Institute of Hazard, Risk and Resilience Blog

Preparing for disaster: An interview with Prof José Manuel Mendes

July 15, 2011

by **Brett Cherry**

Prof José Manuel Mendes visited IHRR on an ERASMUS scholarship. He is a sociologist with the University of Coimbra, Portugal where he does research in risk, risk perception and social vulnerability at the Centre for Social Studies. In this interview, José talked to me about his research on disaster management, vulnerability and state intervention as well as incorporating research in vulnerability into disaster mitigation strategies at the municipal level.

BC: The state has usually been essential in providing emergency aid, but has also been known to fail in delivering the services needed by people affected by disaster, or can make things worse. What role do you think the state plays during times of disaster?

JM: During a disaster the state is the last resort, as you can't really rely on private institutions or companies at first. When there is a catastrophe or an extreme event you are 'naked' and you have to ask for your rights as a citizen. Normally the state has the means, the tools and the right to attend to you as a citizen. On the other hand, it is too expensive to operate during the first hours, days and months of a catastrophe. The private sector normally comes afterwards when rebuilding is needed and for supplying resources such as food and water. It is interesting that some researchers have argued that the last catastrophes have seen the state lagging. There is often no intervention soon after a disaster takes place. Hurricane Katrina in the US, for example, induced a lot of thinking and reflection about what are called 'post-disaster societies' and 'post-state societies'. The earthquake and tsunami near Fukushima, a disaster also in a rich country, took the state government in Japan a long time to respond and it was quite a surprise.

In Japan, civil protection disappeared and you had the police collecting the bodies of the dead and the military helping to provide aid. And for three to four days people were literally alone. In response to the disaster, during the first four days after the event the Bank of Japan put in 23 trillion yen (282 billion dollars) into the Japanese financial system, so the government was very fast to intervene in the sphere of business and trade, but a little slow in the field with people. When you do a socioeconomic analysis of these areas affected by the earthquake and tsunami that hit Japan and the nuclear meltdowns at Fukushima, these are areas that are not very rich, they have a lot of poor and elderly people. These regions do not have the power to influence the national and political system.

What we have seen is that the state takes some time to respond and has been increasing this response time because it lacks leadership. It is also because in all catastrophes you have political struggles and you have an assessment that has to be very quick, and you have to mobilise resources at the same time. The poor

people who are affected do not have the means to protest or to demand. In all catastrophes the most affected normally are the people with the least amount of resources. You could say in Japan 'well it's different', but no. If it were Tokyo or another major city in Japan I think the response would have been different. It has to do with the means that the population has to demand and to be seen as worthy of attention.

BC: Now there are of course other forms of aid that come from outside local or state government, such as NGOs, the UN and so forth, but one factor that seems to be overlooked is the role of local communities working together to overcome the problems they face by helping each other in their own neighbourhoods. How significant do you think this is in reducing the effects of a disaster?

JM: It's crucial. We know for the first days, for the first hours, community is essential, especially the capability of local leadership. People that can lead search and rescue actions, that know where resources such as food and water are located and can organise the minimal structures needed for survival. People tend to help those they have social ties with or 'social capital'. After the earthquake in Haiti, it was all local help, it was for example the World Food Program that designed a programme to provide aid through women living in the areas affected.

Aftermath of 2010 Haiti earthquake

It was women who received rice that they took home to their families. For the first moments after a disaster you have to rely on local communities, but not all communities have the same ability. In our research you have to specify the social ties, the organisational ties, routines and structures that will be crucial to mobilise, if a catastrophe hits because you have to know who the leaders are in communities.

BC: I wanted to touch on the risks that come about from the dependency on nuclear energy that is revealed in your research comparing uranium mining
in France and Portugal, what do you think are the risks in mining uranium and how did the state respond to these risks in both cases?

Uranium mine in France

JM: In Europe there were uranium mines and there still are in the Eastern European countries, but they are closing. If you have mines you are a nuclear country and part of what is known as 'nuclearity' (defined by Gabrielle Hecht as the degree to which a nation, a program, a policy, a technology, or even a material counts as "nuclear"). You don't have to have nuclear power plants to be a nuclear country. In the comparison we did between France and Portugal, we found that the rules were very strict for French miners and less strict for Portuguese miners, such as wearing protective clothing, washing etc. As the European uranium mines are closing, the companies are buying uranium from countries in Africa and other countries where regulations are not as strict. It depends on the regulation structure of the country, if it's a poorer country that relies on mining the rules will be very loose and have consequences. In the EU, all of the old mines have to be rehabilitated.

What we found in our research is that communities co-existed peacefully with the mines when they were operating. They saw it as a means of getting jobs and access to a better life. When the mines started to close and be rehabilitated, nuclearity as radioactivity arose, people felt that they should have been compensated for the companies that left. So there was a demand from workers and local people who had to be compensated for the closing of the mines and for the exploitation of their communities. The demands were placed on the state and the companies who ran the mines. The state initiates a plan and specifies the objectives and threshold for radiation exposure along with the companies.

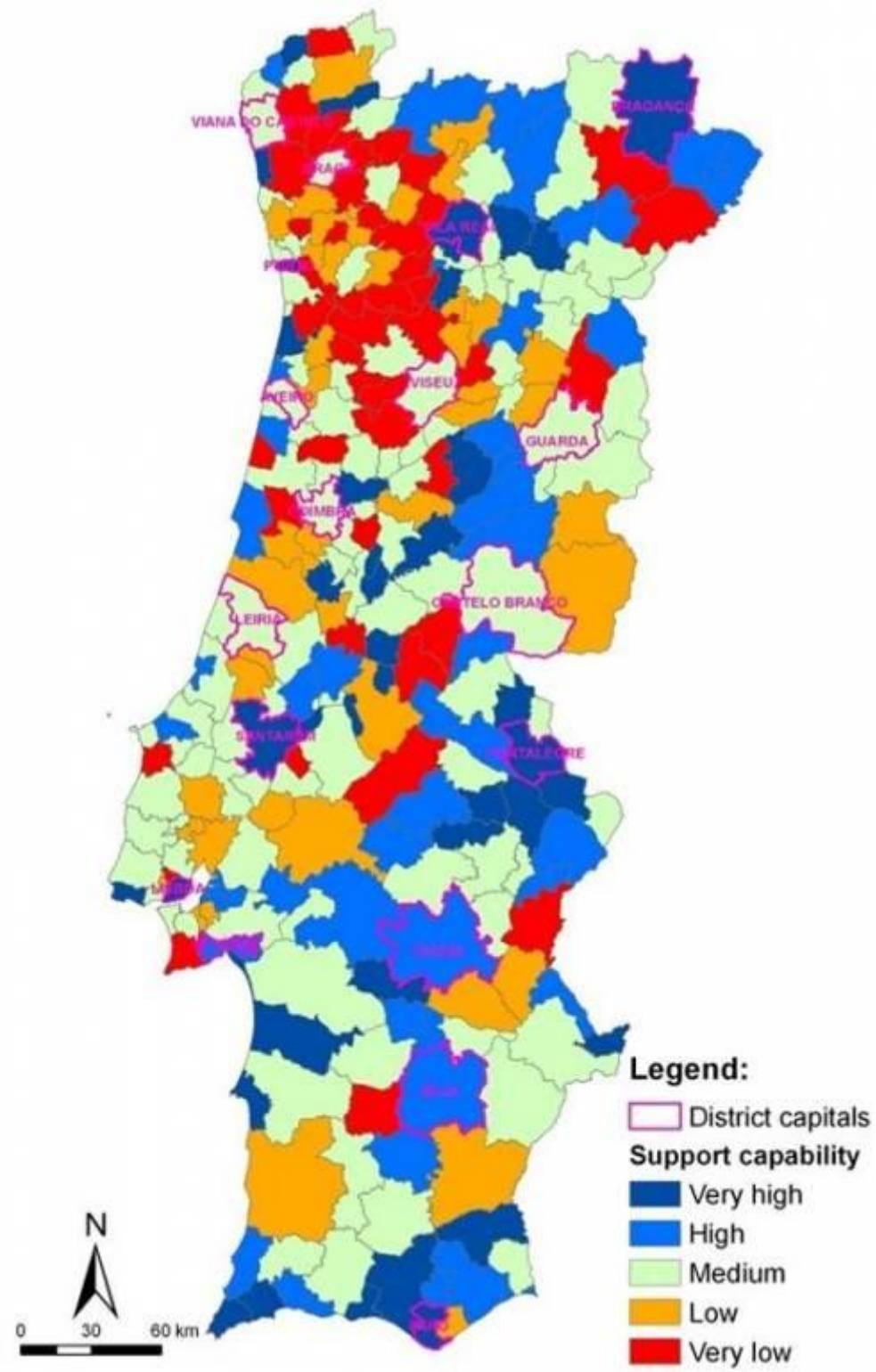
The state is always there monitoring the levels of radiation from the mines, but in Portugal and France the companies wanted to establish themselves as having the know-how to rehabilitate other sites. They wanted to be experts in the field of rehabilitation, because there are many uranium mines abandoned in Eastern European countries, such as Poland, and the companies have the specialised knowledge of moving the debris, monitoring the radiation etc. Their methods could also be used for rehabilitating all types of mines, not just uranium mines.

But this is the thing with nuclear waste, it's there for a very long time and if you have for example the debris, the used fuel, where do you stock it? In Portugal and in France they store it in ancient mining sites. But they don't stock it in new places, they stock it in places where there is a historical relationship with nuclearity.

BC: Large-scale disasters such as earthquakes, heat waves and floods clearly have a massive impact on people's livelihoods. We know that some people are more vulnerable to hazards than others. In your work in Portugal, how have you incorporated studies in social vulnerability into disaster mitigation strategies and how do you go about identifying which populations are most vulnerable to hazards?

Our challenge was doing social vulnerability analysis that can be scale relevant and operationalised into regional and municipal emergency plans. We have included studies in vulnerability in the planning for the central region of Portugal. It is the only region of the country that has done this so far. Now we have also made agreements with seven municipalities and they are implementing our vulnerability studies in their emergency municipal plans.

For those parishes or zones that have more vulnerable populations, it can be older people, it can be young people, but it depends on the hazard of course. If it is a heat wave, it's people under the age of five and more than 65, if it's a cold wave it's the same. If it's an earthquake, it depends on what kinds of buildings people are in and in what zones. For those zones that have more vulnerable people: disabled people, people who are sick or immobile, they have located resources



Municipal and parish level social vulnerability map of Portugal

closer to them, for example emergency vehicles or a local fire brigade, so they can receive help more quickly. Also, where they have zones where people are alone they have done censuses and made lists of all the people who need to be contacted regularly to make sure they are ok.

If there is an alert the fire fighters know which zones or even which buildings contain people who need to be helped in the first instance. All of this information contained is available publicly including maps of local resources so people know where to get the things they need during a disaster.

For one municipality we brought in large stakeholders into the project including the military, electric power and train companies. We ran a workshop together and they were surprised to see the local means that could be utilised. For example, in this municipality there are a number of cranes available to pick up trains if there was an accident. If there was a landslide and they needed heavy machinery, the military could use a crane provided by the train company for resolving some emergency situations. This has been incorporated into the emergency plan.

The vulnerability study was an opportunity to have these different institutions working together. Two or three companies relocated some of their resources to be closer to the possible sites of landslides, floods and other hazards. Not in the immediate site of course, but close to the site where they can be most effective. In our research, it's not only about the social aspects; it's about the infrastructural aspects — the existing infrastructures and support capability.