

Annex II

Nomination form for cities and local governments to participate in the campaign

Please send the nomination form and the mayor's letter to isdr-campaign@un.org. Nominations will be accepted on an ongoing basis throughout 2010-11.

City / Local Government (Please indicate the year the numbers were provided.)	
City name	Arborg Municipality
Location (short description)	South Iceland, 50 km east of Reykjavík, the capitol
Size (year)	158 sqkm (2010)
Population (year)	7800, 7570 in urban areas and 230 in rural farming areas (2010).
GDP	4.4 billion IKR
Hazard type(s)	Earthquakes, river flooding, sea flooding, tsunami due to ocean-landslides, sea-level rising , ashfall and land erosion from river and sea
Name of Mayor / Commissioner / Governor / Community leader	
Ms Asta Stefansdottir	
Which part of the city administration will be the focal point for the Campaign?	
Mayor	
Contact details Focal Point	
Name	Asta Stefansdottir (Solveig Thorvaldsdottir, solveig@rainrace.com may also be contacted)
Function	Mayor
Address	Austurvegi 2, 800 Selfoss, Iceland
Email	asta@arborg.is
Telephone	480-1900
Fax	
Which local institutions will be engaged in the Campaign? (In addition to the local government.)	
<p>1. Solveig Thorvaldsdottir, with Rainrace consulting service, and Ragnheidur Hergeirsdóttir, former mayor of Arborg. Rainrace and Ragnheidur introduced the campaign to Arborg municipality and are enthusiastic partners of this project. Rainrace and Ragnheidur hereby nominate Arborg as a role model community to ISDR for the My City is Getting Ready Campaign (http://www.arborg.is). Rainrace and Ragnheidur reside in Arborg.</p> <p>The other institutions in the campaign were chosen jointly by Arborg municipality, Rainrace and Ragnheidur. The strategy was to identify institutions and community societies that are not normally associated with disasters, but have shown to be an important part of the community and contributed to disaster risk</p>	

reduction, response and/or recovery activities in Arborg. Local institutions that have said that they are willing to participate in the campaign are listed below. Local institutions that have said that they are willing to participate in the campaign are listed below. In addition to other possible activities within this campaign, the institutions involved are asked to contribute to a report on their views and experiences relating to natural processes and consequent impact at the community level that can be helpful to other communities preparing for disasters. A few other contributions to the project are also described below

Rainrace lead a project on developing guidelines for local communities on short and long term recovery for natural disasters. This guidelines were submitted to Arborg immediately after the 29th May 2008 earthquake. Ragnheidur lead the implementation of the guidelines during her time as mayor and has significant experience working in the implementation of disaster guidelines for communities. Rainrace will submit a translated version of the guidelines into the report. An introduction to the project can be found at:
http://www.jardskjalftamidstod.hi.is/sites/files/jardskjalftamidstod/imagefield_thumbs/Thorvaldsdottir%20-%20Gl%C3%A6rur%2028May.pdf

Arborg was the first community in Iceland to write disaster guidelines that are specific for a municipality (as opposed to search and rescue and police related activities). A key contribution from Arborg in this project is to adapt its currently short and long term recovery guidelines to include disaster risk reduction guidelines. The various departments within the Arborg municipality will contribute in this process.

Arborg is willing to explore possibilities of receiving individuals from abroad who are interested in learning about how the municipality of Arborg deals with getting the town ready for disasters. The prospects of sharing experiences in order to reduce risk in other locations is an exciting one.

2. The hospital in Arborg.

This institution serves approximately 20 000 inhabitants in the South Iceland region. The establishment includes eight health care clinics, a hospital with 62 sickbeds in Selfoss, and health care service for the prison Litla Hraun, nursing wards with a total of 40 sickbeds for the elderly, and facilities for occupational- and physiotherapy.

3. Vallaskoli - School.

Valla-school has approximately 600 pupils. The school has organized visits to the Earthquake Engineering Research Center for earthquake education for the past 10 years. The staff, who have considerable experience in dealing with school children after serious earthquakes will share their views and explain their earthquake training programs.

4. Earthquake Engineering research Centre, of the University of Iceland.

(<http://www.jardskjalftamidstod.hi.is/en>). The contribution from the EERC, besides a contribution to the report, is a course on Natural Catastrophes. This is a 3-week (May 30th - June 18th) masters' level course. More information about the course is available at www.earthquake.is. furthermore, the EERC has contributed to increasing awareness of earthquake preparedness among school children.

5. The South Iceland University Center.

The South Iceland University Center (<http://www.earthquake.is/about-us/about-ucsi>) is also a partner of the Natural Catastrophes course.

6. Lions, both the men's and women's clubs.

Lions is active in Arborg with 3 clubs. The members have both their own experience from earthquakes and floods, but the clubs have also contributed to relief and recovery efforts abroad.

7. MS Iceland Dairies

MS Iceland Dairies is a cooperative organisation that includes over 700 of Iceland's family-run dairy farms and other milk producers across the country. We have over 450 employees in non-farm roles. The mission of the company centres on milkproduction and the making of high quality dairy products. Their experience in running

a private factory in a natural hazardous area will be presented.

8. Agricultural Association of South Iceland - Southagri

Southagri is a union of agricultural societies and clubs in South Iceland. It operates for the benefit of individual farmers and the aim is to develop increased agricultural efficiency in the area and prosperity of its clients.

9. The state prison, Litla Hraun.

The state prison is in Arborg. It room for 150 detainees. It was greatly affected during the 2008 earthquakes causing unique problems regarding evacuation of the building.

In addition to above, the general public will be offered to participate in the project. The public participation will be decided after the project activities are clear. Furthermore, the project will be open to any interested parties in Arborg that wish to join and can contribute to the cause of the campaign, for example through seminars during official community celebrations that are held every year.

Summary of potential activities:

1. Report with views and experiences.
2. Course on Natural Castarophes.
3. Submission of general recovery guidelines.
4. An adapted version of the general guidelines to Arborg.
5. Disaster risk reduction guidelines added to Arborgs recovery guidelines.
6. Seminars during official community celebrations.
7. Twinning with national partners.
8. Twinning with interational partners.
- 9 Addressing the 10 essential issues listed below.

Major Disaster Risks

(Please indicate major disasters that have occurred, prevailing hazards and vulnerable conditions.)

Arborg (River town) is a small municipality that faces a multitude of natural hazards.

Arborg is situated on the boundaries of the North-American and Euro-Asian tectonic plates. Significant earthquakes occur with regular intervals. The most recent large-scale earthquakes were a magnitude 6.6 and 6.5 in 2000 and magnitude 6.3 in 2008. The human consequences were, thankfully, low in this small community, however, there was considerable damage that affected the community as a whole, requiring the attention of the local government and staff.

River-flooding has been a serious threat through the years as Selfoss, the largest community in Arborg, is located on the river banks of the river Ölfus. Ölfus has flooded on occasion through the years, the last flood was in 2006.

The North Atlantic ocean provides the southern boundary of the municipality. The coast is a long stretch of low-lying fields with two small coastal villages, so sea-level rise due to global warming is a concern in the area. Erosion from storm surges along the coast and river banks is also of high concern.

There are no volcanoes located within the municipality boundaries, however, volcanoes such as Eyjafjallajökull, Hekla and Hengill rise majestically to the east, north and west of Arborg with their threatening ash-fall.

Multi-hazard phenomena are also a problem. The Katla volcano east of Arborg (which can erupt at any time) is likely to produce a lahar that will flow to the sea, creating an underwater landslide near the coast, resulting in a tsunami that could severely affect the coastal villages of Arborg.

Achievements and plans in relation to the ten essentials areas

A - Make an estimation of the **status** per essential as follows:

1 - poor/nothing in place, 2 - some progress in place, 3 - in place, well functioning, or N/A

B - Please describe main areas of **progress** and **achievements**.

C - Please identify **activities** and **plans** your city will pay special attention **to improve the current situation** during the campaign and beyond. Additionally, feel free to propose special events or activities your city would like undertake to raise awareness on disaster resilience. Please select the respective Essential(s).

Essential 1 – Risk reducing organization and coordination in place

Status - 2

Progress and achievements –

Arborg has through the years been involved in various risk reduction activities. For example, Arborg runs a fire-department that is proactive in risk reduction (recently ran a campaign regarding brush fires). Risk reduction is also implemented through the Building and Safety department, that ensures that buildings are built according to design. Sea-walls and land-use planning has been an part of important risk reduction in Arborg. Measures have been taken to reduce risks from the impact of flooding on the sewage system. Increasing the hot-water reservoir to reduce the risk of the town losing all its hot water during a major earthquake or another disaster (hot water in Iceland is pumped directly from the ground and use to heat houses).

In the May wake of the 2008 earthquakes, Arborg established a municipality relief and recovery plan containing pre-determined teams and standard operating procedures within the local institutions in order to be better prepared for the next event, - which happened to be a man made disaster when the banking system collapsed 7th October 2008. The new system was utilized successfully to evaluate and monitor the affects in the community in order to plan interventions. The system was based on a research project on long-terms guideline for municipalities due to natural disasters, an initiative lead by Rainrace consulting service and the University of Iceland. The current plan focuses on the short and long-term response of a disaster. The bank-collapse crises and new elections delayed the finalization of the plan, which is now on the table. The My City is Getting Ready project has brought pre-disaster risk reduction activities into the foreground and Arborg has realized that their plan can be expanded to include risk reduction.

Plans – To include disaster risk reduction guidelines into the current relief and recovery guidelines.

Essential 2 – Budget assigned

Status - 2

Progress and achievements –

Line items in the budget include:

- The civil protection committee
- Sea-wall maintenance,
- Building inspection activities
- Fire prevention activities
- Participation in the NPP project (North Periphery Programme), an ESB project about the impact of climate change on communities in the far North (temporary line item). This is the third year that it is running.

Plans – At the moment the city is adjusting to the considerable less income than previous years, due to the collapse of the economy. It is unlikely that extra budget will be added to risk reducing measures, except for threat that pose an immediate danger. The status is given a level 2 to indicate that at the moment the budget cannot be increased, but it would be possible to look more closely at the risks and how the budget is used.

Essential 3 – Risk assessment prepared

Status - 2

Progress and achievements –

Arborg has produced and participated in a number of hazard assessments, such as

- Report on flood plains.
- Overview hazard assessment as part of a national hazard assessment by the Police Commissioner's Civil Protection.

<p>- Contributions to to university studies, including an on-going doctoral study on floods.</p> <p>Hazard and risk assessments have been performed for land-use planning. The national Urban Planning agency reviews all plans before they can be accepted by local governments. There are various places in Arborg where construction is forbidden due to earthquake fractures, possibility of liquefaction during an earthquake, due to the threat of flooding or is restricted due to wetlands</p>	
<p>Plans – The plan is to use the aforementioned (1) teams, along with the partners in this project to develop more direct risk assessments that lead to information about consequences and their likelihoods, from the already made hazard assessments.</p>	
<p>Essential 4 – Investment in risk reducing infrastructure</p>	<p>Status - 2</p>
<p>Progress and achievements –</p> <p>Arborg participates in the construction of new, and maintenance of older, sea-walls in collaboration with the national government, who has the main responsibility of these structures around the coast. Other measures taken to reduce risks from natural processes include reducing the possible impact of flooding on the sewage system in the Olfus river and increasing hot water reservoirs to reduce the risk of the town losing all its hot water during a major earthquake or another disaster (hot water in Iceland is pumped directly from the ground and used to heat houses). The hot water boreholes were affected by the 2008 earthquake requiring an adjustment of the system.</p> <p>A current discussion in Arborg is whether pavements (sidewalks) should be made out of tarmac (performs well in an earthquake, but if you need to get to the piping and sewage in the pavement for repair work, you need to damage the tarmac), or flagstones (easy to remove for repair work, but get thrown about during an earthquake) or concrete (severely cracked after the earthquake, are damaged when repair work is needed, but are easy to lay and stay put with time).</p>	
<p>Plans – Arborg is currently increasing the number of hot water tanks in the town to reduce the risk of lack of access to hot water, due to damages in the boreholes during a major earthquake or other disasters. The plan is to streamline the monitoring of risks in the area.</p>	
<p>Essential 5 – Safe schools and health facilities</p>	<p>Status - 2</p>
<p>Progress and achievements –</p> <p>The school system up till the age of 15 is the responsibility of the municipalities. The schools are specially designed to withstand large earthquakes and performed well during the most recent large earthquakes. The main concern is that of building content; whether the content can injure the students or staff. One of the kitchens in a kindergarten was severely damaged in the 2008 earthquake, reminding everyone about the importance of tying objects down.</p> <p>The hospital and health care services fall under the national services. Severe cracks were observed immediately following the shaking and the hospital was evacuated. The good May weather made that decision easier.</p>	
<p>Plans – Visit the schools and hospitals and do a safety check.</p>	
<p>Essential 6 – Risk-compliant building regulation and land use applied</p>	<p>Status - 2</p>
<p>Progress and achievements -</p> <p>Arborg runs a Building and Safety department that is mandated to enforce building construction regulation. It is, however, the role of the national government to ensure that there are standards for building design and to award engineers and other professionals appropriate licensing.</p> <p>Land-use regulation is enforced through the Building and Safety department.</p>	

Landowners have a lot of freedom to built what they want witin the laws and regulation. Even if the local government deems a certain type of construction not wise in a certain area, it can only work withn the boundaries of the law. However, a recent successful story of monitoring and control by the Building and Safety Departmen is when an excavation of a future building site on the river bank revealed liquefaction hazard and the town withdrew the building permit.

Some of the residents in the coastal village Eyrarbakki have been pushing for permitting new construction within the village boudary. This has not been given because the village is built around a wetland that is floodplain. During occasional floods the water flows through these wetlands to the sea. The local government has stood firm not to allow any construction in the floodplain

Arborg is a typical Icelandic middle-class community with no low-income citizens that need specific land-use regulations.

Plans – After the plans for Items 3 and 4 above are complete, thus having a better understanding of the risk, the building department will evaluate its own procedures for keeping abreast with regulation compliance.

Essential 7 – Education programmes and training in place

Status - 2

Progress and achievements –

The schools practice Duck-Cover-Hold on a somewhat regular basis and train evacuation drills. After the 2000 earthquakes school staff sought information from the National Civil Defence agency, that had previously published and distributed pamphlets to all schools in Iceland regarding earthquake safety in schools. The school children were severly affected by the earthquakes 2000 and 2008, as the community as a whole, and the teachers worked with them to try and overcome pysological affects.

The Univeristy of Iceland Earthquake Engineering Research Center, situated in Arborg, also invites school children to the center on a regular basis to learn more about earthquakes and to exercise what to do in an earthquake.

Plans - Visit the schools and discuss with the students and staff to ensure that the training programmes are still in place.

Essential 8 – Ecosystems and natural buffers protected

Status - 2

Progress and achievements – Arborg is very proud of the wetlands in the community and the bird-life, both migrant birds and permanent birds. The wetlands by the river banks close to the sea are a breeding ground for many species. There are on-going discussions about restricting and controlling access to the area.

The North Atlantic and the Oflus river both cause erosion of the land. Arborg is working towards monitoring and controlling these areas.

Plans - To review the current plans regarding ecosystems and natural buffers.

Essential 9 – Early warning systems installed

Status - 2

Progress and achievements -

The Icelandic Metrological department issues warnings regarding storms. The IMO also monitors and warns of floods and other hazards.

In 2006 Arborg was warned of a flood upstream in the Olfus river and was able to reduce the risk in the town by removing loose items near the river banks.

The epicenter of the 2008 earthquake was underneath the town montain, Ingolfsfjall. Ingolfsfjall is 550 meters high and is a popular recreational area where people go hiking and enjoy the outside. Parts of the mountain is rather steep ending in cliffs at the top. The mountain dissapeared in a cloud of dust during the earthquake due

to countless rock and earthslide, many of which are still visible. Loose stones and rock are being monitored for safety reasons. Now that winter is coming again with snow, rain and frost, this will be even more important.

One of the main challenges for Arborg is to find the boundary between the municipality's responsibility, the responsibility of the police and the responsibility of the various ministries. The law of civil protection is unclear as it does not mirror the day-to-day responsibilities of the various institutions, but rather it gives the bulk of the responsibility after an event to the police. Arborg strives to be a role model in disaster risk reduction, disaster response and long-term recovery.

Plans - To review the current early warning systems, identify necessary measures and implement them.

Essential 10 – Needs-based (survivors) reconstruction

Status - 2

Progress and achievements – The new disaster relief and recovery plan in Arborg focuses on long-term recovery and reconstruction. It is based on setting up multi-department (within the local administration) teams that include members of society, such as from the Red Cross, and among other things monitor the situation in the society. The plan places special attention on the elderly, handicapped and people who live on their own. The system also include contacts with stakeholders outside of Arborg. Public drills would be the role of the police, which is a state-run administration, and have not been held.

Insurance is a large part of recovery and reconstruction in Iceland. The National Catastrophe Insurance Fund insures already insured private assets in the event of a natural disaster (some restrictions do apply). However, there have been lessons learned during the application of the payouts that warrant attention ensuring that reconstruction is needs based.

Plans – To review the current plans regarding needs-based reconstruction.