# Possible dates of occurrence of major and great earthquakes worldwide.

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With evidence presented in the paper (See Reference cited in Table 1) that Indian dams are controlling worldwide earthquakes, it is possible to gauge the dates of occurrence of peak magnituide worldwide earthquakes. Thus the peak magnitude quake in July was predicted to occur between 16th to 24th July 2005 on this basis. The magnitude was predicted to be that of a major quake(Table 1). The prediction turned out to be true. The major quake occurred in the Andaman Basin bang on target(24th July 2005).The prediction was also true for June, August and September as well for the date, magnitude and location. The location was also predicted to be anywhere between Japan and Indonesia, via the Sagaing fault which is adjacent to the Himalayan Frontal Thrust for July and August. The location for September is adjacent to Indonesia. In view of the certainty of dates of occurrence and of the peak magnitude correlating with the surges of water moment changes caused by rapidly changing storages behind the dams (See http://www.geocities.com/rakumra/earthquakescausedbydams.pdf), the authorities should take note of this major research finding and take appropriate steps to mitigate the suffering of people. For example, the 16th August occurrence of the 7.2 magnitude major quake on the east coast of Honshu, Japan, caused the design basis ground acceleration to be exceeded and the concerned reactors scrammed. Radioactive water from spent fuel storages also spilled at other reactors nearby. If the quake makes a direct hit on the reactors, mass suicide may result. See message below from the Citizen's Nuclear Information Center, Japan. See the latest update in the URL:
http://cnic.jp/english/newsletter/nit108%20/nit108articles/nit108miyagiquake.html

Table 1 also shows the prediction for the dry season. The Table undergoes revision every month to give new estimates for the location based on the trend in the previous month.

For each year the monthly peak magnitudes expressed as percentages of the respective seasonal totals of the monthly peak magnitudes correlate statistically extremely significantly with the corresponding monthly percent changes of water moment (For example, for June 2004 to May 2005, the correlation coefficient r and its probability p are 0.864 and 0.000523 respectively). Similarly, the percent mean latitude and the percent mean longitude of the locations of the monthly peak magnitude quakes, for each ten-year period from 1973, exhibit extreme statistical significance when correlated with the percent change in water moment. Thus, for the ten-year period 1973-74 to 1982-83, the

mean monthly latitudes from June to May have correlation coefficient r = 0.8946 with probability p = 8.562E-.05. The mean monthly longitudes have r = 0.79828, p = 0.001854. For the most recent period, 1993-94 to 2004-05(12 years), the corresponding correlation coefficients with their probabilities are: Mean latitudes: r = 0.91439,p = 3.132E-05; mean longitudes: r = 0.84833, p = 0.0004872. Further, the great surge waves of force and water moment changes that the dams unleash would reasonably be the cause of the peak magnitude quakes worldwide. Together with the findings in the above quoted URL, the contention that the peak magnitude quakes are due to the Indian dams rests therefore, on a sound scientific basis.

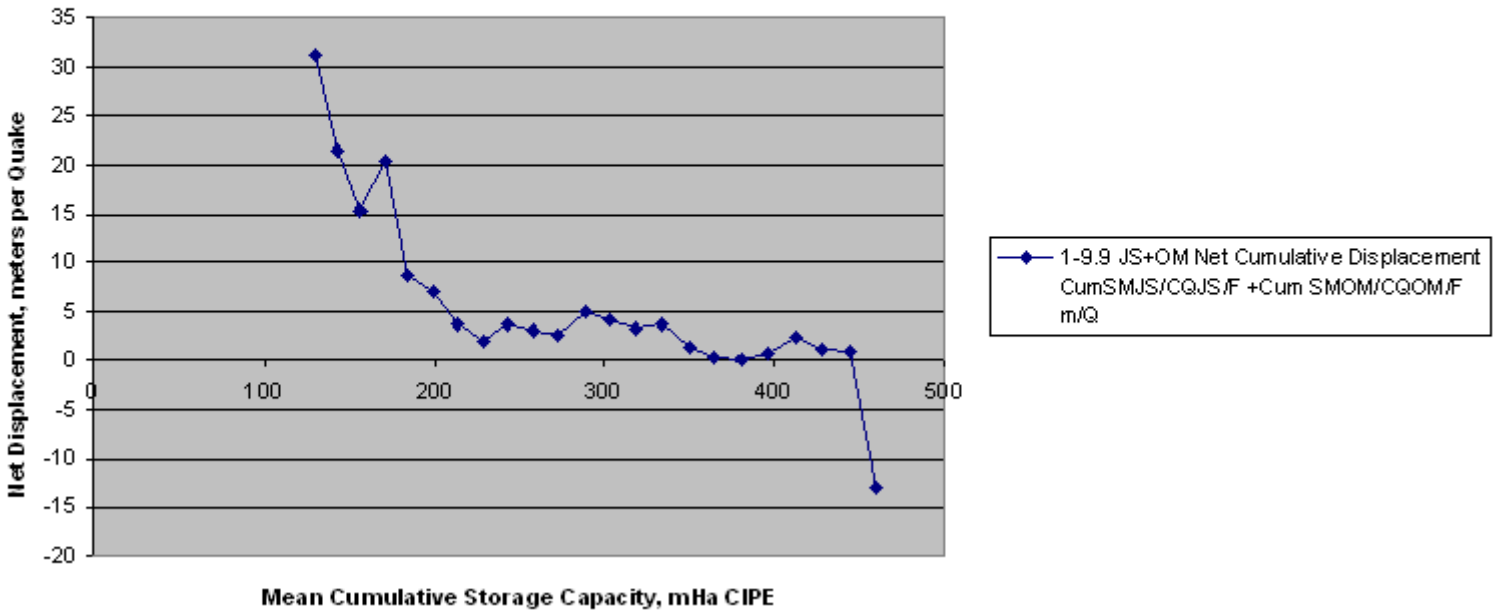
| **Table 1** | **Predicting Worldwide Earthquake Peak Magnitude and Date of Occurrence** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Period** | **Jun 05 to May 06** | | Updated: | As on 5th May 2006 | | | | |
| **Basis** | Cause: Indian dams | | | | | | | |
| **Expected** | Date of peak | Magnitude | **Nature of quake** | **Location** | | | | |
| **2005** | 13-20 June | 6.9-7.9 | Strong-Major | - | | | | |
| | 16-24 Jul | 7.3-7.7 | Major | - | | | | |
| | 17-26 Aug | 7.2-7.7 | Major | Japan to | Indonesia | | | |
| | 9-18 Sep | 7.1-7.8 | Major | Japan to | Indonesia, | California | | |
| | 11-17 Oct | 7.2-7.9 | Major | - | | | | |
| | 7-16 Nov | 7.2-8.0 | Major-Great | | | | | |
| | 10-19 Dec | 7.1-8.7 | Major-Great | | | | | |
| **2006** | 1-4 Jan | 7-7.7 | Major | | | | | |
| | 24-28 Feb | 6.7-7.6 | Strong-Major | | | | | |
| | 20-31 Mar | 7-8.1 | Major-Great | | | | | |
| | 12-21 Apr | 7-7.6 | Major | | | | | |
| | 16-27May | 7.2-7.9 | Major | | | | | |
| **Actual** | Date of peak | Magnitude | Nature of quake | Location | Region | | Country | depth,km |
| | 13-Jun-05 | 7.9 | Major | -19.96,-69.11 | Tarapaca | | Chile | 115 |
| | 24-Jul-05 | 7.2 | Major | 7.916,92.137 | Nicobar | Isles | India | 10 |
| | 16-Aug-05 | 7.2 | Major | 38.251, 142.059 | East Coast | of Honshu | Japan | 36 |
| | 9-Sep-05 | 7.7 | Major | -4.540, 153.402 | New Ireland | Papua New | Guinea | 117 |
| | 8-Oct-05 | 7.6 | Major | 34.402,73.560 | Muzzafarabad,POK | | | 10 |
| | 14-Nov-05 | 7 | Major | 38.138,144.886 | East Coast | of Honshu | Japan | 29.8 |
| | 5-Dec-05 | 6.8 | Strong | -6.22,29.77 | Lake Tanganyka,Congo,T | | Tanzania | 22 |
| | 27-Jan-06 | 7.6 | Major | -5.462, 128.096 | Banda Sea | | Indonesia | 351.7 |
| | 22-Feb-06 | 7.4 | Major | -21.215,33.337 | R I F T Valley | | Mozambique | 10 |
| | 14-Mar-06 | 6.7 | Strong | -3.59,127.22 | Seram | | Indonesia | 30 |
| | 20-Apr-06 | 7.6 | Major | 61.07,167.08 | Koryakia | | Russia | 22 |
| | 3-May-06 | 7.9 | Major | -20.088,-174.219 | Tonga | | | 55 |
| **Reference:** | http://monsoonquakes.rediffblogs.com | | | | | | | |

**Indian Dams caused the 750 mile 42 foot high vertical displacement of the Indian Ocean Fault**

It's the giant surge waves of force and bending moment due to Indian Dams that caused the 9.2 Moment Magnitude 26 December 2004 earthquake in the Andaman Basin. This resulted in the net vertical displacement of 12.9 meters of the West side of the fault on the sea bed of the Indian Ocean compared to the East side. See the Tables 11a and 11b in the URL: http://www.geocities.com/rakumra/earthquakescausedbydams.pdf

In these Tables the December 26 2004 earthquake has been assumed to be of 9.4 MM. Assuming a figure of 9.2 MM results in the vertical displacement observed by the Performer team of The Unstoppable Wave shown on the Discovery channel on the 25th of December 2005(See Figure 1:For 460 mHa CIPE storage in 2004,displacement is 12.9 m ).

**Figure1:Worldwide Earthquakes,1973-2005,1-9.9 MM,Wet( JS)+Dry(OM)Season Net Cumulative Displacement CumSMJS/CQJS/F +Cum SMOM/CQOM/F, m/Q,Correlation with Mean Cumulative Reservoir Storage(1982-2005,r= -0.79,p=1.0E-5)**



Legend for Figure 1: CumSM : Cumulative seismic moment , from1973 on for each year. JS: June to September; OM : October to May. CQ: Cumulative number of earthquakes. F: Mean applied force by the cumulative water storage behind the dams.

**The location of the monthly peak magnitude earthquake**

25 locations where peak magnitude quakes occurred were finally identified from the 32 year history 1973-2004. One of these locations invariably was also the location (within about + or –5 degrees, for the peak in the hydrological year June 2005 to May 2006, till November 2005(See Table 1). On this basis therefore the prediction for the epicenter of the peak magnitude earthquake in December 2005 was carried out and is shown in Table 2. When the month finally ended in a low spin mode, the Lake Tanganyika location in the Rift valley became the epicenter of the peak magnitude earthquake of 6.8 MM (Location 26!).

In the next section an interpretation of the low and high spin modes of the earth are incorporated into prediction of peak magnitude quakes. At the present time more research is needed to foresee the actual mode into which the earth will at any stage jump into. So far 2 months- December 2005 and March 2006 have witnessed low spin modes(Table 1)(Hydrological year June 2005 to May 2006).

There is also evidence of severe activation of the fault lines by the dams and the world community should at once take preventive action to avoid further damage to earth and loss of life and property. As we proceed in our story of activation of the faults, this point will be clear.

**Interpretation of the response of the earth to applied forces in December 2005.**

In December 2005, the peak magnitude quake occurred on the 5th and was a strong quake of magnitude 6.8 MM, while the expected earthquake was major to great(7.1 to 8.7 MM) and estimated to occur with a mean date between 10th to 19th. There is a 28 percent probability of the earth going into a low spin mode as measured by the 1973 to 2004 sample of peak magnitude quakes. In the low spin mode of seismic moment release, strong earthquakes take place as observed in the sample. But there is a 72 percent probability that the earth responds with major and great quakes as it did in December 2004. In alerting ourselves to the possibility of quakes of peak magnitude due to dams on the Indian subcontinent, the precautionary principle was adopted by the author and plumped for the high spin mode of the earth to predict the December 2005 quakes. In the low spin mode of December 2005, the minimum mean date of occurrence was the 4th and the strong quake of peak magnitude occurred on the 5th. With the data of 32 years for the peak magnitude quakes, the location in the Rift valley in Africa could not be envisaged with the present method. This requires data on return times for this location, which was absent in this period. The lone

**Table 2: Prediction of Peak Magnitude Earthquake Location for December 2005**

| | | | **December-05** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Note: OD Overdue | | | | Expected | Actual | **MAGNITUDE** | | Actual | Name |
| | Region | Epicenter | Region's | **Dec-05** | dates in | Date | Expected | Actual | Location | |
| | | | Last peak | **Slot** | December | | | | | |
| | | | on | Dates | 05 | | **7.1-8.7** | | | |
| | | | | (a) | (b) | | MM | | | |
| 1 | Japan | 43.23,145.79 | 14/11/05 | **10-19** | 14 | 2/12/2005 | | 6.5 | 38.09,142.12 | Near East Coast of Honshu |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | 14 | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | Out of range | | | | | |
| 4 | Vanuatu | -14.46,166.6 | 11/4/2005 | | 13-14 | | | | | |
| 5 | PNG | -7.38,155.57 | 9/9/2005 | | 16 | 11/12/2005 | | 6.6 | -6.57,152.19 | New Britain,PNG |
| 6 | Peru/N.Chile | -14.96,-72.21 | 13/6/05 | | 10-19OD | | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 13/6/05 | | 10-19OD | | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | 5 | 20/12/2005 | | 6.1 | 12.21,140.99 | Yap State,Micronesia States |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | 10-19OD | | | | | |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 8/10/2005 | | 27 | 12/12/2005 | | 6.6 | 36.34,71.11 | Hindu Kush,Afghanistan |
| 11 | Off WC of Sumatra | 0.39,97.84 | 24/7/2005 | | 24 | | | | | |
| 12 | Molucca Sea | -4.96,129.99 | 5/2/2005 | | 27 | 21/12/2005 | | 6.4 | -0.082,124.638 | Molucca Sea |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | 10-19OD | | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | 10-19OD | | | | | |
| 15 | Kermadec Is. | -24.89,-175.12 | 9/3/2004 | | 15 | 13/12/2005 | | 6.7 | -15.25,-178.58 | Fiji Region |
| 16 | Philippines I | 6.26,124.02 | 5/2/2005 | | 9 | | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | 10-19OD | 3/12/2005 | | 6 | 29.35,130.26 | Ryu Kyu Is.,Japan |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | 10-19OD | | | | | |
| 19 | Java Trench | -11.09,118.46 | 11/11/2004 | | 10-19OD | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | 10-19OD | 23/12/2005 | | 6.2 | -1.43,-77.55 | Ecuador |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | 10-19OD | | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | Out of range | | | | | |
| 23 | Iran | 33.39,57.43 | 6/12/2000 | | 10-19OD | | | | | |
| 24 | KamchatkaPen | 54.88,167.85 | 10/6/2004 | | 16 | | | | | |
| 25 | West of Seattle | 48.8,-129.9 | 1/9/1994 | | 10-19OD | | | | | |
| 26 | Congo,Tanzania | -6.22,29.77 | 20/5/1990 | | 5703-5712 | 5/12/2005 | - | 6.8 | -6.22,29.77 | Lake Tanganyika,Congo,Tan |

epicenter was in Sudan in the Rift Valley, which occurred on May 20th 1990 as shown in Table 2. Also,

statistically one great quake per year occurs. In the hydrological year June 2004 to May 2005, three great quakes occurred, two of them in December 2004 spaced two days apart(One on the Macquarie Ridge on 23rd December 2004 of 8.1 MM, the second was the Great Andaman Basin quake of 26th December of

| | Table 3 | Response of the Earth in December | | | | Expected and Actual Earthquake Parameters | | | |
|---|---|---|---|---|---|---|---|---|---|
| | OD: Overdue | | December-04 | | | | | | |
| | | | | Dec-04 | Expected | Actual | Expected | Actual | Actual |
| | Region | Epicenter | Region's | Slot | dates in | Date | Magnitude | Magnitude | Location |
| | | | Last peak | Dates | December | | | | |
| | | | on | (a) | 04 | | | | |
| 1 | Japan | 43.23,145.79 | 5/9/2004 | 6(4)-15(26) | 4-13 | | | | |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | 10 | | | | |
| 4 | Vanuatu | -14.46,166.6 | 3/1/2004 | | 9 | | | | |
| 5 | PNG | -7.38,155.57 | 20/1/03 | | 6-15OD | | | | |
| 6 | Peru/N.Chile | -14.96,-72.21 | 20/6/03 | | 6-15OD | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 28/8/04 | | 6-15OD | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | 6-15OD | | | | |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | 6-15OD | 23/145903.89 | | 8.1 | -50.145,160.370 |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 27/2/97 | | 6-15OD | | | NORTH OF MACQUARIE ISLAND | |
| 11 | Off WC of Sumatra | 0.39,97.84 | 25/7/2004 | | 25 | 26/1:005850.76;2:042129. | 7.1-7.6 | 1: 9.4(9.2);2:7.5 | 1:(3.3,95.98);2:(6.91,92.96) |
| 12 | Molucca Sea | -4.96,129.99 | 11/11/2004 | | 2-19 | | 1.Banda Aceh,2.Off Great Nicobar Is. | | |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | 6-15OD | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | 6-15OD | | | | |
| 15 | Kermadec Is. | -24.89,-175.1 | 9/3/2004 | | 6 | | | | |
| 16 | Philippines I | 6.26,124.02 | 26/5/03 | | 8 | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | 6-15OD | | | | |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | 26 | | | | |
| 19 | Java Trench | -11.09,118.46 | 11/11/2004 | | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | 6-15OD | | | | |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | 6-15OD | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | | | | | |

magnitude 9.2 MM and the third the Simuele Indonesia quake of 28th March 2005 measuring 8.7 MM). And in December, from 1973 to 2003, no great quake occurred and thus the earth probably chose 2004-2005 hydrological year for the multiple great quakes event. The date for December 2004 was correctly predicted to within an hour to be the 26th of December 2004 but the magnitude was estimated to be a major one based on past history. The major one however, did occur also on the 26th of December 2004 hours after the 9.2 MM quake, of magnitude 7.5 (the estimate was 7.1 to 7.6 MM). The location, in the Andaman Basin region was also correctly predicted! See Table 3. . So the earth could have been expected to go in the low spin mode in December 2005!

**Expectation and Realisation in January 2006**

Table 4 shows the picture for peak magnitude earthquakes in January 2006.
Note that in January 2006, the earth has chosen to be in the high spin mode and hence major quakes are occurring and as predicted! Thus the peak magnitude earthquake, expected to be between 7 to 7.7, has registered 7.6( a deep quake)on 27th January 2006.The location is one

of27 in this case and is in one of the expected zones( Banda Sea) and was overdue. A major shallow earthquake of 7.3 MM took place on 2nd January East of South Sandwich Islands.

| Table 4: Prediction of Peak Magnitude Earthquake for Location for January 2006 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Note: OD Overdue | | | | | Expected | Actual | Magnitude | | Actual | Name |
| | Region | Epicenter | Region's | Jan-06 | dates in | Date | Expected | Actual | Location | |
| | | | Last peak | Slot | Jan-06 | | | | | |
| | | | on | dates | | | | | | |
| | | | | (a) | (b) | | MM | | | |
| 1 | N.Japan | 43.23,145.79 | 14/11/05 | **1-4** | OD | | **7-7.7** | | | |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | OD | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | 11 | | | | | |
| 4 | Vanuatu | -14.46,166.6 | 11/4/2005 | | 13-16 | | | | | |
| 5 | PNG | -7.38,155.57 | 9/9/2005 | | 10-13 | | | | | |
| 6 | Peru/N.Chile | -14.96,-72.21 | 13/6/05 | | OD | | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 13/6/05 | | OD | | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | OD | | | | | |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | OD | | | | | |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 8/10/2005 | | OD | | | | | |
| 11 | Off WC of Sumatra | 0.39,97.84 | 24/7/2005 | | OD | | | | | |
| 12 | Molucca Sea | -4.96,129.99 | 5/2/2005 | | OD | **27/1/2006** | | **7.6** | **-5.462, 128.096, 351.7 km** | **Banda Sea** |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | OD | | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | OD | | | | | |
| 15 | Kermadec Is. | -24.89,-175.1 | 9/3/2004 | | OD | 2/1/2006 | | 7.1 | -19.878,-178.233, 579.1 km | Fiji Region |
| 16 | Philippines I | 6.26,124.02 | 5/2/2005 | | 4 | | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | OD | | | | | |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | OD | | | | | |
| 19 | Java Trench | -11.09,118.48 | 11/11/2004 | | 12 | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | 4 | | | | | |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | OD | | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | | | | | | |
| 23 | Iran | 33.39,57.43 | 6/12/2000 | | OD | | | | | |
| 24 | KamchatkaPen | 54.88,167.85 | 10/6/2004 | | OD | | | | | |
| 25 | West of Seattle | 48.8,-129.9 | 1/9/1994 | | OD | | | | | |
| 26 | Congo,Tanzania | -6.22,29.77 | 5/12/2005 | | OOR | | | | | |
| 27 | South Sandwich Is(SSI) | -60.6,-20.88 | 21/11/92 | | OD | 2/1/2006 | | 7.3 | -60.809,-21.451, 10 km | East of SSI |

**Prediction for February 2006.**

**The details for the location of the peak magnitude earthquake in February 2006 are presented in Table 5: The low spin mode predicts a strong quake(6.7 to 6.9) and the high spin mode a major quake(7.0-7.6). The mean dates are 24th to 28th February for the range of the date of occurrence. Regarding location, except for North Japan, Vanuatu, Papua New Guinea, Peru/ N. Chile, Bonin Isles, Molucca Sea, Java Trench, and Kamchatka Peninsula, where the dates in February are predicted, the peak magnitude quake is overdue in the 16 other locations. The actual location was so soon again the Rift Valley, this time in Mozambique(it was Rift Valley, Congo, Tanzania in December 2005). Thus this shows that the Rift Valley has been activated. It was a major quake of 7.4 MM and hence the date and magnitude predicted became very close to the actuals.**

| Table 5: Prediction of Peak Magnitude Earthquake for February 2006: Location | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Note: OD Overdue | | OOR: Out of Range | | | Expected | Actual | Expected | Actual | Actual | Name |
| Feb-06 | Region | Epicenter | Region's | Feb-06 | dates in | Date | Magnitude | Magnitude | Location | |
| | | | Last peak | Mean | Feb-06 | | | | | |
| | | | on | dates | | | | | | |
| | | | | (a) | (b) | | MM | | | |
| 1 | N.Japan | 43.23,145.79 | 14/11/05 | **24-28** | **27-28** | | **6.7-7.6** | | | |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | **OD** | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | **OD** | | | | | |
| 4 | Vanuatu | -14.46,166.6 | 11/4/2005 | | **11** | | | | | |
| 5 | PNG | -7.38,155.57 | 9/9/2005 | | **5** | | | | | |
| 6 | Peru/N.Chile | -14.96,-72.21 | 13/6/05 | | **16** | | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 13/6/05 | | **OD** | | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | **5** | | | | | |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | **OD** | | | | | |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 8/10/2005 | | **OD** | | | | | |
| 11 | Off WC of Sumatra | 0.39,97.84 | 24/7/2005 | | **OD** | | | | | |
| 12 | Molucca Sea | -4.96,129.99 | 27/1/06 | | **27** | | | | | |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | **OD** | | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | **OD** | | | | | |
| 15 | Kermadec Is. | -24.89,-175.12 | 9/3/2004 | | **OD** | | | | | |
| 16 | Philippines I | 6.26,124.02 | 5/2/2005 | | **OD** | | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | **OD** | | | | | |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | **OD** | | | | | |
| 19 | Java Trench | -11.09,118.46 | 11/11/2004 | | **26** | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | **OD** | | | | | |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | **OD** | | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | **OOR** | | | | | |
| 23 | Iran | 33.39,57.43 | 6/12/2000 | | **OD** | | | | | |
| 24 | KamchatkaPen | 54.88,167.85 | 10/6/2004 | | **23** | | | | | |
| 25 | West of Seattle | 48.8,-129.9 | 1/9/1994 | | **OD** | | | | | |
| 26 | Rift Valley | -6.22,29.77 | 5/12/2005 | | **OOR** | | | | | Congo,Tanzania |
| 27 | South Sandwich Is | -60.6,-20.88 | 2/1/2006 | | **OOR** | | | | | |
| **28** | **Rift Valley** | **-21.215,33.337** | | | | **22-Feb-06** | | **7.4** | **-21.215,33.337,10 km** | **Mozambique** |

**Prediction for March 2006**

**The predicted date of occurrence, moment magnitude and possible locations are given in Table 6 below: Note that there was a possibility of a great earthquake in March.**

In March 2006, the earth as in December 2005, went into a low spin mode(only strong earthquakes) and the peak magnitude quake was 6.7 MM(expected: 6.7 to 6.9). It occurred on 14th March at Seram, Indonesia, location -3.59,127.22,location 19 in Table 6(was expected to occur on 18th March). The prediction of the magnitude for low spin peak magnitude quake is made by considering peak magnitude quakes in previous years falling in the strong quake range(6 to 6.9). Thus the prediction for low spin mode was correct for magnitude and location and was late by four days only (18 instead of 14).

**Prediction for April 2006**

See Table 7 below and also Table 1.

| Table 6: Prediction of Peak Magnitude Quake for March 2006 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Note: OD Overdue | | OOR: Out of Range | | | Expected | Actual | Expected | Actual | Actual | Name |
| Mar-06 | Region | Epicenter | Region's | Mar-06 | datesin | Date | Magnitude | Magnitude | Location | |
| | | | Last peak | Mean | Mar-06 | | | | | |
| | | | on | dates | | | | | | |
| | | | | (a) | (b) | | MM | | | |
| 1 | N.Japan | 43.23,145.79 | 14/11/05 | 20-31 | OD | | 7-8.1 | | | |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | OD | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | OD | | | | | |
| 4 | Vanuatu | -14.46,166.6 | 11/4/2005 | | 17 | | | | | |
| 5 | PNG | -7.38,155.57 | 9/9/2005 | | 18 | | | | | |
| 6 | Peru/N.Chile | -14.96,-72.21 | 13/6/05 | | OD | | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 13/6/05 | | 29 | | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | OD | | | | | |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | OD | | | | | |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 8/10/2005 | | 14 | | | | | |
| 11 | OffWC of Sumatra | 0.39,97.84 | 24/7/2005 | | OD | | | | | |
| 12 | Molucca Sea | -4.96,129.99 | 27/1/06 | | 24 | | | | | |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | OD | | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | OD | | | | | |
| 15 | Kermadec Is. | -24.89,-175.1 | 9/3/2004 | | OD | | | | | |
| 16 | Philippines I | 6.26,124.02 | 5/2/2005 | | 26 | | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | OD | | | | | |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | OD | | | | | |
| 19 | Java Trench | -11.09,118.46 | 11/11/2004 | | 18 | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | OD | | | | | |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | OD | | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | OOR | | | | | |
| 23 | Iran | 33.39,57.43 | 6/12/2000 | | OD | | | | | |
| 24 | KamchatkaPen | 54.88,167.85 | 10/6/2004 | | OD | | | | | |
| 25 | West of Seattle | 48.8,-129.9 | 1/9/1994 | | OD | | | | | |
| 26 | Rift Valley | -6.22,29.77 | 5/12/2005 | | OD | | | | | Congo,T |
| 27 | South Sandwich Is | -60.6,-20.88 | 2/1/2006 | | OOR | | | | | |
| 28 | Rift Valley | -21.215,33.33 | 22/2/2006 | | OOR | | | | | Mozambique |

**While the predicted 95% confidence limits for the date of occurrence of the peak magnitude quake for April 2006 were 12 to 21, it actually occurred at 2325 hrs on the 20th! Its magnitude was 7.6 MM at the upper limit of prediction. The location- the Kamchatka Peninsula in Russia -was one of the expected locations(See Table 7).**

| Table 7: Prediction of Peak Magnitude Quake for April 2006 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Note: OD Overdue | | OOR: Out of Range | | | Expected | Actual | Expected | Actual | Actual | Name |
| Apr-06 | Region | Epicenter | Region's Last peak on | Apr-06 Slot dates | dates in Apr-06 | Date | Magnitude | Magnitude | Location | |
| | | | | (a) | (b) | | MM | | | |
| 1 | N.Japan | 43.23,145.79 | 14/11/05 | **12-21** | **18** | | **7-7.6** | | | |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | **OD** | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | **OD** | | | | | |
| 4 | Vanuatu | -14.46,166.6 | 11/4/2005 | | **5** | | | | | |
| 5 | PNG | -7.38,155.57 | 9/9/2005 | | **28** | | | | | |
| 6 | Peru/N.Chile | -14.96,-72.21 | 13/6/05 | | **OD** | | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 13/6/05 | | **OD** | | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | **OD** | | | | | |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | **OD** | | | | | |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 8/10/2005 | | **OD** | | | | | |
| 11 | Off WC of Sumatra | 0.39,97.84 | 24/7/2005 | | **OD** | | | | | |
| 12 | Molucca Sea | -4.96,129.99 | 27/1/06 | | **13** | | | | | |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | **OD** | | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | **OD** | | | | | |
| 15 | Kermadec Is. | -24.89,-175.12 | 9/3/2004 | | **OD** | | | | | |
| 16 | Philippines I | 6.26,124.02 | 5/2/2005 | | **OD** | | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | **18** | | | | | |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | **OD** | | | | | |
| 19 | Java Trench | -11.09,118.46 | 14/3/06 | | **OOR** | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | **OD** | | | | | |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | **OD** | | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | **OOR** | | | | | |
| 23 | Iran | 33.39,57.43 | 6/12/2000 | | **OD** | | | | | |
| 24 | KamchatkaPen | 54.88,167.85 | 10/6/2004 | | **OD** | **20** | | **7.6** | 61.07,167.08 | Koryakia,R |
| 25 | West of Seattle | 48.8,-129.9 | 1/9/1994 | | **OD** | | | | | |
| 26 | Congo,Tanzania | -6.22,29.77 | 5/12/2005 | | **OD** | | | | | |
| 27 | South Sandwich Is | -60.6,-20.88 | 2/1/2006 | | **OOR** | | | | | |
| 28 | Mozambique | -21.215,33.337 | 22/2/2006 | | **OOR** | | | | | |

**Prediction for May 2006**

**Table 8 shows the expected peak magnitude quake in May 2006 together with its possible location and date of occurrence. Already on the 3rd of May, a major quake of magnitude 7.9 MM occurred in the Kermadec Isles Region(Tonga). See Table 1. The previous Table 1 had indicated 8th May for the earliest date(with 95% confidence) given that 12 to 21 April would be the range for the April peak magnitude quake. Given that the 3rd May quake magnitude was 7.9 MM, the range of major quake for the rest of May is expected to be 7.2 to 7.9, allowing for the greater storage capacities available on the subcontinent in 2006.**

**Mitigation of the effects and eventual prevention of man-made natural earthquake disasters**

| Table 8: Prediction of Peak Magnitude Quake for May 2006 | | | | | | 5th May 2006 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Note: OD Overdue | | OOR: Out of Range | | | Return | Expected | Actual | Expected | Actual | Actual | Name |
| May-06 | Region | Epicenter | Region's | May '06 | from past | dates in | Date | Magnitude | Magnitude | Location | |
| | | | Last peak | Slot | history | May-06 | | | | | |
| | | | on | dates | incl. trend | | | | | | |
| | | | | (a) | Days | (b) | | MM | | | |
| 1 | N.Japan | 43.23,145.79 | 14/11/05 | **16-27** | 181 | **14** | | **7.2-7.9** | | | |
| 2 | C. Japan | 41.89,130.87 | 5/9/2004 | | 364 | **OD** | | | | | |
| 3 | El Salvador | 18.27,-96.6 | 9/10/2004 | | 460 | **OD** | | | | | |
| 4 | Vanuatu | -14.46,166.6 | 11/4/2005 | | 398 | **19** | | | | | |
| 5 | PNG | -7.38,155.57 | 9/9/2005 | | 250-257 | **17-24** | | | | | |
| 6 | Peru/N.Chile | -14.96,-72.21 | 13/6/05 | | 349 | **28** | | | | | |
| 7 | La Serena,Chile | -29.94,-71.34 | 13/6/05 | | 351 | **30** | | | | | |
| 8 | Bonin Is. | 19.74,147.27 | 26/4/02 | | 1320 | **OD** | | | | | |
| 9 | Tasman Sea | -54.55,158.59 | 21/8/03 | | 628 | **OD** | | | | | |
| 10 | Uzbek,Afghan,Pak | 36.35,70.76 | 8/10/2005 | | 157 | **OD** | | | | | |
| 11 | Off WC of Sumatra | 0.39,97.84 | 24/7/2005 | | 153 | **OD** | | | | | |
| 12 | Molucca Sea | -4.96,129.99 | 27/1/06 | | 121 | **28** | | | | | |
| 13 | Rat Is. | 53.11,173.5 | 17/11/03 | | 554 | **OD** | | | | | |
| 14 | Turkey | 38.47,40.72 | 22/11/95 | | 1349 | **OD** | | | | | |
| 15 | Kermadec Is. | -24.89,-175.1 | 3/5/06 | | 19-24 | **22-27** | | | | | |
| 16 | Philippines I | 6.26,124.02 | 5/2/2005 | | 414 | **OD** | | | | | |
| 17 | Philippines II | 22.1,121.4 | 18/12/01 | | 1583 | **OD** | | | | | |
| 18 | Papua,Indonesia | -4.52,139.92 | 7/2/2004 | | 560 | **OD** | | | | | |
| 19 | Java Trench | -11.09,118.46 | 14/3/06 | | 202 | **OOR** | | | | | |
| 20 | Ecuador | 10.2,-85.22 | 9/10/2004 | | 477 | **OD** | | | | | |
| 21 | Albania | 42.1,19.21 | 4/8/1999 | | 589 | **OD** | | | | | |
| 22 | Tajikistan | 49.99,78.85 | 1/10/2003 | | 2551 | **OOR** | | | | | |
| 23 | Iran | 33.39,57.43 | 6/12/2000 | | 1307 | **OD** | | | | | |
| 24 | Kamchatka Pen | 54.88,167.85 | 20/4/2006 | | 122 | **OOR** | | | | | |
| 25 | West of Seattle | 48.8,-129.9 | 1/9/1994 | | 2043 | **OD** | | | | | |
| 26 | Congo,Tanzania | -6.22,29.77 | 5/12/2005 | | 5698 | **OOR** | | | | | |
| 27 | South Sandwich Is | -60.6,-20.88 | 2/1/2006 | | 1730 | **OOR** | | | | | |
| 28 | Mozambique | -21.215,33.33 | 22/2/2006 | | 79 | **12** | | | | | |

The concerned nations should therefore be on alert with constant communication on hot lines so people's lives can be saved. This is of course the immediate next step. That the persistent cause is the set of dams on the Indian subcontinent and dams elsewhere under similar hydrological cycles points to quick moves to reappraise these dams for effective prevention steps. One way may be to involve people's cooperatives for ecologically feasible forest regeneration using the dam waters. Ultimately, the dams may become redundant, when forests are regenerated to a sufficient dry biomass density.

Citizens' Nuclear Information Center ,Japan

Tohoku Earthquake

The magnitude 7.2 earthquake that hit the Tohoku Region (1) of Japan on Tuesday 16 August caused the 3 nuclear reactors at Tohoku Electric's Onagawa Nuclear Power Plant to scram automatically.

The maximum quake was measured at 251.2 gals (2) on the second floor basement of the number 2 reactor. This exceeded the design basis of 250 gals. The Nuclear Industrial and Safety Agency said that it may in fact be the first time the earthquake design basis for a nuclear reactor has been exceeded in Japan.

Tohoku Electric immediately dismissed the significance of this saying the reactors can withstand a quake of 375 gals. The reactors are designed to scram if the quake exceeds 200 gals horizontally, or 100 gals vertically. All three Onagawa reactors exceeded this limit.

Operations at the three Onagawa reactors will be suspended for some time while the effects of the earthquake on the reactors are assessed.

Meanwhile, Tokyo Electric Power Company has confirmed that water leaked from the spent fuel pools at the No. 2 and No. 6 reactors of the Fukushima I plant. It said that the water did not leak outside the facilities.

News items about the earthquake are listed on the following page of CNIC's English web site:

http://cnic.jp/english/news/mediaetc/index.html

(Author's note: See the latest update at

http://cnic.jp/english/newsletter/nit108%20/nit108articles/nit108miyagiquake.html)

An article about the Niigata earthquake last year can be found at the following page:

http://cnic.jp/english/newsletter/nit103/nit103articles/earthquake2Nov04.html

1. The Tohoku Region is in the north east of Honshu, the largest island

in Japan.
2. Gal is a measure of acceleration. 1 gal = 0.01 m/s2.

From Philip White,International Liaison Officer

Citizens' Nuclear Information Center, Japan; 19th August 2005, to R. Ashok Kumar, Negentropist, Bombay Sarvodaya Mandal,299,Tardeo Road,Nana Chowk,Mumbai-400007. Tel: 022-23872061.