

# PRIME DATABASE CONTENTS

## Introduction

The PRIME data was assembled by the following data collection activities:

- Historical zooplankton and Secchi disc data from OWS India
- Data from the PRIME Mesocosm Experiment at the Bergen University facility
- Data from the PRIME research cruise (Discovery 221) along the 20 W meridian
- Fisheries Research Services over-wintering zooplankton data from the PRIME study area

All of the PRIME data, with the exception of the underway (navigation, bathymetry, meteorology and automatically-logged surface water) data from the PRIME cruise, have been assembled into an integrated structure in a relational database. The data model underlying the database is based on the concept of events. An event is defined as an action that results in the generation of data. Events can be many things including a CTD deployment, a day in the life of a mesocosm experiment or turning on a tap to collect a water sample. Broadly speaking, events are of two types. Point events are events that may be considered to relate to a single position, like CTD profiles, vertical net hauls or corer deployments. Traverse events are events that occur along a significant distance and generally pertain to oceanographic hardware that is towed by a ship. Note that mesocosm experiments are a special type of point events for which positions have no meaning and are therefore set null.

The contents of the database are described along the lines of the data collection activities, with additional entries for database overview and dictionary tables, thus:

[Event Inventory and Data Dictionary](#)

[OWS India data](#)

[Mesocosm data](#)

[PRIME cruise data](#)

[FRS zooplankton data](#)

## Event Inventory and Data Dictionary

The Event Inventory is probably the most important component of the database. In addition to its inventory function, it stores information on event attributes, such as space and time co-ordinates. Obviously, without this information the data in the database would be useless.

The bulk of the inventory information is held in the EVENT table, which contains times, positions and other ancillary information. Table G\_CODE, which defines mnemonics used in table EVENT, supports this. The table CRSINDX provides additional information on the cruises associated with the events. The contents of either of these tables may be interrogated through forms included in the Access database.

In addition to this primary index of events, there is also a series of secondary indices that contain additional information that is specific to a particular type of oceanographic data. This information could have been stored in EVENT, but it would have resulted in an unmanageable number of columns. However, these data are often of equal importance to the data stored in EVENT. For example sample depths are stored in table BOTTLE and without these, sample data would be useless.

The following secondary indices are present in the database.

Water and air samples: table BOTTLE

CTD data: tables CTDINDX and CTDCAL

Net haul data: table NETINDX

Instrument type codes used in table CTDINDX are defined in table CTDTYP.

No direct interface is provided to these tables. Information from them is incorporated into database forms or Database Explorer output as required.

The major data tables in the database use coded fields to store information. The most important of these fields are those identifying the parameter measured and the data originator.

Parameter codes are defined by a group of tables known as the Parameter Dictionary, namely ZUSG, ZUPM, ZUCT and ZUNT. The bulk of the code definition is stored in ZUSG, including the parameter name and the protocol used to measure it. The units in which the parameter is stored may be found by obtaining a coded field from table ZUPM that is defined in table ZUNT. A database form is provided that allows the dictionary to be perused.

Data originators are identified by simple numeric codes that are defined in table ORGCODE. No direct interface is provided to this table.

## OWS India Data

The OWS India data consist of zooplankton net haul data and Secchi disc data that are accompanied by associated environmental observations. The zooplankton data are stored in a strongly normalized form in table NETDATA, which may be accessed using either the Database Explorer software or the form provided in the Access databases.

The Secchi disc data are stored in table SECCHI and may only be accessed via a database form.

## Mesocosm Data

The mesocosm experiment data include high-resolution CTD profiles, water and net sample data and meteorological data from Bergen Airport, the nearest recording station to the experiment.

The CTD data are held in table BINCTD, which may be accessed through a database form.

Most of the sample data are held in the highly normalized BOTDATA and NETDATA tables, which may be accessed either by the Database Explorer software or through database forms. However, multisizer and fatty acid data have been stored in the custom tables MULTI and FATACID. These may only be accessed via database forms.

The Bergen Airport meteorological data are held in the table WEATHER that may be accessed through a database form.

## PRIME Cruise Data

The PRIME cruise data include CTD and SeaSoar profiles, water and net sample data and new production data from long (24 hour) incubation experiments.

The CTD and SeaSoar data are held in table BINCTD, which may be accessed through database forms.

Most of the sample data are held in the highly normalized BOTDATA and NETDATA tables, which may be accessed either by the Database Explorer software or through database forms. However, fatty acid data have been stored in the custom table FATACID. This may only be accessed via a database form.

The new production data are held in the tables N15HDR and N15DAT, which may be accessed through a database form.

## FRS Zooplankton Data

These data are held in the highly normalized NETDATA table, which may be accessed either through the Database Explorer software or a database form.