

Geologist uses church documents to predict earthquakes

JERUSALEM – Ancient church documents, some of them from the Vatican archives, are helping an Israeli geologist plot earthquake patterns to determine when the next big earthquake is most likely to take place in the Holy Land.

According to his analysis of ancient documents, an earthquake in the region is long overdue, said Shmulik Marco, a geologist from Tel Aviv University.

Marco said that based on his studies he can determine a pattern in the series of devastating earthquakes that have hit the Holy Land over the last 2,000 years. Major quakes were recorded along the Jordan Valley in the years 31 and 363 B.C. and A.D. 749 and 1033.

“The region is stressed twice its usual stress. An earthquake is quite imminent,” said Marco, who when renovating his home in Tel Aviv hired an engineer to strengthen the foundations of the building and make it earthquake-resistant.

A mild earthquake, magnitude 4.2, shook Israel Nov. 20. It struck the Dead Sea area, and its tremors were felt as far away as Jerusalem.

Marco, who spoke to Catholic News Service about a week before the small quake, said research shows that under its surface the earth is very active, and small earthquakes are taking place “almost all the time.”

Predicting an earthquake is quite different from predicting when the first rains will come, he said, but he added that by studying the historical material he has come to the conclusion that there is some order to the natural phenomena.

A major earthquake of magnitude 7 in the politically fragile region of the Middle East could have dire consequences for holy sites and even world peace, said Marco. To try to forecast when the next big earthquake is due, Marco has taken a historical approach by using the ancient documents left behind mainly by monks and pilgrims.

Most of the ancient cities in the Holy Land – including Jerusalem – were destroyed at least once by earthquakes, he said.

Church documents constituted three-fourths of the material his team studied, he said. Marco said that although these papers are not officially recording history they contain a lot of information.

“The most important accounts (were left) by people in the church. They were literate and educated. They had the practice of writing,” said Marco. “They read the Bible and had a sense of history; they knew how important the past was, so they thought it important to report the present for the future.”

In these letters, which were often accompanied by illustrations, the earthquakes were referred to as acts of God and the survival of people described as “miraculous,” said Marco.

Some of the documentation used by Marco had been previously compiled by a group of researchers at the University of Bologna, Italy, and other international researchers and historians who deciphered the Latin, Greek and Arabic used to write the original correspondence.

Marco based some of his conclusions on the writings of St. Theophanes, who lived in the eighth and ninth centuries. In one of his manuscripts the monk wrote: “A great earthquake in Palestine, by the Jordan and in all of Syria on Jan. 18 in the fourth hour. Numberless multitudes perished, churches and monasteries collapsed, especially in the desert of the holy city.”

Marco has also analyzed writings by Michael the Syrian, patriarch of the Syrian Orthodox Church, 1166-1199. Some of the documents are letters to European rulers, the Vatican and the Orthodox church in Constantinople – now Istanbul, Turkey – asking for church aid to rebuild the churches, he said.

“While many of these accounts are told in an archaic religious manner, they help us confirm the dates and locations of major calamities. Following these patterns in the past can be a good predictor of the future,” Marco said.

Verses from the Old Testament also provided Marco with pieces of the puzzle, as did

ancient correspondence collected by Muslim clergy.

Based on the ancient records, Marco said a quake is most probable around the Dead Sea region.

“When (the next quake) strikes – and it will – this quake will affect Amman, Jordan,” as well as Ramallah and Bethlehem in the West Bank and Jerusalem, he said. “Earthquakes don’t care about a religion or political boundaries.”

“Compared to the damage done by a large earthquake, the fighting between Israelis and Arabs would be just little skirmishes,” he said.