Establishment of NDC in the great lakes region: a tool for diplomatic and scientific reenforcement between CTBTO and the region.

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I. Introduction

Problem:

Many countries have signed and ratified the treaty but are not actively participating in CTBTO's verification regime.
This is the case of the great lake region countries.

Why this?

The cause is normally the putting into effect of diplomatic relations.

It is therefore important to awaken these relationships.

Project main question:

How to bring many countries (as the great lake region countries for exemple) to participate activelly to the verification regime of the CTBT?

I. Introduction

Some of these inactive countries face to risks and natural disasters such as earthquakes, volcanoes, tsunamis, ...

They may therefore need IMS data and IDC products from CTBTO to help them manage these hazards.

We thought that ***the Installation of NDCs*** in such contries could be the solution to bring them to participate actively in the verification regime of the CTBT.

Why?

- *The NDCs serve as a diplomatic pole between CTBTO and the countries.*
- *NDC agents who can be trained, can have to activate their governments to actively participate in CTBTO's verification regime.*
- *The NDCs can have available IMS data and IDC products to help govenments of the countries to manage risks and disasters.*

II. Benefits for CTBTO

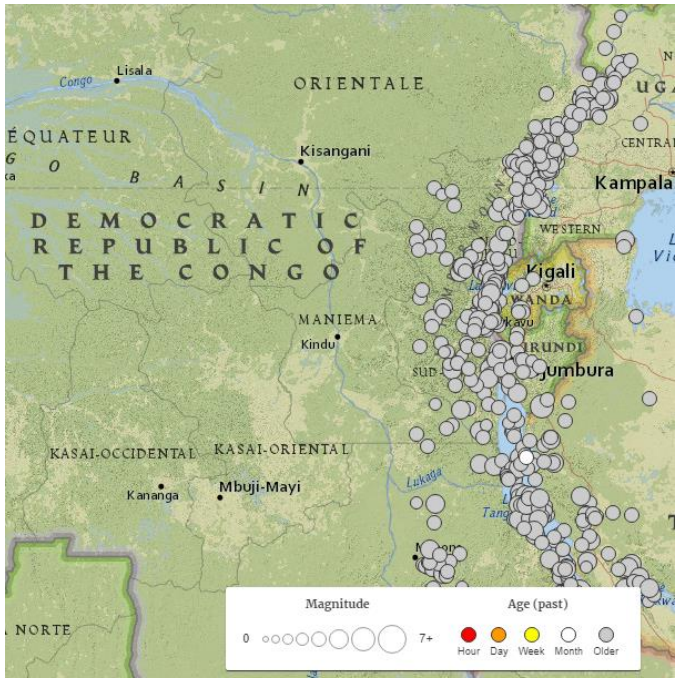
The project main to awake the diplomatic relationship between CTBTO and inactive countries in the verification regime.

- The active work of NDC in the country will ***bring these governments to actively participate in the verification regime***: supporting the CTBT activities.

- CTBTO will contribute to sustainable development from the use of its IMS data and IDC products to manage natural or artificial risks in the country.

III. Specific SDG targets in the great lake region

1. Natural hazards in the Great Lakes region.



Seismic activity of the great lake region between 1950 – 2018.

The earthquakes magnitudes do not exceed 7,0.

But the geology and the weak constructions in the region grow its vulnerabiliy.

Very seismical active region.

Recent seismic events: 2004, 2008, 2015, 2016, 2017.

III. Specific SDG targets in the great lake region

1. Natural hazards in the Great Lakes region

Building destroyed:

the 2008 and the 2016 seismic events in Bukavu (DRCongo)

III. Specific SDG targets in the great lake region

1. Natural hazards in the Great Lakes region

The Nyiragongo 2002 eruption:

- 85 percent of the economy of Goma (DRC) were lost,
- 15 percent of the geographic space of Goma was destroyed by lava flows.

III. Specific SDG targets in the great lake region

B. Solutions planned from NDC if installed

1. Defining seismic hazard zones:

- PGA (Peak Grand Acceleration) determination.
- Seismic zonation in order to show the zones where the level of hazard is high,
- Structural Analysis: Coupling seismic data with the regional structural map for the delineation of higher risk areas.

The seismic hazard maps will help the local population to know the areas at risk as well as the level of the hazard in order to plan the type of seismic construction to be considered for the region.

III. Specific SDG targets in the great lake region

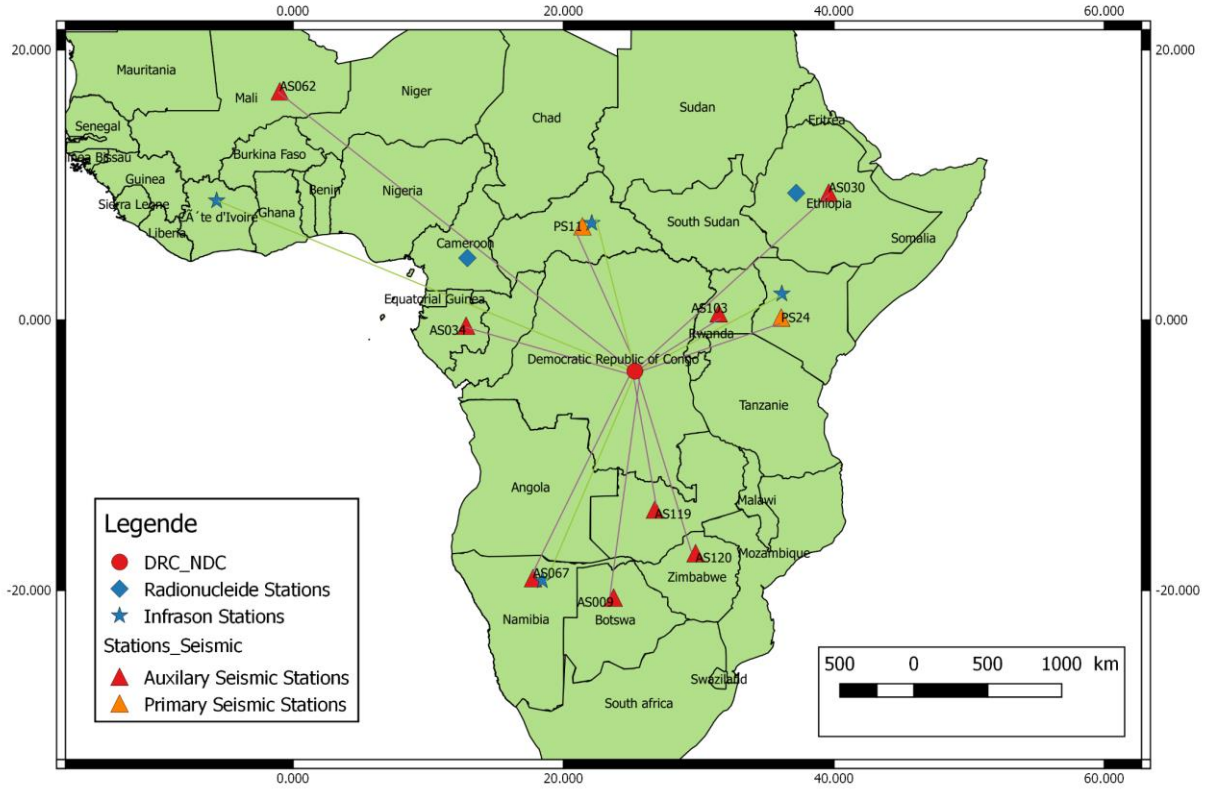
B. Solutions planned from NDC if installed

2. Nyiragongo Volcano activity monitoring:

- Contribution to the reports on volcanic activity of the Nyiragongo and Nyamulagira volcanoes which are very active in the region.

The population of Goma (DRC) and Gisenyi (Rwanda) and surrounding will receive support on volcanic risk prevention tools, which will help produce information to the people using the NDC data.

III. Planned stations to be recorded by NDC in the region



Firstly, the NDC plans to connect the seismic and infrasound stations that are installed in countries close to the DRC.

- 8 Auxilary seismic stations (with special agreements),
- 2 Primairy seismic stations,
- 4 Infrasound stations.

IV. Conclusion

- The NDCs in CTBTO members countries use IMS data and IDC products.
- NDCs are an important tool for the reinforcement of the diplomatic relations between the country and CTBTO.
- NDCs can help monitoring seismic and volcanic activities,
- Scientists at the institution that will abhor the NDC benefit from trainings organized by the PTS of CTBTO. These trainings are beneficial for the analysis of seismic and volcanic risks by local scientists.

IV. Conclusion

- Having NDC well established in any country contribute to its natural risk management and make it visible to the international community, not only in political point of view but also by contributing to science promotion,
- Evolvment of Young scientists through the NDCs is very relevent,
- The country which have NDC *can contribute actively in the verification regime* of the CTBT.
- NDCs provide expertise about using IMS data, *build up national and regional capacities* in implementing treaty and *increase participation in the verification regime*.
- So such project could bring CYG members to search for young scientists from these countries and raise awareness about the importance of CTBTO and some benefits that they would have in using IMS data and IDC products.

Finally, this is a challenge for the great lake region because we have to start for the scratch.

Thank you for your attention