project within the consortium companies.
- TSUNAMI to promote the Satellite Risks Project, following receipt from Simon Groves once the details have been agreed with Marham's technical advisor.
- TSUNAMI to assist Dougal Goodman and Julian Hunt in organising the Royal Society Conference on 10th and 11th April 2000.
- David Crichton, with TSUNAMI's assistance, to contact the Board members to discuss a possible dialogue with the Red Cross.
- TSUNAMI to confirm the next Board Meeting as Tuesday, 21 September 1999.

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Dougal Goodman opened the meeting by thanking Peter Stirling of the Royal Society for the use of the Council Chamber.

Peter Stirling welcomed TSUNAMI and gave a brief description of the Royal Society, as the pre-eminent scientific society in the UK. It was established in 1660, as the first society with a Royal Charter, to share knowledge of breakthroughs in science and technology. The Royal Society's present-day mission was to "Promote Excellence in Science".

1. Introduction of Mike Cooper.

Dougal Goodman introduced Mike Cooper, as the deputy for Andrew Dlugolecki. Mike works within the General Insurance Development department of the CGU Group and he will take an active involvement in TSUNAMI, although Andrew will remain as the Management Board representative for the CGU Group.

2. Confirmation of Minutes of the Tenth Management Board Meeting.

The minutes of the Tenth Management Board Meeting were accepted without amendment.

Part I - Strategy

3. Presentation on Strategy

Strategic Review

Dougal Goodman explained that a request from Julia Graham at the previous Board Meeting, for assistance in determining budget requirements for TSUNAMI, had prompted a review of the future strategy of the initiative.

Since the beginning of the initiative, in 1995, there had been three mergers within the consortium and three take-overs, which had strongly influenced the priorities and needs of the companies. Nonetheless, TSUNAMI had remained stable during this time.

In supporting the initiative, the Department of Trade and Industry had looked for a broad representation from the insurance industry, with leading market players in the consortium. The Sector Challenge's competitiveness objective, derived from exploiting science and technology, had been encouraged by a recent review by Sir Robert May. This had shown that UK science output had the greatest impact on competitiveness of any member of the G8.



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Short Term Aims

Dougal Goodman then stressed the need for the companies to identify their priorities and to push the dialogue on using scientific research beyond the Management Board. He suggested that a renewed effort be made to support the internal promotion of research and consideration of the companies' Research & Development (R&D) strategies.

He also asked that companies provide further potential research proposals, to suggest the likely contents of their R&D strategy. This would also help identify whether TSUNAMI could help with their development, funding and delivery. Project development could be pushed through the "fast track" development process, which Dougal was keen to promote.

The results of the original ranking exercise in 1997 were reviewed. The majority of the projects were either under development, in progress or had been delivered. Dougal suggested that this ranking process could be repeated, with inclusion of topical issues such as satellite risks, weather risks, realistic disaster scenario modelling, non-stationary mathematics, climate variability and change. It was also suggested that a further development might be the inclusion of sea-surface temperature predictions within the Tropical Cyclones Forecasting Project.

Long Term Aims

The consortium members of the Board were then asked about their desire to continue to work together, which would be key in developing a strategy paper for presentation at the next Board Meeting. There was general agreement that the Board was positively minded towards TSUNAMI continuing beyond its initial three-year phase.

Dougal also described the possible future forms of TSUNAMI:

- Joint Venture (as at present);
- Limited Company;
- Company Limited by Guarantee, running as a "not for profit".

It was agreed that a revised Business Plan would be presented at the next Board Meeting and Dougal Goodman would meet with each of the Board members to discuss their particular circumstances and views.

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Part II - Administration

4. Project Director's Report - Financial Position

James Orr presented a summary statement of the initiative's financial position, which showed that some £816,000 of the total budget had been committed. He also explained that a surplus was likely to emerge in respect of running costs and that he and Dougal Goodman would agree on an appropriate recognition of the surplus before the next Board Meeting.

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Part III - Projects

5. Project Reports:

a) Extreme Value Statistics Study Group

Peter Taylor gave a review of progress and activities of the Study Group. A meeting had been held at Royal & SunAlliance on a potential project on Y2K Reporting and discussions would be held with Lloyd's on their requirements. He explained that the real benefits of the EVS work would be in estimating uncertainty and that the City University course run by Mark Dixon had presented some very useful statistical procedures in the free "R" statistics package.

Looking forward, an educational meeting would be held on 25 June, where the Study Group would meet and hear from Mark Dixon and Anthony Ledford. This would be followed on 1 July by a meeting to discuss and consider the practical tools and business challenges that could be addressed by the Study Group over the coming months.

By October it was hoped that a clear view would emerge of the usefulness of the research and a firm decision could be taken on whether to commission further research or the development of computer code.



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b) Extreme Weather in Northern Europe

David Simmons gave a background explanation of the project, seeking to gain understanding of the factors driving weather in Northern Europe. Two out of nine proposals had been selected and the research teams from the University of East Anglia and University College London (with Imperial College) had been asked to collaborate in a joint research project.

A number of questions remained before the project could begin, including the geographical scope and the particular extreme events that should be analysed. Also the joint research project was expected to have a budget of some £115,000, which was £15,000 more than the original budget figure.

It was agreed, by the six sponsoring companies (Benfield Greig, Catlin, CGU Group, Guy Carpenter, Royal & SunAlliance and Wren) that the budget would be increased by this amount.

c) Tropical Cyclones Forecasting Project

Mike Cooper explained that the joint project between the Met.Office, University College London and Reading had successfully delivered the 1 June pre-season forecast. This had been presented at a briefing session, with some 30 insurance industry attendees, and a questionnaire on the prediction content and format had been distributed.

Only 5 responses had been received, but these indicated that the forecast was clear and understandable, that the forecast might more usefully be produced on 1 May and should include the Caribbean.

Generally, the forecast was not expected to lead to any definite actions by companies, although the brokers had confirmed that they would give it to their clients. It was suggested that more use would have been made of the forecast had it predicted an exceptional season.

Although the cost of the project was seen as reasonable, respondents were uncertain about supporting the forecasts beyond the initial phase of the research.

Finally, it was suggested that an end of season analysis would be useful in demonstrating the skill of the forecasts. Lance Garrard confirmed that this was included in the project plan.

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d) Tsunami Risks

Lance Garrard described the three phases of the planned research, covering a book, low-resolution hazard map and high-resolution local studies. The local studies would take account of the local bathymetry, which strongly influenced the risk from tsunamis, and would probably cover the North Sea and the Mediterranean. The research would also be supported by a series of workshops and promotion within the consortium companies.

e) UK Flood Risks

David Crichton explained how this project dealt with the strategic issues presented by the biggest accumulation hazard to UK insurers. The development of the joint project had stayed within the original announcement of opportunity, in its scope and budget. To be effective, the project would have to benefit from broad industry involvement and the support of the ABI was seen as a valuable means of achieving this.

David explained how his discussions with the ABI were progressing towards the ABI supporting an independent review of the forthcoming Flood Estimation Handbook, to be produced by the Institute of Hydrology. It was also hoped that the ABI would pay for David to support Mike Clark of Southampton University in his consultations with the industry. This would also allow David to act independently from the consortium companies.

Finally, Dougal Goodman thanked David for his support in the project so far and wished him success in his work following his retirement from the CGU Group.

f) Uninsured Losses

Simon Jennings explained that Andrew Dlugolecki had now joined the research team to replace David Crichton as the CGU Group representative on the project. Simon explained how the list of catastrophic events had been narrowed to focus on fewer perils (Flood and Earthquake) and the developed world (US and Europe).

Simon explained that existing research commitments had prevented Shirin Elahi and Koko Werner-Merl from starting the research at the expected time. However, the effect of these delays would be minimised by Benfield Greig's hands-on involvement in the project. It was hoped that a review of the initial stage of the research would be made in February 2000.

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6. Potential Projects

a) Wind Hazards

Stephen Mobbs explained how his proposal to look at Wind Hazards would make use of the UK Weather Research Network (UKWERN). This would include the Met.Office, Surrey University and Reading University

The research would look at modelling severe down-slope winds. These had been studied in great detail by Stephen and his team, through field studies that included comprehensive validation of their models. Much of their practical research had looked at the risks to airports, such as the Falkland Islands.

Stephen explained how “speed-up” occurred on hills, where stable strata of unmixed air were pushed together leading to increased wind-speeds. Above a scale of ~2km these speed-ups led to the crest of the compressed strata moving upwind and the highest winds being found in the lee of the hills.

A nine-month pilot study was proposed, costing £40,000. This was supported by ISL, Benfield Greig and Royal & SunAlliance. Dougal Goodman confirmed that matching funding would be provided from the Sector Challenge.

Further discussions will be held with the CGU Group to confirm their support for the project and work will be progressed to fully develop the research project, obtain the requisite insurance claims and meteorological data.

Action - TSUNAMI

b) Economic Influences on Insurance Industry Profitability

James Orr explained that he had worked with Julian Beardsworth of the CGU Group and Professor Brian Henry of London Business School on developing this research project. The project will look at the major macro-economic drivers and their effect on insurance industry profitability. The project would now be targeted at the strategic and executive functions within the consortium companies.

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c) Satellite Risks

Simon Groves described two research projects that had been developed by Andrew Coates of the Mullard Space Science Laboratory, following discussion with Marham's technical advisor, John Korda of TeleSat. These projects were concerned with space weather, which related to the high-energy particles occurring in the magnetosphere and radiation belts of the Earth.

The first project was for a prototype compact energetic electron detector, which would be produced in a land-based test form. This detector would be 10 times smaller than existing high-energy detectors, which were carried by scientific, polar orbit, satellites. As it was so much smaller, it would be feasible to fly the device on an operational commercial satellite.

The second project would use space weather data from DERA's experimental satellite to develop a forecasting system. The system would make use of solar activity data from other, near-Sun, satellites to provide predictions of expected electron energy levels in the orbits used by operational satellites. The British Antarctic Survey was likely to collaborate on the project and would provide support on the theoretical aspects of the research.

Interest was expressed in the project by a number of Board members and it was agreed that a copy of the research proposal would be distributed once John Korda had confirmed his interest in the research.

Action – Simon Groves and TSUNAMI

7. Easter 2000 Royal Society Conference

Peter Stirling confirmed that the Royal Society had been booked for Monday 10th and Tuesday 11th April 2000. This would be provided under the City Science & Technology Dialogue, which seeks to bring the world of science and finance together.

Peter also confirmed that the Royal Society did not allow the holding of events for profit, although sponsorship for particular events (e.g. coffee breaks and dinners) could be sought from companies. It could be expected that speakers would not charge for presenting at the Royal Society.

Peter Stirling and James Orr will assist Dougal Goodman and Julian Hunt in organising the conference.

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8. Any Other Business.

a) Red Cross

David Crichton explained that the Red Cross had approached him to invite a formal dialogue with the insurance industry. David asked whether this dialogue could be held under the banner of TSUNAMI and this was supported by the Board. David will contact the Board members to seek nominations for individual contacts to support the dialogue.

Action –David Crichton and TSUNAMI

9. Date of Next Meeting.

Dougal Goodman explained that the 12th Board Meeting would be held at British Antarctic Survey in Cambridge. He planned to invite representatives from the four science committees within NERC to present on the work carried out in their area of research. Following the Board Meeting, a dinner would be held at one of the colleges, most likely Trinity.

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