

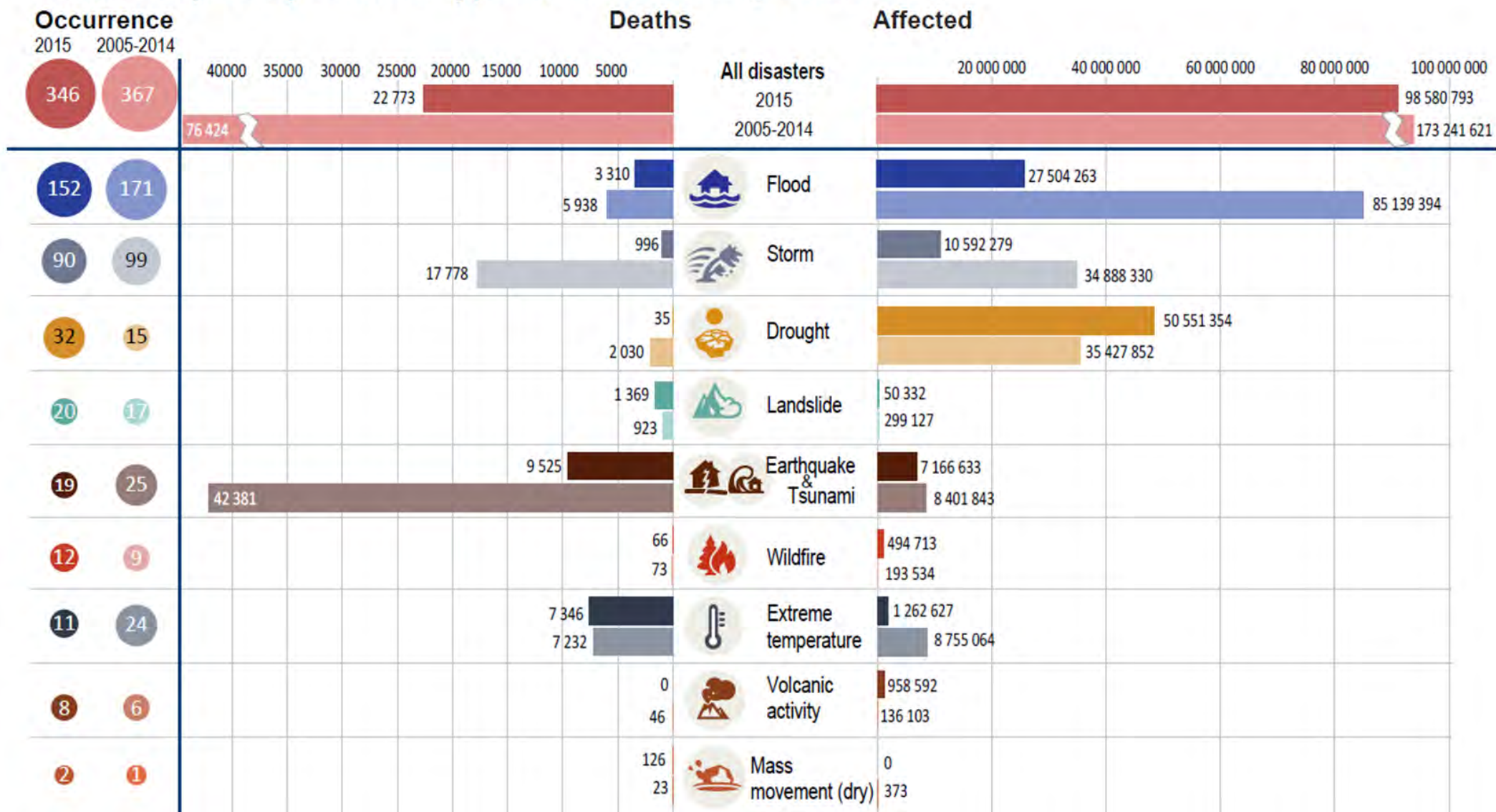
United Nations/Germany International Conference International
Cooperation Towards Low-Emission and Resilient Societies

Strengthening Early Warning Systems for Droughts (SEWS-D)

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Human impact by disaster types (2015 versus average 2005-2014)



Focusing Efforts on Drought Early Warning in Central América

Central American countries have been experiencing more frequent and intense droughts (1997/1998; 2000/2001; 2009/2010; 2014/2015).

El Niño events worsen droughts, but not all droughts behave the same way when there is an El Niño event.



Strengthening Early Warning Systems for Droughts (SEWS-D)

The SEWS-D project aims to:

Contribute to the implementation of the Sendai framework on disaster risk reduction;

Strengthen national drought policies;

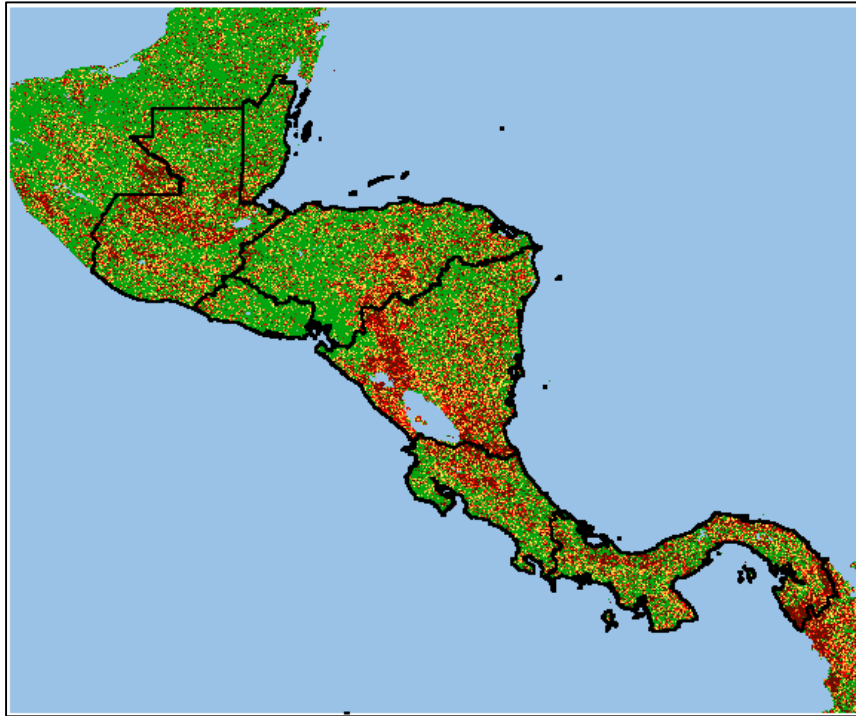
Incorporate the routine use of drought indices such as the Vegetation Condition Index and the Standard Vegetation Index;

Encourage the use of geospatial technologies.

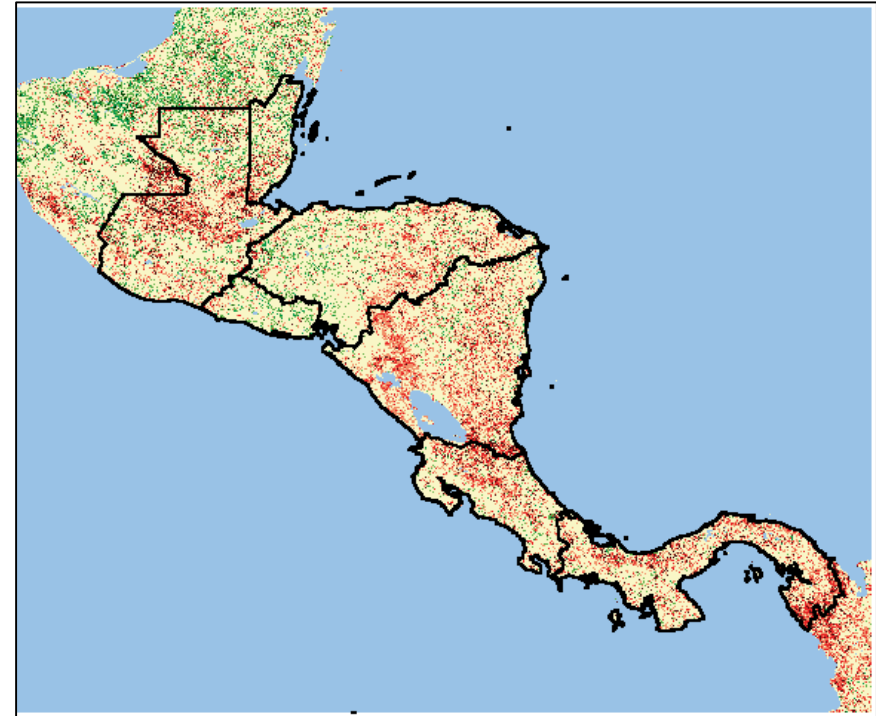


Phases of the SEWS-D Project

Development and validation of the step-by-step procedures (Recommended Practices) to generate and the VCI and the SVI on a permanent basis, including the ASIS-Country version of FAO.



Vegetation Condition Index
Julian day 145 - 2014



Standard Vegetation Index
Julian day 145 - 2014

Phases of the SEWS-D Project

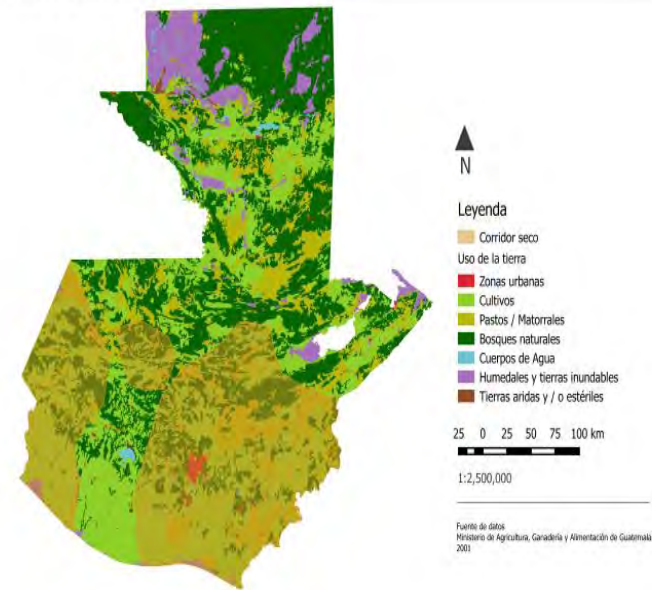
Training of professionals and experts. Validation of the use of space-based information at the country level by these groups.



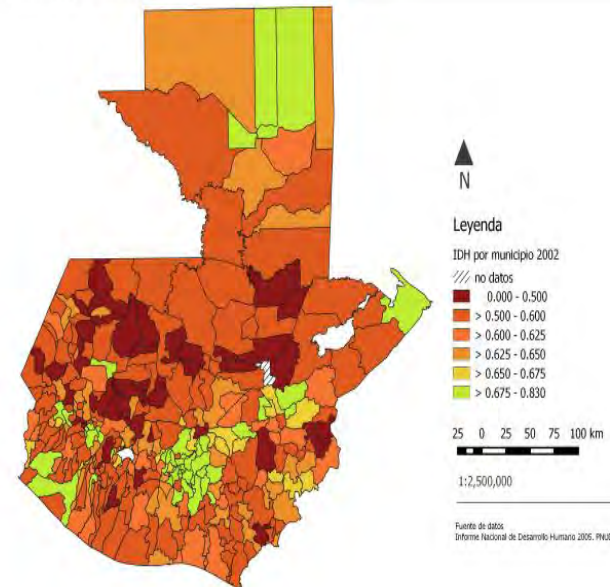
Phases of the SEWS-D Project

Incorporation of the use of space-based information in SEWS-D operated in the countries of this region.

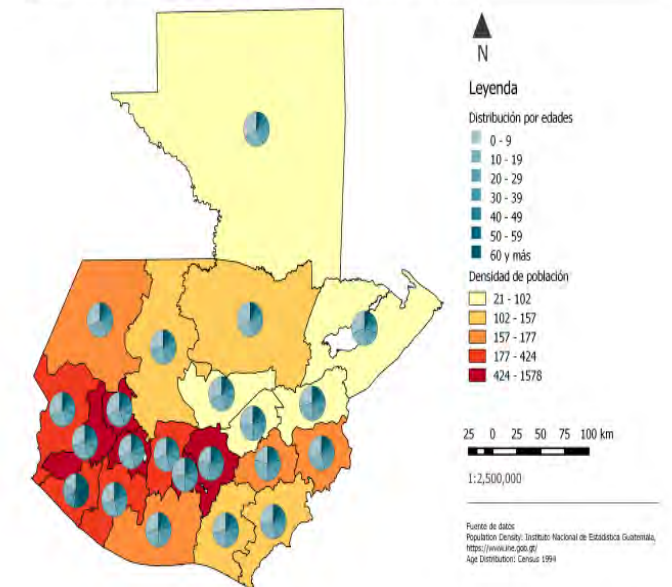
Uso de la tierra y corredor seco



Índice de desarrollo humano (IDH) por municipio 2002



Demografía de Guatemala: Densidad de población y distribución por edades



Phases of the SEWS-D Project

Tracking the use of space-based info in SEWS-D, following up on the implementation of the national drought policies; documenting lessons learned, adapting step-by-step procedures as needed;



UNITED NATIONS
Office for Outer Space Affairs

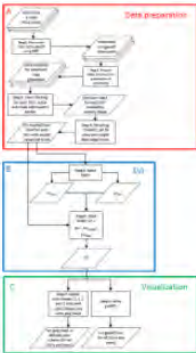
English [Español](#) [Français](#)

UN-SPIDER KNOWLEDGE PORTAL

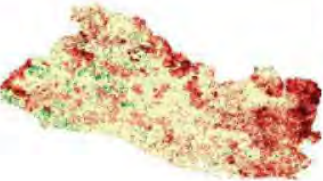
Space-based information for Disaster Management and Emergency Response

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Flowchart



Recommended Practice: Drought monitoring using the Standard Vegetation Index (SVI)



Drought monitoring is an important component in drought early warning systems. This practice shows how to monitor the impacts of meteorological drought on natural vegetation using MODIS optical satellite imagery. The practice has been developed in the context of the SEWS-D project. It is similar to the practice developed by the Iranian Space Agency but it proposes the use of a different index (SVI instead of VCI). The practice was developed by the Universidade Federal de Santa Maria (UFSM) in Brasil. (The above image shows the standard vegetation index based on EVI for El Salvador on 28 July 2014.)

[Step by Step](#) [In Detail](#)

Recommended by:



Related Practices

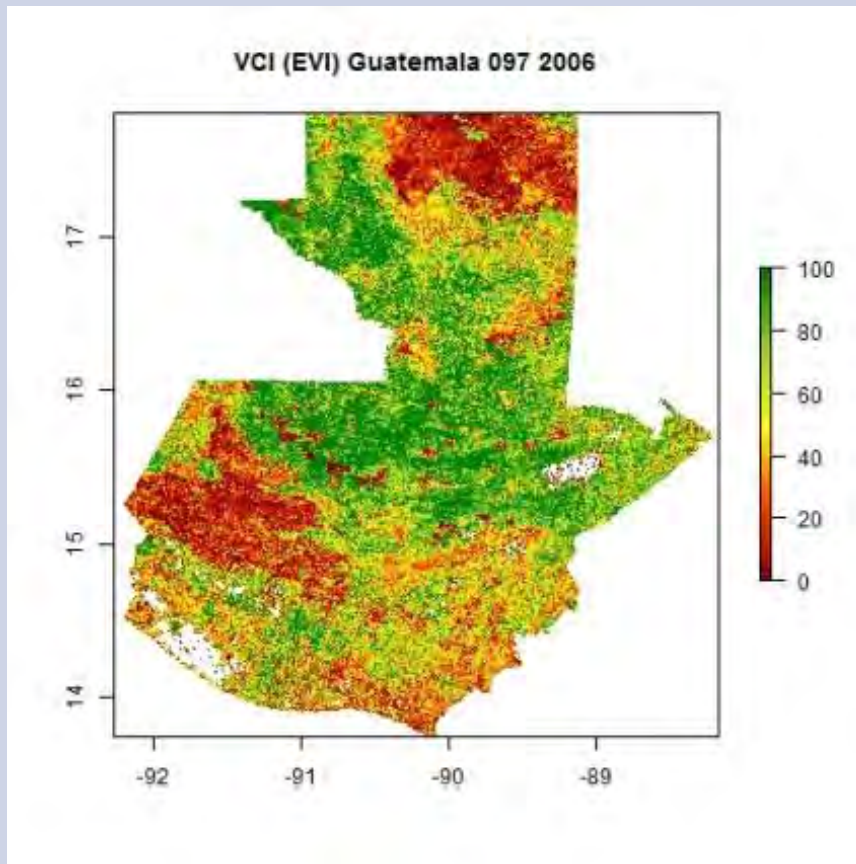
[Recommended Practice: Drought monitoring using the Vegetation Condition Index \(VCI\)](#)

Related data

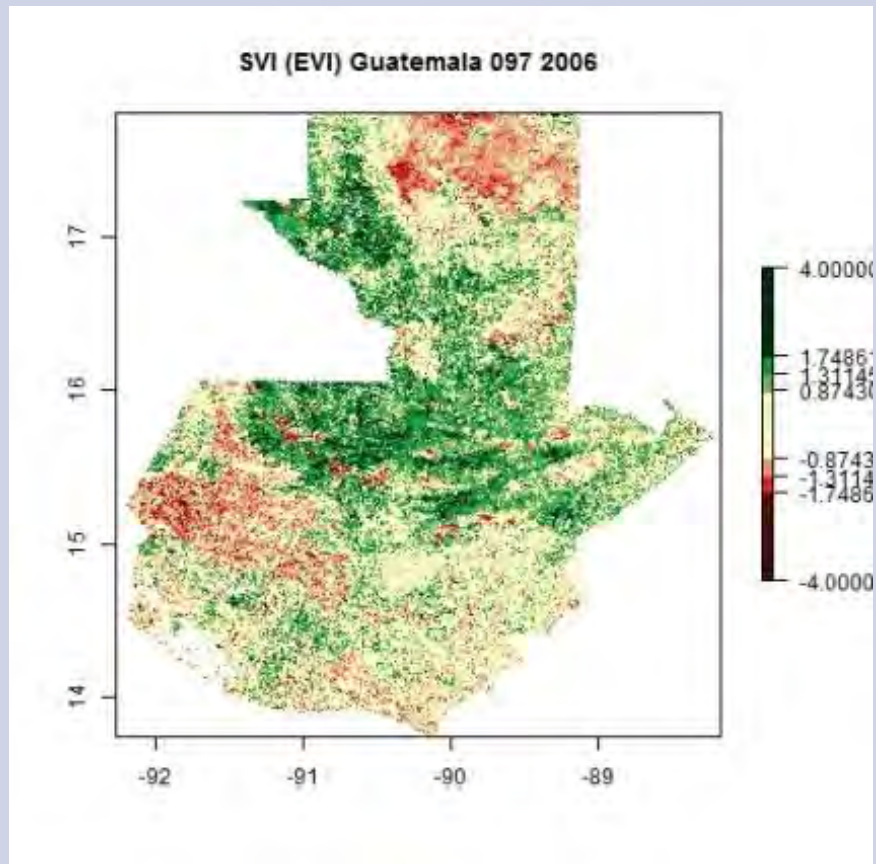
[MODIS Vegetation Product](#)

Examples of Products: VCI and SVI Maps

VCI_i (EVI)

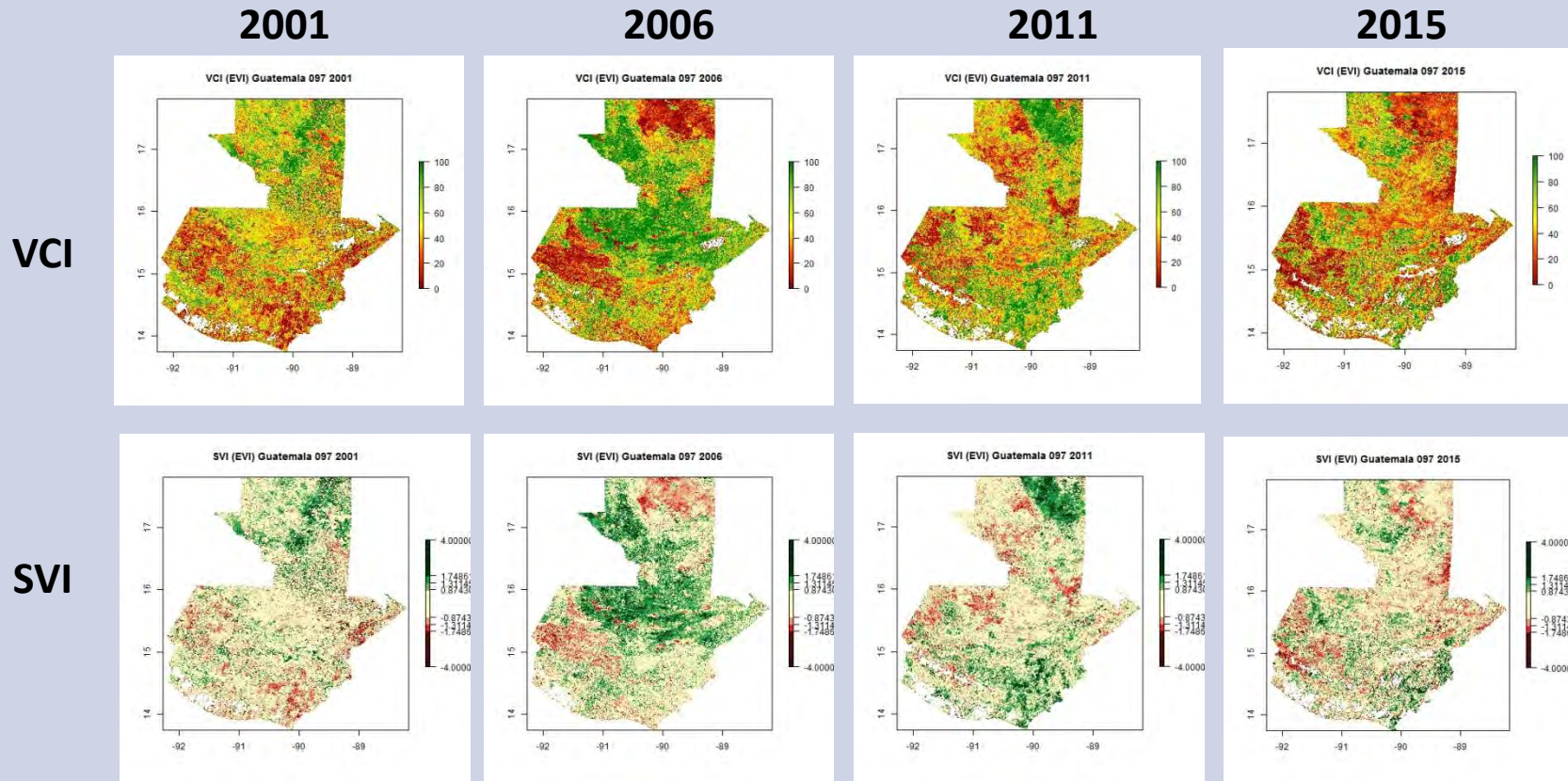


SVI_i (EVI)



Examples of Products: VCI and SVI Maps

Comparison of VCI and SVI maps for Julian day 97 corresponding to 4 distinct years using EVI composite products from MODIS - Guatemala



University's Role

- Research about new satellites, applications and methodological approach for drought monitoring and early warning systems;
- Implement the Recommended Practices on different software: open source and commercial;
- Capacity building activities at different levels;
- Integrate new data with field information as well as ancillary data.





Thank You!

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