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Blended Learning Course/Workshop Environmental Statistic & DRM/DRR with IFANOS-India-GIZ & NIDM; Face to Face Workshop 27/28 January, 2010

Report on Face to Face Workshop

Zusammenfassung (Deutsch)

Der Bericht fast im ersten Teil den Ablauf des Face to Face Kurses zusammen, ergänzt im zweiten Teil eine Bewertung des gesamten Blended Learning Kurses und enthält Vorschläge zur Weiterführung und einer möglichen Fortsetzung dieser Trainingskomponente. Der Anhang enthält Zusatzdokumente, die zum Verständnis des Berichts nicht notwendig aber hilfreich sind.

Summary

The report summarizes in the first the implementation of the Face ton of Face of course, adds in the second part an evaluation of the entire Blended Learning course and contains proposals for the continuation and a possible sequel of this training component. The annex contains auxiliary documents, which are not necessarily however helpful to understand the report.

The Face to Face workshop
The face to face (f2f) course as stated in the agenda “Annex IV: Draft Agenda110112.pdf” was to discuss the e-learning modules and getting feedback on the past and possible future courses from the participants.

Apart from the welcome address and the handing over of the certificates there were five major subjects dealt with in the f2f Workshop:

1. Recap of the goals
2. Recap of elements of the third module “Understand Causes and Effects of Disasters as Described by Statistics” namely Correlation and Linear Regression
3. Presentation of the delivered WebQuests
4. A guided exercise on Correlation and Linear Regression using disaster data from India
5. Presentation of a technical assessment (online times, deliverables etc.) of the online course

The final goal of the f2f workshop was to evaluate the validity of the current approach, receive information on shortcomings and omissions and provide grounds for improvement and modifications if this was to be intended.

about 1. The goals were recapitulated in the presentation “DRM India 2010 -Purpose of Course110123.ppt”.

about 2. The elements of the third module were presented in “DRM India 2010 -Statistical Methods - A Review110123.ppt”. Here the essentials of relationships between statistical variable were repeated and the basics of statistical interference. This repetition was requested by NIDM because of the impression that several of the participants had difficulties grasping the semi advanced methods in the later part of the course. The review and the following discussion seemed to prove that the statistical background of most was not very solid or was not well remembered because it had been formed in a distant past.
Although the author opines that a statistical background was not deemed to be necessary to complete the course, it is obvious that a mathematical background or statistical knowledge facilitated the understanding. The first module deals in brief with Indian meteorological data and introduces to elementary statistical indicators of central tendency (mean, median and mode) and dispersion (variance, standard deviation, Skewness, Kurtosis). Relating these measurements to repetitively occurring disasters in India like flood and drought was supposed to have helped the introduction to these basic indicators. The second module worked on the display and the presentation of disasters or disaster risks, even introduced examples of very misleading types of international presentations for the purpose of training. The third module introduces basic knowledge of statistical inference and leading from this to correlation and test theory always on examples from Indian Disaster Databases.

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The final units of this module entered into more sophisticated areas of modeling through linear regression and factor analysis (limiting the introduction to principal component analysis). The introduction tried to recap the essentials of correlation and linear regression to prepare the guided exercise on the following day.

about 3. The presentation of the WebQuests (presentation of web researched solution using methods from the online course to improve Disaster Risk Management of the participant's portfolio) saw 5 presentations (solved individually or by groups). Six WebQuests had been delivered, five were presented. All are uploaded on the discussion board on the BL course. One WQ (3[1]) was closely related to Module 1 (Rainfall analysis for Bihar), three (2,4,5) were referring to Module 2 (Presentation of Flood exposure and disaster maps in Bihar, another with the disaster situation in Kanataka and a third one with an all India assessment of disaster risk with some data exploitation for Bihar). The sixth (6) presentation was rather exceptional: not only choosing the rather most demanding of the statistical methods PCA and Factor analysis but applying it to data sources and presenting the analytical results of a particular new area of work: A earthquake risk index for all districts in Himachal Pradesh. This WQ obviously required absorbing a rather new and complicated method but also access to administrative data from state sources. An excellent work improving the knowledge base of the state and more than that backing the hitherto published earthquake risks of various regions mainly by seismic conditions.

about 4. For the guided exercise participants had been invited to collect data suitable for the elaboration of some inference between losses (human, crop areas, economic) as a result of floods or droughts and possible causes (rain, protection and irrigation schemes). Participants came up with data from Orissa "DI_Report_orissa_Exercise (version 1).xls".

The data were supposed to "prove" a relation between the rainfall in Angul, the central district of Bihar and the losses reported. The first difficulty of these data was the shortness of time series (only the last five years were reported and there the losses were on a report card basis contrasting with the monthly rainfall data). This required some elaboration of the primary data (summing up for yearly rainfall and the yearly losses). However this was a useful session showing and elaborating comparable time series. The results of correlation analysis proved the primary assumption that very little inference could be detected and assuring that little direct influence could be detected for the losses in Angul (at least on this yearly basis).

Since no other data series was prepared by the participants, a guided and prepared example for Bihar was done by all showing that additional data on river gauges can improve the model for losses (human casualties) related to rainfall and river flood levels "Bihar_Exercise.xls".

about 5. The assessment of the participation was presented in "DRM India 2010 -Assessment of Online Course110120.ppt". The assessment had been rendered anonymous but the participants received a personal assessment of their performance (online time, delivered assessments etc.)

Conclusion

As a general conclusion one can state that the course demanded some dedication and depending on the prior background knowledge of the participants quite some digging in new and unfamiliar soil. Several participants voiced this situation and obviously conquered new ground with amazing astuteness and perseverance. The active and present participants in the f2f workshop were highly motivated and even active in encouraging their colleagues to conquer new ground. Those in this course who grasped the essence and the objectives became quite enthusiastic; this should be a positive indicator for this starter or pilot.

The WebQuests as a final proof of concept were partly convincing. All WQ ventured into new ground but some rather timidly relying mostly on established and well known knowledge than to use fully the newly acquired methods. In this respect the WQ for Module 1 (3) and Module 3 (6) merit the highest respect because here participants conquered new fields of work and obviously acquired new knowledge. This shows already the possible drawback of this course: was statistics really such a new subject to most. One has to answer in the affirmative, almost all participants had only but a modest statistical background.

[1] As numbered in the Annex

This is not per se an argument against the subject; it was not designed for statisticians but for professionals in their field. Obviously the participants could not be expected to be high ranked or data analysis experts otherwise the course length would be exceeding the available time.

Another request for further explications about indicators of dispersion showed a need for deepening of statistical basic. I can be admitted that the course content was too high brow and exceeded the capacities of most.

Some arguments from the tutor's side for the possible future of BL courses for Disaster Risk Management and Statistics:

The preconditions for the Disaster Risk Management + statistics course are excellent as far as the data conditions are concerned. Even if meteorological data on districts level are only available for the last 5 years "www.imd.gov.in", full coverage of monthly rainfall on district level is available at the site with payable services www.indiastat.com. However data are not available and accessible at first click or sight, internet skills and some investigating capacities are required

Without overestimating this first course if subsequent ones are to come, the knowledge level for absorbing the course content is heterogeneous. The course should address both audiences: skilled statisticians ("experts") and the less experienced ("primary") and the distinction should be made clear between the two parts. The modular approach of a possible course successor should be stressed further. One module is not a precondition of another but to complete or pass the assessment of the "Primary" course should be compulsory to enter the "Expert" course in the future.

The basic approach for grasping the essence of access to and analysis of fact based information has to given major importance. Reference and best practice of the "PR and Statistics" course available at GC21 should be evaluated for this purpose. Improvement on course content is possible and can be administered without delay or constraint, but the major challenge will be not to loose the attention of engaged professionals.

For the current course: The only vague ideas and information of many of the original participants invited might have prevented a more numerous attendance. For evaluation of this course: full coverage of responses by ALL course invitees by the course organizers would be informative for further follow-ups.

An introduction to Disaster Risk Management terns and references and the relation to fact based information necessary for this will be helpful.

The organization of chat session at the very beginning has to be given enough room and tutorial support. The tutor's / tutors' presence is crucial for the success of the course. As proposed the training of national tutors is pertinent. Without an expert and continuous support the course would be one of many of the self-learning courses and would have little expectation of sustainable impact.

The opinion expressed are of personal character and do not represent the view of GIZ.

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Annexes

Annex I: DRM India 2010 -Purpose of Course110123.pdf
Annex II: DRM India 2010 -Statistical Methods - A Review110123.pdf
Annex III: DRM India 2010 -Assessment of Online Course110124.pdf
Annex IV: Draft Agenda110112.pdf

Annexed Exercises: DI_Report_orissa_Exercise (version 1).xls and Bihar_Exercise.xls

Annexed WebQuest1 : Ms Sreeja : webquest1_Sreeja-1294661819605904.doc
Annexed WebQuest2: Ms Sreeja : NIDMEPDRMmodule2module_2_Webquest-1296041556621197.doc
Annexed WebQuest3 : Mr.Prithwi, Ms.Chauhan, Mr.Nath: UsersPK_NathDesktopWeb_Quest_1-1294679372775053.doc
Annexed WebQuest4 : Ms.Jothi, Dr.Devi, Mr.Eswara, Mr.Talwar: Pres-Flod_EQ-LL-Ts-1295696578675460.ppt
Annexed WebQuest5 : Mr.Talwar: Delhi_GC21-129585154877560.ppt
Annexed WebQuest6 : Dr.Kapoor: Presentation-I-1294656536155261.ppt