



**Instituto Nicaragüense de Estudios Territoriales**

**[www.ineter.gob.ni](http://www.ineter.gob.ni)**

# **Nicaragua Seismic Network**

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# First Nicaragua Seismic Network 1975

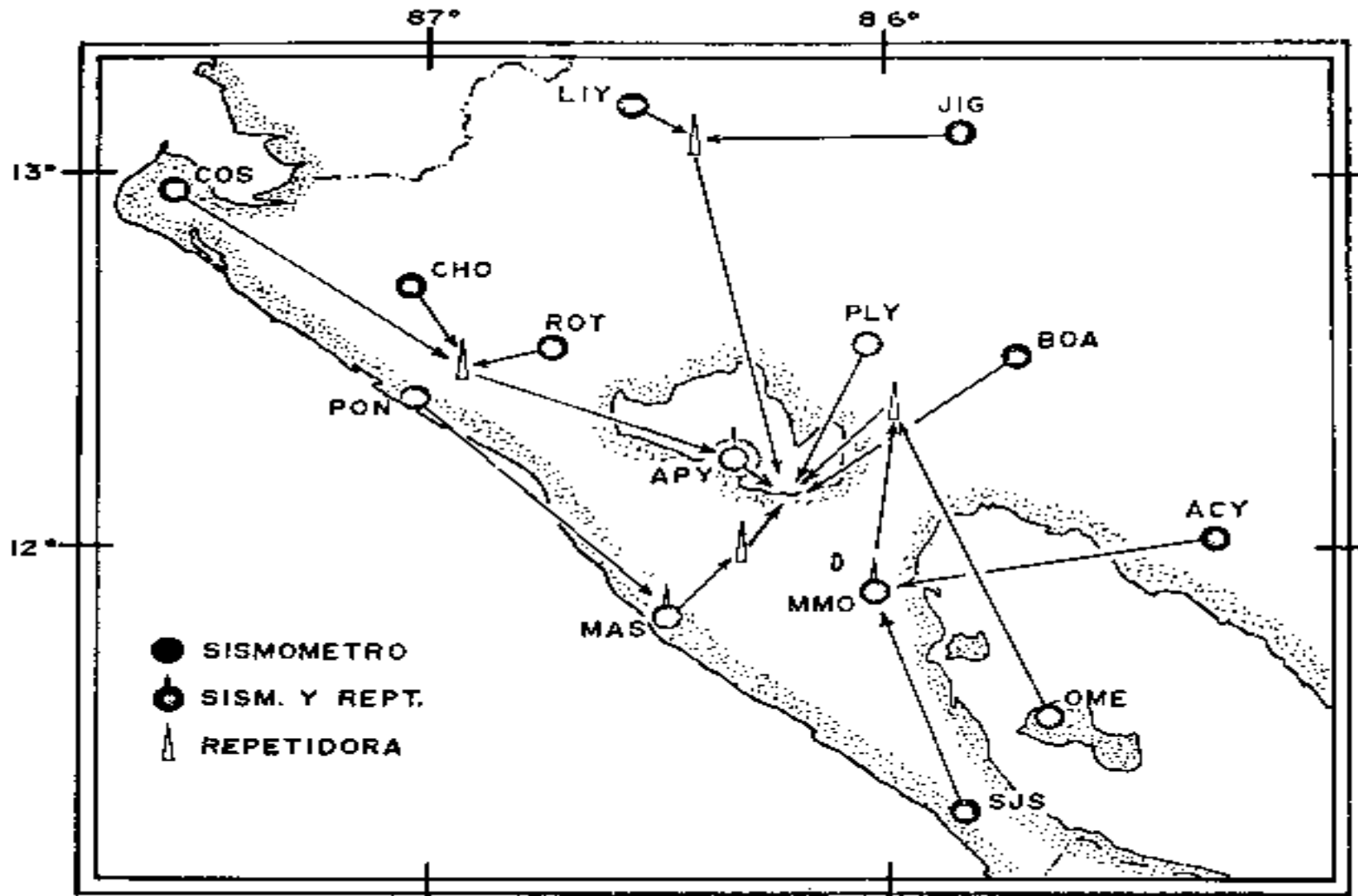
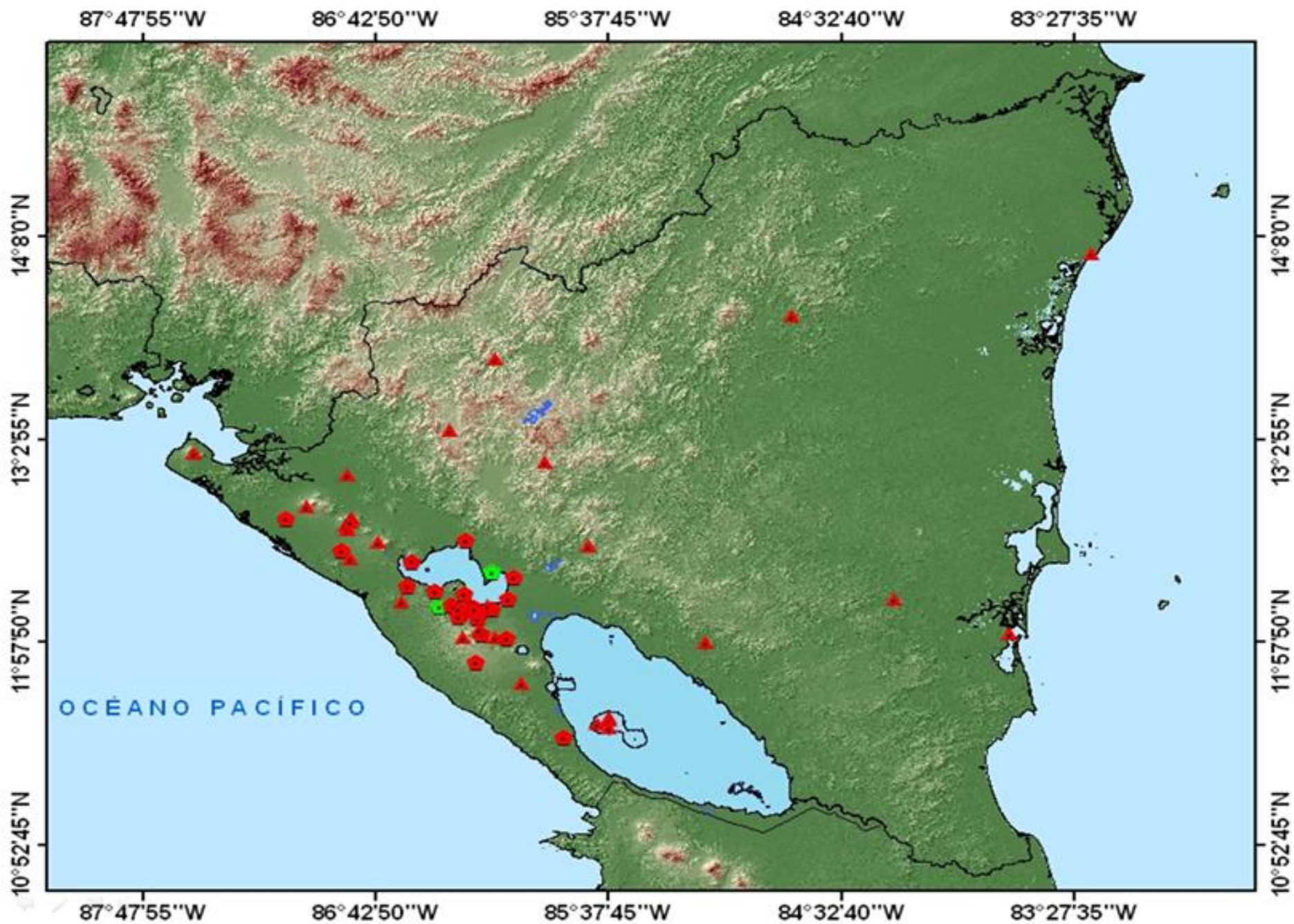


Figura 1. Mapa de las estaciones sismográficas.

# Nicaragua Seismic Network 2014



# Tsunami Nicaragua 1992



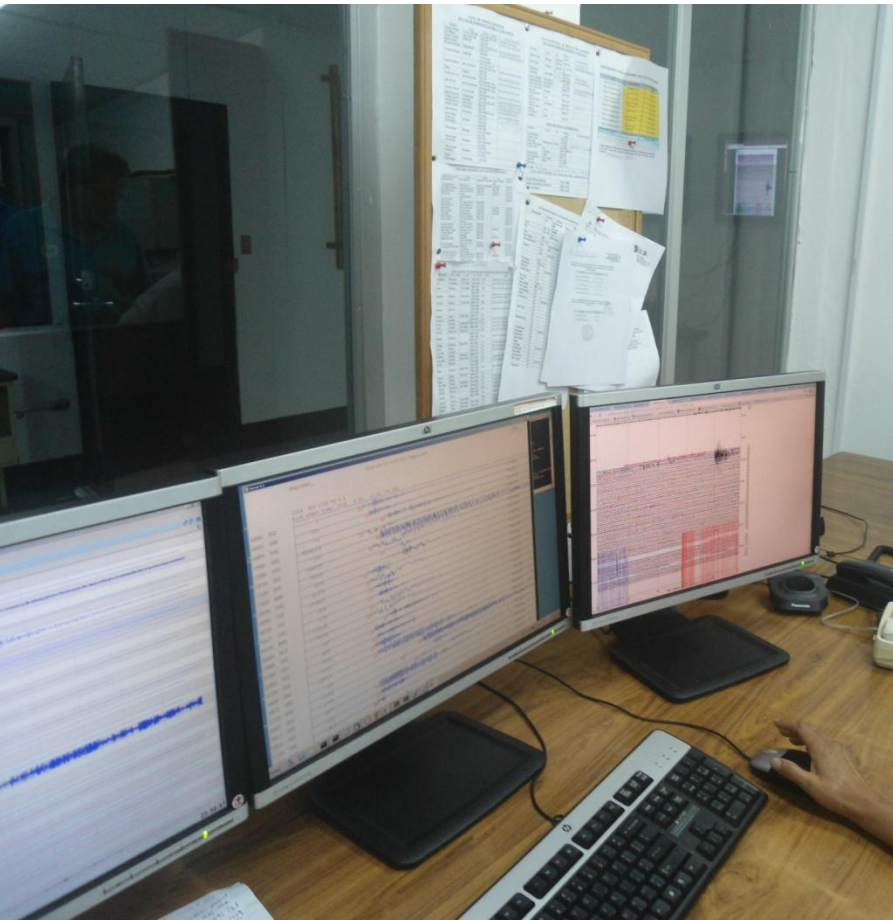
Destruction of restaurants and fishery facilities



Tsunami memorial

**Effects in Masachapa, Municipality of San Rafael del Sur - 18 people killed**

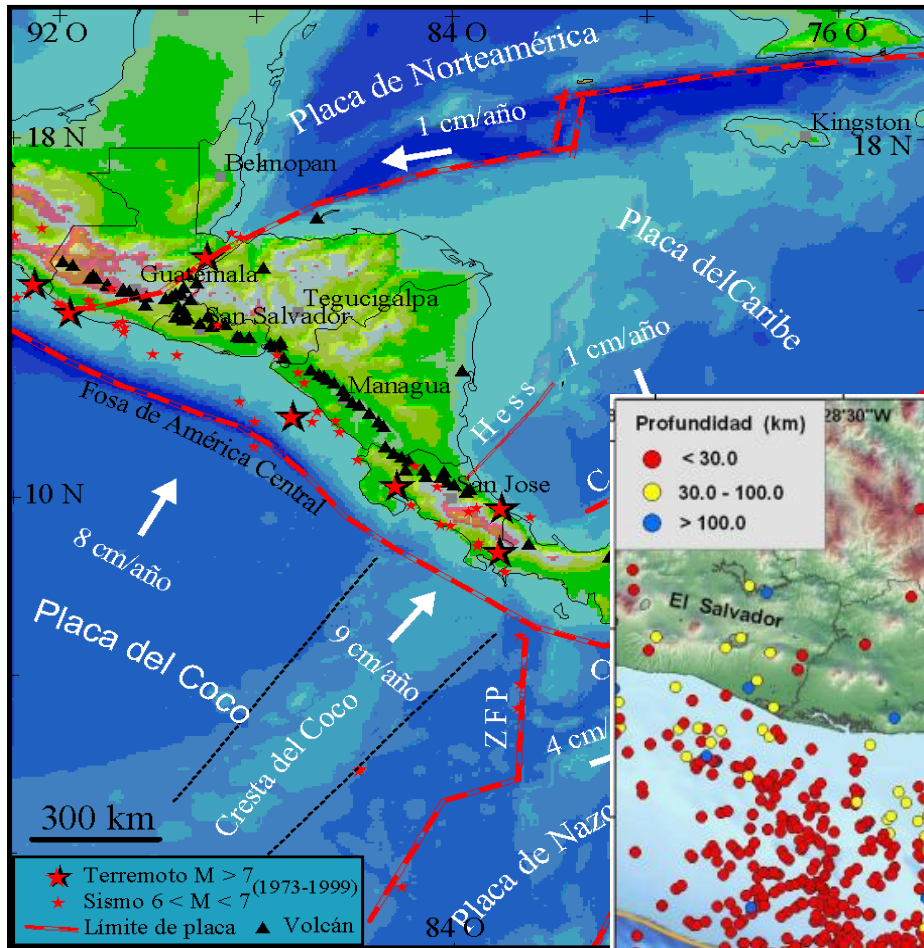
# Seismic Surveillance 24/7 1992



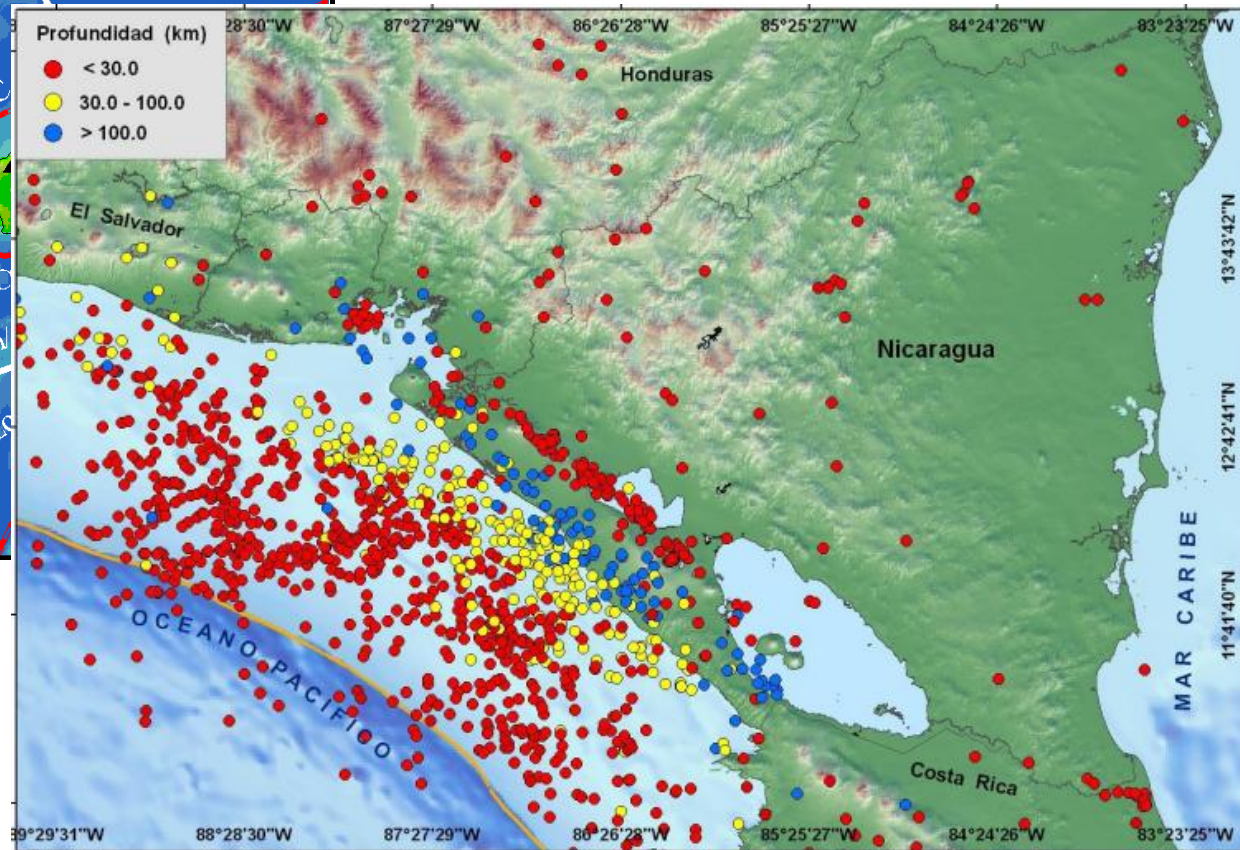
# Instrumentation



# Tectonic map



# Seismic activity



# Seismic network analysis system

Start\_Ineter.bat

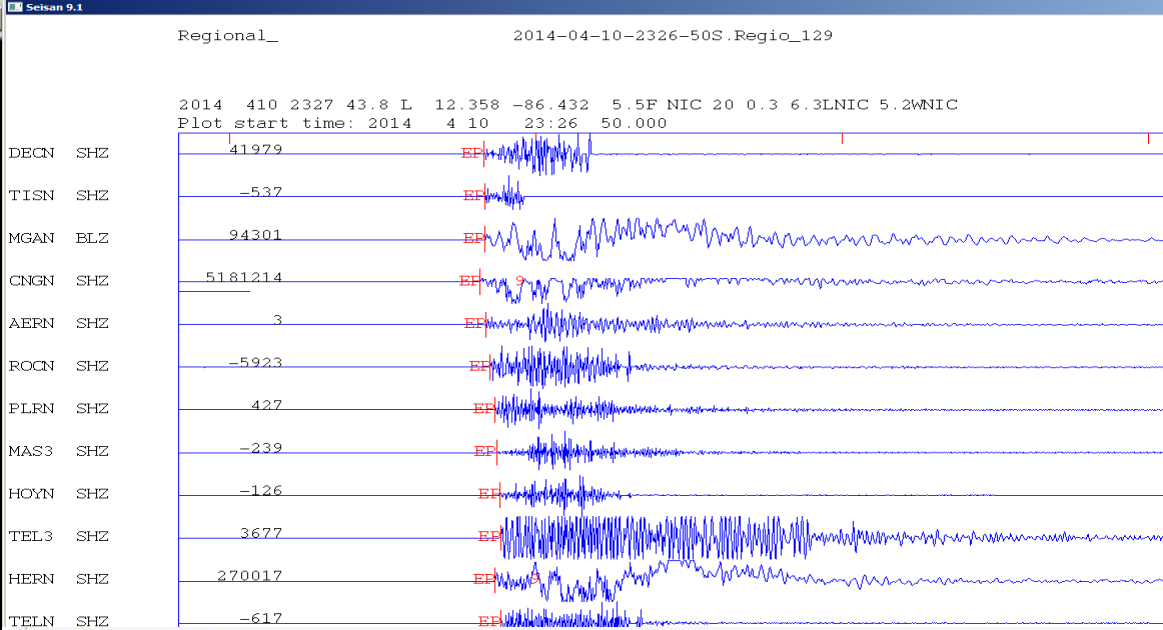
EARTHWORM SYSTEM STATUS

```

Start time (UTC):    Fri May 23 14:12:20 2014
Current time (UTC): Thu Jun 05 07:19:40 2014
Ring 1 name/key/size: WAVE_RING / 1000 / 10240 kb
Ring 2 name/key/size: PICK_RING / 1005 / 10240 kb
Ring 3 name/key/size: HYPO_RING / 1010 / 10240 kb
Ring 4 name/key/size: STATUS_RING / 1015 / 10240 kb
Ring 5 name/key/size: TRIG_RING / 1020 / 10240 kb
Ring 6 name/key/size: WAVE_RING_RSAM / 1025 / 10240 kb
Ring 7 name/key/size: DDR_RING / 1030 / 10240 kb
Ring 8 name/key/size: WAVE_RING_SNET / 1035 / 10240 kb
Ring 9 name/key/size: WAVE_RING_SCN / 1040 / 10240 kb
Ring 10 name/key/size: WAVE_RING_BIG / 1045 / 10240 kb
Ring 11 name/key/size: ALARM_RING / 1050 / 10240 kb
Ring 12 name/key/size: RAW_RING / 1055 / 10240 kb
Ring 13 name/key/size: WAVE_RING_COPECO / 1060 / 10240 kb
Ring 14 name/key/size: WAVE_RING_SSAM / 1065 / 10240 kb
Ring 15 name/key/size: SSAM_RING / 1070 / 10240 kb
Startstop's Config File: Start_ineter.d
Startstop's Log Dir: e:\ew-logs\
Startstop's Params Dir: e:\earthworm\run_ineter\params
Startstop's Bin Dir: e:\earthworm\v7.4\bin
Startstop's Priority Class: Normal
Startstop Version: v7.4 2010-03-04
    
```

Process Name	Process Id	Status	Class/ Priority	Console	Argument
statmgr	7572	Alive	Normal/Normal	Minim	statmgr.d
psnadsend	4588	Alive	Normal/Normal	Minim	psnadsend_1.d
carlstatrig	1940	Alive	Normal/Normal	Minim	carlstatrig.d
carlsubtrig	5660	Alive	Normal/Normal	Minim	carlsubtrig_event
carlsubtrig	8100	Alive	Normal/Normal	Minim	carlsubtrig_volca
trig2disk	7100	Alive	Normal/Normal	Minim	trig2disk_events
trig2disk	3960	Alive	Normal/Normal	Minim	trig2disk_volcan
scn2scn1	4004	Alive	Normal/Normal	Minim	scn2scn1.d
scn12scn	6540	Alive	Normal/Normal	Minim	scn12scn_rsan.d
ew2rsan	716	Alive	Normal/Normal	Minim	ew2rsan.d
rsan	6360	Alive	Normal/Normal	Minim	rsan.ini
rsan2disk_ineter	6584	Alive	Normal/Normal	Minim	rsan2disk_ineter
export_scn1	7772	Alive	Normal/Normal	Minim	export_scn1_ack.d
export_scn1	2460	Alive	Normal/Normal	Minim	export_scn1_acp.d
import_generic	7088	Alive	Normal/Normal	Minim	import_gen_acp.d
slink2ew	4548	Alive	Normal/Normal	Minim	slink2ew_seiscomp
sendfileII	6776	Alive	Normal/Normal	Minim	sendfileII.d
wftimefilter	5460	Alive	Normal/Normal	Minim	wftimefilter.d
export_scn	7984	Alive	Normal/Normal	Minim	export_scn_SC3.d
export_generic	7964	Alive	Normal/Normal	Minim	export_generic.d

Press return to print Earthworm status, or  
type 'restart nnn<cr>' where nnn is either a module name or Process ID, or  
type 'quit<cr>' to stop Earthworm.



46 days and 2 hours ago

Near Coast of Nicaragua

Type	Value	+/-	Count
M	6.3	-	31
MLv	6.4	0.10	12
Mw(mB)	6.2	0.40	26
mB	6.4	0.14	26
mb	6.0	0.21	31

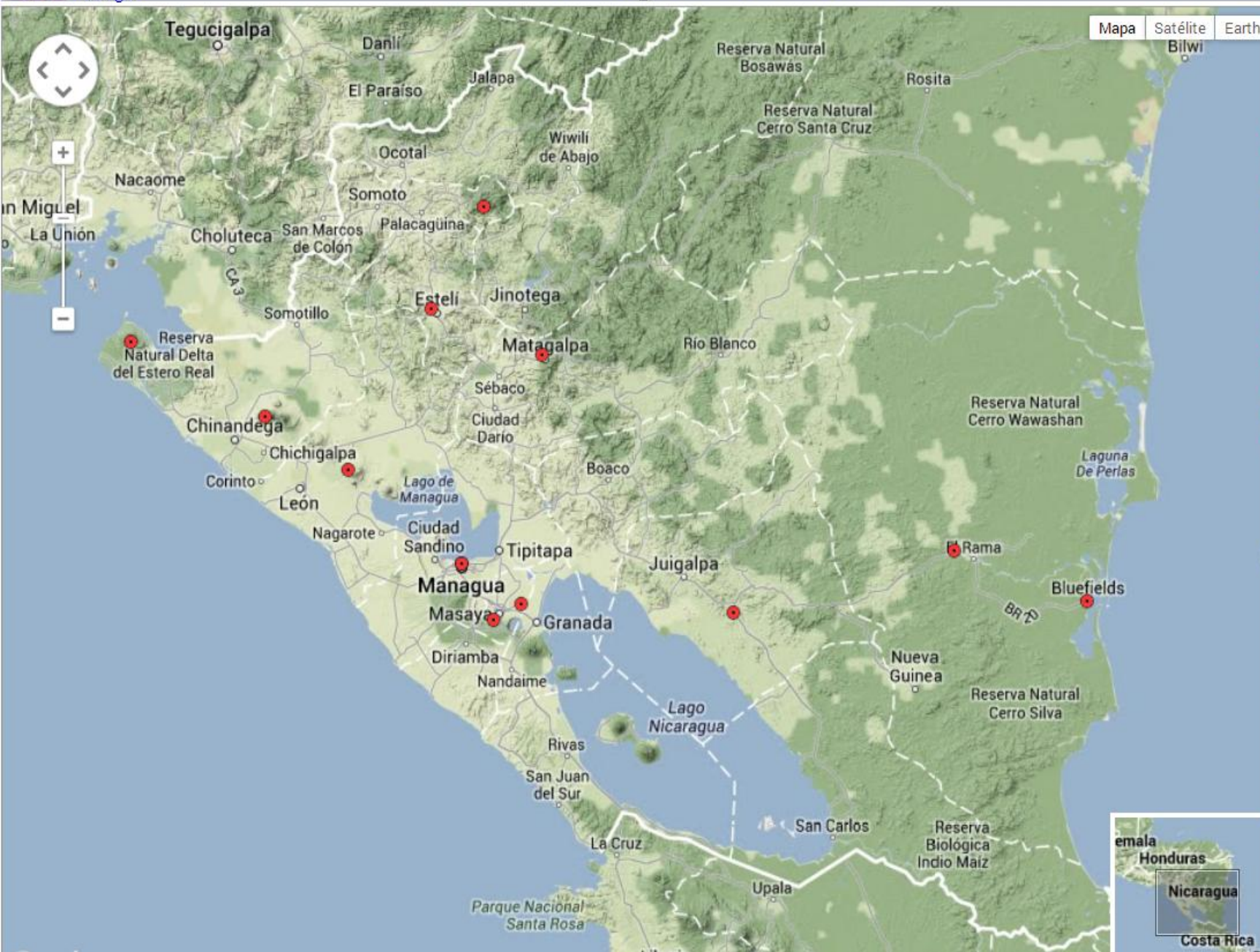
Latitude: 11.74 °N +/- 3 km  
Longitude: 87.17 °W +/- 4 km  
Depth: 29 km +/- 7 km  
Phase Count: 51  
RMS Residual: 2.1

Agency: INETER  
Station: automatic  
First Location: O.T. +1m 28s  
This Location: O.T. +24m 10s  
EventID: gfg2013lquu

Show Details



# Network map for NU Nicaraguan Seismic Network



Data Available

Realtime  
Archive

- NU.ACON
- NU.BC&A
- NU.BLUN
- NU.CNGN
- NU.CRIN
- NU.CSGN
- NU.ESPN
- NU.ESTN
- NU.MASN
- NU.MATN
- NU.MGAN
- NU.NANN
- NU.RCON

## **Future plans for the seismic network in the next years.**

- **Install 8 BB stations VSAT**
- **Install 25 SP stations**
- **Strengthen the seismic lab**
- **Establish a Tsunami Warning Center for Central America in INETER.**