INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

WORLD METEOROLOGICAL ORGANIZATION

DATA BUOY CO-OPERATION PANEL

Supplement

Annual Report for 1994

DBCP Technical Document No. 1

DATA BUOY CO-OPERATION PANEL

SUPPLEMENT TO DBCP TECHNICAL DOCUMENT NO. 1

ANNUAL REPORT FOR 1994

National reports from Canada and Japan on data buoy activities to be included in Annex I of the DBCP Annual Report for 1994.

This document should be considered as additional information to the DBCP Annual Report for 1994.

ANNEX I, SUPPLEMENT

NATIONAL REPORTS ON DATA BUOY ACTIVITIES

COUNTRIES

AUSTRALIA

CANADA

CHINA

FINLAND

FRANCE

GREECE

ICELAND

JAPAN

KOREA, REPUBLIC OF

NETHERLANDS

NEW ZEALAND

NORWAY

SOUTH AFRICA

UNITED KINGDOM

UNITED STATES OF AMERICA

CANADA

YEAR: 1994

CURRENT PROGRAMMES

A. Agency or program: Canada - Northeast Pacific Ocean

Number and type of buoys:	
a) Deployed during year:	1 three metre discus
	4 standard drifters
	2 air deployed CMOD
	2 WOCE drifters
b) Operational at 31 August:	3 moored six metre NOMAD buoys
	13 moored three metre discus buoys
	13 drifting buoys
c) Reporting on GTS at 31 August:	16 moored buoys
	13 drifters
Purpose of programme:	operational
Main deployment areas:	Northeast Pacific Ocean

B. Agency or programme: Canada - Arctic

Number and type of buoys:	
a) deployed during year:	1 moored buoy redeployed in Great Slave Lake
b) operational at 31 August:	1
c) reporting on GTS at 31 August:	1
Purpose of programme:	operational
Main deployment areas:	Canadian Arctic

C. Agency or programme: Canada - Great Lakes, Lake Winnipeg

Number and type of buoys:	
a) deployed during year:	5 moored three meter discus buoys Great Lakes
	1 moored twelve meter discus Great Lakes
	2 moored buoys Lake Winnipeg
b) operational at 31 August:	6 in Great Lakes
	2 in Lake Winnipeg
c) reporting on GTS at 31 August:	6 in Great Lakes
	2 in Lake Winnipeg
Purpose of programme:	operational
Main deployment areas:	Great Lakes, Lake Winnipeg

D. Agency or programme: Canada - Northwest Atlantic

Number and type of buoys:	
a) deployed during year:	1 six meter NOMAD 1 three meter discus
b) operational at 31 August:	6 six meter NOMADS 1 three meter discus
c) reporting on GTS at 31 August:	7
Purpose of programme:	operational
Main deployment areas:	Northwest Atlantic

E. Agency or programme: Fisheries and Oceans

Number and type of buoys:	
a) deployed during year:	8 moored wave buoys
b) operational at 31 August:	7
c) reporting on GTS at 31 August:	nil
Purpose of programme:	mostly operational, some met/ocean research
Main deployment areas:	Coastal waters of Newfoundland, British Columbia and Lake Ontario

PLANNED PROGRAMS

A. Agency or program: Canada - Northeast Pacific Ocean

Number and type of buoys planned for deployment in next 12 months.

Purpose of programme:	
a) operational:	5 standard drifting buoys 3 air deployable CMOD
b) developmental:	1 six metre NOMAD to be redeployed in Oct-94 in continuation of Severe Wave Study
c) met/ocean research:	nil
Main deployment area:	Northeast Pacific Ocean

B. Agency or programme: Canada - Arctic

Number and type of buoys planned for deployment in next 12 months:

Purpose of programme:	
a) operational:	3 CALIB drifters 1 TAD drifter 1 standard drifter
b) developmental:	1
c) met/ocean research:	
Main deployment areas:	Arctic Ocean

C. Agency or programme: Canada - Great Lakes, Lake Winnipeg

Number and type of buoys planned for deployment in next 12 months:

Purpose of programme:	
a) operational:	1 twelve meter discus buoy
b) developmental:	nil
c) met/ocean research:	nil

Main deployment areas: Great Lakes

D. Agency or programme: Canada - Northwest Atlantic

Number and type of buoys planned for deployment in next 12 months:

Purpose of programme:	
a) operational:	nil
b) developmental:	nil
c) met/ocean research:	nil

Main deployment areas:

E. Agency or programme: Fisheries and Oceans

Number and type of buoys planned for deployment in next 12 months:

Purpose of programme:	
a) operational:	8 moored wave buoys 15 ice beacons
b) developmental:	5 ice pressure buoys
c) met/ocean research:	nil

Main deployment areas: Coastal waters of Newfoundland, British Columbia and the Arctic

TECHNICAL DEVELOPMENTS

Moored Buoy Systems: Canada - North East Pacific Ocean

a) Buoy design: Solar powered buoy in second year of ocean operation

b) Instrumentation: Global Positioning Systems installed on 7 buoys.

Dual scalar/vector wind speed processors on 7 buoys.

Smart Argos/GPS beacon under development - unit will only transmit via Argos when GPS senses an off station condition.

Severe Wave Study continued from 1993.

Campbell Scientific buoy payload used on Great Lakes twelve meter buoy

PUBLICATIONS

Monthly Moored Buoy Status Report
Monthly Drifting Buoy Status Report and Drift Track Map
Annual Pacific and Yukon Region Moored Buoy Inspection Reports

SPECIAL COMMENTS

a) Quality of buoy data: Good

b) Communications: Some local DRGS problems in receiving GOES data.

c) Buoy Lifetimes: Moored buoys - over 2 years between battery changes. Expect 3 - 4 years with current configuration.

d) Other: Drifting Buoys - Over 2 years
46687 - 53 months
46681 - 48 months
46682 - 38 months

JAPAN

Year: 1994

CURRENT PPOGRMMES

A. Maritime Safety Agency

Number and type of buoys:
(a) deployed during year:
21 surface drifters with holey sock drogues and SST sensors

(b) operational at 31 August: 18

(c) reporting on GTS at 31 August: 5

Purpose of programme: ocean research (circulation)

Main deployment areas:
North Pacific, Indian and Antarctic Ocean

B: Tokai University

Number and type of buoys:
(a) deployed during year:
3 surface drifters with window shade drogues and SST sensors

(b) operational at 31 August: 3

(c) reporting on GTS at 31 August: None

Purpose of programme:
ocean research (gathering mechanism of drifting wastes)

Main deployment areas: North Pacific

C. Japan Meteorological Agency

Number and type of buoys:
(a) deployed during year:
6 surface drifters with holey sock drogues, SST sensors and crystal barometers
3 moored buoys with 13 maritime meteorological and oceanographic sensors

(b) operational at 31 August: 4 surface drifters
: 3 moored buoys

(c) reporting on GTS at 31 August: 4 surface drifters
: 3 moored buoys

Purpose of programme:
drifters: met/ocean research and development of a crystal barometer
moorings: met/ocean research and the quickest announcement of warnings

Main deployment areas:
drifters: North Pacific Ocean
moorings: seas around Japan

D: Japan Marine and Science Technology Center

Number and type of buoys:
(a) deployed during year: 8 WOCE/TOGA SVP type drifters

(b) operational at 31 August: None

(c) reporting on GTS at 31 August: None

Purpose of programme: ocean research (surface current)

Main deployment areas: east of Philippines

E: Japan Marine and Science Technology Center

Number and type of buoys:
(a) deployed during year:
1 surface drifter (cooperation with Woods Hole Oceanographic Institution, USA)
1 moored buoy (cooperation with University of Alaska, USA)

(b) operational at 31 August: 2 surface drifters
: 1 moored buoy

(c) reporting on GTS at 31 August: None

Purpose of programme:
met/ocean research (transport processes of water, heat and substances among ocean, sea ice and atmosphere)

Main deployment areas: Arctic Ocean

F: Japan Fisheries Agency

Number and type of buoys:
(a) deployed during year:
2 surface drifters with upwelling radiance, downwelling irradiance and SST, but without drogues

(b) operational at 31 August: None

(c) reporting on GTS at 31 August: None

Purpose of programme: ocean research (upwelling radiance)

Main deployment areas:
western North Pacific, off Florida and Mediterranean

G. Hokkaido University

Number and type of buoys:
(a) deployed during year: 4 drifters on ice floes

(b) operational at 31 August: None

(c) reporting on GTS at 31 August: None

Purpose of programme: ocean research (drift of ice floes)

Main deployment areas: western part of the Sea of Okhotsk

H: University of Tokyo

Number and type of buoys:
(a) deployed during year:
10 compact surface drifters with drogues

(b) operational at 31 August: None

(c) reporting on GTS at 31 August: None

Purpose of programme:
ocean research (transport process of fish eggs and larvae)

Main deployment areas: Kuroshio and Indonesian Throughflow

PLANNED PROGRAMMES

A. Maritime Safety Agency

Number and type of buoys for deployment in next 12 months:
22 surface drifters with holey sock drogues and SST sensors

Purpose of programme: ocean research (circulation)

Main deployment areas:
North Pacific, Indian and Antarctic Ocean

B. Japan Meteorological Agency

Number and type of buoys for deployment in next 12 months:
6 surface drifters and 3 moored buoys

Purpose of programme:
drifters: met/ocean research and development of a crystal barometer
moorings: met/ocean research and the quickest announcement of warnings

Main deployment areas:
drifters: North Pacific Ocean
moorings: seas around Japan

C. Japan Marine Science and Technology Center

Number and type of buoys for deployment in next 12 months:
1 surface drifter and 1 moored buoy

Purpose of programme:
met/ocean research (transport processes of water, heat and substances among ocean, sea ice and atmosphere)

Main deployment areas: Arctic Ocean

D. Japan Marine Science and Technology Center

Number and type of buoys for deployment in next 12 months:
6 moored ADCP buoys

Purpose of programme:
ocean research (New Guinea Coastal Undercurrent and Equatorial Undercurrent)

Main deployment areas: equatorial Pacific between 137E and 147E

E. Japan Fisheries Agency

Number and type of buoys for deployment in next 12 months:
2 surface drifters with upwelling radiance, downwelling irradiance and SST, but without drogues

Purpose of programme: ocean research (upwelling radiance)

Main deployment areas: western North Pacific

F. University of Tokyo

Number and type of buoys for deployment in next 12 months:
10 compact surface drifters with drogues

Purpose of programme:
ocean research (transport process of fish eggs and larvae)

Main deployment areas: Kuroshio and Indonesian Throughflow

TECHNICAL DEVELOPMENTS

A. Japan Meteorological Agency
Instrumentation: Development of a crystal barometer

B. Japan Marine Science and Technology Center
Instrumentation:
Development of real-time transmission system for surface temperature and salinity data from a surface moored buoy