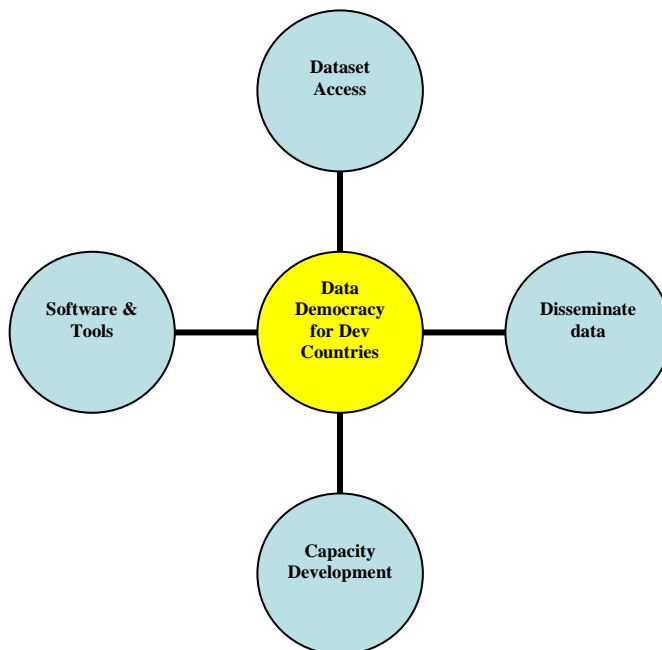


## CSIR CEOS Data Democracy Concept Paper Ver 1.0

The CSIR holds the view that the sustainability of Earth Observation (EO) efforts will be determined by the end users. By broadening data access and capacity to these end users, CEOS will successfully advance the potential of Earth Observation in the relevant domains of Societal Benefit Areas as advanced by GEO. The Data Democracy theme relies on focussed efforts along several fronts, with each front representing a pillar that constitutes the theme as presented below in figure 1. These pillars include:

1. Unhindered access to EO information,
2. Open source software and open systems such as freely available image-processing software tools and systems,
3. Adequate dissemination models which reflect the realities of band width in developing countries,
4. Locally initiated cross-border collaborative projects and intensive capacity building and training programmes.



**Figure 1**

The CSIR recognises that specific models such as the one associated with CBERS-2B data, where Brazil through INPE and China through CRESDA provide the necessary infrastructure for Africa-wide coverage of their resource, need to be expanded. In this specific model, the local ground reception facilities commit in return to disseminate the data at no cost to countries within the region and beyond.

The Data Democracy theme is built on existing initiatives such as that of NASA and NIMA. That initiative led to free and unlimited access to specific global orthorectified Landsat archive data, which since then, has had a massive impact in terms of broadening the user base of the EO data particularly in developing countries. The recent announcement by USGS that the entire Landsat archive will be freely available

from February 2009 reflects another major contribution to a concept that essentially is synonymous if not complementary to Data Democracy as espoused by the CSIR.

The CSIR has taken a short, medium and long term view in its objective to realise the Data Democracy theme:

1. Short term relates to the fundamental datasets and tools that will allow quick gains in developing countries' EO related activities. It will include a country data package that will be delivered (generally on a courier basis) to regional country nodes. Connectivity still remains a constraint in many countries in the region, and where available, the cost thereof is prohibitive including South Africa. The data packages will include direct local access to:
  - Afriocover (UN FAO land cover) and Globcover (ESA Meris-based 300m global landcover) – to allow for monitoring of broad scale land use change,
  - GeoCover (1980, 1990, 2000, 2006 Landsat Africa mosaics) – for long term multitemporal change analysis,
  - Country coverage of vector infrastructure databases (Digital atlas of the world),
  - 1 Regional workshop on the Data Democracy theme as well as on the technical application of Data Democracy related information.
2. Medium term relates to harnessing the Data Democracy theme by including additional datasets such as:
  - CBERS-2B and SAC-C (CONAE) – for the development of broad scale fundamental base data sets for monitoring (e.g. urban change maps, land cover maps etc),
  - SRTM GTOPO 30 – for the processing of CBERS-2B and other broad scale EO information into ready-to-use image files,
  - RadarSAT Africa mosaic – to compliment broad scale optical EO data for monitoring particularly in the equatorial regions where persistent cloud cover creates restrictions,
  - GEONETCAST – for data dissemination,
  - Effective collaboration between regional training centres.

Medium term also relates to access to tools such as LeoWorks, UN LCCS, Software and other similar software tools.

3. Long term relates to sustaining the Data Democracy theme as a working and proven reference model in terms of enabling access to additional fundamental EO data (e.g. Sentinel) and availing expertise and software tools. Human Capital Development (HCD) will remain a strong feature of Data Democracy for many years to come to ensure that EO remains relevant in developing countries.

In closing, undoubtedly, Data Democracy as a CEOS Chair 2008 special project is a worthwhile initiative and the CSIR believes that in partnering with CEOS agency members, the ultimate objectives of CEOS and GEO can be realised to the benefit of both developing and developed countries.