IODE NATIONAL REPORT ON OCEANOGRAPHIC DATA MANAGEMENT AND EXCHANGE
FOR Costa Rica
1. **Name of Data Centre:**
   NDC Universidad de Costa Rica

2. **National IODE Coordinator:**
   Name: Dr. Luis-Manuel MURILLO-BOLAñOS
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3. **Data Center Address:**
   Casa No. 6 Residencial Lantana, Las Mercedes de San Pedro
   San Jose, Costa Rica

4. **Data Center URL:**
   [www.ucr.ac.cr/mareas](http://www.ucr.ac.cr/mareas)

5. **IODE Data Center Designation Date:**
   unknown

6. **Description of national data flow:**

   How does data flow operate in your country (if possible illustrate by means of one or more diagrams)? This should cover:

   1. **Metadata management:** for now
      - At the discovery level (e.g. do you contribute to IOC/IODE MEDI, GCMD, EDMED, another system _none_?)
      - At the Cruise level (e.g. do you contribute to IOC/IODE Cruise Summary Reports (ROSCOPs), other in-house system _none_)
      - For monitoring/operational systems (e.g. EDIOS, regional GOOS systems, etc) 1156 ENDECO and Woods Hole SP2100

   2. **Data tracking:**
      - What systems are in place to track data through from collecting organisations to through to data dissemination? None due to malfunction

7. **What is the structure of marine data management in your country:**

   1. How many organisations are involved?
      University of Costa Rica/ Harbor authority for the Pacific INCOP and Atlantic JAPDEVA

   2. Who does what?
      Data collection was in charge of the topographic office from JAPDEVA under supervision of Dr. Murillo. Now all responsibilities are in Dr. Murillo’s hands and its research time allocated yearly by the School of Physics and its research authorities
Data gathering activities, previous to the actual breakdown of all our equipment are summarized on the following diagram.

![Diagram showing data gathering activities]

3. What data goes where?
All data goes to a single personal and private PC in Casa 6 Lantana.
Data Types: Our possibilities are now restricted to what we can measure with our own hands...and the most basic equipments in coastal waters of Costa Rica, mostly on the Pacific Coastal level (Max-Min), and current data. General partially verified data on levels is available on the INTERNET On UCR (www.ucr.ac.cr/mareas/index.htm). Previous data is available on petition. Subjects are T,S, density, wave spectral and directional data for restricted periods on the Puntarenas and Limon coast of Costa Rica. This data is on DAT (Woods Hole Data Systems) and STD, RAW, STH (Endeco 1156) for april-Dec. 1996-7, and also on processed xls format.

4. Are there data for which there is no home?
No all data is stored in Lantana on a private PC during this critical period.

5. What gets passed on to other organisations?
Sea Level predictions government agencies, public, priv. companies etc), current measurements and interpretations go to private companies and the government as required and if funded. Local governmental agencies (Incop, Recope, Japdeva) and private companies (Salzgitter AG) All above subjects were treated by auxiliary personnel from INCOP and JAPDEVA (Costarrican Gov.) under my supervision but since equipment malfunctioned in 2000 and could not be repaired all data in all aspects in now managed on an auxiliary personal “one for all purposes...” computer under my charge and cover. Processed level data is distributed by Universidad de Costa Rica/www.ucr.ac.cr/mareas/index.htm

6. What regional links and data centres are there?
Only one www.ucr.ac.cr/mareas

7. What are the strengths and problems of the present arrangements nationally, regionally and internationally?:
they are obvious: All equipment for data acquisition malfunctioned and no funds for repairs except the personal contribution of Dr. L. Murillo and his time allocated for research and all data collect activities...WE are in an existential fight for the most basic elements.

8. What improvements could be made nationally, regionally and internationally?:

Working computer and local University Lab space could be found once equipment was repaired, links to other centralamerican data sources could be developed and data exchanges with other more advanced nations could be very helpful.

10. **What future national activities are planned?** Repairs the Endeco 6000gauge to measure for tidal signals as well as tsunamis and other anomalies. Finding help to acquire a companion monitoring PC for the gauge, set up the well and finding a processing computer. Other equipment is too expensive to run in Costa Rica and it is doubtful we can find financing for repairs due to unavailability of larger construction projects this year 2005.

11. **What national, regional or international projects is your NODC involved in (both IODE and non-IODE). Examples: Argo, GTSPP, EDMED, EDIOS, Sea-Search, GODAR,...** None at the moment.