

**Government of the People's Republic of Bangladesh  
Ministry of Environment and Forest  
Department of Forest**

**SUNDARBAN BIODIVERSITY CONSERVATION PROJECT  
SURFACE WATER MODELLING  
TA NO. 3158-BAN (Contract COCS/00-696)**



**FINAL REPORT**

**VOLUME 2**

**ANNEXURE A : SALINITY MAPS  
ANNEXURE B : WATER QUALITY**

**AUGUST 2003**



**INSTITUTE OF WATER MODELLING**  
(erstwhile Surface Water Modelling Centre)

**Government of the People's Republic of Bangladesh  
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**INSTITUTE OF WATER MODELLING**  
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## Structure of Final Report

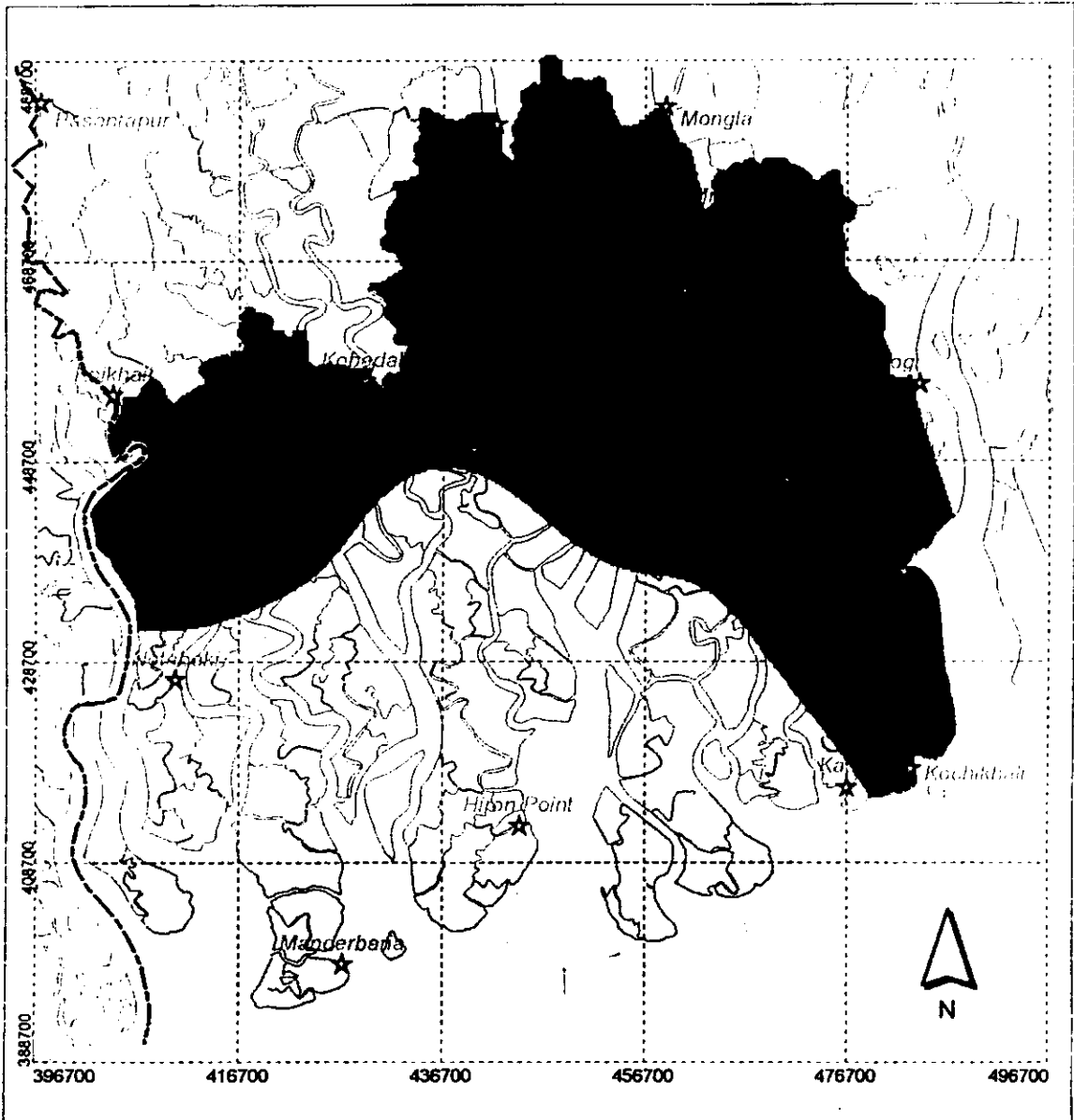
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| Volume 2 | Annexure A : Salinity Maps<br>Annexure B : Water Quality Plots and Tables  |
| Volume 3 | Annexure C : Results of Intensive Monitoring on Pilot Areas  |
| Volume 4 | Annexure D : Flow, Sediment and Morphological Observations   |
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Annexure A  
(Salinity Maps)



**Legend**

- ★ Sampling Location
  - River Network
  - ▬ International Boundary
- Salinity (ppt)**
- 1 - 5
  - 5 - 10
  - 10 - 15
  - 15 - 20
  - 20 - 25
  - 25 - 30

**Salinity Distribution Map  
January 2001**

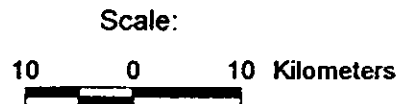
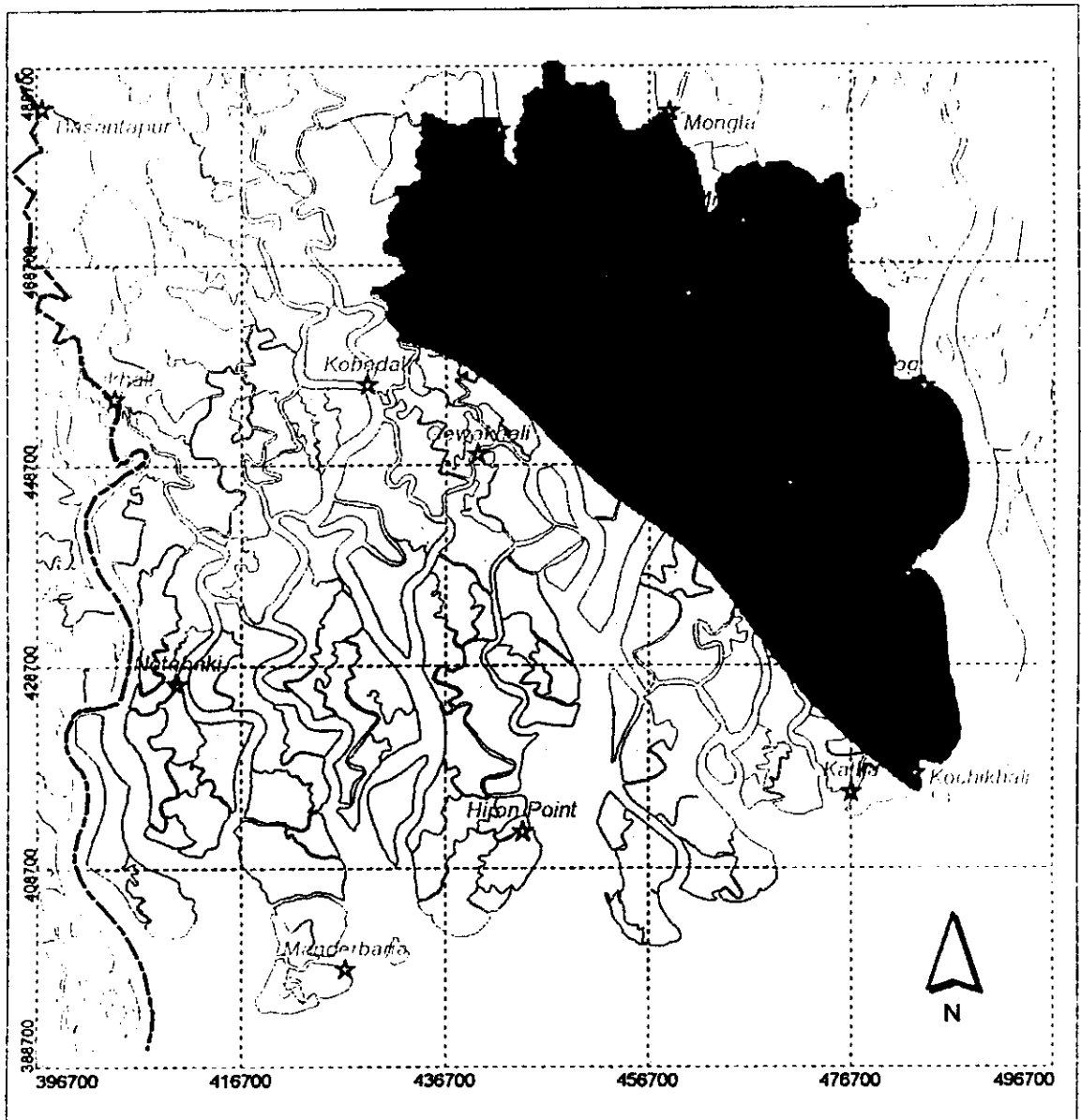


Figure: A1

**IWM**  
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Search to Enhance Your Planning Capabilities



Legend

- ★ Sampling Location
- River Network
- - - International Boundary

Salinity (ppt)

- 144 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- 25 - 30

Salinity Distribution Map  
February 2001

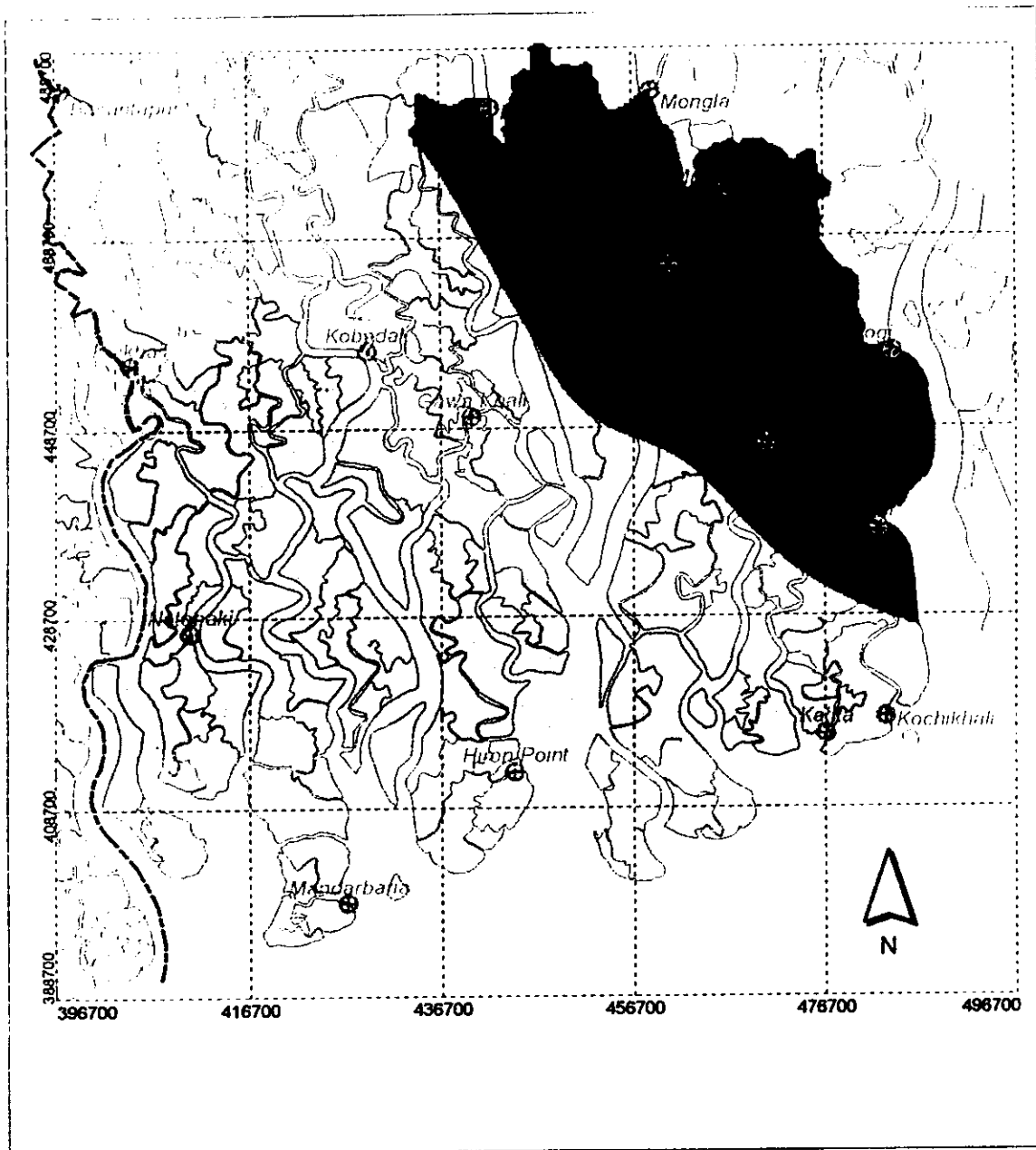
Scale:



Figure: A2

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**Legend**

- Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 1-5
- 5-10
- 10-15
- 15-20
- 20-25
- 25-30

**Salinity Distribution Map  
March 2001**

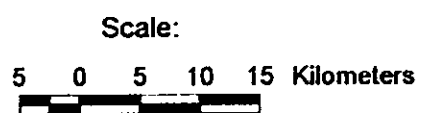
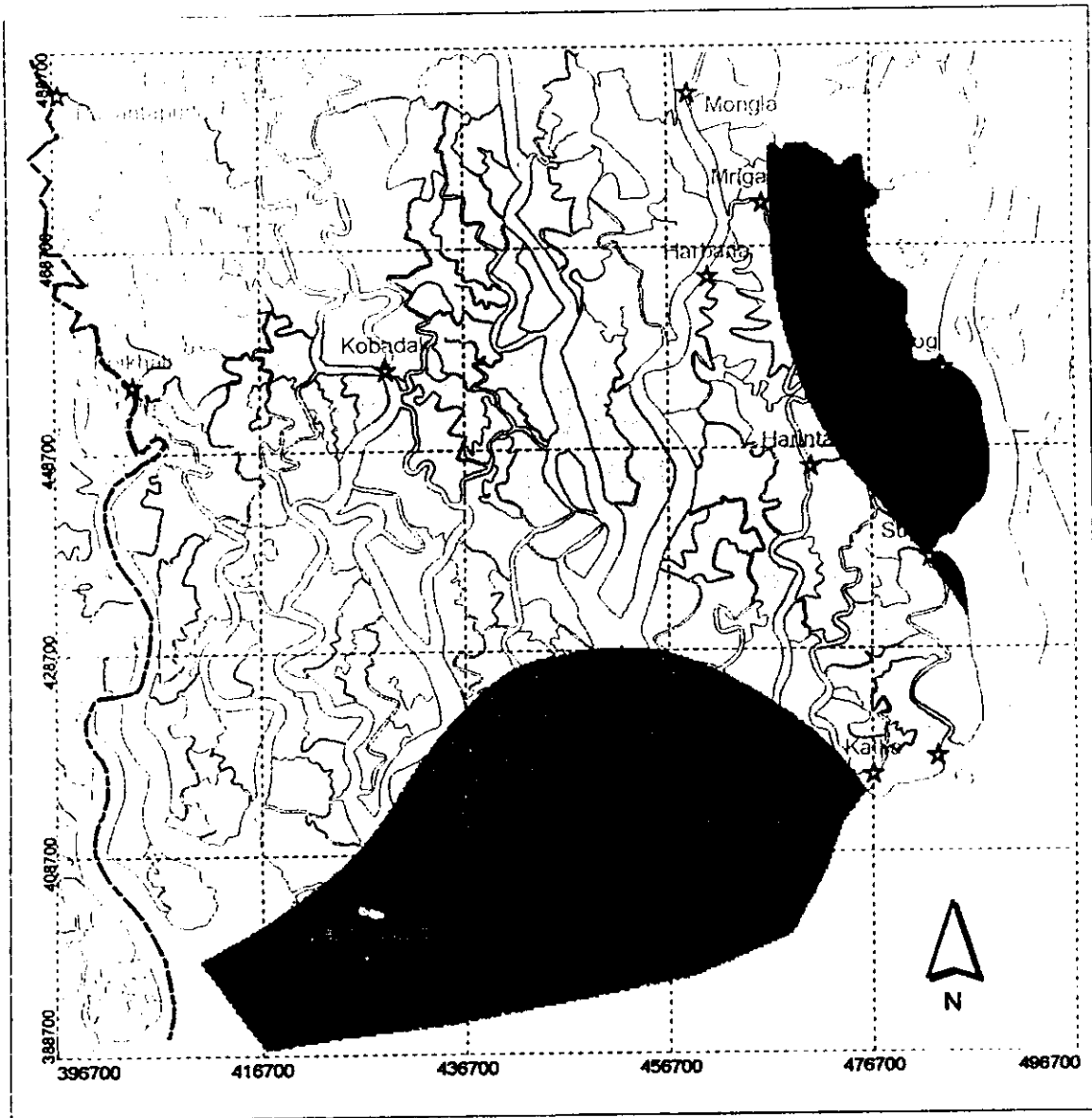

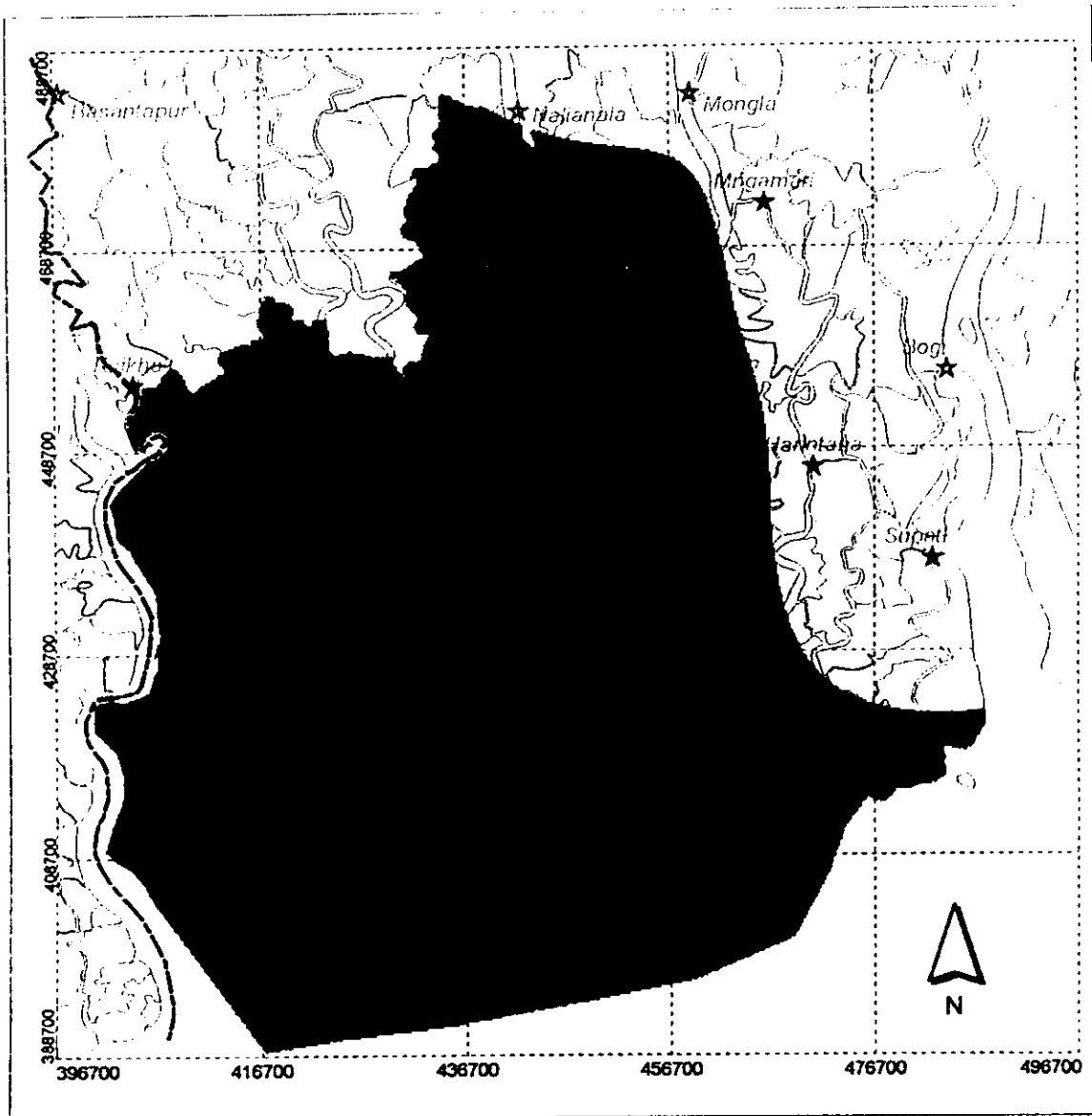


Figure: A3





|   |   |
|---|---|
| <p><b>Legend</b></p> <ul style="list-style-type: none"> <li>★ Sampling Location</li> <li>— River Network</li> <li>— International Boundary</li> </ul> <p><b>Salinity (ppt)</b></p> <ul style="list-style-type: none"> <li>■ 1 - 5</li> <li>■ 5 - 10</li> <li>■ 10 - 15</li> <li>■ 15 - 20</li> <li>■ 20 - 25</li> <li>■ &gt;25</li> </ul> | <p><b>Salinity Distribution Map</b><br/><b>April 2001</b></p> <p>Scale:</p> <p>10      0      10 Kilometers</p>  <p>Figure: A4</p> <p><b>IWM</b> INSTITUTE OF WATER MODELLING<br/><small>Research to Support Water Modelling Capabilities</small></p> |
|---|---|



Legend

- ★ Sampling Location
- River Network
- - - International Boundary

Salinity (ppt)

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15

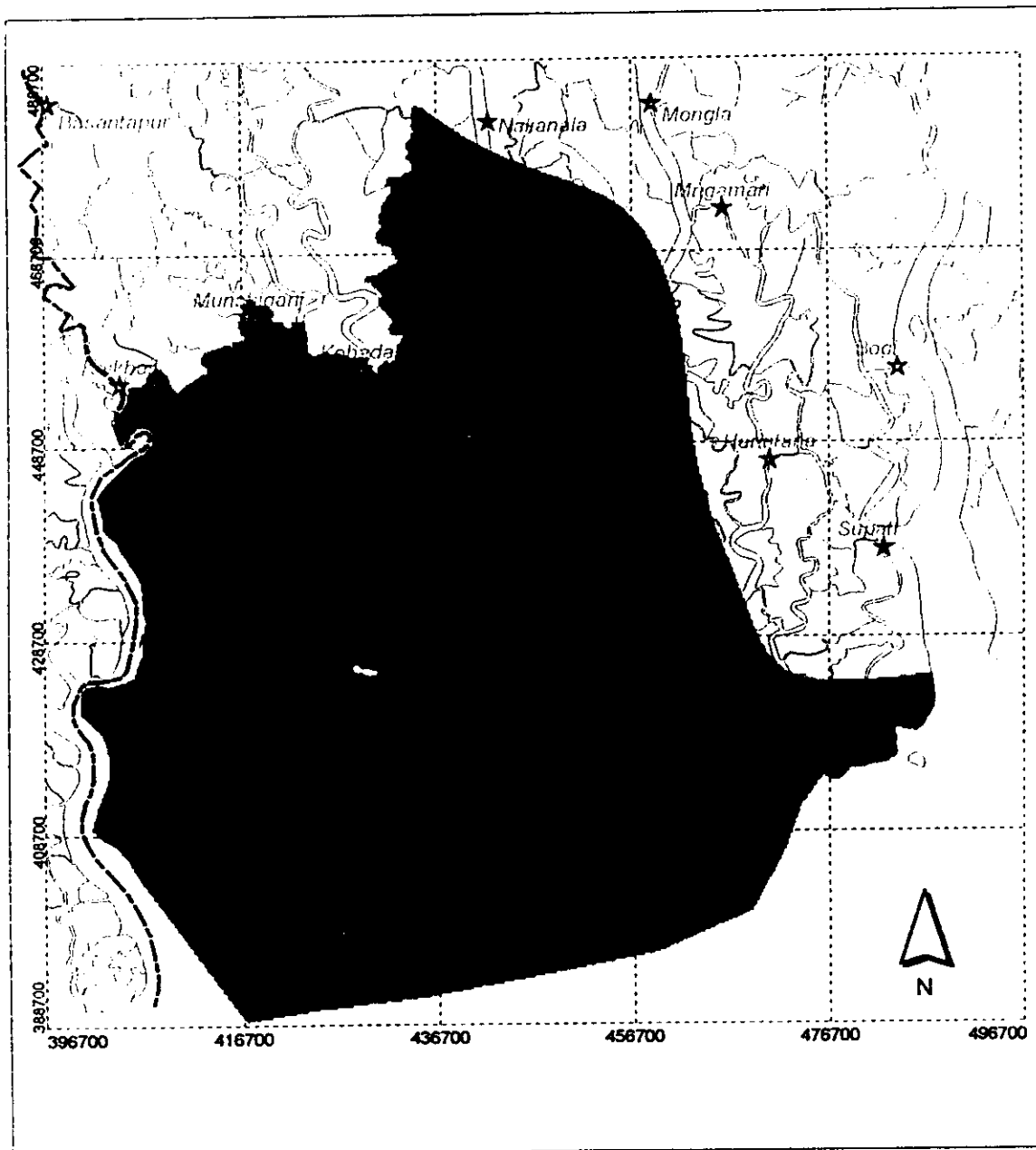
Salinity Distribution Map  
August 2001

Scale:



Figure: A5

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Member of the Bangladesh Water Modelling Centre



- Legend
- ★ Sampling Location
  - River Network
  - - - International Boundary
- Salinity (ppt)
- 0 - 1
  - 1 - 5
  - 5 - 12

**Salinity Distribution Map  
September 2001**

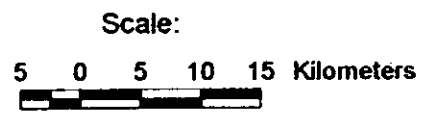
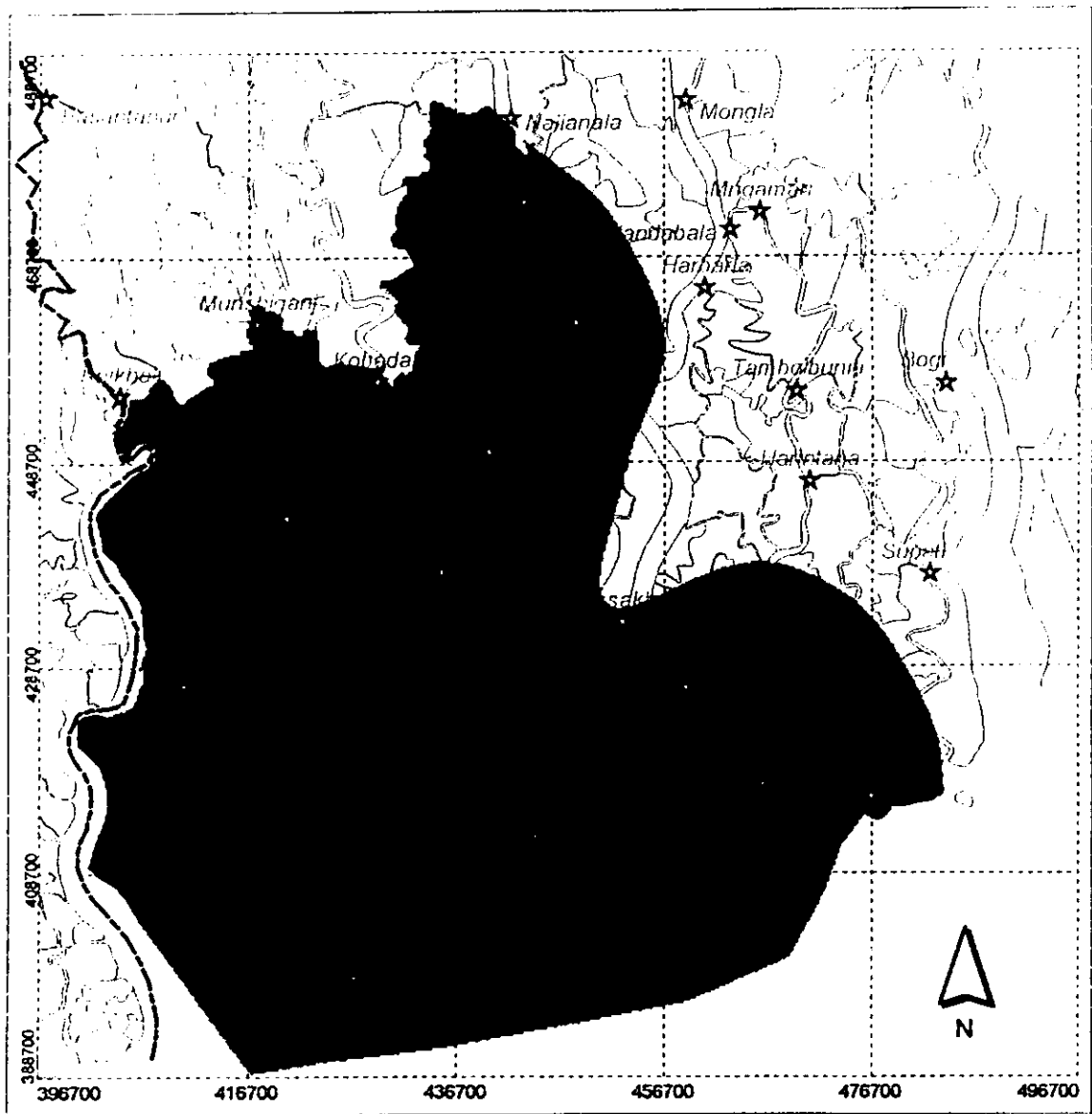


Figure: A6





Legend

- ☆ Sampling Location
- River Network
- - - International Boundary

Salinity (ppt)

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 12

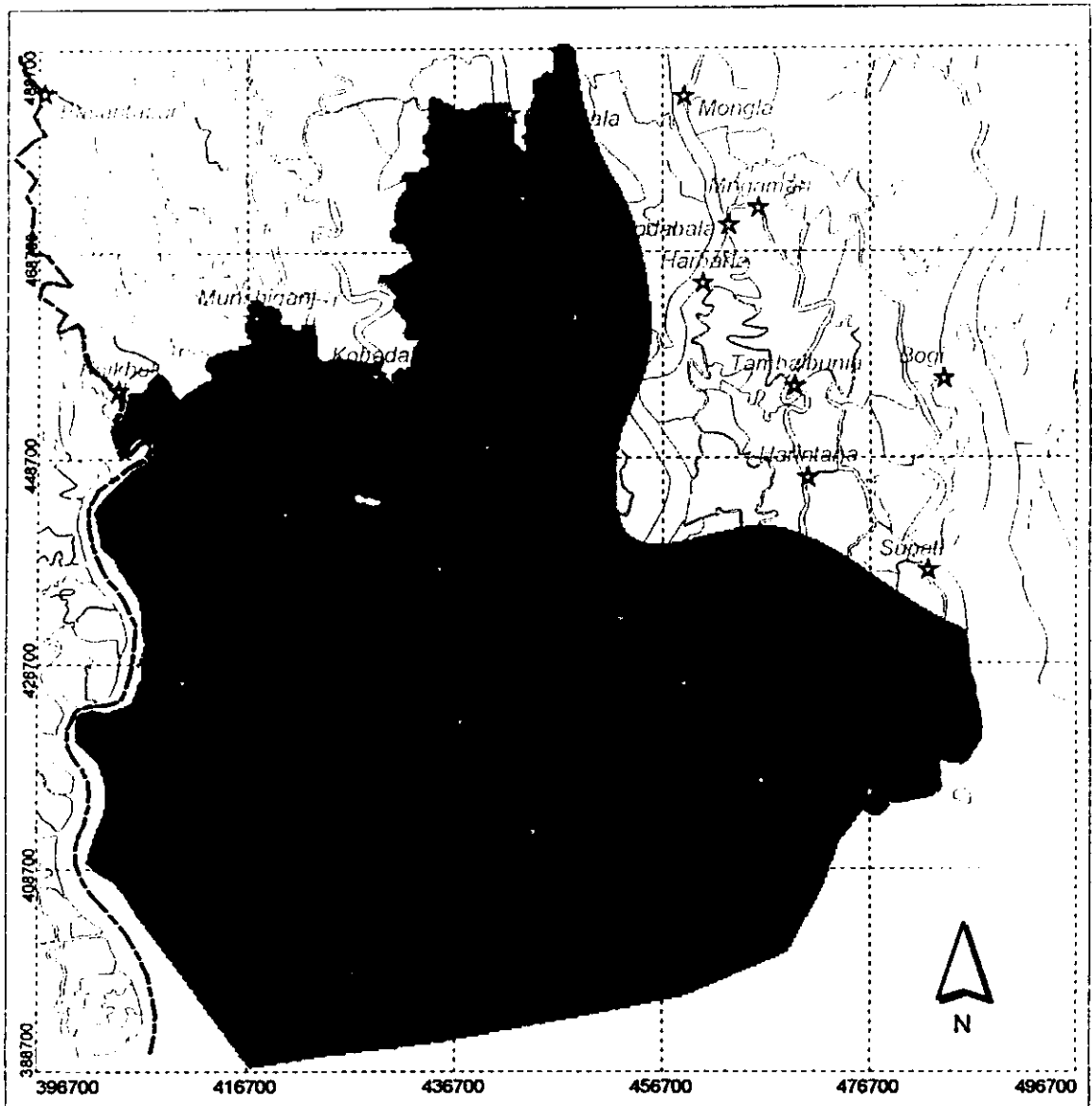
Salinity Distribution Map  
October 2001

Scale:



Figure: A7





**Legend**

- ★ Sampling Location
- River Network
- - - International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 12

**Salinity Distribution Map  
November 2001**

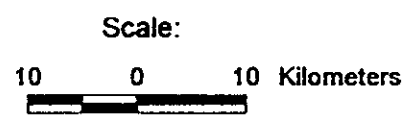
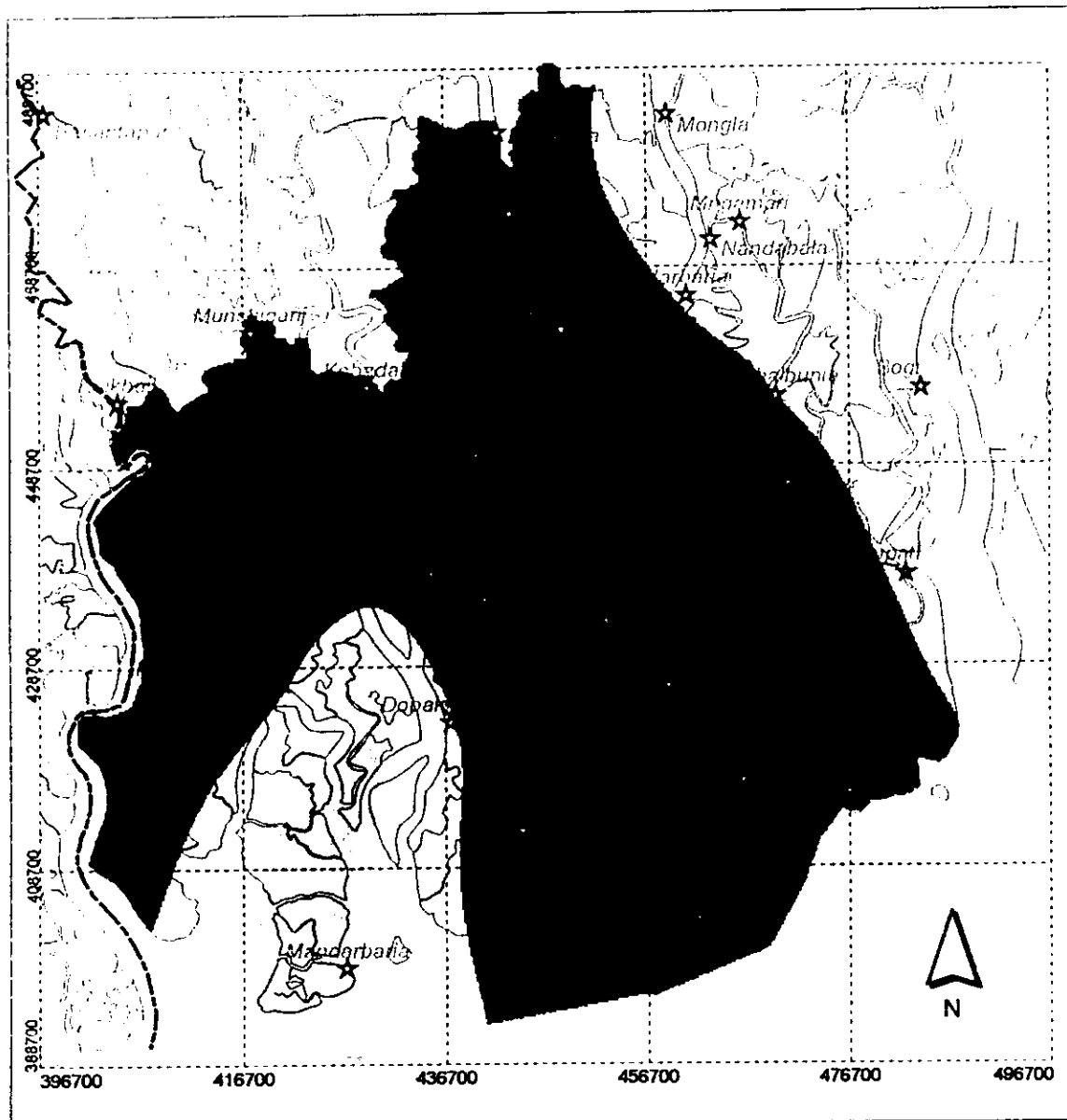


Figure: A8





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25

**Salinity Distribution Map  
December 2001**

Scale:

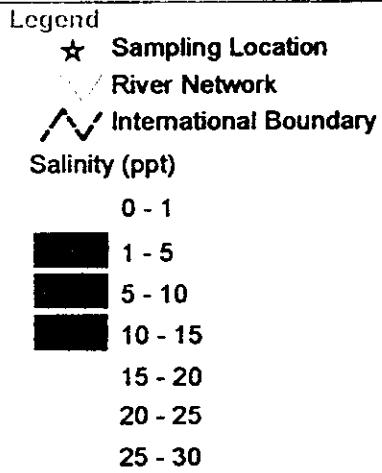
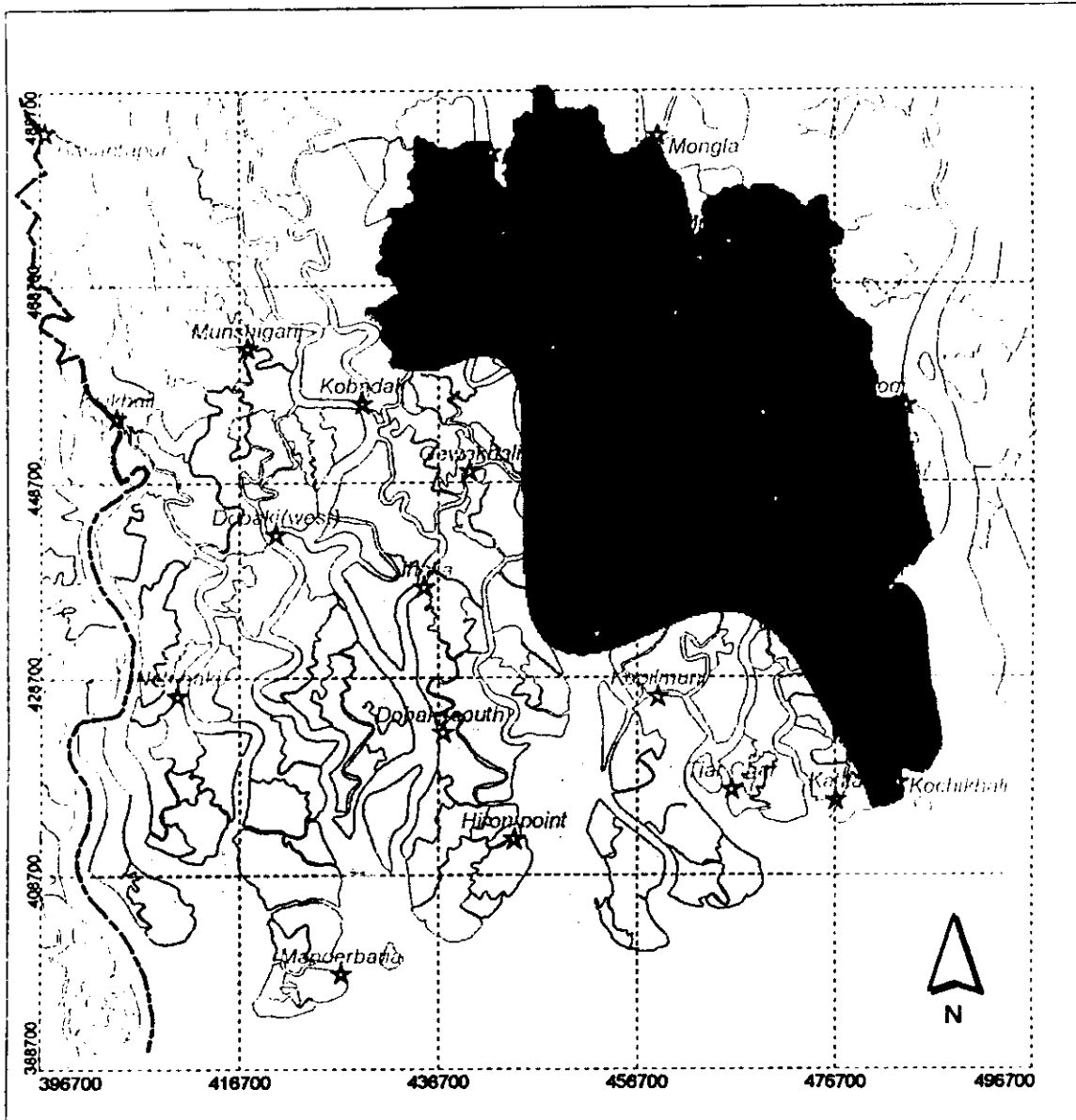


Figure: A9









**Salinity Distribution Map  
February 2002**

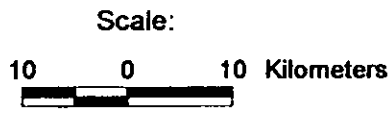
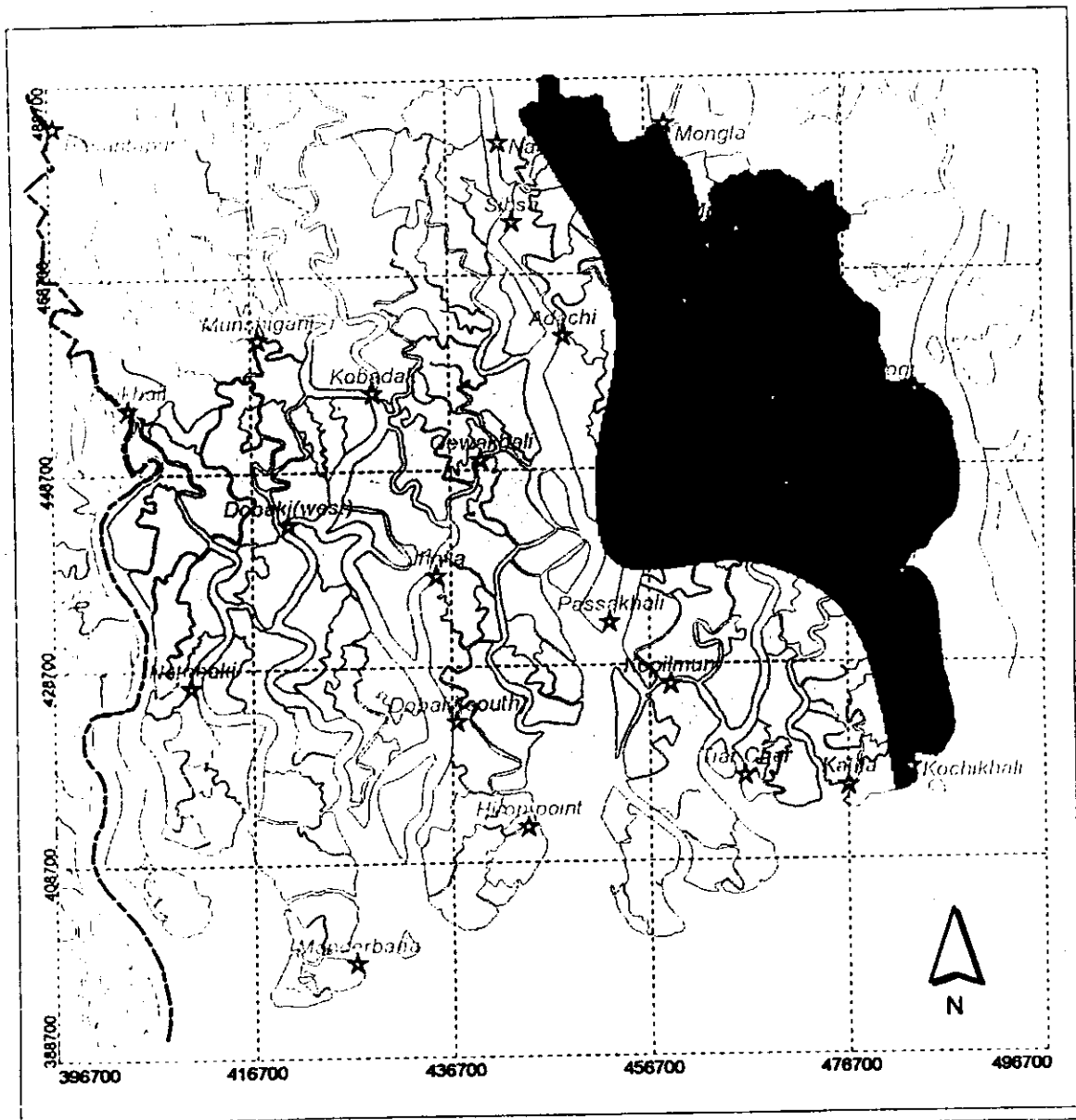


Figure: A11





- Legend**
- ★ Sampling Location
  - River Network
  - International Boundary
- Salinity (ppt)**
- 1 - 5
  - 5 - 10
  - 10 - 15
  - 15 - 20
  - 20 - 25
  - 25 - 30

**Salinity Distribution Map  
March 2002**

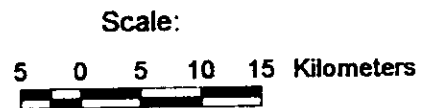
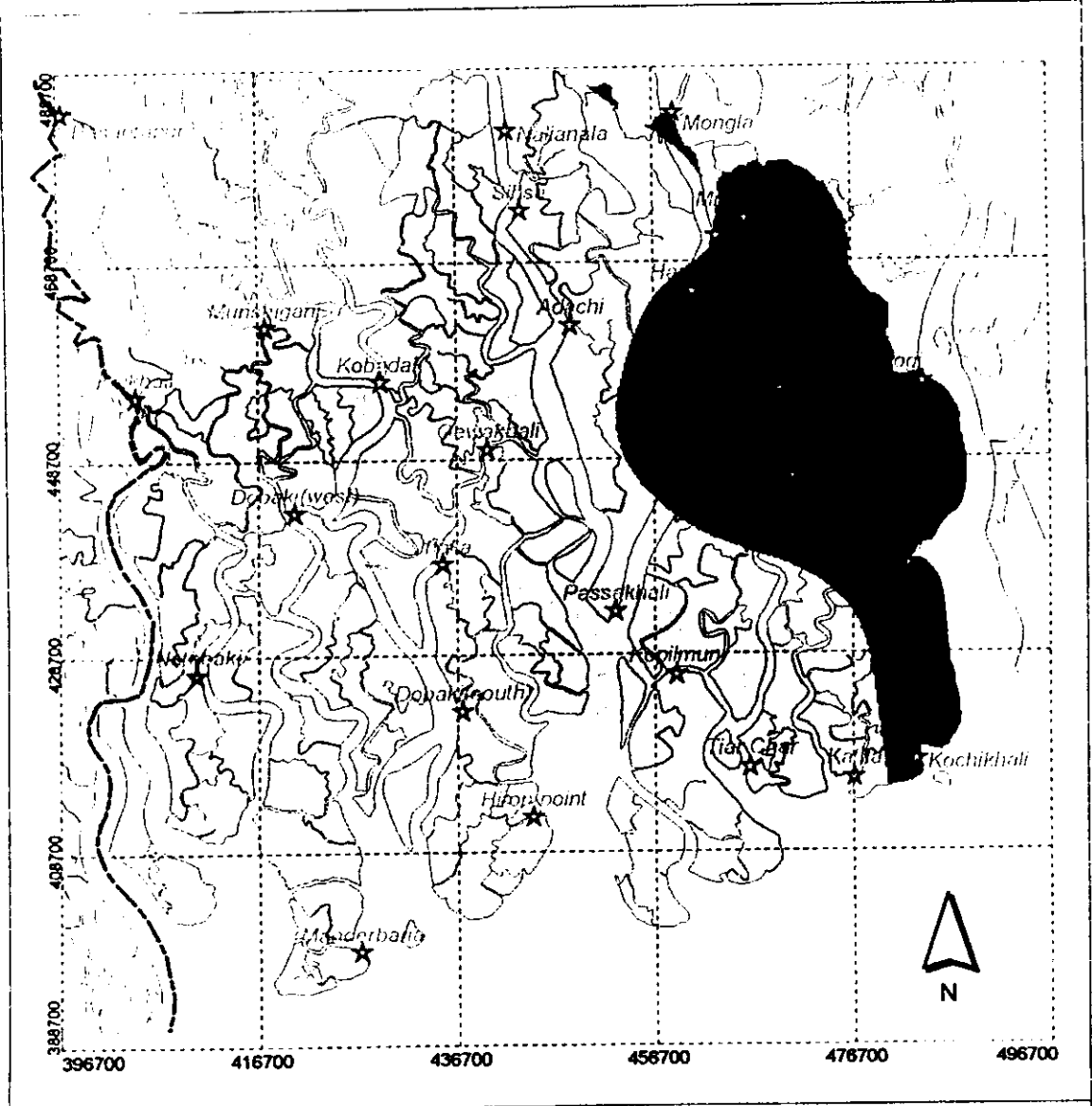


Figure: A12





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

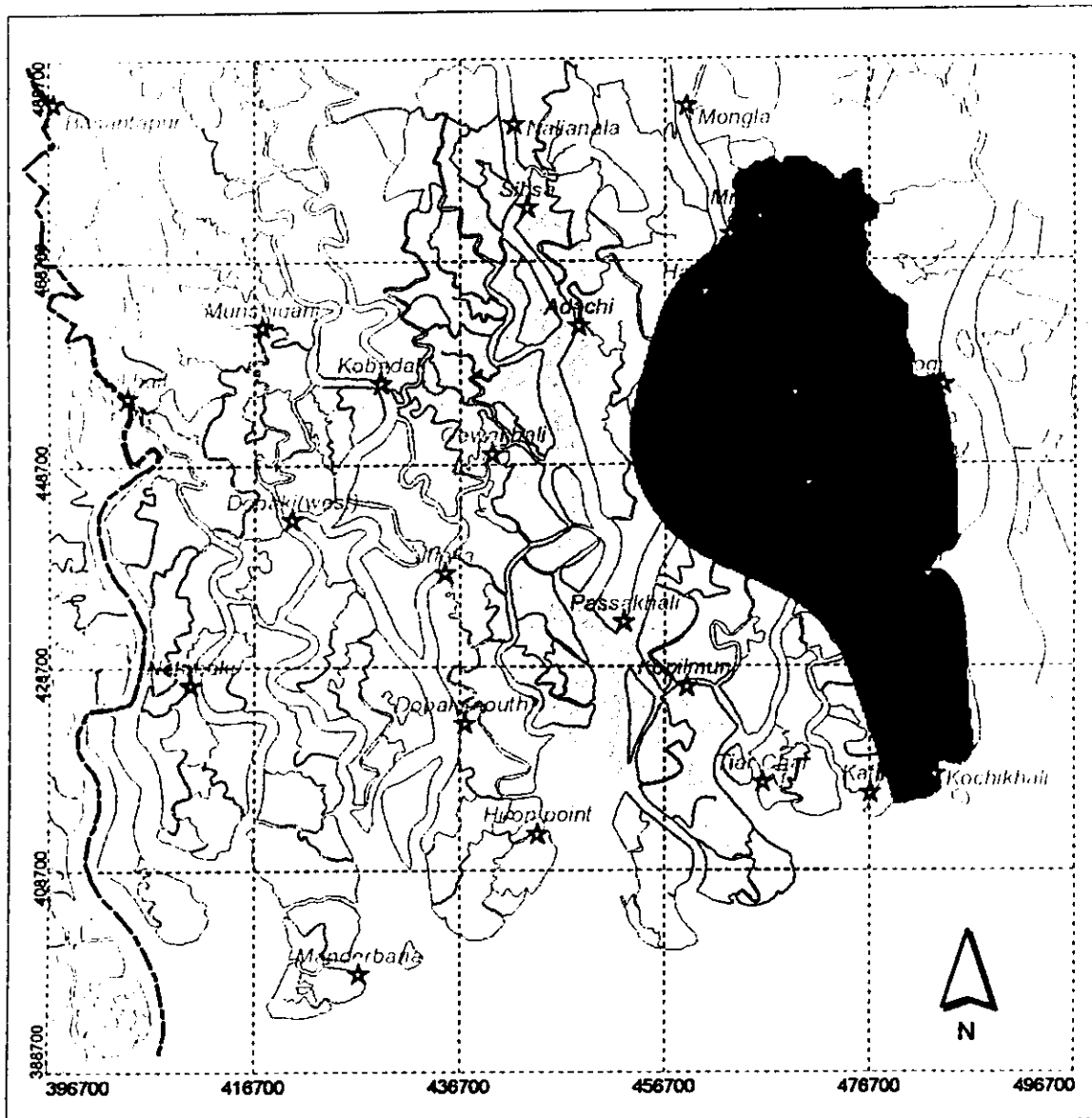
- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 16 - 20
- 20 - 25
- >25

**Salinity Distribution Map  
April 2022**

**Scale:**  
5 0 5 10 15 Kilometers

Figure: A13

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**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- >25

**Salinity Distribution Map  
May 2002**

Scale:

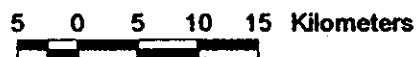
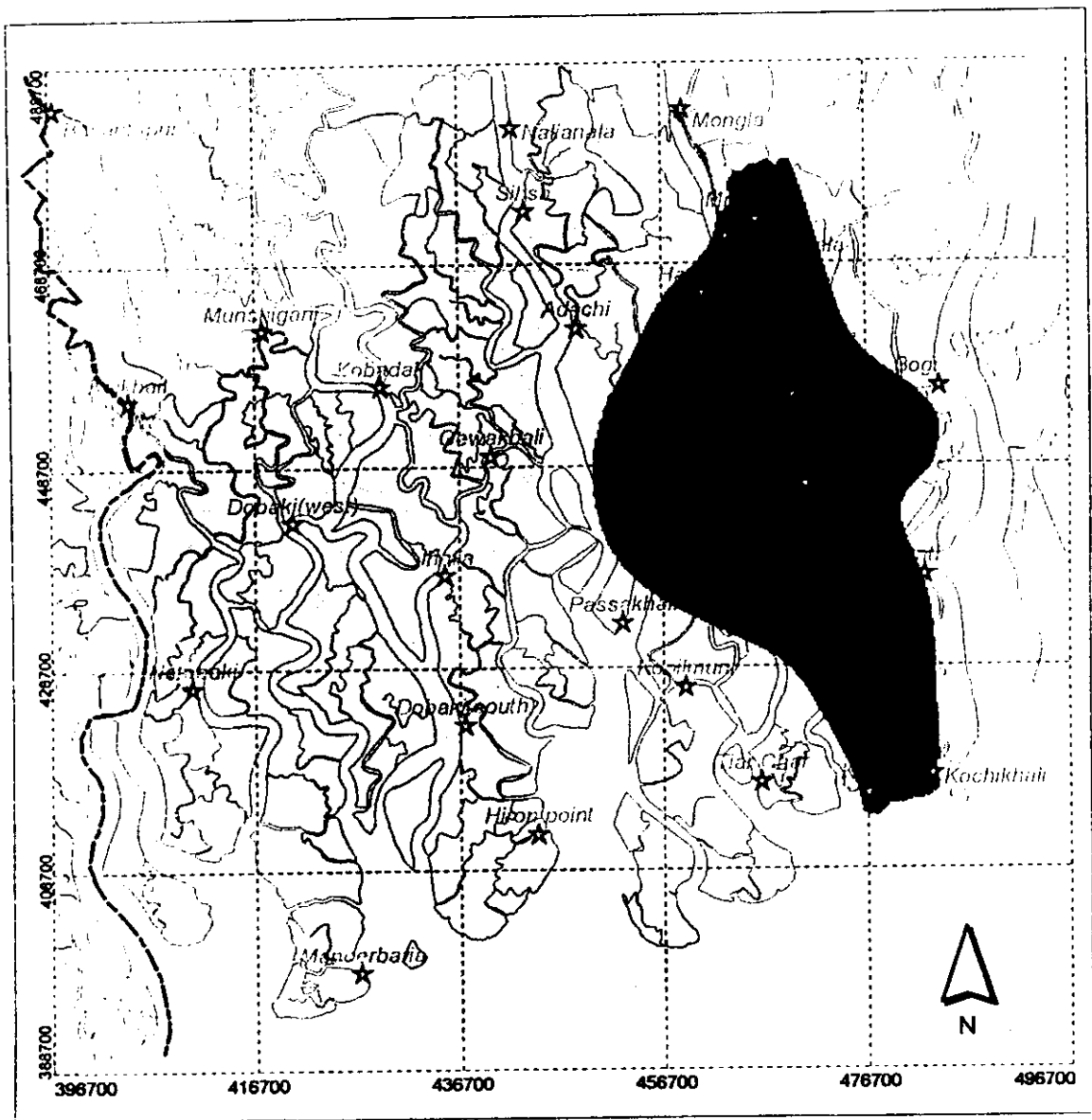


Figure: A14





- Legend**
- ★ Sampling Location
  - River Network
  - International Boundary
- Salinity (ppt)**
- 0 - 1
  - 1 - 5
  - 5 - 10
  - 10 - 15
  - 15 - 20
  - 20 - 25
  - 25 - 30

**Salinity Distribution Map  
June 2002**

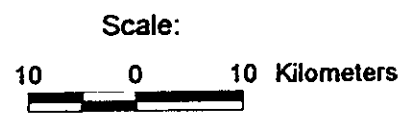
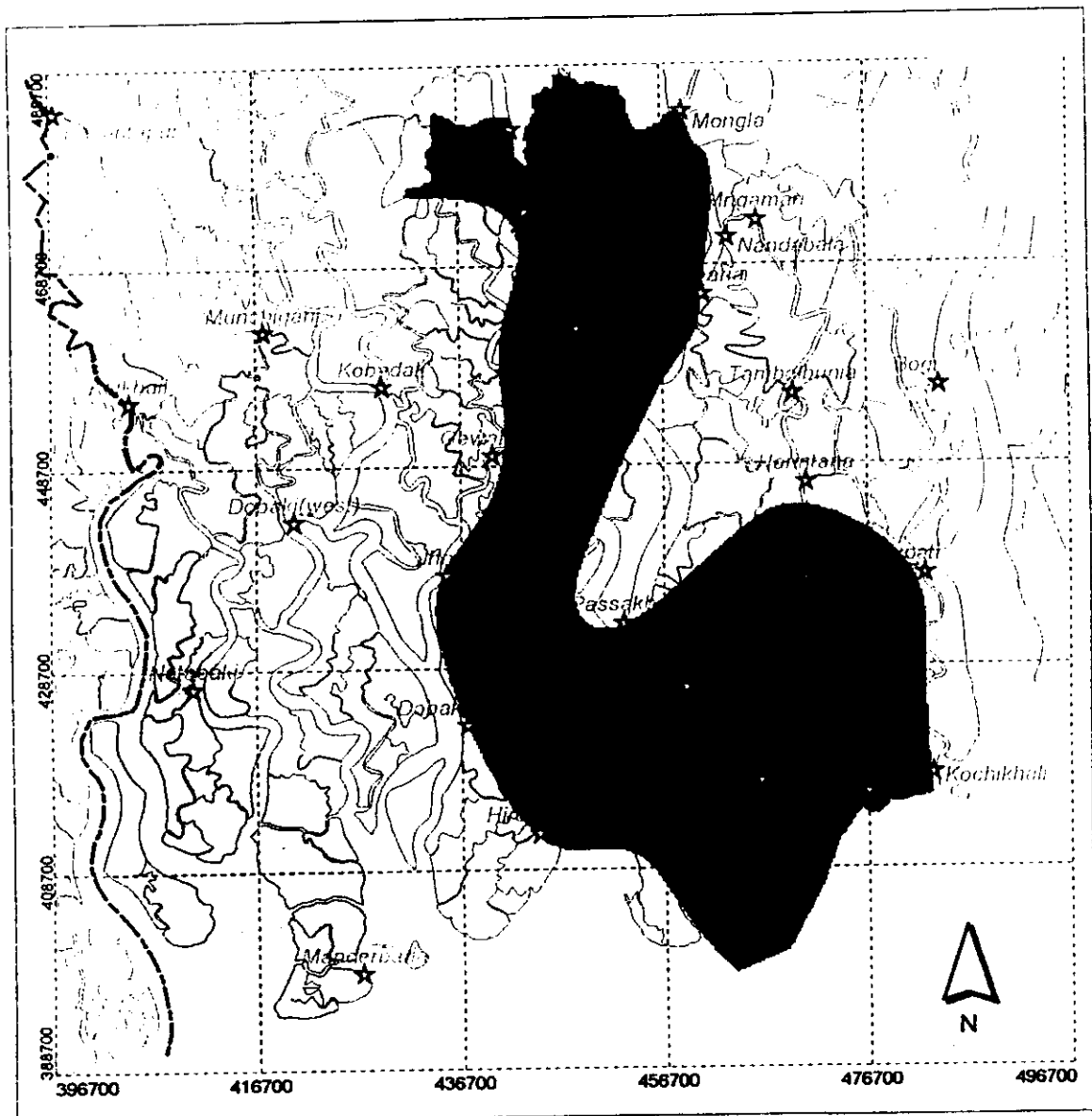


Figure: A15





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25

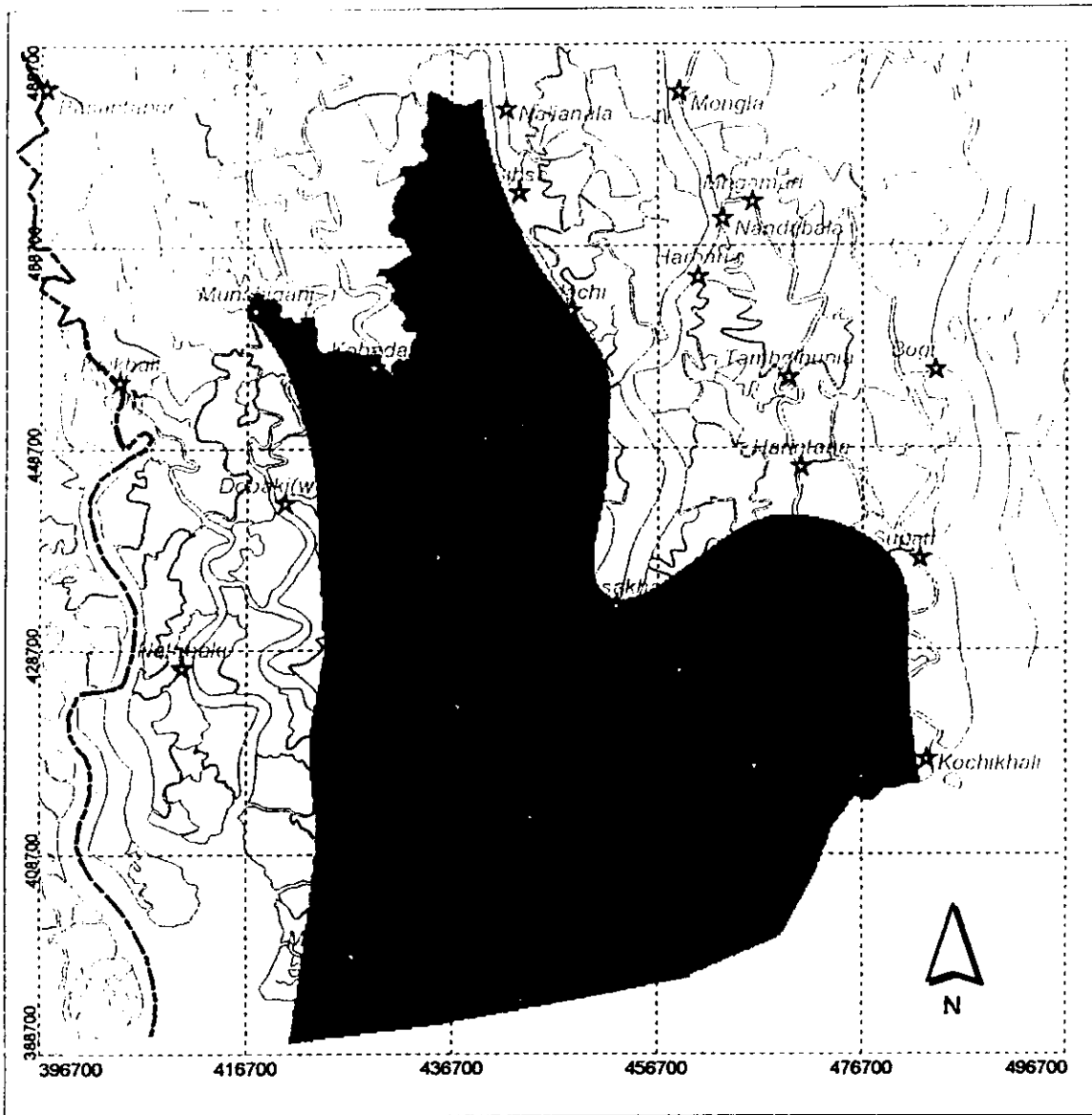
**Salinity Distribution Map  
July 2002**

Scale:

10    0    10 Kilometers

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Figure: A16



Legend

- ★ Sampling Location
- River Network
- - - International Boundary

Salinity (ppt)

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 22

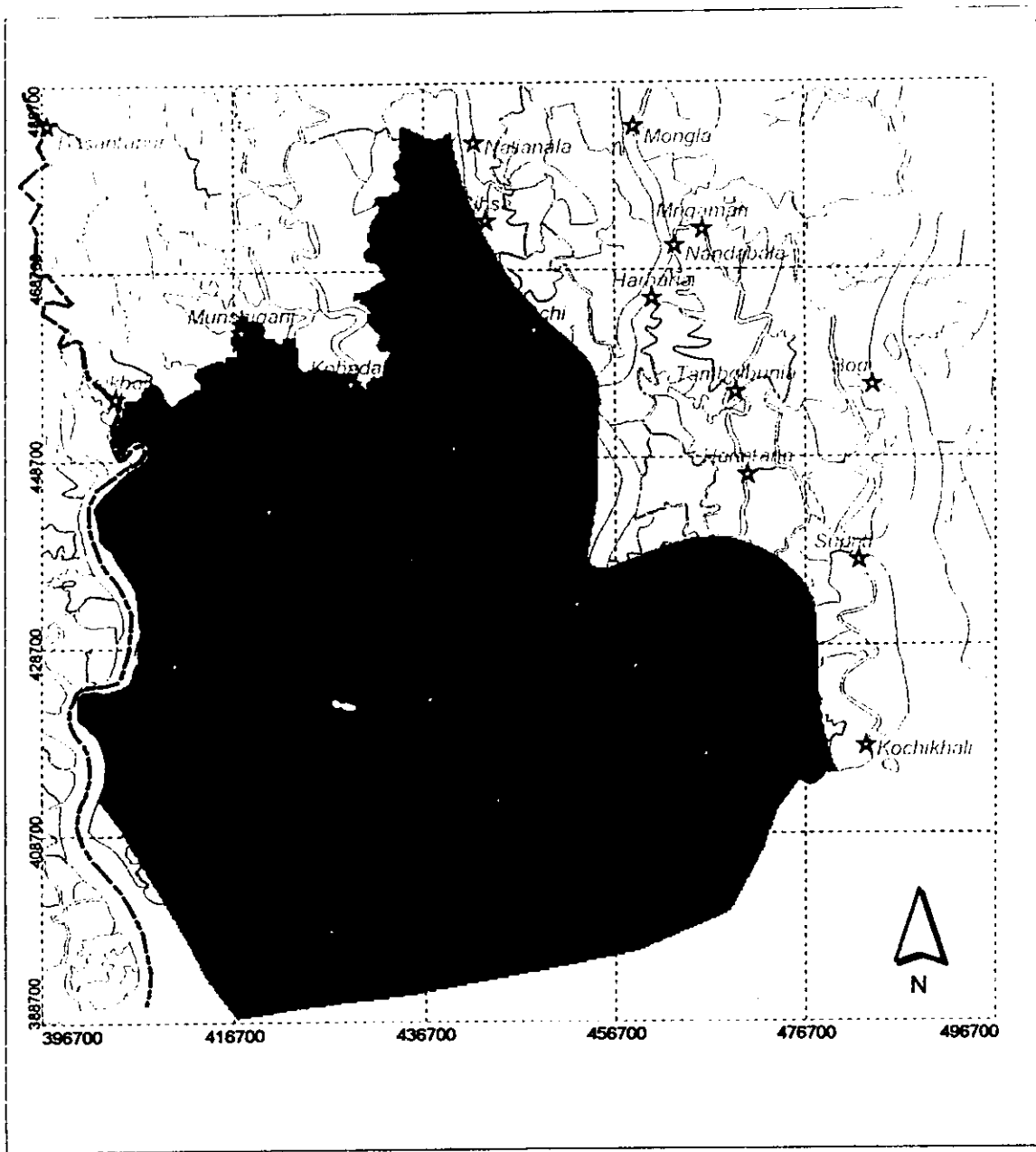
Salinity Distribution Map  
August 2002

Scale:



Figure: A17





**Legend**

★ Sampling Location

River Network

— International Boundary

Salinity (ppt)

0 - 1



1 - 5



5 - 10



10 - 15

15 - 16

**Salinity Distribution Map  
September 2002**

Scale:

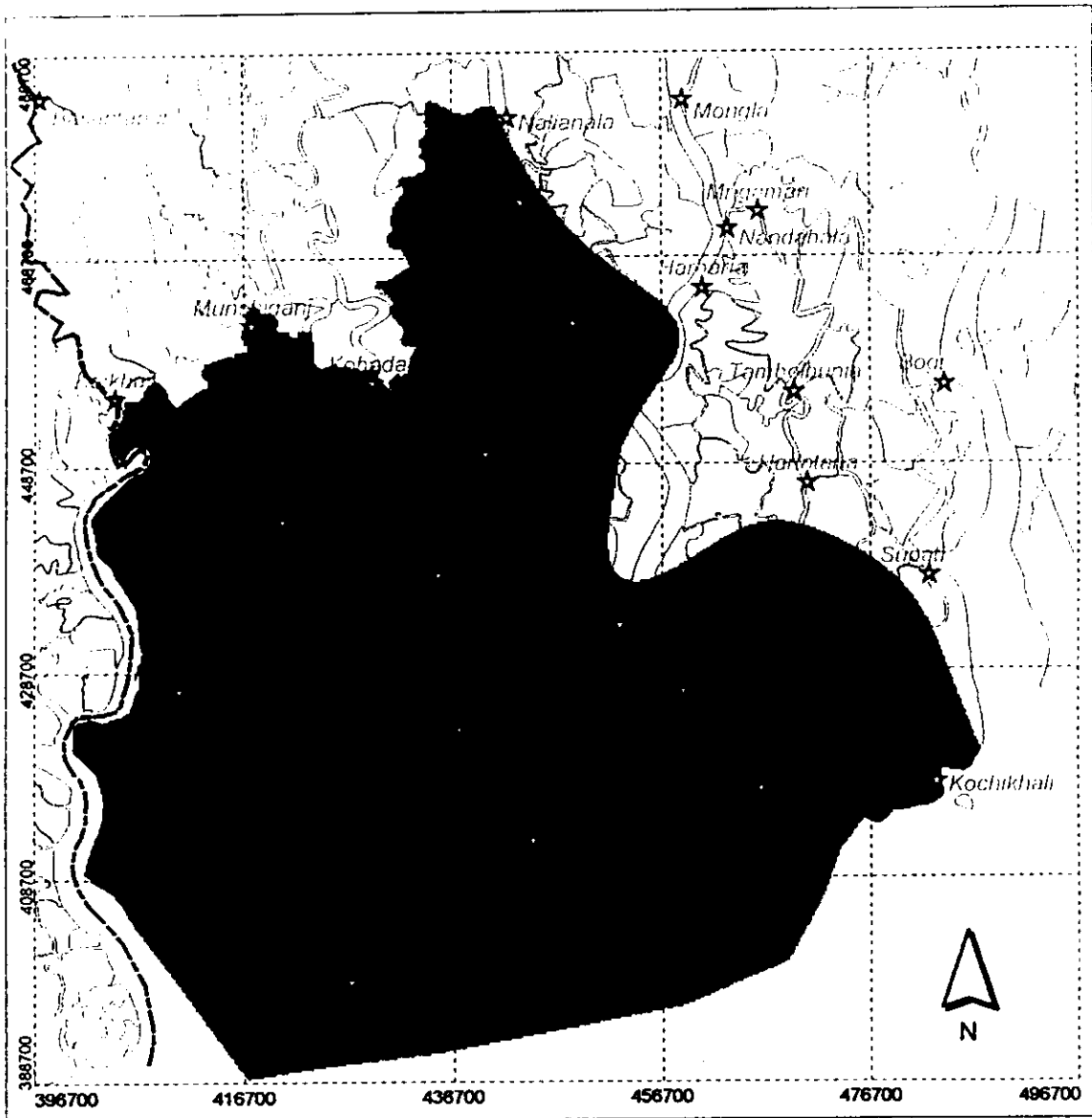
5 0 5 10 15 Kilometers



Figure: A18







**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 12 - 16

**Salinity Distribution Map  
October 2002**

Scale:

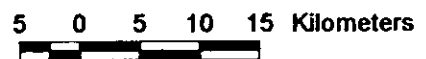
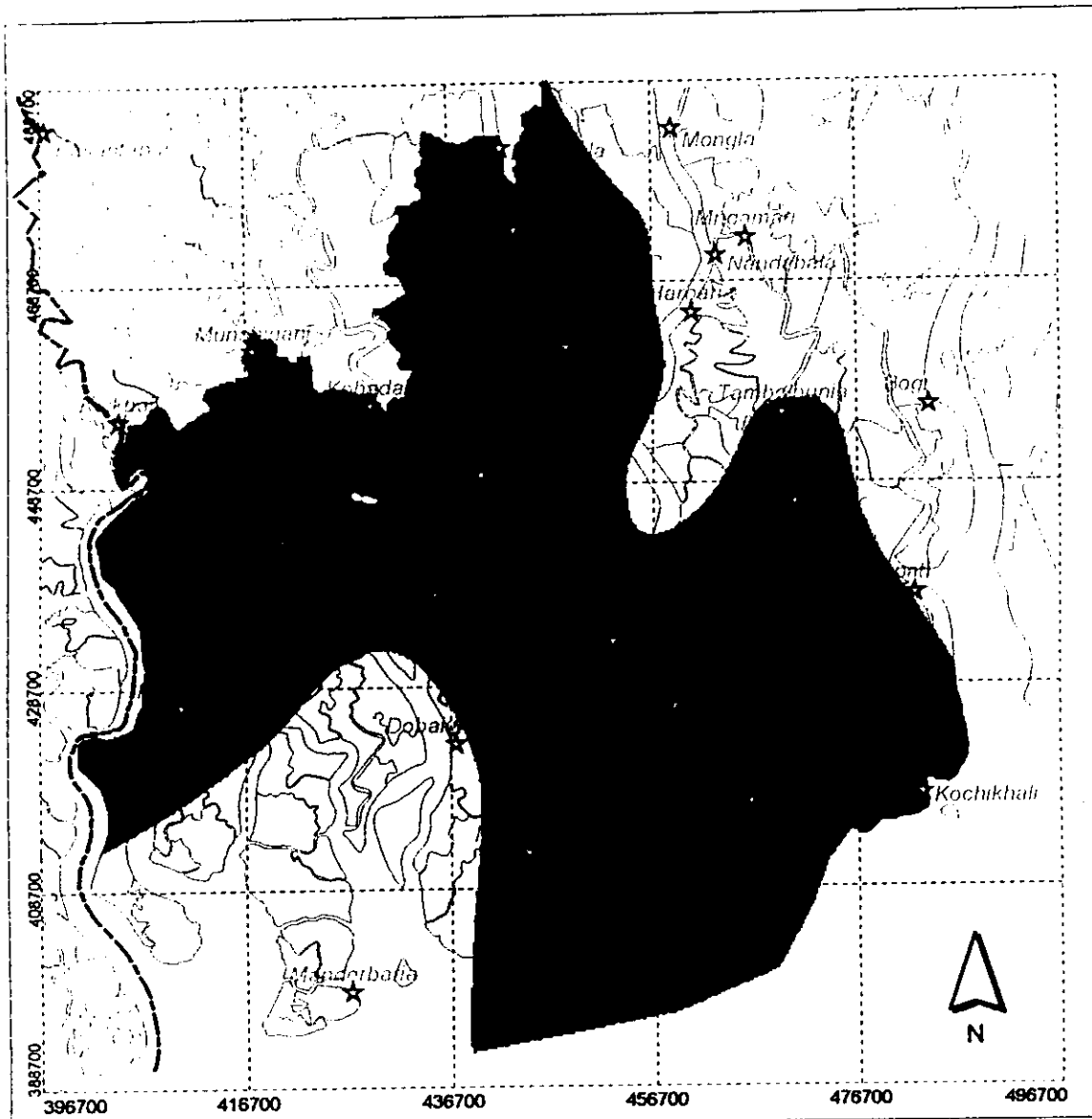


Figure: A19





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20

**Salinity Distribution Map  
November 2002**

**Scale:**

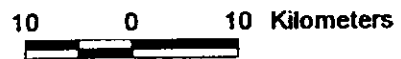
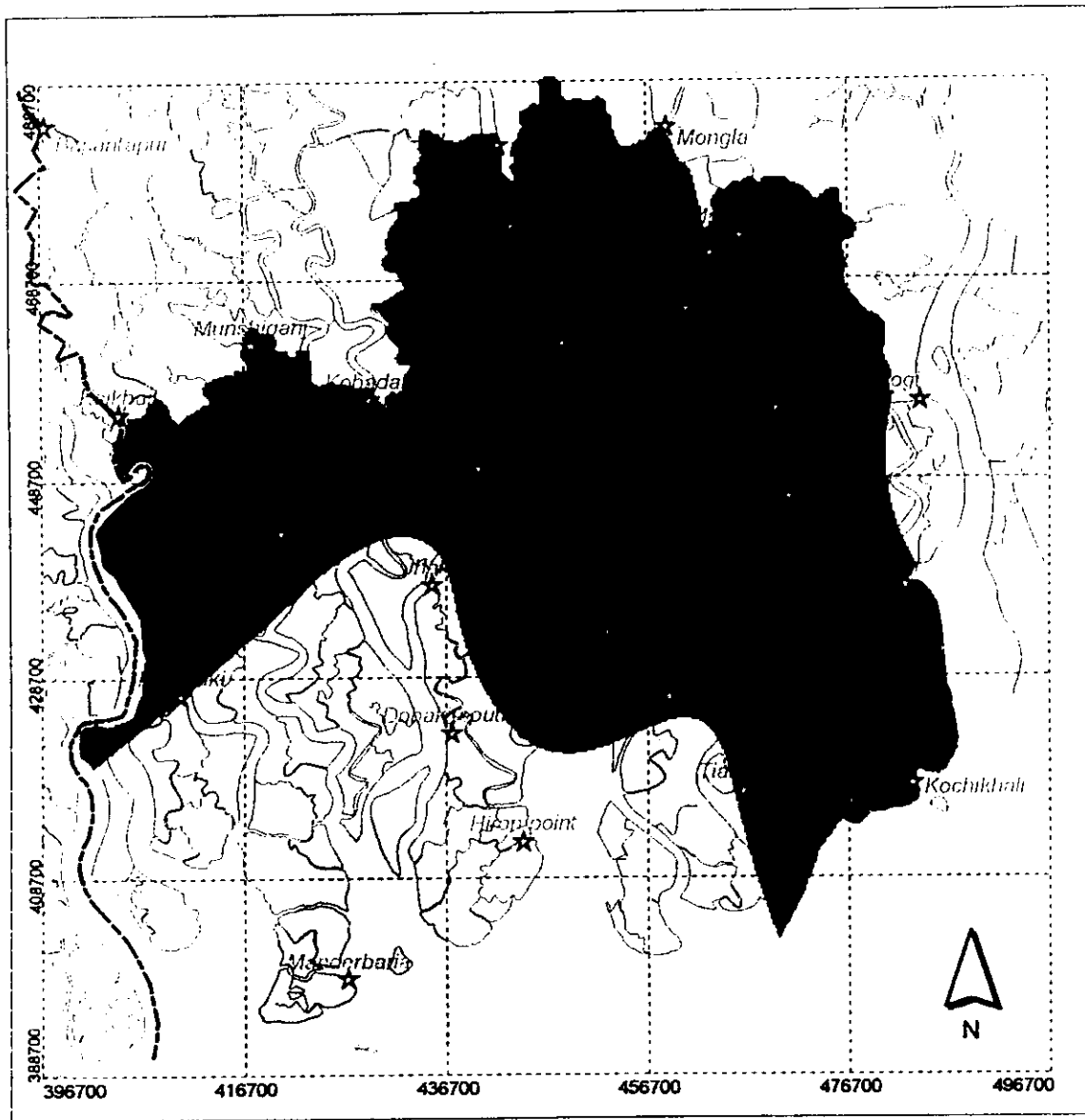


Figure: A20





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25

**Salinity Distribution Map  
December 2002**

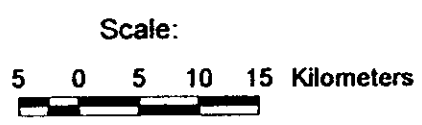
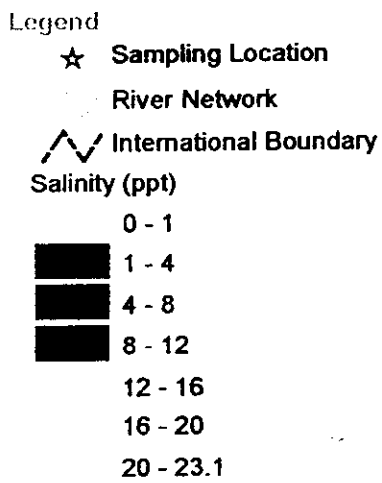
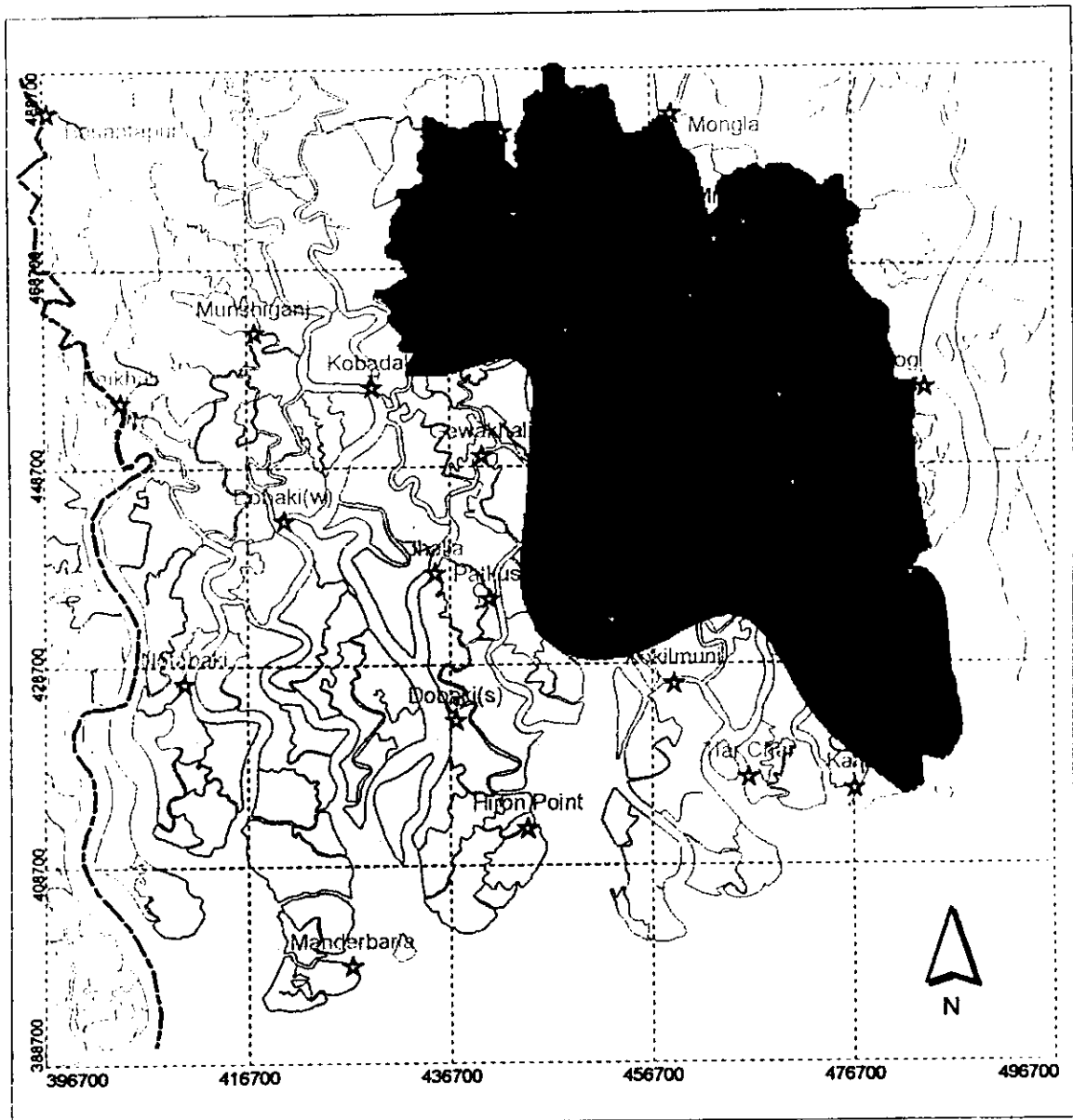


Figure: A21





**Salinity Distribution Map  
January 2003**

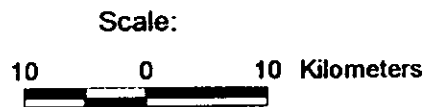
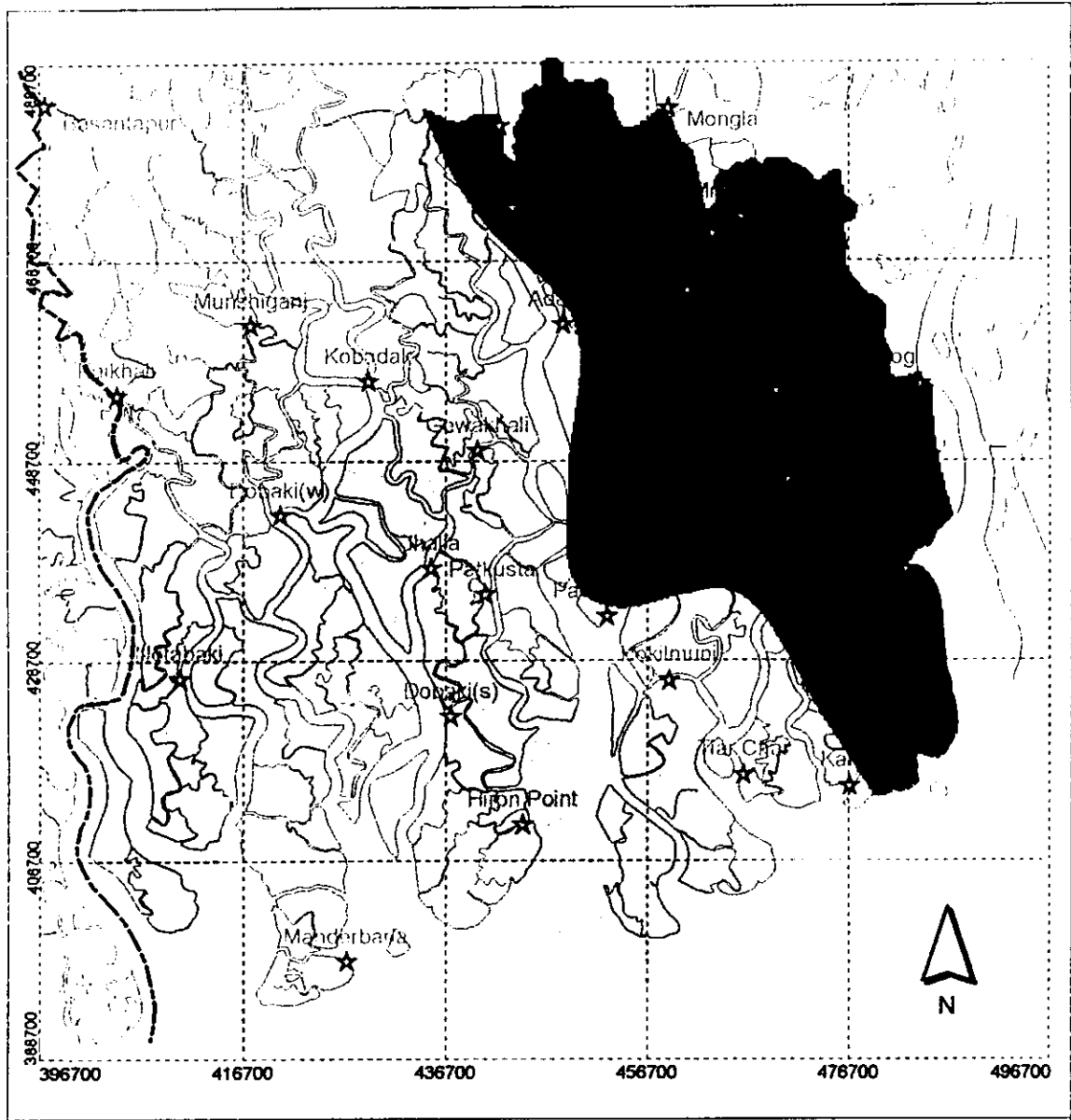


Figure: A22





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 0 - 1
- 1 - 4
- 4 - 8
- 8 - 12
- 12 - 16
- 16 - 20
- 20 - 25

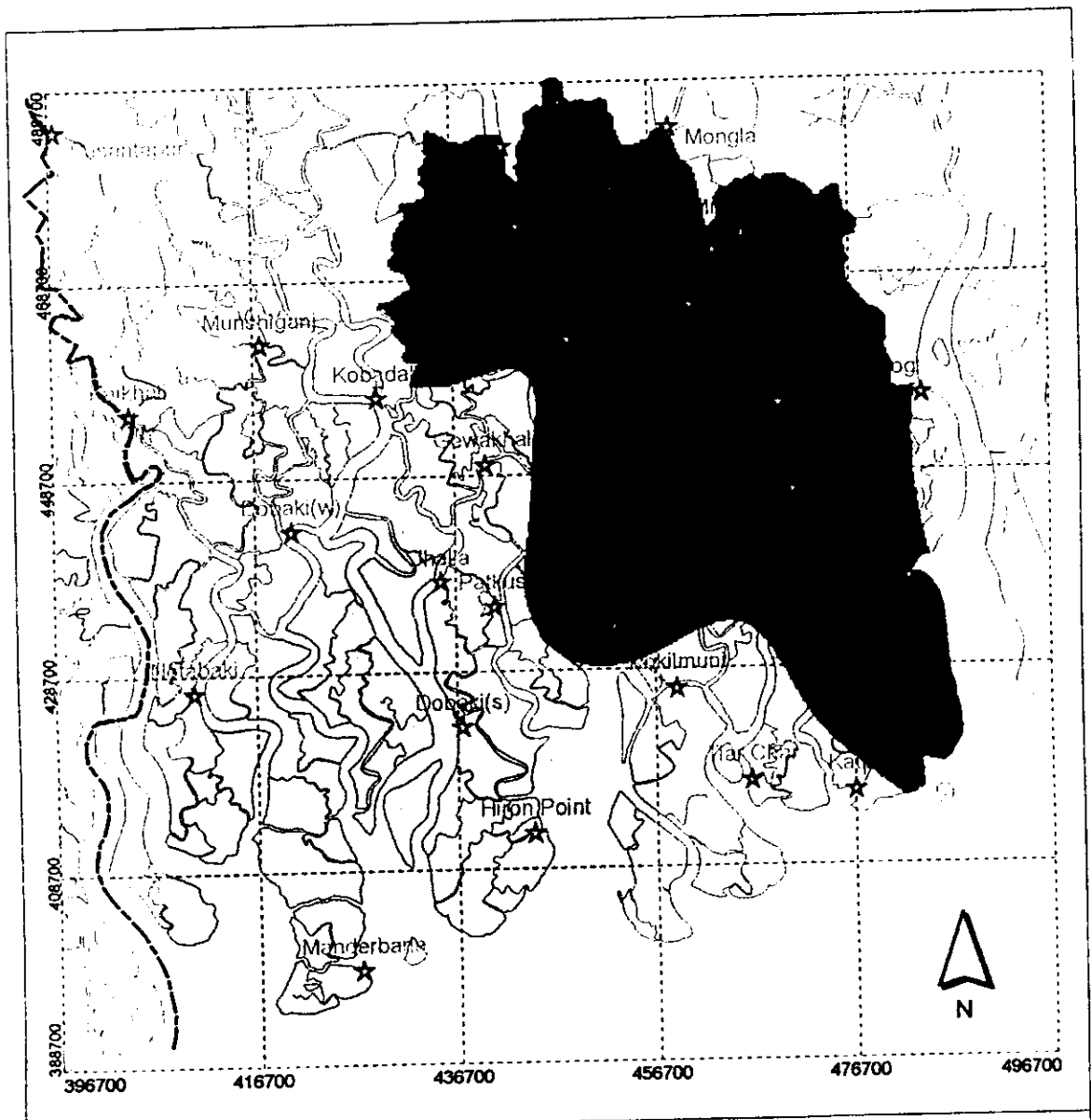
**Salinity Distribution Map  
February 2003**

Scale:



Figure: A23





**Legend**

- ★ Sampling Location
- River Network
- International Boundary

**Salinity (ppt)**

- 1 - 4
- 4 - 8
- 8 - 12
- 12 - 16
- 16 - 20
- 20 - 25

**Salinity Distribution Map  
March 2003**

Scale:



Figure: A24



# Comparison of yearwise Observed Salinity

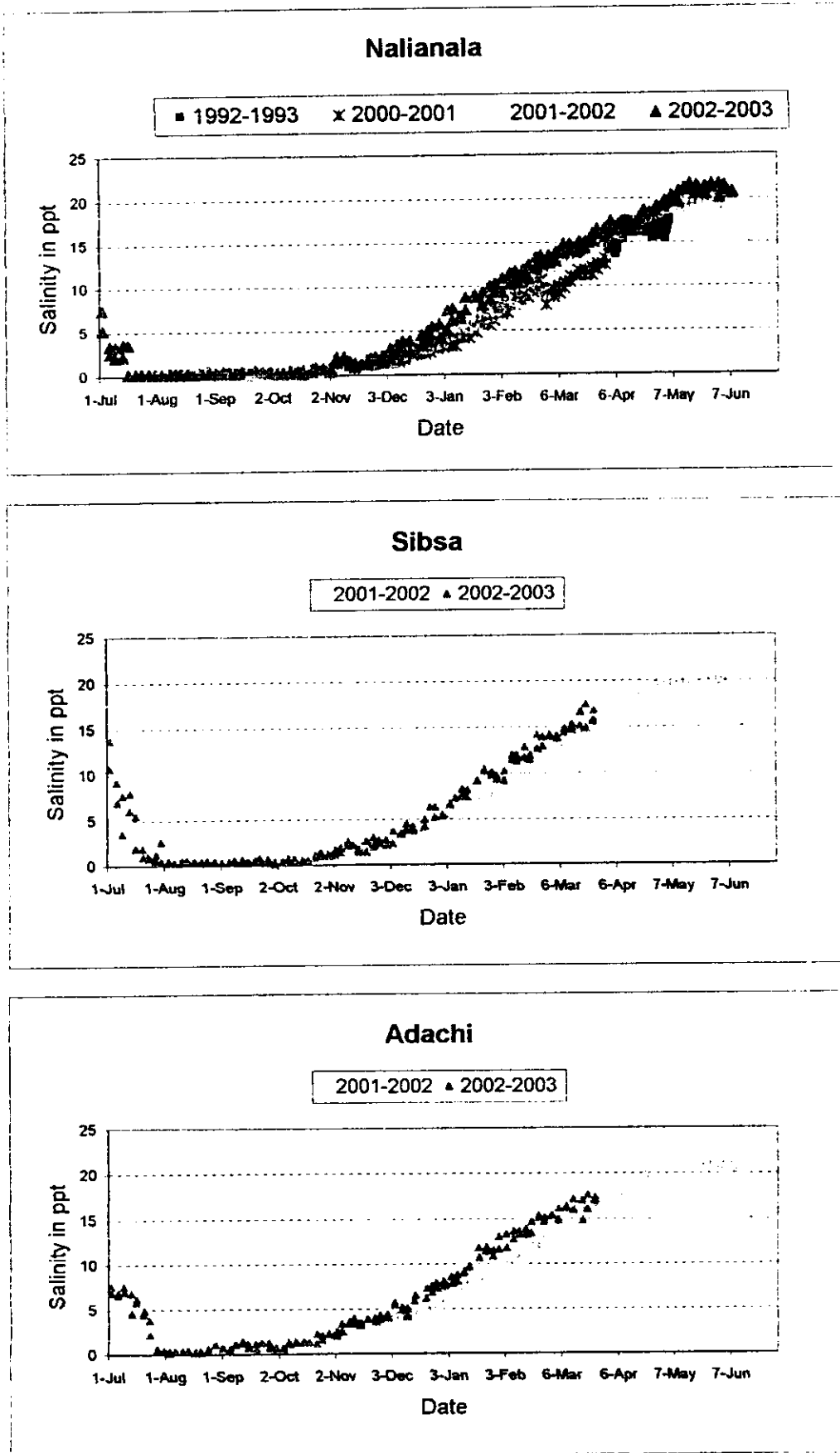


Figure A25 : Salinity at Nalianala, Sibsa and Adachi

# Comparison of yearwise Observed Salinity

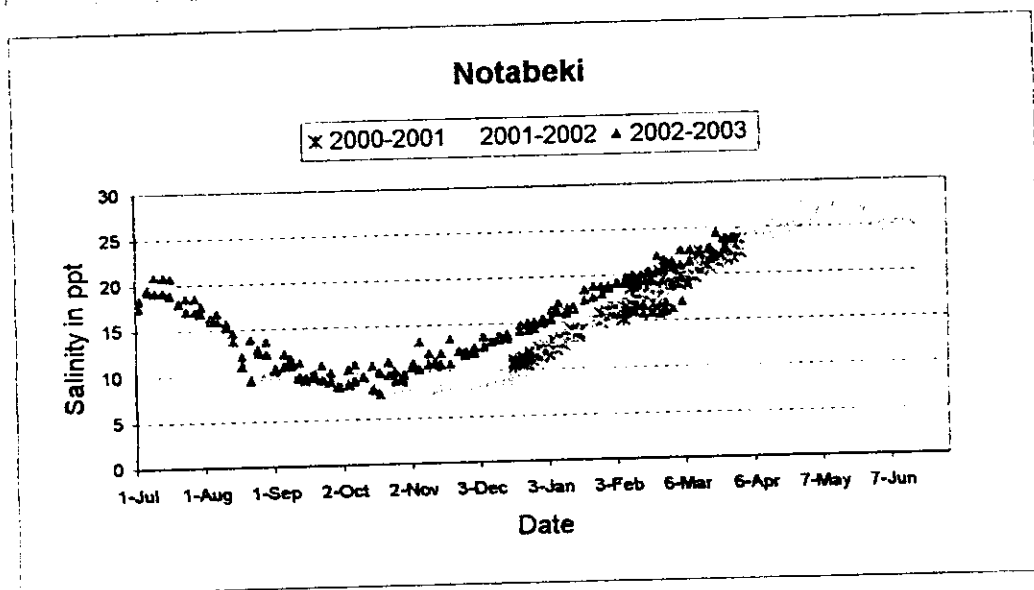
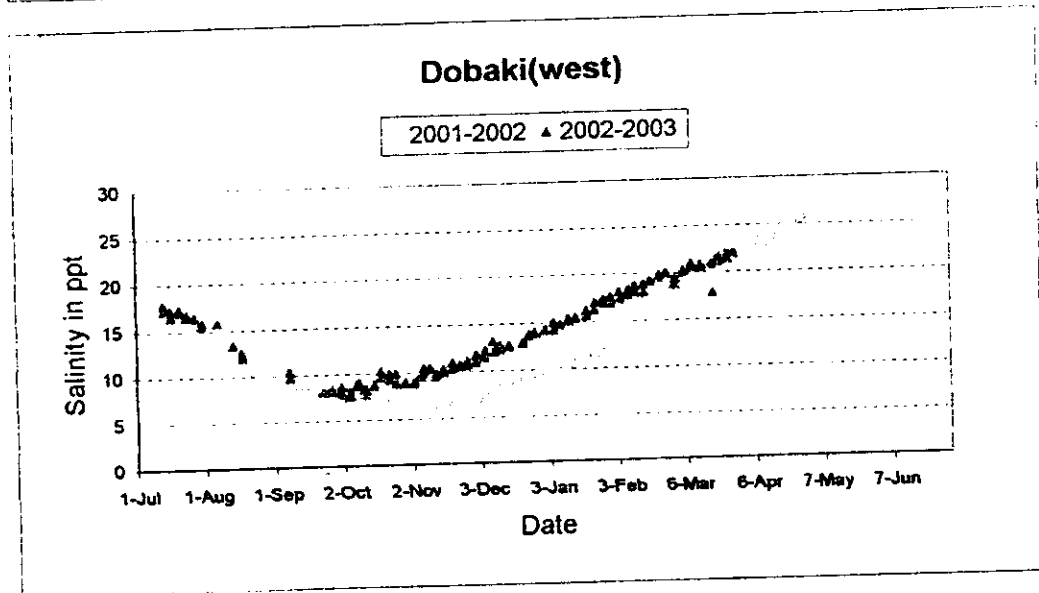
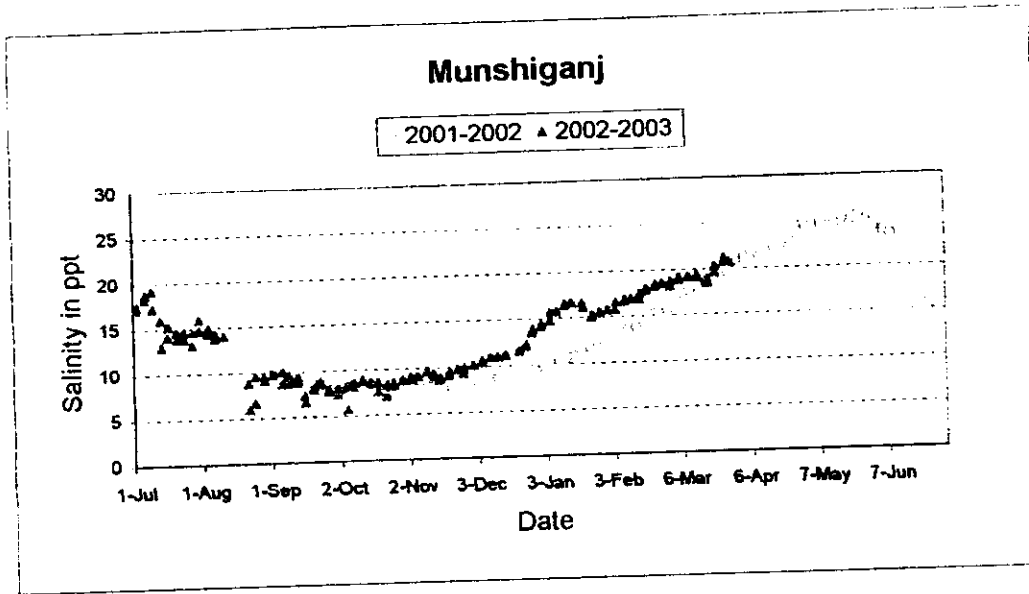


Figure A26 : Salinity at Munshiganj, Dobaki(west) and Notabeki



# Comparison of yearwise Observed Salinity

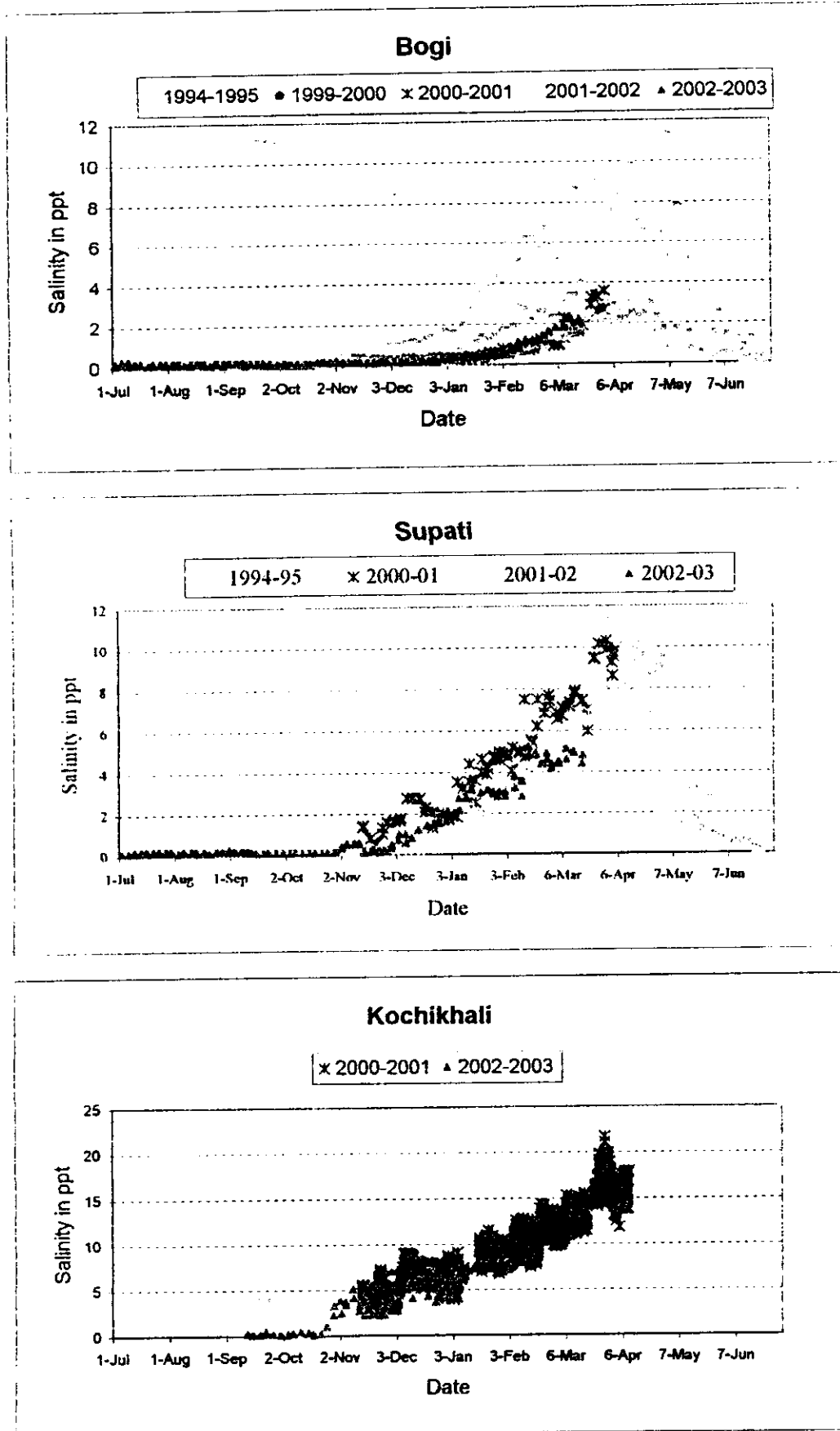


Figure A27 : Salinity at Bogi, Supati and Kochikhali

# Comparison of yearwise Observed Salinity

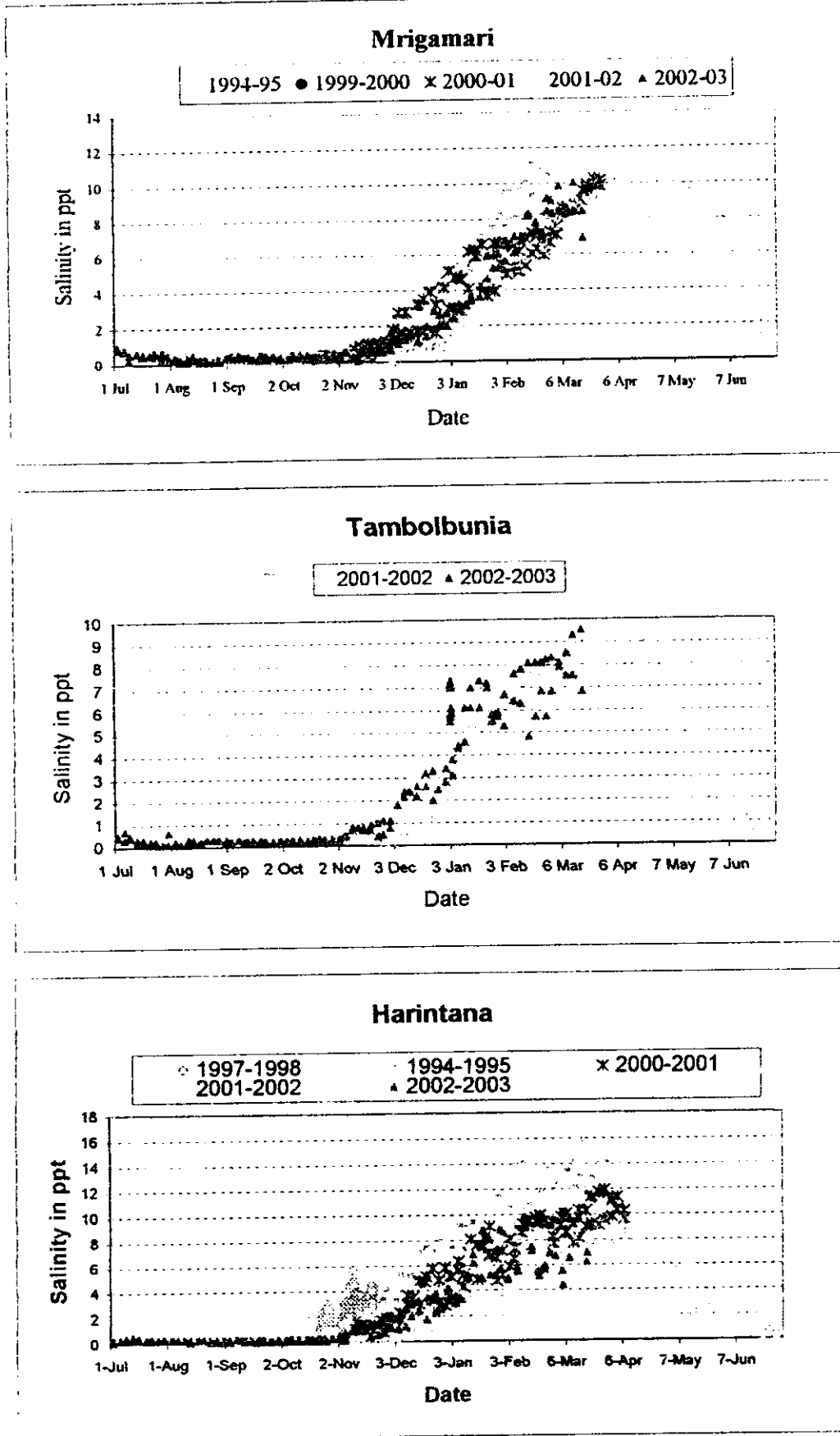


Figure A28 : Salinity at Mrigamari, Tambolbunia and Harintana

# Comparison of yearwise Observed Salinity

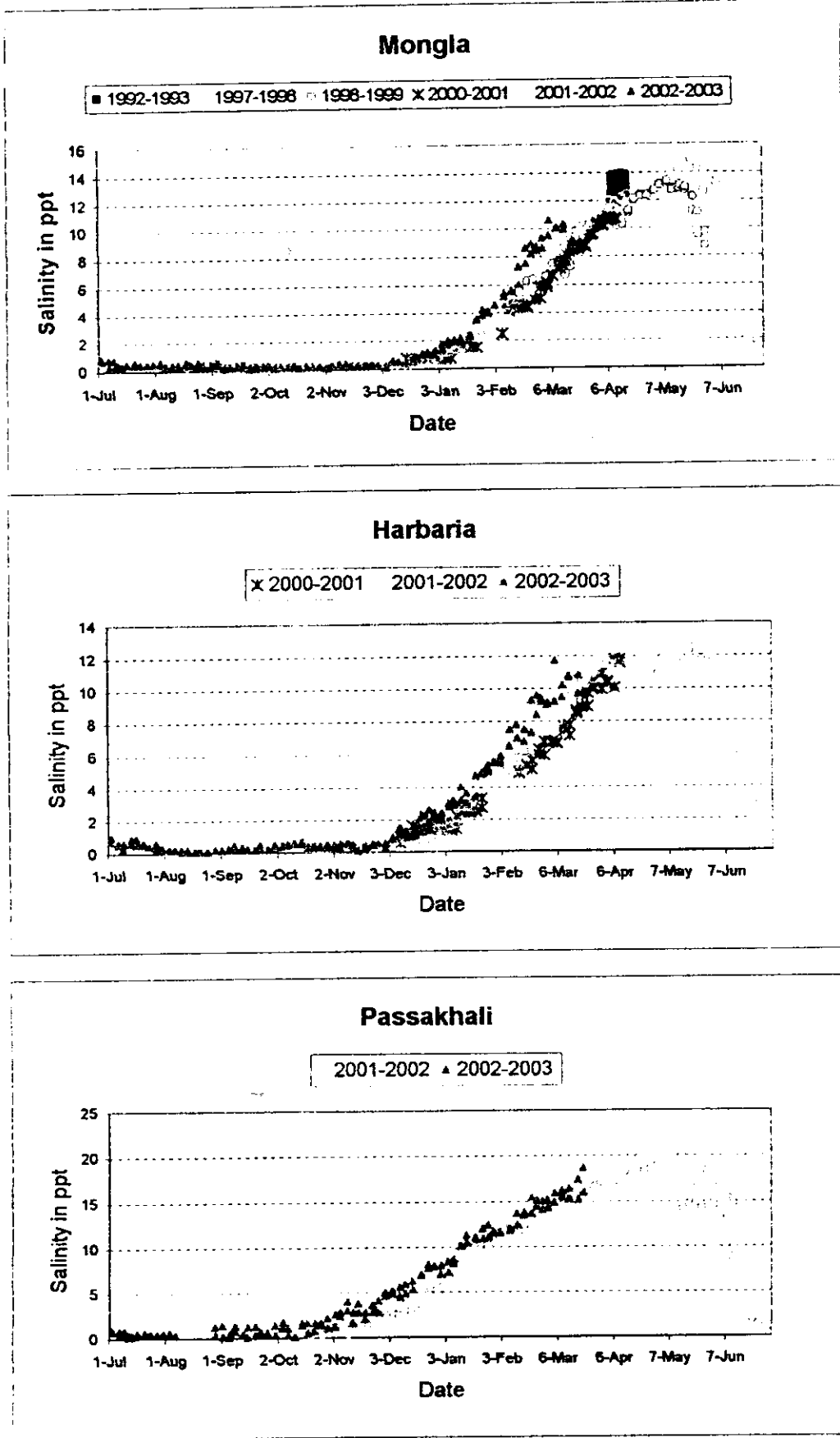
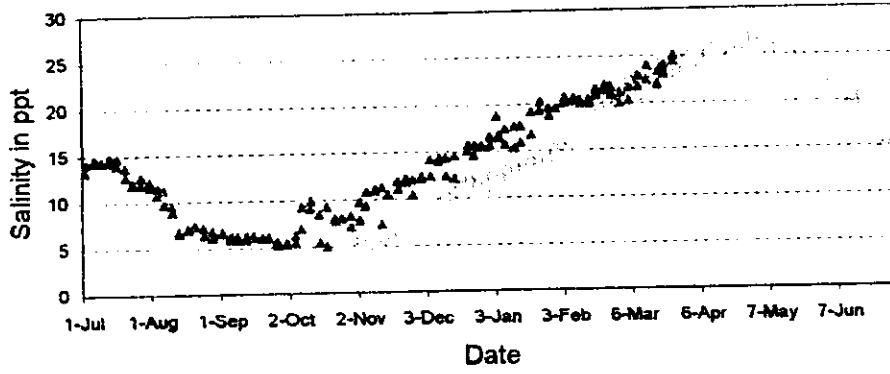


Figure A29 : Salinity at Mongla, Harbaria and Passakhali

# Comparison of yearwise Observed Salinity

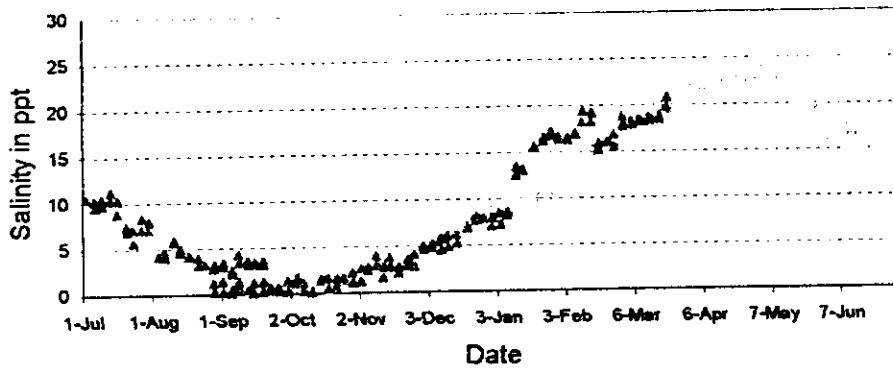
## Jhalia

2001-2002 ▲ 2002-2003



## Patkusta

2001-2002 ▲ 2002-2003



## Dobaki(south)

2001-2002 ▲ 2002-2003

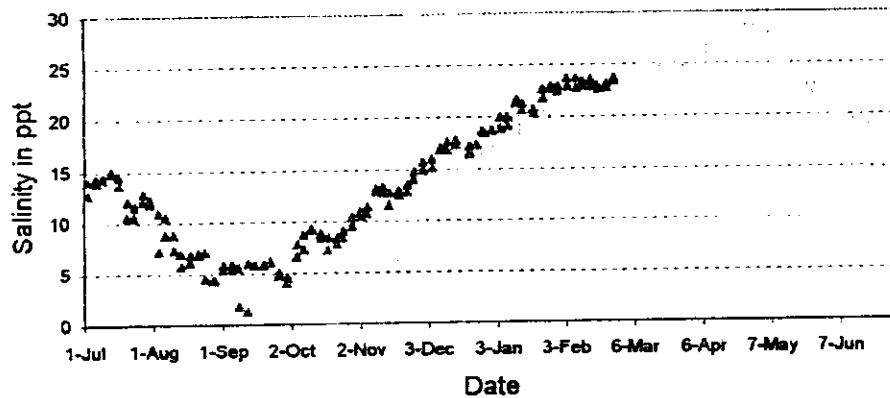


Figure A30 : Salinity at Jhalia, Patkusta and Dobaki(south)

# Comparison of yearwise Observed Salinity

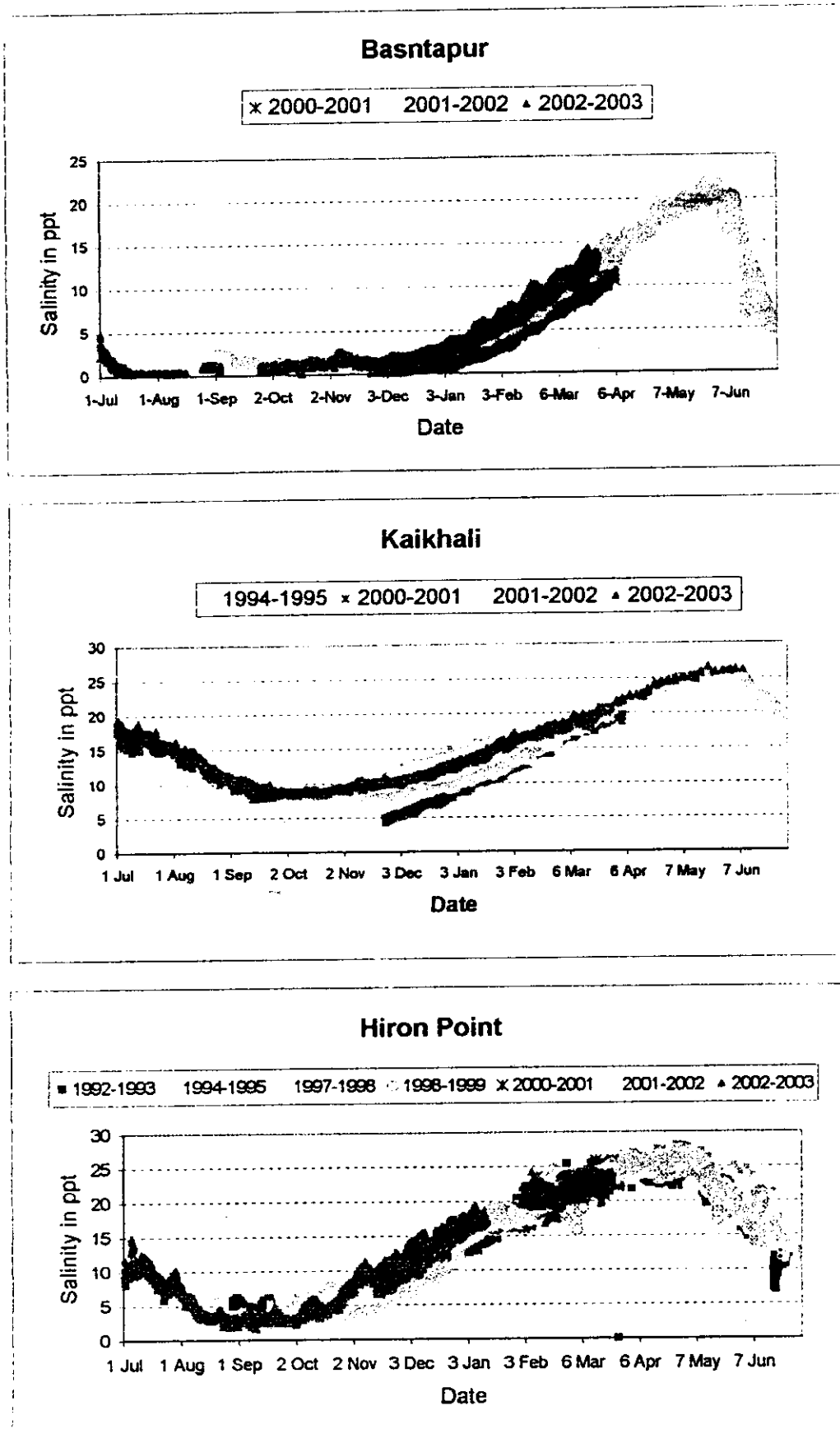


Figure A31 : Salinity at Basantapur, Kaikhali and Hiron Point

# Comparison of yearwise Observed Salinity

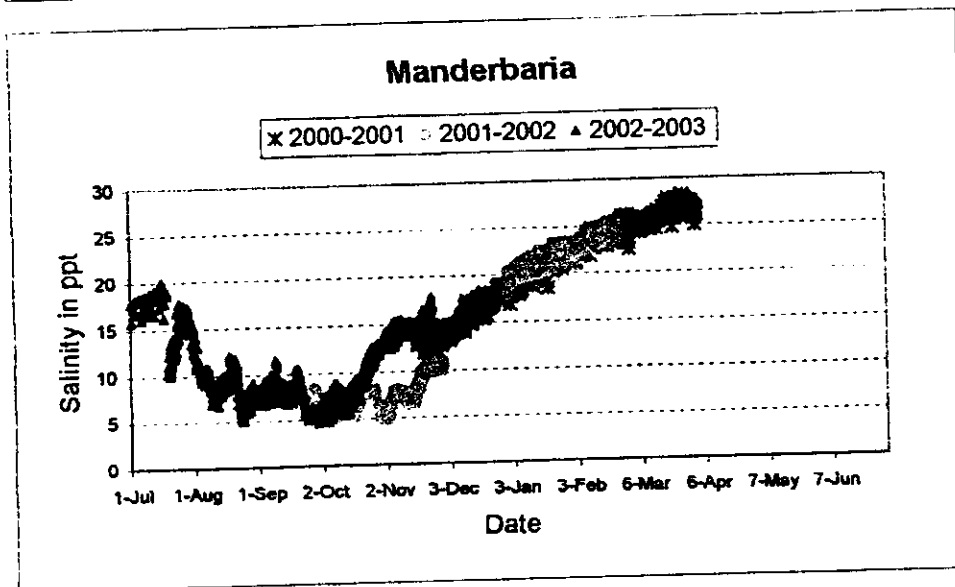
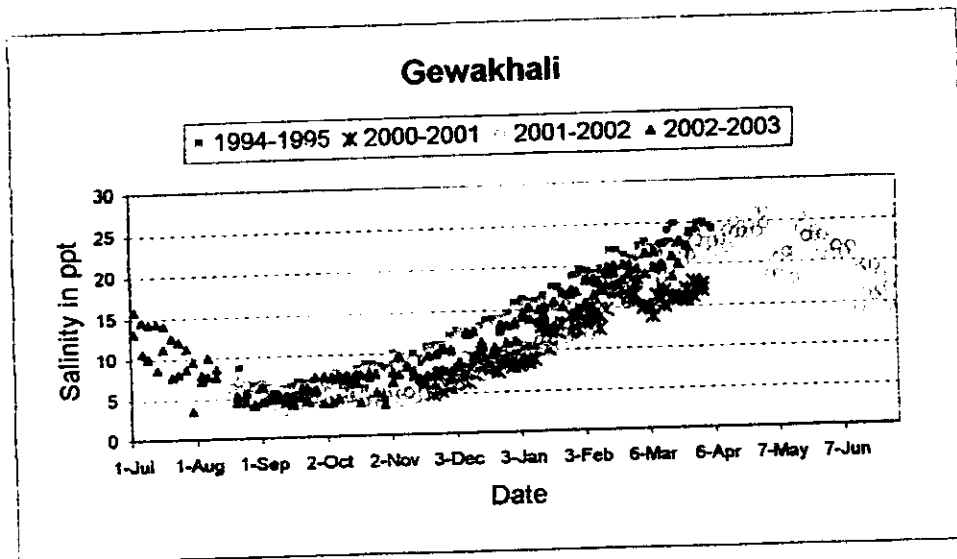
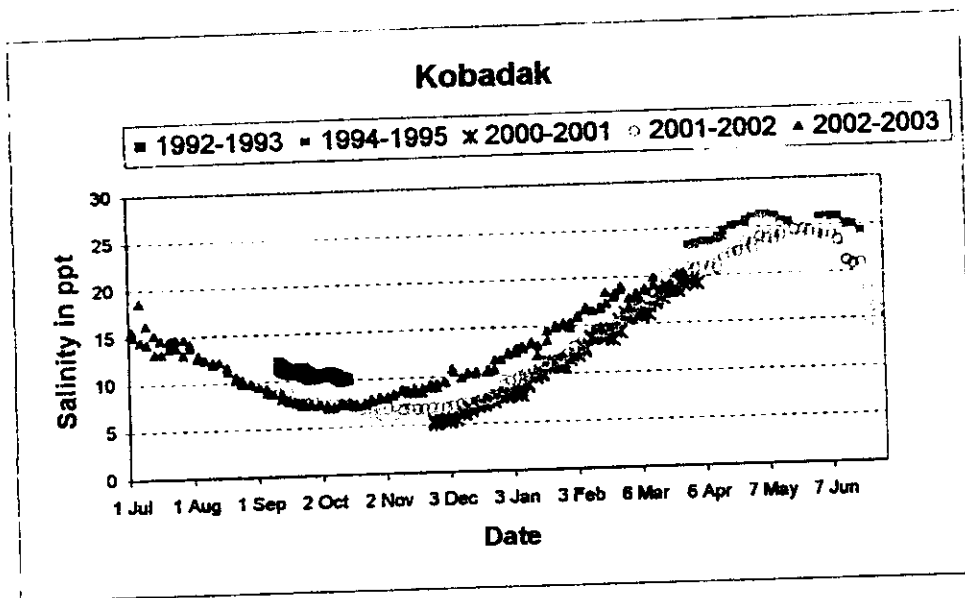


Figure A32 : Salinity at Kobadak, Gewakhali and Manderbaria

# Comparison of yearwise Observed Salinity

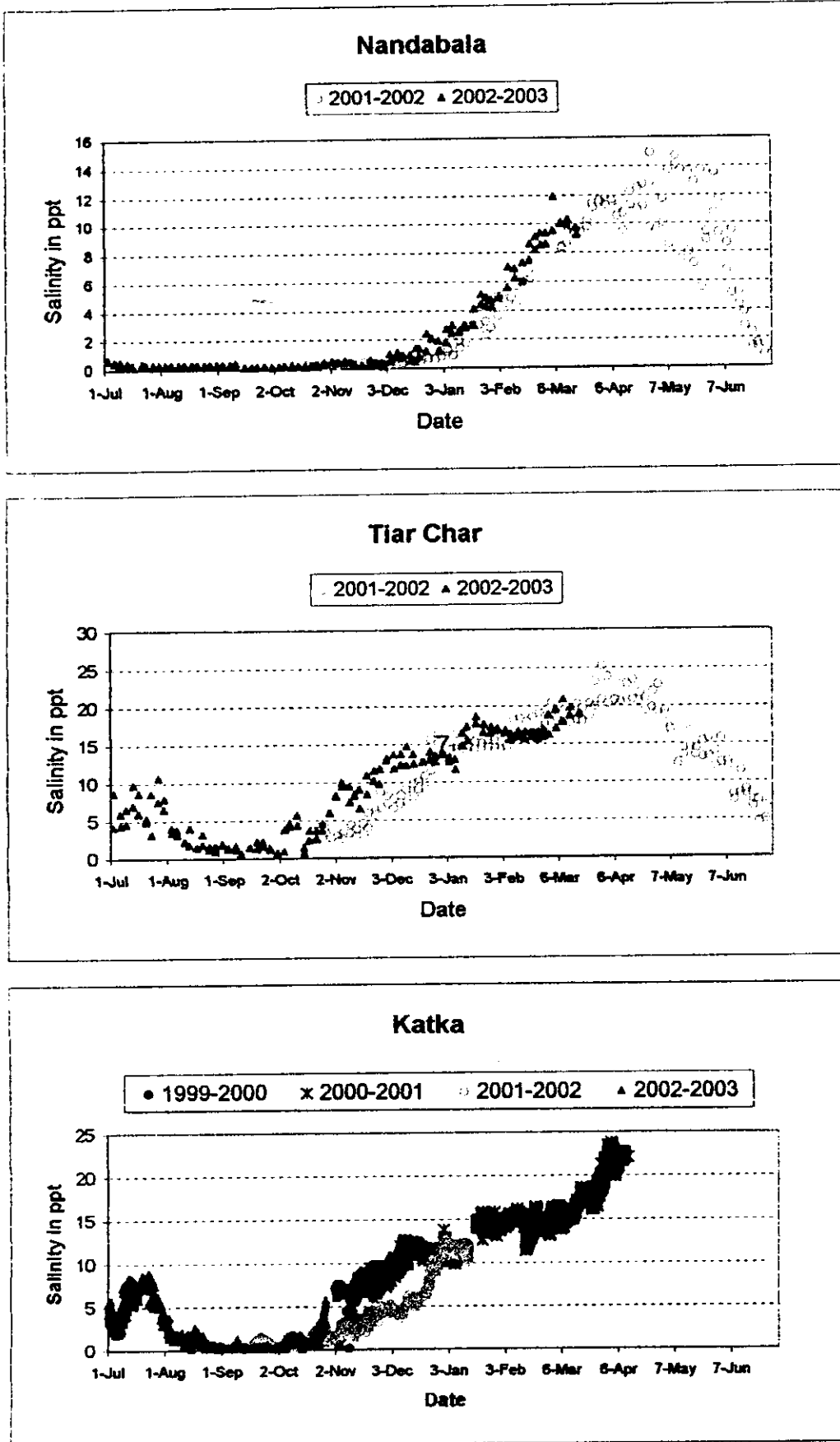
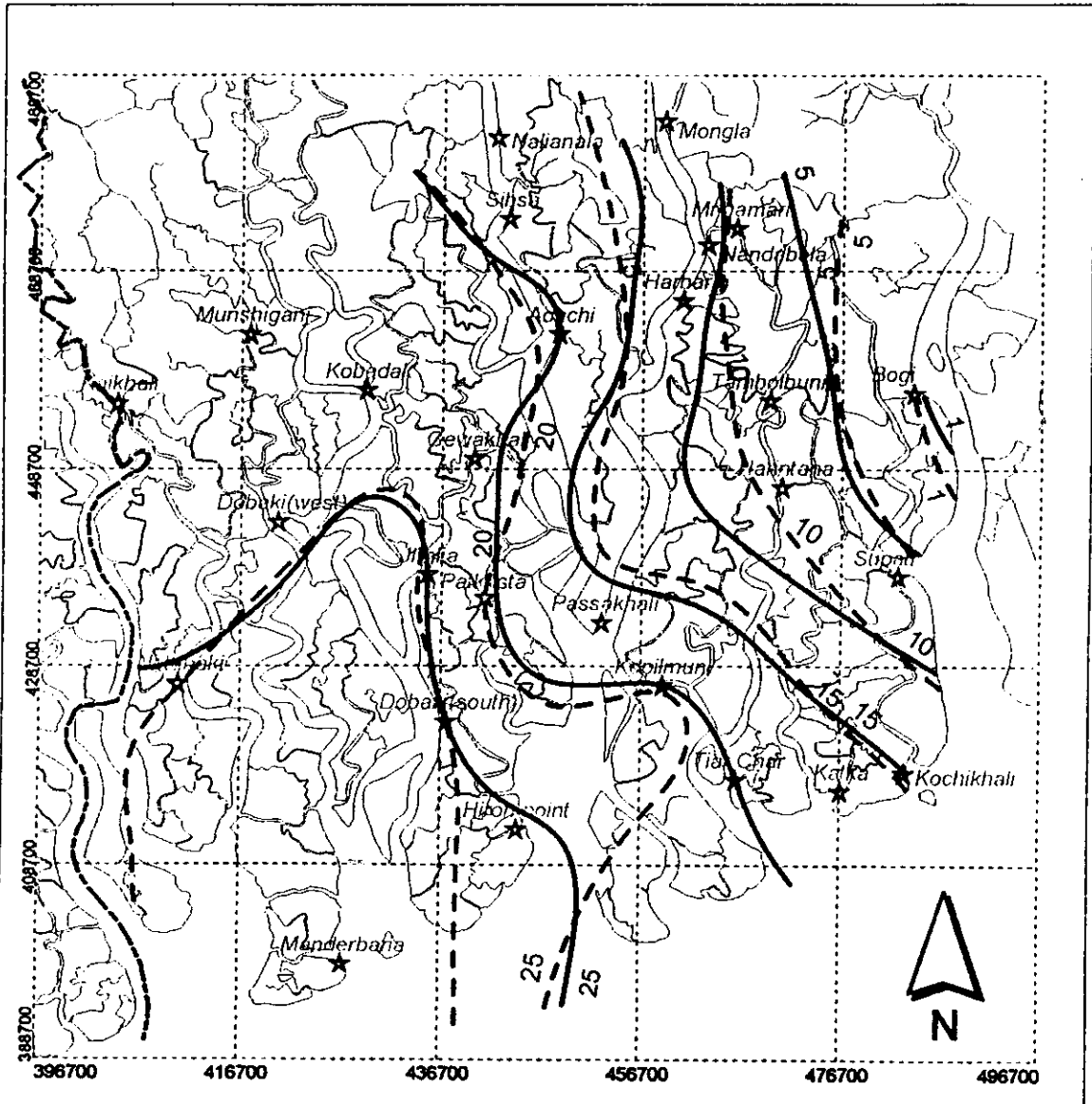







Figure A33 : Salinity at Nandabala, Tiar Char and Katka



**Isohaline Map Showing Minimum Salinity (ppt) for 15 days Duration**

**Legend**

-  Flood Tide Isoheline
-  Ebb Tide Isoheline
-  Sampling Location
-  International Boundary
-  River Network

Scale:

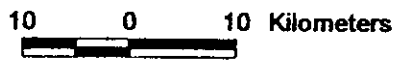
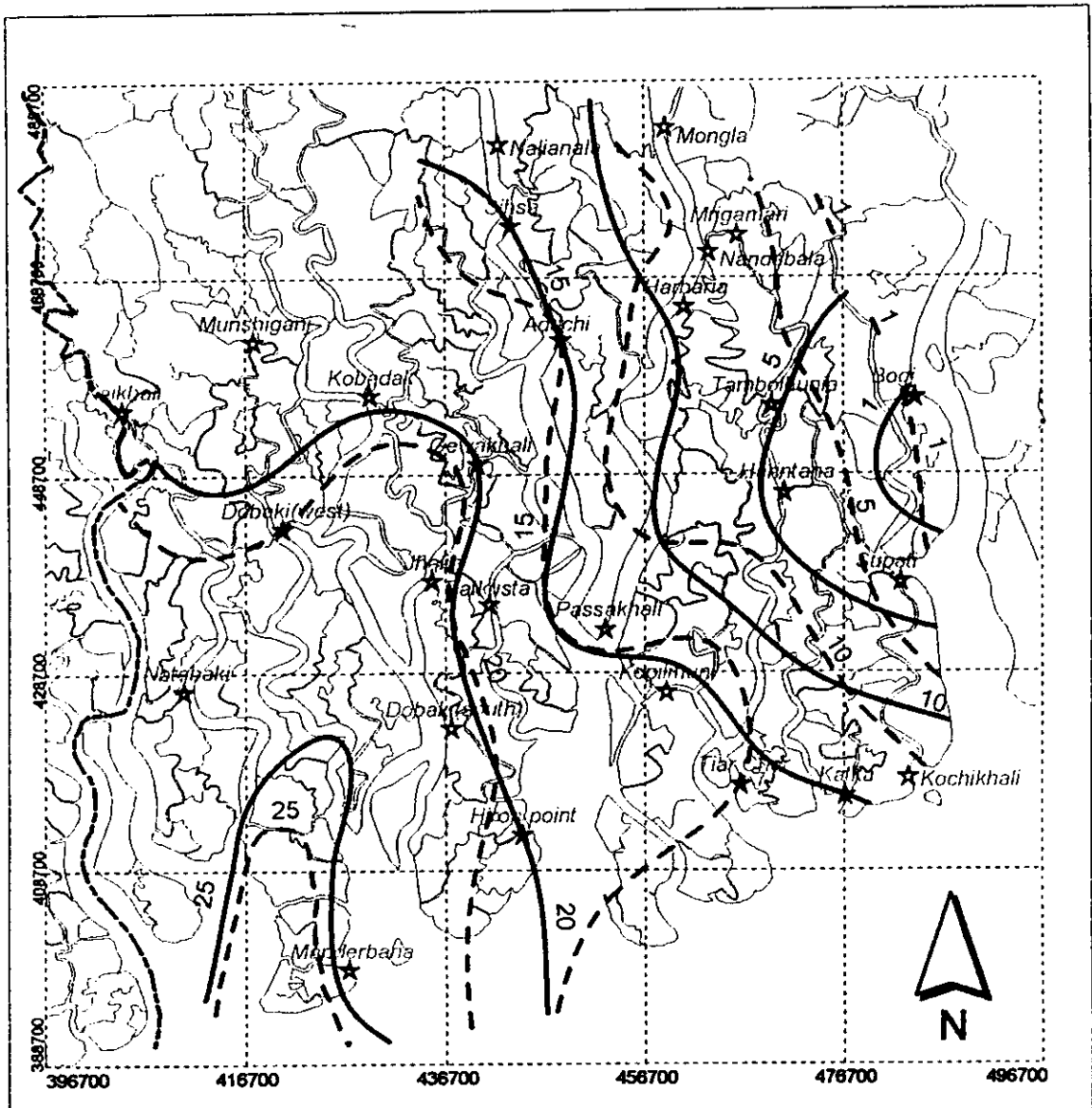







Figure: A34






**Isohaline Map Showing Minimum Salinity (ppt) for 30 days Duration**

**Legend**

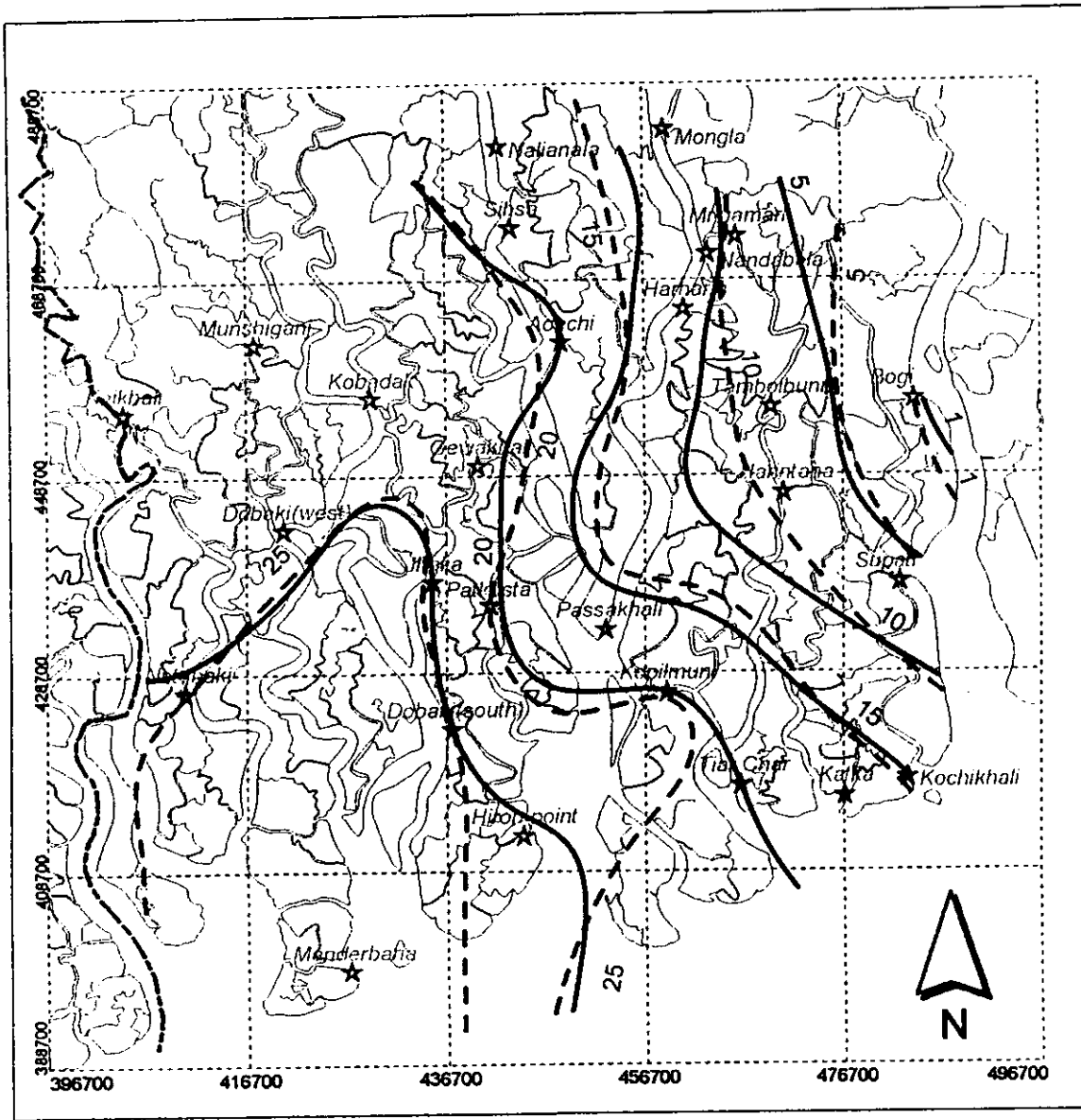
-  Flood Tide Isoheline
-  Ebb Tide Isoheline
-  Sampling Location
-  International Boundary
-  River Network

**Scale:**






10 0 10 Kilometers



**Figure: A35**



**Isohaline Map Showing Minimum Salinity (ppt) for 45 days Duration**

- Legend**
-  Flood Tide Isoheline
  -  Ebb Tide Isoheline
  -  Sampling Location
  -  International Boundary
  -  River Network

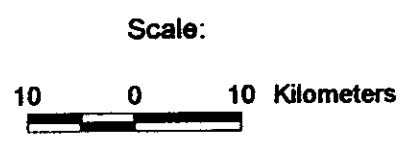
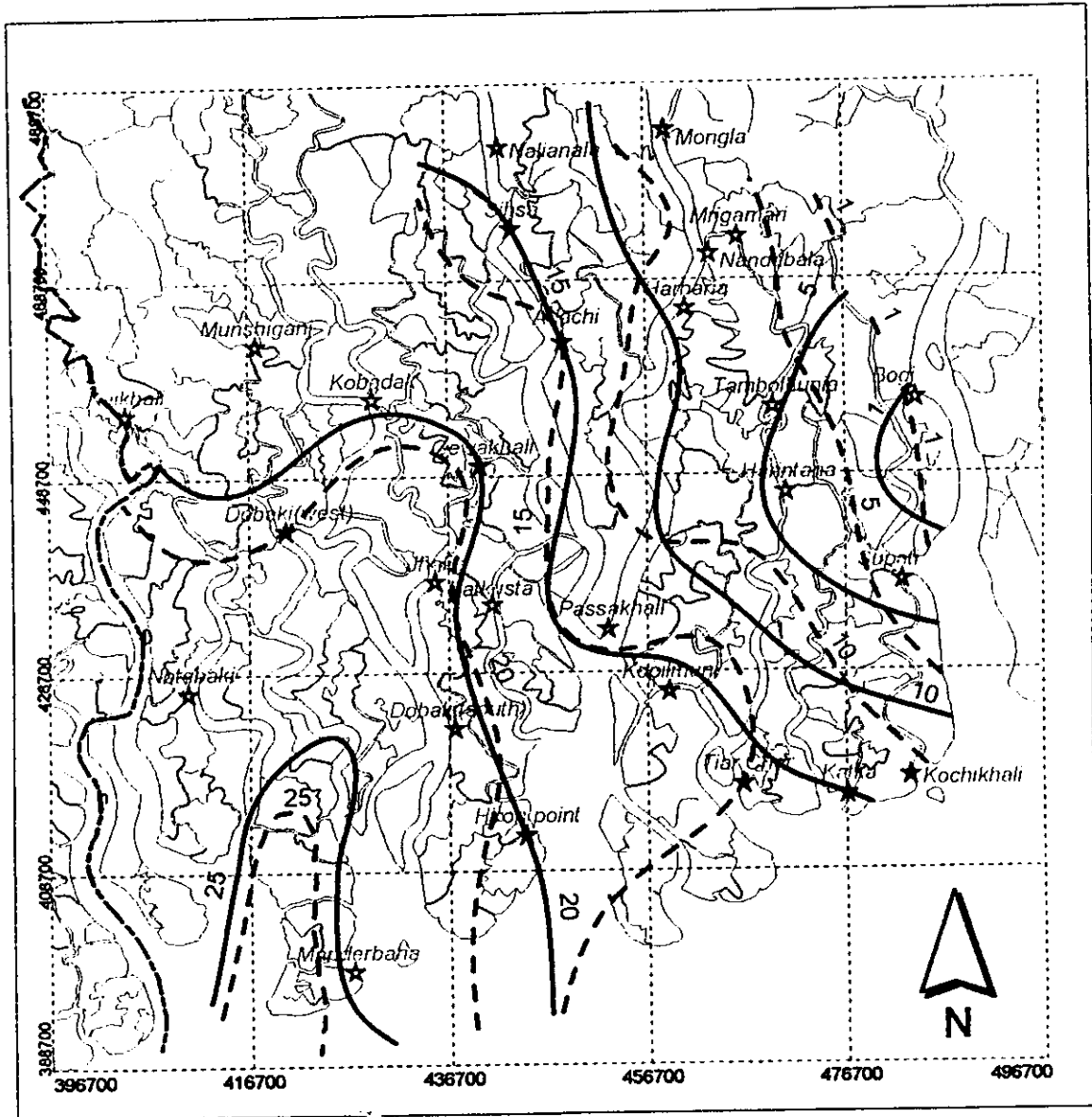







Figure: A36



**Isohaline Map Showing Minimum Salinity (ppt) for 60 days Duration**

**Legend**

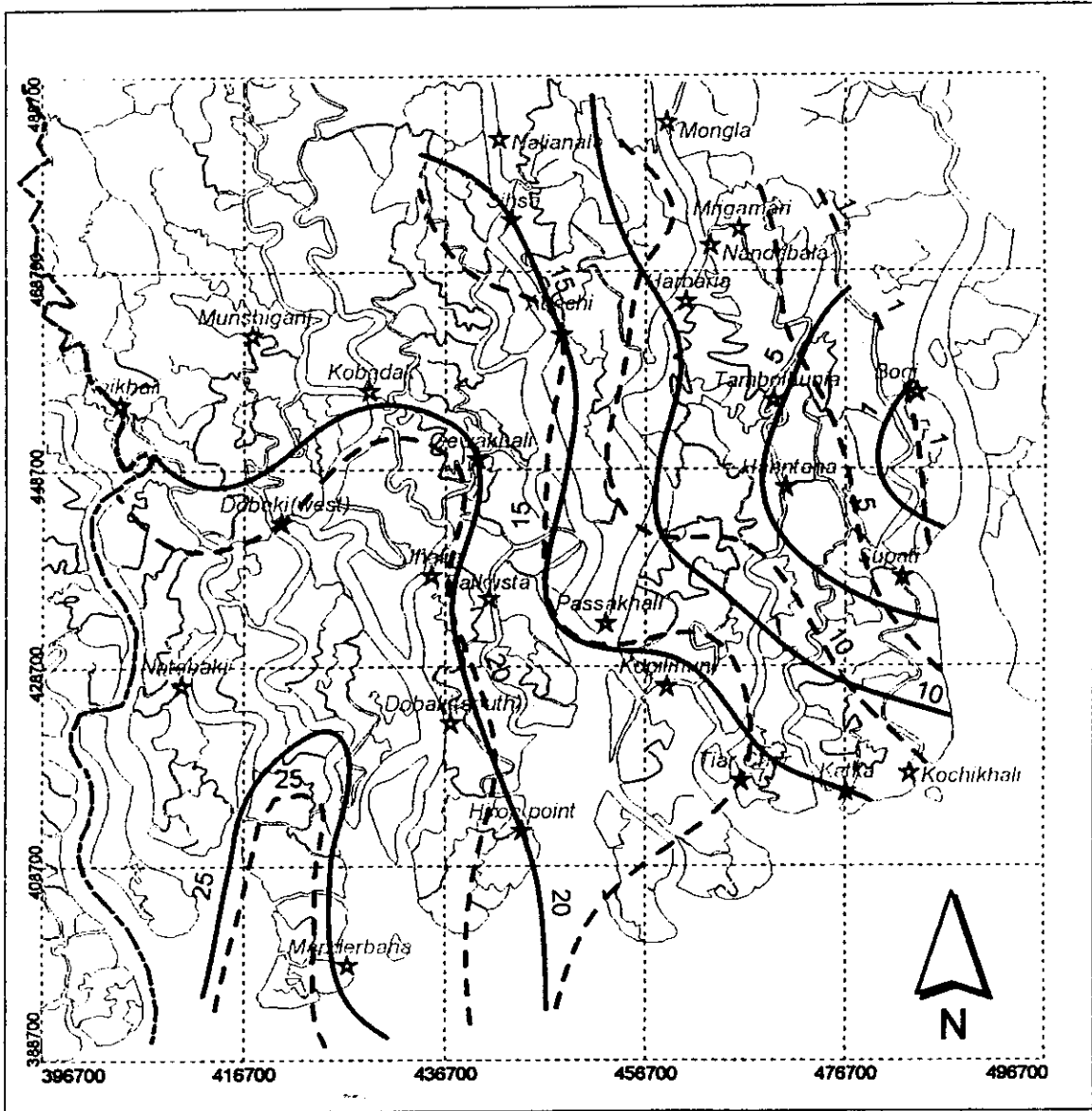
-  Flood Tide Isoheline
-  Ebb Tide Isoheline
-  Sampling Location
-  International Boundary
-  River Network

**Scale:**






10 0 10 Kilometers

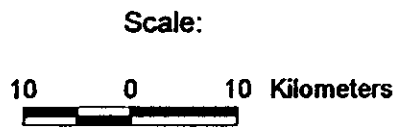


**Figure: A37**

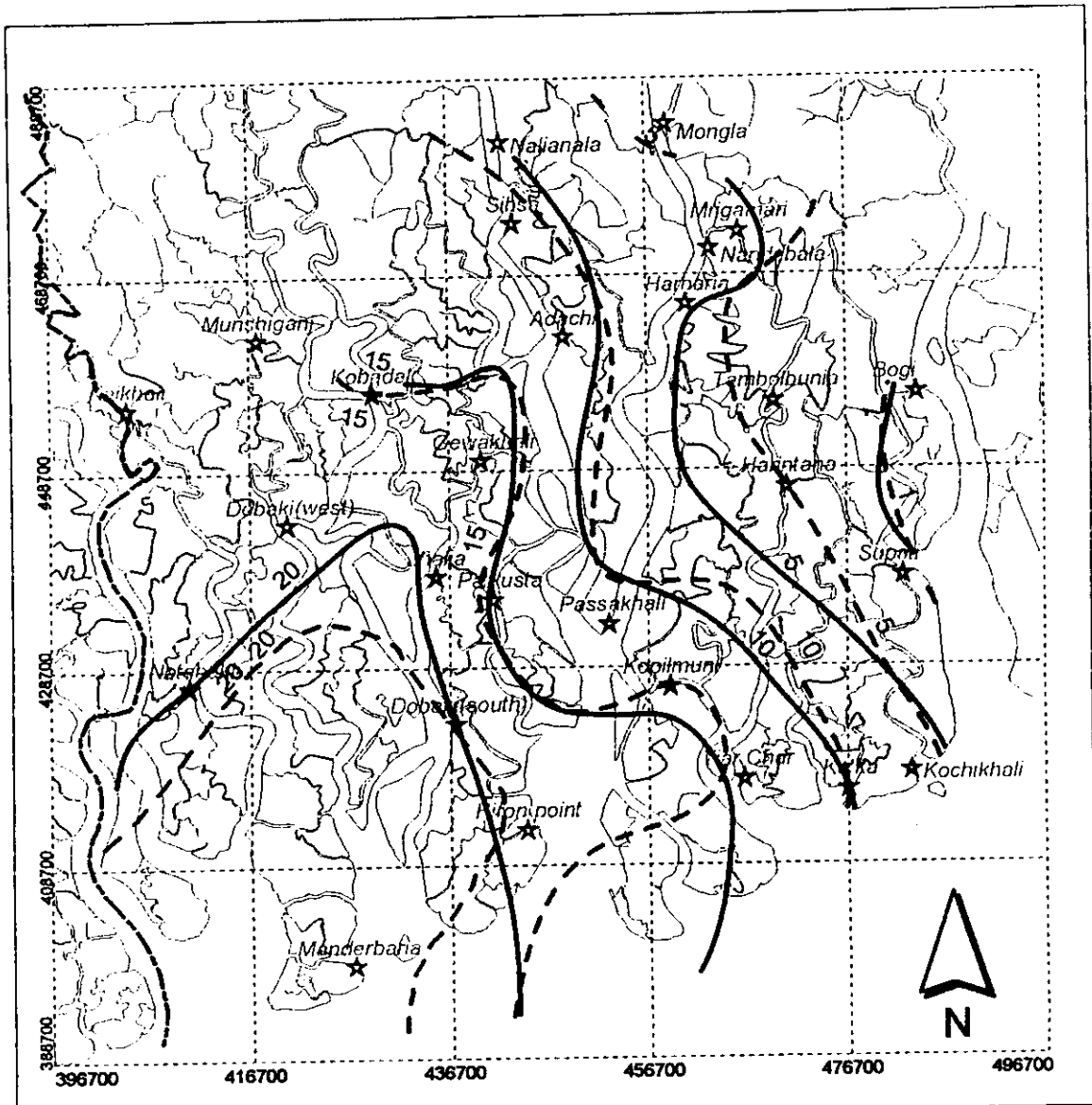


**Isohaline Map Showing Minimum Salinity (ppt) for 90 days Duration**

- Legend**
-  Flood Tide Isoheline
  -  Ebb Tide Isoheline
  -  Sampling Location
  -  International Boundary
  -  River Network








**Figure: A38**



**Isohaline Map Showing Minimum Salinity (ppt) for 120 days Duration**

**Legend**

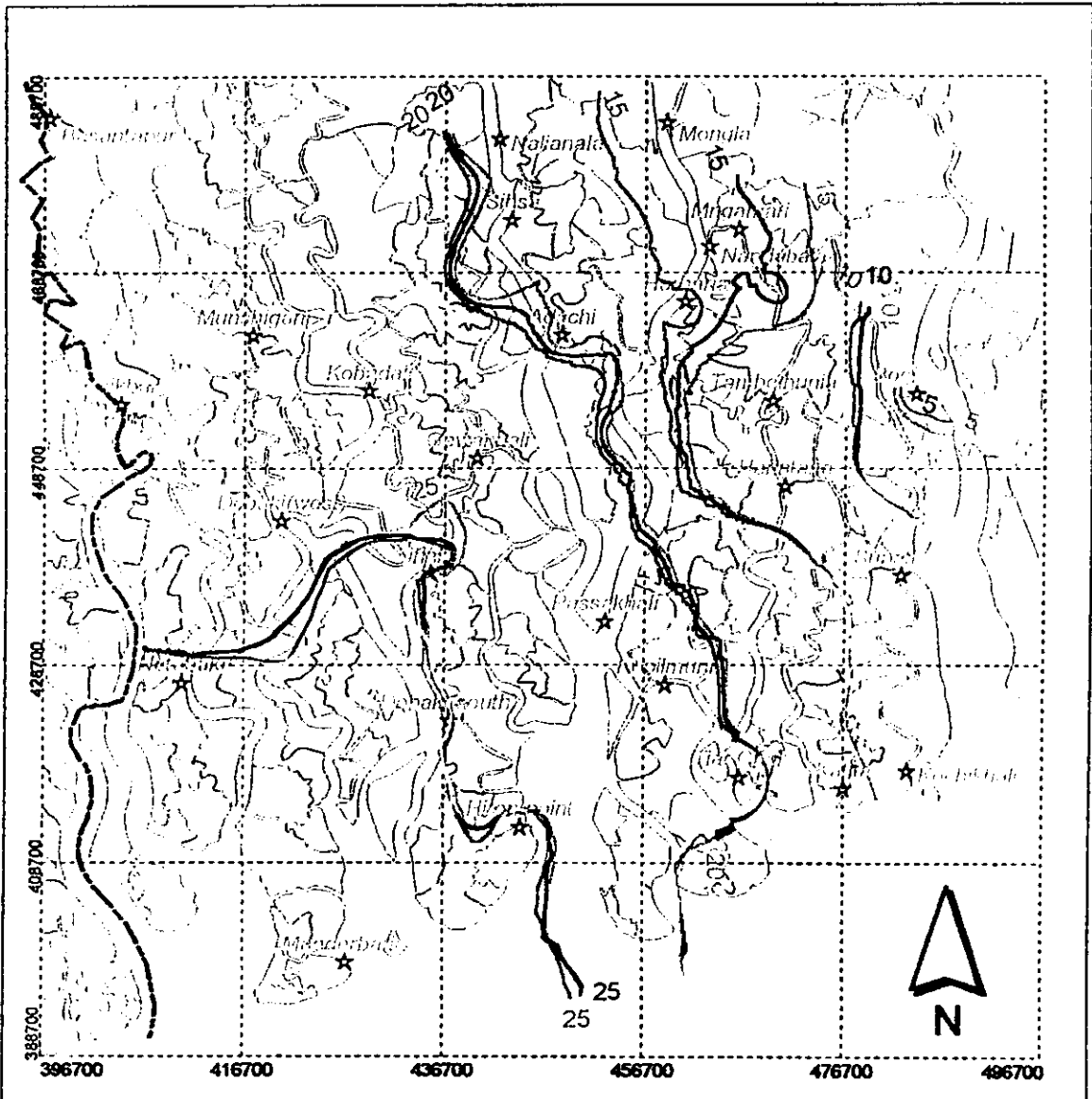
-  Flood Tide Isoheline
-  Ebb Tide Isoheline
-  Sampling Location
-  International Boundary
-  River Network

**Scale:**

10 0 10 Kilometers



**Figure: A39**



### Impact of increasing fresh water flow on Salinity

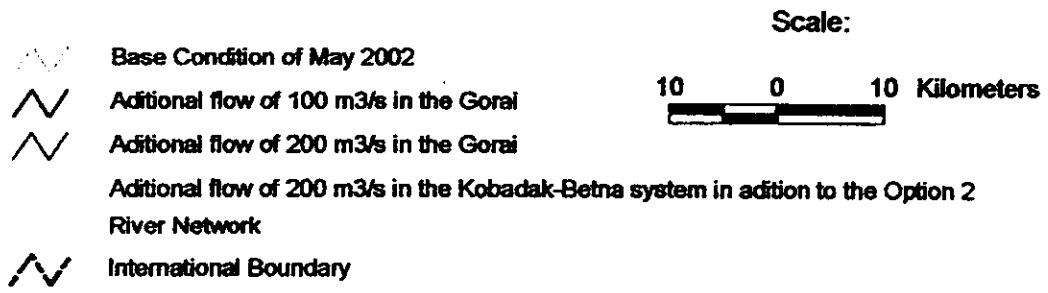


Figure: 8.6

Annexure B  
(Water Quality Plots and Tables)

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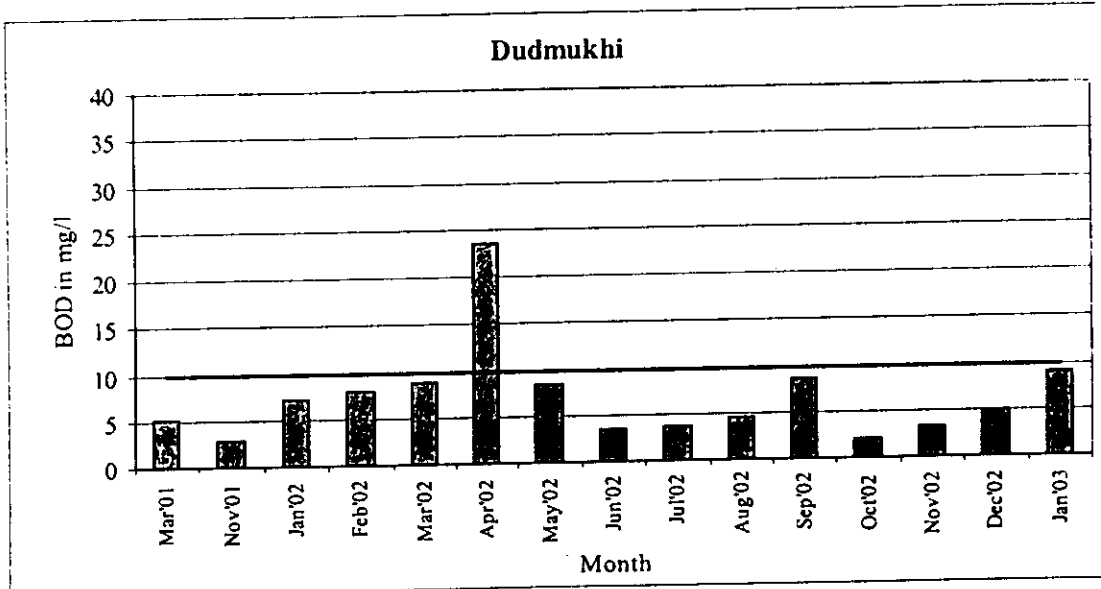
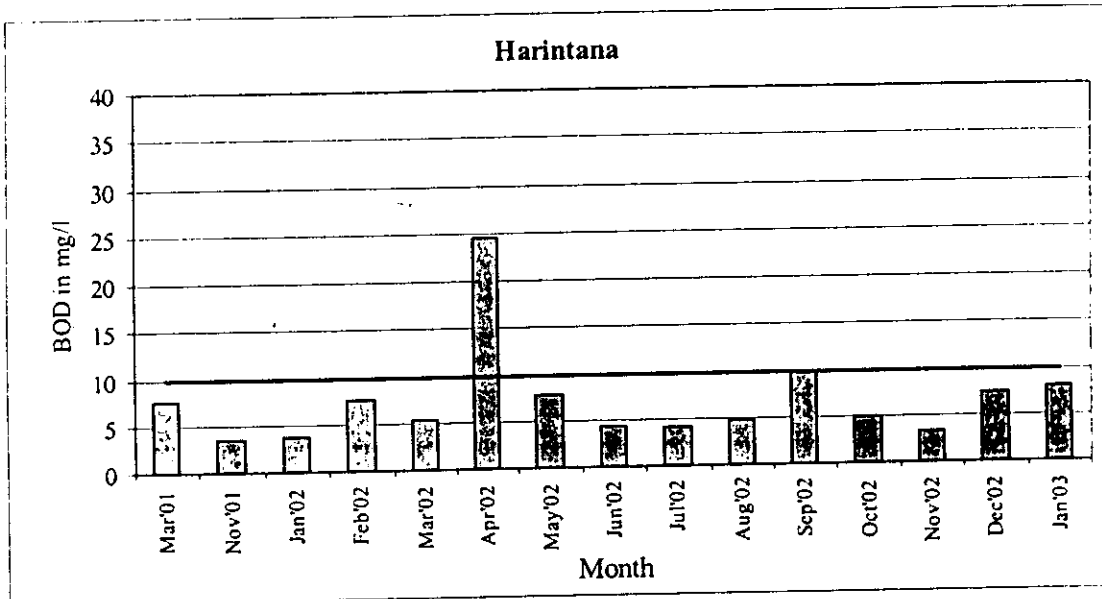
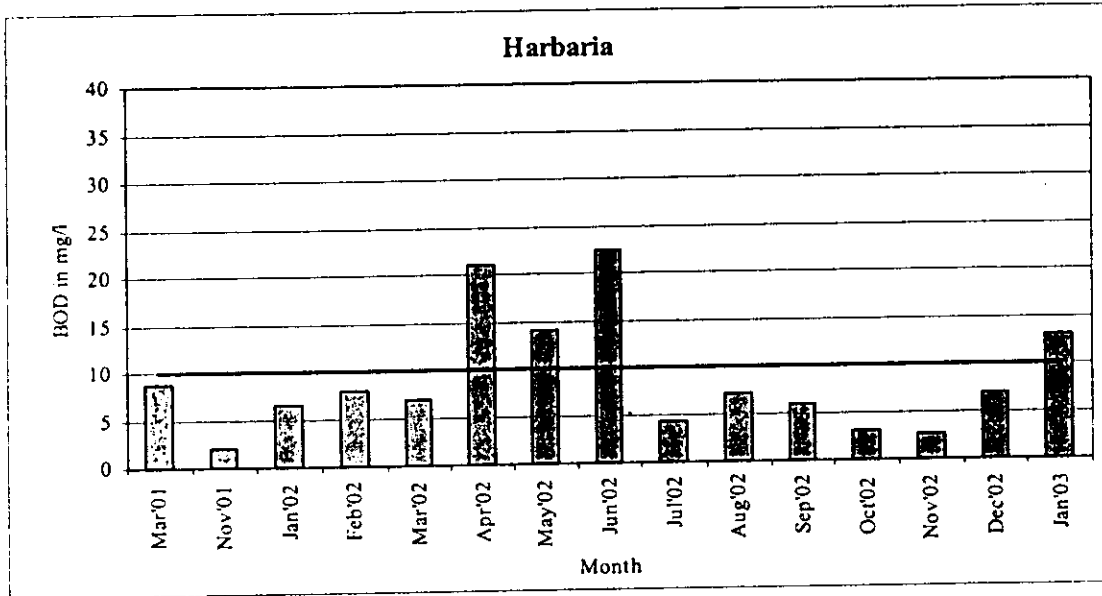
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## Plots

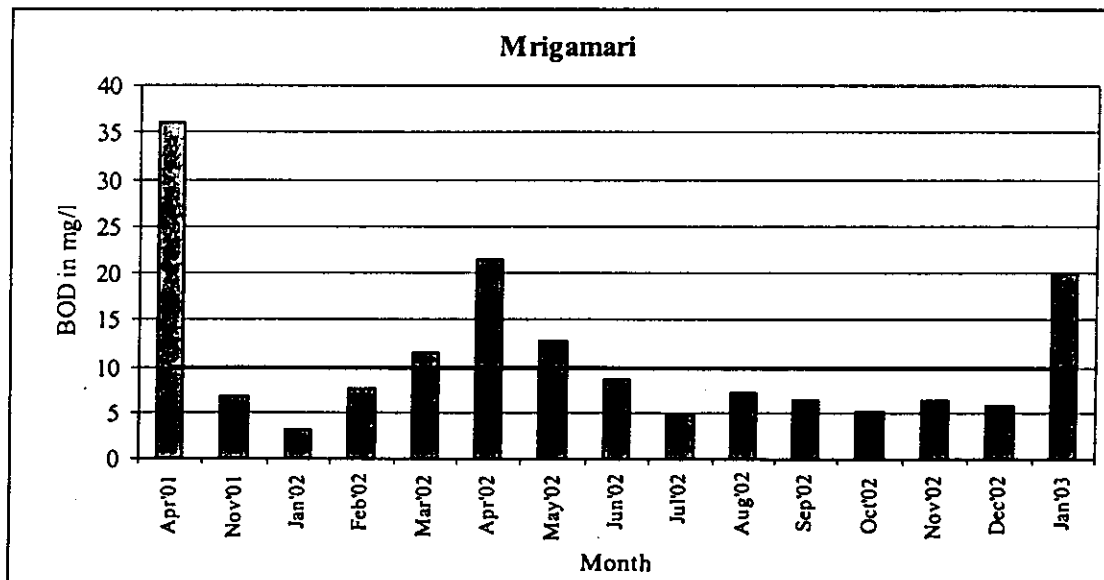
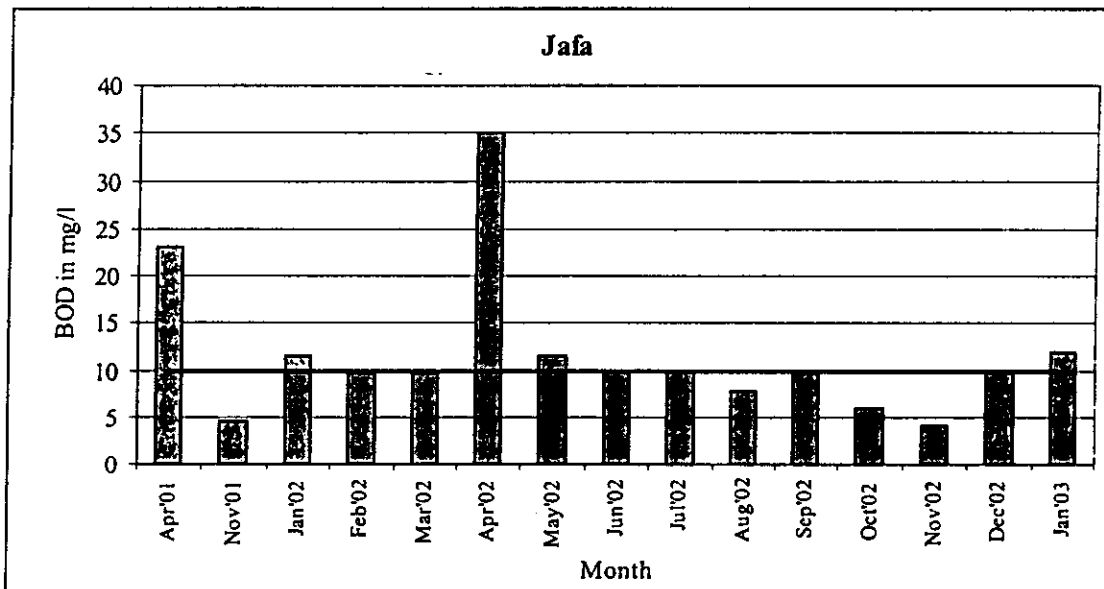
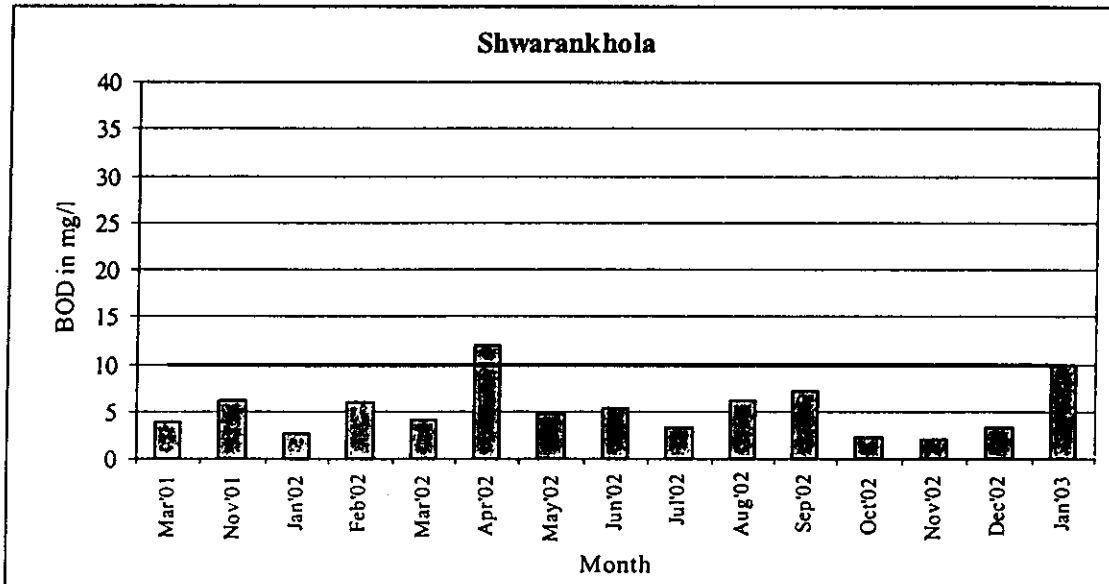


**BOD observed at different stations**



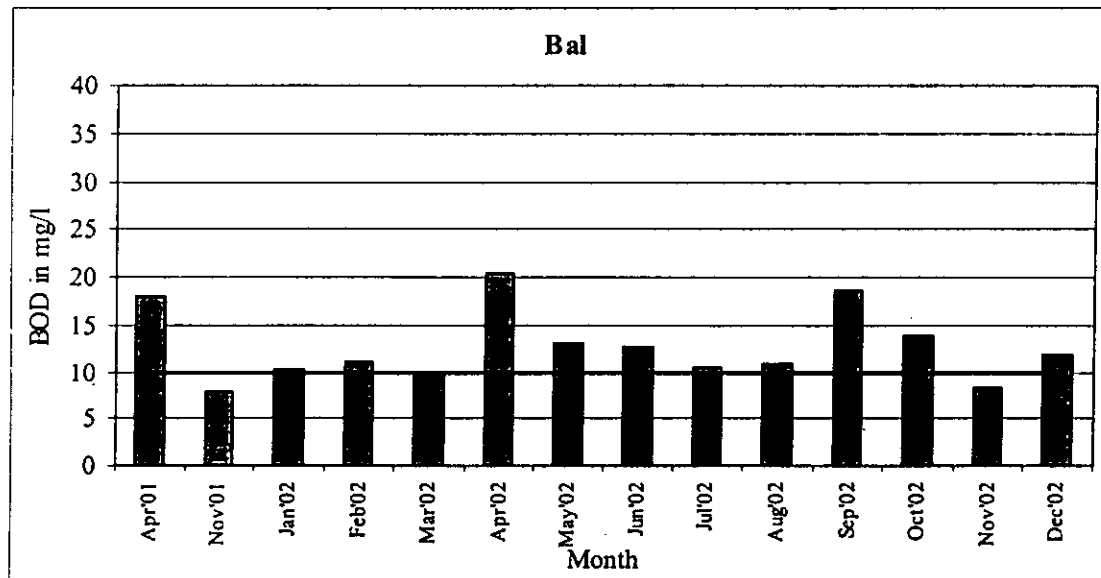
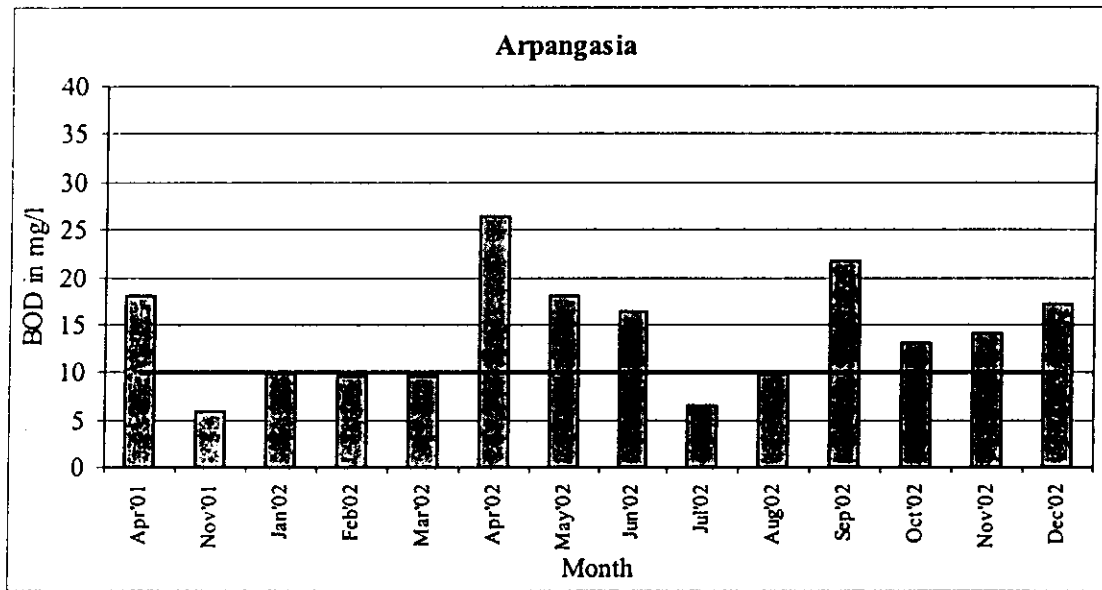
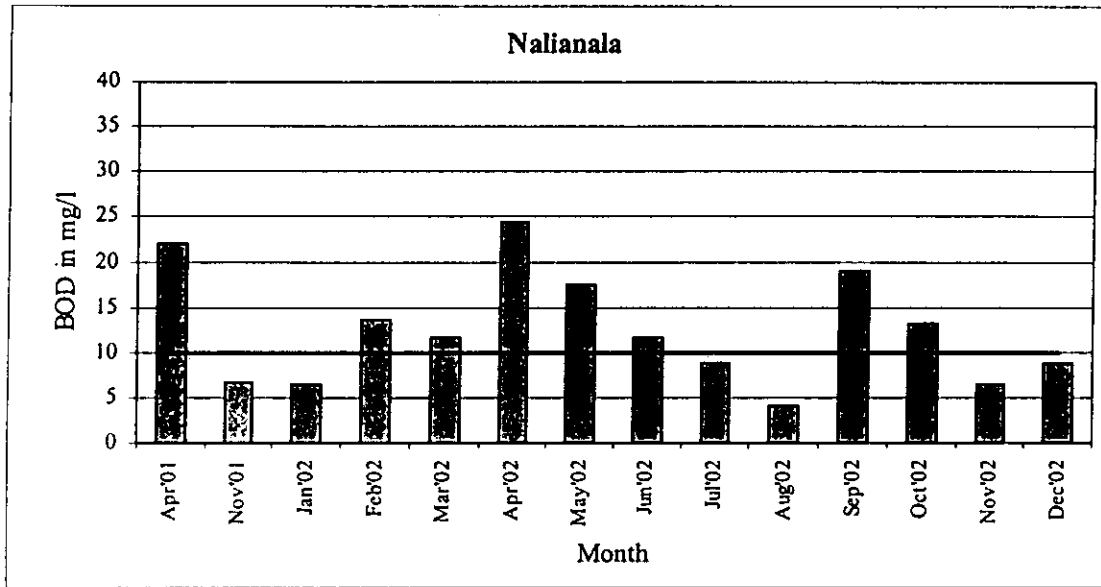
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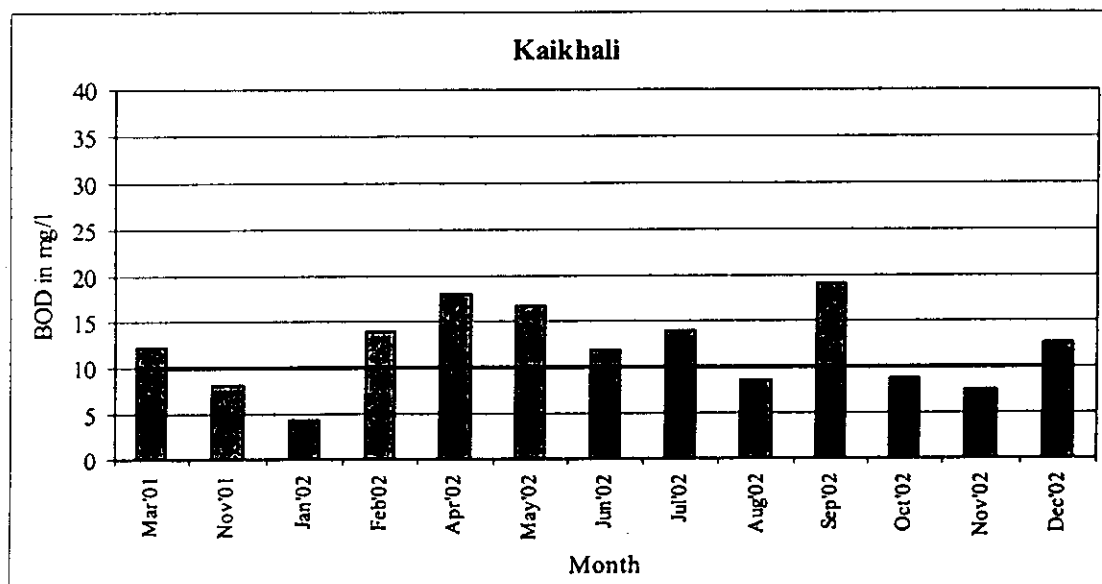
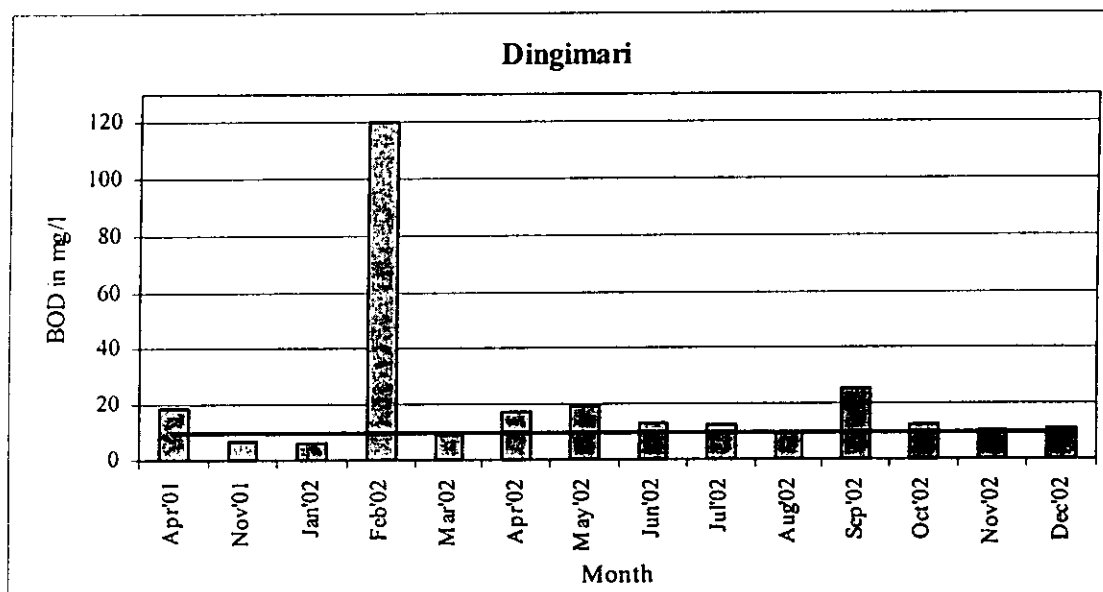
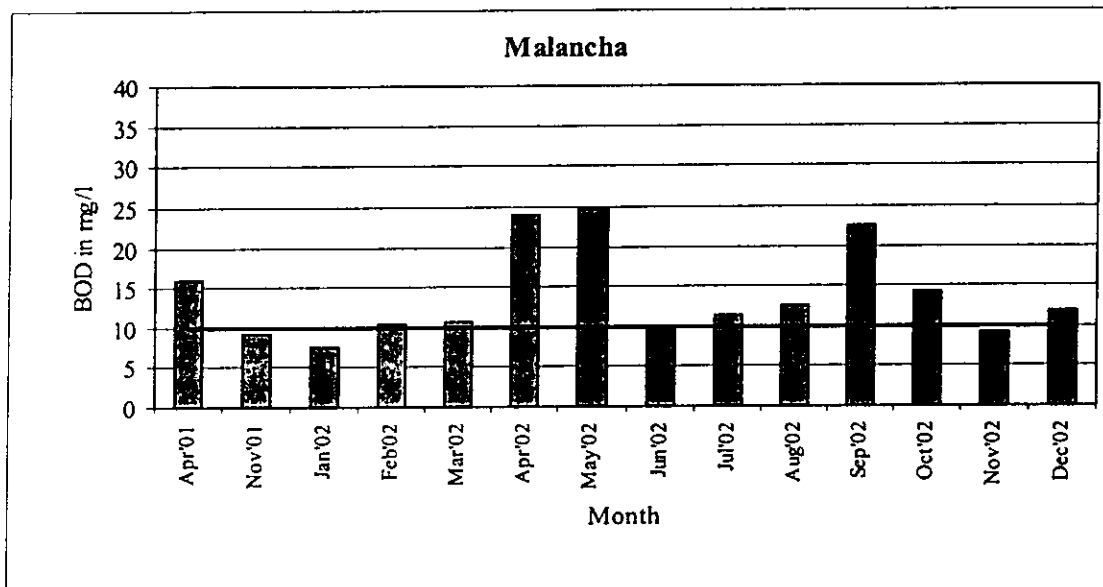


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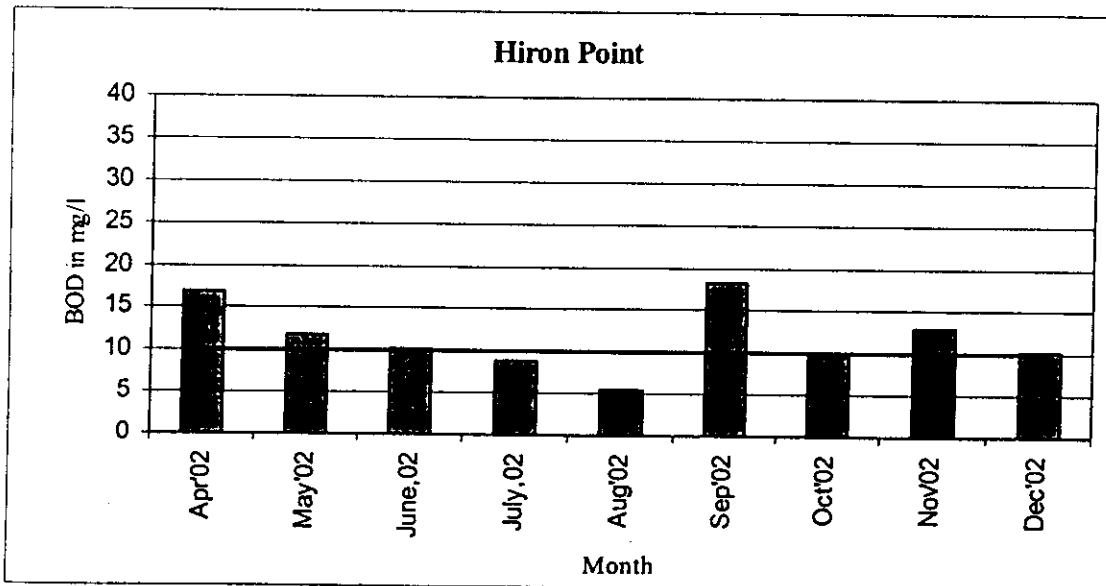
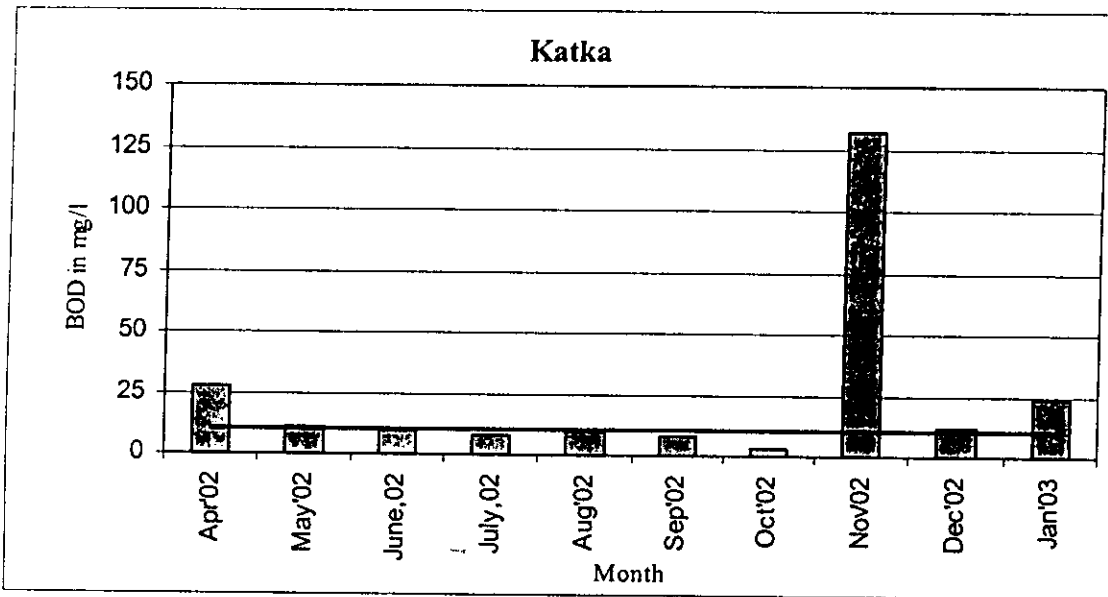
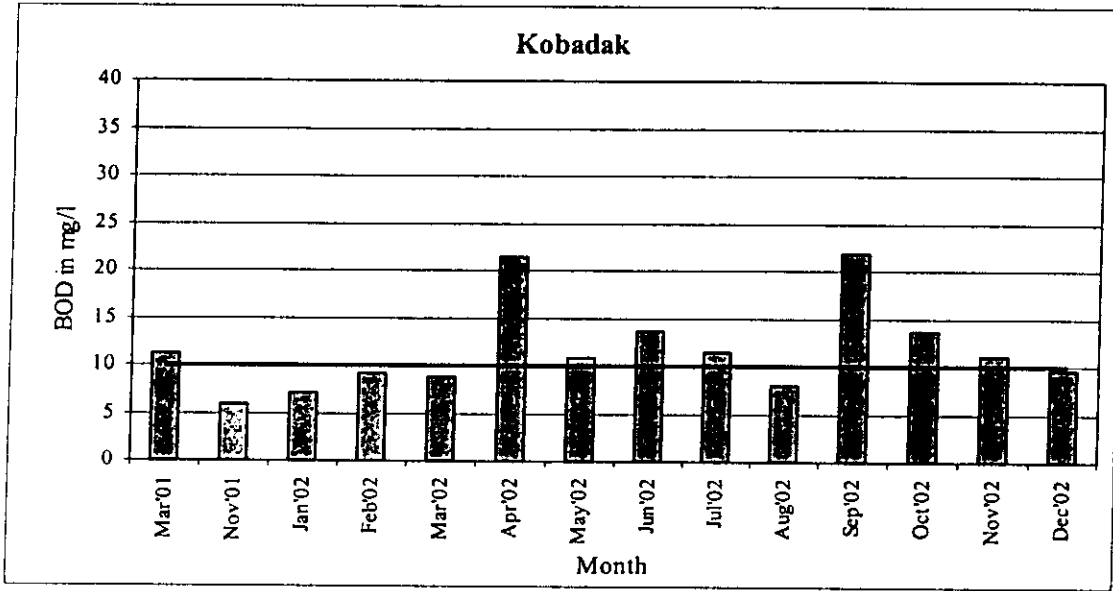


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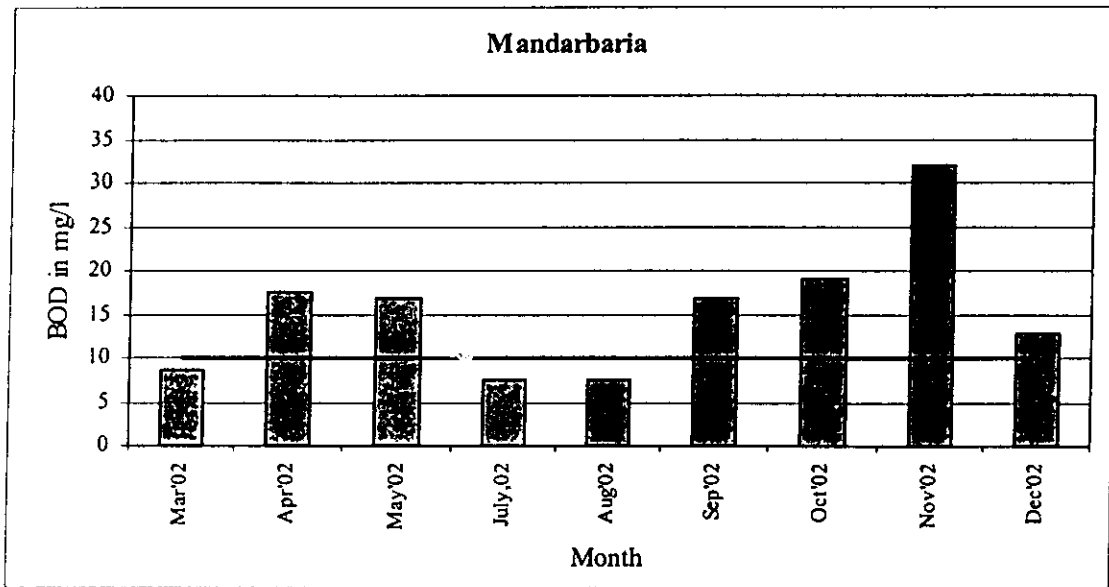


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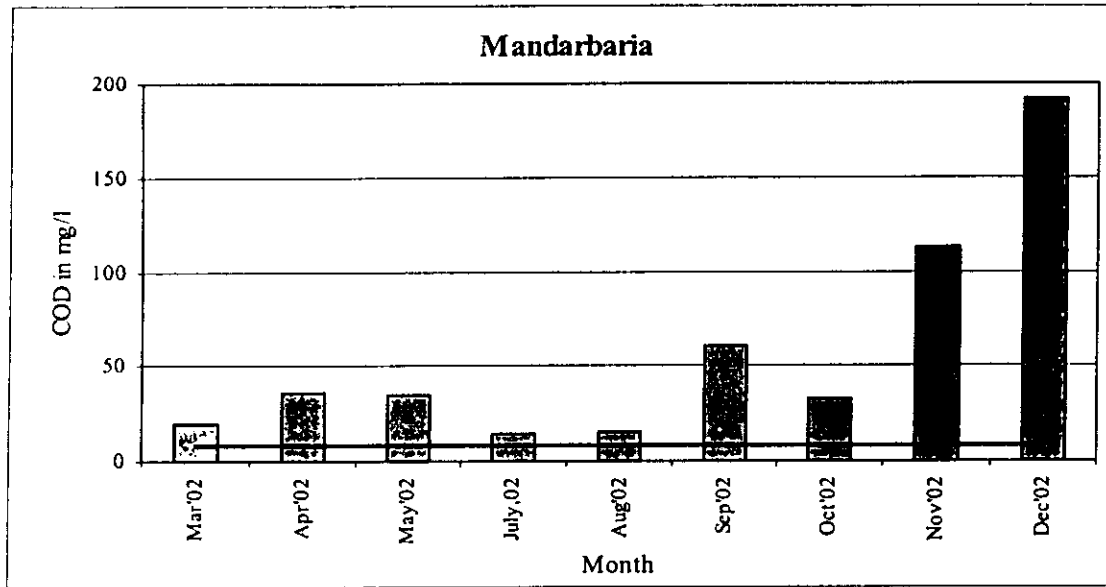
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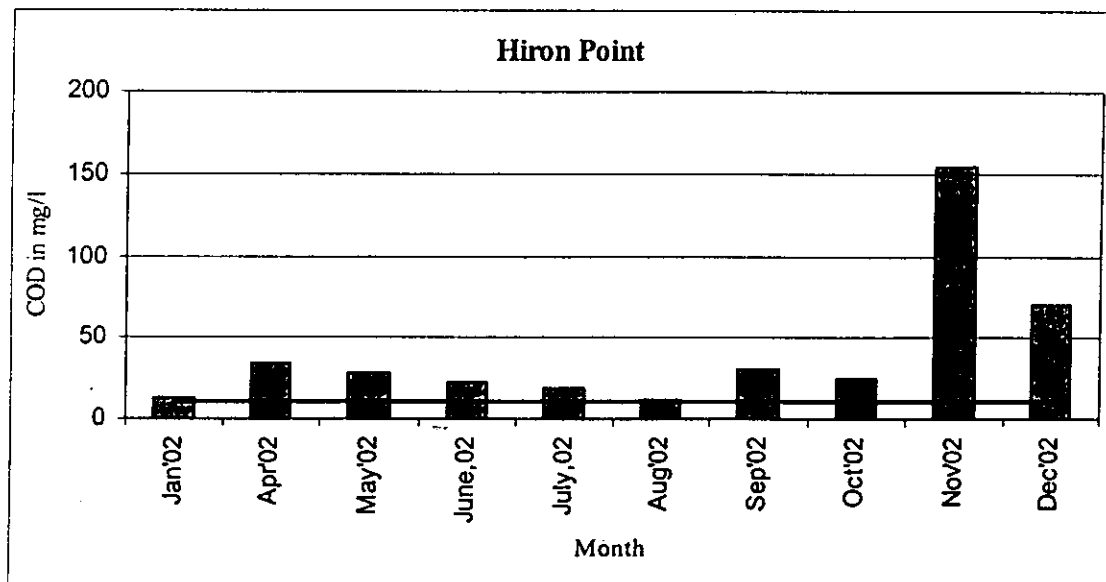
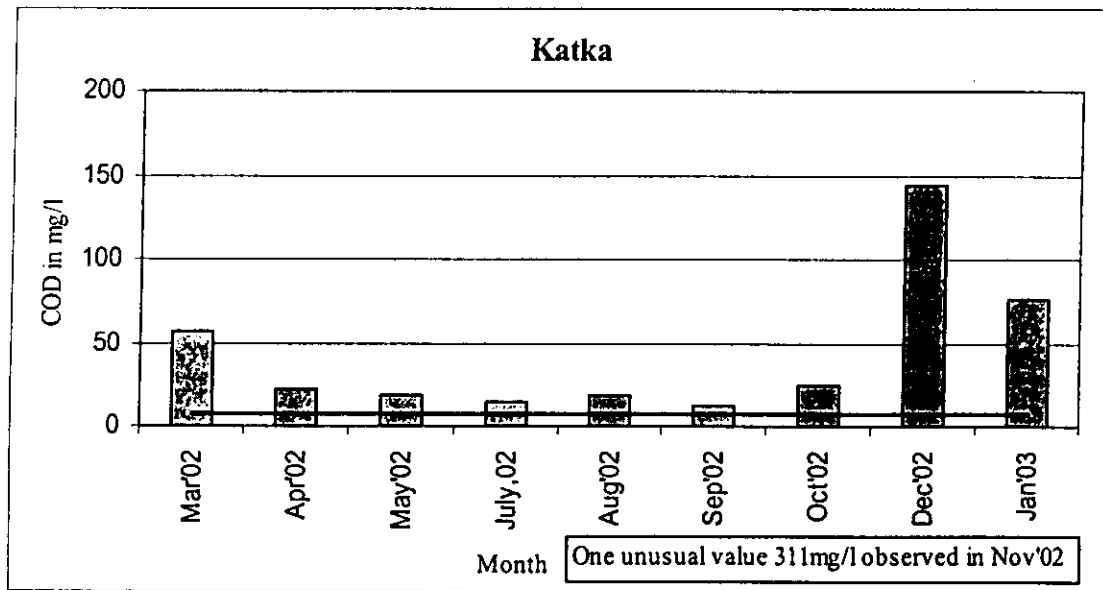
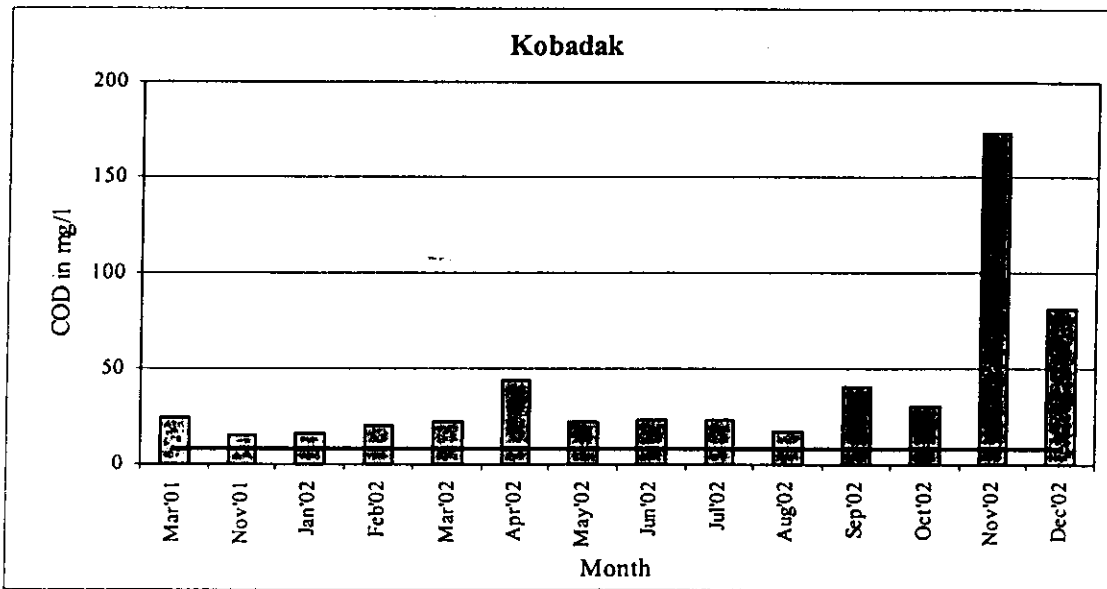
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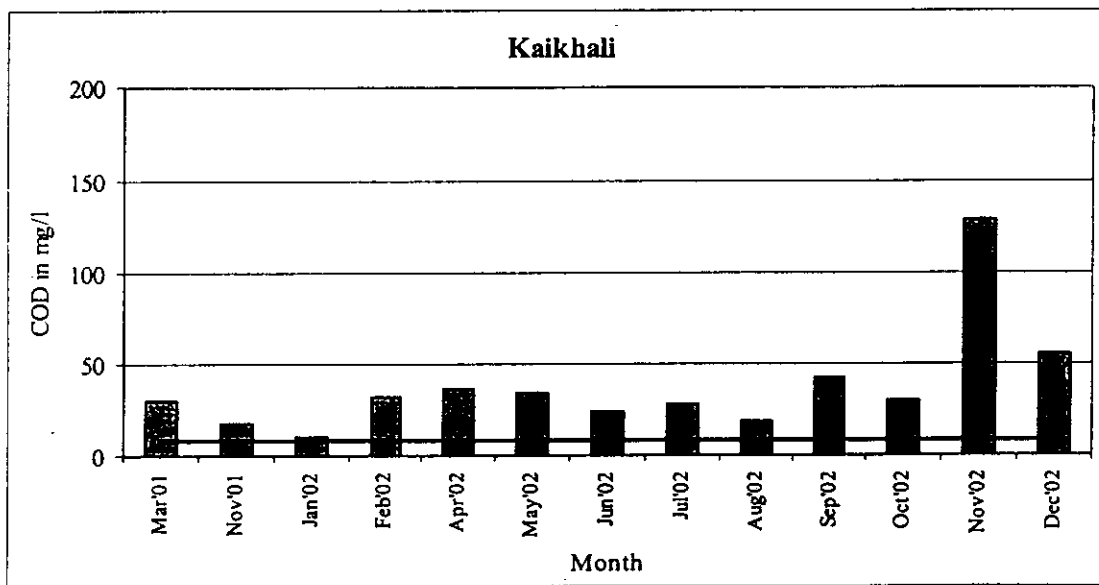
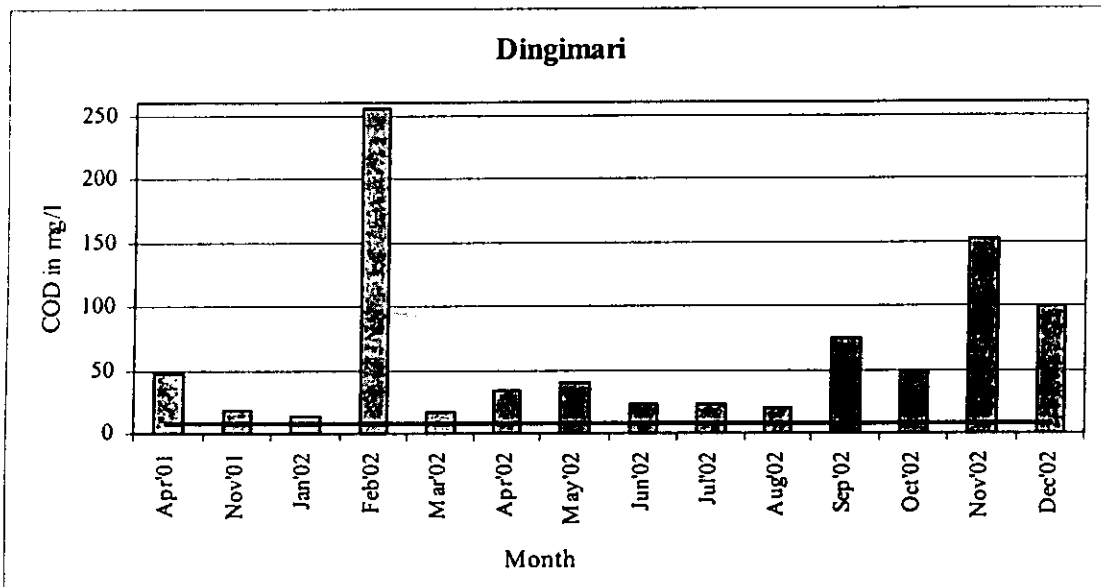
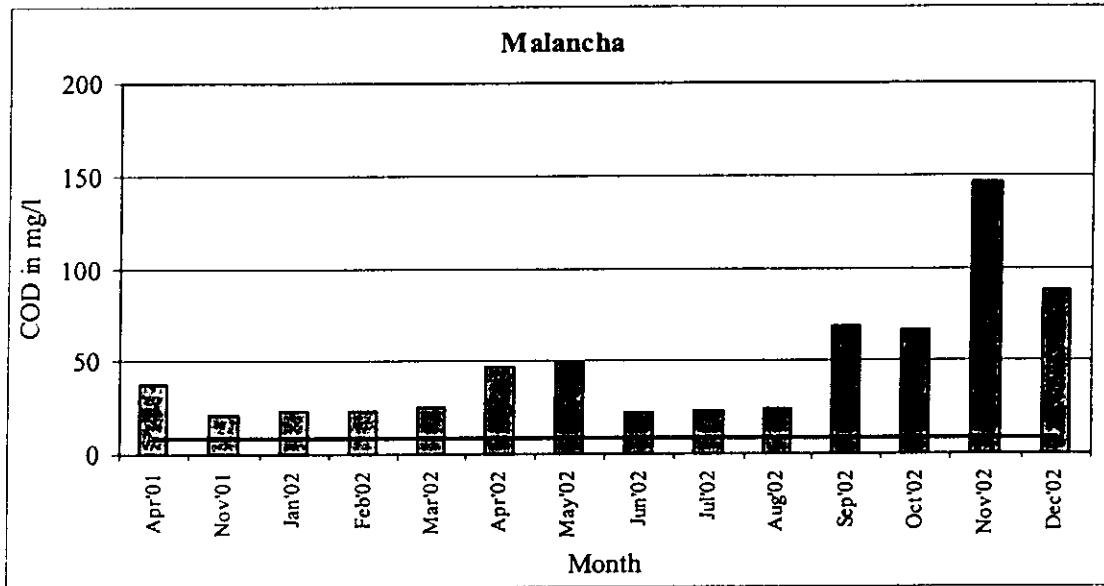


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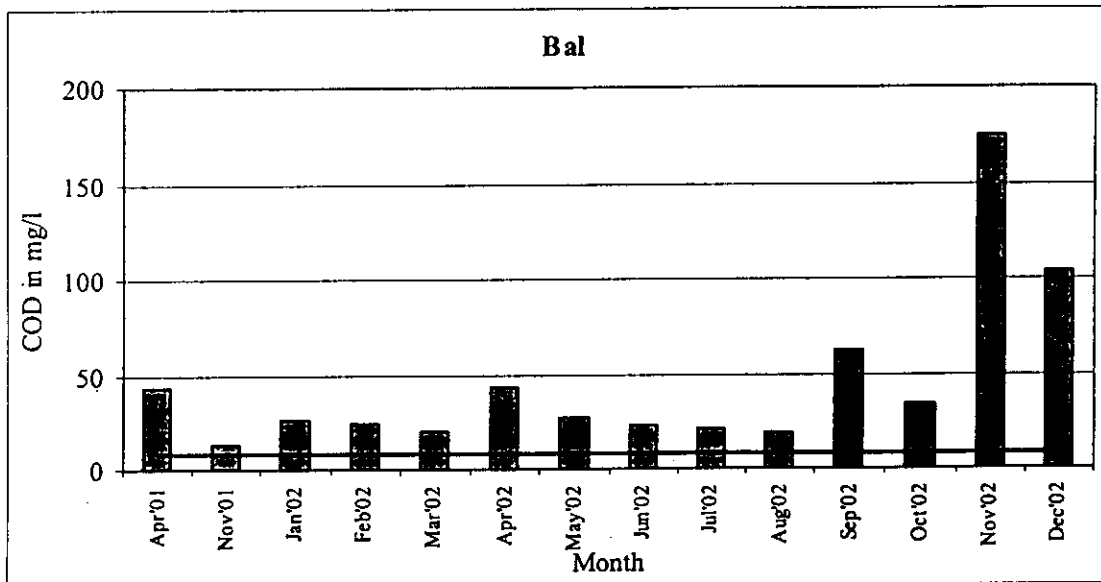
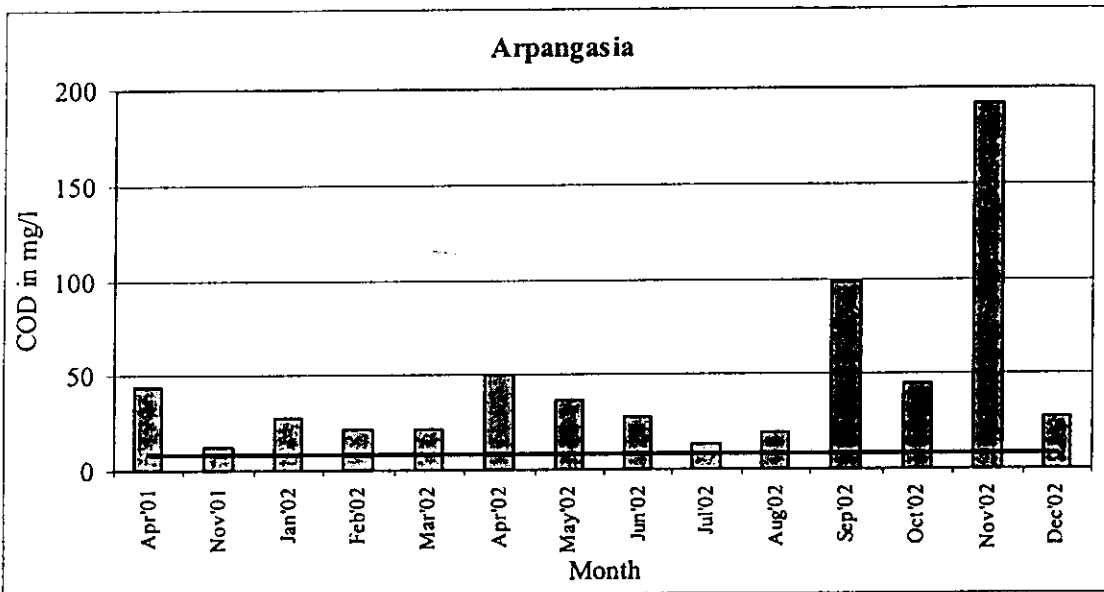
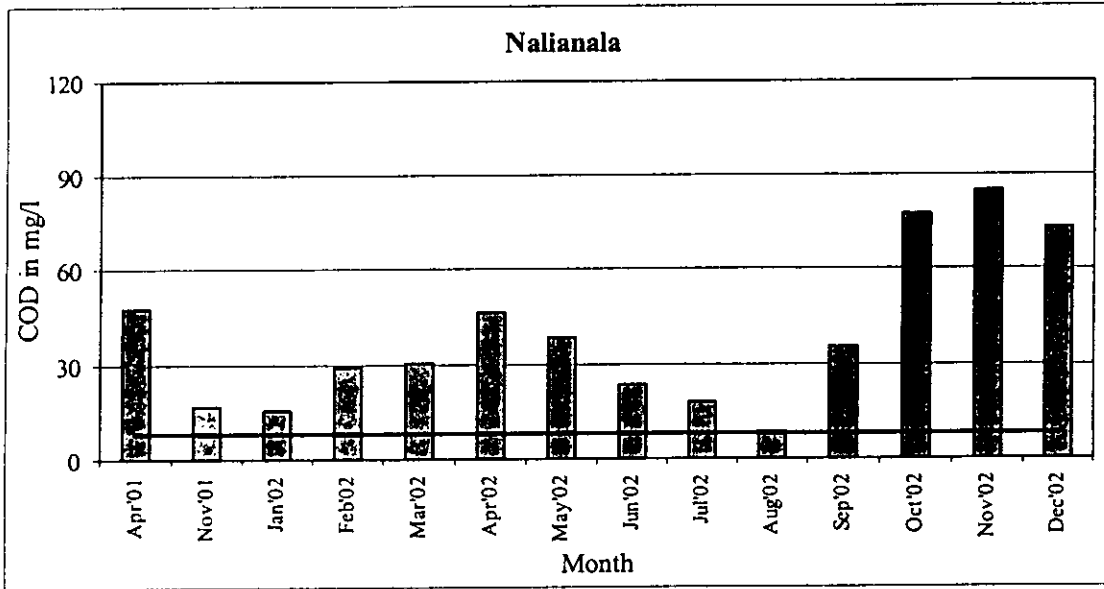


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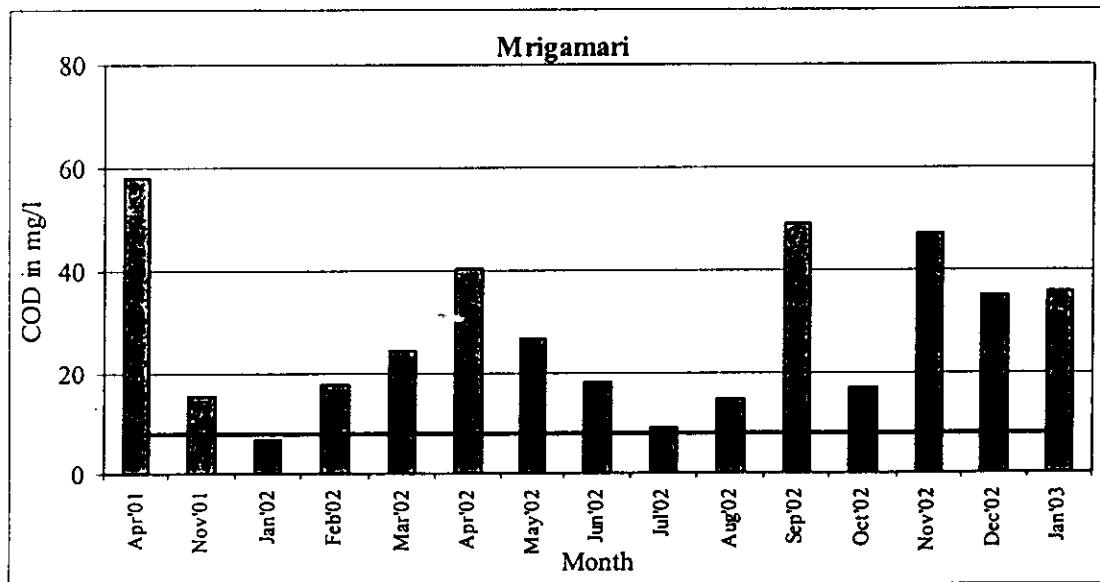
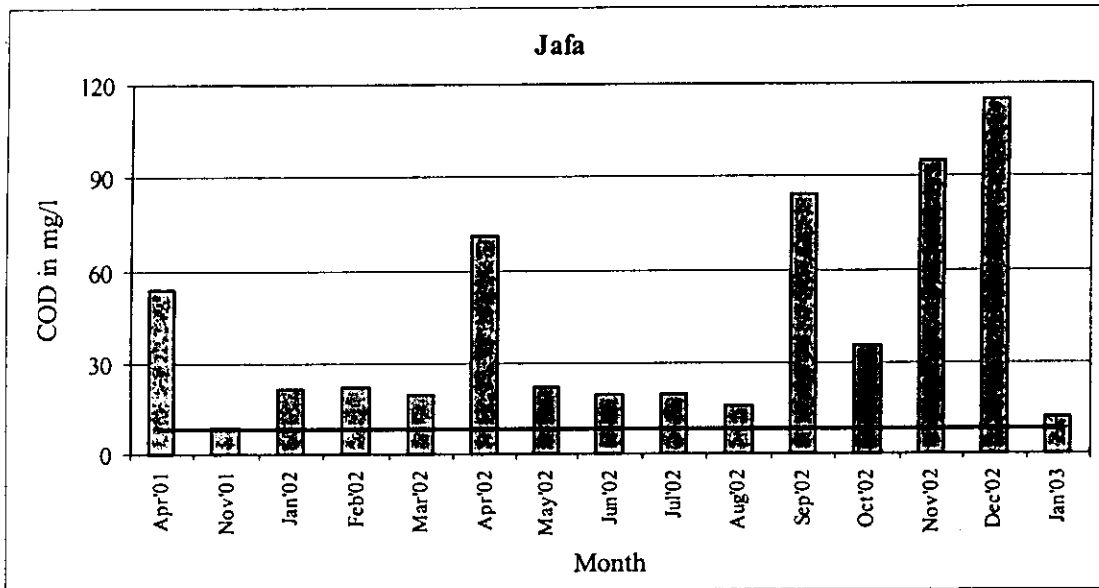
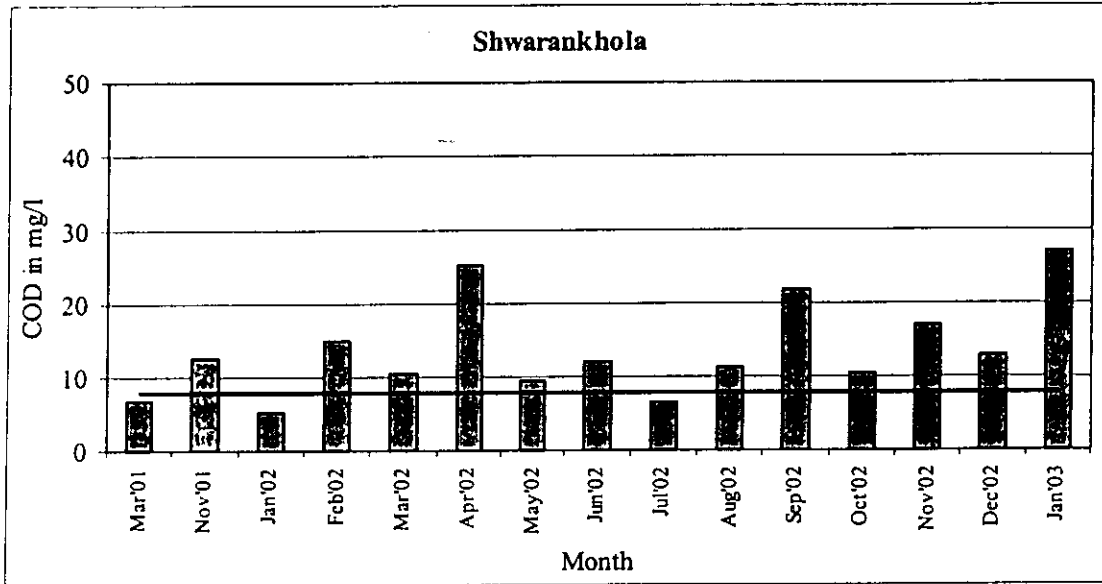


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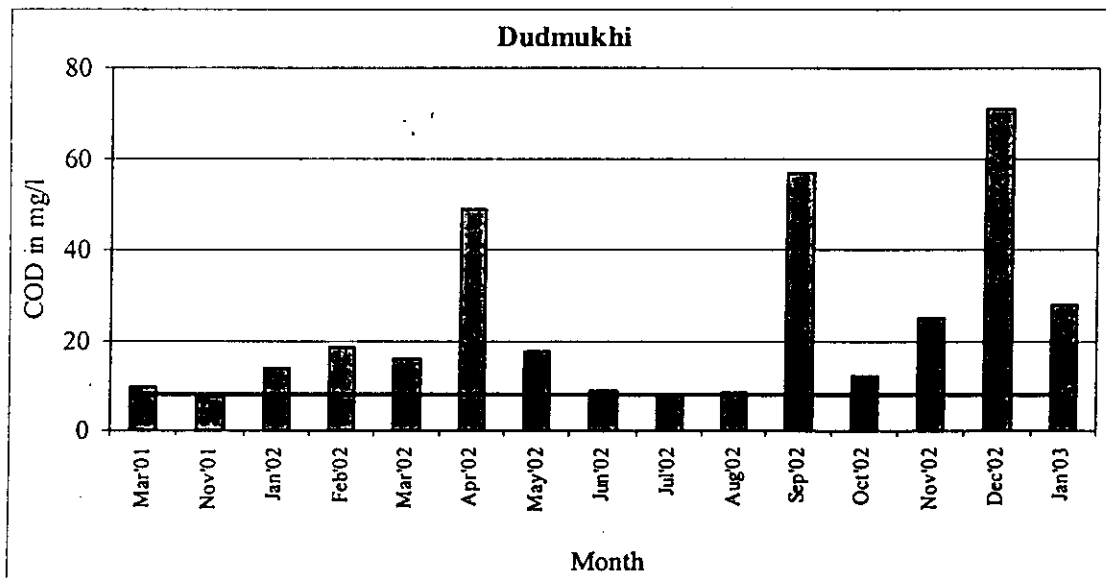
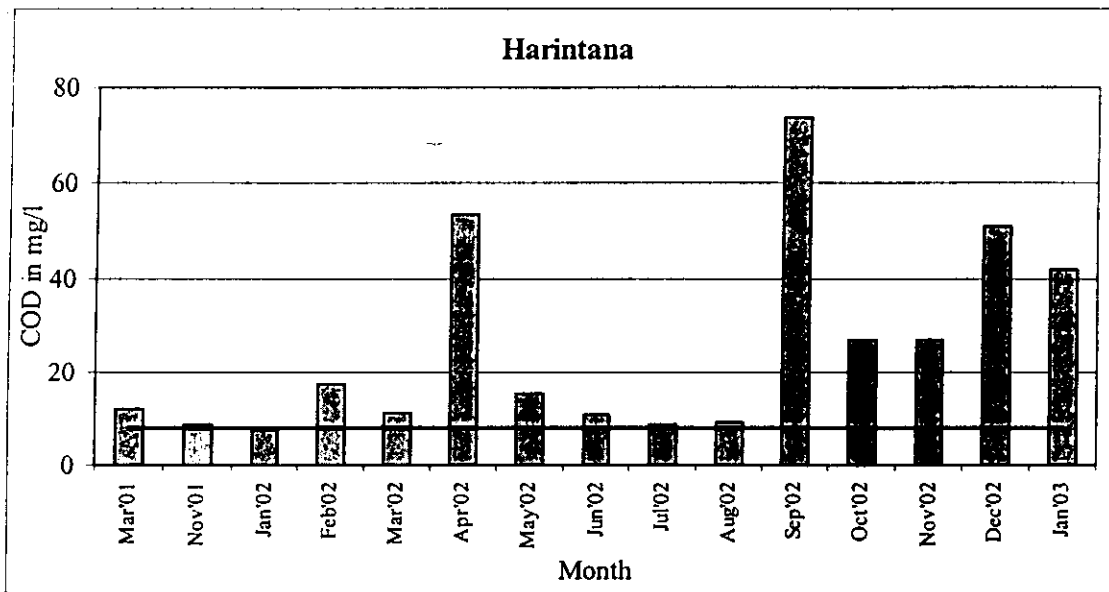
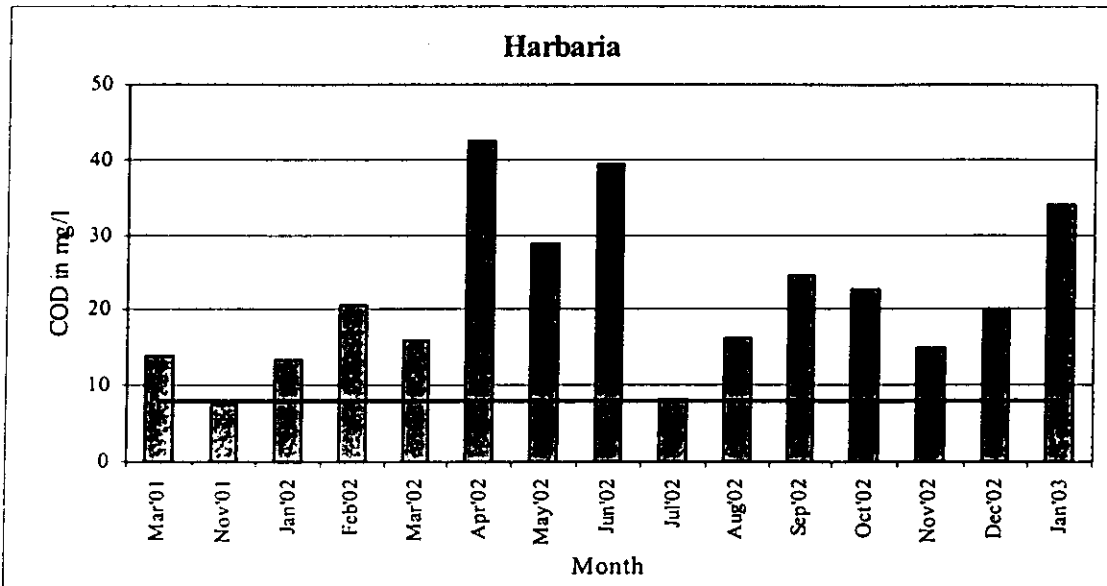
### COD observed at different stations



### COD observed at different stations



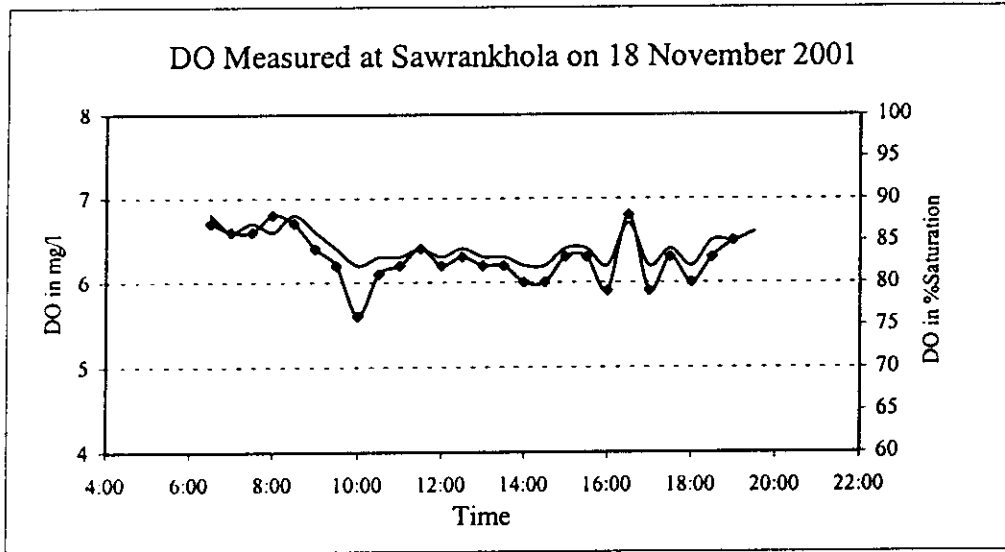
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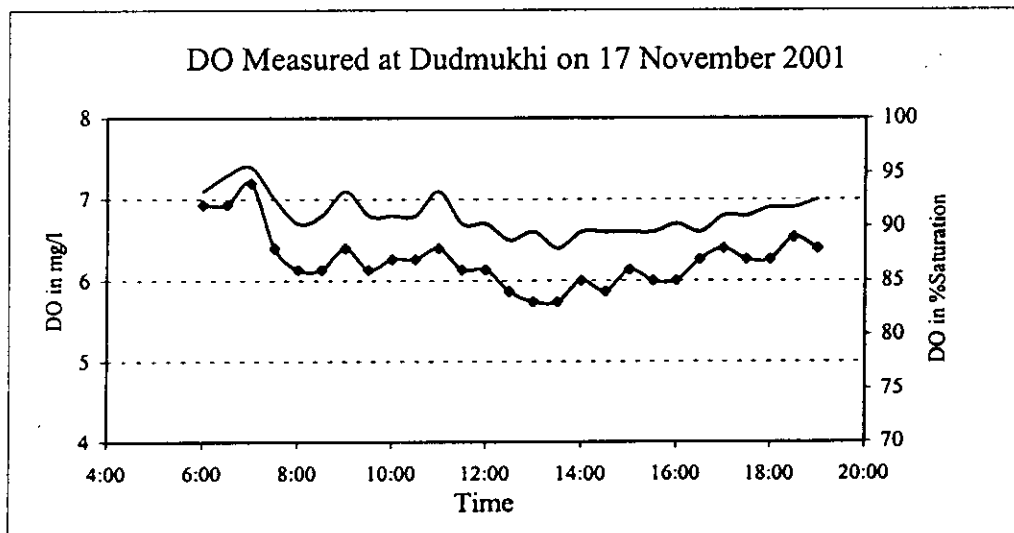
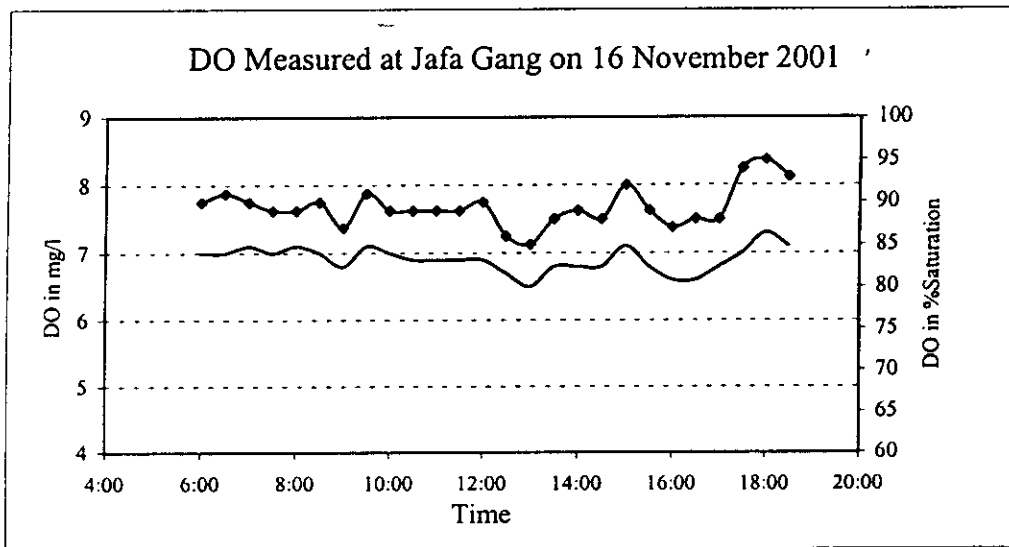
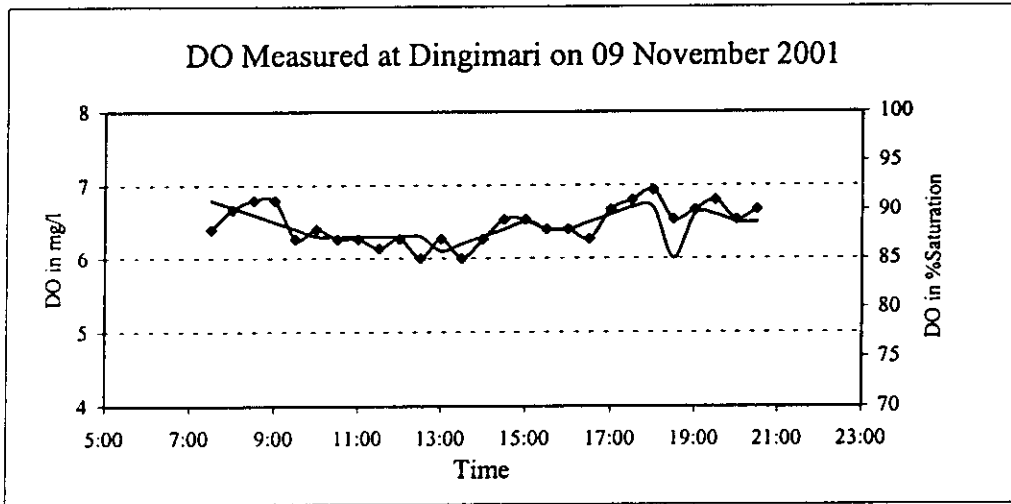
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# Plot showing Point Profiling of Dissolved Oxygen



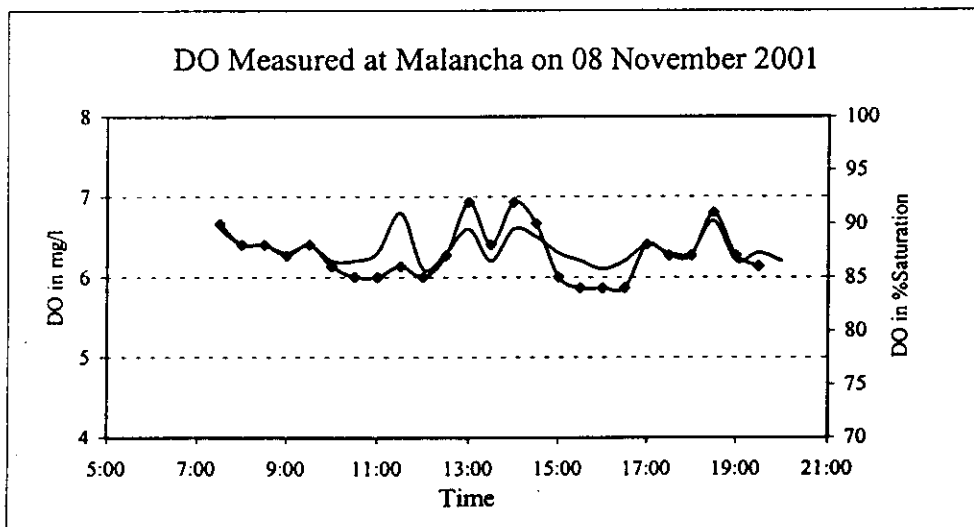
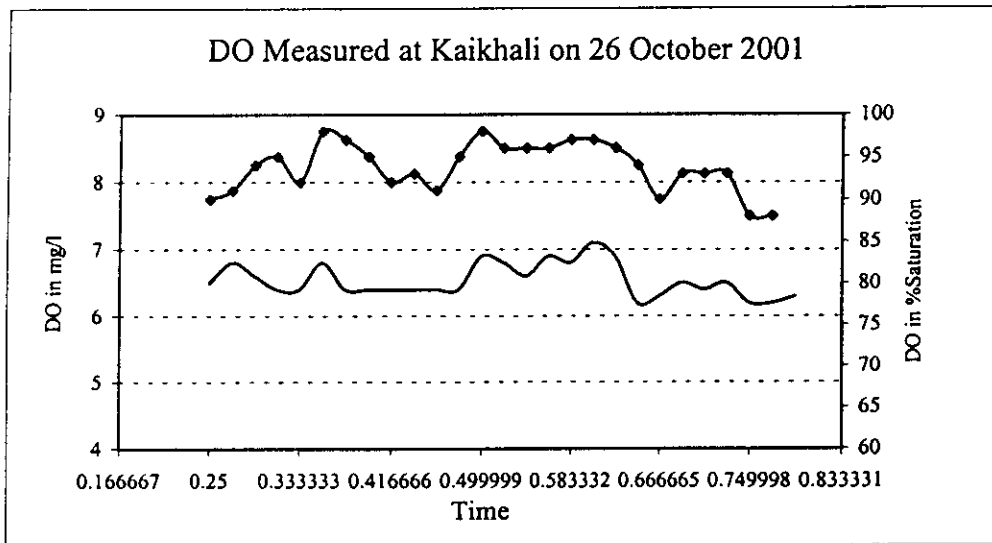
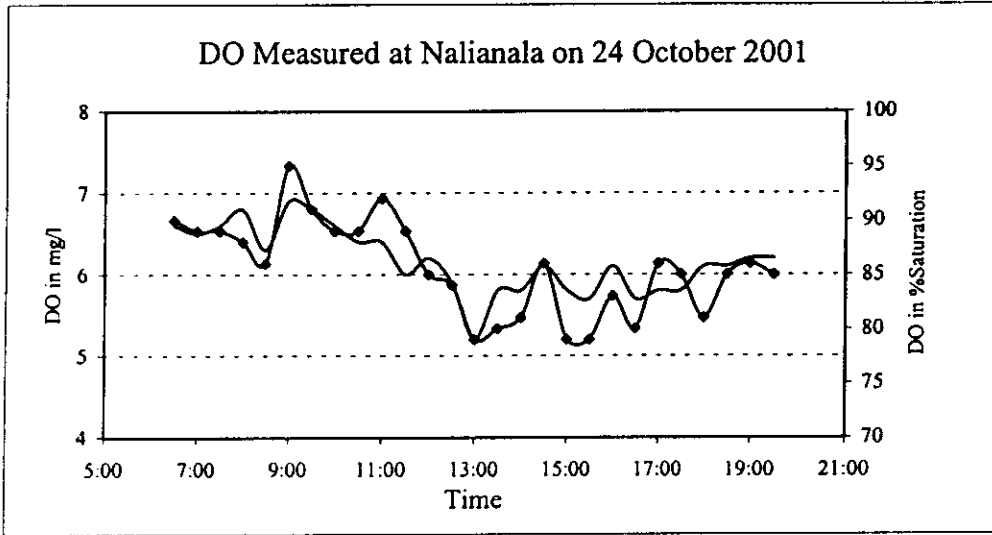
## Plot showing Point Profiling of Dissolved Oxygen



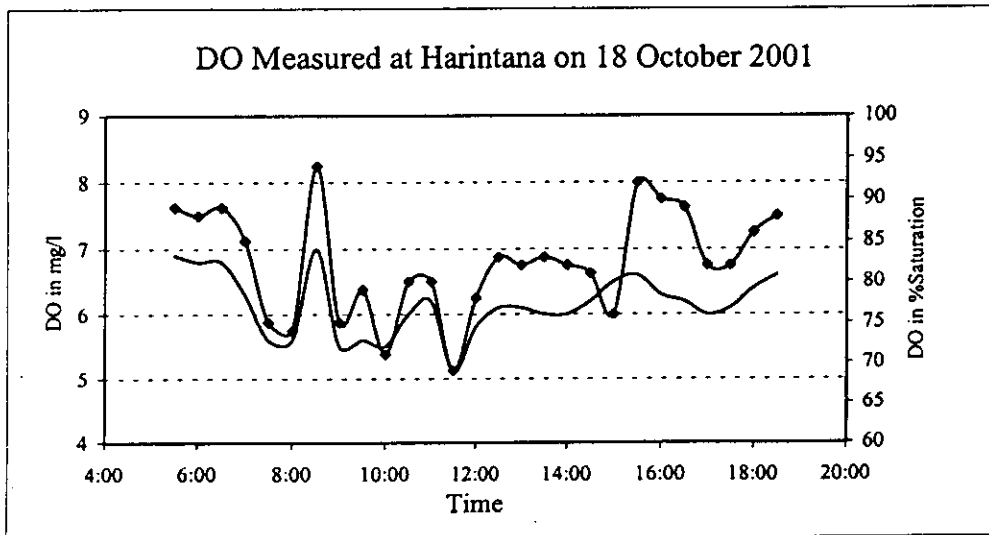
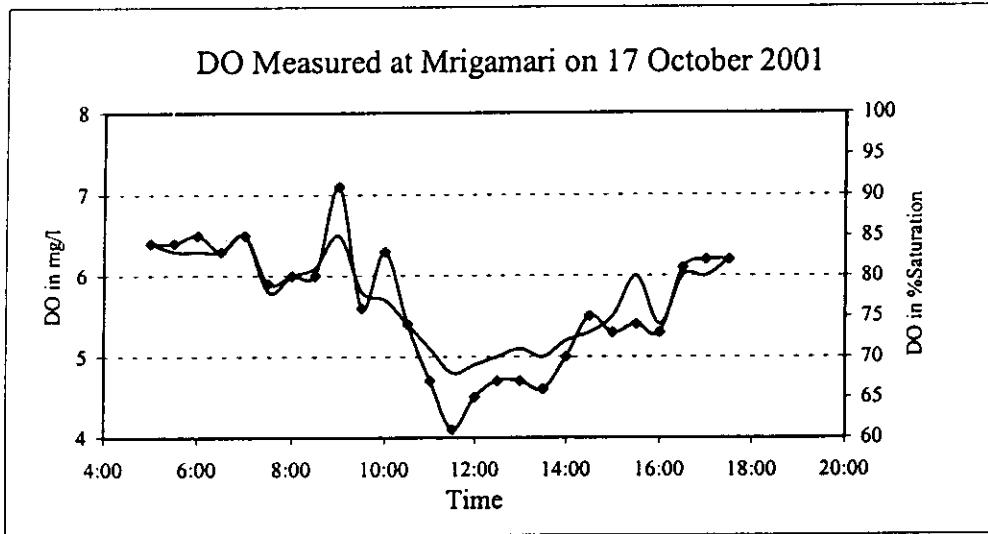
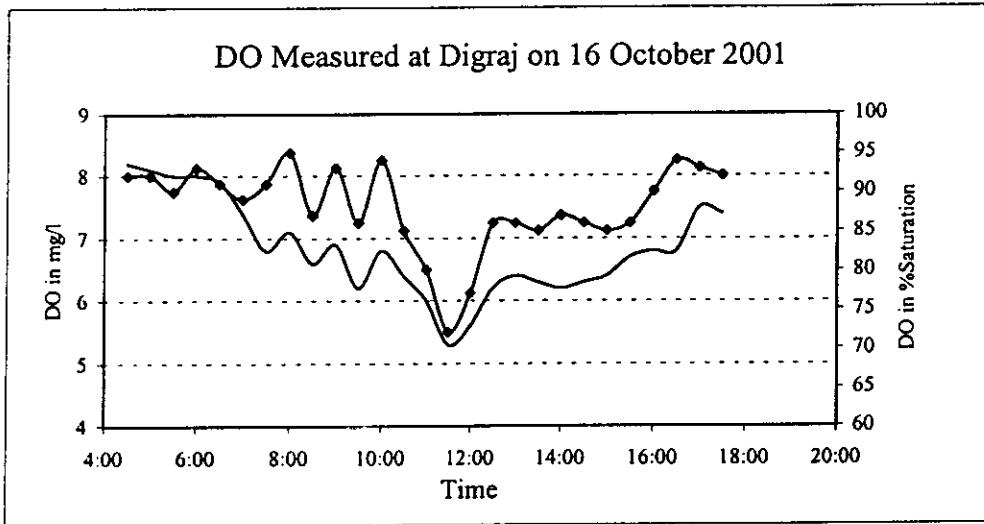
— DO in mg/l

—◆— DO in %Saturation

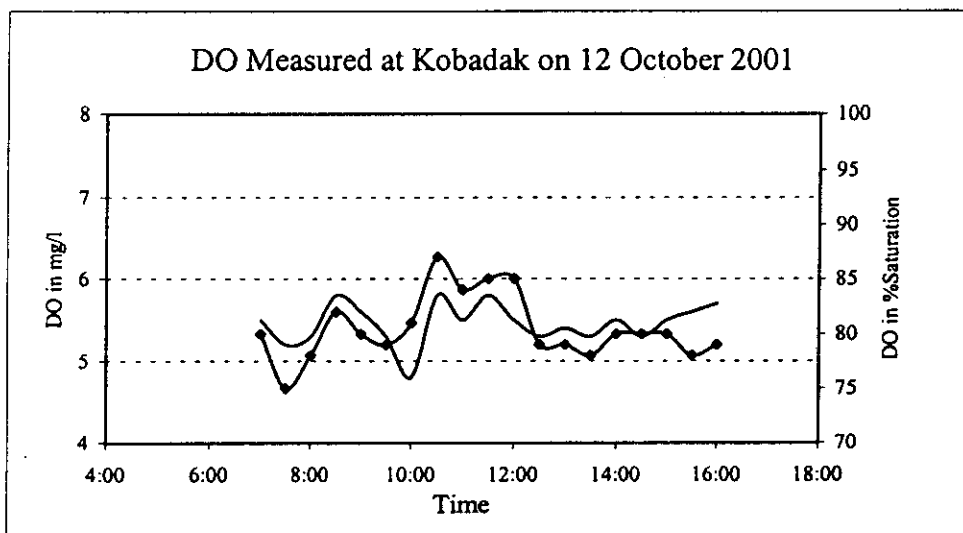
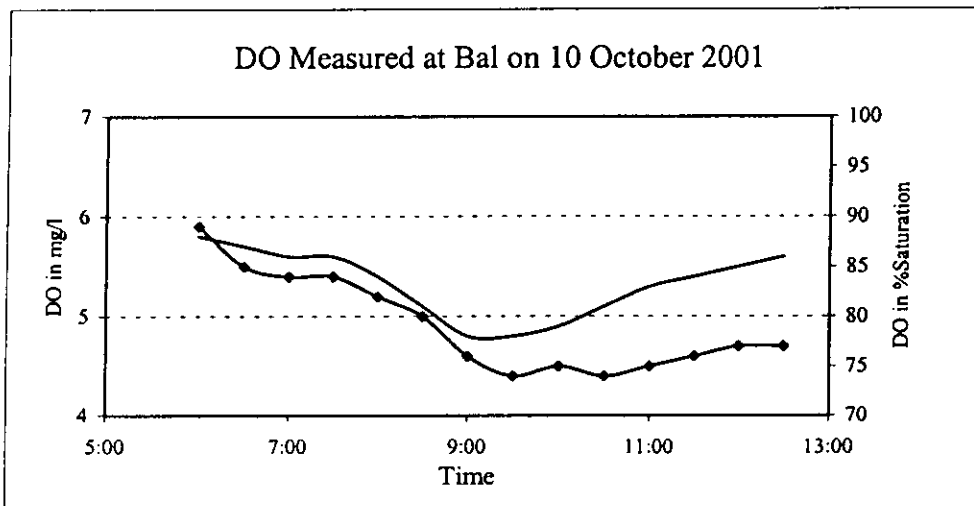
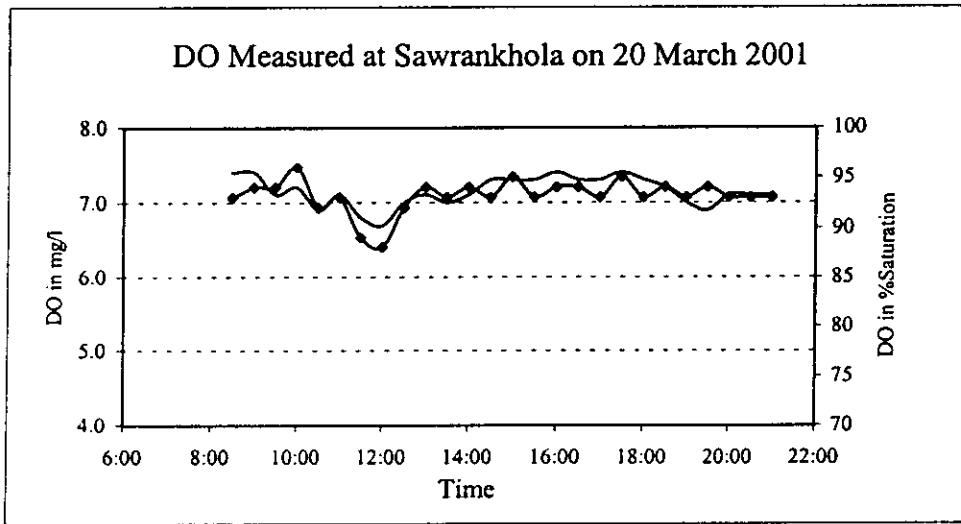
Plot showing Point Profiling of Dissolved Oxygen



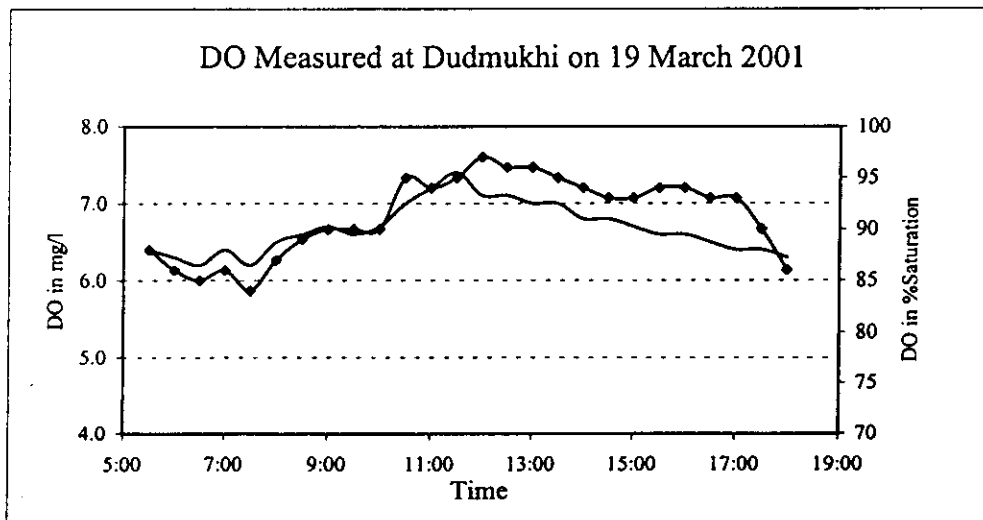
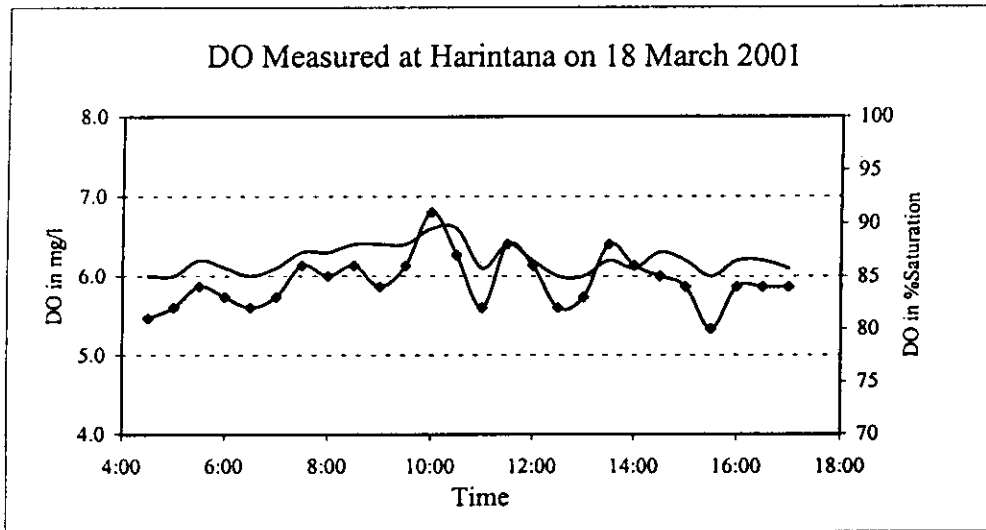
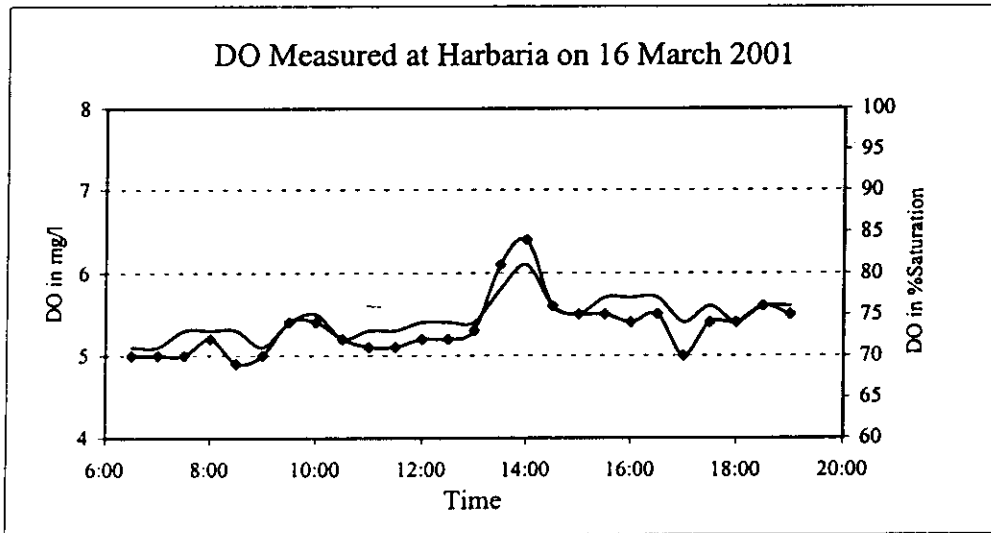
# Plot showing Point Profiling of Dissolved Oxygen



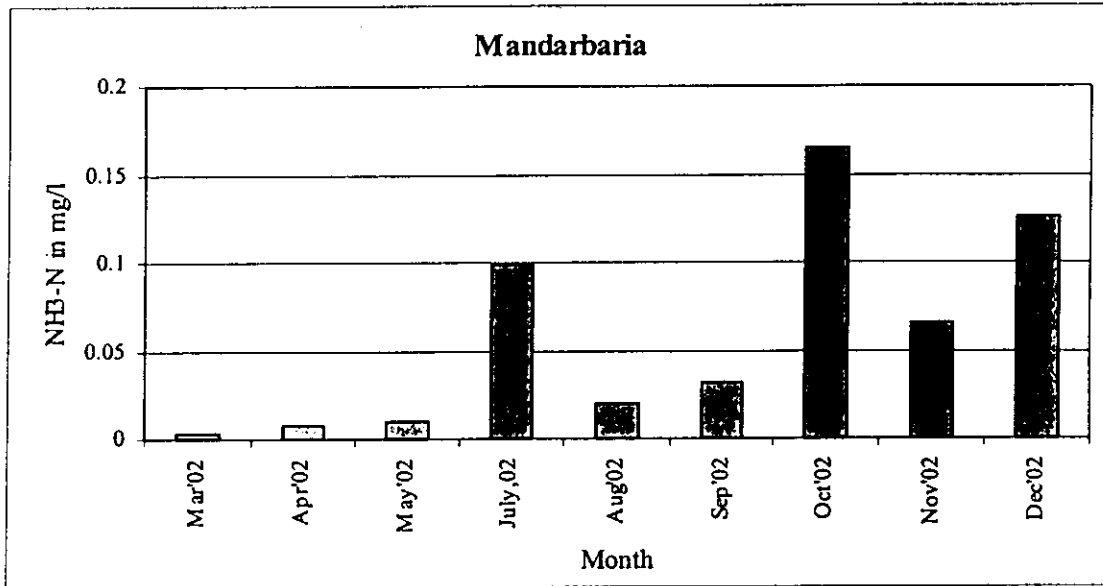
Plot showing Point Profiling of Dissolved Oxygen



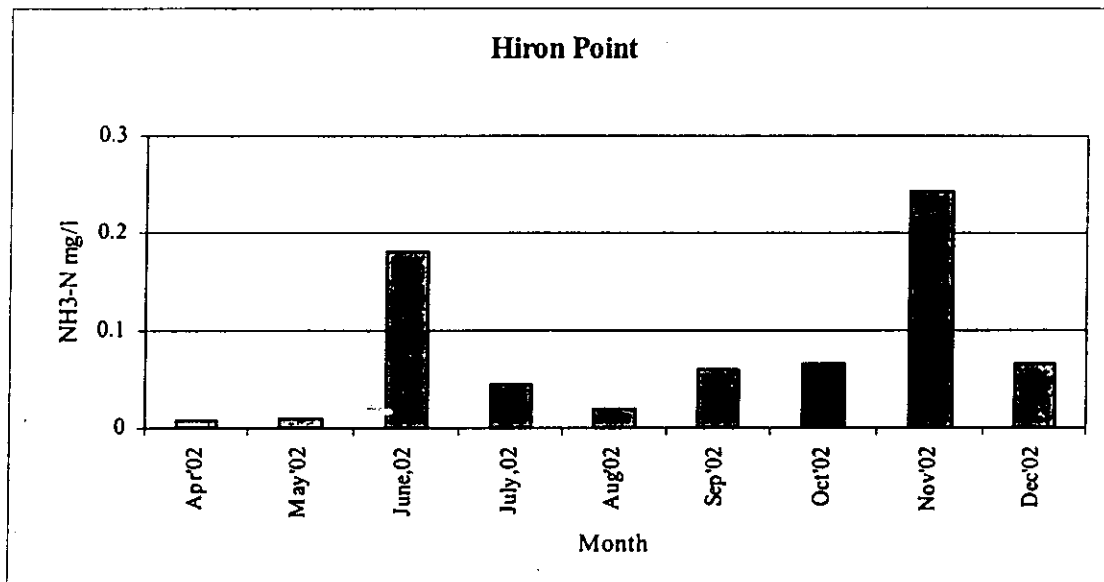
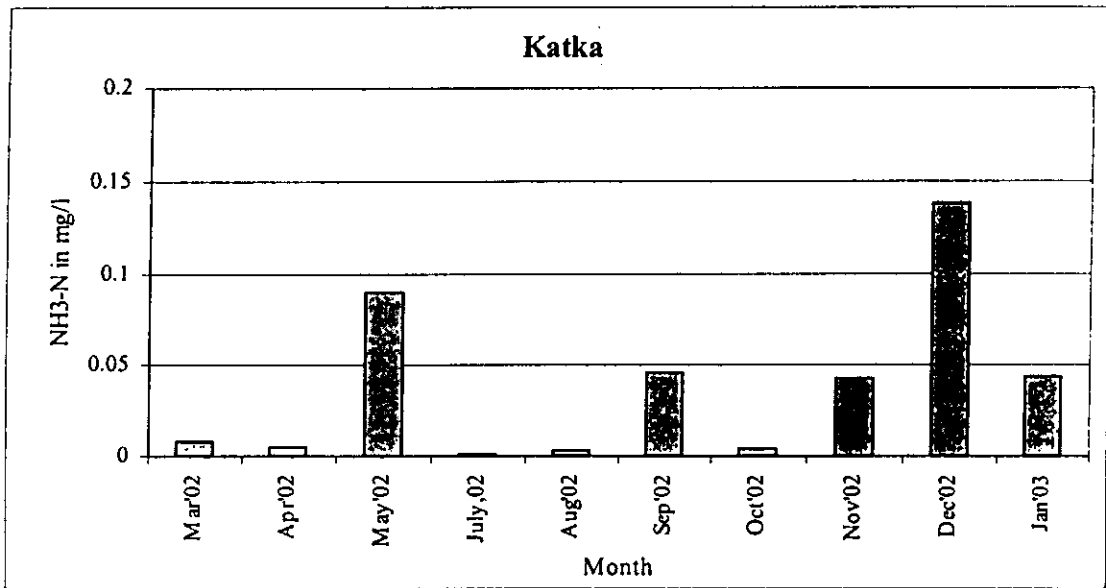
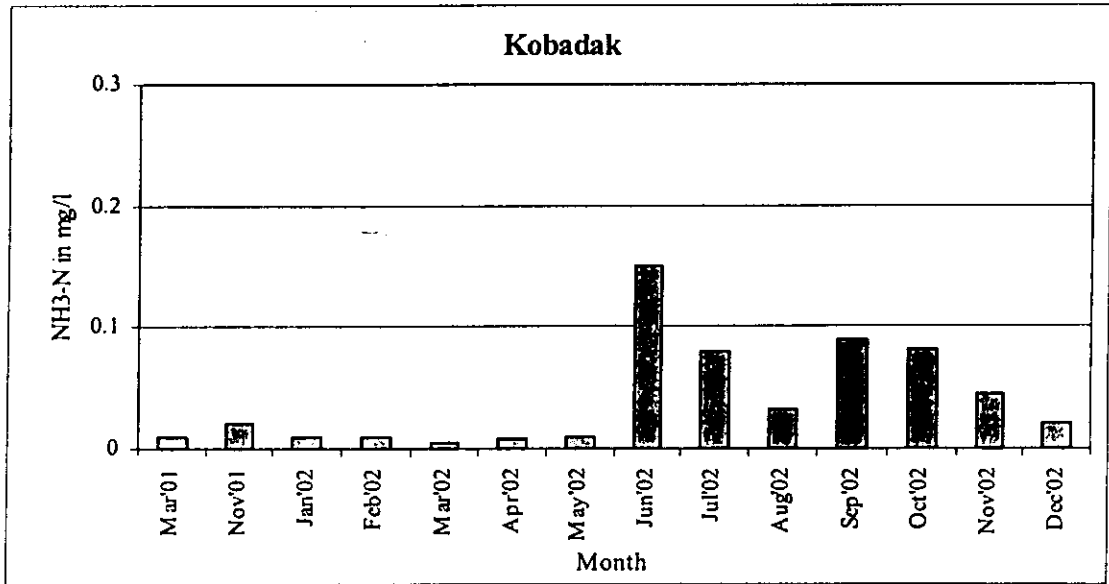
Plot showing Point Profiling of Dissolved Oxygen



NH<sub>3</sub>-N observed at different stations

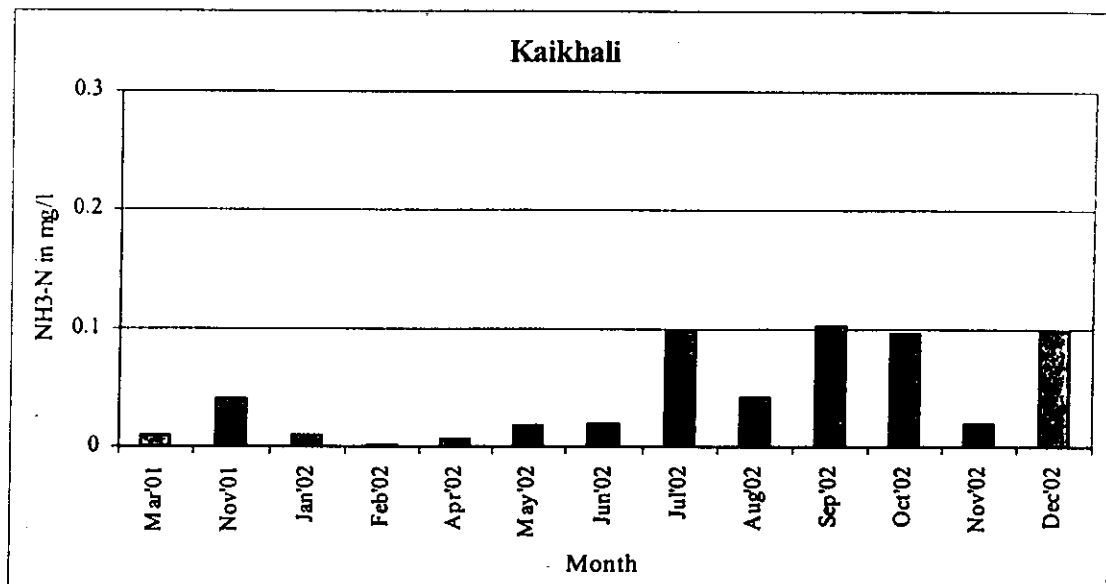
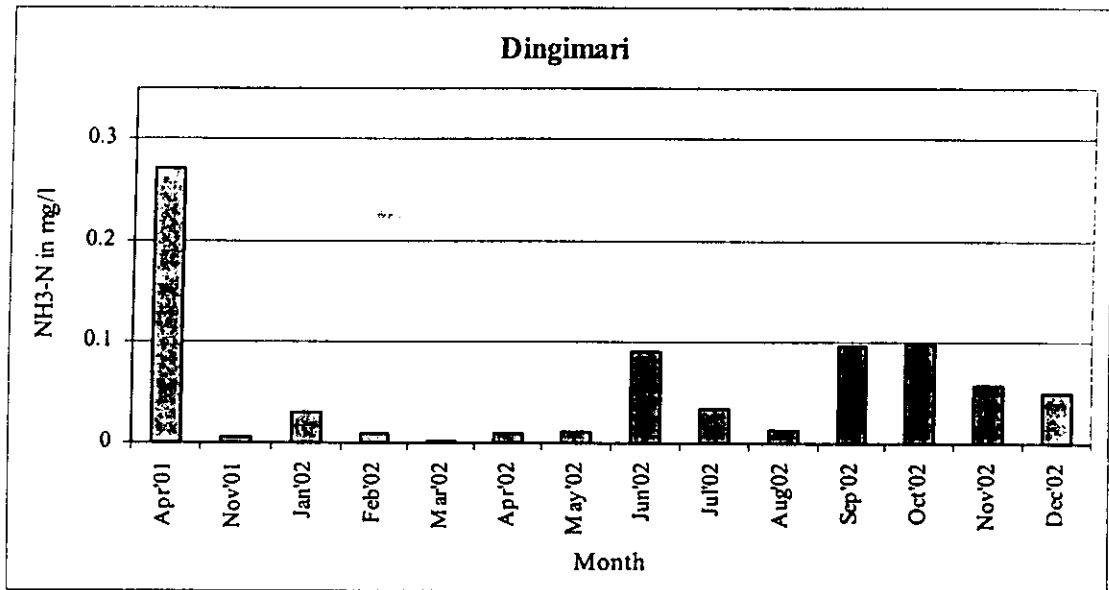
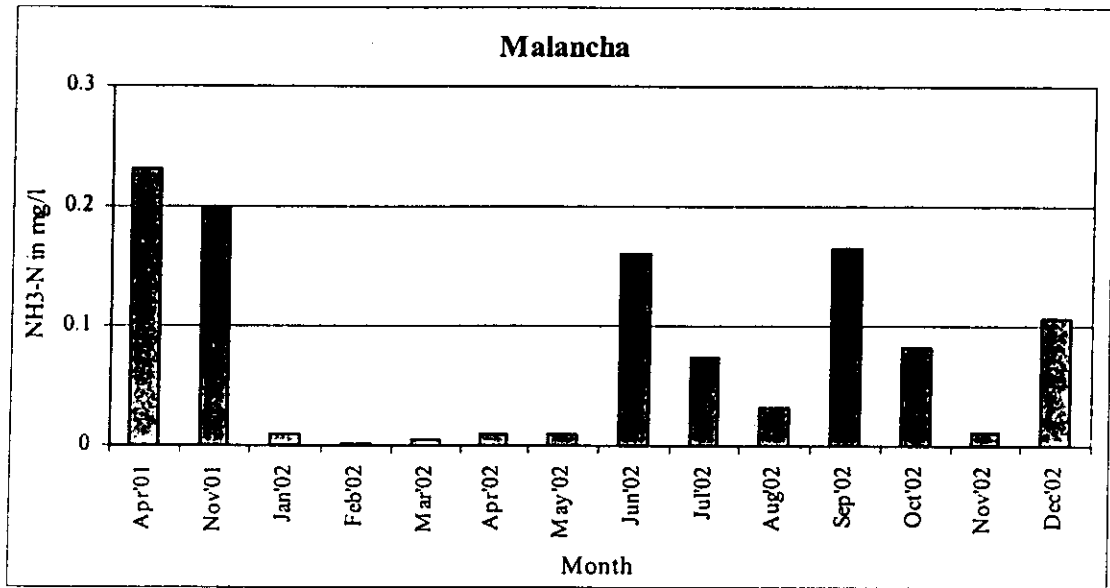


**NH<sub>3</sub>-N observed at different stations**

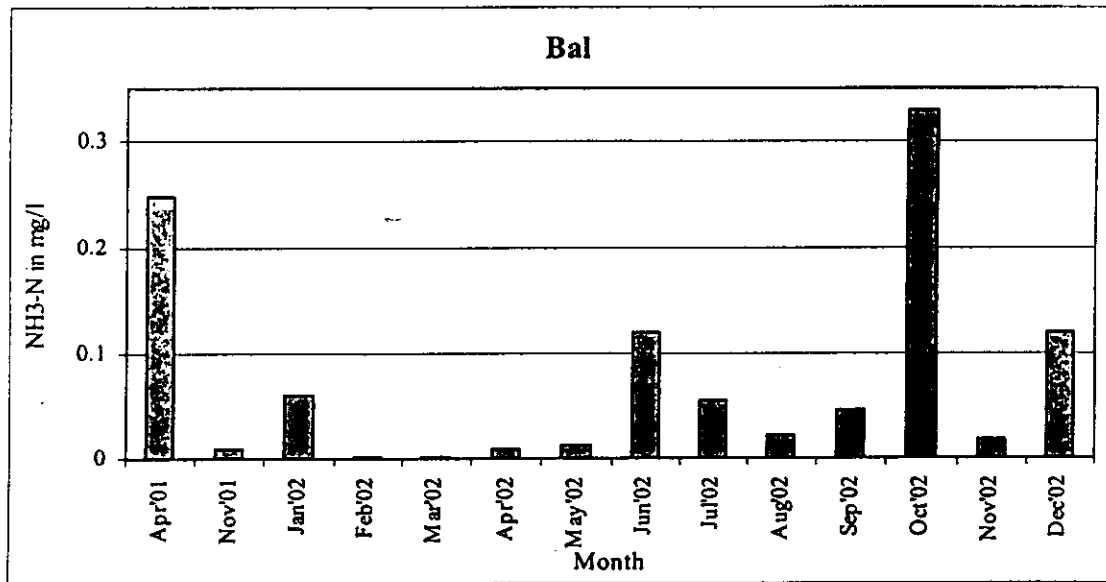
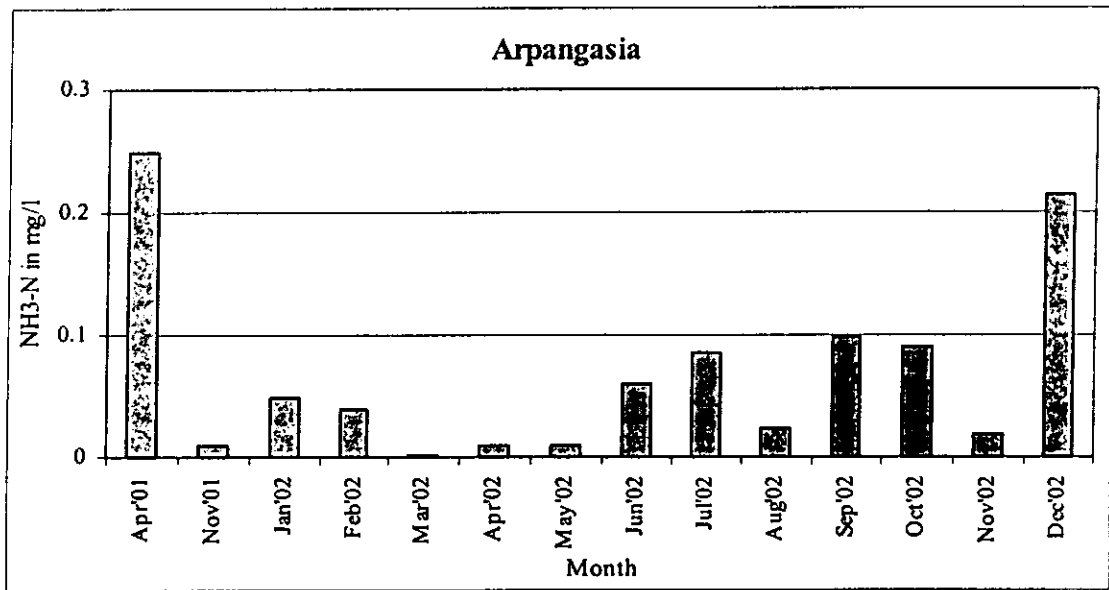
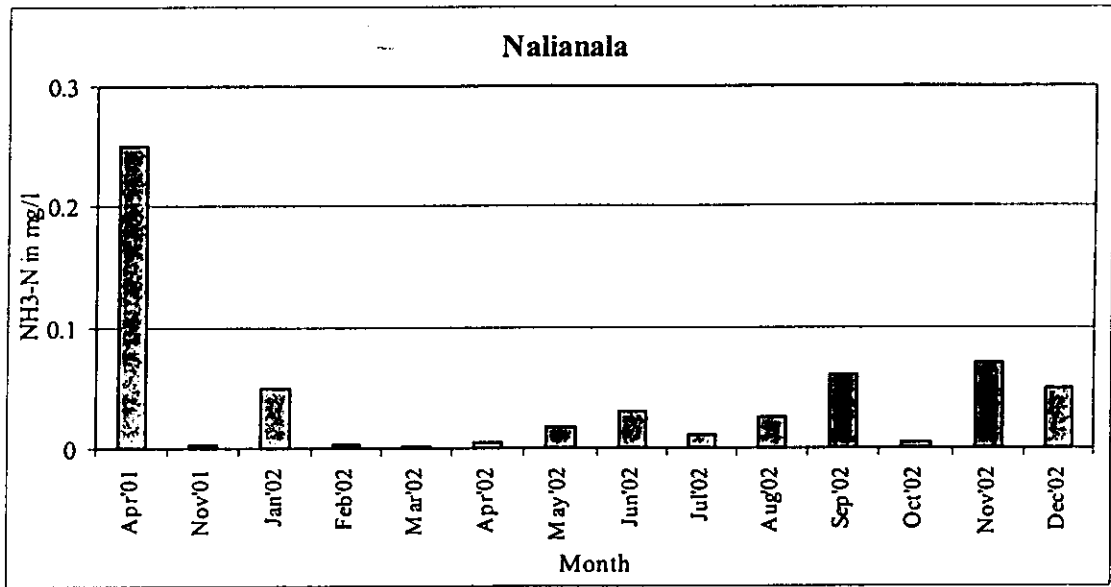




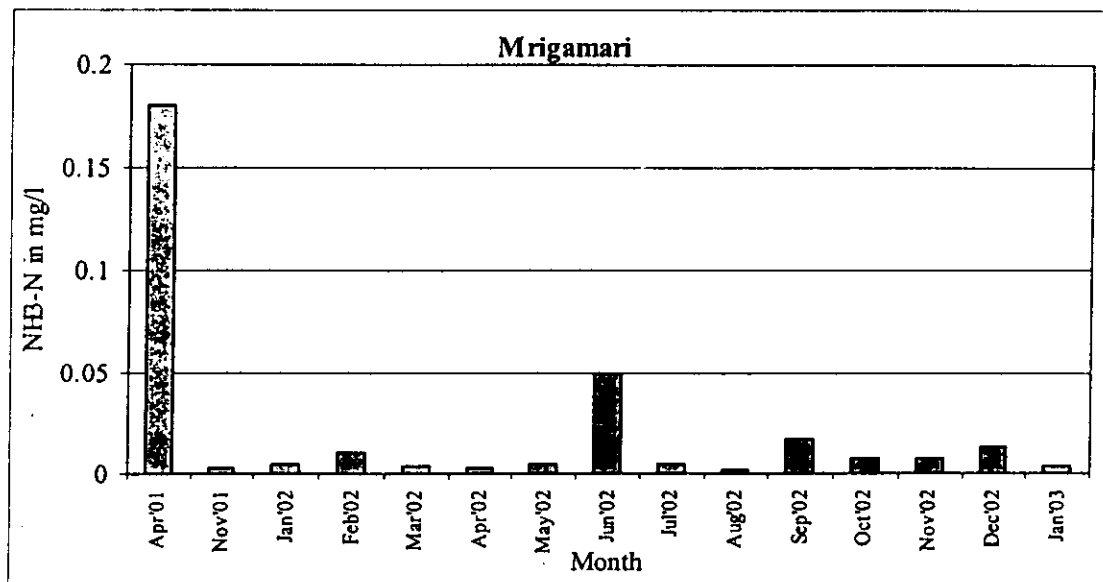
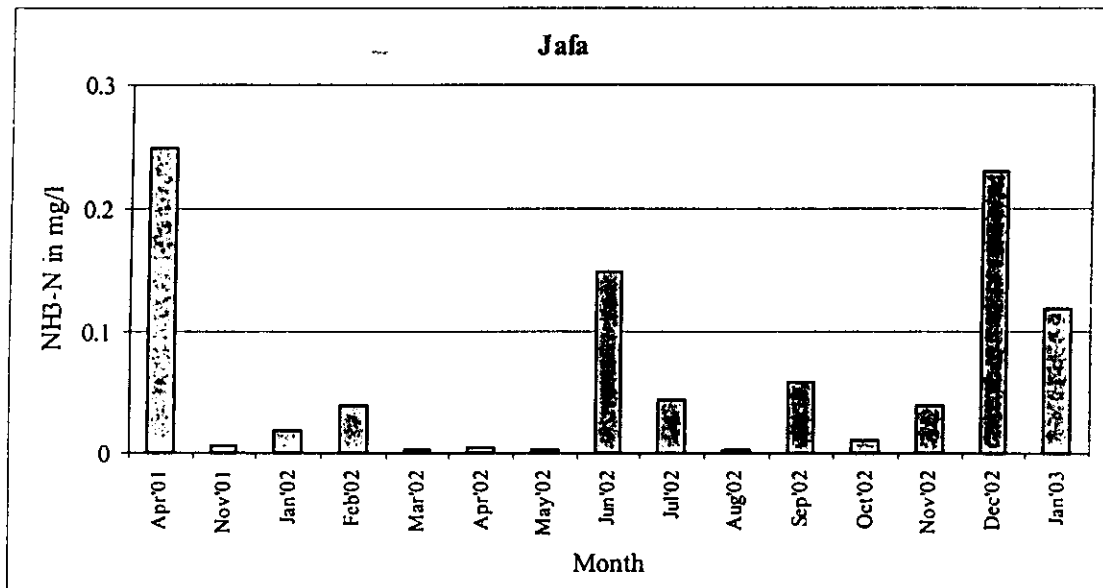
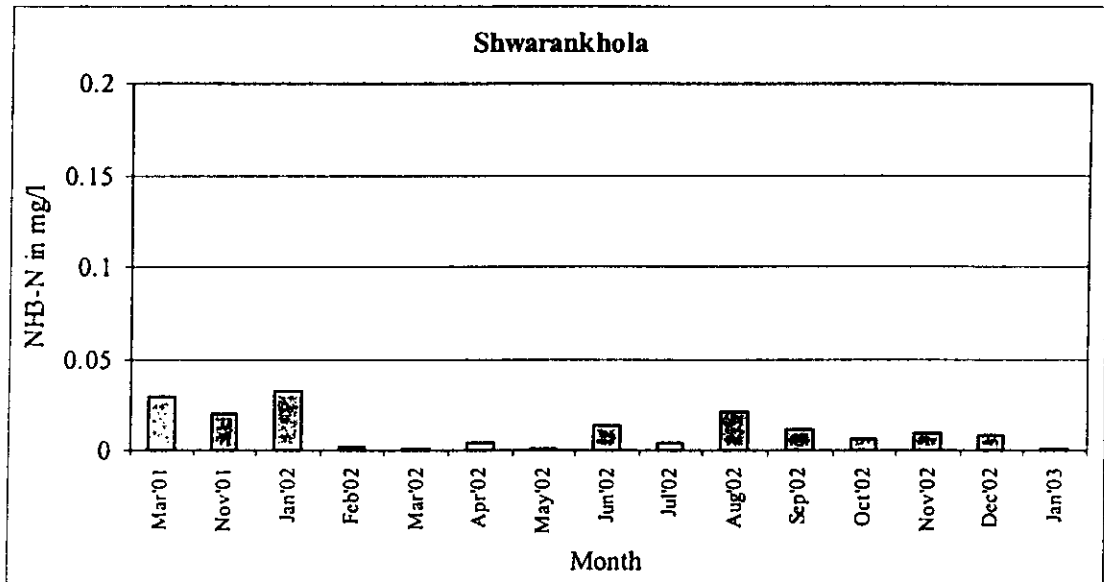
**NH<sub>3</sub>-N observed at different stations**



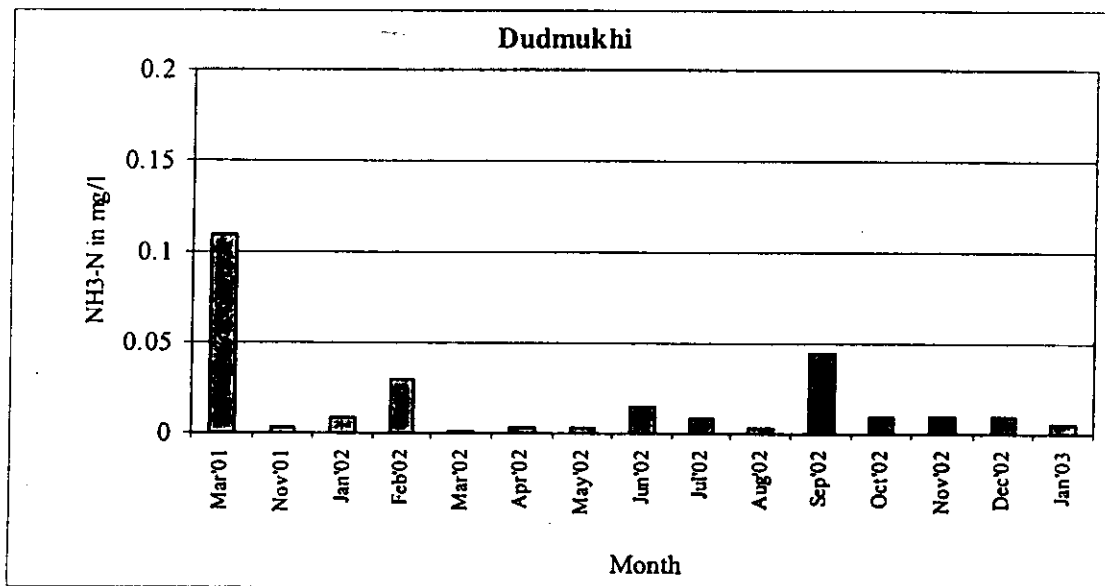
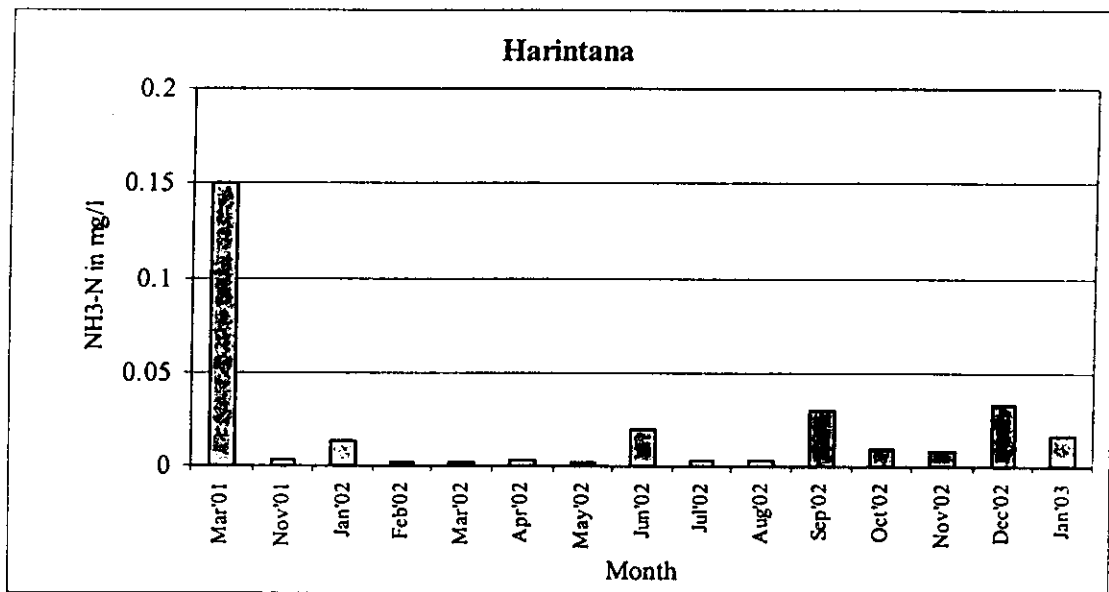
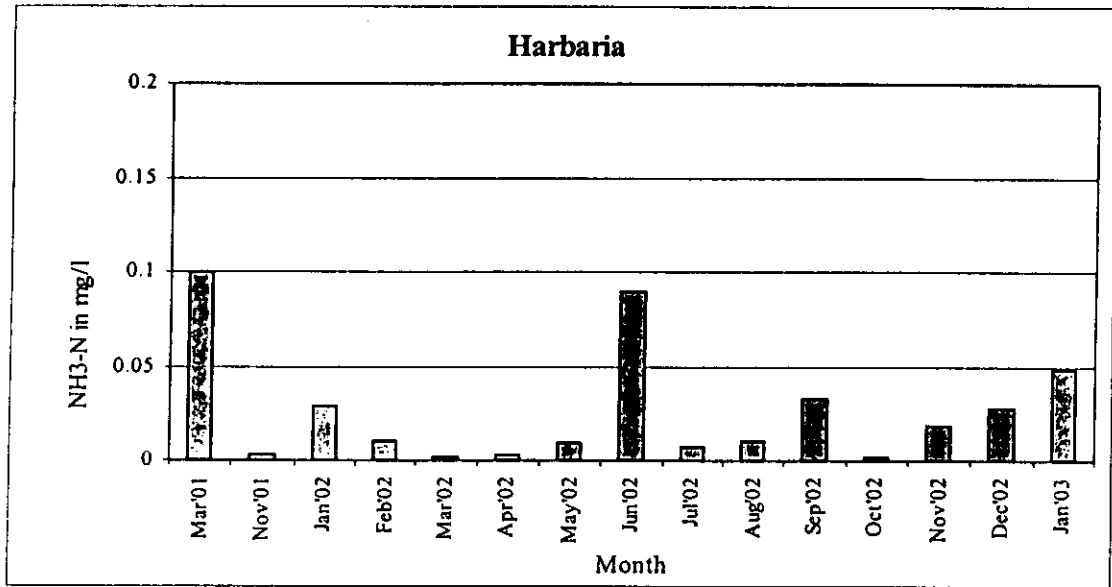
NH<sub>3</sub>-N observed at different stations



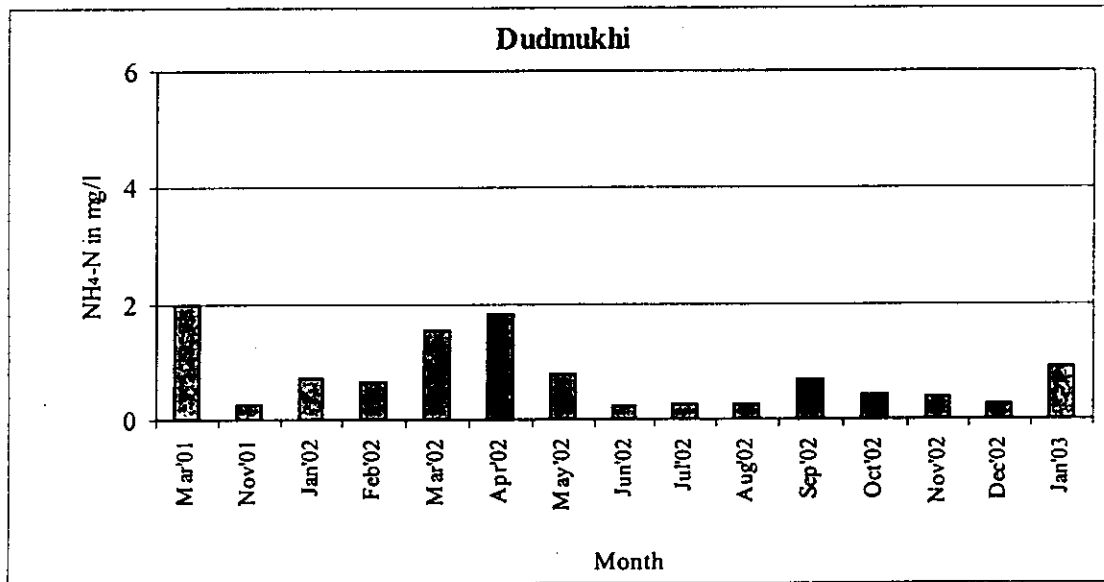
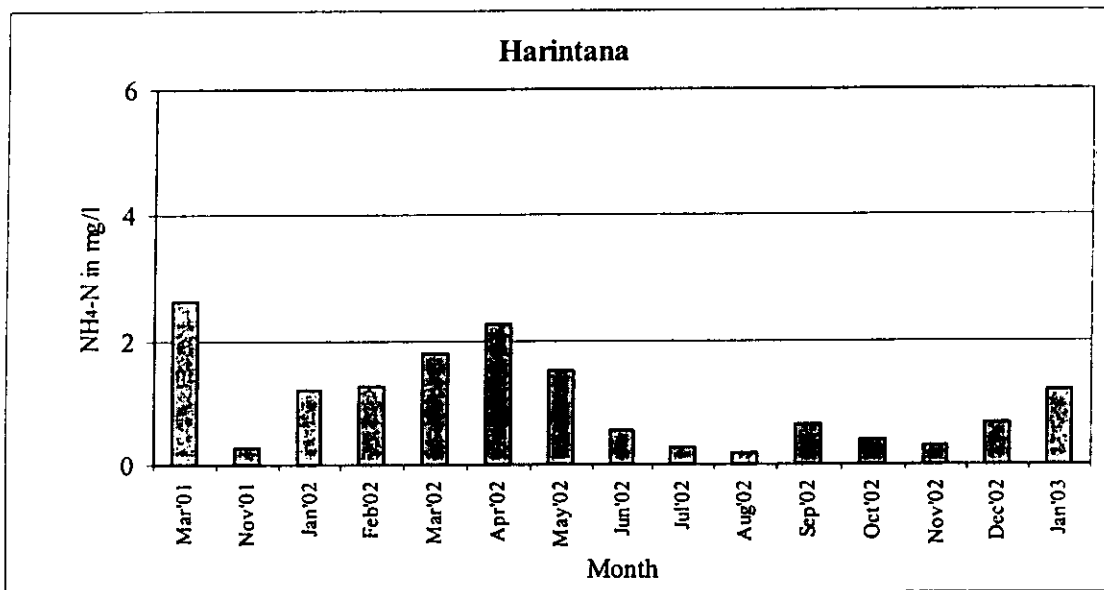
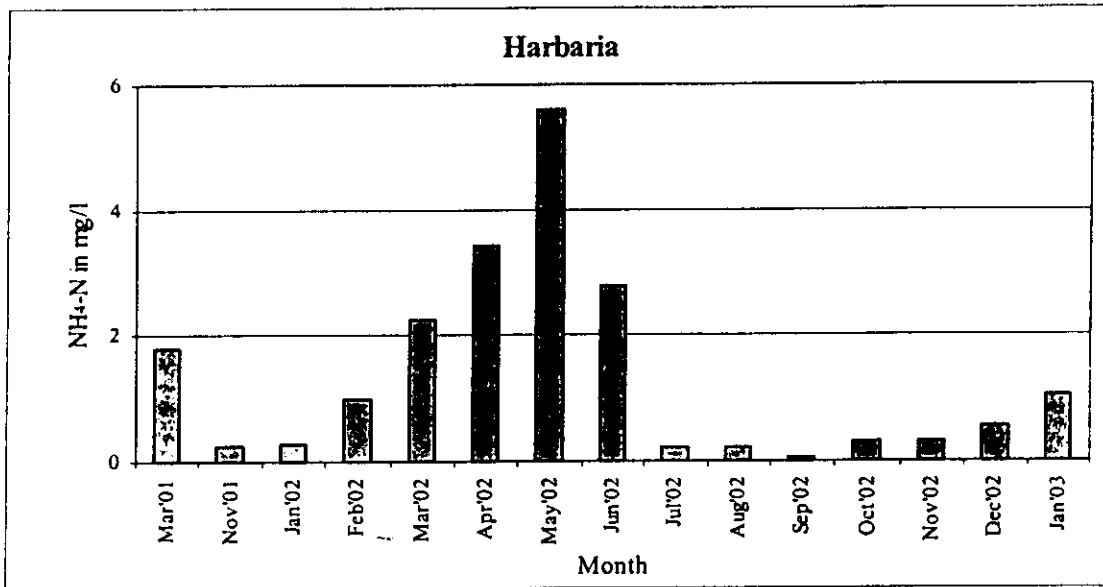
**NH<sub>3</sub>-N observed at different stations**



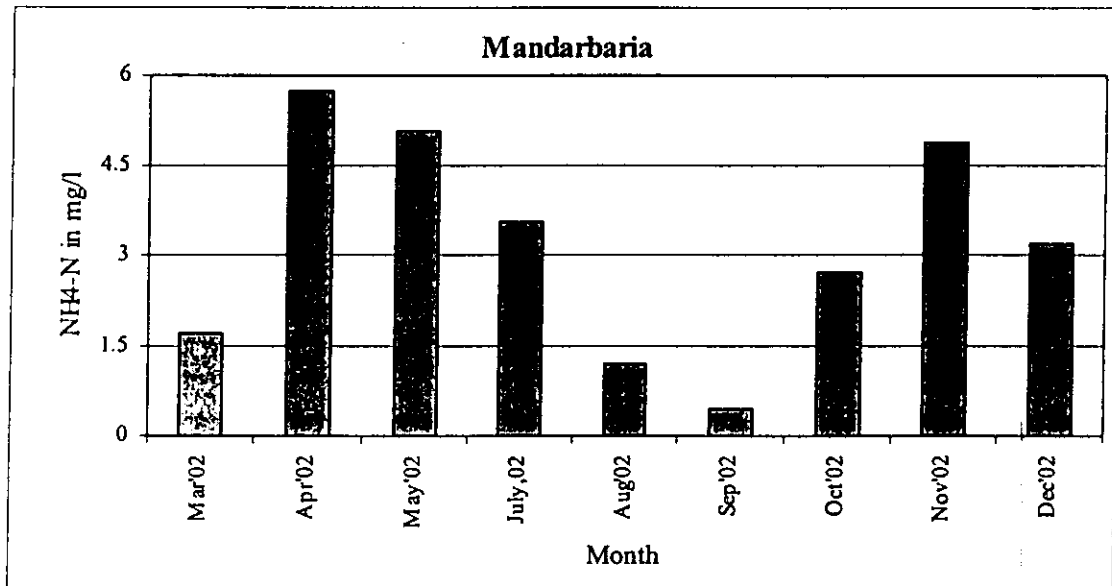
NH<sub>3</sub>-N observed at different stations



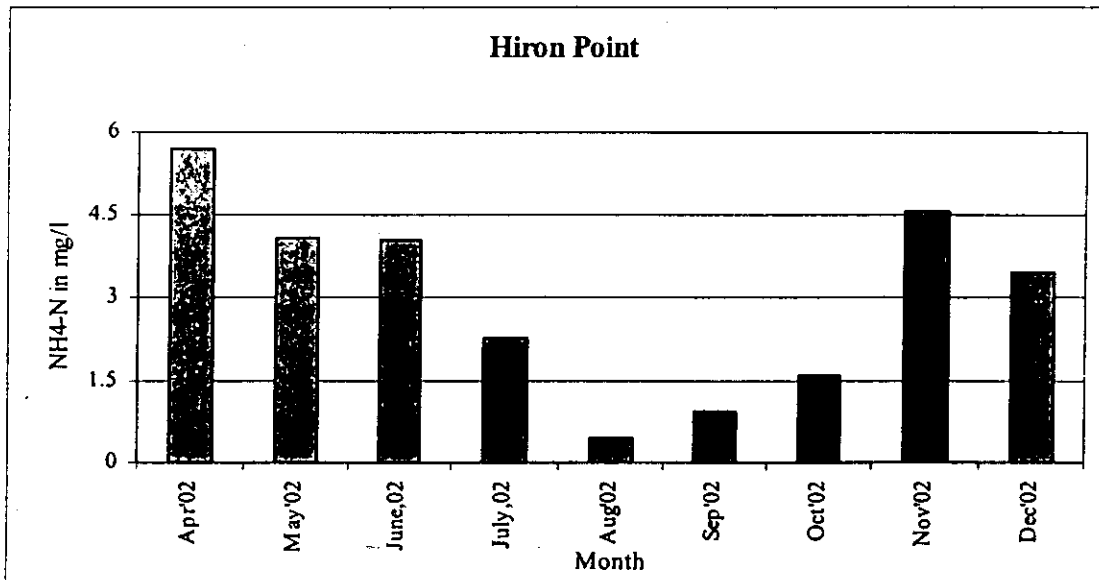
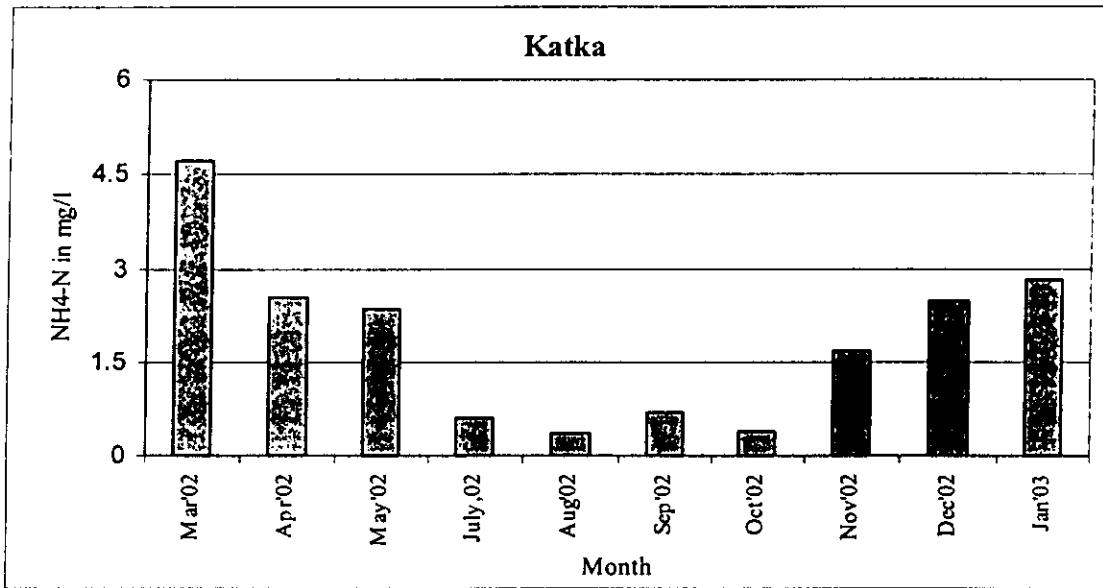
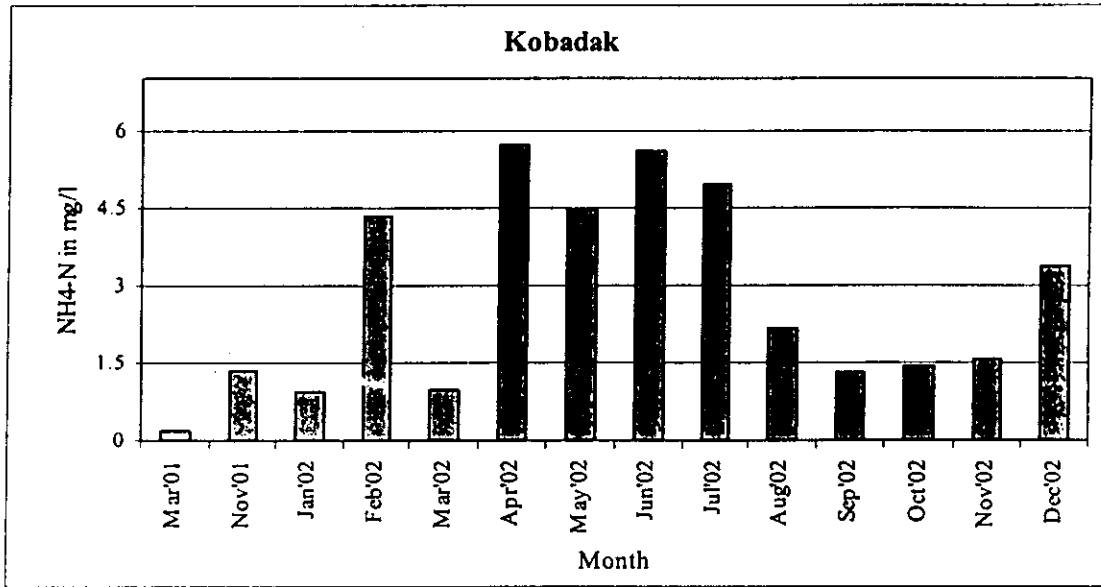
NH<sub>4</sub>-N observed at different stations



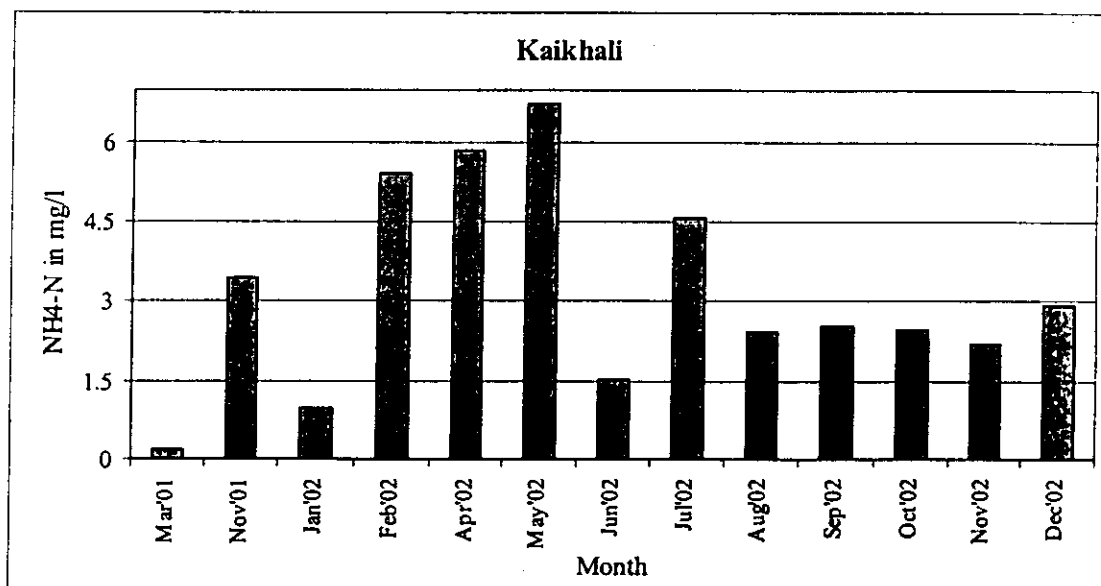
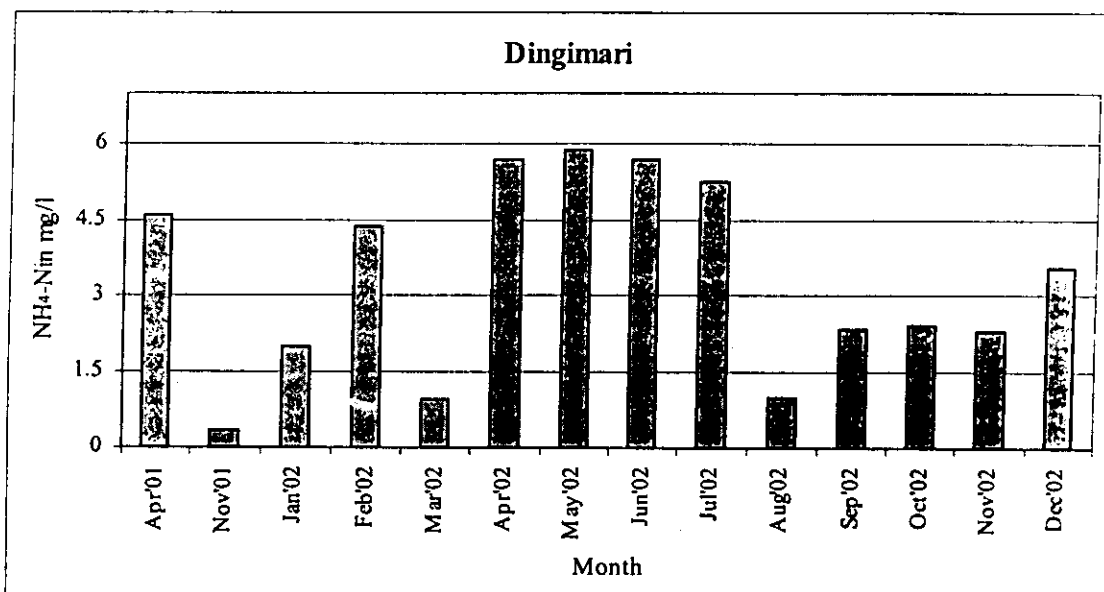
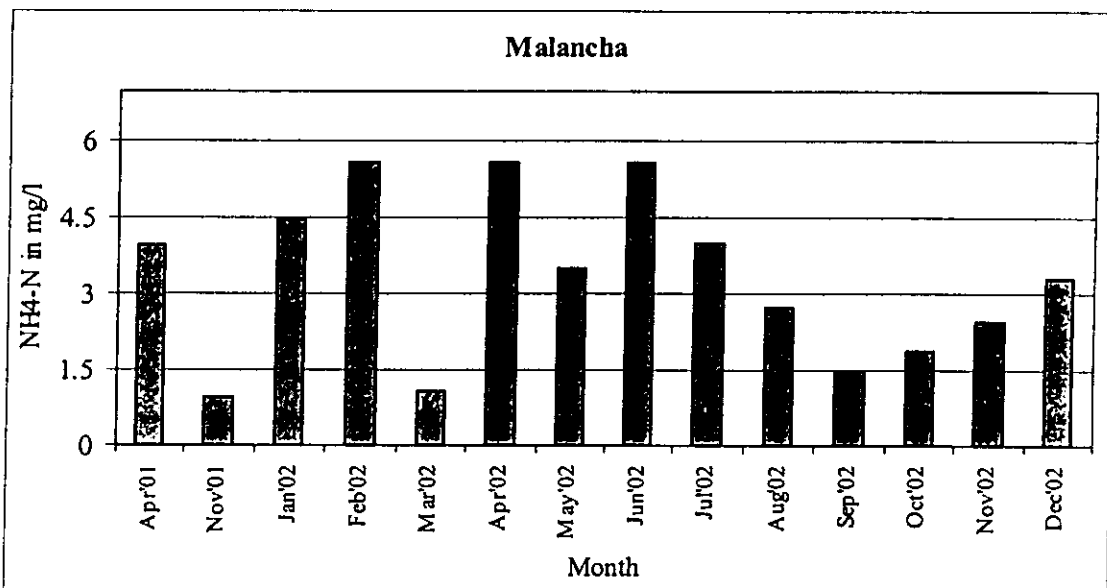
NH<sub>4</sub>-N observed at different stations



**NH<sub>4</sub>-N observed at different stations**

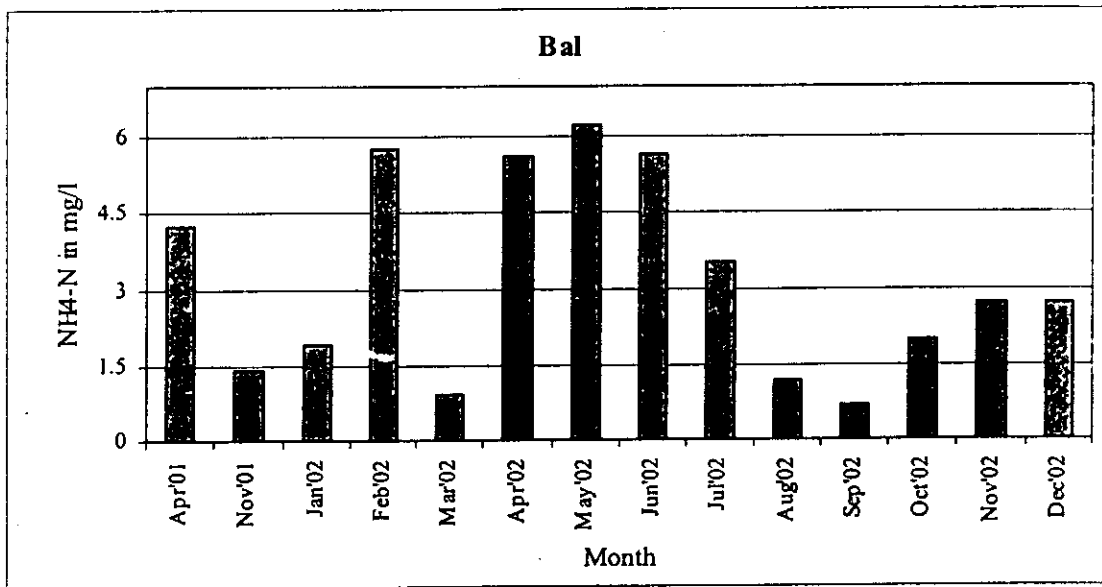
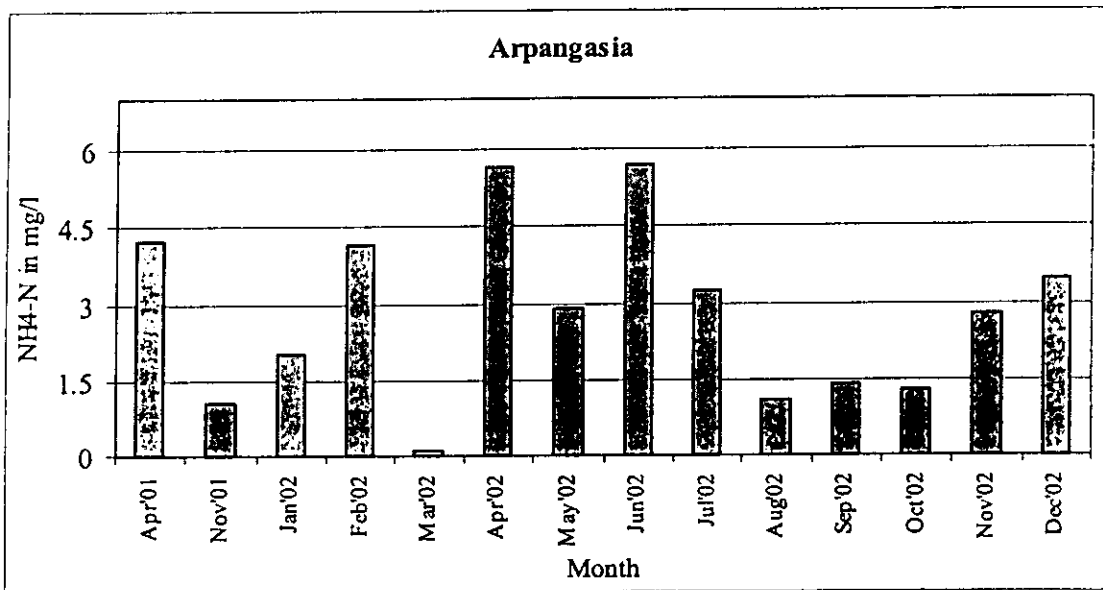
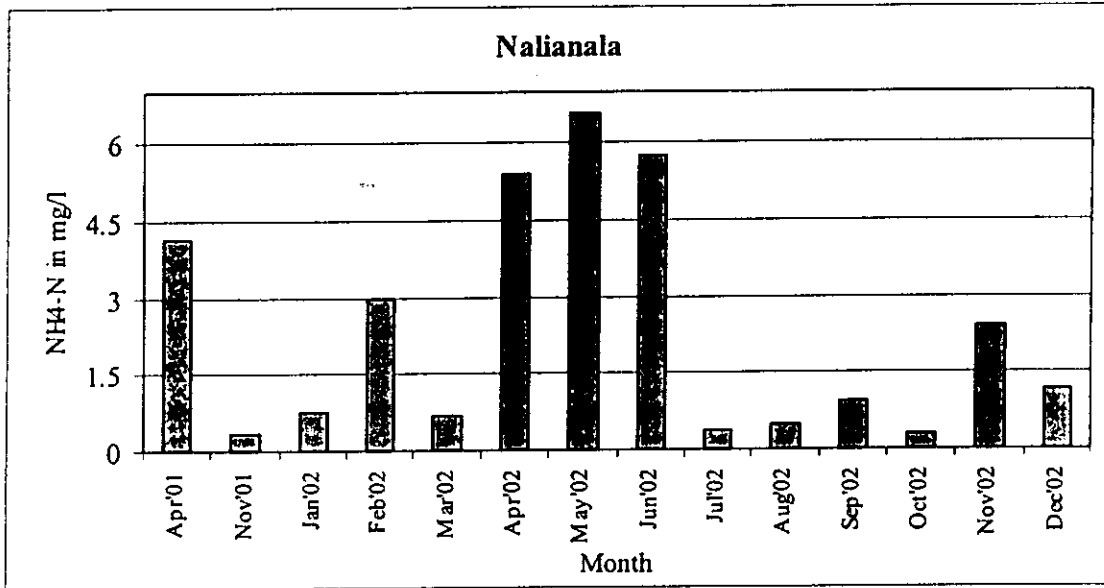


NH<sub>4</sub>-N observed at different stations

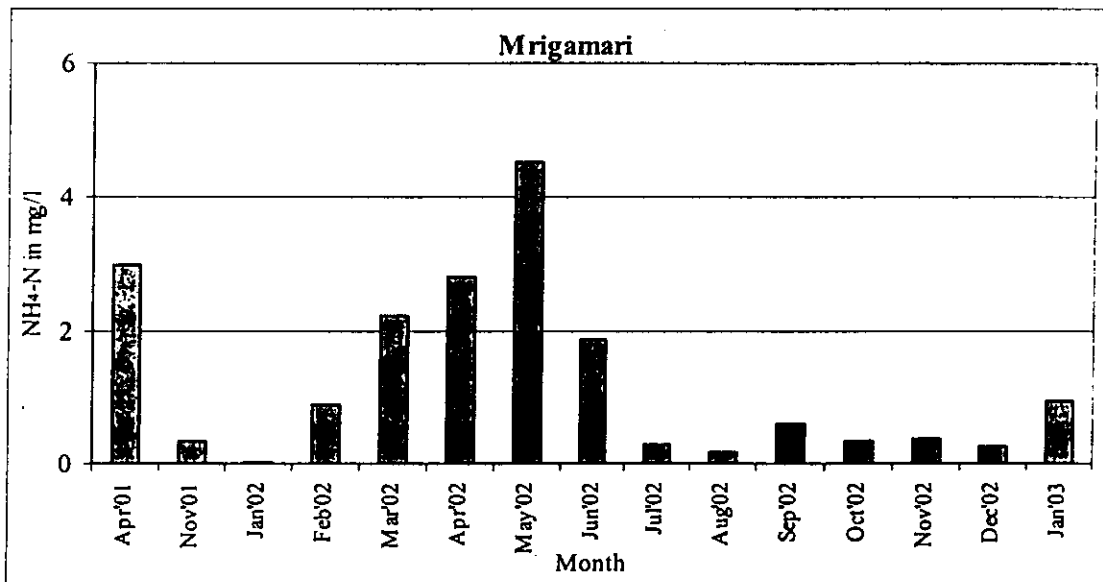
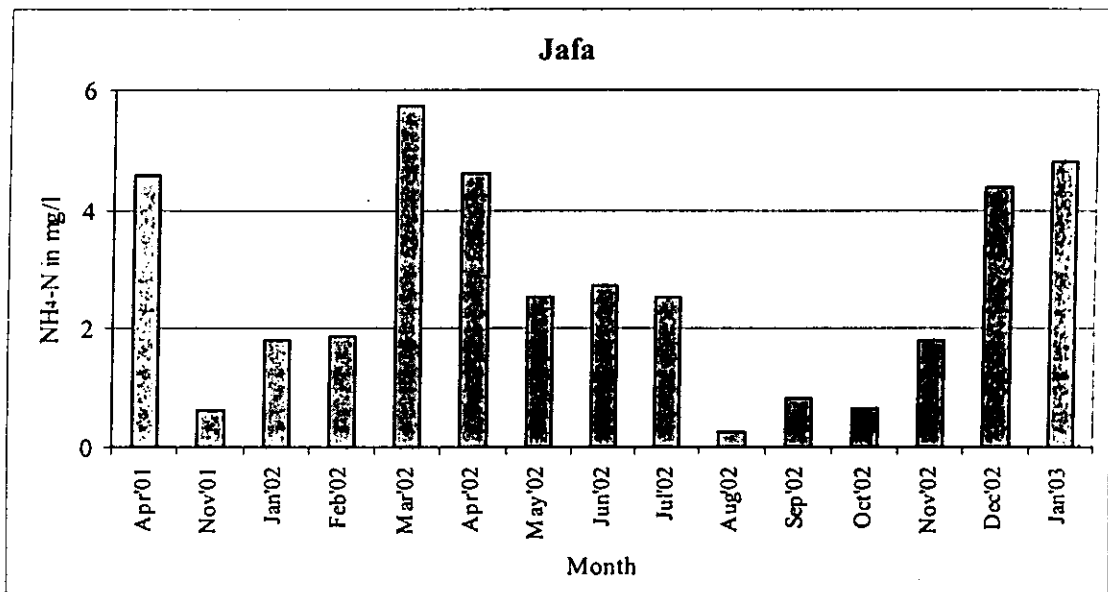
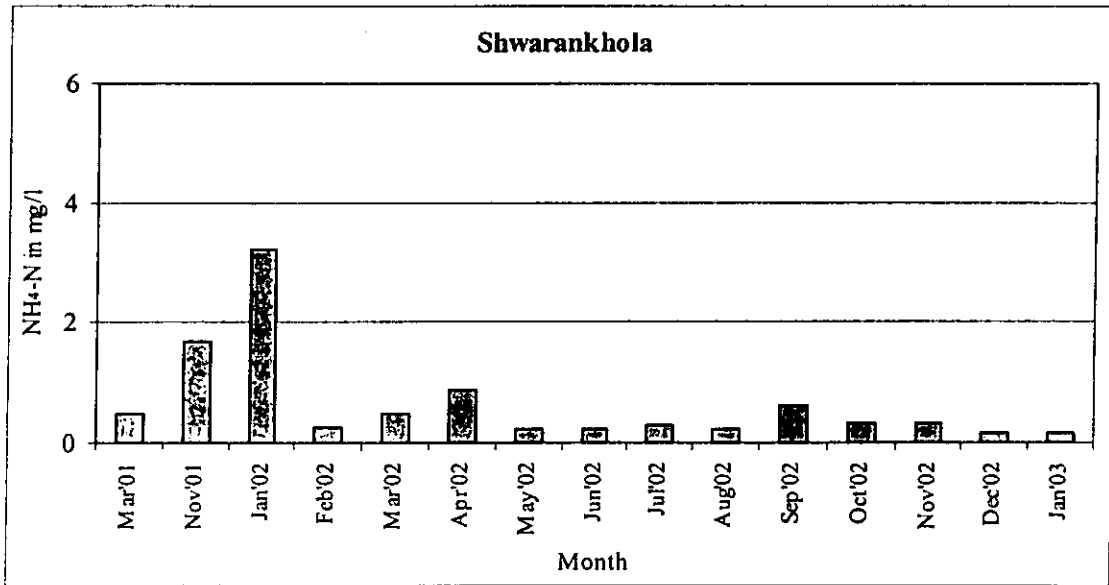




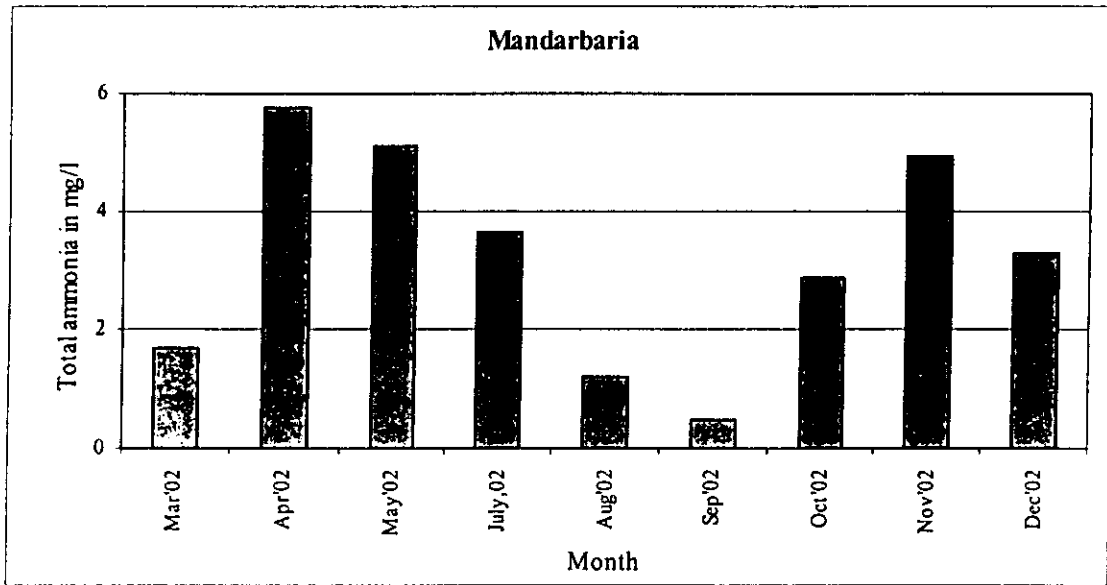
**NH<sub>4</sub>-N observed at different stations**



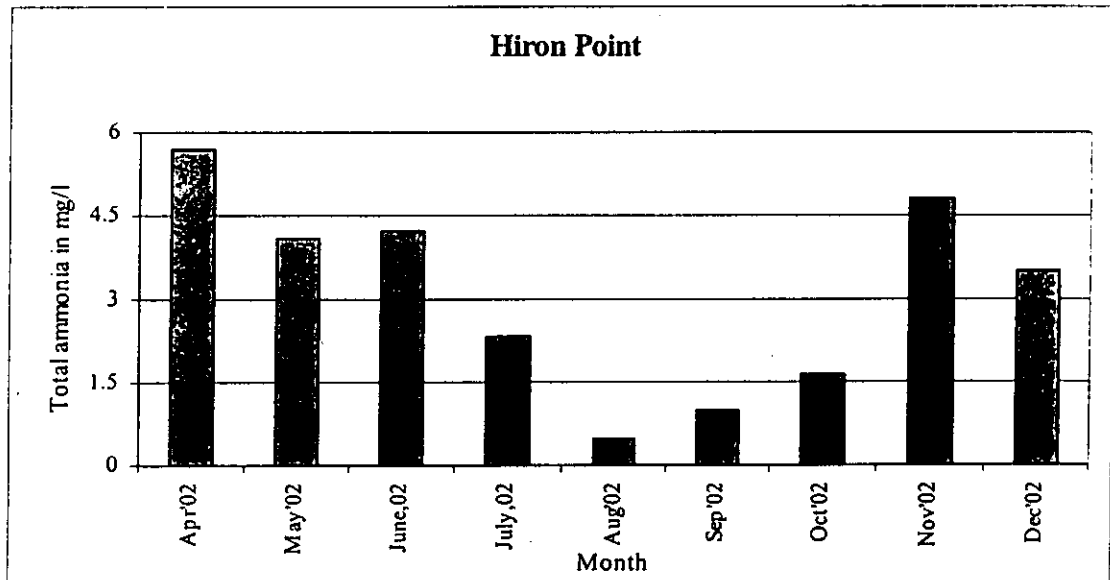
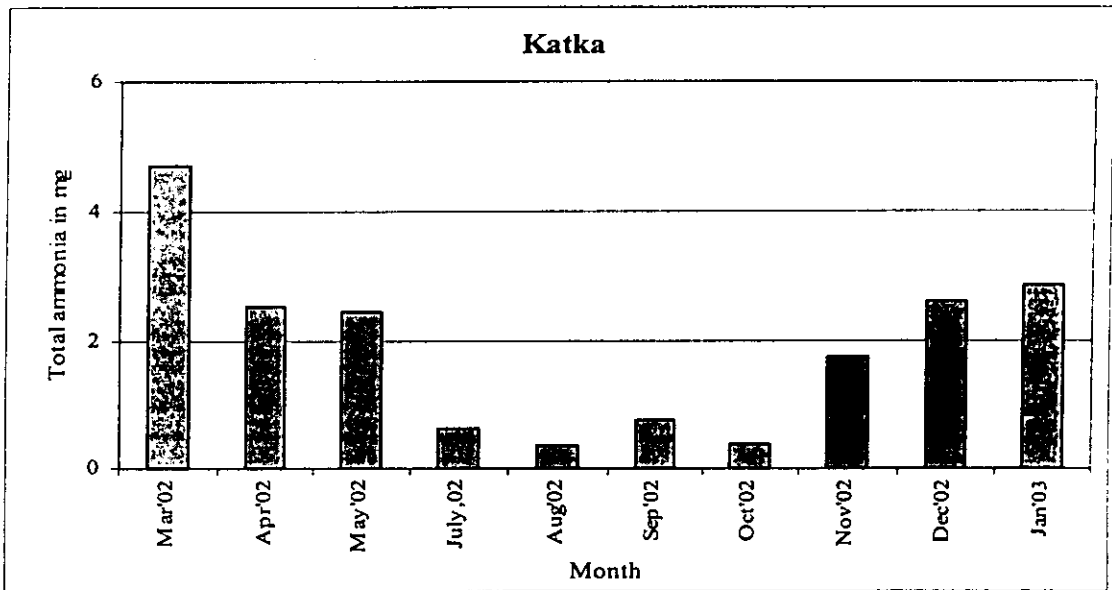
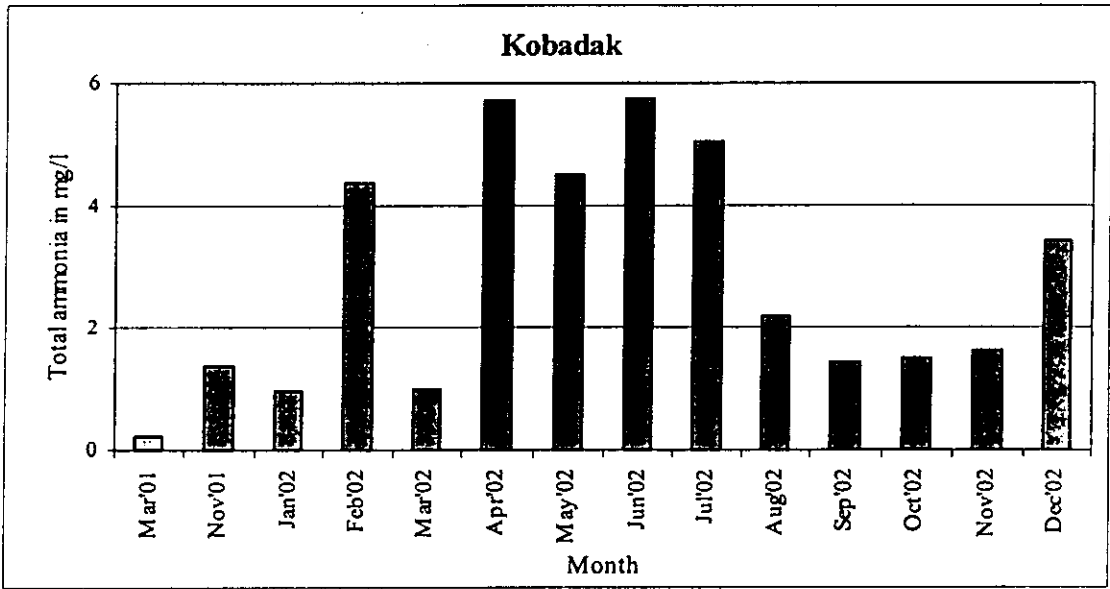
NH<sub>4</sub>-N observed at different stations



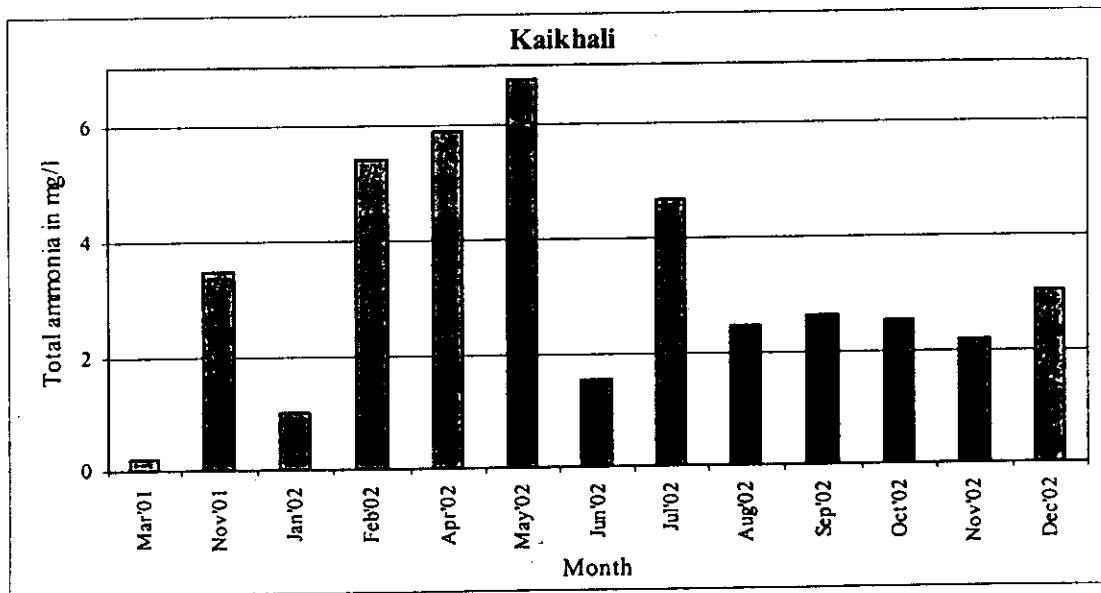
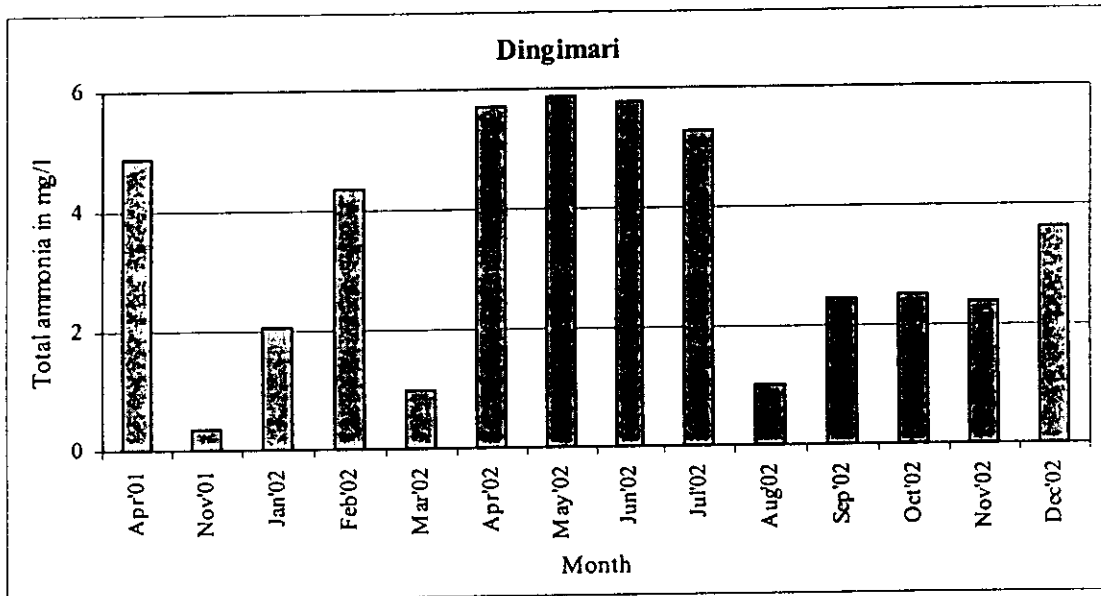
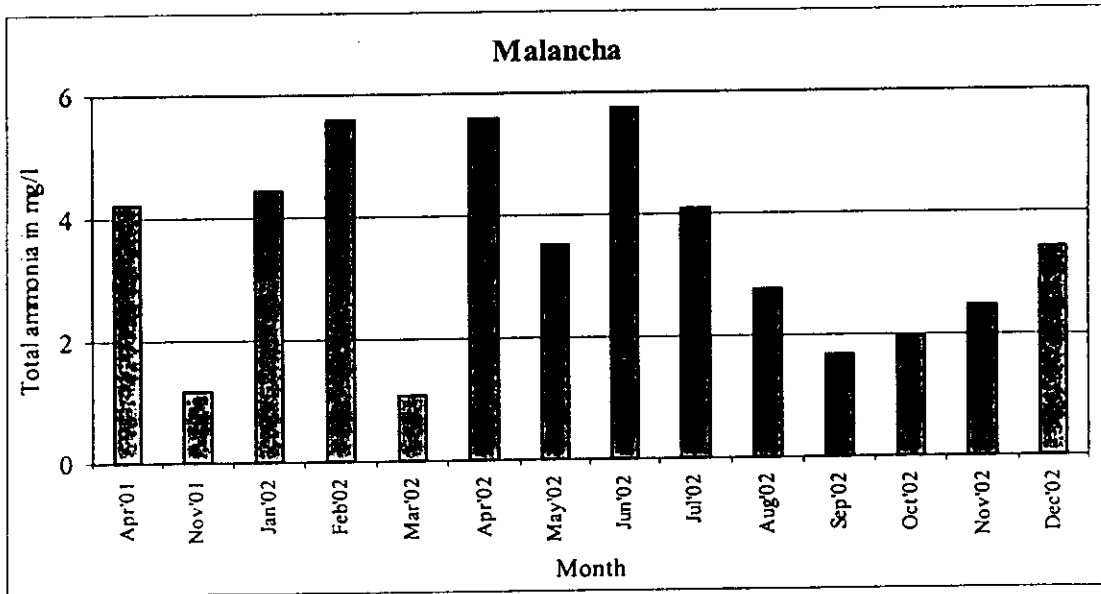
### Total ammonia observed at different stations



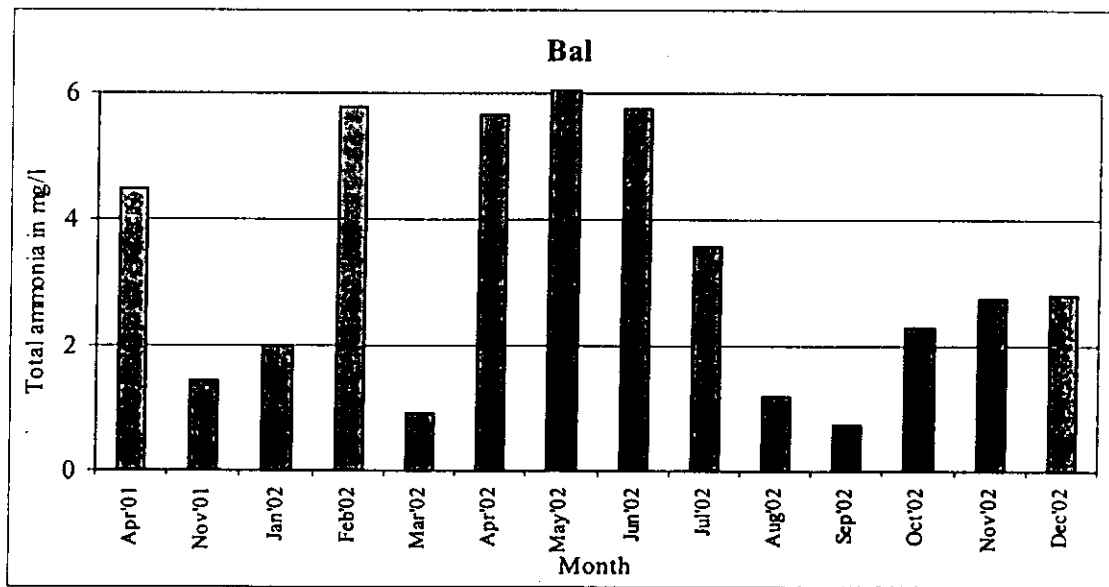
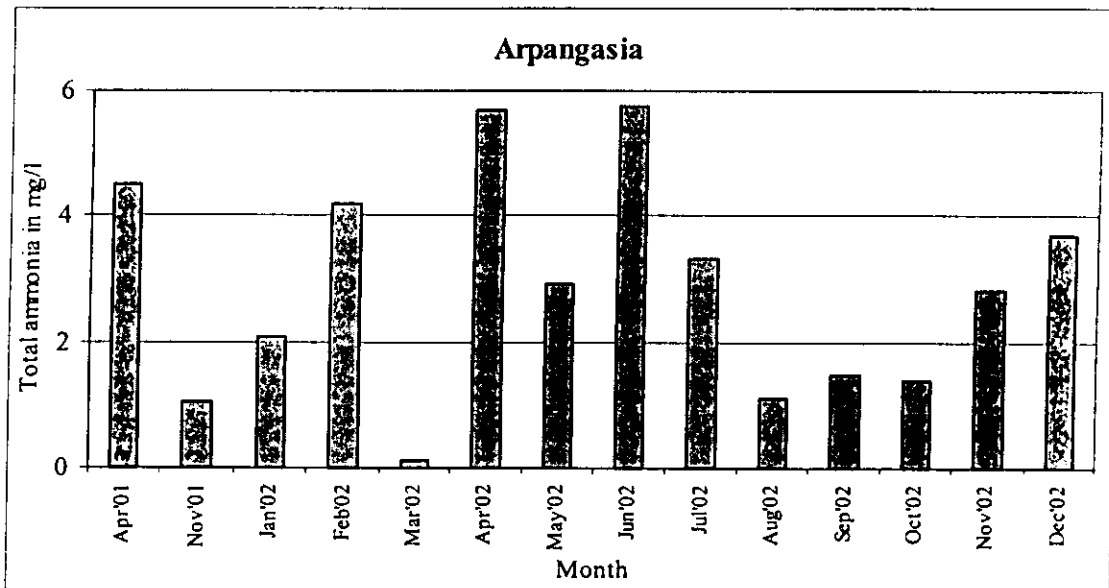
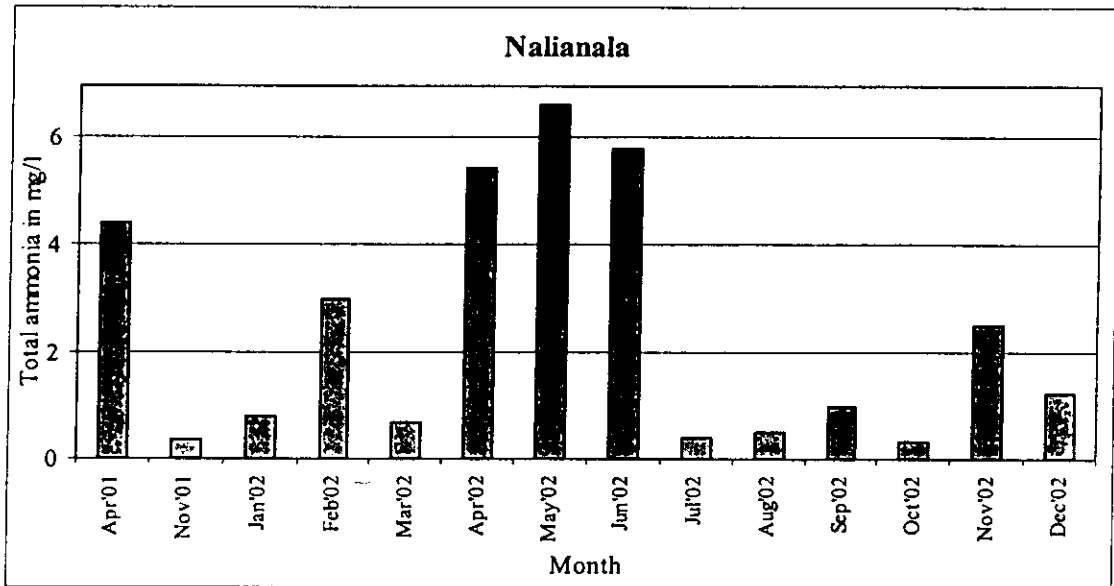
Total ammonia observed at different stations



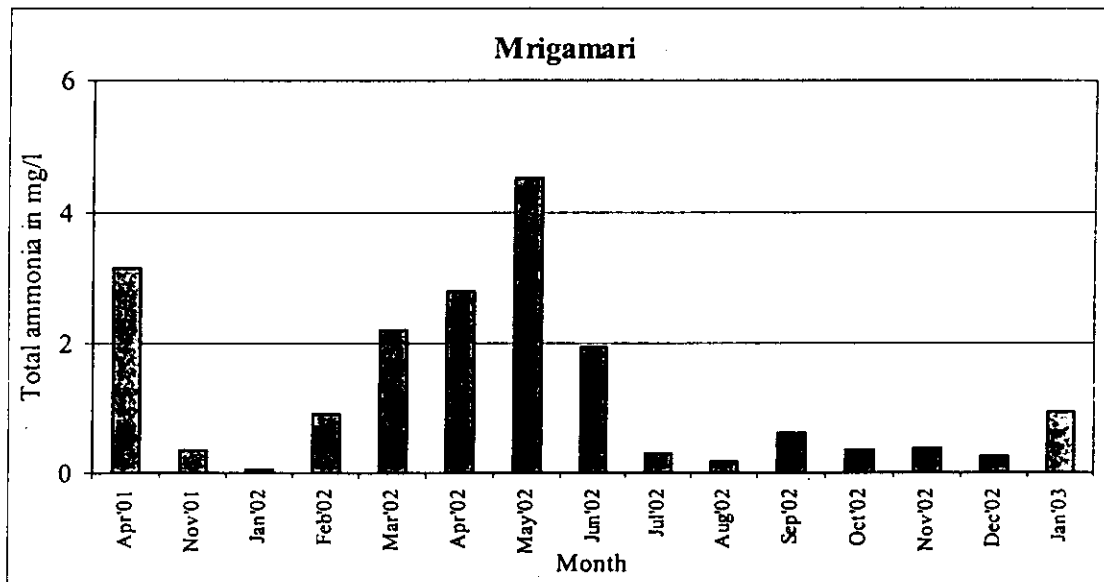
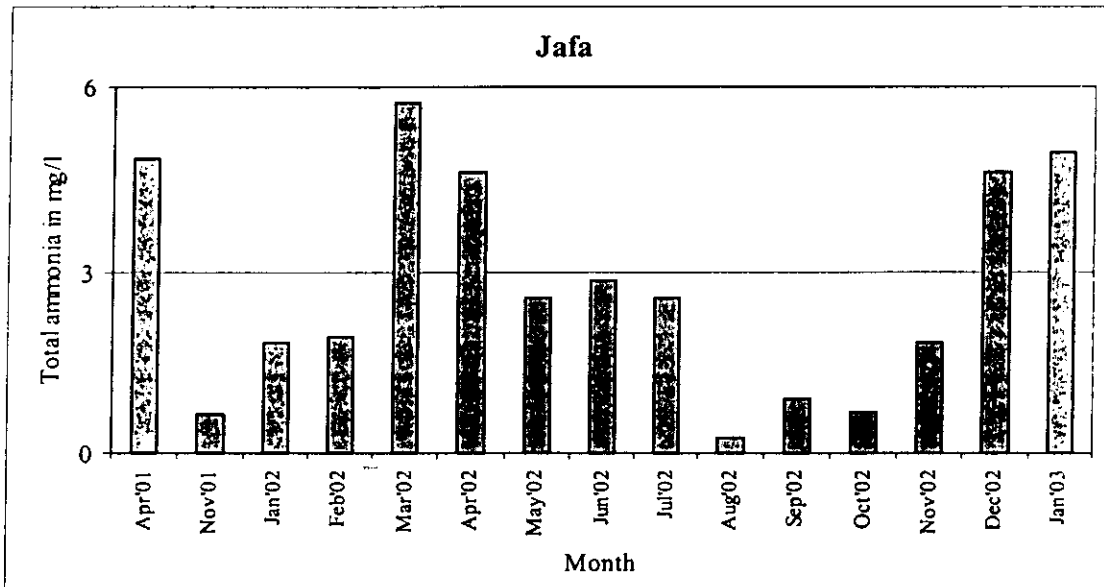
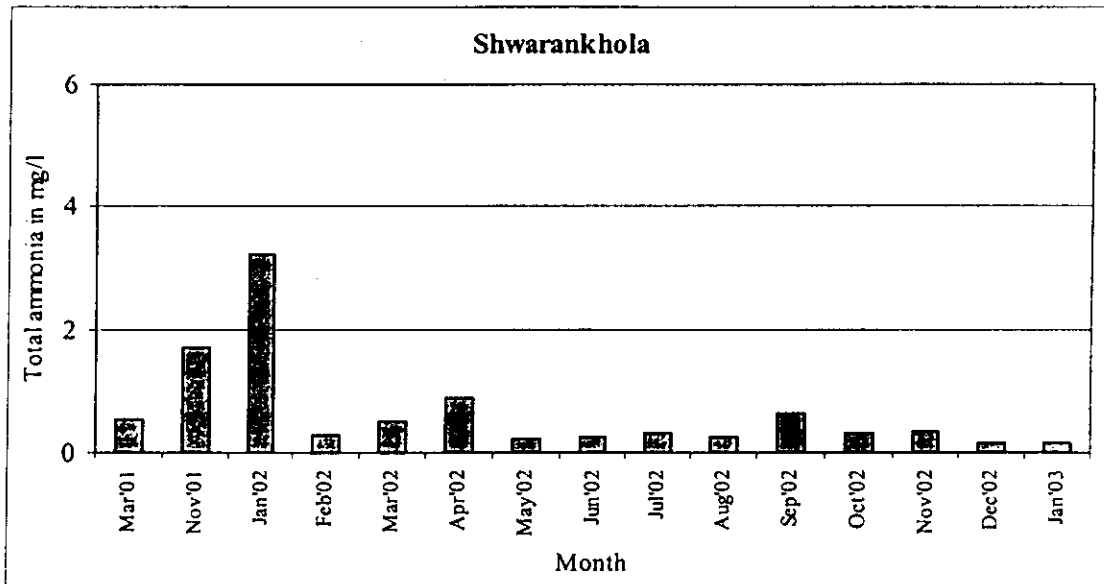
**Total ammonia observed at different stations**



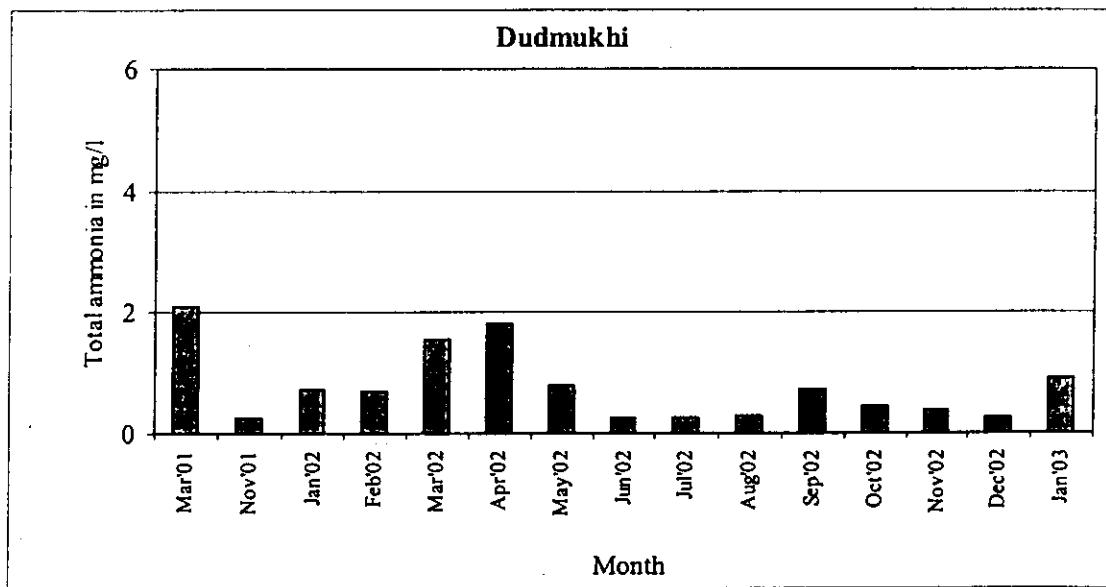
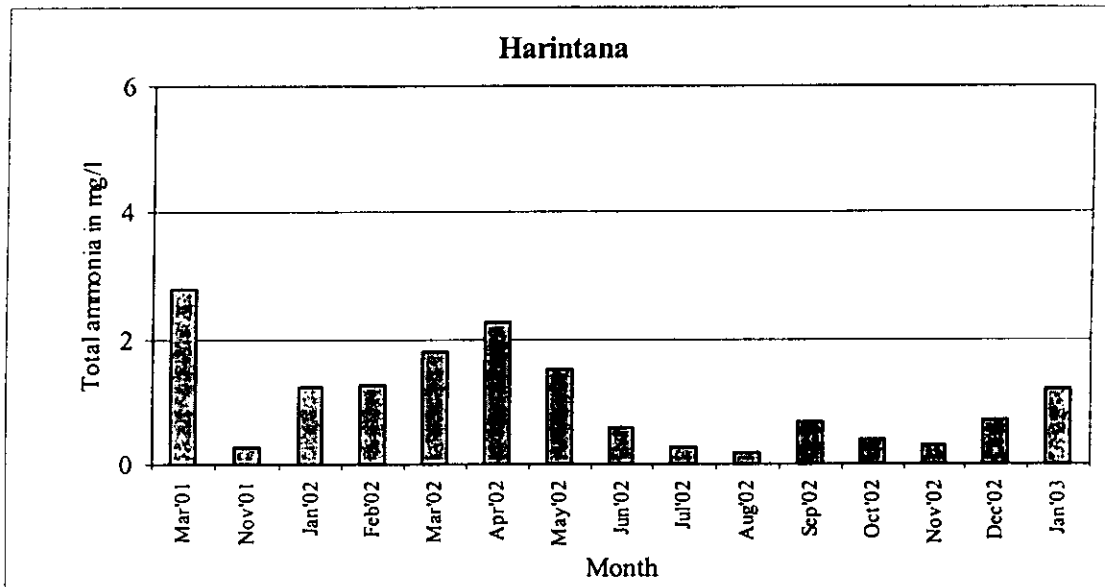
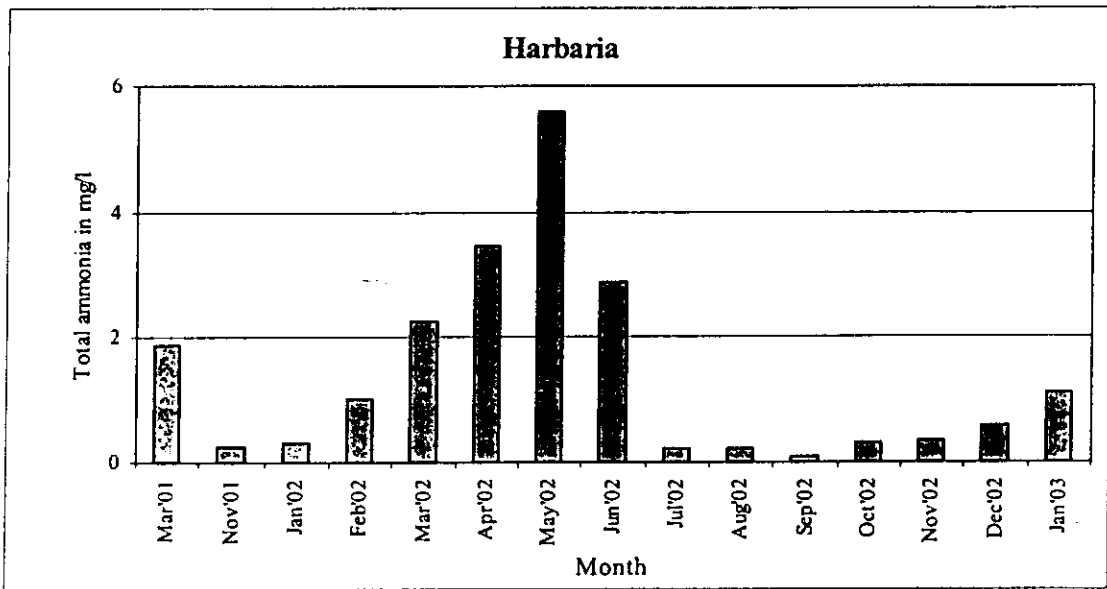
### Total ammonia observed at different stations



Total ammonia observed at different stations

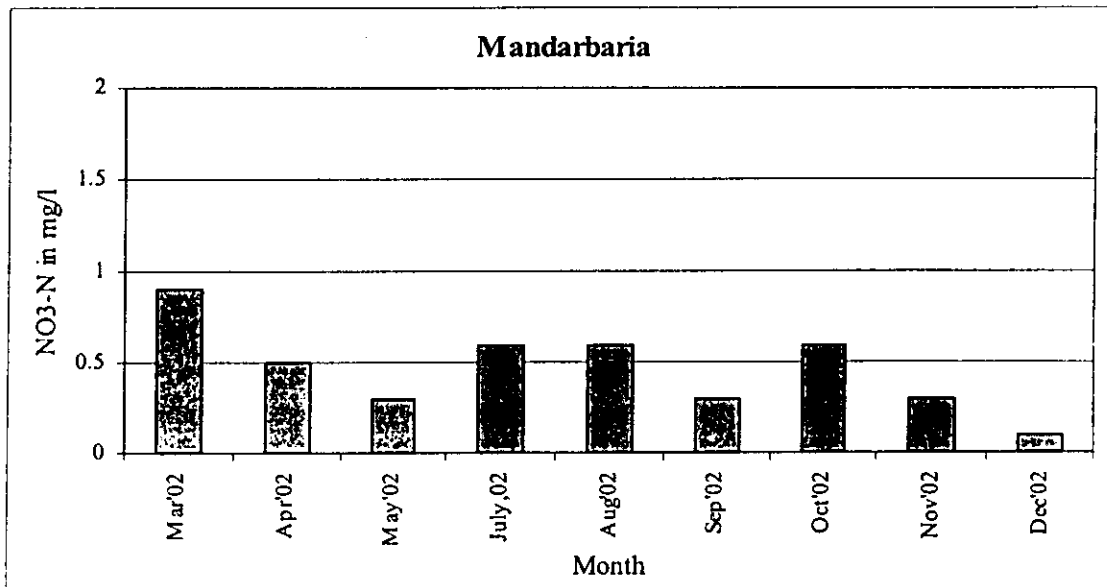


**Total ammonia observed at different stations**

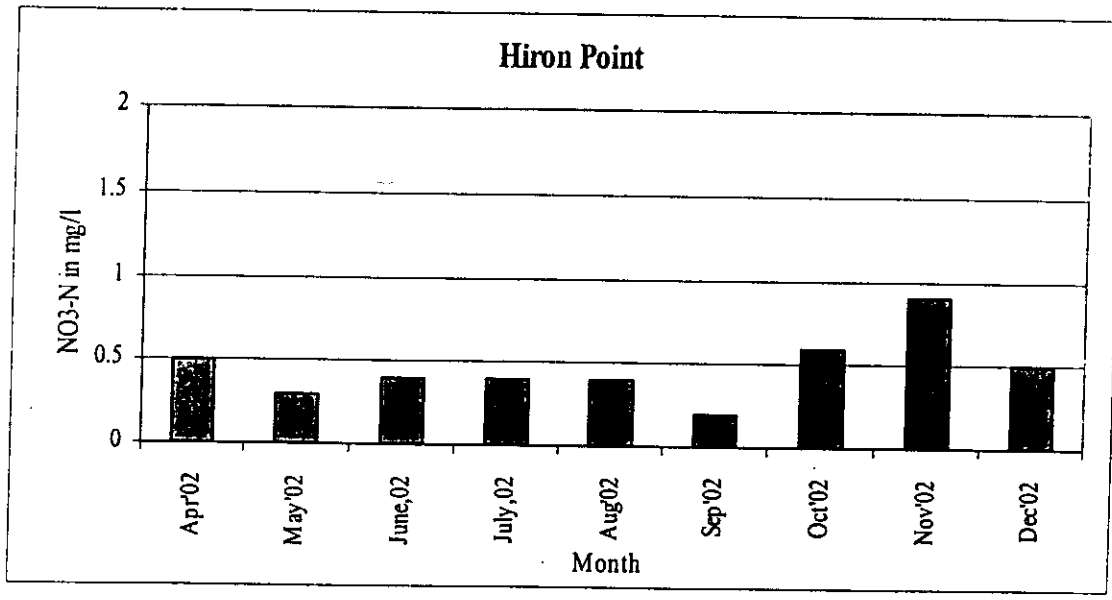
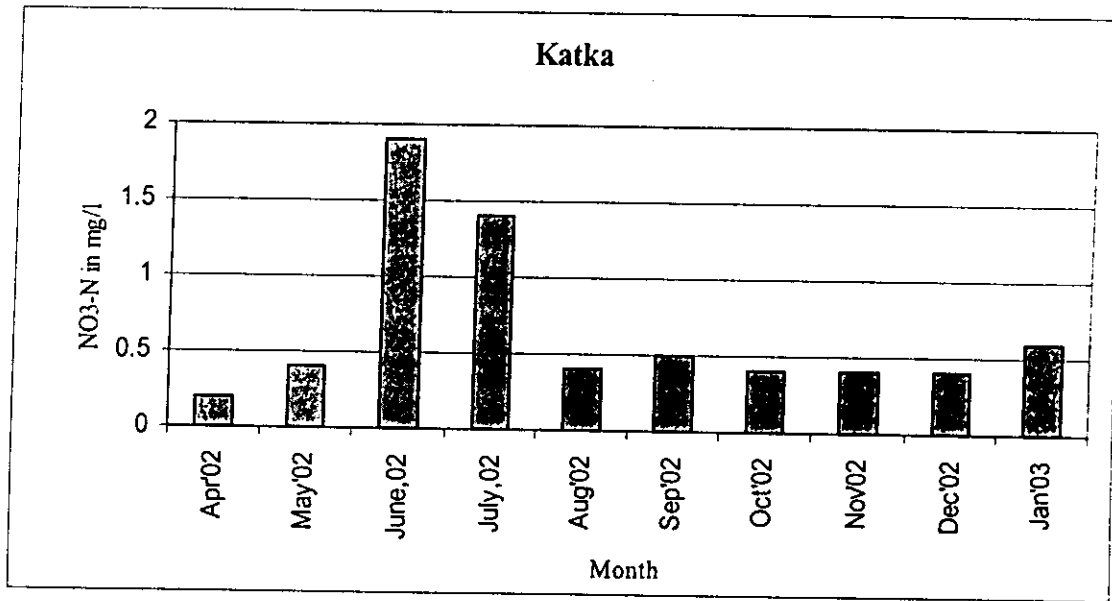
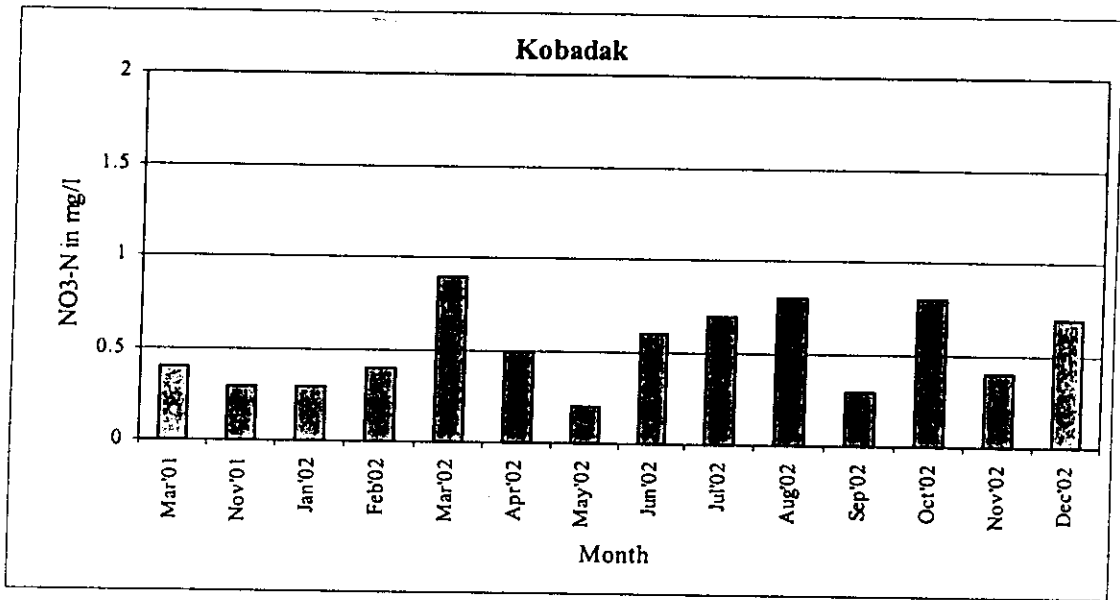




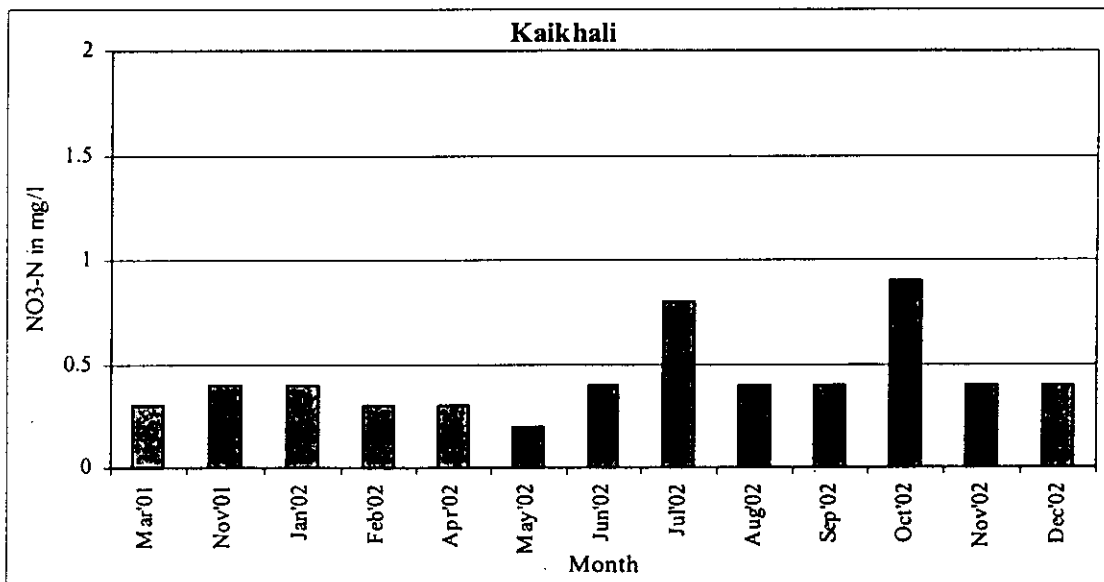
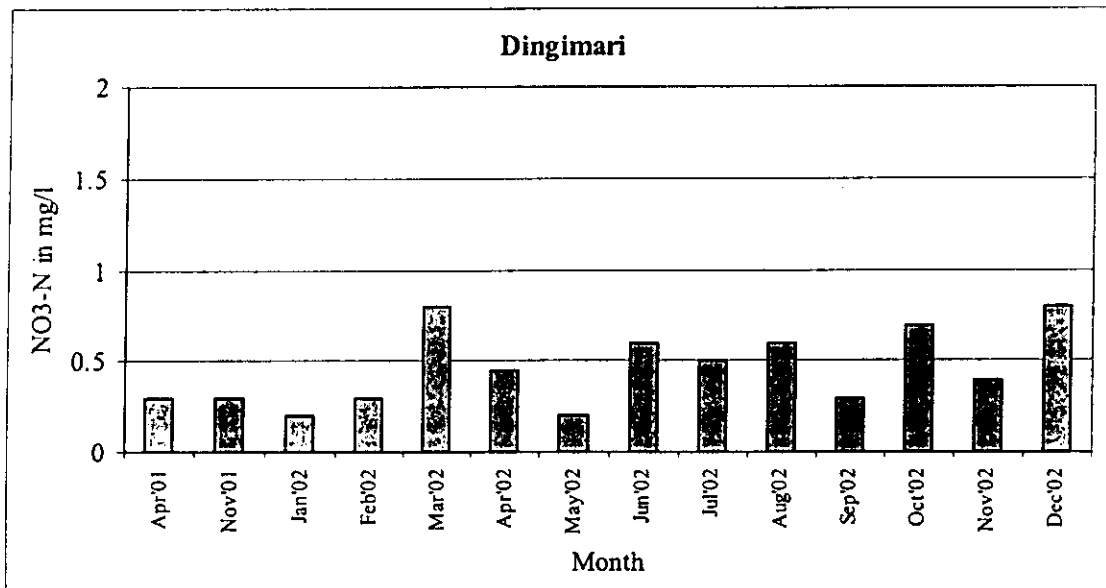
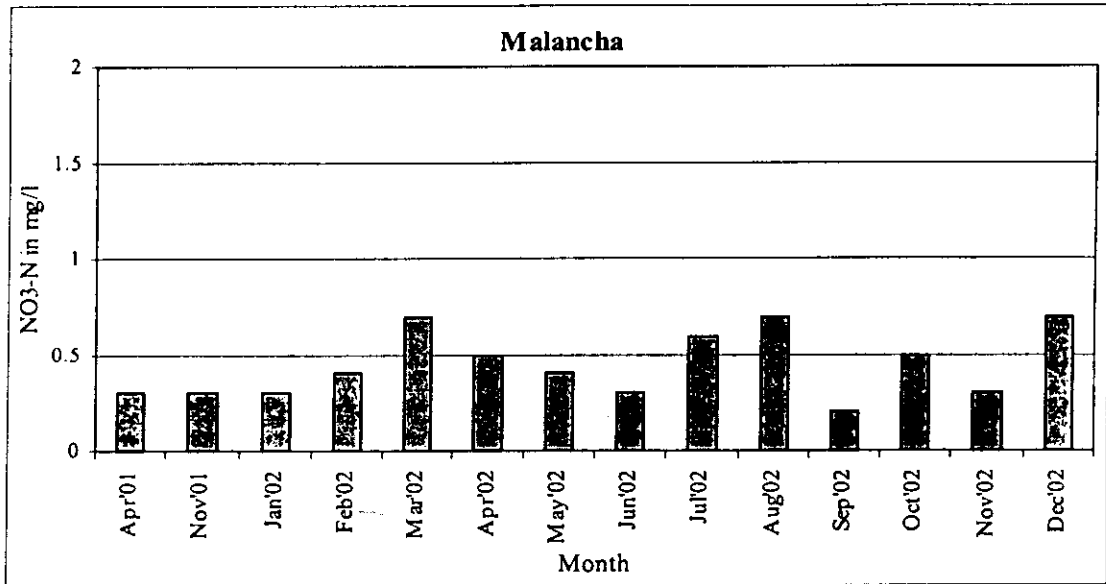
### NO<sub>3</sub>-N observed at different stations



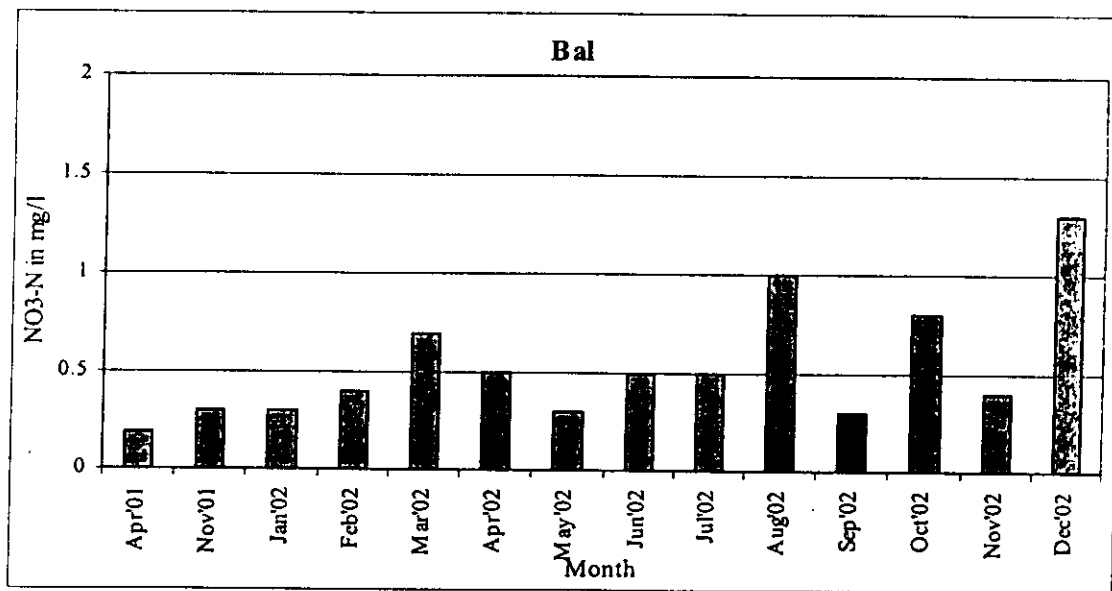
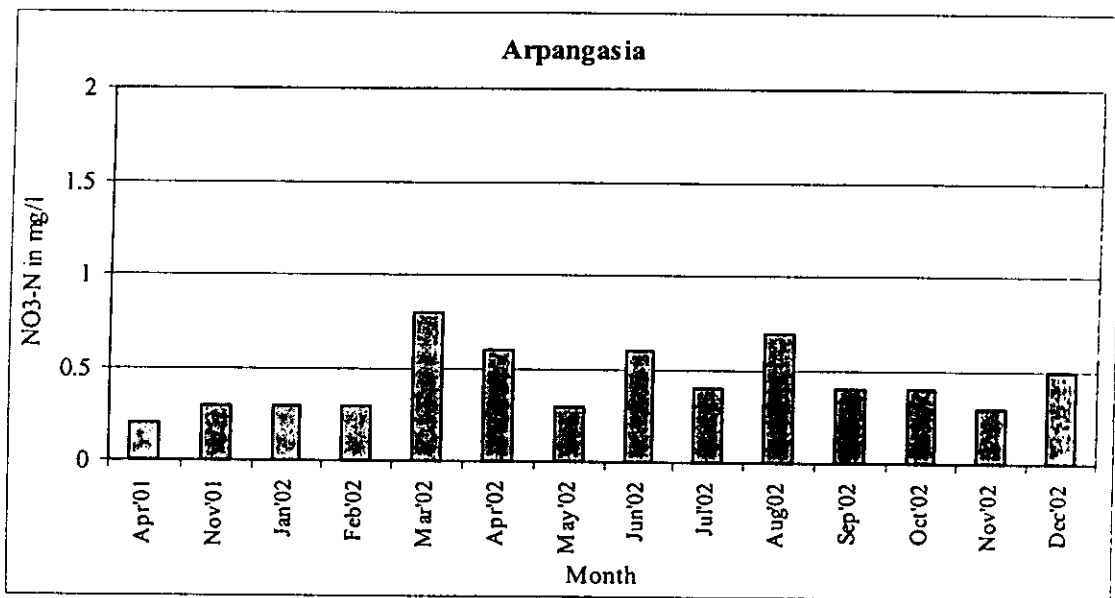
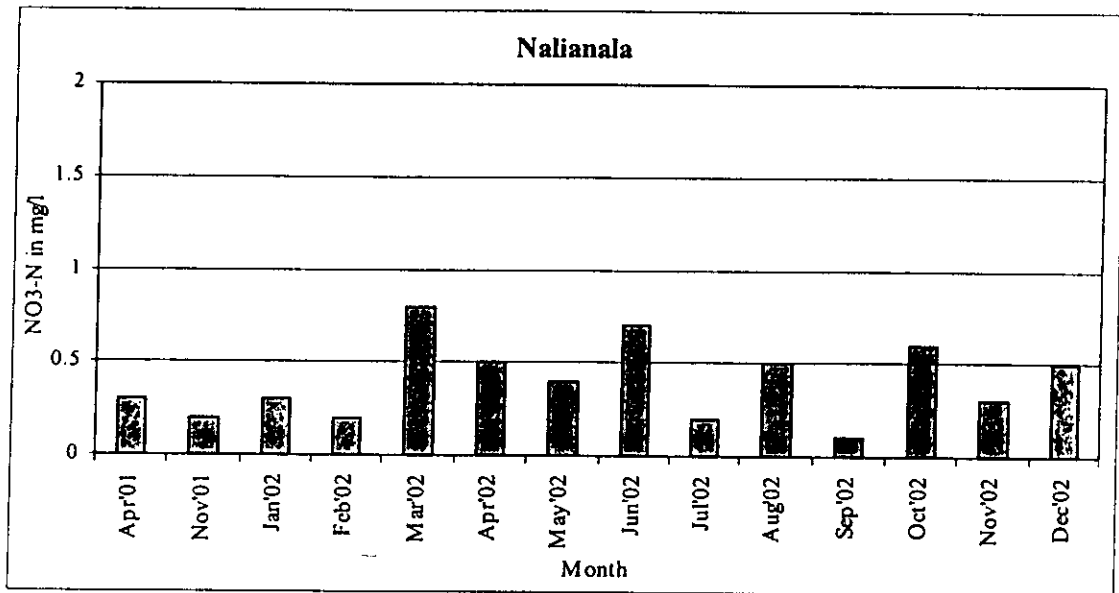
**NO<sub>3</sub>-N observed at different stations**



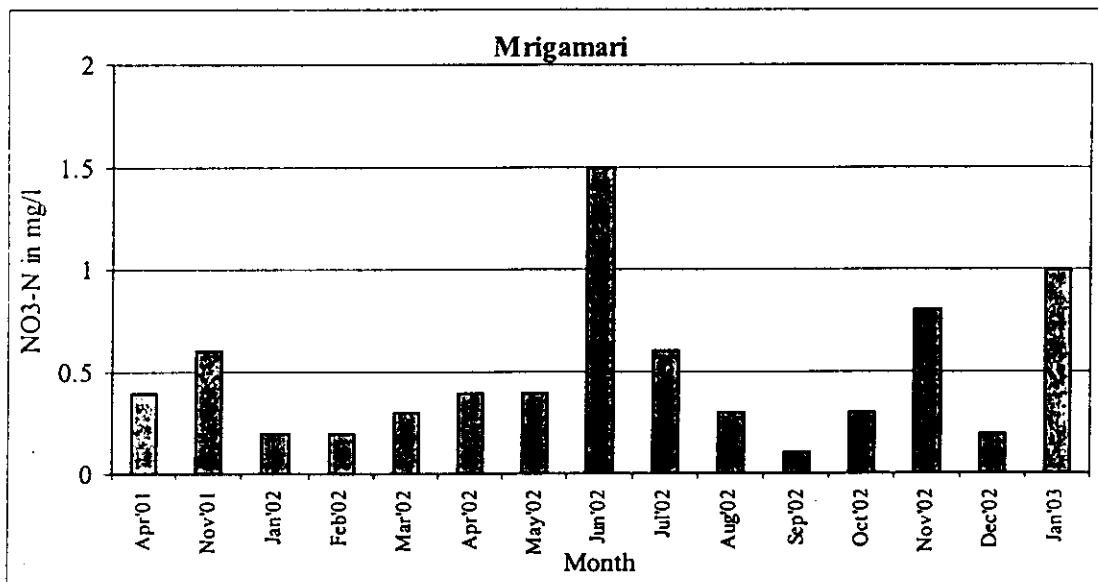
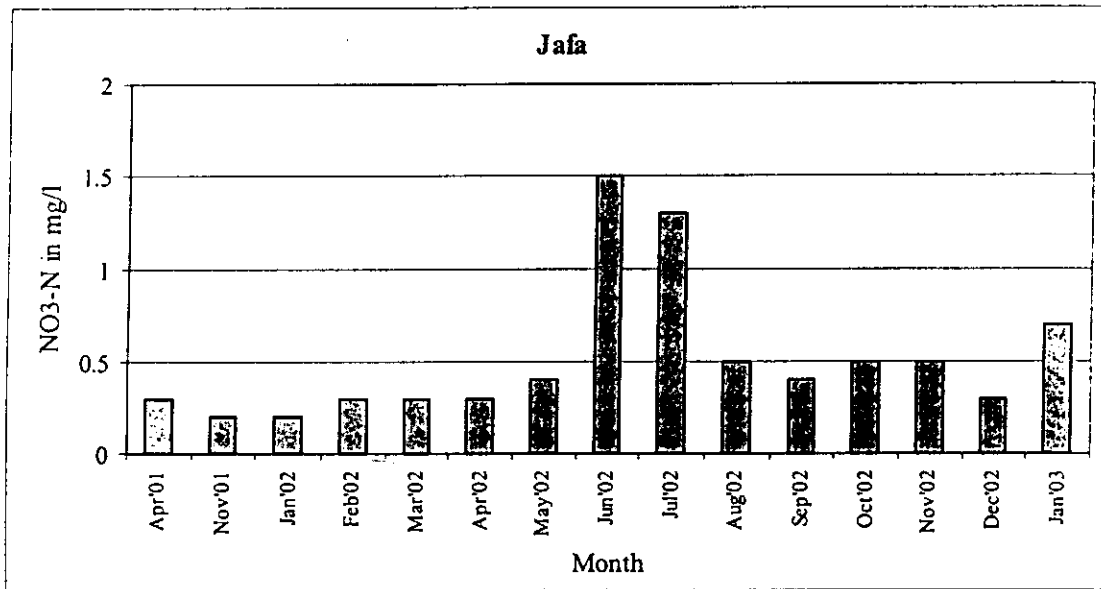
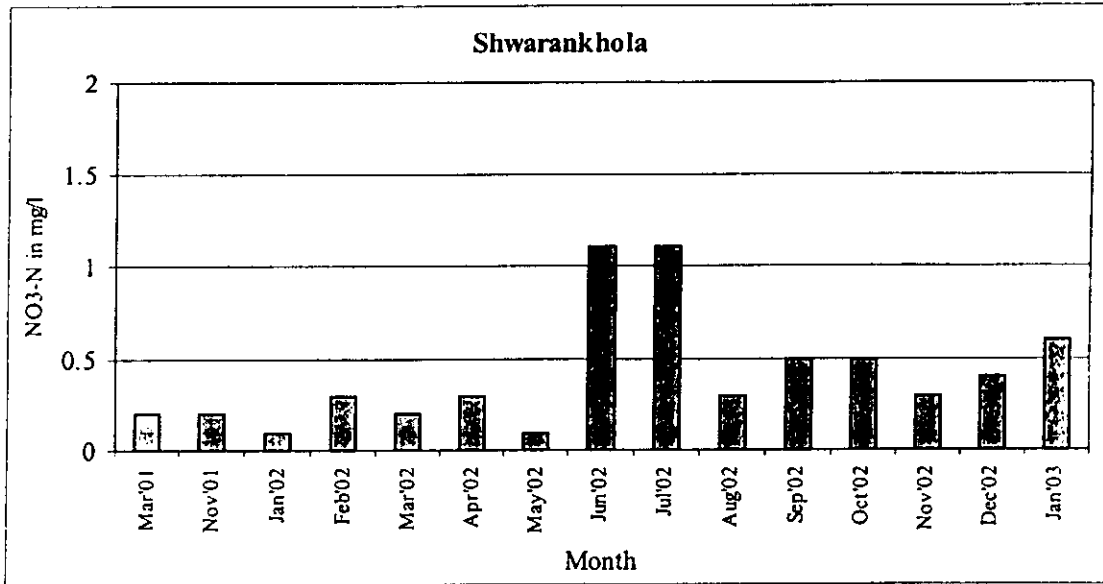
**NO<sub>3</sub>-N observed at different stations**



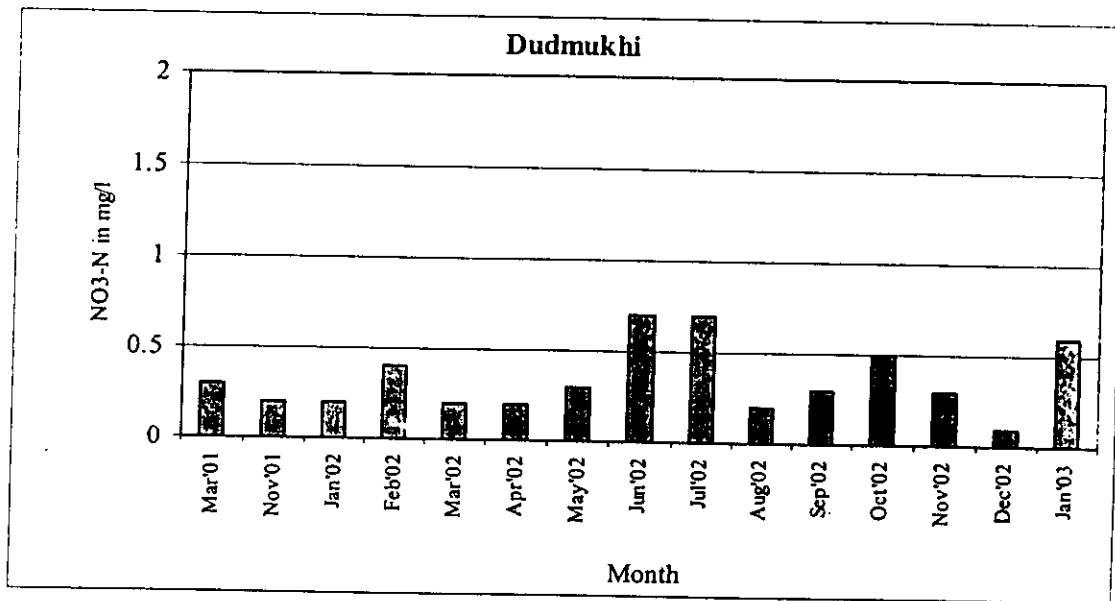
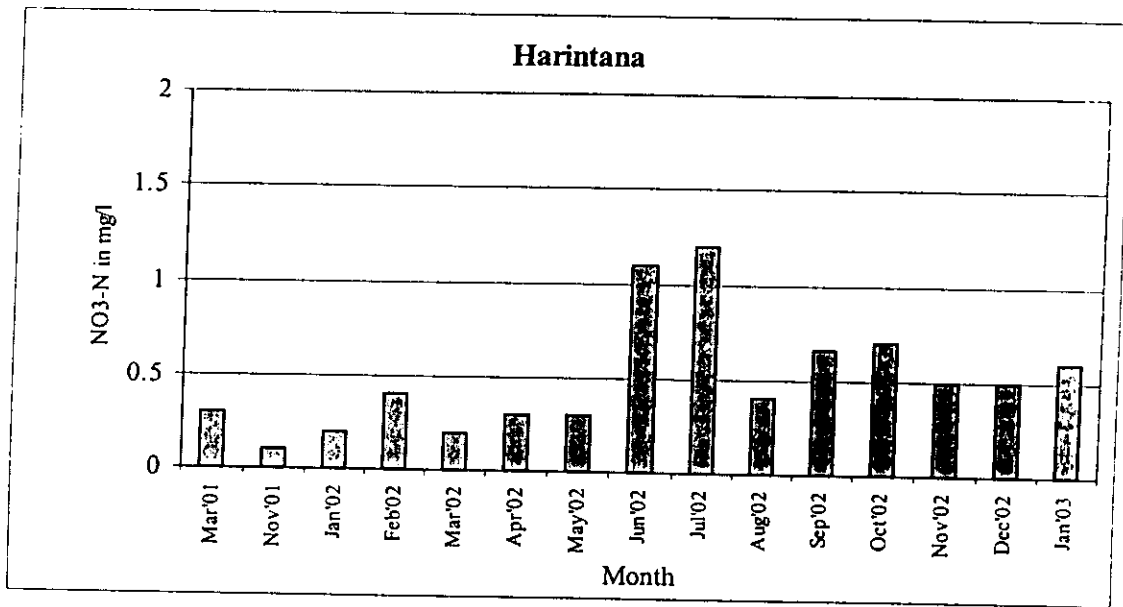
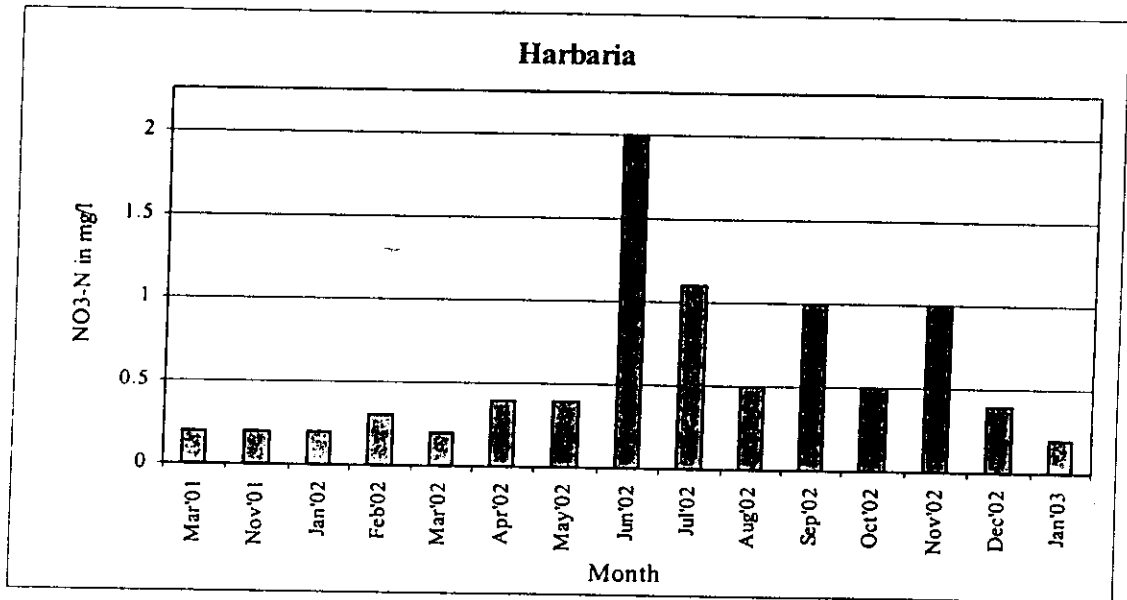
**NO<sub>3</sub>-N observed at different stations**



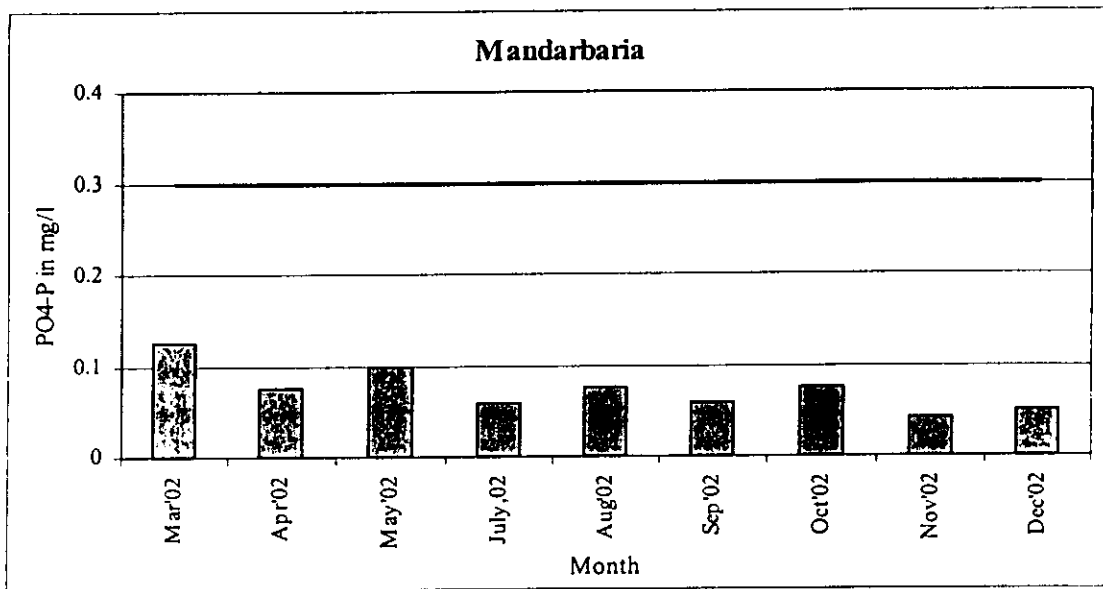
**NO<sub>3</sub>-N observed at different stations**



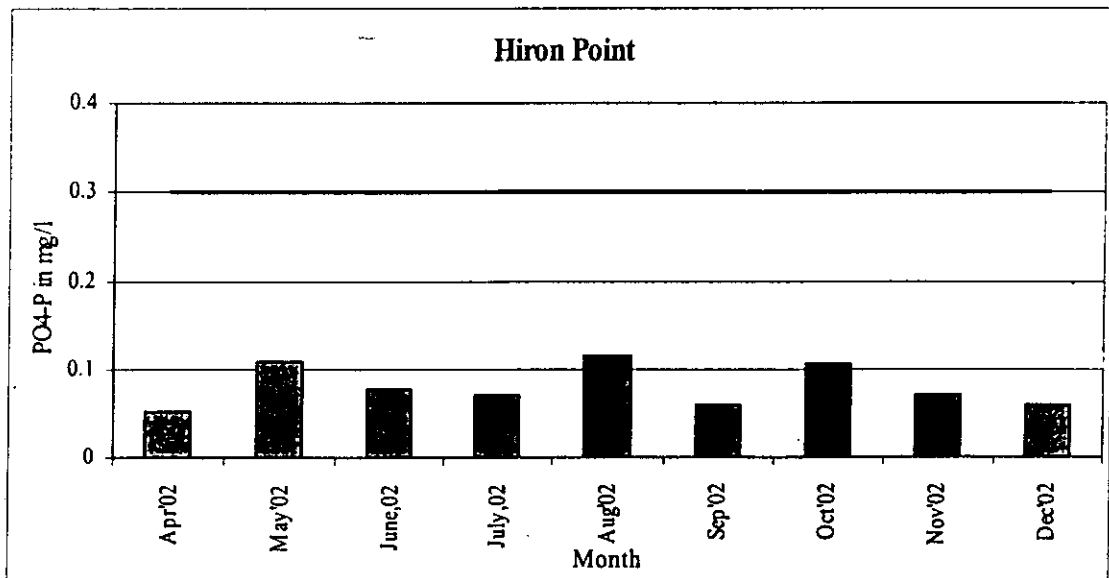
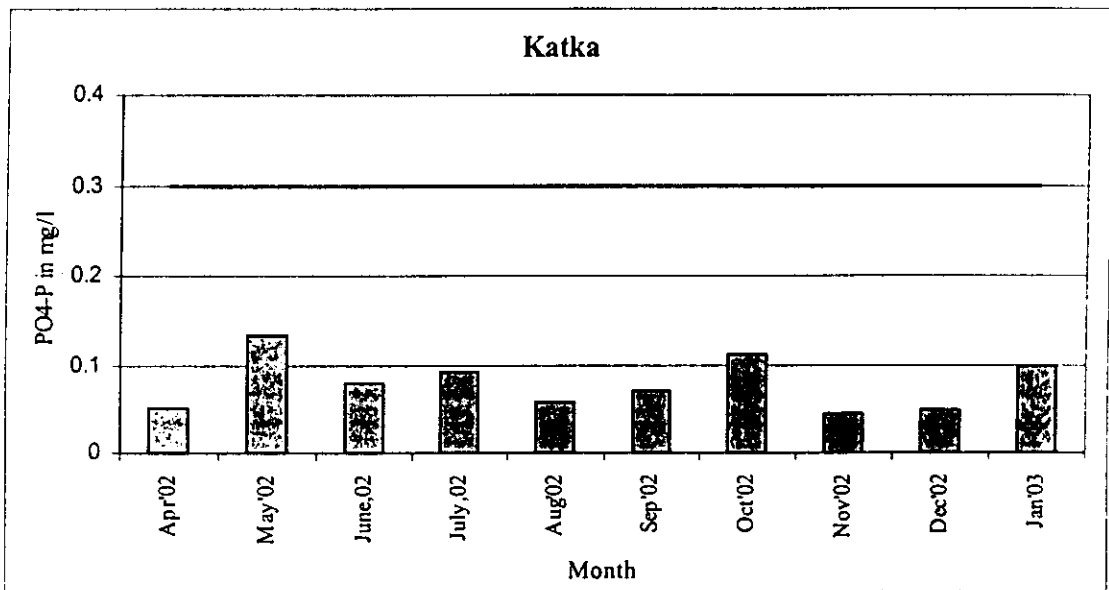
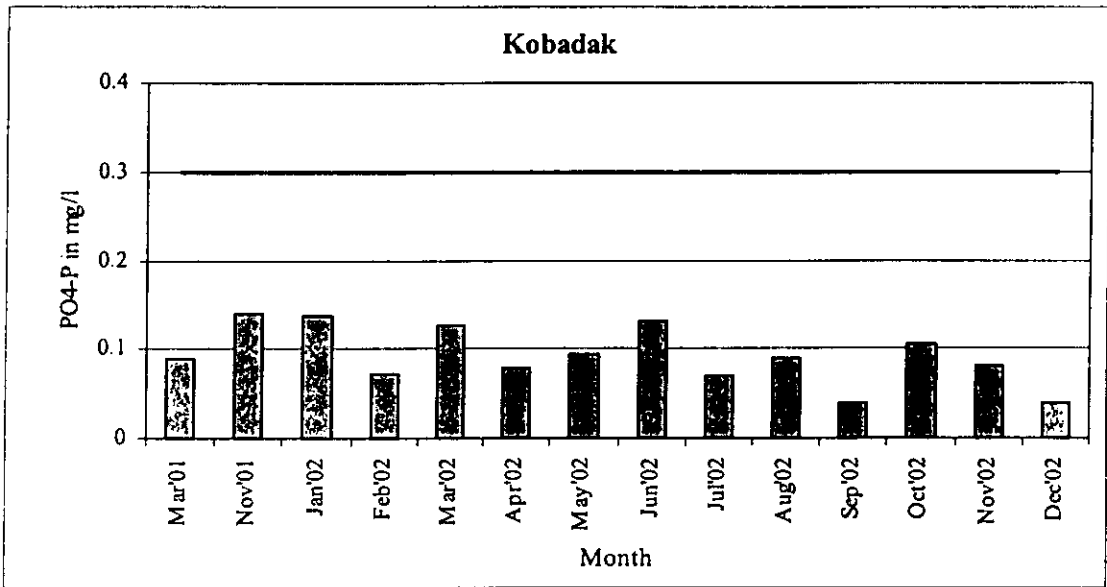
**NO<sub>3</sub>-N observed at different stations**



# PO<sub>4</sub>-P observed at different stations

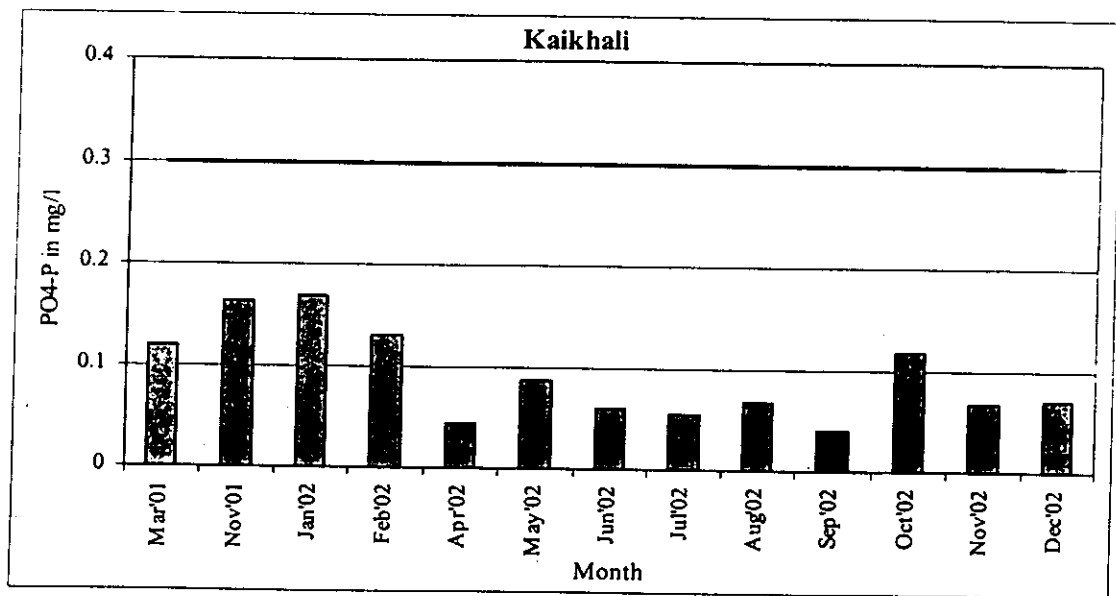
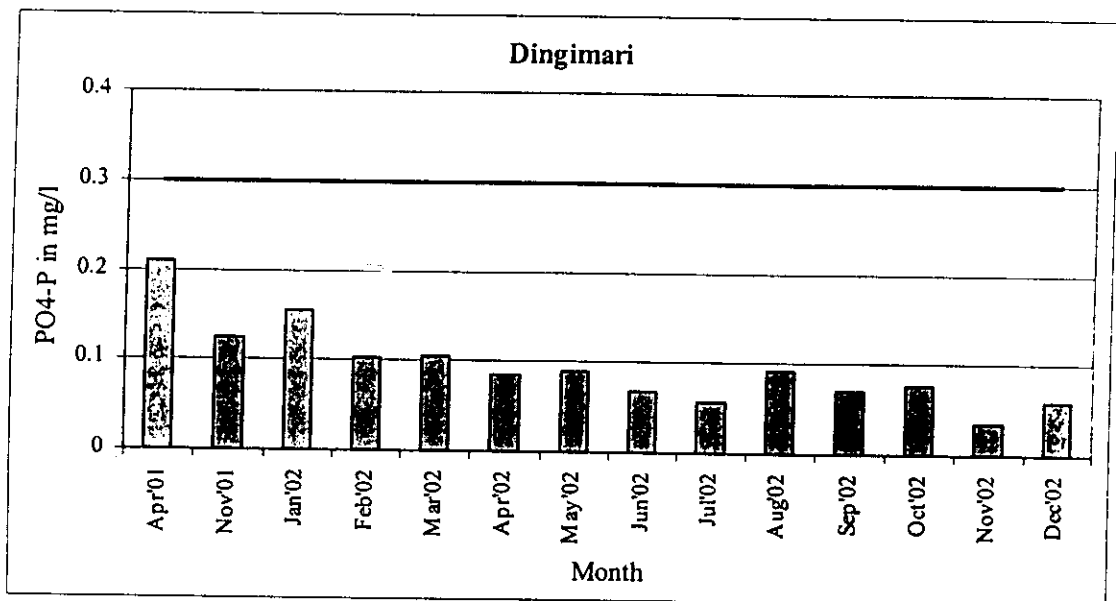
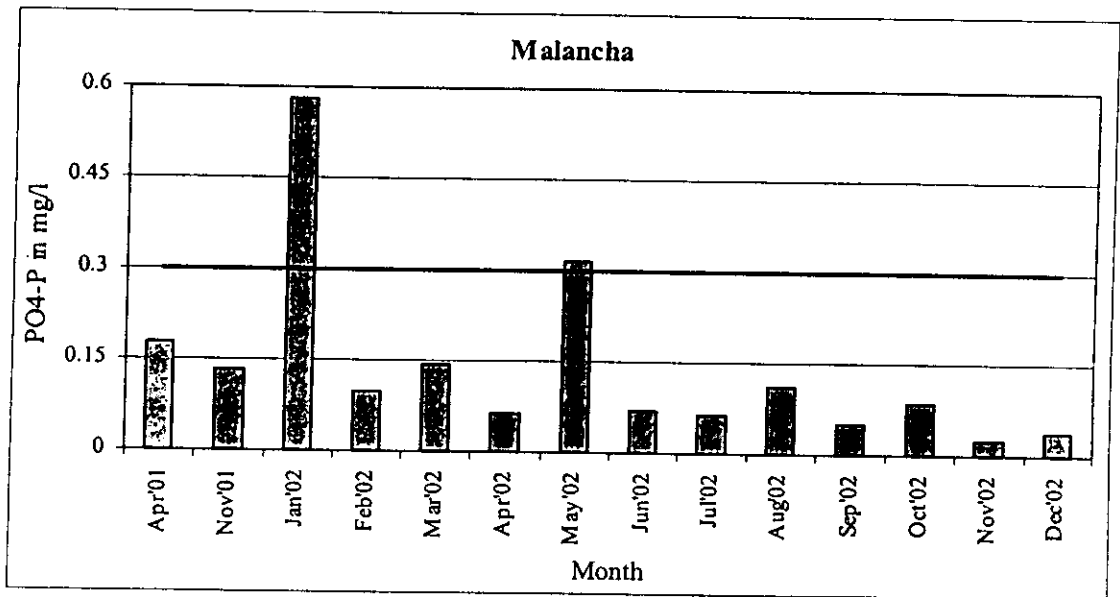


**PO<sub>4</sub>-P observed at different stations**

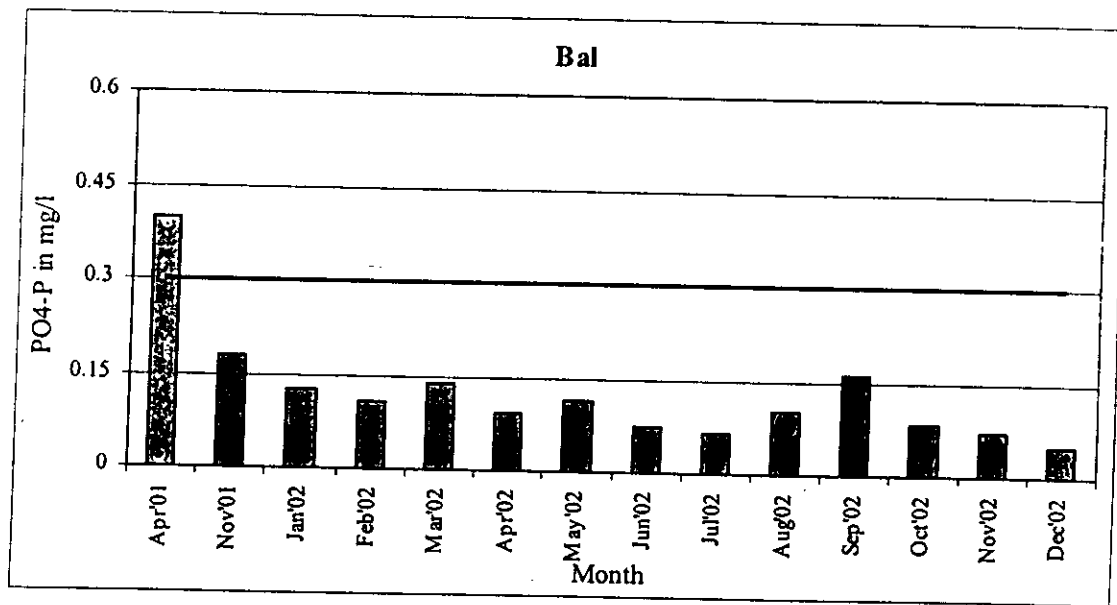
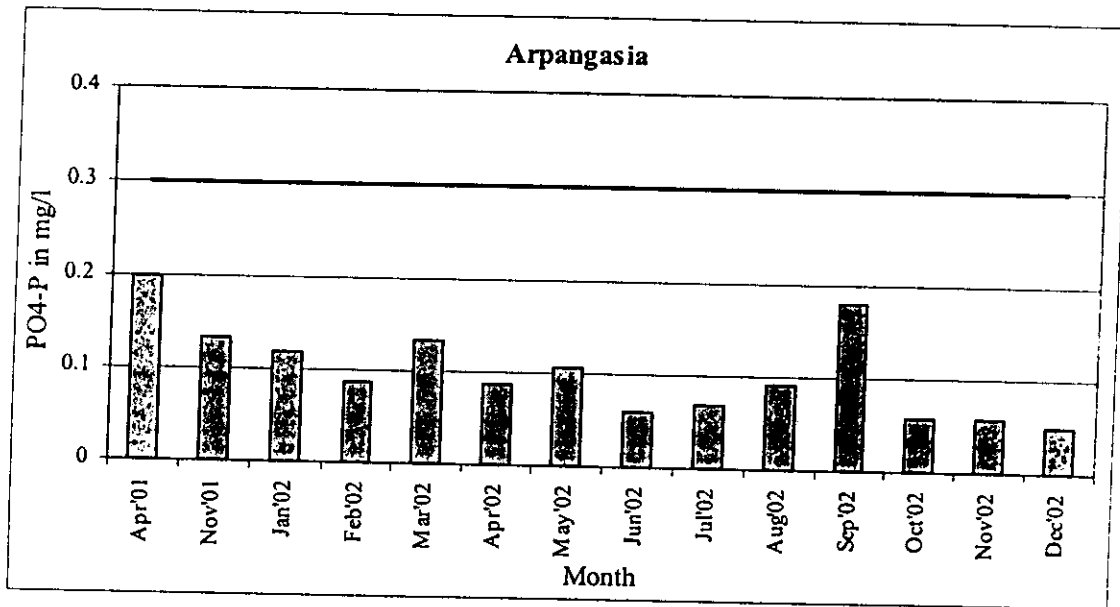
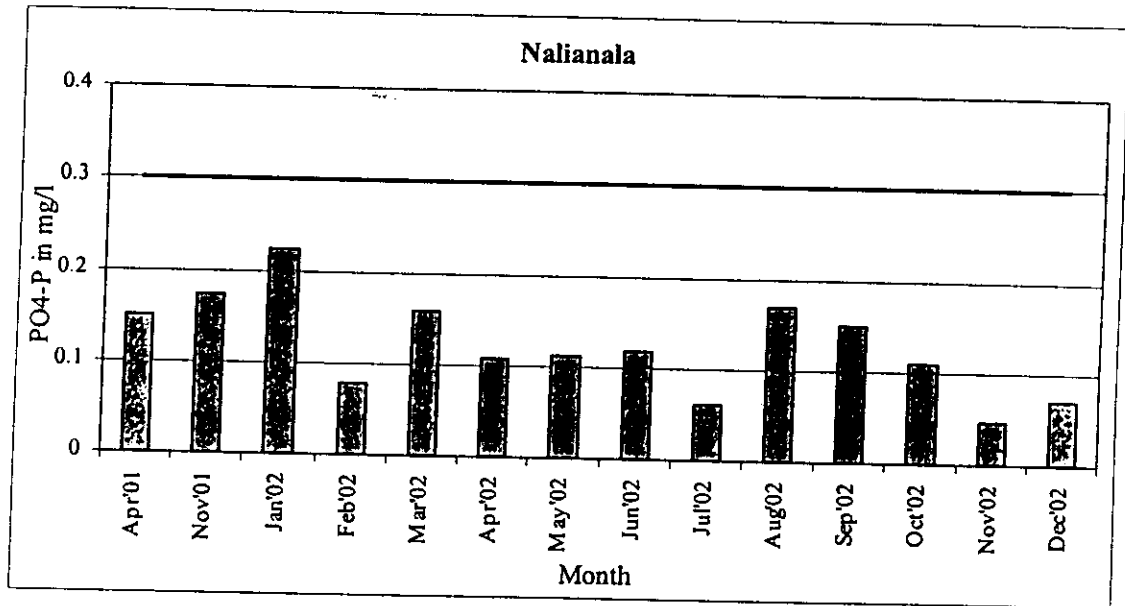




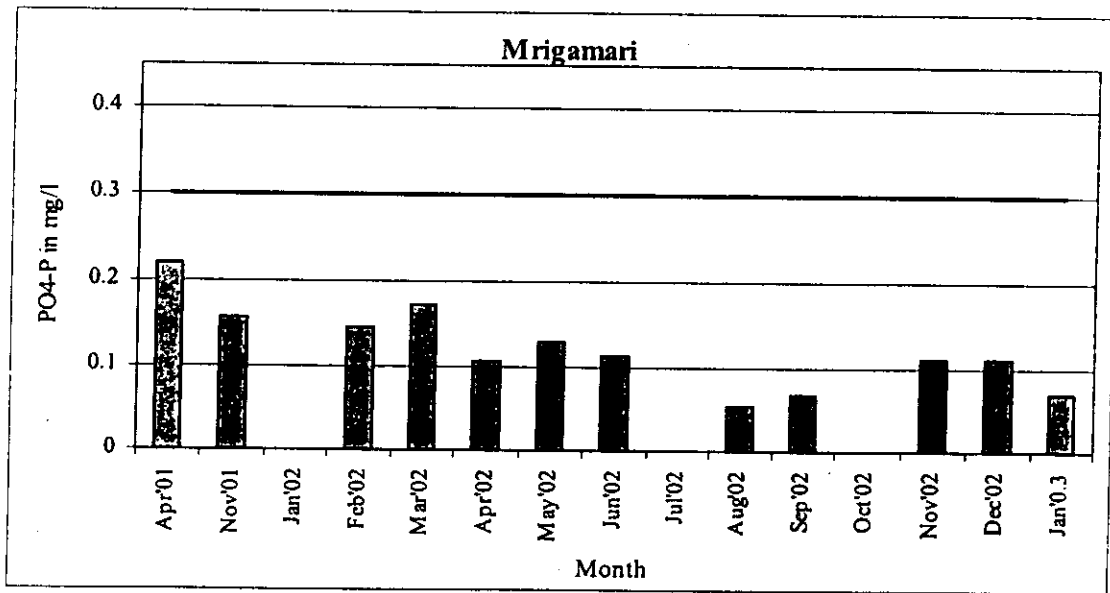
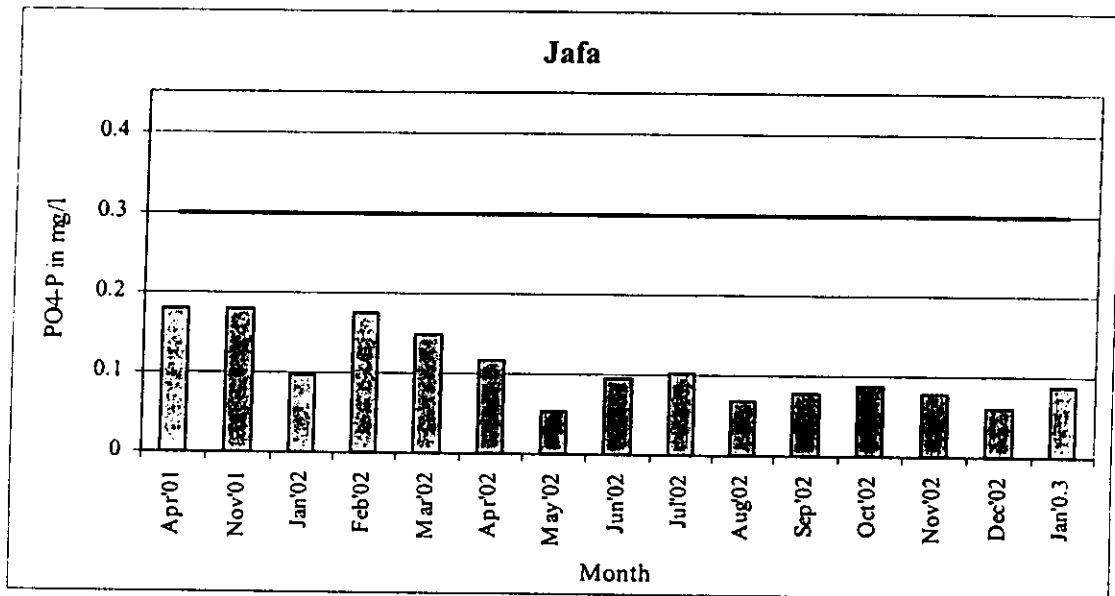
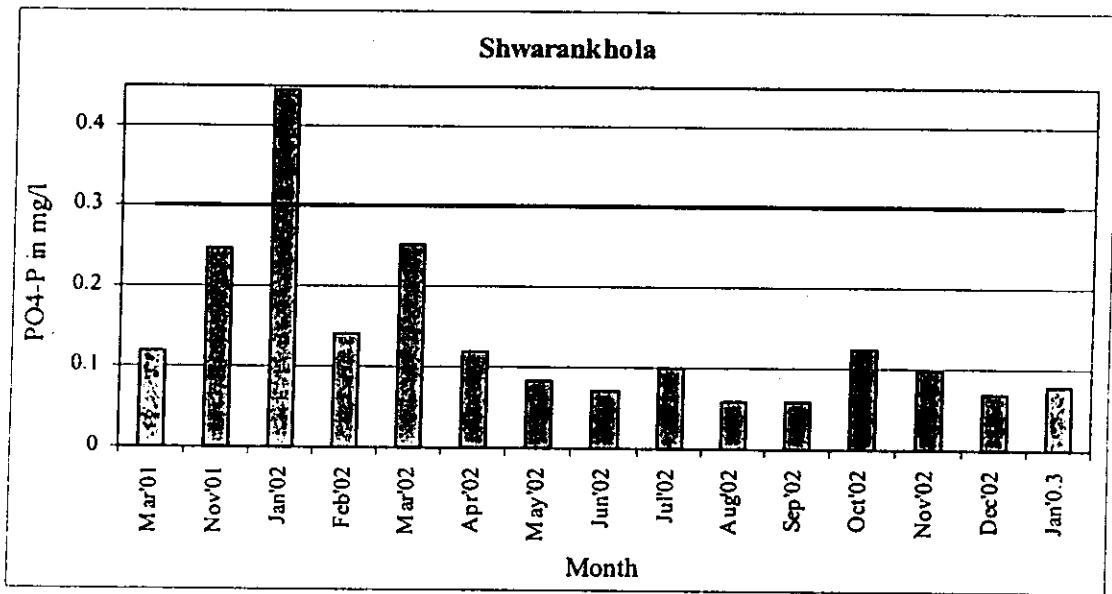
PO<sub>4</sub>-P observed at different stations



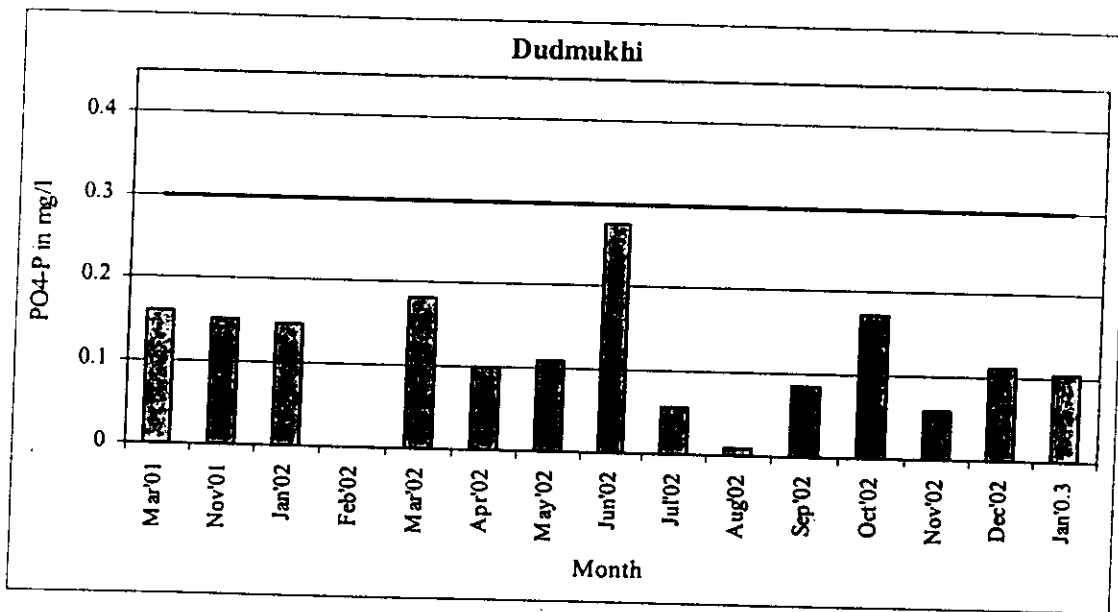
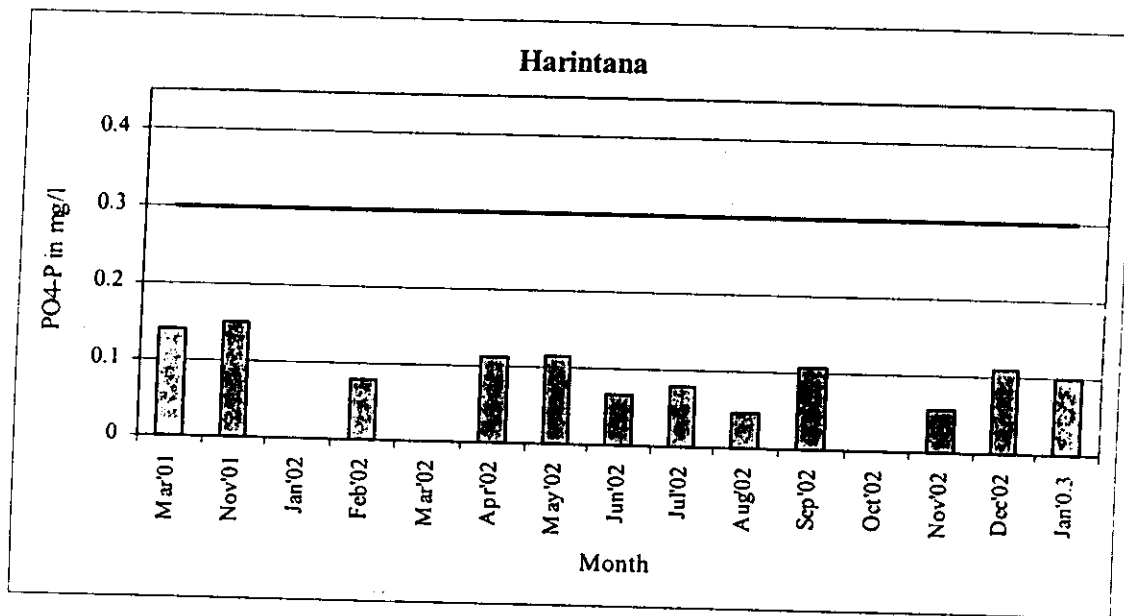
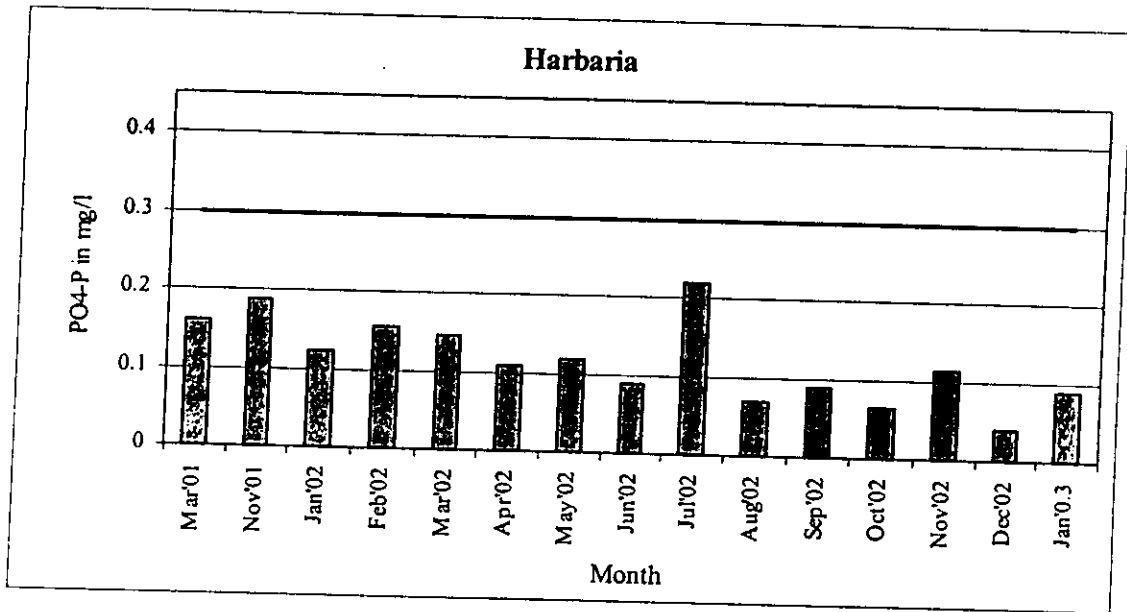
PO<sub>4</sub>-P observed at different stations



**PO<sub>4</sub>-P observed at different stations**

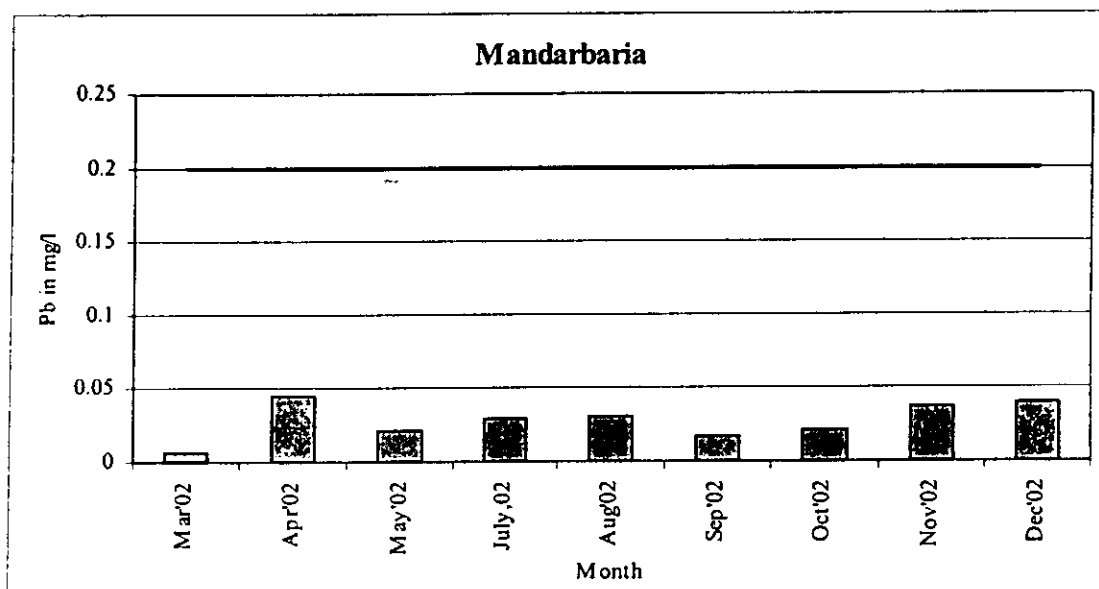


PO<sub>4</sub>-P observed at different stations



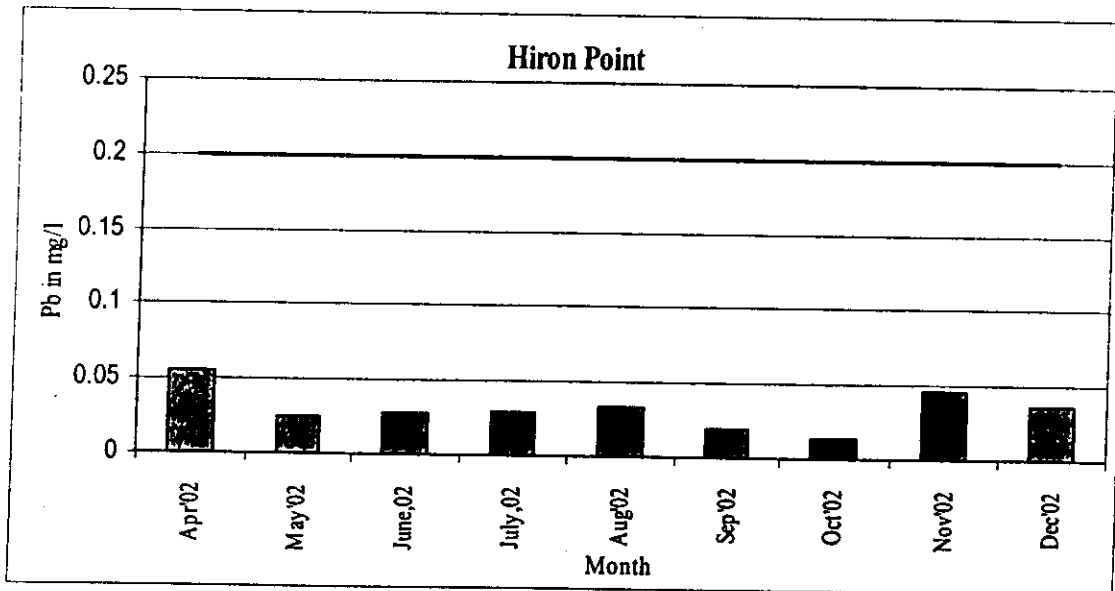
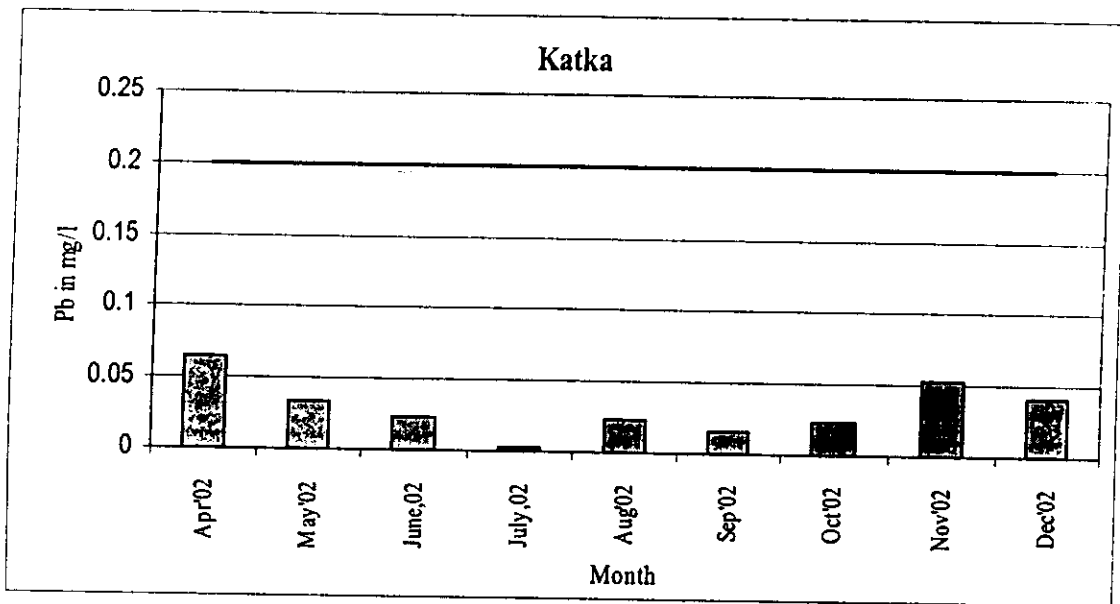
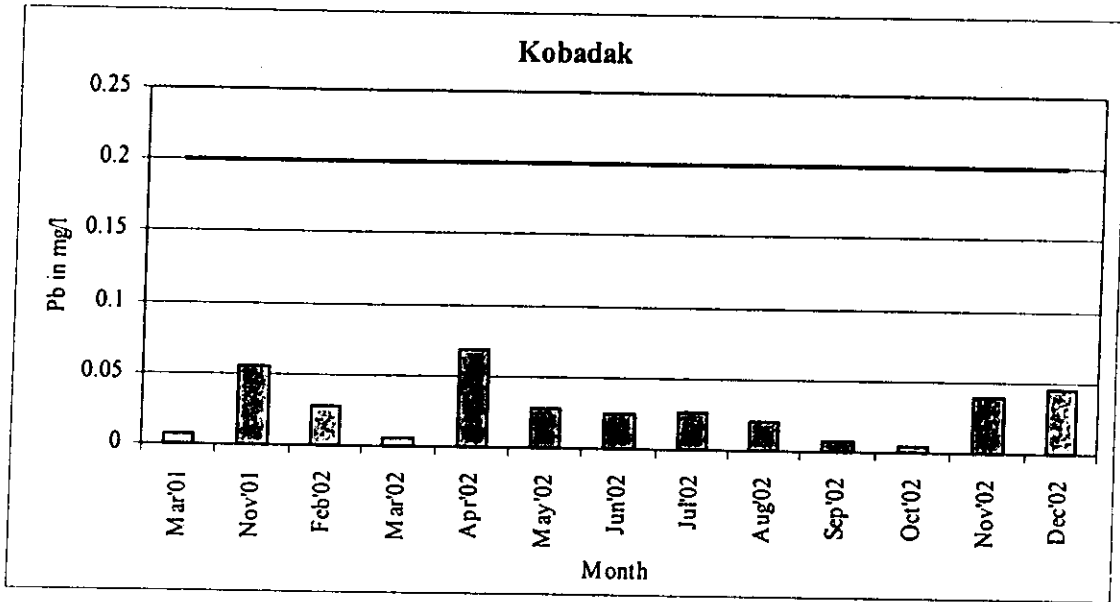
Allowable Limit ———

### Lead observed at different stations



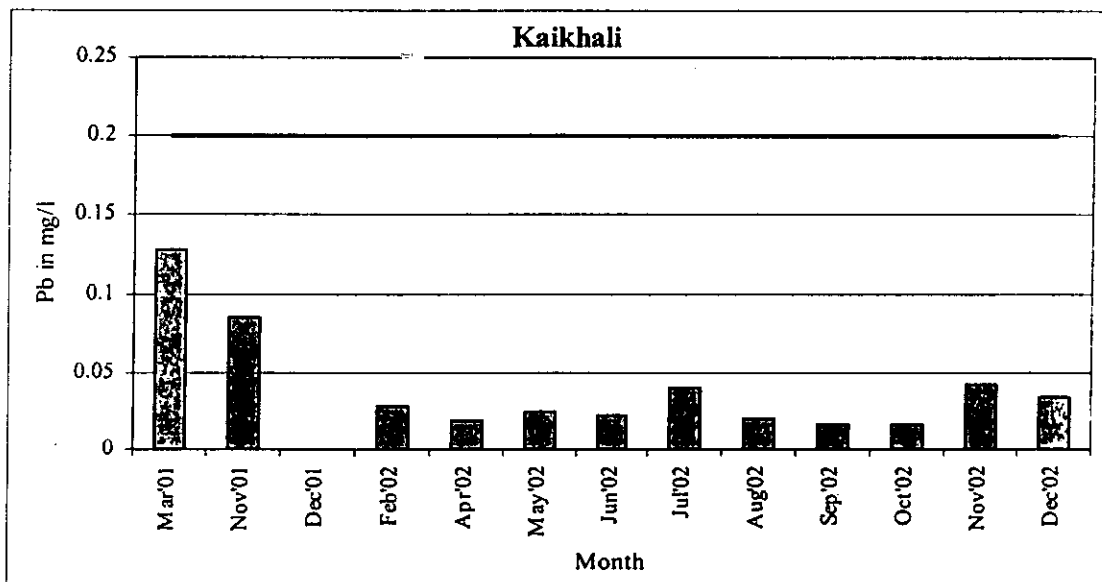
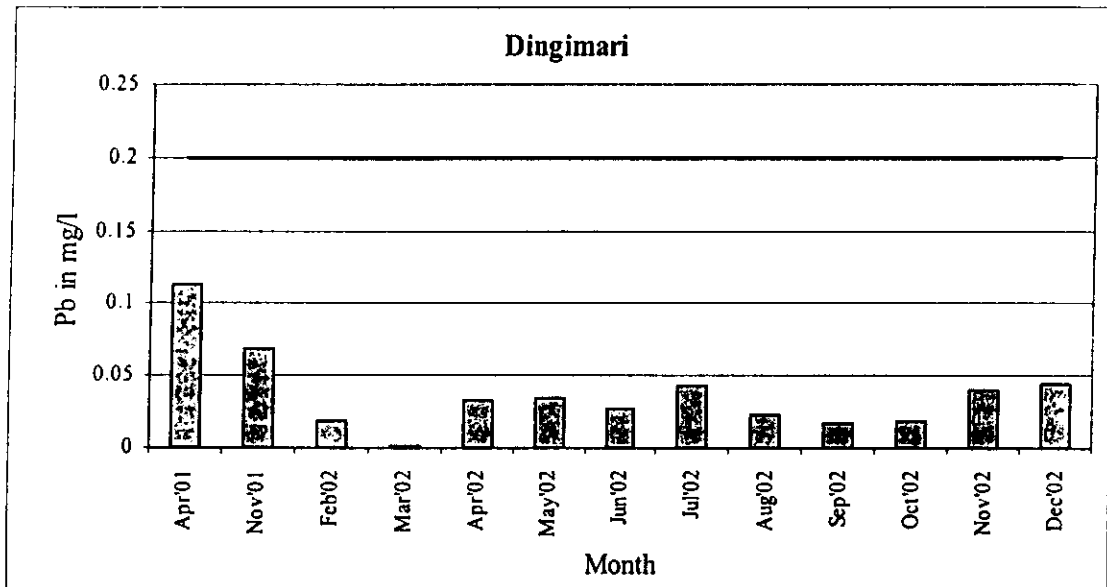
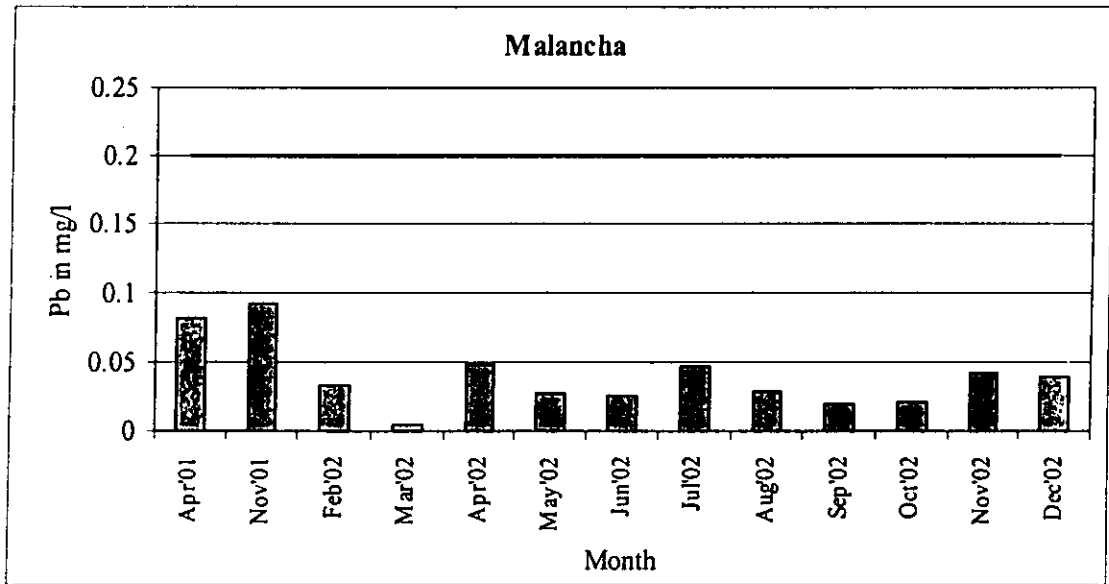
Allowable Limit ———

### Lead observed at different stations



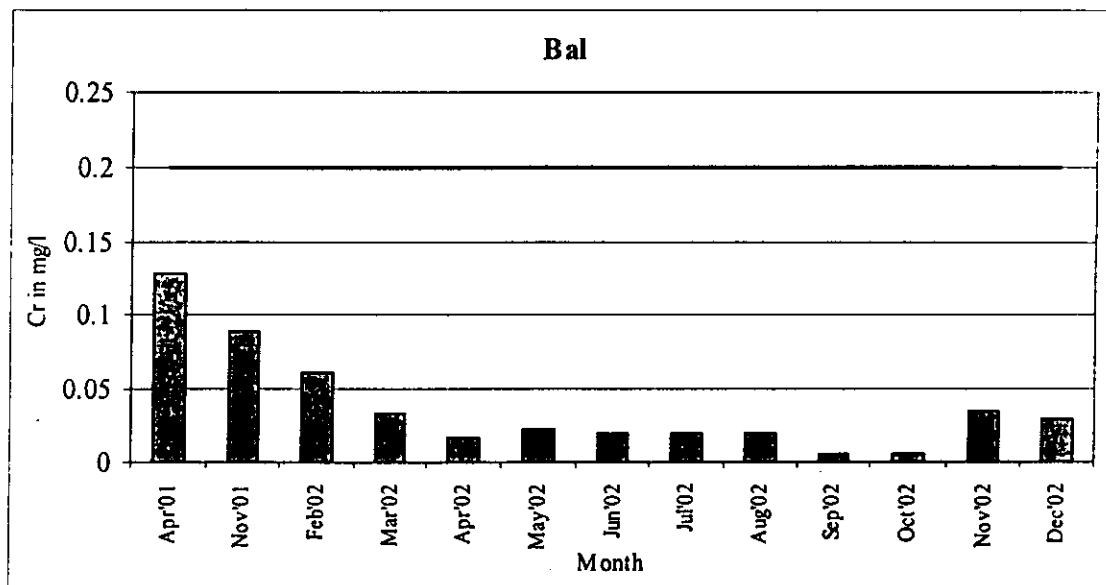
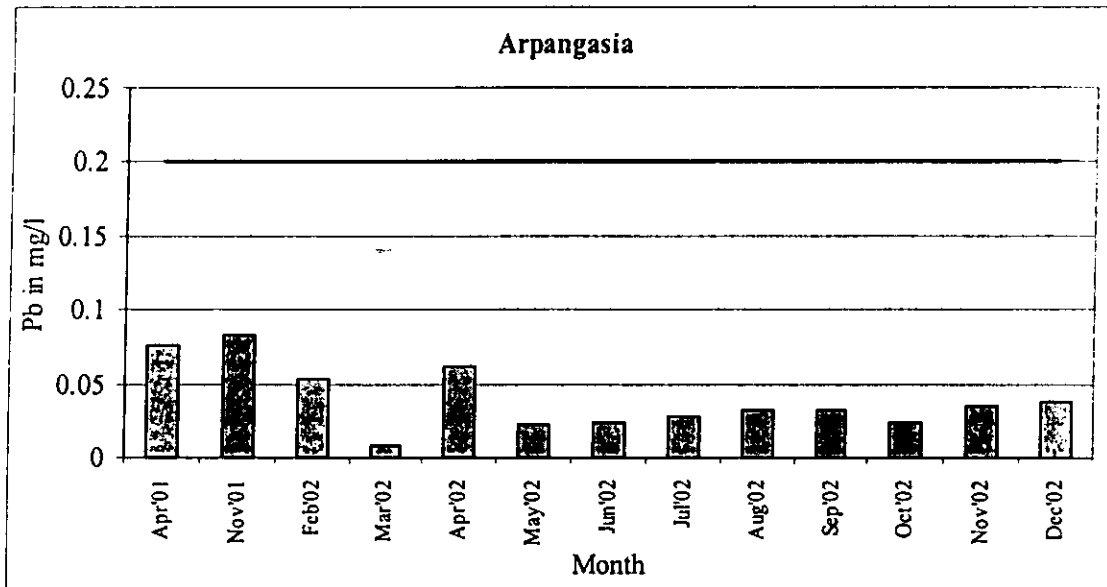
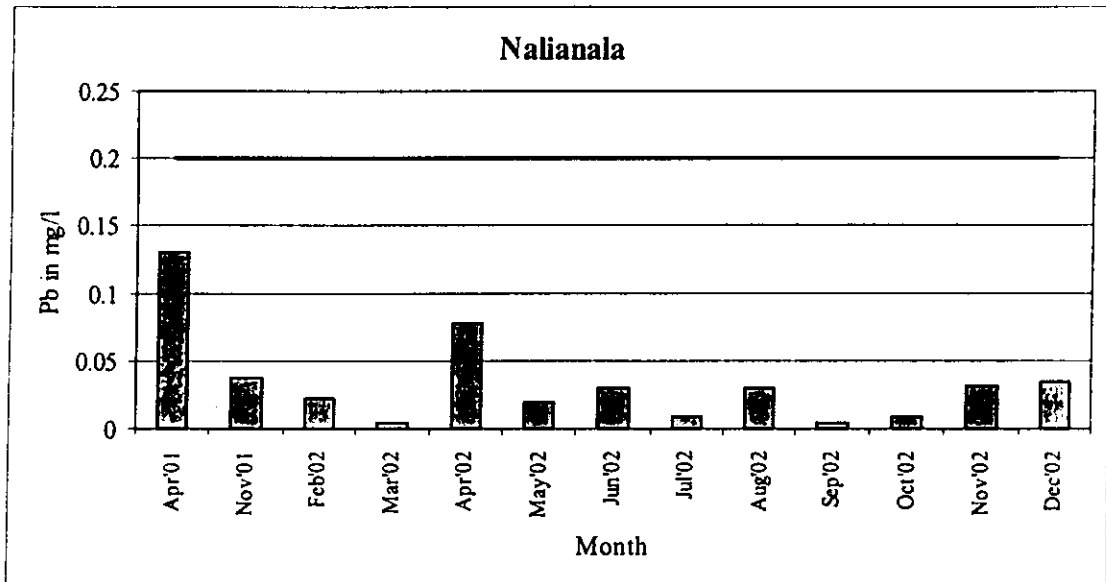
Allowable Limit ———

**Lead observed at different stations**



Allowable Limit ———

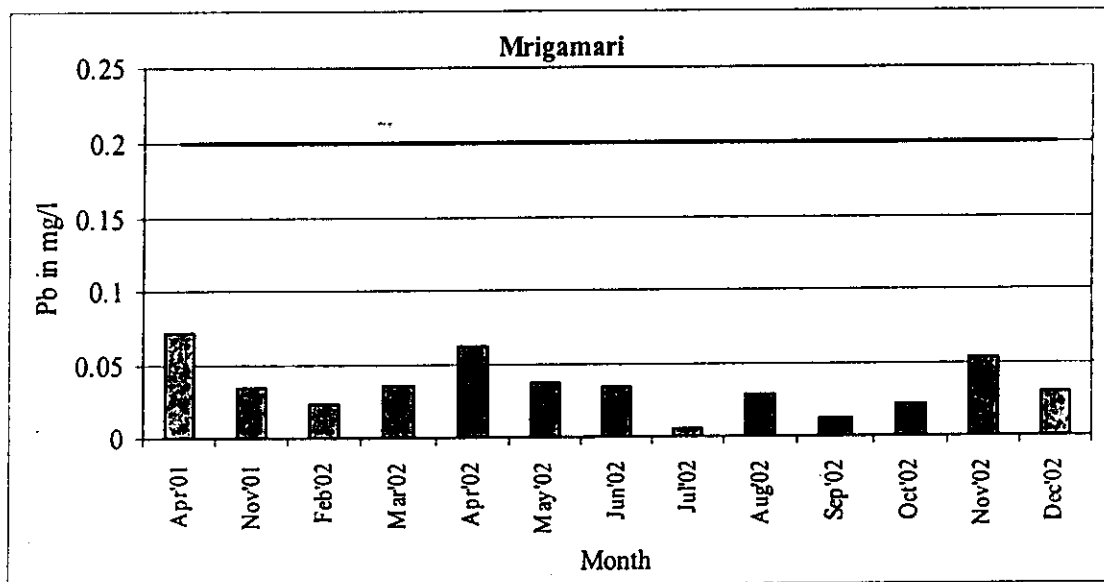
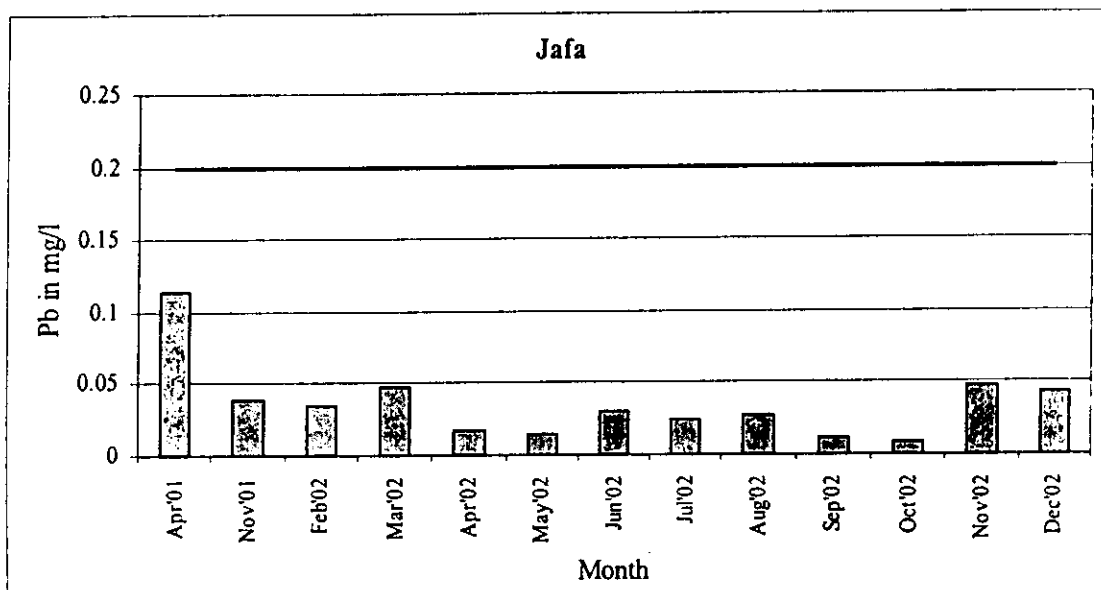
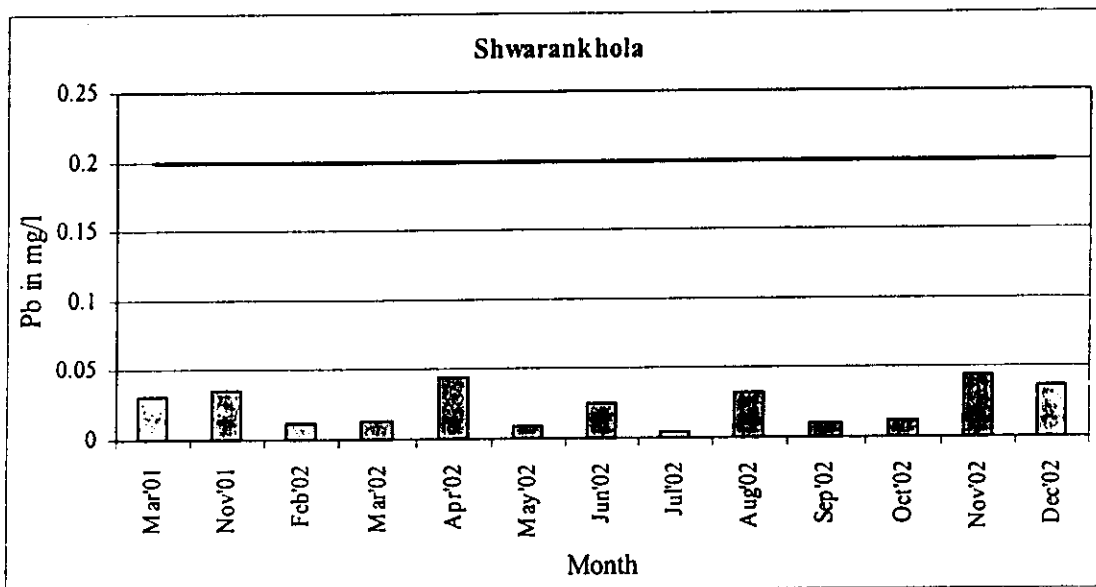
Lead observed at different stations



Allowable Limit ———

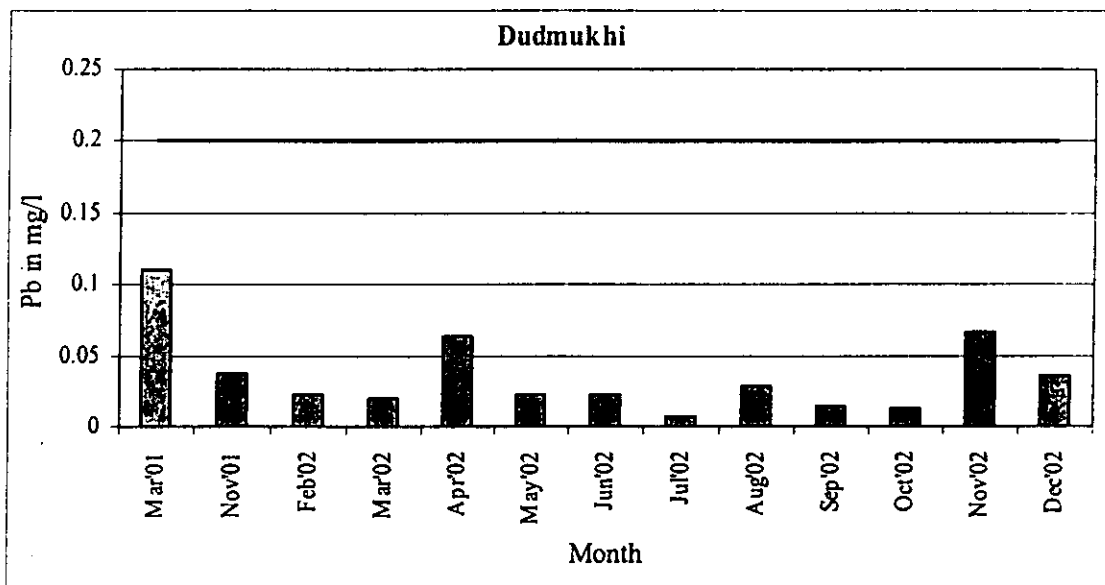
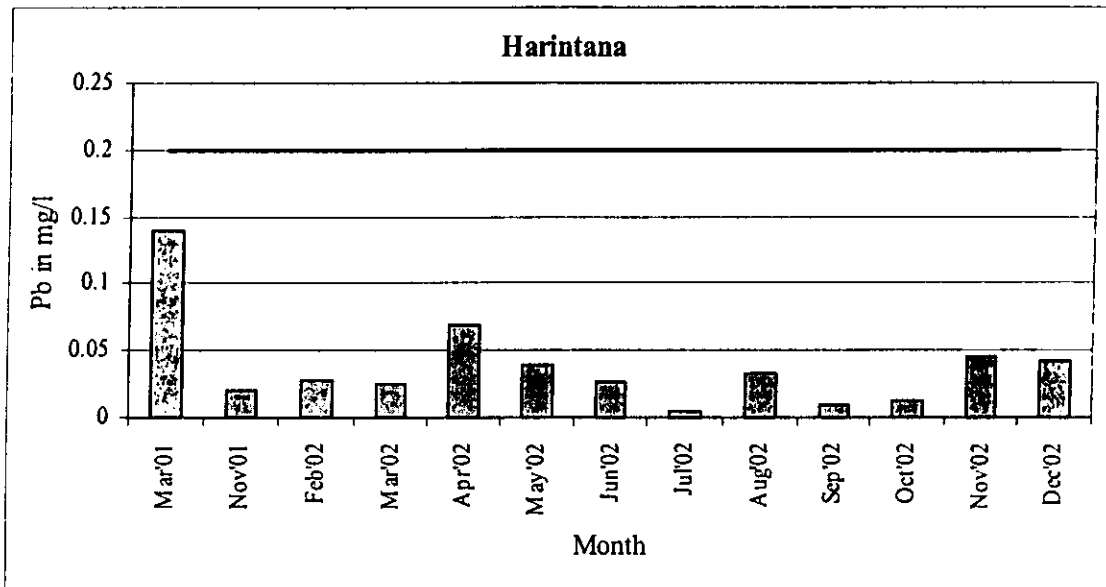
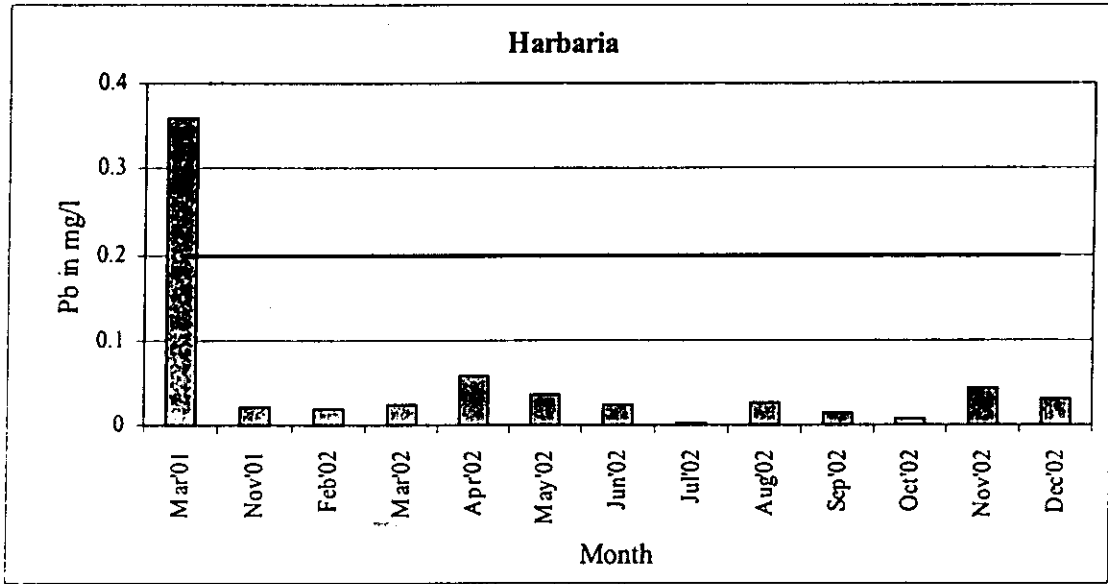


### Lead observed at different stations



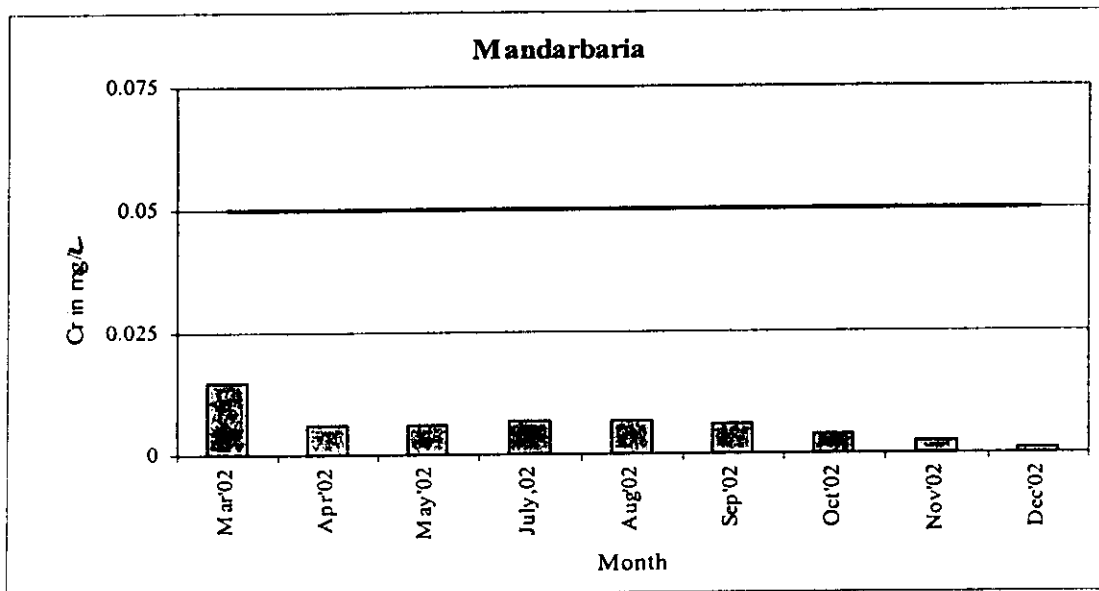
Allowable Limit ———

Lead observed at different stations



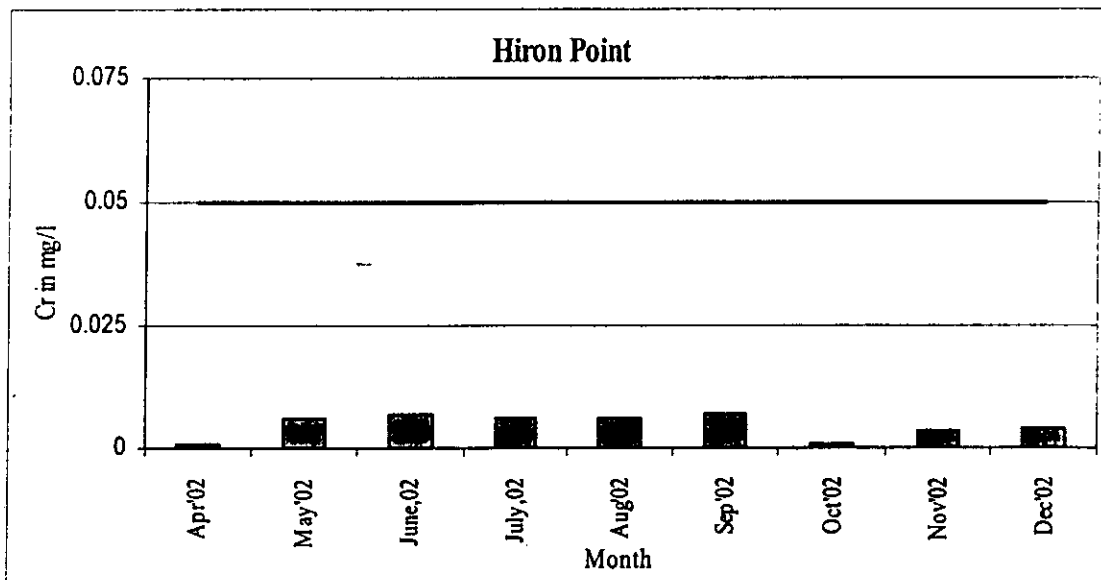
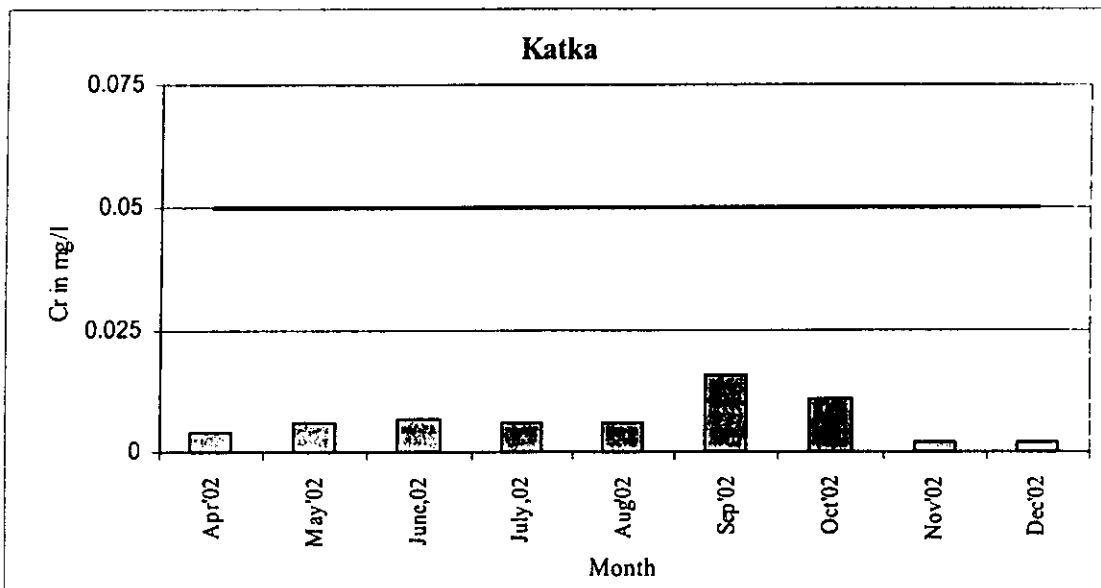
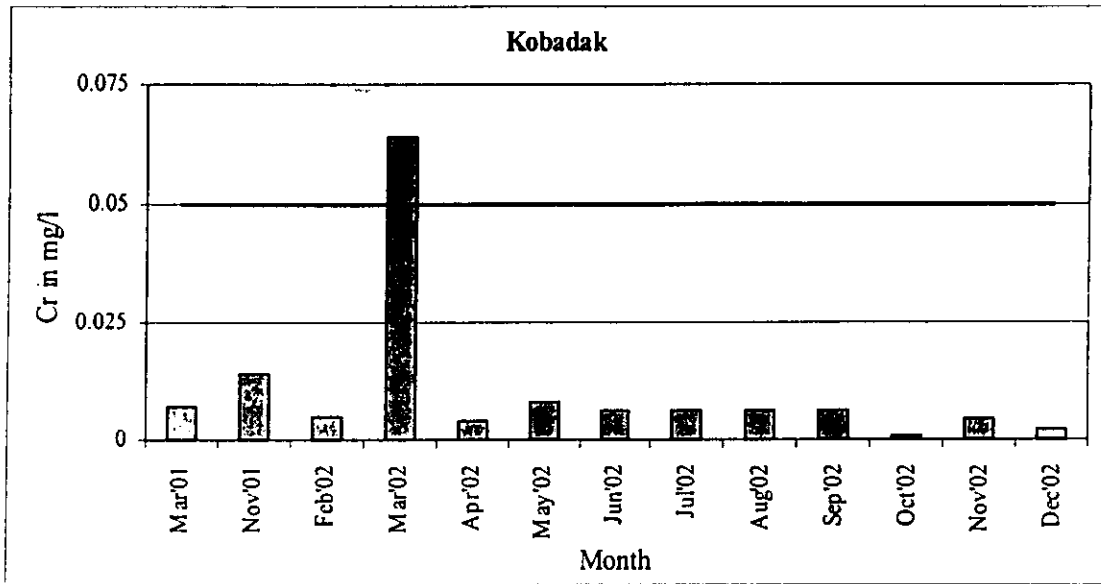
Allowable Limit ———

### Chromium observed at different stations

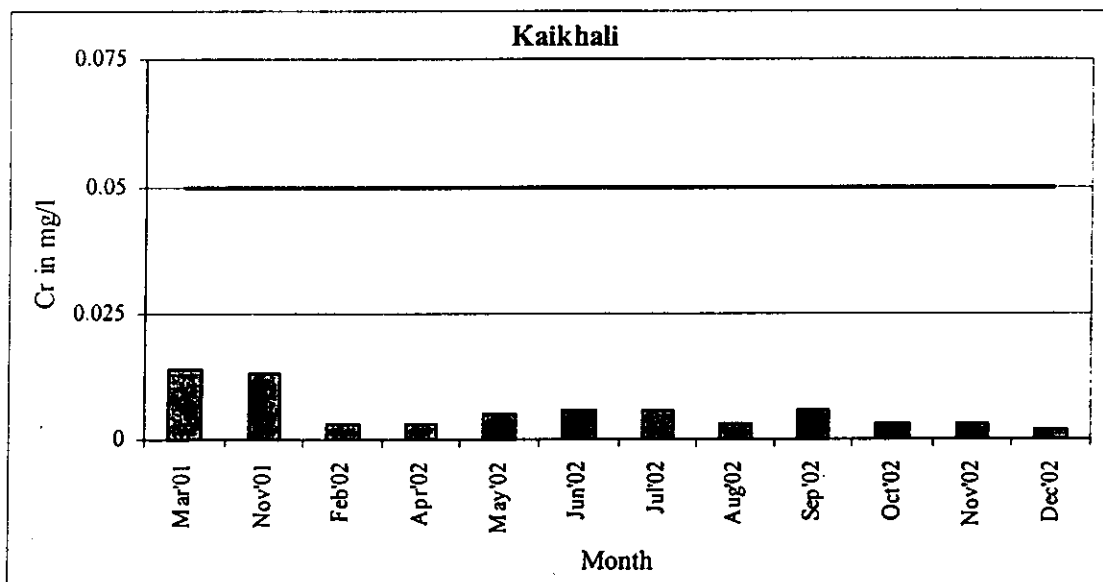
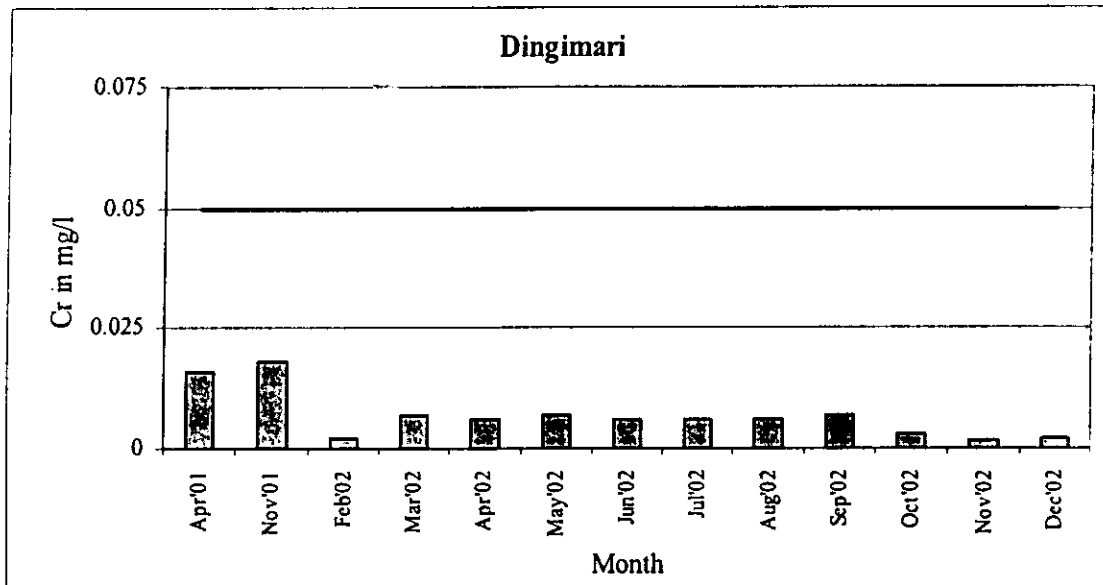
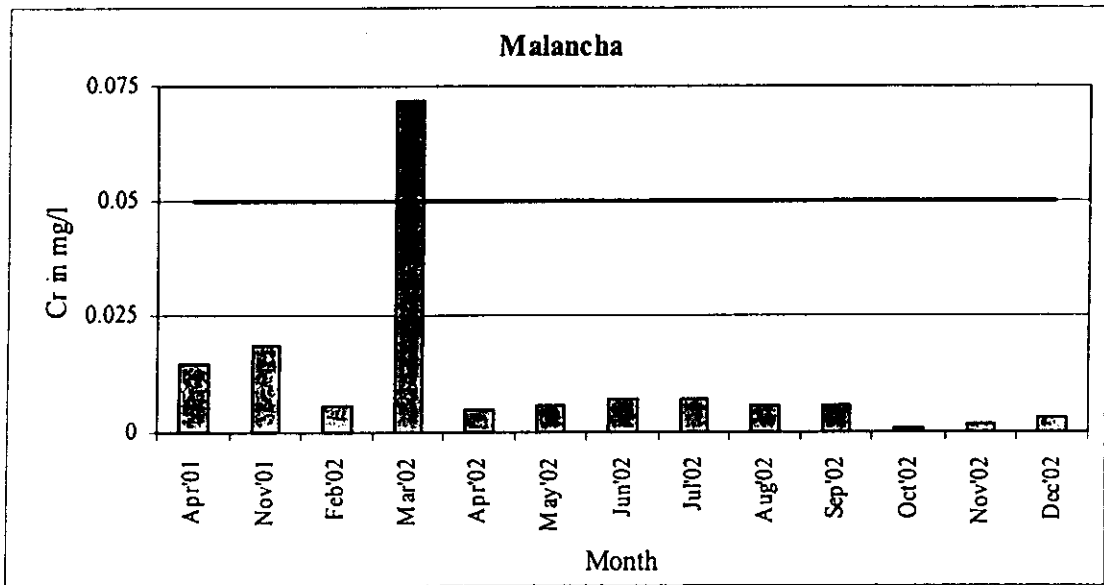


Allowable Limit —————

**Chromium observed at different stations**

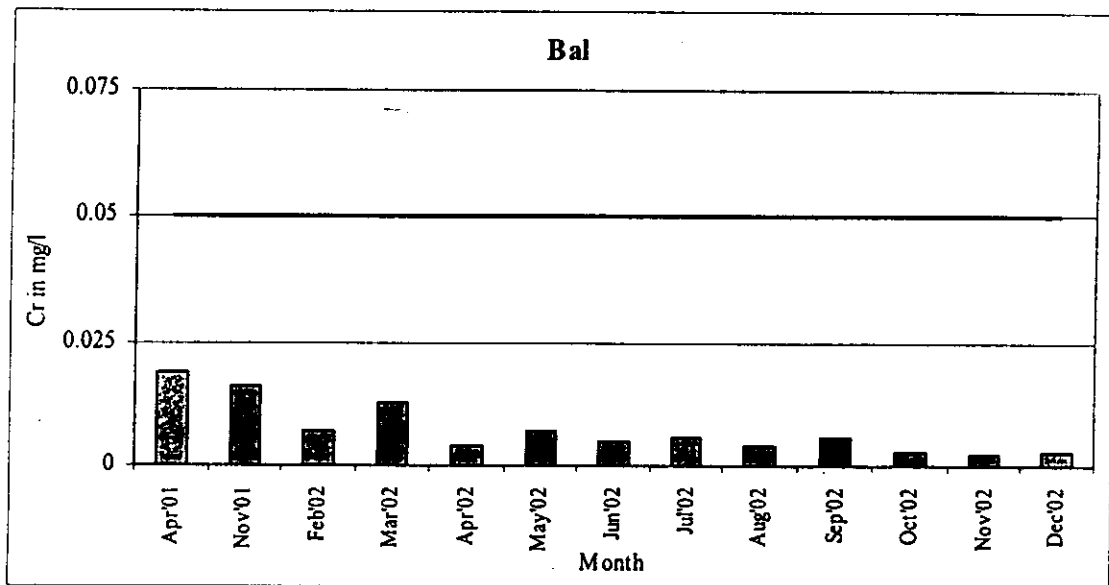
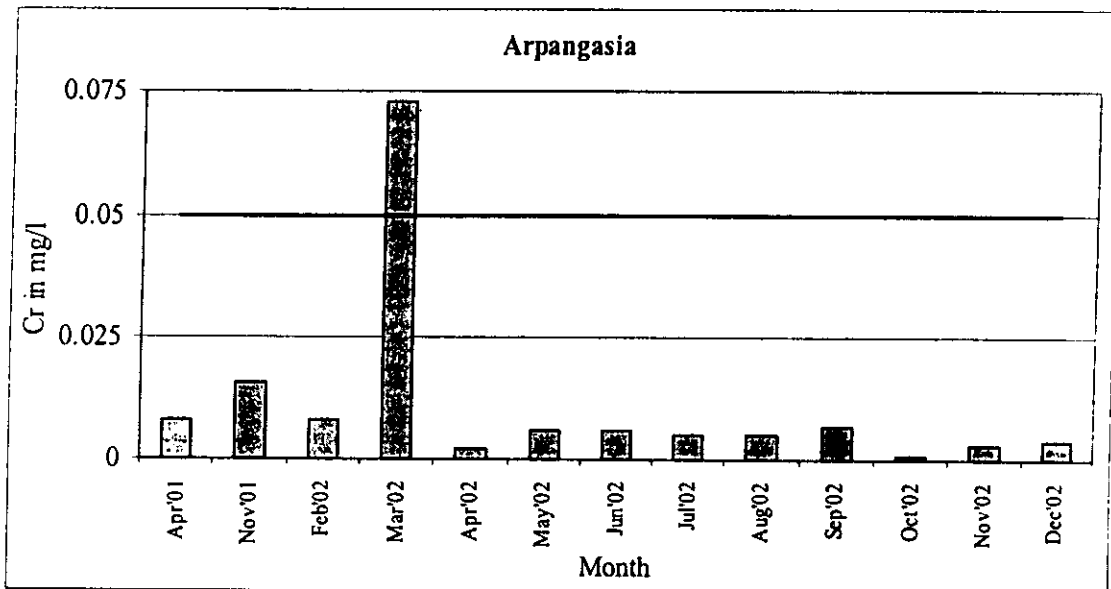
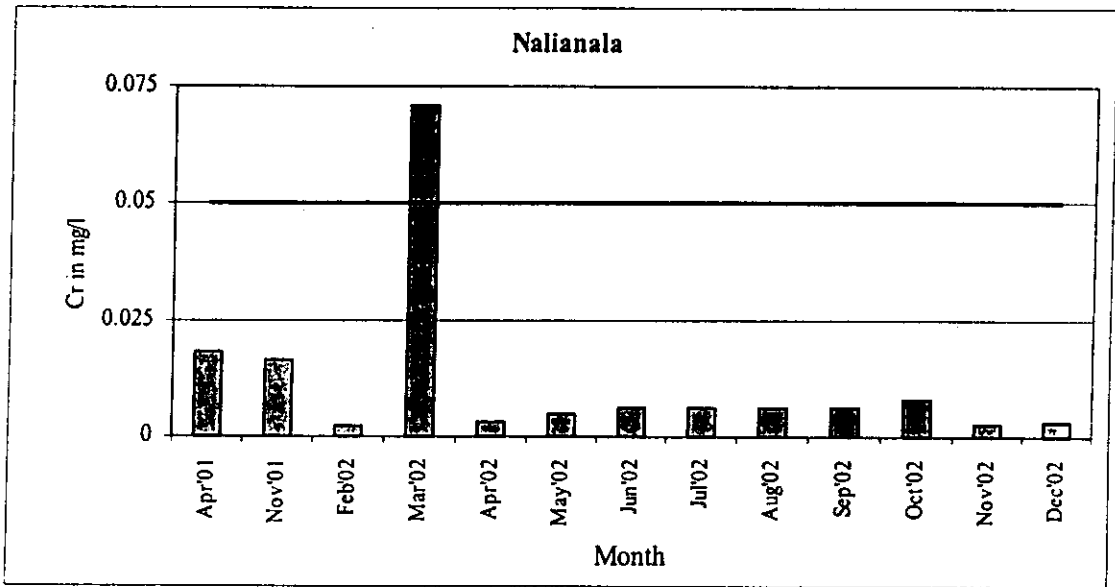


### Chromium observed at different stations



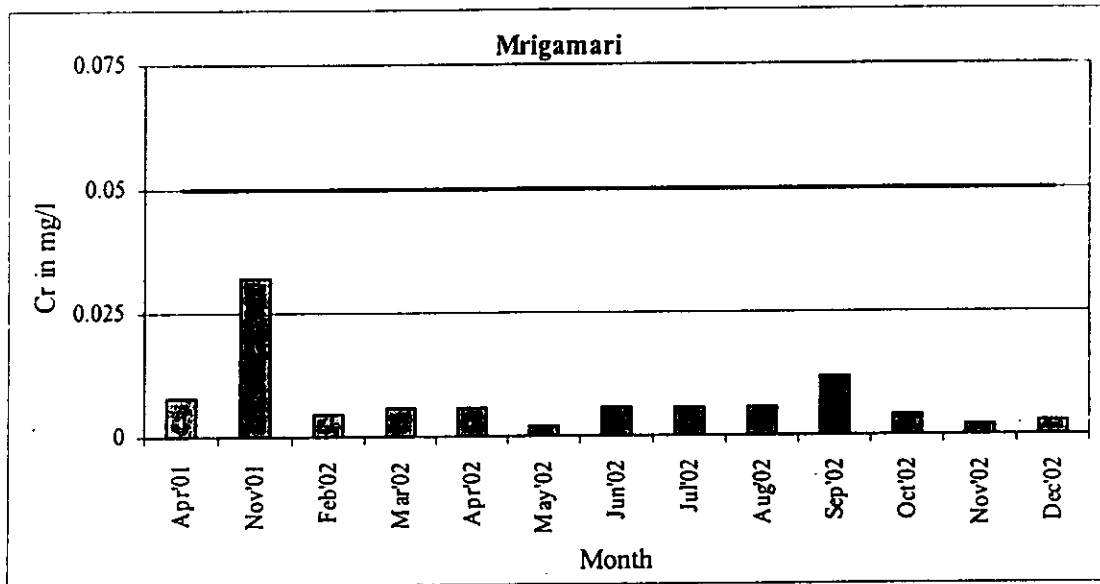
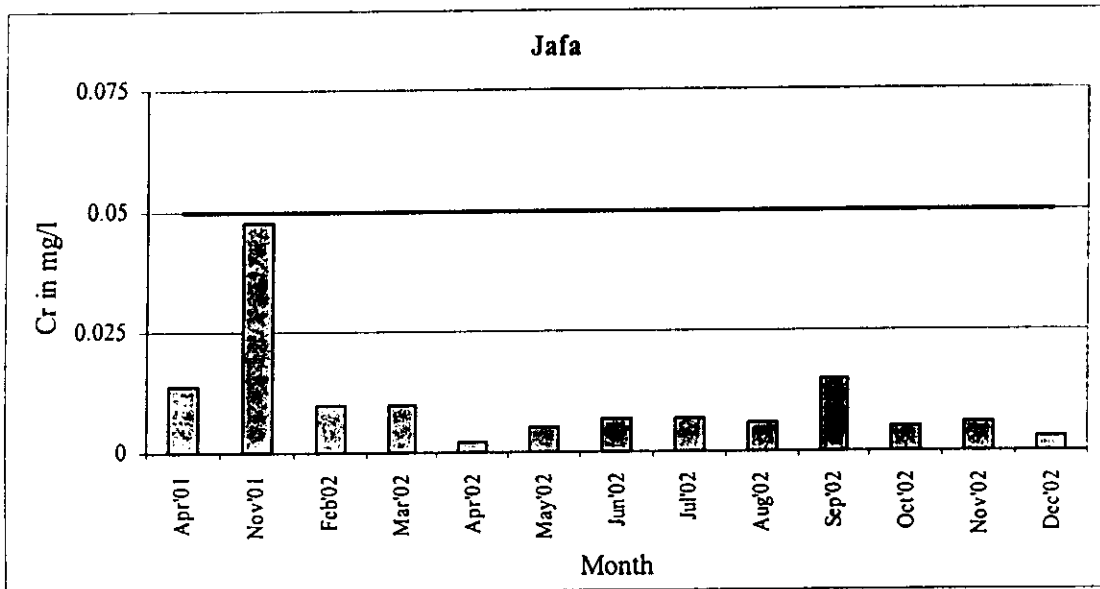
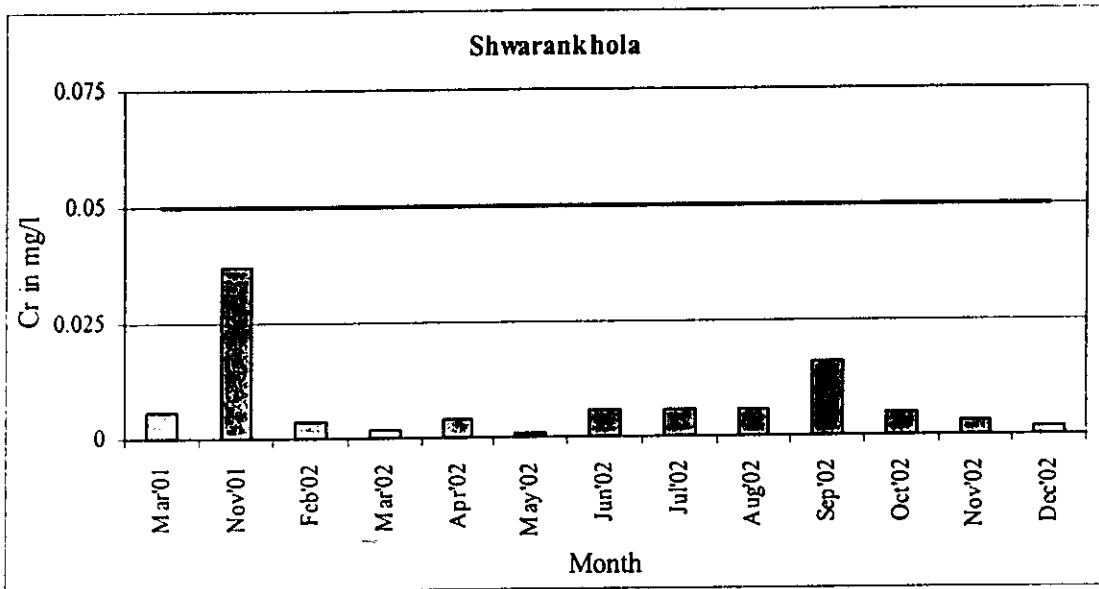
Allowable Limit —————

**Chromium observed at different stations**



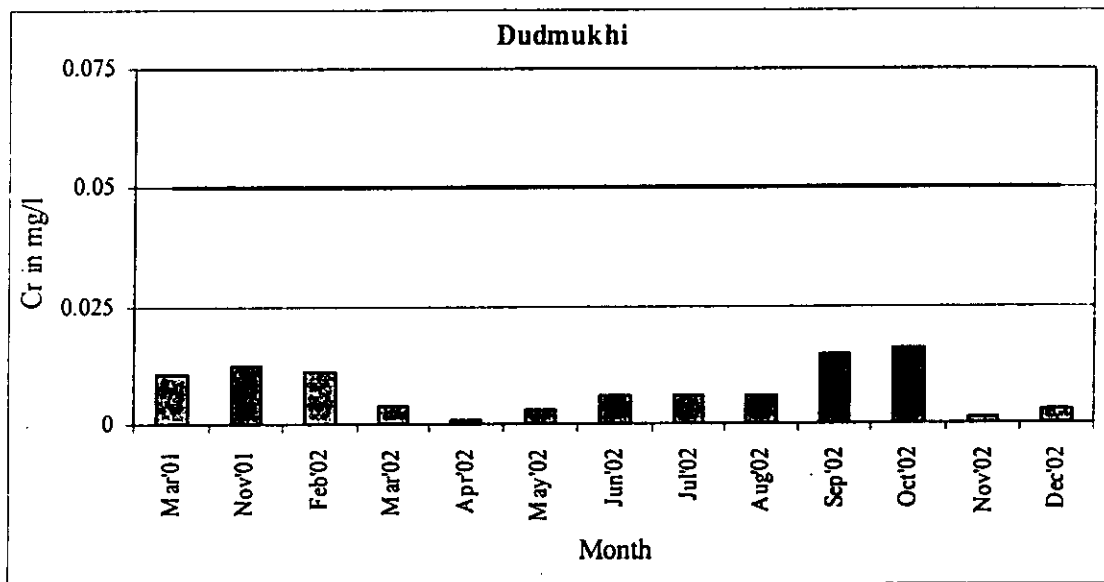
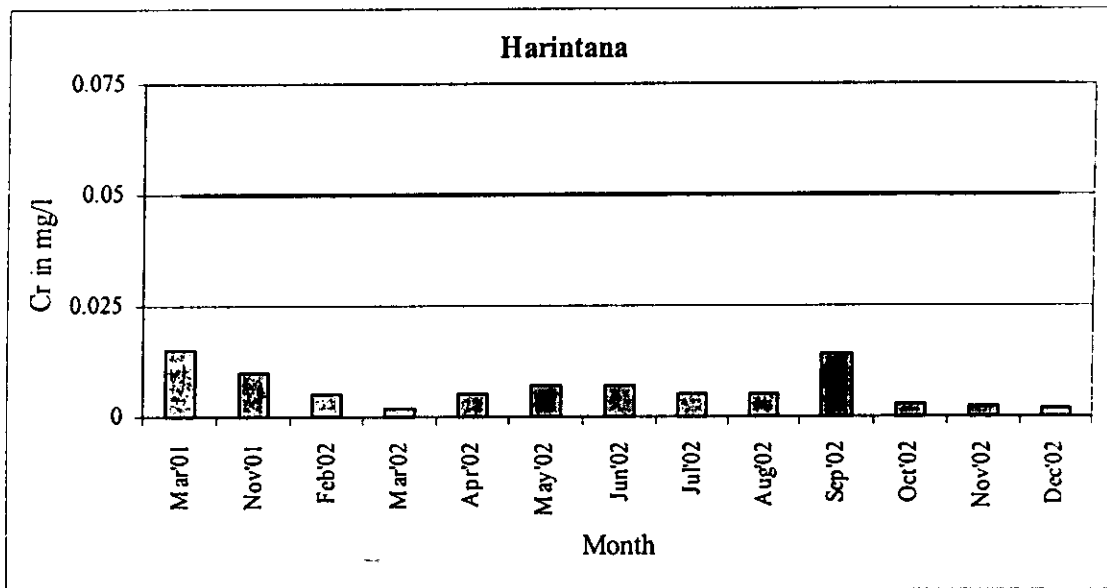
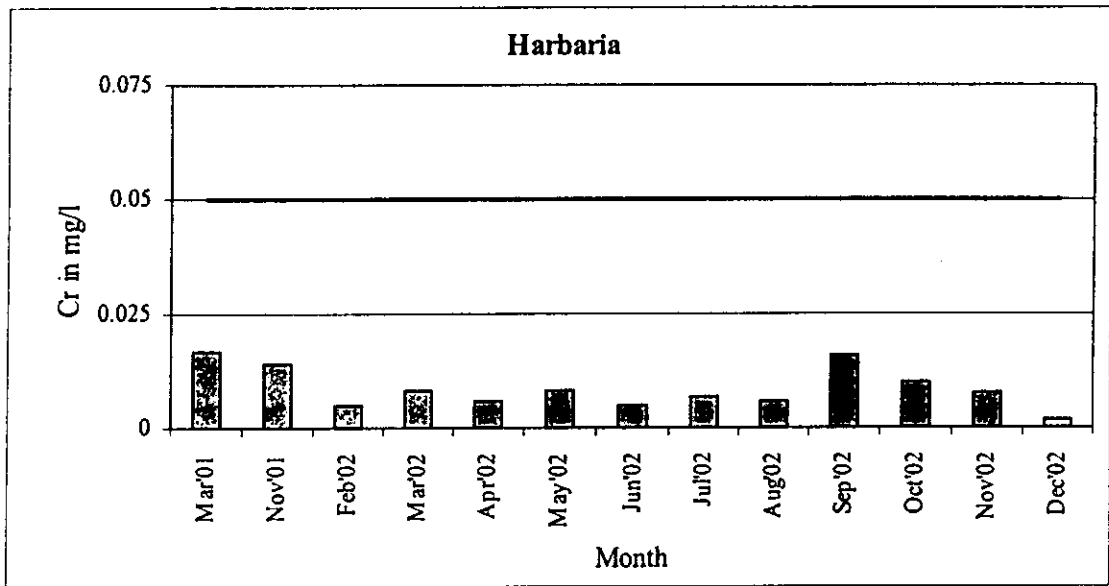
Allowable Limit ———

### Chromium observed at different stations



Allowable Limit

### Chromium observed at different stations



Allowable Limit —————



## Tables



BOD observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 8.80   |        | 2.00   | 6.50   | 8.00   | 7.00   | 21.00  | 14.00  | 22.50  | 4.20   | 7.20   | 6.00   | 3.10   | 2.60   | 7.00   | 13.00  |
| Harintana     | 7.60   |        | 3.60   | 3.80   | 7.60   | 5.40   | 24.50  | 7.80   | 4.40   | 4.10   | 4.70   | 10.00  | 5.00   | 3.20   | 7.40   | 8.00   |
| Dudmukhi      | 5.20   |        | 2.80   | 7.20   | 8.00   | 8.80   | 23.50  | 8.40   | 3.60   | 3.70   | 4.50   | 8.60   | 2.00   | 3.40   | 5.00   | 9.00   |
| Shwarankhola  | 4.00   |        | 6.20   | 2.60   | 6.00   | 4.20   | 12.00  | 4.80   | 5.40   | 3.20   | 6.20   | 7.20   | 2.30   | 2.10   | 3.40   | 10.00  |
| Jafa          |        | 23.00  | 4.50   | 11.50  | 9.60   | 9.60   | 35.00  | 11.60  | 9.80   | 9.80   | 7.80   | 9.60   | 6.00   | 4.20   | 9.80   | 12.00  |
| Mrigamari     |        | 36.00  | 6.80   | 3.10   | 7.60   | 11.60  | 21.50  | 12.80  | 8.60   | 4.80   | 7.20   | 6.40   | 5.20   | 6.30   | 5.80   | 20.00  |
| Nalianala     |        | 22.00  | 6.60   | 6.40   | 13.60  | 11.60  | 24.50  | 17.60  | 11.60  | 8.90   | 4.20   | 19.00  | 13.20  | 6.50   | 8.80   |        |
| Arpangasia    |        | 18.00  | 6.00   | 10.00  | 9.60   | 9.60   | 26.50  | 18.00  | 16.40  | 6.60   | 9.80   | 21.80  | 13.20  | 14.20  | 17.20  |        |
| Bal           |        | 18.00  | 7.80   | 10.40  | 11.20  | 9.80   | 20.50  | 13.20  | 12.80  | 10.50  | 11.00  | 18.60  | 14.00  | 8.30   | 12.00  |        |
| Malancha      |        | 16.00  | 9.30   | 7.60   | 10.40  | 10.60  | 24.00  | 24.80  | 10.00  | 11.30  | 12.60  | 22.60  | 14.40  | 9.30   | 11.80  |        |
| Dingimari     |        | 19.00  | 7.20   | 6.00   | 120.00 | 8.80   | 17.50  | 19.60  | 13.20  | 12.40  | 9.60   | 25.40  | 12.40  | 10.50  | 10.80  |        |
| Kaikhali      | 12.40  |        | 8.10   | 4.40   | 14.00  |        | 18.00  | 16.80  | 12.00  | 14.10  | 8.60   | 19.00  | 8.80   | 7.50   | 12.80  |        |
| Kobadak       | 11.20  |        | 6.00   | 7.20   | 9.20   | 8.80   | 21.50  | 10.80  | 13.60  | 11.50  | 8.00   | 21.80  | 13.60  | 11.00  | 9.60   |        |
| Katka         |        |        |        |        |        |        | 28.00  | 11.00  | 9.20   | 8.00   | 9.60   | 8.00   | 3.10   | 132.00 | 11.60  | 24.00  |
| Hiron Point   |        |        |        |        |        |        | 17.00  | 12.00  | 10.40  | 8.90   | 5.40   | 18.20  | 9.60   | 13.00  | 10.40  |        |
| Mandarbaria   |        |        |        |        |        | 8.60   | 17.50  | 16.80  |        | 7.60   | 7.60   | 17.00  | 19.20  | 32.00  | 12.80  |        |
| Maximum       | 12.40  | 36.00  | 9.30   | 11.50  | 120.00 | 11.60  | 35.00  | 24.80  | 22.50  | 14.10  | 12.60  | 25.40  | 19.20  | 132.00 | 17.20  | 24.00  |
| Minimum       | 4.00   | 16.00  | 2.00   | 2.60   | 6.00   | 4.20   | 12.00  | 4.80   | 3.60   | 3.20   | 4.20   | 6.00   | 2.00   | 2.10   | 3.40   | 8.00   |
| Average       | 8.20   | 21.71  | 5.92   | 6.67   | 18.06  | 8.80   | 22.03  | 13.75  | 10.90  | 8.10   | 7.75   | 14.95  | 9.07   | 16.63  | 9.76   | 13.71  |

COD observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 14.00  |        | 7.40   | 13.30  | 20.66  | 15.97  | 42.40  | 28.86  | 39.50  | 8.30   | 16.20  | 24.50  | 22.76  | 15.00  | 20.00  | 34.00  |
| Harintana     | 12.00  |        | 8.70   | 7.30   | 17.28  | 11.32  | 53.40  | 15.14  | 10.70  | 8.50   | 9.00   | 73.80  | 26.83  | 27.00  | 51.00  | 42.00  |
| Dudmukhi      | 10.00  |        | 7.60   | 14.00  | 18.78  | 16.31  | 49.10  | 17.95  | 9.07   | 7.50   | 8.50   | 57.10  | 12.20  | 25.00  | 71.00  | 28.00  |
| Shwarankhola  | 6.80   |        | 12.70  | 5.30   | 15.02  | 10.65  | 25.30  | 9.50   | 12.00  | 6.50   | 11.40  | 21.76  | 10.57  | 17.00  | 13.00  | 27.00  |
| Jafa          |        | 54.00  | 9.20   | 21.90  | 22.16  | 19.97  | 71.00  | 21.53  | 19.40  | 19.60  | 15.70  | 84.30  | 35.77  | 95.00  | 115.00 | 115.00 |
| Mrigamari     |        | 58.00  | 15.50  | 6.70   | 17.65  | 24.63  | 40.30  | 26.75  | 18.10  | 9.10   | 14.60  | 49.20  | 17.07  | 47.00  | 35.00  | 36.00  |
| Nalianala     |        | 47.60  | 16.60  | 15.40  | 29.30  | 30.59  | 46.20  | 38.08  | 23.30  | 17.90  | 8.60   | 34.96  | 77.24  | 85.00  | 73.00  |        |
| Arpangasia    |        | 44.00  | 12.20  | 27.30  | 21.03  | 21.16  | 49.90  | 36.72  | 27.90  | 13.80  | 19.70  | 98.22  | 44.72  | 192.00 | 28.00  |        |
| Bal           |        | 43.60  | 13.40  | 26.10  | 24.04  | 20.14  | 43.20  | 27.54  | 23.30  | 21.00  | 19.30  | 62.60  | 34.15  | 175.00 | 104.00 |        |
| Malancha      |        | 38.00  | 21.00  | 23.40  | 22.53  | 24.98  | 47.30  | 49.30  | 22.40  | 22.70  | 24.20  | 69.36  | 67.48  | 147.00 | 88.00  |        |
| Dingimari     |        | 48.00  | 18.10  | 14.60  | 255.50 | 17.08  | 33.50  | 40.12  | 22.70  | 23.20  | 20.40  | 75.76  | 49.59  | 153.00 | 100.00 |        |
| Kaikhali      | 30.00  |        | 17.60  | 10.80  | 32.30  |        | 36.50  | 34.34  | 23.70  | 28.20  | 18.60  | 43.09  | 30.08  | 129.00 | 56.00  |        |
| Kobadak       | 24.00  |        | 15.30  | 16.10  | 19.90  | 22.18  | 43.90  | 22.78  | 23.00  | 23.80  | 17.00  | 40.65  | 30.89  | 173.00 | 82.00  |        |
| Katka         |        |        |        |        |        |        | 57.30  | 21.82  | 18.50  | 15.40  | 18.60  | 12.00  | 24.39  | 311.00 | 145.00 | 77.00  |
| Hiron Point   |        |        |        |        |        |        | 34.20  | 27.88  | 21.70  | 18.20  | 11.60  | 30.89  | 24.39  | 154.00 | 70.00  |        |
| Mandarbaria   |        |        |        |        |        | 19.12  | 35.80  | 35.02  |        | 14.00  | 15.10  | 60.16  | 33.33  | 113.00 | 192.00 |        |
| Maximum       | 30.00  | 58.00  | 21.00  | 27.30  | 255.50 | 30.59  | 71.00  | 49.30  | 39.50  | 28.20  | 24.20  | 98.22  | 77.24  | 311.00 | 192.00 | 115.00 |
| Minimum       | 6.80   | 38.00  | 7.40   | 5.30   | 15.02  | 10.65  | 25.30  | 9.50   | 9.07   | 6.50   | 8.50   | 12.00  | 10.57  | 15.00  | 13.00  | 27.00  |
| Average       | 16.13  | 47.60  | 13.48  | 15.55  | 39.70  | 19.55  | 44.33  | 28.40  | 21.02  | 16.11  | 15.53  | 52.40  | 33.84  | 116.13 | 77.69  | 51.29  |

## Observed salinity and DO profile

Month: March-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 4/3/02 19:00   | 2.50          | 5.90     | 82            | 454510     | 525029      |
| 4/3/02 19:30   | 4.00          | 5.90     | 80            | 457485     | 518686      |
| 4/3/02 20:00   | 5.30          | 6.00     | 79            | 451985     | 510646      |
| 4/3/02 20:30   | 7.60          | 5.70     | 81            | 452029     | 510185      |
| 4/3/02 21:00   | 8.10          | 5.50     | 78            | 451703     | 504651      |
| 4/3/02 21:20   | 8.60          | 5.40     | 78            | 451789     | 499300      |
| 4/3/02 21:40   | 8.10          | 5.30     | 78            | 455120     | 495969      |
| 4/3/02 23:20   | 8.40          | 5.20     | 74            | 458154     | 483969      |
| 4/3/02 23:45   | 8.30          | 5.20     | 74            | 459510     | 478228      |
| 4/3/02 0:20    | 8.30          | 5.10     | 74            | 462564     | 471486      |
| 5/3/02 0:20    | 8.30          | 5.10     | 74            | 466410     | 472049      |
| 5/3/02 8:35    | 8.80          | 5.10     | 76            | 468426     | 467820      |
| 5/3/02 9:00    | 8.60          | 5.30     | 79            | 470098     | 462836      |
| 5/3/02 9:30    | 8.40          | 5.40     | 78            | 469369     | 458760      |
| 5/3/02 10:00   | 8.20          | 5.40     | 79            | 469226     | 455716      |
| 5/3/02 10:30   | 8.10          | 5.90     | 84            | 468636     | 453116      |
| 5/3/02 11:00   | 8.10          | 5.60     | 78            | 468585     | 452950      |
| 5/3/02 12:00   | 6.40          | 5.90     | 79            | 473626     | 447462      |
| 5/3/02 12:45   | 6.10          | 5.50     | 78            | 473712     | 447480      |
| 5/3/02 13:45   | 5.40          | 5.50     | 79            | 480579     | 440534      |
| 5/3/02 14:10   | 4.10          | 5.90     | 80            | 479830     | 446659      |
| 5/3/02 14:45   | 4.80          | 6.00     | 83            | 483336     | 446655      |
| 5/3/02 15:35   | 2.20          | 6.30     | 83            | 480649     | 455735      |
| 5/3/02 17:30   | 2.00          | 6.30     | 82            | 483794     | 456487      |
| 6/3/02 7:00    | 5.50          | 5.60     | 76            | 482450     | 437912      |
| 6/3/02 7:50    | 5.90          | 5.70     | 77            | 480051     | 431218      |
| 6/3/02 8:20    | 7.50          | 5.50     | 79            | 483195     | 427119      |
| 6/3/02 8:45    | 8.40          | 5.50     | 80            | 480542     | 425259      |
| 6/3/02 9:20    | 11.70         | 5.30     | 72            | 477803     | 423713      |
| 6/3/02 12:50   | 15.50         | 6.20     | 80            | 475364     | 415766      |
| 6/3/02 15:00   | 20.10         | 5.90     | 81            | 465813     | 419160      |
| 6/3/02 15:50   | 19.40         | 5.80     | 80            | 463071     | 424663      |
| 6/3/02 18:30   | 18.60         | 6.00     | 81            | 458447     | 426723      |
| 7/3/02 10:10   | 21.40         | 5.70     | 82            | 446280     | 411964      |
| 7/3/02 13:15   | 19.90         | 5.60     | 84            | 451232     | 425599      |
| 7/3/02 14:00   | 17.30         | 5.50     | 80            | 451232     | 425599      |
| 7/3/02 14:45   | 14.00         | 5.40     | 78            | 453531     | 434890      |
| 7/3/02 15:30   | 13.50         | 6.00     | 84            | 454923     | 440439      |
| 7/3/02 16:20   | 12.30         | 5.60     | 80            | 458444     | 445373      |
| 7/3/02 17:55   | 12.20         | 5.60     | 80            | 455301     | 452079      |
| 7/3/02 18:35   | 10.40         | 5.10     | 70            | 457725     | 459083      |
| 7/3/02 18:05   | 9.40          | 5.00     | 74            | 458959     | 464411      |
| 7/3/02 19:45   | 9.50          | 5.20     | 79            | 460906     | 467026      |
| 7/3/02 20:30   | 8.80          | 5.50     | 74            | 462770     | 471246      |
| 7/3/02 20:30   | 8.40          | 5.20     | 73            | 458273     | 483729      |
| 14/03/02 18:55 | 4.90          | 5.60     | 74            | 457549     | 519061      |
| 14/03/02 19:30 | 7.70          | 5.60     | 80            | 452983     | 514241      |
| 14/03/02 20:00 | 8.80          | 5.40     | 81            | 452724     | 507969      |
| 14/03/02 20:30 | 9.10          | 5.60     | 78            | 460640     | 490438      |
| 14/03/02 21:05 | 9.30          | 5.50     | 78            | 449466     | 496153      |

## Observed salinity and DO profile

Month: March-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 14/03/02 21:45 | 10.00         | 5.70     | 79            | 455838     | 483846      |
| 14/03/02 22:30 | 12.10         | 5.40     | 78            | 443076     | 491748      |
| 14/03/02 23:00 | 12.30         | 5.60     | 76            | 442382     | 489463      |
| 14/03/02 23:30 | 12.70         | 5.30     | 76            | 439582     | 488016      |
| 15/03/02 5:50  | 14.20         | 5.20     | 78            | 443083     | 475162      |
| 15/03/02 6:30  | 14.80         | 4.90     | 75            | 444089     | 468848      |
| 15/03/02 6:50  | 15.10         | 5.30     | 77            | 446769     | 464559      |
| 15/03/02 7:20  | 14.90         | 5.60     | 77            | 448100     | 461916      |
| 15/03/02 8:00  | 15.70         | 5.40     | 77            | 445801     | 457644      |
| 15/03/02 8:35  | 15.80         | 5.30     | 77            | 445593     | 452202      |
| 15/03/02 9:00  | 16.20         | 5.10     | 78            | 446475     | 448897      |
| 15/03/02 9:35  | 16.70         | 5.60     | 79            | 442082     | 450684      |
| 15/03/02 12:00 | 20.40         | 5.70     | 77            | 439483     | 449605      |
| 15/03/02 12:30 | 20.50         | 5.60     | 83            | 439473     | 447004      |
| 15/03/02 13:00 | 22.20         | 5.20     | 78            | 439324     | 444034      |
| 15/03/02 13:30 | 23.20         | 5.10     | 78            | 436555     | 439654      |
| 15/03/02 14:10 | 20.20         | 5.80     | 82            | 436264     | 435615      |
| 15/03/02 15:50 | 22.40         | 5.90     | 85            | 441106     | 437939      |
| 16/03/02 11:00 | 24.00         | 5.90     | 89            | 436665     | 424083      |
| 16/03/02 11:45 | 24.80         | 5.40     | 85            | 436441     | 419712      |
| 16/03/02 12:30 | 25.30         | 5.50     | 86            | 434038     | 413375      |
| 17/03/02 7:00  | 26.00         | 5.60     | 81            | 420758     | 399673      |
| 17/03/02 7:10  | 25.80         | 5.40     | 80            | 419435     | 400529      |
| 17/03/02 7:40  | 25.60         | 5.30     | 81            | 416688     | 406114      |
| 17/03/02 8:30  | 24.60         | 5.20     | 80            | 416420     | 414086      |
| 17/03/02 8:50  | 24.00         | 5.00     | 80            | 417204     | 419100      |
| 17/03/02 9:35  | 23.10         | 5.10     | 81            | 412790     | 424308      |
| 17/03/02 13:00 | 21.90         | 5.20     | 83            | 413231     | 432589      |
| 17/03/02 14:00 | 20.40         | 5.60     | 85            | 414197     | 439262      |
| 17/03/02 14:45 | 20.70         | 5.50     | 83            | 417219     | 441516      |
| 17/03/02 17:55 | 20.70         | 5.60     | 84            | 420289     | 443418      |
| 17/03/02 19:30 | 20.30         | 5.30     | 80            | 423846     | 442976      |
| 17/03/02 20:00 | 19.40         | 5.70     | 81            | 424910     | 446071      |
| 17/03/02 20:30 | 18.90         | 5.10     | 79            | 426044     | 449718      |
| 17/03/02 21:00 | 18.40         | 5.00     | 73            | 429617     | 453115      |
| 18/03/02 7:45  | 18.40         | 5.40     | 84            | 428654     | 456791      |
| 18/03/02 8:25  | 18.10         | 5.30     | 80            | 432657     | 456754      |
| 18/03/02 9:00  | 17.40         | 5.40     | 78            | 432192     | 460520      |
| 18/03/02 9:30  | 17.00         | 5.30     | 79            | 435497     | 462203      |
| 18/03/02 10:15 | 14.70         | 5.30     | 76            | 439941     | 461337      |
| 18/03/02 10:50 | 14.50         | 5.90     | 76            | 440172     | 467904      |
| 18/03/02 11:15 | 14.60         | 5.60     | 74            | 441009     | 471277      |
| 18/03/02 12:00 | 14.50         | 5.20     | 78            | 443426     | 475253      |
| 18/03/02 13:20 | 14.40         | 5.40     | 80            | 442046     | 482416      |
| 21/03/02 21:35 | 5.70          | 5.40     | 80            | 456380     | 523013      |
| 21/03/02 22:05 | 6.40          | 5.50     | 79            | 457532     | 519006      |
| 21/03/02 22:50 | 9.10          | 5.30     | 79            | 452102     | 511532      |
| 22/03/02 6:00  | 12.40         | 5.80     | 81            | 451309     | 499117      |
| 22/03/02 7:00  | 13.20         | 5.40     | 80            | 448402     | 495640      |
| 22/03/02 7:45  | 13.30         | 5.20     | 79            | 442972     | 491490      |

## Observed salinity and DO profile

Month: March-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 22/03/02 8:10  | 13.90         | 5.30     | 80            | 440972     | 488453      |
| 22/03/02 8:45  | 14.10         | 5.40     | 81            | 441318     | 480297      |
| 22/03/02 9:30  | 14.80         | 5.30     | 79            | 441733     | 472012      |
| 22/03/02 10:00 | 15.00         | 5.00     | 74            | 440259     | 468051      |
| 22/03/02 10:30 | 14.60         | 5.20     | 75            | 440760     | 464581      |
| 22/03/02 11:00 | 15.10         | 4.90     | 72            | 439872     | 461337      |
| 22/03/02 11:30 | 17.20         | 5.10     | 79            | 434862     | 462335      |
| 22/03/02 11:45 | 17.60         | 5.20     | 78            | 433365     | 461696      |
| 22/03/02 12:25 | 18.50         | 5.30     | 79            | 432785     | 458672      |
| 22/03/02 13:05 | 19.00         | 5.10     | 77            | 430517     | 454605      |
| 22/03/02 13:40 | 18.80         | 5.50     | 81            | 428689     | 456883      |
| 22/03/02 14:15 | 18.30         | 5.60     | 84            | 422108     | 456453      |
| 22/03/02 14:35 | 19.00         | 5.60     | 81            | 419970     | 454988      |
| 22/03/02 15:05 | 18.80         | 5.60     | 82            | 417759     | 455885      |
| 22/03/02 15:30 | 19.10         | 5.70     | 83            | 416207     | 458126      |
| 22/03/02 16:00 | 19.20         | 5.60     | 82            | 414035     | 456643      |
| 22/03/02 16:20 | 19.20         | 5.30     | 80            | 413531     | 455594      |
| 22/03/02 17:00 | 19.20         | 5.30     | 80            | 408588     | 456434      |
| 22/03/02 17:30 | 19.10         | 5.40     | 79            | 406558     | 456096      |
| 26/03/02 9:00  | 20.20         | 5.80     | 85            | 410331     | 448823      |
| 26/03/02 9:30  | 20.60         | 5.70     | 84            | 410055     | 445762      |
| 26/03/02 10:00 | 20.70         | 5.70     | 83            | 411807     | 442468      |
| 26/03/02 10:20 | 20.90         | 5.50     | 84            | 415014     | 440882      |
| 26/03/02 11:10 | 20.90         | 5.30     | 84            | 419580     | 442610      |
| 26/03/02 11:40 | 20.20         | 5.40     | 83            | 423621     | 442774      |
| 26/03/02 12:40 | 22.60         | 5.50     | 84            | 428162     | 435484      |
| 26/03/02 13:20 | 23.90         | 5.50     | 83            | 432709     | 428933      |
| 29/03/02 7:20  | 15.50         | 6.50     | 81            | 430192     | 454994      |
| 29/03/02 7:45  | 13.40         | 6.30     | 89            | 432506     | 457511      |
| 29/03/02 8:20  | 15.40         | 6.00     | 83            | 431717     | 461777      |
| 29/03/02 8:35  | 16.40         | 6.10     | 81            | 435417     | 451226      |
| 29/03/02 9:15  | 16.80         | 6.00     | 80            | 439666     | 461301      |
| 29/03/02 9:35  | 16.70         | 5.80     | 79            | 440435     | 464840      |
| 29/03/02 9:50  | 15.80         | 5.60     | 78            | 440379     | 468161      |
| 29/03/02 10:15 | 16.10         | 5.40     | 75            | 441440     | 471810      |
| 29/03/02 10:45 | 15.40         | 5.30     | 74            | 441663     | 480702      |
| 29/03/02 11:20 | 14.80         | 5.30     | 73            | 441970     | 489409      |
| 29/03/02 12:00 | 13.10         | 5.40     | 76            | 445608     | 495355      |
| 29/03/02 12:25 | 12.50         | 5.50     | 75            | 451463     | 499265      |
| 29/03/02 12:50 | 11.30         | 5.60     | 78            | 452020     | 507233      |
| 29/03/02 13:25 | 10.90         | 5.70     | 76            | 452043     | 514760      |
| 29/03/02 14:00 | 10.00         | 5.60     | 75            | 457500     | 519965      |
| 29/03/02 14:30 | 5.30          | 5.70     | 76            | 454521     | 524863      |

## Observed salinity and DO profile

Month: April-02

| Date & time  | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|--------------|---------------|----------|---------------|------------|-------------|
| 6/4/02 10:15 | 8.10          | 5.70     | 84            | 454510     | 525029      |
| 6/4/02 11:03 | 8.50          | 5.40     | 83            | 457485     | 518686      |
| 6/4/02 12:00 | 10.40         | 5.50     | 84            | 451985     | 510646      |
| 6/4/02 13:00 | 11.40         | 5.30     | 83            | 451807     | 499608      |
| 6/4/02 14:00 | 12.00         | 5.50     | 80            | 457346     | 489598      |
| 6/4/02 14:30 | 12.20         | 5.60     | 79            | 457990     | 484707      |
| 6/4/02 15:00 | 11.90         | 5.40     | 82            | 458784     | 479522      |
| 6/4/02 15:45 | 11.50         | 5.50     | 80            | 462064     | 473858      |
| 6/4/02 16:30 | 11.60         | 5.90     | 83            | 463518     | 473211      |
| 6/4/02 18:20 | 10.90         | 5.80     | 84            | 465922     | 473068      |
| 8/4/02 06:00 | 11.70         | 5.30     | 80            | 459714     | 465236      |
| 8/4/02 06:30 | 12.40         | 5.20     | 79            | 458076     | 460531      |
| 8/4/02 07:00 | 13.20         | 5.40     | 80            | 454829     | 456129      |
| 8/4/02 07:45 | 14.40         | 5.60     | 81            | 454223     | 452811      |
| 8/4/02 08:15 | 15.50         | 5.70     | 84            | 455774     | 449781      |
| 8/4/02 08:45 | 17.60         | 5.70     | 83            | 457411     | 445615      |
| 8/4/02 09:15 | 19.70         | 5.40     | 80            | 455586     | 441394      |
| 8/4/02 09:45 | 20.60         | 5.40     | 81            | 454878     | 440417      |
| 8/4/02 10:15 | 21.90         | 5.10     | 80            | 454064     | 437174      |
| 8/4/02 10:45 | 21.90         | 5.20     | 79            | 453211     | 432938      |
| 8/4/02 11:15 | 21.60         | 5.30     | 78            | 453089     | 428723      |
| 8/4/02 13:00 | 20.20         | 5.40     | 79            | 458423     | 426694      |
| 8/4/02 13:20 | 21.00         | 5.30     | 77            | 461559     | 426436      |
| 8/4/02 13:55 | 21.80         | 5.40     | 84            | 464495     | 421126      |
| 8/4/02 14:45 | 20.30         | 5.60     | 81            | 465511     | 419273      |
| 8/4/02 15:20 | 19.50         | 5.50     | 80            | 467668     | 424285      |
| 8/4/02 16:00 | 16.40         | 5.60     | 82            | 469038     | 429321      |
| 8/4/02 16:15 | 17.00         | 5.40     | 85            | 470587     | 430104      |
| 8/4/02 16:50 | 16.00         | 6.40     | 79            | 471567     | 426154      |
| 8/4/02 17:20 | 17.50         | 6.10     | 84            | 471172     | 422492      |
| 8/4/02 18:00 | 18.20         | 6.00     | 79            | 473396     | 418205      |
| 8/4/02 18:30 | 19.10         | 5.90     | 81            | 475206     | 415456      |
| 9/4/02 05:30 | 17.00         | 5.50     | 84            | 476932     | 416391      |
| 9/4/02 06:00 | 16.40         | 5.50     | 83            | 477818     | 421568      |
| 9/4/02 06:45 | 8.10          | 5.70     | 82            | 482426     | 426721      |
| 9/4/02 07:20 | 7.50          | 5.40     | 84            | 480747     | 430754      |
| 9/4/02 07:45 | 8.00          | 5.30     | 83            | 483818     | 433275      |
| 9/4/02 08:15 | 7.70          | 5.60     | 84            | 482385     | 437860      |
| 9/4/02 09:50 | 5.00          | 5.50     | 79            | 481303     | 447738      |
| 9/4/02 10:25 | 3.50          | 5.40     | 78            | 481813     | 453746      |
| 9/4/02 11:20 | 3.20          | 5.60     | 79            | 483722     | 456434      |
| 9/4/02 13:10 | 3.10          | 5.50     | 83            | 480587     | 448015      |
| 9/4/02 14:20 | 8.10          | 5.50     | 84            | 473844     | 453706      |
| 9/4/02 14:55 | 7.90          | 6.00     | 79            | 473706     | 447969      |
| 9/4/02 16:00 | 9.30          | 5.20     | 79            | 470526     | 446242      |
| 9/4/02 16:45 | 8.80          | 5.10     | 81            | 468888     | 451509      |
| 9/4/02 17:10 | 8.80          | 5.10     | 80            | 468379     | 454757      |
| 9/4/02 17:50 | 8.80          | 5.30     | 84            | 469202     | 456493      |
| 9/4/02 18:30 | 9.10          | 5.40     | 84            | 472197     | 463489      |
| 9/4/02 19:00 | 10.00         | 5.50     | 85            | 470167     | 465556      |



## Observed salinity and DO profile

Month: April-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 9/4/02 19:30   | 11.40         | 5.50     | 84            | 467369     | 469314      |
| 12/4/02 05:55  | 10.70         | 5.40     | 84            | 456688     | 517074      |
| 12/4/02 06:25  | 11.90         | 5.50     | 81            | 451118     | 513778      |
| 12/4/02 06:50  | 12.30         | 5.30     | 83            | 452408     | 506863      |
| 12/4/02 07:25  | 12.60         | 5.20     | 84            | 451667     | 499096      |
| 12/4/02 08:10  | 13.30         | 5.40     | 88            | 444652     | 494617      |
| 12/4/02 09:10  | 15.60         | 5.30     | 87            | 440870     | 488933      |
| 12/4/02 09:55  | 16.70         | 5.40     | 88            | 442070     | 483282      |
| 12/4/02 13:20  | 17.70         | 5.60     | 89            | 441842     | 472417      |
| 12/4/02 14:00  | 17.50         | 5.50     | 84            | 440558     | 468276      |
| 12/4/02 14:30  | 17.80         | 5.50     | 83            | 440472     | 464794      |
| 12/4/02 14:50  | 18.20         | 5.40     | 86            | -61996     | 474174      |
| 12/4/02 15:15  | 19.60         | 5.60     | 86            | 436099     | 461197      |
| 12/4/02 15:45  | 20.10         | 5.20     | 79            | 432487     | 460365      |
| 12/4/02 16:20  | 21.10         | 5.30     | 80            | 430970     | 455146      |
| 12/4/02 17:00  | 20.80         | 5.80     | 84            | 429039     | 456875      |
| 13/04/02 7:50  | 21.30         | 5.40     | 85            | 430572     | 453509      |
| 13/04/02 8:30  | 22.20         | 5.50     | 86            | 431876     | 449318      |
| 13/04/02 9:00  | 22.40         | 5.60     | 87            | 432940     | 447298      |
| 13/04/02 9:30  | 23.30         | 5.50     | 86            | 434132     | 444626      |
| 13/04/02 10:00 | 24.00         | 5.60     | 84            | 436632     | 441896      |
| 13/04/02 10:35 | 21.00         | 5.40     | 87            | 439657     | 437225      |
| 13/04/02 10:55 | 21.30         | 5.50     | 86            | 440150     | 436876      |
| 15/04/02 18:10 | 25.50         | 5.40     | 80            | 436985     | 425165      |
| 15/04/02 18:50 | 26.40         | 5.50     | 81            | 438935     | 424156      |
| 15/04/02 19:30 | 26.63         | 5.50     | 82            | 440177     | 420847      |
| 15/04/02 20:00 | 26.30         | 5.40     | 84            | 443048     | 418055      |
| 15/04/02 20:30 | 25.90         | 5.20     | 86            | 440682     | 415929      |
| 15/04/02 21:00 | 26.40         | 5.50     | 87            | 437255     | 414821      |
| 16/04/02 8:00  | 26.40         | 5.10     | 81            | 443899     | 412372      |
| 16/04/02 11:00 | 26.60         | 5.30     | 84            | 435969     | 425039      |
| 16/04/02 13:00 | 24.00         | 5.70     | 89            | 435397     | 439616      |
| 16/04/02 14:00 | 21.60         | 5.80     | 84            | 439845     | 449991      |
| 16/04/02 14:45 | 21.10         | 5.40     | 81            | 440319     | 452541      |
| 16/04/02 15:30 | 22.40         | 5.60     | 82            | 436467     | 455847      |
| 16/04/02 16:10 | 21.60         | 5.50     | 80            | 430500     | 454661      |
| 16/04/02 17:20 | 22.10         | 5.40     | 79            | 425189     | 456573      |
| 16/04/02 18:20 | 21.10         | 5.30     | 78            | 417798     | 455749      |
| 17/04/02 9:00  | 22.20         | 5.70     | 85            | 417461     | 462332      |
| 17/04/02 9:50  | 22.00         | 5.60     | 81            | 416666     | 458185      |
| 17/04/02 10:50 | 21.80         | 5.50     | 82            | 417439     | 452799      |
| 17/04/02 11:20 | 22.20         | 5.60     | 84            | 417534     | 449109      |
| 17/04/02 11:50 | 23.10         | 5.30     | 87            | 417180     | 447204      |
| 17/04/02 13:30 | 23.60         | 5.40     | 86            | 420195     | 443007      |
| 17/04/02 15:40 | 24.00         | 5.60     | 83            | 419655     | 432678      |
| 17/04/02 16:00 | 24.00         | 5.50     | 82            | 414336     | 435320      |
| 17/04/02 16:45 | 25.40         | 5.10     | 80            | 411784     | 430168      |
| 18/04/02 5:39  | 25.41         | 5.30     | 82            | 410816     | 426360      |
| 18/04/02 6:30  | 26.00         | 5.40     | 81            | 416001     | 381317      |
| 18/04/02 19:30 | 28.00         | 5.60     | 84            | 425541     | 409895      |

# Observed salinity and DO profile

Month: April-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 19/04/02 9:30  | 23.60         | 5.00     | 83            | 413593     | 440920      |
| 19/04/02 10:25 | 23.40         | 5.20     | 84            | 411649     | 446896      |
| 19/04/02 10:55 | 23.10         | 5.30     | 83            | 407379     | 451626      |

## Observed salinity and DO profile

Month:     May-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 7/5/02 11:15   | 9.90          | 6.30     |               | 454561     | 525049      |
| 7/5/02 12:20   | 10.90         | 5.70     |               | 457442     | 520890      |
| 7/5/02 13:15   | 12.70         | 5.70     |               | 452763     | 515298      |
| 7/5/02 14:00   | 13.80         | 5.60     |               | 452080     | 507137      |
| 7/5/02 14:20   | 14.70         | 5.60     |               | 451023     | 501595      |
| 7/5/02 14:35   | 15.00         | 6.00     |               | 451928     | 499218      |
| 7/5/02 16:30   | 14.50         | 5.80     |               | 458281     | 484297      |
| 7/5/02 17:30   | 15.00         | 5.60     |               | 461756     | 473784      |
| 8/5/02 8:00    | 13.50         | 5.60     |               | 466358     | 472123      |
| 8/5/02 9:00    | 13.00         | 5.70     |               | 468383     | 468469      |
| 8/5/02 9:37    | 8.30          | 5.40     |               | 470251     | 465466      |
| 8/5/02 10:20   | 7.20          | 5.50     |               | 472857     | 463517      |
| 8/5/02 11:00   | 6.80          | 5.70     |               | 471256     | 459067      |
| 8/5/02 11:46   | 5.60          | 6.00     |               | 469233     | 455716      |
| 8/5/02 13:20   | 7.60          | 6.30     |               | 470324     | 446158      |
| 8/5/02 15:20   | 5.20          | 6.40     |               | 473844     | 448534      |
| 8/5/02 16:00   | 3.00          | 6.60     |               | 473997     | 453770      |
| 8/5/02 17:50   | 1.10          | 6.50     |               | 480781     | 448232      |
| 9/5/02 8:00    | 0.90          | 6.60     |               | 481221     | 454951      |
| 9/5/02 9:34    | 1.40          | 6.50     |               | 480601     | 438848      |
| 9/5/02 10:20   | 1.80          | 6.70     |               | 482380     | 437869      |
| 9/5/02 12:00   | 4.50          | 6.60     |               | 482066     | 427534      |
| 9/5/02 13:00   | 8.60          | 6.10     |               | 476792     | 422419      |
| 10/5/02 7:10   | 17.20         | 5.60     |               | 455305     | 438380      |
| 10/5/02 7:43   | 17.10         | 5.50     |               | 454835     | 440440      |
| 10/5/02 8:30   | 15.10         | 5.40     |               | 454795     | 452284      |
| 10/5/02 9:30   | 13.20         | 5.50     |               | 458177     | 463333      |
| 10/5/02 10:19  | 13.00         | 5.50     |               | 462473     | 469392      |
| 10/5/02 11:00  | 12.00         | 5.60     |               | 462743     | 471286      |
| 15/05/02 18:00 | 11.80         | 5.90     | 89            | 456215     | 523302      |
| 15/05/02 18:50 | 12.80         | 5.80     | 87            | 454683     | 516265      |
| 15/05/02 19:20 | 14.90         | 5.80     | 86            | 451590     | 512001      |
| 15/05/02 19:50 | 153.80        | 5.80     | 84            | 451421     | 503760      |
| 15/05/02 20:15 | 16.10         | 5.40     | 80            | 451120     | 498995      |
| 15/05/02 20:35 | 17.00         | 5.50     | 82            | 448425     | 495652      |
| 15/05/02 21:25 | 18.50         | 5.40     | 80            | 442291     | 489617      |
| 15/05/02 21:40 | 19.00         | 5.00     | 79            | 441086     | 488268      |
| 16/05/02 5:30  | 19.90         | 5.40     | 78            | 442731     | 477500      |
| 16/05/02 6:10  | 20.50         | 5.50     | 77            | 443958     | 468886      |
| 16/05/02 6:50  | 20.50         | 5.40     | 74            | 446394     | 461928      |
| 16/05/02 7:30  | 20.90         | 5.60     | 76            | 446099     | 451106      |
| 16/05/02 9:45  | 22.00         | 5.20     | 79            | 439879     | 449837      |
| 16/05/02 12:20 | 24.20         | 5.30     | 80            | 436566     | 445146      |
| 16/05/02 13:20 | 25.50         | 5.40     | 82            | 436751     | 441148      |
| 16/05/02 14:15 | 25.20         | 4.90     | 82            | 441072     | 439655      |
| 16/05/02 15:30 | 22.40         | 5.00     | 81            | 437990     | 435639      |
| 16/05/02 17:00 | 23.00         | 5.20     | 79            | 437953     | 426353      |
| 16/05/02 18:00 | 23.90         | 5.40     | 80            | 439006     | 424228      |
| 16/05/02 19:25 | 22.70         | 5.60     | 83            | 440926     | 415796      |
| 17/05/02 7:15  | 20.70         | 5.70     | 80            | 444473     | 412431      |

## Observed salinity and DO profile

Month: **May-02**

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 17/05/02 10:50 | 28.20         | 5.60     | 85            | 432940     | 407710      |
| 17/05/02 11:50 | 25.80         | 5.60     | 84            | 434624     | 425844      |
| 17/05/02 13:15 | 25.20         | 5.50     | 80            | 427800     | 439126      |
| 17/05/02 18:00 | 23.30         | 5.60     | 85            | 410016     | 426826      |
| 17/05/02 21:00 | 25.00         | 5.20     | 81            | 413641     | 433970      |
| 17/05/02 20:20 | 25.50         | 5.10     | 79            | 416033     | 441676      |
| 17/05/02 10:45 | 25.50         | 5.00     | 78            | 420254     | 443345      |
| 18/05/02 8:45  | 24.70         | 5.00     | 83            | 424458     | 447413      |
| 18/05/02 10:00 | 24.20         | 5.10     | 81            | 428998     | 456863      |
| 18/05/02 13:35 | 24.60         | 5.00     | 82            | 432581     | 457739      |
| 18/05/02 14:20 | 24.00         | 5.20     | 80            | 433602     | 462193      |
| 18/05/02 15:45 | 21.30         | 5.60     | 80            | 439866     | 461337      |
| 18/05/02 15:05 | 20.60         | 5.50     | 85            | 440252     | 464964      |
| 18/05/02 16:06 | 20.00         | 5.30     | 81            | 440809     | 468436      |
| 18/05/02 17:12 | 20.40         | 5.60     | 84            | 441078     | 471356      |

## Observed salinity and DO profile

Month: June-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 7/6/02 10:30   | 5.90          | 4.90     | 80            | 458377     | 484060      |
| 7/6/02 11:20   | 8.20          | 5.00     | 79            | 459394     | 479814      |
| 7/6/02 12:30   | 10.50         | 5.20     | 78            | 462787     | 471153      |
| 7/6/02 13:00   | 7.60          | 5.00     | 79            | 466067     | 472124      |
| 7/6/02 13:30   | 5.70          | 5.10     | 80            | 469780     | 466710      |
| 7/6/02 14:00   | 4.00          | 5.00     | 78            | 473206     | 462775      |
| 7/6/02 14:40   | 2.90          | 5.00     | 77            | 469175     | 456251      |
| 7/6/02 15:50   | 2.60          | 4.90     | 78            | 469290     | 453558      |
| 7/6/02 16:50   | 1.40          | 4.90     | 78            | 470497     | 446656      |
| 8/6/02 6:20    | 0.80          | 5.00     | 79            | 474245     | 447350      |
| 8/6/02 7:25    | 0.40          | 5.10     | 81            | 477194     | 442549      |
| 8/6/02 8:20    | 0.30          | 5.00     | 73            | 480063     | 440479      |
| 8/6/02 10:30   | 0.30          | 5.10     | 84            | 482381     | 437820      |
| 8/6/02 11:40   | 0.90          | 5.00     | 80            | 480807     | 430572      |
| 8/6/02 12:25   | 3.00          | 4.90     | 80            | 480577     | 425259      |
| 8/6/02 13:15   | 6.00          | 4.90     | 83            | 477889     | 423547      |
| 8/6/02 14:10   | 9.90          | 5.10     | 80            | 476932     | 416391      |
| 9/6/02 6:20    | 10.20         | 5.30     | 80            | 471155     | 421529      |
| 9/6/02 7:00    | 8.40          | 5.10     | 81            | 471513     | 428999      |
| 9/6/02 7:30    | 8.80          | 5.00     | 82            | 468227     | 429375      |
| 9/6/02 9:45    | 15.10         | 5.10     | 83            | 465572     | 419252      |
| 9/6/02 10:09   | 14.30         | 5.00     | 80            | 464493     | 421542      |
| 9/6/02 11:00   | 16.70         | 4.90     | 81            | 458395     | 426686      |
| 10/6/02 5:50   | 16.80         | 4.90     | 83            | 453360     | 429153      |
| 10/6/02 7:00   | 12.70         | 4.90     | 84            | 456652     | 443497      |
| 10/6/02 8:30   | 11.00         | 5.00     | 83            | 457388     | 455099      |
| 10/6/02 9:15   | 10.20         | 4.90     | 84            | 460541     | 465514      |
| 19/06/02 10:10 | 0.00          | 6.00     | 83            | 455168     | 523939      |
| 19/06/02 11:30 | 0.00          | 5.80     | 80            | 456242     | 516703      |
| 19/06/02 12:35 | 0.00          | 5.70     | 81            | 452020     | 507270      |
| 19/06/02 13:20 | 2.00          | 5.70     | 79            | 450794     | 498787      |
| 19/06/02 13:00 | 7.00          | 5.60     | 79            | 440802     | 488786      |
| 19/06/02 14:00 | 9.10          | 5.60     | 80            | 440796     | 482771      |
| 19/06/02 14:35 | 13.20         | 5.60     | 77            | 441495     | 477234      |
| 19/06/02 15:50 | 16.20         | 5.50     | 78            | 442366     | 471548      |
| 19/06/02 16:40 | 17.00         | 5.50     | 80            | 446003     | 466203      |
| 19/06/02 17:20 | 16.40         | 5.50     | 78            | 446242     | 461092      |
| 20/06/02 6:20  | 17.60         | 5.30     | 75            | 440374     | 457977      |
| 20/06/02 7:10  | 16.90         | 5.40     | 75            | 437871     | 454851      |
| 20/06/02 8:10  | 18.90         | 5.50     | 78            | 440326     | 449805      |
| 20/06/02 9:50  | 18.80         | 5.30     | 77            | 439749     | 451652      |
| 20/06/02 11:00 | 18.80         | 5.30     | 76            | 435885     | 439694      |
| 21/06/02 5:30  | 13.00         | 5.40     | 73            | 444129     | 412470      |
| 21/06/02 6:40  | 17.30         | 5.20     | 70            | 440170     | 417889      |
| 21/06/02 7:23  | 17.00         | 5.20     | 79            | 439633     | 421581      |
| 21/06/02 8:40  | 16.00         | 5.30     | 78            | 436635     | 425246      |
| 21/06/02 9:20  | 17.70         | 5.40     | 79            | 429651     | 433964      |
| 21/06/02 15:30 | 16.80         | 5.20     | 73            | 427214     | 442481      |
| 21/06/02 17:20 | 20.50         | 5.20     | 74            | 419511     | 442518      |
| 21/06/02 18:40 | 21.90         | 5.00     | 73            | 414241     | 441089      |

# Observed salinity and DO profile

Month: June-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Saturation(%) | Easting(m) | Northing(m) |
|----------------|---------------|----------|---------------|------------|-------------|
| 21/06/02 19:25 | 21.90         | 5.10     | 73            | 409658     | 436576      |
| 21/06/02 20:20 | 21.70         | 5.20     | 74            | 406065     | 454051      |

## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 08/07/02 8:20  | 0.00          | 6.00     | 458393     | 483507      |
| 08/07/02 10:40 | 0.20          | 6.00     | 461268     | 474570      |
| 08/07/02 11:05 | 4.00          | 6.10     | 462838     | 471227      |
| 08/07/02 12:30 | 0.70          | 6.10     | 466358     | 472123      |
| 08/07/02 13:50 | 0.80          | 6.10     | 469711     | 466858      |
| 08/07/02 14:25 | 0.50          | 6.00     | 472104     | 460950      |
| 08/07/02 15:00 | 0.50          | 6.00     | 468261     | 454390      |
| 08/07/02 15:50 | 0.30          | 5.90     | 470446     | 446822      |
| 08/07/02 16:40 | 0.20          | 6.00     | 475447     | 446666      |
| 08/07/02 17:30 | 0.10          | 6.00     | 477400     | 442457      |
| 08/07/02 18:00 | 0.10          | 5.80     | 480493     | 441143      |
| 08/07/02 19:00 | 0.10          | 6.00     | 480348     | 448153      |
| 08/07/02 19:50 | 0.10          | 5.90     | 480546     | 455845      |
| 09/07/02 11:00 | 0.10          | 5.80     | 482243     | 437396      |
| 09/07/02 12:20 | 0.10          | 6.00     | 482393     | 432894      |
| 09/07/02 13:00 | 0.60          | 5.70     | 483660     | 427340      |
| 09/07/02 13:50 | 2.00          | 5.60     | 476529     | 423401      |
| 09/07/02 14:40 | 2.90          | 5.90     | 476932     | 416372      |
| 10/07/02 6:35  | 3.80          | 5.60     | 473850     | 416949      |
| 10/07/02 7:30  | 3.60          | 5.70     | 470804     | 427045      |
| 10/07/02 7:50  | 3.50          | 5.60     | 471530     | 429036      |
| 10/07/02 8:10  | 1.30          | 5.90     | 468193     | 429393      |
| 10/07/02 9:23  | 4.50          | 5.80     | 465023     | 419826      |
| 10/07/02 10:30 | 10.30         | 5.70     | 461561     | 426419      |
| 10/07/02 11:20 | 11.20         | 5.60     | 456862     | 426413      |
| 10/07/02 11:50 | 8.90          | 5.70     | 453306     | 428453      |
| 10/07/02 12:30 | 6.80          | 5.60     | 453983     | 328007      |
| 10/07/02 13:25 | 4.80          | 5.70     | 456033     | 443554      |
| 10/07/02 13:45 | 2.00          | 5.70     | 457398     | 446317      |
| 10/07/02 18:15 | 2.00          | 5.60     | 456378     | 450120      |
| 10/07/02 18:50 | 1.90          | 5.60     | 454023     | 455763      |
| 10/07/02 19:35 | 1.80          | 5.70     | 457561     | 461869      |
| 10/07/02 20:25 | 0.30          | 5.60     | 460888     | 466786      |
| 18/07/02 8:45  | 17.30         | 5.70     | 419786     | 442591      |
| 18/07/02 9:18  | 18.10         | 5.70     | 414961     | 440568      |
| 18/07/02 9:45  | 18.30         | 5.70     | 412854     | 435912      |
| 18/07/02 10:30 | 18.20         | 5.60     | 410754     | 426551      |
| 18/07/02 11:25 | 18.50         | 5.50     | 415267     | 423888      |
| 18/07/02 12:05 | 18.70         | 5.70     | 417443     | 418637      |
| 18/07/02 12:35 | 18.00         | 5.80     | 416747     | 414084      |
| 18/07/02 13:30 | 16.00         | 5.60     | 415650     | 408500      |
| 18/07/02 14:25 | 13.00         | 5.90     | 420843     | 399544      |
| 18/07/02 15:30 | 16.00         | 5.80     | 426532     | 399295      |
| 19/07/02 16:20 | 14.50         | 5.70     | 434229     | 405405      |
| 19/07/02 17:00 | 10.20         | 5.60     | 438890     | 411843      |
| 28/07/02 18:00 | 6.60          | 6.60     | 441250     | 434950      |
| 28/07/02 18:25 | 8.10          | 6.50     | 441131     | 430836      |
| 28/07/02 18:35 | 8.30          | 6.50     | 438256     | 430497      |
| 28/07/02 19:00 | 9.50          | 6.70     | 436487     | 426943      |
| 28/07/02 19:15 | 11.10         | 6.30     | 437613     | 424577      |

## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 28/07/02 19:45 | 11.20         | 6.50     | 440147     | 420970      |
| 28/07/02 20:15 | 11.30         | 6.40     | 443496     | 418523      |
| 28/07/02 20:50 | 9.30          | 6.10     | 441468     | 414877      |
| 28/07/02 21:30 | 9.70          | 6.40     | 440217     | 412096      |
| 28/07/02 22:00 | 7.20          | 6.40     | 444473     | 412431      |
| 29/07/02 12:00 | 13.00         | 6.00     | 436664     | 424009      |
| 29/07/02 12:30 | 12.50         | 6.30     | 433658     | 429630      |
| 29/07/02 12:55 | 12.50         | 6.30     | 433809     | 436732      |
| 29/07/02 13:20 | 12.60         | 6.40     | 436469     | 439581      |
| 29/07/02 13:45 | 6.80          | 6.30     | 439831     | 437243      |
| 31/07/02 8:00  | 14.00         | 6.30     | 429033     | 456863      |
| 31/07/02 8:15  | 13.00         | 6.30     | 430861     | 454733      |
| 31/07/02 8:35  | 11.50         | 6.20     | 432522     | 457345      |
| 31/07/02 9:00  | 9.30          | 6.20     | 432040     | 460982      |
| 31/07/02 9:15  | 9.10          | 6.30     | 433814     | 462229      |
| 31/07/02 9:45  | 3.70          | 6.40     | 438327     | 461564      |
| 31/07/02 10:05 | 3.60          | 6.30     | 440837     | 462163      |
| 31/07/02 10:20 | 3.70          | 6.40     | 439101     | 466044      |
| 31/07/02 10:35 | 2.70          | 6.40     | 440397     | 468235      |
| 31/07/02 10:48 | 0.40          | 6.30     | 440957     | 471111      |
| 31/07/02 11:20 | 0.20          | 6.20     | 442150     | 478154      |
|                |               |          |            |             |
| 06/08/02 8:50  | 0.20          | 6.40     | 463512     | 473199      |
| 06/08/02 10:10 | 0.30          | 6.40     | 466222     | 472455      |
| 06/08/02 10:35 | 0.30          | 6.50     | 469555     | 466139      |
| 06/08/02 11:10 | 0.40          | 6.70     | 470957     | 463055      |
| 06/08/02 11:35 | 0.40          | 6.70     | 471984     | 460913      |
| 06/08/02 12:20 | 0.50          | 6.60     | 468728     | 455810      |
| 06/08/02 12:40 | 0.40          | 6.60     | 468792     | 453817      |
| 06/08/02 13:30 | 0.40          | 6.70     | 470497     | 446656      |
| 06/08/02 13:50 | 0.30          | 6.60     | 473695     | 447517      |
| 06/08/02 14:10 | 0.30          | 6.70     | 473753     | 450967      |
| 06/08/02 14:25 | 0.30          | 6.70     | 473826     | 453697      |
| 06/08/02 14:40 | 0.20          | 6.70     | 476335     | 453877      |
| 06/08/02 15:20 | 0.20          | 6.70     | 480863     | 448097      |
| 06/08/02 15:40 | 0.10          | 6.60     | 483082     | 450197      |
| 06/08/02 16:20 | 0.10          | 6.60     | 480975     | 455089      |
| 07/08/02 6:30  | 0.10          | 6.60     | 482346     | 437414      |
| 07/08/02 7:15  | 0.10          | 6.50     | 480137     | 431569      |
| 07/08/02 7:50  | 0.20          | 6.40     | 477912     | 427753      |
| 07/08/02 8:30  | 0.20          | 6.60     | 477496     | 425485      |
| 07/08/02 8:55  | 0.90          | 6.60     | 477683     | 423640      |
| 07/08/02 9:30  | 1.20          | 6.00     | 475244     | 416356      |
| 07/08/02 14:10 | 1.40          | 6.60     | 476845     | 416077      |
| 07/08/02 14:15 | 0.60          | 6.70     | 475052     | 414807      |
| 07/08/02 14:26 | 1.10          | 6.90     | 474107     | 416137      |
| 07/08/02 14:53 | 0.90          | 6.60     | 472393     | 420346      |
| 07/08/02 15:40 | 0.70          | 6.50     | 471714     | 426029      |
| 07/08/02 16:00 | 0.50          | 6.50     | 471427     | 429018      |
| 07/08/02 16:30 | 1.70          | 6.20     | 468245     | 429485      |



## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt)      | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|--------------------|----------|------------|-------------|
| 07/08/02 17:00 | 2.80               | 6.30     | 464525     | 420399      |
| 07/08/02 18:20 | 2.50               | 6.50     | 461681     | 426290      |
| 07/08/02 18:50 | 2.10               | 6.50     | 456811     | 426413      |
| 08/08/02 5:55  | 2.10               | 6.30     | 452844     | 429413      |
| 08/08/02 6:40  | 0.30               | 6.40     | 454314     | 437950      |
| 08/08/02 7:30  | 0.20               | 6.40     | 456876     | 444013      |
| 08/08/02 8:15  | 0.30               | 6.20     | 455178     | 457153      |
| 08/08/02 8:45  | 0.30               | 6.10     | 458080     | 463140      |
| 08/08/02 9:15  | 0.40               | 6.20     | 460835     | 466103      |
| 08/08/02 10:35 | 0.20               | 6.40     | 462258     | 472354      |
| 08/08/02 10:00 | 0.20               | 6.20     | 458863     | 479871      |
| 19/08/02 14:30 | 0.20               | 6.10     | 441210     | 487825      |
| 19/08/02 18:00 | 0.30               | 6.20     | 441898     | 479557      |
| 19/08/02 18:45 | 0.30               | 6.10     | 443219     | 474903      |
| 19/08/02 19:15 | 0.30               | 6.30     | 440646     | 470540      |
| 19/08/02 19:35 | 0.60               | 6.40     | 439241     | 466800      |
| 19/08/02 20:00 | 2.80               | 6.10     | 441288     | 463472      |
| 19/08/02 20:15 | 3.20               | 6.20     | 438362     | 461527      |
| 19/08/02 20:30 | 5.90               | 5.90     | 435820     | 461482      |
| 19/08/02 21:00 | 6.20               | 6.20     | 434104     | 461803      |
| 19/08/02 21:40 | 11.00              | 6.10     | 431057     | 456300      |
| 20/08/02 6:45  | 10.70              | 6.30     | 428792     | 456919      |
| 20/08/02 7:20  | 11.00              | 6.10     | 421937     | 460033      |
| 20/08/02 7:45  | 8.60               | 6.40     | 419676     | 461262      |
| 20/08/02 9:45  | 9.80               | 6.90     | 417571     | 462565      |
| 20/08/02 10:25 | 12.20              | 6.70     | 415317     | 458629      |
| 20/08/02 11:00 | 12.30              | 6.60     | 413376     | 455595      |
| 20/08/02 11:30 | 12.80              | 6.70     | 409875     | 453290      |
| 20/08/02 12:00 | 12.90              | 6.50     | 406342     | 454344      |
| 20/08/02 14:30 | 13.00              | 6.30     | 405833     | 452650      |
| 20/08/02 15:40 | 137.0 <sup>n</sup> | 6.40     | 409632     | 446982      |
| 20/08/02 16:25 | 13.50              | 6.30     | 414670     | 440810      |
| 20/08/02 17:00 | 11.70              | 6.10     | 419511     | 442518      |
| 21/08/02 8:40  | 11.90              | 6.40     | 410533     | 427069      |
| 21/08/02 9:20  | 11.10              | 6.30     | 414131     | 424005      |
| 21/08/02 9:50  | 12.00              | 6.10     | 417424     | 418434      |
| 21/08/02 10:20 | 12.20              | 6.20     | 416608     | 413734      |
| 21/08/02 10:50 | 12.00              | 6.30     | 416093     | 407704      |
| 21/08/02 11:20 | 12.00              | 6.20     | 419267     | 401415      |
| 21/08/02 11:30 | 11.90              | 5.90     | 419724     | 399771      |
| 21/08/02 12:20 | 12.00              | 6.20     | 424550     | 399600      |
| 22/08/02 9:45  | 4.20               | 6.20     | 434453     | 405423      |
| 22/08/02 10:15 | 5.00               | 6.40     | 438061     | 411293      |
| 22/08/02 10:40 | 3.00               | 6.10     | 441937     | 411297      |
| 22/08/02 11:10 | 5.00               | 6.20     | 444215     | 412469      |
| 22/08/02 17:45 | 5.00               | 6.10     | 441815     | 415633      |
| 22/08/02 18:22 | 5.90               | 6.30     | 440232     | 420583      |
| 22/08/02 18:35 | 6.40               | 6.40     | 438591     | 423743      |
| 22/08/02 19:15 | 6.60               | 6.10     | 436357     | 424527      |
| 22/08/02 19:55 | 7.40               | 6.20     | 432626     | 433749      |

# Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 22/08/02 22:30 | 6.40          | 6.30     | 436214     | 440320      |
| 22/08/02 23:00 | 5.10          | 6.00     | 438956     | 446729      |
| 22/08/02 23:25 | 3.20          | 5.90     | 439845     | 449991      |
| 23/08/02 8:20  | 1.00          | 6.00     | 445494     | 448328      |
| 23/08/02 8:55  | 1.00          | 6.30     | 446694     | 457493      |
| 23/08/02 9:30  | 1.00          | 6.20     | 447518     | 462435      |
| 23/08/02 10:15 | 0.90          | 6.50     | 442392     | 469390      |
| 23/08/02 10:45 | 0.80          | 6.20     | 441966     | 479280      |
| 27/08/02 11:00 | 0.1           | 6.9      | 459120     | 479944      |
| 27/08/02 12:00 | 0.1           | 6.8      | 461558     | 473739      |
| 27/08/02 12:55 | 0.1           | 6.6      | 461473     | 467485      |
| 27/08/02 15:35 | 0.1           | 6.7      | 456856     | 461409      |
| 27/08/02 17:00 | 0.1           | 6.4      | 455166     | 452965      |
| 28/08/02 9:50  | 0.1           | 6.3      | 455480     | 436490      |
| 28/08/02 11:20 | 0.2           | 6.4      | 449127     | 429314      |
| 28/08/02 12:17 | 0.5           | 6.3      | 450114     | 436727      |
| 28/08/02 12:55 | 0.3           | 6.4      | 450549     | 443662      |
| 28/08/02 13:46 | 0.3           | 6.2      | 448884     | 449774      |
| 28/08/02 14:30 | 0.3           | 6        | 444370     | 456173      |
| 28/08/02 15:25 | 0.2           | 6.1      | 445909     | 463861      |
| 28/08/02 16:15 | 0.2           | 6.3      | 441956     | 472140      |
| 28/08/02 16:55 | 0.1           | 6.2      | 443192     | 476877      |
|                |               |          |            |             |
| 10/09/02 13:40 | 0.2           | 6.1      | 458464     | 484411      |
| 10/09/02 14:30 | 0.2           | 6.2      | 460821     | 474092      |
| 10/09/02 15:10 | 0.3           | 6.1      | 462838     | 471227      |
| 10/09/02 18:00 | 0.3           | 5.9      | 466359     | 472197      |
| 10/09/02 19:00 | 0.2           | 6.2      | 469635     | 462966      |
| 10/09/02 19:30 | 0.2           | 6.3      | 470691     | 458518      |
| 10/09/02 20:00 | 0.3           | 6.3      | 468693     | 455570      |
| 10/09/02 20:54 | 0.2           | 6.2      | 470497     | 446656      |
| 11/09/02 8:45  | 0.2           | 6.1      | 473953     | 447461      |
| 11/09/02 8:53  | 0.2           | 6.2      | 475087     | 447257      |
| 11/09/02 9:30  | 0.1           | 6.1      | 477211     | 442475      |
| 11/09/02 10:05 | 0.1           | 6.1      | 479873     | 440442      |
| 11/09/02 10:30 | 0.1           | 6.2      | 480493     | 441143      |
| 11/09/02 11:10 | 0.1           | 6.1      | 480348     | 448153      |
| 11/09/02 11:30 | 0.1           | 6.2      | 480546     | 455845      |
| 12/09/02 7:05  | 0.1           | 6.2      | 482226     | 437746      |
| 12/09/02 8:00  | 0.1           | 6.1      | 480155     | 431642      |
| 12/09/02 8:30  | 0.1           | 6.1      | 482610     | 427009      |
| 12/09/02 12:00 | 0.2           | 6.2      | 484288     | 418891      |
| 12/09/02 13:00 | 0.2           | 6.3      | 477770     | 424322      |
| 12/09/02 17:00 | 0.4           | 6.2      | 476449     | 415930      |
| 12/09/02 17:40 | 0.4           | 6.2      | 473954     | 417115      |
| 12/09/02 21:30 | 0.3           | 6.3      | 472279     | 424349      |
| 13/09/02 8:00  | 1.40          | 6.0      | 465504     | 419308      |
| 13/09/02 8:25  | 1.60          | 6.3      | 464405     | 420749      |
| 13/09/02 9:15  | 1.70          | 6.2      | 460719     | 426975      |
| 13/09/02 10:10 | 1.80          | 6.1      | 457207     | 426615      |

## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 13/09/02 11:00 | 1.40          | 6.3      | 453221     | 428859      |
| 13/09/02 11:45 | 0.30          | 6.2      | 455672     | 437467      |
| 13/09/02 12:20 | 0.1           | 6.4      | 457537     | 446612      |
| 13/09/02 13:00 | 0.1           | 6.2      | 454127     | 456049      |
| 13/09/02 13:50 | 0.1           | 6.3      | 460698     | 466436      |
| 20/09/02 9:30  | 0.90          | 6.30     | 447391     | 460590      |
| 20/09/02 10:30 | 1.20          | 6.30     | 444620     | 454032      |
| 20/09/02 10:50 | 1.30          | 6.20     | 445879     | 450467      |
| 20/09/02 11:00 | 2.00          | 6.30     | 446492     | 448860      |
| 20/09/02 11:35 | 6.00          | 6.20     | 441704     | 450648      |
| 20/09/02 12:00 | 6.20          | 6.10     | 439828     | 449843      |
| 20/09/02 12:30 | 6.10          | 6.30     | 437441     | 446015      |
| 20/09/02 12:46 | 6.30          | 6.10     | 436692     | 443565      |
| 20/09/02 15:00 | 6.10          | 6.20     | 433205     | 436218      |
| 20/09/02 15:50 | 6.40          | 6.00     | 432846     | 428711      |
| 20/09/02 16:10 | 6.40          | 6.20     | 436254     | 424638      |
| 20/09/02 17:20 | 6.30          | 6.10     | 439942     | 421192      |
| 20/09/02 18:00 | 6.00          | 6.00     | 442012     | 417846      |
| 20/09/02 18:30 | 6.10          | 5.90     | 441161     | 415764      |
| 20/09/02 19:55 | 3.40          | 6.40     | 439962     | 412946      |
| 20/09/02 20:15 | 3.40          | 6.10     | 444473     | 412431      |
| 21/09/02 8:30  | 3.40          | 6.20     | 437141     | 409747      |
| 21/09/02 8:55  | 5.20          | 6.10     | 434177     | 405442      |
| 21/09/02 9:50  | 6.30          | 6.50     | 424550     | 399600      |
| 23/09/02 6:00  | 8.60          | 6.10     | 410516     | 427106      |
| 23/09/02 6:20  | 8.20          | 6.00     | 412163     | 429274      |
| 23/09/02 7:00  | 8.10          | 5.90     | 414179     | 432861      |
| 23/09/02 7:50  | 8.80          | 6.20     | 419034     | 433517      |
| 23/09/02 8:10  | 8.70          | 6.30     | 421615     | 436991      |
| 23/09/02 9:15  | 8.70          | 6.00     | 420203     | 443437      |
| 23/09/02 9:35  | 8.00          | 6.00     | 424334     | 444395      |
| 23/09/02 10:15 | 8.10          | 6.30     | 429029     | 452287      |
| 23/09/02 11:15 | 7.70          | 5.90     | 430500     | 454661      |
| 23/09/02 12:10 | 6.10          | 6.10     | 432090     | 460723      |
| 23/09/02 12:30 | 5.90          | 6.00     | 433470     | 462230      |
| 23/09/02 13:00 | 2.00          | 5.90     | 440837     | 462163      |
| 23/09/02 13:30 | 1.80          | 5.90     | 440207     | 467940      |
| 23/09/02 13:45 | 0.70          | 6.00     | 440888     | 471148      |
| 23/09/02 15:15 | 0.40          | 6.10     | 441983     | 483800      |
|                |               |          |            |             |
| 13/10/02 7:45  | 0.10          | 6.20     | 481215     | 454719      |
| 13/10/02 8:15  | 0.10          | 6.20     | 481208     | 449111      |
| 13/10/02 9:05  | 0.10          | 6.10     | 480012     | 441088      |
| 13/10/02 10:30 | 0.10          | 6.20     | 482278     | 437986      |
| 13/10/02 11:56 | 0.30          | 6.10     | 483143     | 427267      |
| 13/10/02 12:30 | 0.90          | 6.10     | 481107     | 422362      |
| 13/10/02 12:50 | 1.30          | 6.10     | 483911     | 420514      |
| 13/10/02 16:05 | 1.50          | 6.10     | 479665     | 425924      |
| 13/10/02 16:25 | 1.90          | 6.40     | 477786     | 423676      |
| 13/10/02 17:00 | 2.00          | 6.40     | 477588     | 417404      |

# Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 13/10/02 17:30 | 2.20          | 6.10     | 476311     | 415469      |
| 14/10/02 11:00 | 4.20          | 6.30     | 473867     | 416432      |
| 14/10/02 11:30 | 1.90          | 6.10     | 472209     | 423648      |
| 14/10/02 12:00 | 1.80          | 6.20     | 470535     | 430256      |
| 14/10/02 12:40 | 0.20          | 6.10     | 468814     | 430259      |
| 14/10/02 13:15 | 0.90          | 6.40     | 467355     | 423713      |
| 14/10/02 13:50 | 0.30          | 6.50     | 465796     | 419141      |
| 14/10/02 14:25 | 0.20          | 6.10     | 463601     | 423149      |
| 14/10/02 15:10 | 0.20          | 6.40     | 458378     | 426704      |
| 14/10/02 15:30 | 0.40          | 6.60     | 452192     | 429969      |
| 14/10/02 16:25 | 0.80          | 6.30     | 454889     | 440421      |
| 14/10/02 17:20 | 0.1           | 6.4      | 457537     | 446612      |
| 14/10/02 17:55 | 0.1           | 6.2      | 454127     | 456049      |
| 14/10/02 18:50 | 0.1           | 6.3      | 460698     | 466436      |
| 21/10/02 7:15  | 0.20          | 6.20     | 442064     | 482416      |
| 21/10/02 7:45  | 0.30          | 6.20     | 442315     | 476290      |
| 21/10/02 8:30  | 0.50          | 6.30     | 441003     | 469561      |
| 21/10/02 8:45  | 1.30          | 6.00     | 439294     | 467224      |
| 21/10/02 9:40  | 2.40          | 6.10     | 440200     | 461778      |
| 21/10/02 10:05 | 3.00          | 6.30     | 436473     | 461683      |
| 21/10/02 10:20 | 4.60          | 6.00     | 435085     | 462426      |
| 21/10/02 10:30 | 5.90          | 5.90     | 433452     | 461824      |
| 21/10/02 11:05 | 7.50          | 5.90     | 432992     | 458727      |
| 21/10/02 11:40 | 7.60          | 6.10     | 430312     | 454864      |
| 21/10/02 13:10 | 7.80          | 6.30     | 424806     | 456698      |
| 21/10/02 13:25 | 7.80          | 6.20     | 422141     | 456268      |
| 21/10/02 14:05 | 7.80          | 6.50     | 417742     | 455940      |
| 21/10/02 14:30 | 7.90          | 6.30     | 416070     | 458071      |
| 21/10/02 15:00 | 8.50          | 6.00     | 413376     | 455577      |
| 21/10/02 15:30 | 9.10          | 6.20     | 408825     | 455861      |
| 21/10/02 16:00 | 9.30          | 6.20     | 405106     | 454555      |
| 22/10/02 15:00 | 9.80          | 5.70     | 409512     | 449990      |
| 22/10/02 15:25 | 10.00         | 5.60     | 410045     | 447053      |
| 22/10/02 16:10 | 9.60          | 5.70     | 412296     | 437539      |
| 22/10/02 17:50 | 9.80          | 5.90     | 414494     | 433800      |
| 22/10/02 18:30 | 9.90          | 6.00     | 413340     | 430374      |
| 23/10/02 7:20  | 9.70          | 6.20     | 411388     | 426050      |
| 23/10/02 8:15  | 10.00         | 6.20     | 417913     | 423044      |
| 23/10/02 8:50  | 10.00         | 6.00     | 417575     | 417585      |
| 23/10/02 9:40  | 9.80          | 6.20     | 415080     | 411528      |
| 23/10/02 10:30 | 9.70          | 6.10     | 416310     | 406375      |
| 23/10/02 11:10 | 9.30          | 6.10     | 420293     | 399713      |
| 23/10/02 13:30 | 10.00         | 6.30     | 427184     | 398757      |
| 23/10/02 14:50 | 7.20          | 6.40     | 434453     | 405404      |
| 23/10/02 15:30 | 7.70          | 6.50     | 437542     | 410871      |
| 23/10/02 19:45 | 7.60          | 6.30     | 442753     | 417990      |
| 23/10/02 20:40 | 7.30          | 6.20     | 438045     | 424889      |
| 24/10/02 6:40  | 8.30          | 6.20     | 435980     | 425119      |
| 24/10/02 7:50  | 8.40          | 6.10     | 430000     | 323706      |
| 24/10/02 8:50  | 8.10          | 5.90     | 427626     | 442368      |

## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 24/10/02 8:55  | 7.20          | 5.80     | 421718     | 443762      |
| 24/10/02 10:15 | 8.40          | 5.90     | 417114     | 447715      |
| 24/10/02 10:55 | 8.33          | 6.10     | 418719     | 452338      |
| 09/11/02 8:30  | 0.30          | 6.20     | 469635     | 462966      |
| 09/11/02 9:00  | 0.40          | 6.20     | 470691     | 458518      |
| 09/11/02 9:10  | 0.50          | 6.30     | 472109     | 463478      |
| 09/11/02 10:00 | 0.80          | 6.30     | 469088     | 455753      |
| 09/11/02 10:55 | 1.20          | 6.10     | 470324     | 446158      |
| 10/11/02 15:15 | 0.70          | 6.30     | 473718     | 450690      |
| 10/11/02 15:30 | 0.80          | 6.40     | 473895     | 453715      |
| 10/11/02 16:30 | 0.90          | 6.50     | 480829     | 448429      |
| 12/11/02 7:45  | 0.50          | 6.40     | 482364     | 437875      |
| 12/11/02 8:35  | 1.50          | 6.30     | 480137     | 431237      |
| 12/11/02 9:30  | 2.40          | 6.30     | 482523     | 426880      |
| 12/11/02 13:15 | 5.20          | 6.40     | 478701     | 425428      |
| 12/11/02 13:40 | 6.30          | 6.50     | 478112     | 422919      |
| 12/11/02 14:20 | 6.70          | 6.50     | 476000     | 415082      |
| 13/11/02 9:40  | 5.20          | 6.40     | 473210     | 415087      |
| 13/11/02 10:40 | 4.00          | 6.20     | 472287     | 418760      |
| 13/11/02 11:00 | 4.70          | 6.20     | 471660     | 424461      |
| 13/11/02 11:25 | 5.20          | 6.20     | 468227     | 429264      |
| 13/11/02 12:00 | 6.80          | 6.30     | 464490     | 420472      |
| 13/11/02 13:00 | 9.50          | 6.30     | 463106     | 424700      |
| 13/11/02 13:50 | 8.60          | 6.20     | 458411     | 426446      |
| 13/11/02 15:00 | 6.10          | 6.20     | 459552     | 435003      |
| 13/11/02 15:20 | 6.20          | 6.30     | 455567     | 436951      |
| 13/11/02 16:45 | 4.20          | 6.10     | 455551     | 449329      |
| 13/11/02 18:00 | 0.90          | 6.00     | 460576     | 465532      |
| 23/11/02 5:35  | 2.20          | 6.20     | 442081     | 482416      |
| 23/11/02 6:23  | 2.00          | 6.20     | 443443     | 475179      |
| 23/11/02 7:25  | 3.10          | 6.30     | 448117     | 461898      |
| 23/11/02 8:20  | 3.90          | 6.10     | 444226     | 454273      |
| 23/11/02 8:52  | 4.50          | 6.20     | 446370     | 448399      |
| 23/11/02 11:00 | 7.50          | 6.30     | 439828     | 449843      |
| 23/11/02 11:34 | 8.10          | 6.30     | 437234     | 445942      |
| 23/11/02 11:55 | 10.30         | 6.30     | 436673     | 443085      |
| 23/11/02 14:35 | 11.20         | 6.20     | 435504     | 438994      |
| 23/11/02 15:52 | 12.10         | 6.20     | 433652     | 428136      |
| 23/11/02 16:15 | 13.20         | 6.40     | 436339     | 424472      |
| 24/11/02 5:00  | 13.40         | 6.20     | 439085     | 422321      |
| 24/11/02 8:00  | 13.60         | 6.30     | 439684     | 412338      |
| 24/11/02 9:00  | 16.70         | 6.50     | 433660     | 405297      |
| 24/11/02 11:15 | 16.60         | 6.40     | 425996     | 399058      |
| 24/11/02 11:55 | 17.00         | 6.40     | 419902     | 400932      |
| 24/11/02 12:50 | 14.30         | 6.00     | 415240     | 412413      |
| 24/11/02 13:50 | 12.50         | 6.30     | 416798     | 423788      |
| 24/11/02 14:30 | 11.20         | 6.10     | 413735     | 424007      |
| 25/11/02 9:50  | 11.10         | 6.10     | 412310     | 427705      |
| 25/11/02 10:25 | 11.00         | 6.20     | 413898     | 434892      |

## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 25/11/02 11:00 | 10.90         | 6.00     | 418950     | 433776      |
| 25/11/02 11:35 | 10.20         | 6.00     | 422013     | 440808      |
| 25/11/02 12:00 | 9.80          | 6.10     | 419373     | 442574      |
| 25/11/02 12:55 | 8.60          | 6.20     | 414447     | 440977      |
| 25/11/02 13:32 | 8.80          | 6.20     | 409201     | 446726      |
| 25/11/02 14:10 | 8.60          | 6.00     | 408688     | 450050      |
| 25/11/02 16:15 | 8.20          | 6.10     | 405467     | 454516      |
| 25/11/02 16:50 | 9.90          | 6.10     | 409075     | 454549      |
| 25/11/02 17:15 | 9.00          | 6.20     | 412137     | 455215      |
| 25/11/02 18:00 | 9.40          | 6.30     | 415932     | 458053      |
| 25/11/02 18:40 | 9.20          | 6.00     | 417657     | 462638      |
| 26/11/02 8:50  | 8.30          | 6.20     | 421902     | 460015      |
| 26/11/02 10:20 | 8.70          | 6.10     | 428860     | 456753      |
| 26/11/02 11:00 | 7.90          | 6.10     | 432435     | 457180      |
| 26/11/02 11:30 | 7.00          | 6.20     | 433313     | 461548      |
| 26/11/02 12:15 | 4.40          | 6.20     | 439752     | 461300      |
| 26/11/02 12:45 | 3.60          | 6.30     | 439682     | 465489      |
| 26/11/02 13:18 | 2.60          | 6.20     | 441304     | 472013      |
|                |               |          |            |             |
| 13/12/02 9:25  | 1.10          | 6.90     | 463615     | 473144      |
| 13/12/02 11:15 | 1.40          | 6.80     | 469763     | 466766      |
| 13/12/02 11:50 | 1.90          | 6.80     | 473086     | 462867      |
| 13/12/02 12:30 | 2.50          | 6.60     | 469277     | 455716      |
| 13/12/02 13:25 | 2.60          | 6.60     | 470429     | 446970      |
| 13/12/02 14:45 | 2.40          | 6.70     | 474365     | 447387      |
| 13/12/02 15:20 | 2.00          | 6.50     | 477023     | 442808      |
| 13/12/02 15:45 | 2.10          | 6.60     | 479942     | 440498      |
| 13/12/02 16:15 | 2.00          | 6.60     | 483010     | 446858      |
| 13/12/02 17:00 | 1.40          | 6.50     | 480632     | 455698      |
| 15/12/02 8:20  | 1.40          | 6.60     | 482723     | 436491      |
| 15/12/02 9:10  | 1.80          | 6.50     | 481907     | 429943      |
| 15/12/02 9:55  | 2.40          | 6.60     | 480335     | 424319      |
| 15/12/02 10:30 | 2.50          | 6.70     | 480439     | 425351      |
| 15/12/02 15:30 | 5.30          | 6.80     | 477769     | 423658      |
| 15/12/02 15:55 | 8.70          | 6.70     | 477744     | 418345      |
| 15/12/02 16:15 | 10.60         | 6.60     | 477744     | 418456      |
| 16/12/02 7:05  | 11.50         | 6.60     | 474527     | 409458      |
| 16/12/02 9:15  | 14.30         | 6.70     | 465753     | 415415      |
| 16/12/02 10:10 | 14.50         | 6.60     | 465418     | 419474      |
| 16/12/02 11:55 | 15.00         | 6.06     | 462660     | 425550      |
| 16/12/02 15:05 | 15.00         | 6.50     | 456690     | 426285      |
| 16/12/02 15:55 | 10.00         | 6.50     | 453157     | 430372      |
| 16/12/02 16:50 | 6.30          | 6.40     | 454906     | 440421      |
| 16/12/02 17:48 | 2.60          | 6.50     | 456824     | 450082      |
| 16/12/02 18:30 | 2.00          | 6.40     | 457655     | 458585      |
| 16/12/02 19:40 | 1.60          | 6.60     | 461525     | 467688      |
| 23/12/02 9:25  | 4.60          | 6.40     | 443409     | 475197      |
| 23/12/02 11:00 | 6.80          | 6.40     | 447598     | 460885      |
| 23/12/02 12:20 | 10.30         | 6.50     | 445690     | 450320      |
| 23/12/02 13:00 | 11.00         | 6.50     | 441807     | 450685      |

## Observed salinity and DO profile

Month: July-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 23/12/02 13:40 | 12.40         | 6.40     | 439707     | 449825      |
| 23/12/02 14:26 | 13.60         | 6.20     | 436777     | 443491      |
| 23/12/02 15:15 | 14.00         | 6.30     | 435278     | 438516      |
| 23/12/02 18:00 | 15.20         | 6.40     | 436425     | 424269      |
| 24/12/02 6:00  | 14.30         | 6.40     | 438948     | 422488      |
| 24/12/02 8:00  | 15.70         | 6.60     | 441309     | 413882      |
| 24/12/02 13:00 | 17.80         | 6.40     | 434040     | 405424      |
| 24/12/02 16:20 | 19.40         | 6.00     | 426512     | 398797      |
| 24/12/02 17:05 | 19.70         | 6.10     | 420068     | 399695      |
| 24/12/02 17:55 | 19.00         | 6.10     | 416975     | 405024      |
| 24/12/02 18:50 | 18.80         | 6.20     | 415672     | 412817      |
| 24/12/02 20:05 | 16.30         | 6.10     | 418206     | 423043      |
| 25/12/02 11:25 | 15.30         | 6.10     | 494863     | 426982      |
| 25/12/02 12:15 | 14.00         | 6.00     | 412655     | 437205      |
| 25/12/02 14:30 | 14.10         | 6.00     | 414739     | 440828      |
| 25/12/02 15:00 | 13.50         | 6.10     | 410103     | 445023      |
| 25/12/02 16:00 | 12.70         | 6.30     | 407918     | 450682      |
| 26/12/02 13:30 | 12.00         | 6.00     | 408839     | 455363      |
| 26/12/02 14:05 | 12.30         | 5.90     | 413584     | 455889      |
| 26/12/02 14:35 | 11.40         | 5.90     | 415932     | 458053      |
| 26/12/02 15:10 | 11.20         | 6.10     | 417640     | 462712      |
| 26/12/02 15:50 | 10.90         | 6.00     | 421988     | 459885      |
| 26/12/02 16:40 | 11.90         | 6.10     | 428758     | 456809      |
| 26/12/02 17:30 | 10.80         | 5.90     | 432625     | 457326      |
| 26/12/02 18:05 | 8.00          | 5.80     | 434845     | 462317      |
| 26/12/02 18:45 | 7.50          | 5.90     | 440889     | 462255      |
| 26/12/02 19:20 | 6.40          | 6.00     | 439397     | 467298      |
| 26/12/02 20:05 | 4.30          | 6.20     | 442803     | 473724      |
| 26/12/02 21:40 | 3.70          | 6.50     | 442047     | 482453      |

## Observed salinity and DO profile

Month: August-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 06/08/02 8:50  | 0.20          | 6.40     | 463512     | 473199      |
| 06/08/02 10:10 | 0.30          | 6.40     | 466222     | 472455      |
| 06/08/02 10:35 | 0.30          | 6.50     | 469555     | 466139      |
| 06/08/02 11:10 | 0.40          | 6.70     | 470957     | 463055      |
| 06/08/02 11:35 | 0.40          | 6.70     | 471984     | 460913      |
| 06/08/02 12:20 | 0.50          | 6.60     | 468728     | 455810      |
| 06/08/02 12:40 | 0.40          | 6.60     | 468792     | 453817      |
| 06/08/02 13:30 | 0.40          | 6.70     | 470497     | 446656      |
| 06/08/02 13:50 | 0.30          | 6.60     | 473695     | 447517      |
| 06/08/02 14:10 | 0.30          | 6.70     | 473753     | 450967      |
| 06/08/02 14:25 | 0.30          | 6.70     | 473826     | 453697      |
| 06/08/02 14:40 | 0.20          | 6.70     | 476335     | 453877      |
| 06/08/02 15:20 | 0.20          | 6.70     | 480863     | 448097      |
| 06/08/02 15:40 | 0.10          | 6.60     | 483082     | 450197      |
| 06/08/02 16:20 | 0.10          | 6.60     | 480975     | 455089      |
| 07/08/02 6:30  | 0.10          | 6.60     | 482346     | 437414      |
| 07/08/02 7:15  | 0.10          | 6.50     | 480137     | 431569      |
| 07/08/02 7:50  | 0.20          | 6.40     | 477912     | 427753      |
| 07/08/02 8:30  | 0.20          | 6.60     | 477496     | 425485      |
| 07/08/02 8:55  | 0.90          | 6.60     | 477683     | 423640      |
| 07/08/02 9:30  | 1.20          | 6.00     | 475244     | 416356      |
| 07/08/02 14:10 | 1.40          | 6.60     | 476845     | 416077      |
| 07/08/02 14:15 | 0.60          | 6.70     | 475052     | 414807      |
| 07/08/02 14:26 | 1.10          | 6.90     | 474107     | 416137      |
| 07/08/02 14:53 | 0.90          | 6.60     | 472393     | 420346      |
| 07/08/02 15:40 | 0.70          | 6.50     | 471714     | 426029      |
| 07/08/02 16:00 | 0.50          | 6.50     | 471427     | 429018      |
| 07/08/02 16:30 | 1.70          | 6.20     | 468245     | 429485      |
| 07/08/02 17:00 | 2.80          | 6.30     | 464525     | 420399      |
| 07/08/02 18:20 | 2.50          | 6.50     | 461681     | 426290      |
| 07/08/02 18:50 | 2.10          | 6.50     | 456811     | 426413      |
| 08/08/02 5:55  | 2.10          | 6.30     | 452844     | 429413      |
| 08/08/02 6:40  | 0.30          | 6.40     | 454314     | 437950      |
| 08/08/02 7:30  | 0.20          | 6.40     | 456876     | 444013      |
| 08/08/02 8:15  | 0.30          | 6.20     | 455178     | 457153      |
| 08/08/02 8:45  | 0.30          | 6.10     | 458080     | 463140      |
| 08/08/02 9:15  | 0.40          | 6.20     | 460835     | 466103      |
| 08/08/02 10:35 | 0.20          | 6.40     | 462258     | 472354      |
| 08/08/02 10:00 | 0.20          | 6.20     | 458863     | 479871      |
| 19/08/02 14:30 | 0.20          | 6.10     | 441210     | 487825      |
| 19/08/02 18:00 | 0.30          | 6.20     | 441898     | 479557      |
| 19/08/02 18:45 | 0.30          | 6.10     | 443219     | 474903      |
| 19/08/02 19:15 | 0.30          | 6.30     | 440646     | 470540      |
| 19/08/02 19:35 | 0.60          | 6.40     | 439241     | 466800      |
| 19/08/02 20:00 | 2.80          | 6.10     | 441288     | 463472      |
| 19/08/02 20:15 | 3.20          | 6.20     | 438362     | 461527      |
| 19/08/02 20:30 | 5.90          | 5.90     | 435820     | 461482      |
| 19/08/02 21:00 | 6.20          | 6.20     | 434104     | 461803      |
| 19/08/02 21:40 | 11.00         | 6.10     | 431057     | 456300      |



## Observed salinity and DO profile

Month: August-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 20/08/02 6:45  | 10.70         | 6.30     | 428792     | 456919      |
| 20/08/02 7:20  | 11.00         | 6.10     | 421937     | 460033      |
| 20/08/02 7:45  | 8.60          | 6.40     | 419676     | 461262      |
| 20/08/02 9:45  | 9.80          | 6.90     | 417571     | 462565      |
| 20/08/02 10:25 | 12.20         | 6.70     | 415317     | 458629      |
| 20/08/02 11:00 | 12.30         | 6.60     | 413376     | 455595      |
| 20/08/02 11:30 | 12.80         | 6.70     | 409875     | 453290      |
| 20/08/02 12:00 | 12.90         | 6.50     | 406342     | 454344      |
| 20/08/02 14:30 | 13.00         | 6.30     | 405833     | 452650      |
| 20/08/02 15:40 | 137.00        | 6.40     | 409632     | 446982      |
| 20/08/02 16:25 | 13.50         | 6.30     | 414670     | 440810      |
| 20/08/02 17:00 | 11.70         | 6.10     | 419511     | 442518      |
| 21/08/02 8:40  | 11.90         | 6.40     | 410533     | 427069      |
| 21/08/02 9:20  | 11.10         | 6.30     | 414131     | 424005      |
| 21/08/02 9:50  | 12.00         | 6.10     | 417424     | 418434      |
| 21/08/02 10:20 | 12.20         | 6.20     | 416608     | 413734      |
| 21/08/02 10:50 | 12.00         | 6.30     | 416093     | 407704      |
| 21/08/02 11:20 | 12.00         | 6.20     | 419267     | 401415      |
| 21/08/02 11:30 | 11.90         | 5.90     | 419724     | 399771      |
| 21/08/02 12:20 | 12.00         | 6.20     | 424550     | 399600      |
| 22/08/02 9:45  | 4.20          | 6.20     | 434453     | 405423      |
| 22/08/02 10:15 | 5.00          | 6.40     | 438061     | 411293      |
| 22/08/02 10:40 | 3.00          | 6.10     | 441937     | 411297      |
| 22/08/02 11:10 | 5.00          | 6.20     | 444215     | 412469      |
| 22/08/02 17:45 | 5.00          | 6.10     | 441815     | 415633      |
| 22/08/02 18:22 | 5.90          | 6.30     | 440232     | 420583      |
| 22/08/02 18:35 | 6.40          | 6.40     | 438591     | 423743      |
| 22/08/02 19:15 | 6.60          | 6.10     | 436357     | 424527      |
| 22/08/02 19:55 | 7.40          | 6.20     | 432626     | 433749      |
| 22/08/02 22:30 | 6.40          | 6.30     | 436214     | 440320      |
| 22/08/02 23:00 | 5.10          | 6.00     | 438956     | 446729      |
| 22/08/02 23:25 | 3.20          | 5.90     | 439845     | 449991      |
| 23/08/02 8:20  | 1.00          | 6.00     | 445494     | 448328      |
| 23/08/02 8:55  | 1.00          | 6.30     | 446694     | 457493      |
| 23/08/02 9:30  | 1.00          | 6.20     | 447518     | 462435      |
| 23/08/02 10:15 | 0.90          | 6.50     | 442392     | 469390      |
| 23/08/02 10:45 | 0.80          | 6.20     | 441966     | 479280      |
| 27/08/02 11:00 | 0.1           | 6.9      | 459120     | 479944      |
| 27/08/02 12:00 | 0.1           | 6.8      | 461558     | 473739      |
| 27/08/02 12:55 | 0.1           | 6.6      | 461473     | 467485      |
| 27/08/02 15:35 | 0.1           | 6.7      | 456856     | 461409      |
| 27/08/02 17:00 | 0.1           | 6.4      | 455166     | 452965      |
| 28/08/02 9:50  | 0.1           | 6.3      | 455480     | 436490      |
| 28/08/02 11:20 | 0.2           | 6.4      | 449127     | 429314      |
| 28/08/02 12:17 | 0.5           | 6.3      | 450114     | 436727      |
| 28/08/02 12:55 | 0.3           | 6.4      | 450549     | 443662      |
| 28/08/02 13:46 | 0.3           | 6.2      | 448884     | 449774      |
| 28/08/02 14:30 | 0.3           | 6        | 444370     | 456173      |
| 28/08/02 15:25 | 0.2           | 6.1      | 445909     | 463861      |

# Observed salinity and DO profile

Month: August-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 28/08/02 16:15 | 0.2           | 6.3      | 441956     | 472140      |
| 28/08/02 16:55 | 0.1           | 6.2      | 443192     | 476877      |

## Observed salinity and DO profile

Month: September-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 10/09/02 13:40 | 0.2           | 6.1      | 458464     | 484411      |
| 10/09/02 14:30 | 0.2           | 6.2      | 460821     | 474092      |
| 10/09/02 15:10 | 0.3           | 6.1      | 462838     | 471227      |
| 10/09/02 18:00 | 0.3           | 5.9      | 466359     | 472197      |
| 10/09/02 19:00 | 0.2           | 6.2      | 469635     | 462966      |
| 10/09/02 19:30 | 0.2           | 6.3      | 470691     | 458518      |
| 10/09/02 20:00 | 0.3           | 6.3      | 468693     | 455570      |
| 10/09/02 20:54 | 0.2           | 6.2      | 470497     | 446656      |
| 11/09/02 8:45  | 0.2           | 6.1      | 473953     | 447461      |
| 11/09/02 8:53  | 0.2           | 6.2      | 475087     | 447257      |
| 11/09/02 9:30  | 0.1           | 6.1      | 477211     | 442475      |
| 11/09/02 10:05 | 0.1           | 6.1      | 479873     | 440442      |
| 11/09/02 10:30 | 0.1           | 6.2      | 480493     | 441143      |
| 11/09/02 11:10 | 0.1           | 6.1      | 480348     | 448153      |
| 11/09/02 11:30 | 0.1           | 6.2      | 480546     | 455845      |
| 12/09/02 7:05  | 0.1           | 6.2      | 482226     | 437746      |
| 12/09/02 8:00  | 0.1           | 6.1      | 480155     | 431642      |
| 12/09/02 8:30  | 0.1           | 6.1      | 482610     | 427009      |
| 12/09/02 12:00 | 0.2           | 6.2      | 484288     | 418891      |
| 12/09/02 13:00 | 0.2           | 6.3      | 477770     | 424322      |
| 12/09/02 17:00 | 0.4           | 6.2      | 476449     | 415930      |
| 12/09/02 17:40 | 0.4           | 6.2      | 473954     | 417115      |
| 12/09/02 21:30 | 0.3           | 6.3      | 472279     | 424349      |
| 13/09/02 8:00  | 1.40          | 6.0      | 465504     | 419308      |
| 13/09/02 8:25  | 1.60          | 6.3      | 464405     | 420749      |
| 13/09/02 9:15  | 1.70          | 6.2      | 460719     | 426975      |
| 13/09/02 10:10 | 1.80          | 6.1      | 457207     | 426615      |
| 13/09/02 11:00 | 1.40          | 6.3      | 453221     | 428859      |
| 13/09/02 11:45 | 0.30          | 6.2      | 455672     | 437467      |
| 13/09/02 12:20 | 0.1           | 6.4      | 457537     | 446612      |
| 13/09/02 13:00 | 0.1           | 6.2      | 454127     | 456049      |
| 13/09/02 13:50 | 0.1           | 6.3      | 460698     | 466436      |
| 20/09/02 9:30  | 0.90          | 6.30     | 447391     | 460590      |
| 20/09/02 10:30 | 1.20          | 6.30     | 444620     | 454032      |
| 20/09/02 10:50 | 1.30          | 6.20     | 445879     | 450467      |
| 20/09/02 11:00 | 2.00          | 6.30     | 446492     | 448860      |
| 20/09/02 11:35 | 6.00          | 6.20     | 441704     | 450648      |
| 20/09/02 12:00 | 6.20          | 6.10     | 439828     | 449843      |
| 20/09/02 12:30 | 6.10          | 6.30     | 437441     | 446015      |
| 20/09/02 12:46 | 6.30          | 6.10     | 436692     | 443565      |
| 20/09/02 15:00 | 6.10          | 6.20     | 433205     | 436218      |
| 20/09/02 15:50 | 6.40          | 6.00     | 432846     | 428711      |
| 20/09/02 16:10 | 6.40          | 6.20     | 436254     | 424638      |
| 20/09/02 17:20 | 6.30          | 6.10     | 439942     | 421192      |
| 20/09/02 18:00 | 6.00          | 6.00     | 442012     | 417846      |
| 20/09/02 18:30 | 6.10          | 5.90     | 441161     | 415764      |
| 20/09/02 19:55 | 3.40          | 6.40     | 439962     | 412946      |
| 20/09/02 20:15 | 3.40          | 6.10     | 444473     | 412431      |
| 21/09/02 8:30  | 3.40          | 6.20     | 437141     | 409747      |
| 21/09/02 8:55  | 5.20          | 6.10     | 434177     | 405442      |

## Observed salinity and DO profile

Month: September-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 21/09/02 9:50  | 6.30          | 6.50     | 424550     | 399600      |
| 23/09/02 6:00  | 8.60          | 6.10     | 410516     | 427106      |
| 23/09/02 6:20  | 8.20          | 6.00     | 412163     | 429274      |
| 23/09/02 7:00  | 8.10          | 5.90     | 414179     | 432861      |
| 23/09/02 7:50  | 8.80          | 6.20     | 419034     | 433517      |
| 23/09/02 8:10  | 8.70          | 6.30     | 421615     | 436991      |
| 23/09/02 9:15  | 8.70          | 6.00     | 420203     | 443437      |
| 23/09/02 9:35  | 8.00          | 6.00     | 424334     | 444395      |
| 23/09/02 10:15 | 8.10          | 6.30     | 429029     | 452287      |
| 23/09/02 11:15 | 7.70          | 5.90     | 430500     | 454661      |
| 23/09/02 12:10 | 6.10          | 6.10     | 432090     | 460723      |
| 23/09/02 12:30 | 5.90          | 6.00     | 433470     | 462230      |
| 23/09/02 13:00 | 2.00          | 5.90     | 440837     | 462163      |
| 23/09/02 13:30 | 1.80          | 5.90     | 440207     | 467940      |
| 23/09/02 13:45 | 0.70          | 6.00     | 440888     | 471148      |
| 23/09/02 15:15 | 0.40          | 6.10     | 441983     | 483800      |

## Observed salinity and DO profile

Month:      October-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 13/10/02 7:45  | 0.10          | 6.20     | 481215     | 454719      |
| 13/10/02 8:15  | 0.10          | 6.20     | 481208     | 449111      |
| 13/10/02 9:05  | 0.10          | 6.10     | 480012     | 441088      |
| 13/10/02 10:30 | 0.10          | 6.20     | 482278     | 437986      |
| 13/10/02 11:56 | 0.30          | 6.10     | 483143     | 427267      |
| 13/10/02 12:30 | 0.90          | 6.10     | 481107     | 422362      |
| 13/10/02 12:50 | 1.30          | 6.10     | 483911     | 420514      |
| 13/10/02 16:05 | 1.50          | 6.10     | 479665     | 425924      |
| 13/10/02 16:25 | 1.90          | 6.40     | 477786     | 423676      |
| 13/10/02 17:00 | 2.00          | 6.40     | 477588     | 417404      |
| 13/10/02 17:30 | 2.20          | 6.10     | 476311     | 415469      |
| 14/10/02 11:00 | 4.20          | 6.30     | 473867     | 416432      |
| 14/10/02 11:30 | 1.90          | 6.10     | 472209     | 423648      |
| 14/10/02 12:00 | 1.80          | 6.20     | 470535     | 430256      |
| 14/10/02 12:40 | 0.20          | 6.10     | 468814     | 430259      |
| 14/10/02 13:15 | 0.90          | 6.40     | 467355     | 423713      |
| 14/10/02 13:50 | 0.30          | 6.50     | 465796     | 419141      |
| 14/10/02 14:25 | 0.20          | 6.10     | 463601     | 423149      |
| 14/10/02 15:10 | 0.20          | 6.40     | 458378     | 426704      |
| 14/10/02 15:30 | 0.40          | 6.60     | 452192     | 429969      |
| 14/10/02 16:25 | 0.80          | 6.30     | 454889     | 440421      |
| 14/10/02 17:20 | 0.1           | 6.4      | 457537     | 446612      |
| 14/10/02 17:55 | 0.1           | 6.2      | 454127     | 456049      |
| 14/10/02 18:50 | 0.1           | 6.3      | 460698     | 466436      |
| 21/10/02 7:15  | 0.20          | 6.20     | 442064     | 482416      |
| 21/10/02 7:45  | 0.30          | 6.20     | 442315     | 476290      |
| 21/10/02 8:30  | 0.50          | 6.30     | 441003     | 469561      |
| 21/10/02 8:45  | 1.30          | 6.00     | 439294     | 467224      |
| 21/10/02 9:40  | 2.40          | 6.10     | 440200     | 461778      |
| 21/10/02 10:05 | 3.00          | 6.30     | 436473     | 461683      |
| 21/10/02 10:20 | 4.60          | 6.00     | 435085     | 462426      |
| 21/10/02 10:30 | 5.90          | 5.90     | 433452     | 461824      |
| 21/10/02 11:05 | 7.50          | 5.90     | 432992     | 458727      |
| 21/10/02 11:40 | 7.60          | 6.10     | 430312     | 454864      |
| 21/10/02 13:10 | 7.80          | 6.30     | 424806     | 456698      |
| 21/10/02 13:25 | 7.80          | 6.20     | 422141     | 456268      |
| 21/10/02 14:05 | 7.80          | 6.50     | 417742     | 455940      |
| 21/10/02 14:30 | 7.90          | 6.30     | 416070     | 458071      |
| 21/10/02 15:00 | 8.50          | 6.00     | 413376     | 455577      |
| 21/10/02 15:30 | 9.10          | 6.20     | 408825     | 455861      |
| 21/10/02 16:00 | 9.30          | 6.20     | 405106     | 454555      |
| 22/10/02 15:00 | 9.80          | 5.70     | 409512     | 449990      |
| 22/10/02 15:25 | 10.00         | 5.60     | 410045     | 447053      |
| 22/10/02 16:10 | 9.60          | 5.70     | 412296     | 437539      |
| 22/10/02 17:50 | 9.80          | 5.90     | 414494     | 433800      |
| 22/10/02 18:30 | 9.90          | 6.00     | 413340     | 430374      |
| 23/10/02 7:20  | 9.70          | 6.20     | 411388     | 426050      |
| 23/10/02 8:15  | 10.00         | 6.20     | 417913     | 423044      |
| 23/10/02 8:50  | 10.00         | 6.00     | 417575     | 417585      |

## Observed salinity and DO profile

Month:      **October-02**

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 23/10/02 9:40  | 9.80          | 6.20     | 415080     | 411528      |
| 23/10/02 10:30 | 9.70          | 6.10     | 416310     | 406375      |
| 23/10/02 11:10 | 9.30          | 6.10     | 420293     | 399713      |
| 23/10/02 13:30 | 10.00         | 6.30     | 427184     | 398757      |
| 23/10/02 14:50 | 7.20          | 6.40     | 434453     | 405404      |
| 23/10/02 15:30 | 7.70          | 6.50     | 437542     | 410871      |
| 23/10/02 19:45 | 7.60          | 6.30     | 442753     | 417990      |
| 23/10/02 20:40 | 7.30          | 6.20     | 438045     | 424889      |
| 24/10/02 6:40  | 8.30          | 6.20     | 435980     | 425119      |
| 24/10/02 7:50  | 8.40          | 6.10     | 430000     | 323706      |
| 24/10/02 8:50  | 8.10          | 5.90     | 427626     | 442368      |
| 24/10/02 8:55  | 7.20          | 5.80     | 421718     | 443762      |
| 24/10/02 10:15 | 8.40          | 5.90     | 417114     | 447715      |
| 24/10/02 10:55 | 8.33          | 6.10     | 418719     | 452338      |

## Observed salinity and DO profile

Month: November-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 09/11/02 8:30  | 0.30          | 6.20     | 469635     | 462966      |
| 09/11/02 9:00  | 0.40          | 6.20     | 470691     | 458518      |
| 09/11/02 9:10  | 0.50          | 6.30     | 472109     | 463478      |
| 09/11/02 10:00 | 0.80          | 6.30     | 469088     | 455753      |
| 09/11/02 10:55 | 1.20          | 6.10     | 470324     | 446158      |
| 10/11/02 15:15 | 0.70          | 6.30     | 473718     | 450690      |
| 10/11/02 15:30 | 0.80          | 6.40     | 473895     | 453715      |
| 10/11/02 16:30 | 0.90          | 6.50     | 480829     | 448429      |
| 12/11/02 7:45  | 0.50          | 6.40     | 482364     | 437875      |
| 12/11/02 8:35  | 1.50          | 6.30     | 480137     | 431237      |
| 12/11/02 9:30  | 2.40          | 6.30     | 482523     | 426880      |
| 12/11/02 13:15 | 5.20          | 6.40     | 478701     | 425428      |
| 12/11/02 13:40 | 6.30          | 6.50     | 478112     | 422919      |
| 12/11/02 14:20 | 6.70          | 6.50     | 476000     | 415082      |
| 13/11/02 9:40  | 5.20          | 6.40     | 473210     | 415087      |
| 13/11/02 10:40 | 4.00          | 6.20     | 472287     | 418760      |
| 13/11/02 11:00 | 4.70          | 6.20     | 471660     | 424461      |
| 13/11/02 11:25 | 5.20          | 6.20     | 468227     | 429264      |
| 13/11/02 12:00 | 6.80          | 6.30     | 464490     | 420472      |
| 13/11/02 13:00 | 9.50          | 6.30     | 463106     | 424700      |
| 13/11/02 13:50 | 8.60          | 6.20     | 458411     | 426446      |
| 13/11/02 15:00 | 6.10          | 6.20     | 459552     | 435003      |
| 13/11/02 15:20 | 6.20          | 6.30     | 455567     | 436951      |
| 13/11/02 16:45 | 4.20          | 6.10     | 455551     | 449329      |
| 13/11/02 18:00 | 0.90          | 6.00     | 460576     | 465532      |
| 23/11/02 5:35  | 2.20          | 6.20     | 442081     | 482416      |
| 23/11/02 6:23  | 2.00          | 6.20     | 443443     | 475179      |
| 23/11/02 7:25  | 3.10          | 6.30     | 448117     | 461898      |
| 23/11/02 8:20  | 3.90          | 6.10     | 444226     | 454273      |
| 23/11/02 8:52  | 4.50          | 6.20     | 446370     | 448399      |
| 23/11/02 11:00 | 7.50          | 6.30     | 439828     | 449843      |
| 23/11/02 11:34 | 8.10          | 6.30     | 437234     | 445942      |
| 23/11/02 11:55 | 10.30         | 6.30     | 436673     | 443085      |
| 23/11/02 14:35 | 11.20         | 6.20     | 435504     | 438994      |
| 23/11/02 15:52 | 12.10         | 6.20     | 433652     | 428136      |
| 23/11/02 16:15 | 13.20         | 6.40     | 436339     | 424472      |
| 24/11/02 5:00  | 13.40         | 6.20     | 439085     | 422321      |
| 24/11/02 8:00  | 13.60         | 6.30     | 439684     | 412338      |
| 24/11/02 9:00  | 16.70         | 6.50     | 433660     | 405297      |
| 24/11/02 11:15 | 16.60         | 6.40     | 425996     | 399058      |
| 24/11/02 11:55 | 17.00         | 6.40     | 419902     | 400932      |
| 24/11/02 12:50 | 14.30         | 6.00     | 415240     | 412413      |
| 24/11/02 13:50 | 12.50         | 6.30     | 416798     | 423788      |
| 24/11/02 14:30 | 11.20         | 6.10     | 413735     | 424007      |
| 25/11/02 9:50  | 11.10         | 6.10     | 412310     | 427705      |
| 25/11/02 10:25 | 11.00         | 6.20     | 413898     | 434892      |
| 25/11/02 11:00 | 10.90         | 6.00     | 418950     | 433776      |
| 25/11/02 11:35 | 10.20         | 6.00     | 422013     | 440808      |
| 25/11/02 12:00 | 9.80          | 6.10     | 419373     | 442574      |
| 25/11/02 12:55 | 8.60          | 6.20     | 414447     | 440977      |

## Observed salinity and DO profile

Month: **November-02**

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 25/11/02 13:32 | 8.80          | 6.20     | 409201     | 446726      |
| 25/11/02 14:10 | 8.60          | 6.00     | 408688     | 450050      |
| 25/11/02 16:15 | 8.20          | 6.10     | 405467     | 454516      |
| 25/11/02 16:50 | 9.90          | 6.10     | 409075     | 454549      |
| 25/11/02 17:15 | 9.00          | 6.20     | 412137     | 455215      |
| 25/11/02 18:00 | 9.40          | 6.30     | 415932     | 458053      |
| 25/11/02 18:40 | 9.20          | 6.00     | 417657     | 462638      |
| 26/11/02 8:50  | 8.30          | 6.20     | 421902     | 460015      |
| 26/11/02 10:20 | 8.70          | 6.10     | 428860     | 456753      |
| 26/11/02 11:00 | 7.90          | 6.10     | 432435     | 457180      |
| 26/11/02 11:30 | 7.00          | 6.20     | 433313     | 461548      |
| 26/11/02 12:15 | 4.40          | 6.20     | 439752     | 461300      |
| 26/11/02 12:45 | 3.60          | 6.30     | 439682     | 465489      |
| 26/11/02 13:18 | 2.60          | 6.20     | 441304     | 472013      |



## Observed salinity and DO profile

Month: December-02

| Date & time    | Salinity(ρot) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 13/12/02 9:25  | 1.10          | 6.90     | 463615     | 473144      |
| 13/12/02 11:15 | 1.40          | 6.80     | 469763     | 466766      |
| 13/12/02 11:50 | 1.90          | 6.80     | 473086     | 462867      |
| 13/12/02 12:30 | 2.50          | 6.60     | 469277     | 455716      |
| 13/12/02 13:25 | 2.60          | 6.60     | 470429     | 446970      |
| 13/12/02 14:45 | 2.40          | 6.70     | 474365     | 447387      |
| 13/12/02 15:20 | 2.00          | 6.50     | 477023     | 442808      |
| 13/12/02 15:45 | 2.10          | 6.60     | 479942     | 440498      |
| 13/12/02 16:15 | 2.00          | 6.60     | 483010     | 446858      |
| 13/12/02 17:00 | 1.40          | 6.50     | 480632     | 455698      |
| 15/12/02 8:20  | 1.40          | 6.60     | 482723     | 436491      |
| 15/12/02 9:10  | 1.80          | 6.50     | 481907     | 429943      |
| 15/12/02 9:55  | 2.40          | 6.60     | 480335     | 424319      |
| 15/12/02 10:30 | 2.50          | 6.70     | 480439     | 425351      |
| 15/12/02 15:30 | 5.30          | 6.80     | 477769     | 423658      |
| 15/12/02 15:55 | 8.70          | 6.70     | 477744     | 418345      |
| 15/12/02 16:15 | 10.60         | 6.60     | 477744     | 418456      |
| 16/12/02 7:05  | 11.50         | 6.60     | 474527     | 409458      |
| 16/12/02 9:15  | 14.30         | 6.70     | 465753     | 415415      |
| 16/12/02 10:10 | 14.50         | 6.60     | 465418     | 419474      |
| 16/12/02 11:55 | 15.00         | 6.06     | 462660     | 425550      |
| 16/12/02 15:05 | 15.00         | 6.50     | 456690     | 426285      |
| 16/12/02 15:55 | 10.00         | 6.50     | 453157     | 430372      |
| 16/12/02 16:50 | 6.30          | 6.40     | 454906     | 440421      |
| 16/12/02 17:48 | 2.60          | 6.50     | 456824     | 450082      |
| 16/12/02 18:30 | 2.00          | 6.40     | 457655     | 458585      |
| 16/12/02 19:40 | 1.60          | 6.60     | 461525     | 467688      |
| 23/12/02 9:25  | 4.60          | 6.40     | 443409     | 475197      |
| 23/12/02 11:00 | 6.80          | 6.40     | 447598     | 460885      |
| 23/12/02 12:20 | 10.30         | 6.50     | 445690     | 450320      |
| 23/12/02 13:00 | 11.00         | 6.50     | 441807     | 450685      |
| 23/12/02 13:40 | 12.40         | 6.40     | 439707     | 449825      |
| 23/12/02 14:26 | 13.60         | 6.20     | 436777     | 443491      |
| 23/12/02 15:15 | 14.00         | 6.30     | 435278     | 438516      |
| 23/12/02 18:00 | 15.20         | 6.40     | 436425     | 424269      |
| 24/12/02 6:00  | 14.30         | 6.40     | 438948     | 422488      |
| 24/12/02 8:00  | 15.70         | 6.60     | 441309     | 413882      |
| 24/12/02 13:00 | 17.80         | 6.40     | 434040     | 405424      |
| 24/12/02 16:20 | 19.40         | 6.00     | 426512     | 398797      |
| 24/12/02 17:05 | 19.70         | 6.10     | 420068     | 399695      |
| 24/12/02 17:55 | 19.00         | 6.10     | 416975     | 405024      |
| 24/12/02 18:50 | 18.80         | 6.20     | 415672     | 412817      |
| 24/12/02 20:05 | 16.30         | 6.10     | 418206     | 423043      |
| 25/12/02 11:25 | 15.30         | 6.10     | 494863     | 426982      |
| 25/12/02 12:15 | 14.00         | 6.00     | 412655     | 437205      |
| 25/12/02 14:30 | 14.10         | 6.00     | 414739     | 440828      |
| 25/12/02 15:00 | 13.50         | 6.10     | 410103     | 445023      |
| 25/12/02 16:00 | 12.70         | 6.30     | 407918     | 450682      |
| 26/12/02 13:30 | 12.00         | 6.00     | 408839     | 455363      |
| 26/12/02 14:05 | 12.30         | 5.90     | 413584     | 455889      |

## Observed salinity and DO profile

Month: December-02

| Date & time    | Salinity(ppt) | DO(mg/l) | Easting(m) | Northing(m) |
|----------------|---------------|----------|------------|-------------|
| 26/12/02 14:35 | 11.40         | 5.90     | 415932     | 458053      |
| 26/12/02 15:10 | 11.20         | 6.10     | 417640     | 462712      |
| 26/12/02 15:50 | 10.90         | 6.00     | 421988     | 459885      |
| 26/12/02 16:40 | 11.90         | 6.10     | 428758     | 456809      |
| 26/12/02 17:30 | 10.80         | 5.90     | 432625     | 457326      |
| 26/12/02 18:05 | 8.00          | 5.80     | 434845     | 462317      |
| 26/12/02 18:45 | 7.50          | 5.90     | 440889     | 462255      |
| 26/12/02 19:20 | 6.40          | 6.00     | 439397     | 467298      |
| 26/12/02 20:05 | 4.30          | 6.20     | 442803     | 473724      |
| 26/12/02 21:40 | 3.70          | 6.50     | 442047     | 482453      |

Static Profile (Patkosta)

|                |       |      |       |    |          |       |
|----------------|-------|------|-------|----|----------|-------|
| 14/04/02 17:30 | 21.60 | 5.70 | 29.00 | 85 | Patkosta | Ebb   |
| 14/04/02 18:00 | 21.60 | 5.20 | 29.00 | 87 | Patkosta | Ebb   |
| 14/04/02 18:30 | 21.40 | 5.30 | 28.70 | 86 | Patkosta | Slack |
| 14/04/02 19:00 | 21.50 | 5.40 | 28.70 | 87 | Patkosta | Flood |
| 14/04/02 19:30 | 21.60 | 5.60 | 28.80 | 87 | Patkosta | Flood |
| 14/04/02 20:00 | 21.80 | 5.90 | 28.70 | 89 | Patkosta | Flood |
| 14/04/02 20:30 | 21.80 | 5.60 | 28.70 | 86 | Patkosta | Flood |
| 14/04/02 21:00 | 21.90 | 5.60 | 28.60 | 87 | Patkosta | Flood |
| 14/04/02 21:30 | 21.80 | 5.80 | 28.70 | 87 | Patkosta | Flood |
| 14/04/02 22:00 | 22.20 | 5.60 | 28.50 | 84 | Patkosta | Flood |
| 14/04/02 22:30 | 22.30 | 5.70 | 28.80 | 86 | Patkosta | Flood |

NH<sub>3</sub>-N observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.100  |        | 0.003  | 0.029  | 0.010  | 0.002  | 0.003  | 0.009  | 0.090  | 0.007  | 0.010  | 0.033  | 0.002  | 0.019  | 0.028  | 0.048  |
| Harintana     | 0.150  |        | 0.003  | 0.013  | 0.002  | 0.002  | 0.003  | 0.002  | 0.020  | 0.003  | 0.003  | 0.030  | 0.009  | 0.008  | 0.033  | 0.017  |
| Dudmukhi      | 0.110  |        | 0.003  | 0.008  | 0.030  | 0.001  | 0.003  | 0.003  | 0.015  | 0.008  | 0.003  | 0.045  | 0.010  | 0.010  | 0.010  | 0.005  |
| Shwarankhola  | 0.030  |        | 0.020  | 0.033  | 0.002  | 0.001  | 0.004  | 0.001  | 0.014  | 0.004  | 0.021  | 0.012  | 0.006  | 0.010  | 0.008  | 0.001  |
| Jafa          | 0.250  |        | 0.007  | 0.019  | 0.040  | 0.003  | 0.005  | 0.003  | 0.150  | 0.044  | 0.003  | 0.059  | 0.011  | 0.040  | 0.230  | 0.119  |
| Mrigamari     | 0.180  |        | 0.003  | 0.005  | 0.010  | 0.004  | 0.003  | 0.005  | 0.050  | 0.005  | 0.002  | 0.017  | 0.008  | 0.008  | 0.013  | 0.004  |
| Nalianala     |        | 0.250  | 0.004  | 0.050  | 0.003  | 0.002  | 0.005  | 0.018  | 0.030  | 0.012  | 0.025  | 0.061  | 0.005  | 0.070  | 0.050  |        |
| Arpangasia    |        | 0.250  | 0.010  | 0.050  | 0.040  | 0.001  | 0.009  | 0.009  | 0.060  | 0.085  | 0.024  | 0.098  | 0.090  | 0.019  | 0.215  |        |
| Bal           |        | 0.250  | 0.010  | 0.060  | 0.002  | 0.002  | 0.010  | 0.012  | 0.120  | 0.055  | 0.022  | 0.045  | 0.330  | 0.018  | 0.121  |        |
| Malancha      |        | 0.230  | 0.200  | 0.010  | 0.002  | 0.005  | 0.009  | 0.010  | 0.160  | 0.074  | 0.032  | 0.166  | 0.082  | 0.012  | 0.107  |        |
| Dingimari     |        | 0.270  | 0.005  | 0.030  | 0.010  | 0.002  | 0.009  | 0.012  | 0.090  | 0.034  | 0.013  | 0.097  | 0.098  | 0.058  | 0.051  |        |
| Kaikhali      | 0.010  |        | 0.040  | 0.010  | 0.002  |        | 0.007  | 0.018  | 0.020  | 0.098  | 0.042  | 0.103  | 0.097  | 0.019  | 0.098  |        |
| Kobadak       | 0.010  |        | 0.020  | 0.010  | 0.010  | 0.004  | 0.008  | 0.009  | 0.150  | 0.079  | 0.032  | 0.089  | 0.082  | 0.045  | 0.020  |        |
| Katka         |        |        |        |        |        |        | 0.008  | 0.005  | 0.090  | 0.001  | 0.003  | 0.046  | 0.004  | 0.043  | 0.138  | 0.044  |
| Hiron Point   |        |        |        |        |        |        | 0.008  | 0.009  | 0.180  | 0.045  | 0.017  | 0.061  | 0.066  | 0.244  | 0.067  |        |
| Mandarbaria   |        |        |        |        |        | 0.003  | 0.008  | 0.010  |        | 0.099  | 0.019  | 0.032  | 0.165  | 0.066  | 0.126  |        |
| Maximum       | 0.250  | 0.270  | 0.200  | 0.060  | 0.040  | 0.005  | 0.010  | 0.018  | 0.180  | 0.099  | 0.042  | 0.166  | 0.330  | 0.244  | 0.230  | 0.119  |
| Minimum       | 0.010  | 0.230  | 0.003  | 0.005  | 0.002  | 0.001  | 0.003  | 0.001  | 0.014  | 0.001  | 0.002  | 0.012  | 0.002  | 0.008  | 0.008  | 0.001  |
| Average       | 0.105  | 0.250  | 0.025  | 0.025  | 0.013  | 0.002  | 0.006  | 0.008  | 0.083  | 0.041  | 0.017  | 0.062  | 0.067  | 0.043  | 0.082  | 0.034  |

NH<sub>4</sub>-N observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 1.79   |        | 0.24   | 0.29   | 1.00   | 2.27   | 3.45   | 5.60   | 2.79   | 0.22   | 0.21   | 0.07   | 0.30   | 0.32   | 0.57   | 1.06   |
| Hanntana      | 2.65   |        | 0.29   | 1.22   | 1.27   | 1.79   | 2.27   | 1.53   | 0.56   | 0.29   | 0.19   | 0.67   | 0.40   | 0.30   | 0.70   | 1.20   |
| Dudmukhi      | 2.00   |        | 0.25   | 0.72   | 0.66   | 1.56   | 1.81   | 0.81   | 0.24   | 0.26   | 0.27   | 0.70   | 0.45   | 0.39   | 0.26   | 0.91   |
| Shwarankhola  | 0.50   |        | 1.70   | 3.20   | 0.27   | 0.49   | 0.89   | 0.21   | 0.23   | 0.30   | 0.24   | 0.62   | 0.32   | 0.34   | 0.15   | 0.17   |
| Jafa          |        | 4.58   | 0.64   | 1.81   | 1.88   | 5.75   | 4.60   | 2.55   | 2.72   | 2.53   | 0.27   | 0.83   | 0.66   | 1.80   | 4.39   | 4.83   |
| Mrigamari     |        | 2.98   | 0.35   | 0.04   | 0.91   | 2.23   | 2.81   | 4.52   | 1.89   | 0.28   | 0.18   | 0.60   | 0.34   | 0.39   | 0.26   | 0.95   |
| Nalianala     |        | 4.17   | 0.35   | 0.77   | 2.99   | 0.68   | 5.42   | 6.60   | 5.75   | 0.38   | 0.49   | 0.93   | 0.31   | 2.43   | 1.18   |        |
| Arpangasia    |        | 4.25   | 1.06   | 2.03   | 4.17   | 0.13   | 5.67   | 2.91   | 5.69   | 3.25   | 1.11   | 1.40   | 1.31   | 2.81   | 3.48   |        |
| Bal           |        | 4.26   | 1.43   | 1.92   | 5.79   | 0.92   | 5.64   | 6.24   | 5.65   | 3.52   | 1.17   | 0.70   | 1.98   | 2.73   | 2.71   |        |
| Malancha      |        | 3.98   | 0.96   | 4.45   | 5.57   | 1.08   | 5.59   | 3.50   | 5.58   | 4.01   | 2.74   | 1.51   | 1.90   | 2.48   | 3.32   |        |
| Dingimari     |        | 4.61   | 0.35   | 2.02   | 4.36   | 0.99   | 5.70   | 5.86   | 5.67   | 5.25   | 1.00   | 2.35   | 2.43   | 2.32   | 3.58   |        |
| Kaikhali      | 0.19   |        | 3.44   | 1.00   | 5.42   |        | 5.88   | 6.74   | 1.54   | 4.58   | 2.42   | 2.52   | 2.44   | 2.18   | 2.94   |        |
| Kobadak       | 0.20   |        | 1.36   | 0.95   | 4.36   | 0.99   | 5.70   | 4.49   | 5.61   | 4.97   | 2.17   | 1.33   | 1.42   | 1.59   | 3.40   |        |
| Katka         |        |        |        |        |        |        | 4.71   | 2.54   | 2.37   | 0.62   | 0.37   | 0.71   | 0.39   | 1.70   | 2.50   | 2.84   |
| Hiron Point   |        |        |        |        |        |        | 5.68   | 4.09   | 4.05   | 2.29   | 0.45   | 0.93   | 1.59   | 4.54   | 3.44   |        |
| Mandarbaria   |        |        |        |        |        | 1.71   | 5.75   | 5.08   |        | 3.55   | 1.19   | 0.44   | 2.71   | 4.86   | 3.18   |        |
| Maximum       | 2.65   | 4.61   | 3.44   | 4.45   | 5.79   | 5.75   | 5.88   | 6.74   | 5.75   | 5.25   | 2.74   | 2.52   | 2.71   | 4.86   | 4.39   | 4.83   |
| Minimum       | 0.19   | 2.98   | 0.24   | 0.04   | 0.27   | 0.13   | 0.89   | 0.21   | 0.23   | 0.22   | 0.18   | 0.07   | 0.30   | 0.30   | 0.15   | 0.17   |
| Average       | 1.22   | 4.12   | 0.96   | 1.57   | 2.97   | 1.58   | 4.47   | 3.95   | 3.36   | 2.27   | 0.90   | 1.02   | 1.18   | 1.95   | 2.25   | 1.71   |

Total ammonia observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 1.89   |        | 0.24   | 0.32   | 1.01   | 2.27   | 3.45   | 5.61   | 2.88   | 0.22   | 0.22   | 0.10   | 0.30   | 0.34   | 0.60   | 1.11   |
| Harintana     | 2.80   |        | 0.29   | 1.23   | 1.27   | 1.79   | 2.27   | 1.53   | 0.58   | 0.30   | 0.20   | 0.70   | 0.41   | 0.31   | 0.73   | 1.22   |
| Dudmukhi      | 2.11   |        | 0.25   | 0.73   | 0.69   | 1.56   | 1.82   | 0.81   | 0.26   | 0.27   | 0.27   | 0.74   | 0.46   | 0.40   | 0.27   | 0.92   |
| Shwarankhola  | 0.53   |        | 1.72   | 3.23   | 0.27   | 0.49   | 0.89   | 0.21   | 0.24   | 0.30   | 0.26   | 0.63   | 0.32   | 0.35   | 0.16   | 0.17   |
| Jafa          |        | 4.83   | 0.65   | 1.83   | 1.92   | 5.75   | 4.61   | 2.55   | 2.87   | 2.58   | 0.27   | 0.89   | 0.67   | 1.84   | 4.62   | 4.95   |
| Mrigamari     |        | 3.16   | 0.35   | 0.05   | 0.92   | 2.23   | 2.81   | 4.52   | 1.94   | 0.28   | 0.18   | 0.62   | 0.35   | 0.40   | 0.27   | 0.95   |
| Nalianala     |        | 4.42   | 0.35   | 0.82   | 2.99   | 0.68   | 5.42   | 6.62   | 5.78   | 0.39   | 0.51   | 0.99   | 0.32   | 2.50   | 1.23   |        |
| Arpangasia    |        | 4.50   | 1.07   | 2.08   | 4.21   | 0.13   | 5.68   | 2.92   | 5.75   | 3.33   | 1.13   | 1.50   | 1.40   | 2.83   | 3.70   |        |
| Bal           |        | 4.51   | 1.44   | 1.98   | 5.80   | 0.92   | 5.65   | 6.25   | 5.77   | 3.58   | 1.19   | 0.74   | 2.31   | 2.75   | 2.83   |        |
| Malancha      |        | 4.21   | 1.16   | 4.46   | 5.58   | 1.09   | 5.60   | 3.51   | 5.74   | 4.09   | 2.78   | 1.68   | 1.98   | 2.49   | 3.42   |        |
| Dingimari     |        | 4.88   | 0.36   | 2.05   | 4.37   | 0.99   | 5.71   | 5.87   | 5.76   | 5.29   | 1.01   | 2.45   | 2.53   | 2.38   | 3.63   |        |
| Kaikhali      | 0.20   |        | 3.48   | 1.01   | 5.42   |        | 5.89   | 6.76   | 1.56   | 4.68   | 2.46   | 2.62   | 2.54   | 2.20   | 3.04   |        |
| Kobadak       | 0.21   |        | 1.38   | 0.96   | 4.37   | 1.00   | 5.71   | 4.50   | 5.76   | 5.05   | 2.21   | 1.42   | 1.51   | 1.63   | 3.42   |        |
| Katka         |        |        |        |        |        |        | 4.71   | 2.55   | 2.46   | 0.62   | 0.37   | 0.76   | 0.40   | 1.74   | 2.64   | 2.89   |
| Hiron Point   |        |        |        |        |        |        | 5.69   | 4.10   | 4.23   | 2.33   | 0.47   | 1.00   | 1.66   | 4.79   | 3.50   |        |
| Mandarbaria   |        |        |        |        |        | 1.71   | 5.76   | 5.09   |        | 3.65   | 1.21   | 0.47   | 2.88   | 4.93   | 3.30   |        |
| Maximum       | 2.80   | 4.88   | 3.48   | 4.46   | 5.80   | 5.75   | 5.89   | 6.76   | 5.78   | 5.29   | 2.78   | 2.62   | 2.88   | 4.93   | 4.62   | 4.95   |
| Minimum       | 0.20   | 3.16   | 0.24   | 0.05   | 0.27   | 0.13   | 0.89   | 0.21   | 0.24   | 0.22   | 0.18   | 0.10   | 0.30   | 0.31   | 0.16   | 0.17   |
| Average       | 1.29   | 4.36   | 0.98   | 1.60   | 2.99   | 1.58   | 4.48   | 3.96   | 3.44   | 2.31   | 0.92   | 1.08   | 1.25   | 1.99   | 2.34   | 1.74   |

NO<sub>3</sub>-N observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.20   |        | 0.20   | 0.20   | 0.30   | 0.20   | 0.40   | 0.40   | 2.00   | 1.10   | 0.50   | 1.00   | 0.50   | 1.00   | 0.40   | 0.20   |
| Harintana     | 0.30   |        | 0.10   | 0.20   | 0.40   | 0.20   | 0.30   | 0.30   | 1.10   | 1.20   | 0.40   | 0.66   | 0.70   | 0.50   | 0.50   | 0.60   |
| Dudmukhi      | 0.30   |        | 0.20   | 0.20   | 0.40   | 0.20   | 0.20   | 0.30   | 0.70   | 0.70   | 0.20   | 0.30   | 0.50   | 0.30   | 0.10   | 0.60   |
| Shwarankhola  | 0.20   |        | 0.20   | 0.10   | 0.30   | 0.20   | 0.30   | 0.10   | 1.10   | 1.10   | 0.30   | 0.50   | 0.50   | 0.30   | 0.40   | 0.60   |
| Jafa          |        | 0.30   | 0.20   | 0.20   | 0.30   | 0.30   | 0.30   | 0.40   | 1.50   | 1.30   | 0.50   | 0.40   | 0.50   | 0.50   | 0.30   | 0.70   |
| Mrigamari     |        | 0.40   | 0.60   | 0.20   | 0.20   | 0.30   | 0.40   | 0.40   | 1.50   | 0.60   | 0.30   | 0.10   | 0.30   | 0.80   | 0.20   | 1.00   |
| Nalianala     |        | 0.30   | 0.20   | 0.30   | 0.20   | 0.80   | 0.50   | 0.40   | 0.70   | 0.20   | 0.50   | 0.10   | 0.60   | 0.30   | 0.50   |        |
| Arpangasia    |        | 0.20   | 0.30   | 0.30   | 0.30   | 0.80   | 0.60   | 0.30   | 0.60   | 0.40   | 0.70   | 0.40   | 0.40   | 0.30   | 0.50   |        |
| Bal           |        | 0.20   | 0.30   | 0.30   | 0.40   | 0.70   | 0.50   | 0.30   | 0.50   | 0.50   | 1.00   | 0.30   | 0.80   | 0.40   | 1.30   |        |
| Malancha      |        | 0.30   | 0.30   | 0.30   | 0.40   | 0.70   | 0.50   | 0.40   | 0.30   | 0.60   | 0.70   | 0.20   | 0.50   | 0.30   | 0.70   |        |
| Dingimari     |        | 0.30   | 0.30   | 0.20   | 0.30   | 0.80   | 0.45   | 0.20   | 0.60   | 0.50   | 0.60   | 0.30   | 0.70   | 0.40   | 0.80   |        |
| Kaikhali      | 0.30   |        | 0.40   | 0.40   | 0.30   |        | 0.30   | 0.20   | 0.40   | 0.80   | 0.40   | 0.40   | 0.90   | 0.40   | 0.40   |        |
| Kobadak       | 0.40   |        | 0.30   | 0.30   | 0.40   | 0.90   | 0.50   | 0.20   | 0.60   | 0.70   | 0.80   | 0.30   | 0.80   | 0.40   | 0.70   |        |
| Katka         |        |        |        |        |        |        | 0.20   | 0.40   | 1.90   | 1.40   | 0.40   | 0.50   | 0.40   | 0.40   | 0.40   | 0.60   |
| Hiron Point   |        |        |        |        |        |        | 0.50   | 0.30   | 0.40   | 0.40   | 0.40   | 0.20   | 0.60   | 0.90   | 0.50   |        |
| Mandarbaria   |        |        |        |        |        | 0.90   | 0.50   | 0.30   |        | 0.60   | 0.60   | 0.30   | 0.60   | 0.30   | 0.10   |        |
| Maximum       | 0.40   | 0.40   | 0.60   | 0.40   | 0.40   | 0.90   | 0.60   | 0.40   | 2.00   | 1.40   | 1.00   | 1.00   | 0.90   | 1.00   | 1.30   | 1.00   |
| Minimum       | 0.20   | 0.20   | 0.10   | 0.10   | 0.20   | 0.20   | 0.20   | 0.10   | 0.30   | 0.20   | 0.20   | 0.10   | 0.30   | 0.30   | 0.10   | 0.20   |
| Average       | 0.28   | 0.29   | 0.28   | 0.25   | 0.32   | 0.54   | 0.40   | 0.31   | 0.93   | 0.76   | 0.52   | 0.37   | 0.58   | 0.47   | 0.49   | 0.61   |

PO<sub>4</sub>-P observed (in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.16   |        | 0.188  | 0.124  | 0.157  | 0.145  | 0.109  | 0.119  | 0.089  | 0.219  | 0.07   | 0.088  | 0.064  | 0.114  | 0.04   | 0.088  |
| Harintana     | 0.14   |        | 0.151  | 0.13   | 0.078  | 0.143  | 0.112  | 0.114  | 0.067  | 0.08   | 0.046  | 0.107  | 0.132  | 0.055  | 0.11   | 0.099  |
| Dudmukhi      | 0.16   |        | 0.15   | 0.147  | 0.137  | 0.182  | 0.1    | 0.108  | 0.275  | 0.056  | 0.009  | 0.084  | 0.172  | 0.059  | 0.11   | 0.104  |
| Shwarankhola  | 0.12   |        | 0.249  | 0.445  | 0.142  | 0.252  | 0.121  | 0.085  | 0.073  | 0.101  | 0.06   | 0.061  | 0.125  | 0.098  | 0.07   | 0.08   |
| Jafa          |        | 0.18   | 0.18   | 0.098  | 0.176  | 0.148  | 0.116  | 0.054  | 0.094  | 0.102  | 0.068  | 0.077  | 0.087  | 0.078  | 0.06   | 0.087  |
| Mrigamari     |        | 0.22   | 0.156  | 0.132  | 0.145  | 0.171  | 0.107  | 0.129  | 0.112  | 0.093  | 0.055  | 0.068  | 0.134  | 0.11   | 0.11   | 0.07   |
| Nalianala     |        | 0.15   | 0.174  | 0.224  | 0.078  | 0.158  | 0.108  | 0.113  | 0.118  | 0.062  | 0.169  | 0.15   | 0.109  | 0.047  | 0.07   |        |
| Arpangasia    |        | 0.2    | 0.135  | 0.119  | 0.087  | 0.133  | 0.089  | 0.106  | 0.06   | 0.069  | 0.093  | 0.18   | 0.059  | 0.058  | 0.05   |        |
| Bal           |        | 0.4    | 0.18   | 0.126  | 0.107  | 0.139  | 0.092  | 0.114  | 0.073  | 0.065  | 0.102  | 0.16   | 0.082  | 0.07   | 0.05   |        |
| Malancha      |        | 0.18   | 0.136  | 0.582  | 0.101  | 0.145  | 0.065  | 0.313  | 0.069  | 0.065  | 0.111  | 0.05   | 0.087  | 0.026  | 0.04   |        |
| Dingimari     |        | 0.21   | 0.124  | 0.156  | 0.103  | 0.105  | 0.086  | 0.089  | 0.067  | 0.056  | 0.091  | 0.07   | 0.076  | 0.035  | 0.06   |        |
| Kaikhali      | 0.12   |        | 0.164  | 0.17   | 0.131  |        | 0.043  | 0.087  | 0.06   | 0.055  | 0.068  | 0.04   | 0.118  | 0.067  | 0.07   |        |
| Kobadak       | 0.09   |        | 0.139  | 0.137  | 0.072  | 0.127  | 0.078  | 0.095  | 0.132  | 0.071  | 0.09   | 0.04   | 0.106  | 0.081  | 0.04   |        |
| Katka         |        |        |        |        |        |        | 0.052  | 0.134  | 0.079  | 0.093  | 0.059  | 0.071  | 0.111  | 0.046  | 0.05   | 0.098  |
| Hiron Point   |        |        |        |        |        |        | 0.053  | 0.109  | 0.077  | 0.07   | 0.116  | 0.06   | 0.108  | 0.07   | 0.06   |        |
| Mandarbaria   |        |        |        |        |        | 0.126  | 0.076  | 0.099  |        | 0.06   | 0.075  | 0.06   | 0.076  | 0.043  | 0.05   |        |
| Maximum       | 0.160  | 0.400  | 0.249  | 0.582  | 0.176  | 0.252  | 0.121  | 0.313  | 0.275  | 0.219  | 0.169  | 0.180  | 0.172  | 0.114  | 0.110  | 0.104  |
| Minimum       | 0.090  | 0.150  | 0.124  | 0.098  | 0.072  | 0.105  | 0.043  | 0.054  | 0.060  | 0.055  | 0.009  | 0.040  | 0.059  | 0.026  | 0.040  | 0.070  |
| Average       | 0.132  | 0.220  | 0.164  | 0.199  | 0.116  | 0.152  | 0.088  | 0.117  | 0.096  | 0.082  | 0.080  | 0.085  | 0.103  | 0.066  | 0.065  | 0.089  |



Lead observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.360  |        | 0.022  | 0.019  | 0.024  | 0.057  | 0.037  | 0.025  | 0.003  | 0.026  | 0.015  | 0.008  | 0.044  | 0.031  |
| Harintana     | 0.140  |        | 0.020  | 0.028  | 0.025  | 0.069  | 0.039  | 0.027  | 0.005  | 0.033  | 0.009  | 0.013  | 0.045  | 0.042  |
| Dudmukhi      | 0.111  |        | 0.038  | 0.024  | 0.021  | 0.064  | 0.023  | 0.023  | 0.007  | 0.029  | 0.015  | 0.013  | 0.067  | 0.036  |
| Shwarankhola  | 0.031  |        | 0.036  | 0.011  | 0.014  | 0.045  | 0.009  | 0.025  | 0.005  | 0.032  | 0.010  | 0.012  | 0.045  | 0.037  |
| Jafa          |        | 0.114  | 0.040  | 0.035  | 0.048  | 0.018  | 0.014  | 0.030  | 0.024  | 0.027  | 0.011  | 0.009  | 0.047  | 0.043  |
| Mrigamari     |        | 0.073  | 0.035  | 0.024  | 0.037  | 0.063  | 0.038  | 0.035  | 0.005  | 0.029  | 0.012  | 0.023  | 0.055  | 0.031  |
| Nalianala     |        | 0.131  | 0.038  | 0.023  | 0.004  | 0.078  | 0.020  | 0.030  | 0.009  | 0.030  | 0.005  | 0.009  | 0.032  | 0.030  |
| Arpangasia    |        | 0.076  | 0.083  | 0.054  | 0.008  | 0.062  | 0.023  | 0.024  | 0.028  | 0.032  | 0.033  | 0.024  | 0.035  | 0.038  |
| Bal           |        | 0.128  | 0.090  | 0.061  | 0.034  | 0.017  | 0.023  | 0.020  | 0.020  | 0.020  | 0.006  | 0.005  | 0.035  | 0.030  |
| Malancha      |        | 0.081  | 0.091  | 0.033  | 0.004  | 0.048  | 0.027  | 0.025  | 0.046  | 0.029  | 0.019  | 0.021  | 0.042  | 0.039  |
| Dingimari     |        | 0.114  | 0.070  | 0.019  | 0.002  | 0.033  | 0.035  | 0.027  | 0.043  | 0.023  | 0.017  | 0.019  | 0.040  | 0.044  |
| Kaikhali      | 0.128  |        | 0.086  | 0.028  |        | 0.019  | 0.025  | 0.023  | 0.040  | 0.020  | 0.017  | 0.016  | 0.043  | 0.034  |
| Kobadak       | 0.008  |        | 0.056  | 0.028  | 0.006  | 0.069  | 0.028  | 0.025  | 0.026  | 0.021  | 0.008  | 0.004  | 0.040  | 0.046  |
| Katka         |        |        |        |        |        | 0.065  | 0.034  | 0.023  | 0.003  | 0.024  | 0.016  | 0.023  | 0.053  | 0.041  |
| Hiron Point   |        |        |        |        |        | 0.056  | 0.025  | 0.028  | 0.029  | 0.033  | 0.019  | 0.014  | 0.046  | 0.037  |
| Mandarbaria   |        |        |        |        | 0.006  | 0.045  | 0.021  |        | 0.029  | 0.030  | 0.017  | 0.021  | 0.037  | 0.040  |
| Maximum       | 0.360  | 0.131  | 0.091  | 0.061  | 0.048  | 0.078  | 0.039  | 0.035  | 0.046  | 0.033  | 0.033  | 0.024  | 0.067  | 0.046  |
| Minimum       | 0.008  | 0.073  | 0.020  | 0.011  | 0.002  | 0.017  | 0.009  | 0.020  | 0.003  | 0.020  | 0.005  | 0.004  | 0.032  | 0.030  |
| Average       | 0.130  | 0.102  | 0.054  | 0.030  | 0.018  | 0.051  | 0.026  | 0.026  | 0.020  | 0.027  | 0.014  | 0.015  | 0.044  | 0.037  |

Chromium observed(in.mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.017  |        | 0.014  | 0.005  | 0.008  | 0.006  | 0.008  | 0.005  | 0.007  | 0.006  | 0.016  | 0.010  | 0.008  | 0.002  |
| Harintana     | 0.015  |        | 0.010  | 0.005  | 0.002  | 0.005  | 0.007  | 0.007  | 0.005  | 0.005  | 0.014  | 0.003  | 0.002  | 0.002  |
| Dudmukhi      | 0.011  |        | 0.013  | 0.011  | 0.004  | 0.001  | 0.003  | 0.006  | 0.006  | 0.006  | 0.015  | 0.016  | 0.001  | 0.003  |
| Shwarankhola  | 0.006  |        | 0.037  | 0.004  | 0.002  | 0.004  | 0.001  | 0.006  | 0.006  | 0.006  | 0.016  | 0.005  | 0.003  | 0.002  |
| Jafa          |        | 0.014  | 0.048  | 0.010  | 0.010  | 0.002  | 0.005  | 0.007  | 0.007  | 0.006  | 0.015  | 0.005  | 0.006  | 0.003  |
| Mrigamari     |        | 0.008  | 0.032  | 0.005  | 0.006  | 0.006  | 0.002  | 0.006  | 0.006  | 0.006  | 0.012  | 0.004  | 0.002  | 0.003  |
| Nalianala     |        | 0.018  | 0.016  | 0.002  | 0.071  | 0.003  | 0.005  | 0.006  | 0.006  | 0.006  | 0.006  | 0.008  | 0.003  | 0.003  |
| Arpangasia    |        | 0.008  | 0.016  | 0.008  | 0.073  | 0.002  | 0.006  | 0.006  | 0.005  | 0.005  | 0.007  | 0.001  | 0.003  | 0.004  |
| Bal           |        | 0.019  | 0.016  | 0.007  | 0.013  | 0.004  | 0.007  | 0.005  | 0.006  | 0.004  | 0.006  | 0.003  | 0.002  | 0.003  |
| Malancha      |        | 0.015  | 0.019  | 0.006  | 0.072  | 0.005  | 0.006  | 0.007  | 0.007  | 0.006  | 0.006  | 0.001  | 0.002  | 0.003  |
| Dingimari     |        | 0.016  | 0.018  | 0.002  | 0.007  | 0.006  | 0.007  | 0.006  | 0.006  | 0.006  | 0.007  | 0.003  | 0.002  | 0.002  |
| Kaikhali      | 0.014  |        | 0.013  | 0.003  |        | 0.003  | 0.005  | 0.006  | 0.006  | 0.003  | 0.006  | 0.003  | 0.003  | 0.002  |
| Kobadak       | 0.007  |        | 0.014  | 0.005  | 0.064  | 0.004  | 0.008  | 0.006  | 0.006  | 0.006  | 0.006  | 0.001  | 0.004  | 0.002  |
| Katka         |        |        |        |        |        | 0.004  | 0.006  | 0.007  | 0.006  | 0.006  | 0.016  | 0.011  | 0.002  | 0.002  |
| Hiron Point   |        |        |        |        |        | 0.001  | 0.006  | 0.007  | 0.006  | 0.007  | 0.007  | 0.001  | 0.004  | 0.004  |
| Mandarbaria   |        |        |        |        | 0.015  | 0.006  | 0.006  |        | 0.007  | 0.007  | 0.006  | 0.004  | 0.003  | 0.001  |
| Maximum       | 0.017  | 0.019  | 0.048  | 0.011  | 0.073  | 0.006  | 0.008  | 0.007  | 0.007  | 0.007  | 0.016  | 0.016  | 0.008  | 0.004  |
| Minimum       | 0.006  | 0.008  | 0.010  | 0.002  | 0.002  | 0.001  | 0.001  | 0.005  | 0.005  | 0.003  | 0.006  | 0.001  | 0.001  | 0.001  |
| Average       | 0.012  | 0.014  | 0.020  | 0.006  | 0.027  | 0.004  | 0.006  | 0.006  | 0.006  | 0.006  | 0.010  | 0.005  | 0.003  | 0.003  |

Mercury observed(in ppb) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.042  |        | 0.298  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Harintana     | 0.036  |        | 0.146  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Dudmukhi      | 0.000  |        | 0.320  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Shwarankhola  | 0.000  |        | 0.276  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Jafa          |        | 0.000  | 0.115  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Mrigamari     |        | 0.022  | 0.094  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Nalianala     |        | 0.026  | 0.097  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Arpangasia    |        | 0.000  | 0.000  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Bal           |        | 0.000  | 0.000  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Malancha      |        | 0.000  | 0.237  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Dingimari     |        | 0.000  | 0.201  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Kaikhali      | 0.000  |        | 0.000  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Kobadak       | 0.014  |        | 0.000  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Katka         |        |        |        |        |        |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Hiron Point   |        |        |        |        |        |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Mandarbaria   |        |        |        |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Maximum       | 0.042  | 0.026  | 0.320  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Minimum       | 0.000  | 0.000  | 0.000  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Average       | 0.015  | 0.007  | 0.137  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |

Oil and grease observed(in mg/l) at different location and time in Sundarban

| Station/Month | Mar'01 | Apr'01 | Nov'01 | Jan'02 | Feb'02 | Mar'02 | Apr'02 | May'02 | Jun'02 | Jul'02 | Aug'02 | Sep'02 | Oct'02 | Nov'02 | Dec'02 | Jan'03 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Harbaria      | 0.50   |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Harintana     | 0.30   |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Dudmukhi      | 0.00   |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Shwarankhola  | 0.00   |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Jafa          |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Mrigamari     |        | 0.10   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Nahanala      |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Arpangasia    |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.10   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Bal           |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Malancha      |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Dingimari     |        | 0.00   | 0.00   | 0.00   | 1.50   | 0.00   | 0.20   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Kaikhali      | 0.00   |        | 0.00   | 0.00   | 0.00   |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Kobadak       | 0.00   |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.20   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Katka         |        |        |        |        |        |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Hiron Point   |        |        |        |        |        |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Mandarbaria   |        |        |        |        |        | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Maximum       | 0.50   | 0.10   | 0.00   | 0.00   | 1.50   | 0.00   | 0.20   | 0.00   | 0.00   | 0.10   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Minimum       | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Average       | 0.13   | 0.01   | 0.00   | 0.00   | 0.12   | 0.00   | 0.01   | 0.00   | 0.01   | 0.01   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |