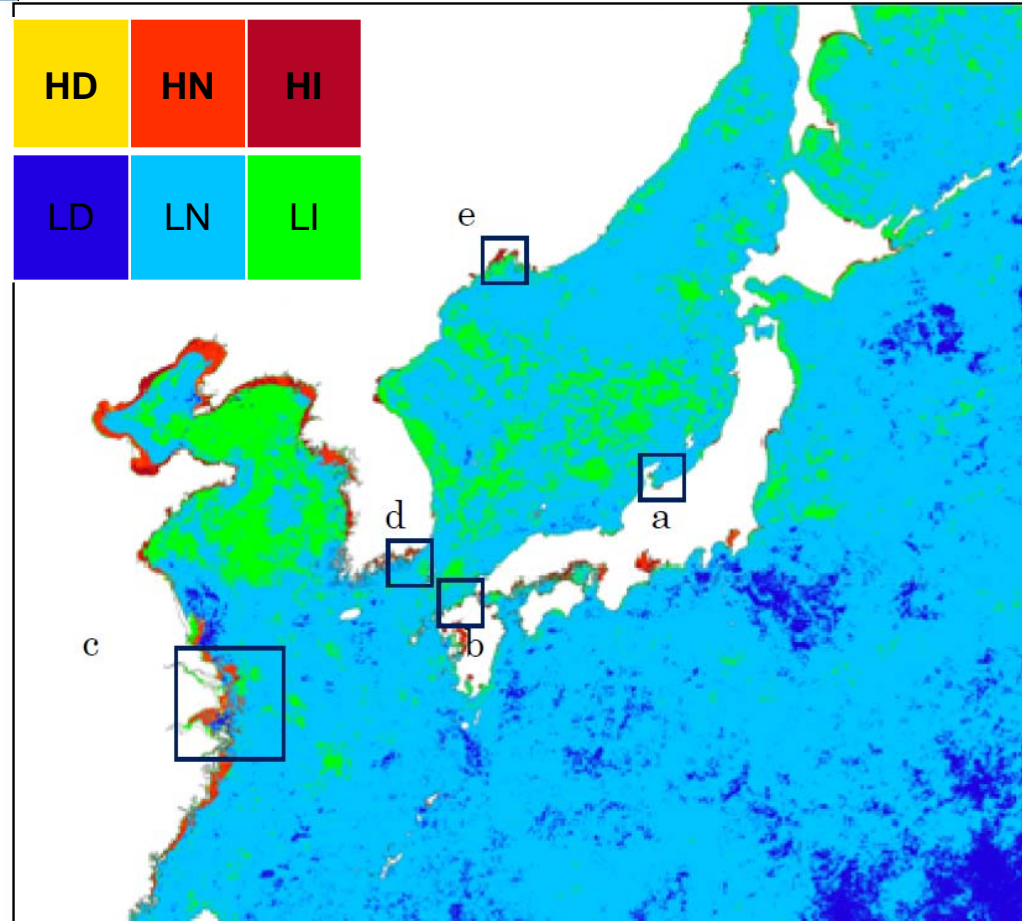
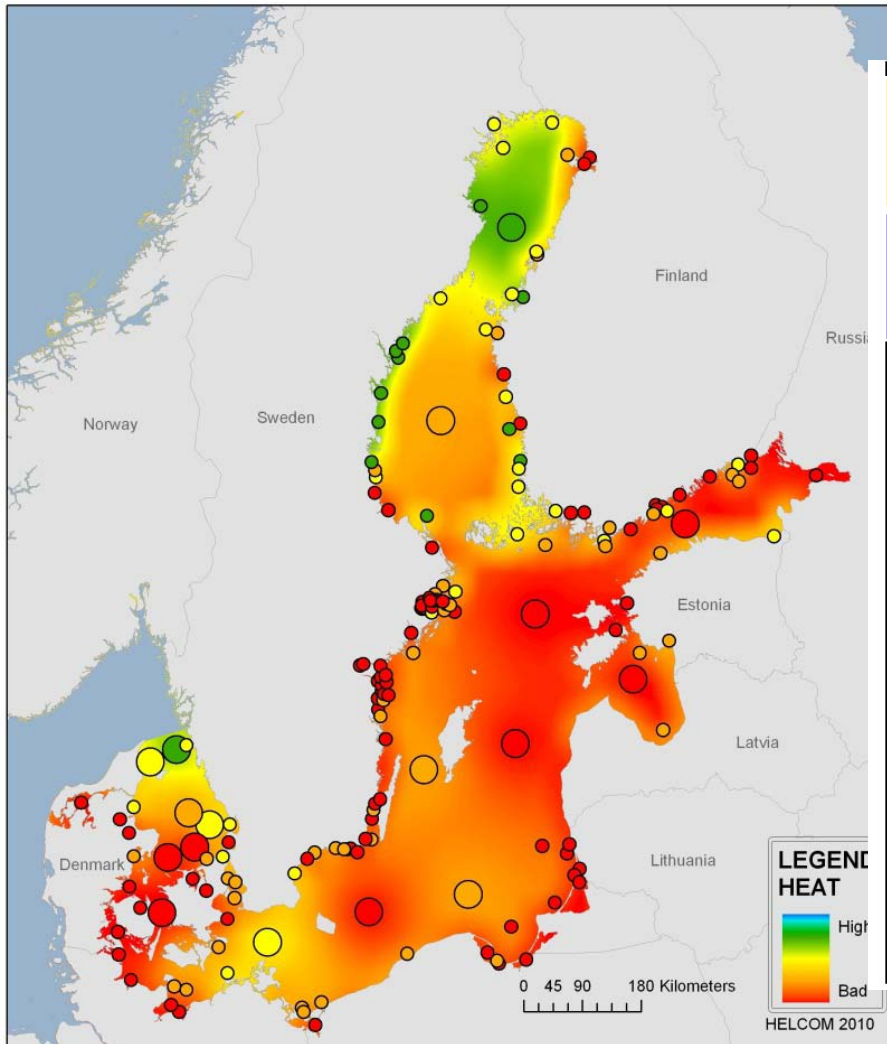
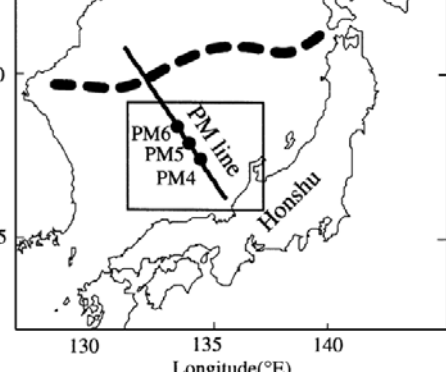


Are we missing "keys to success by Maria"?

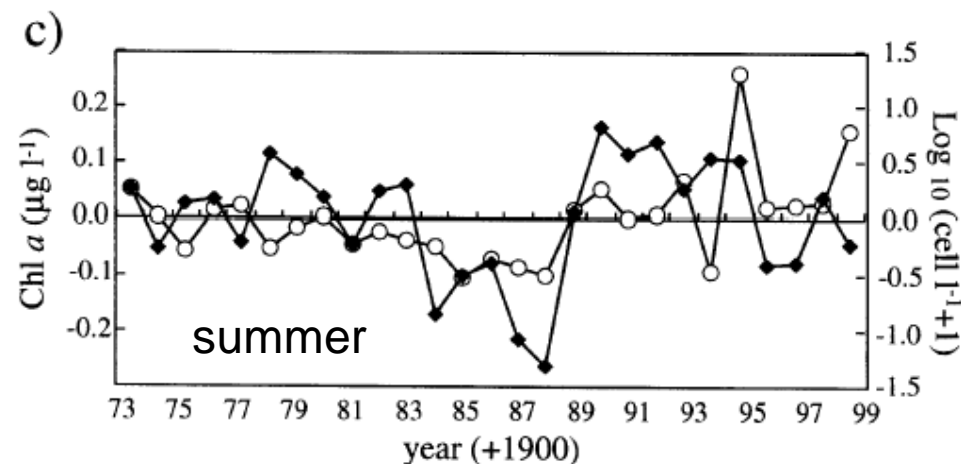
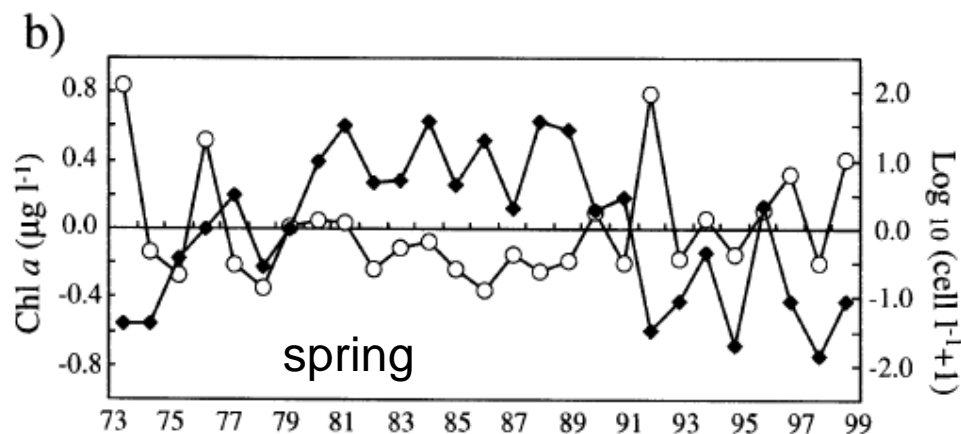
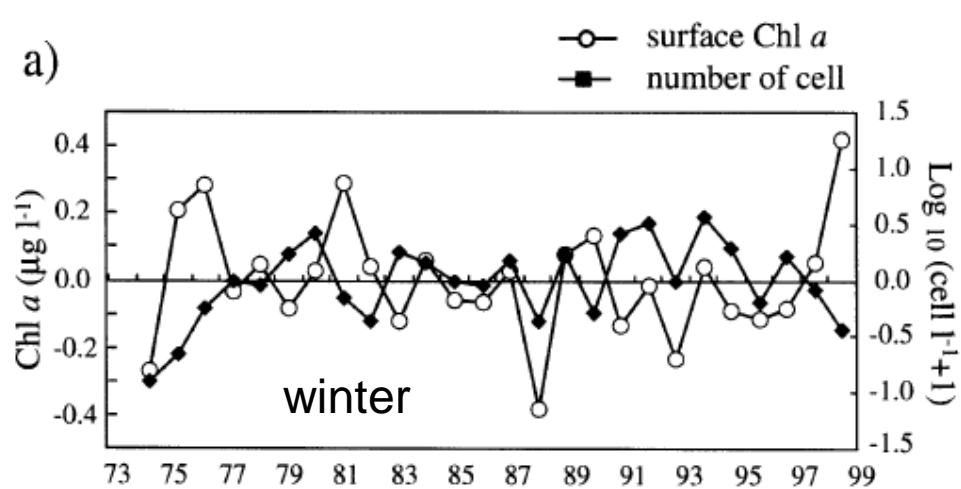
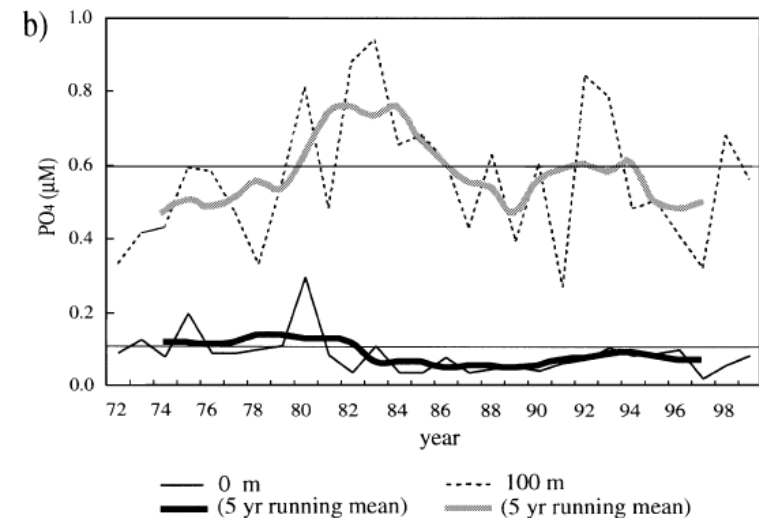
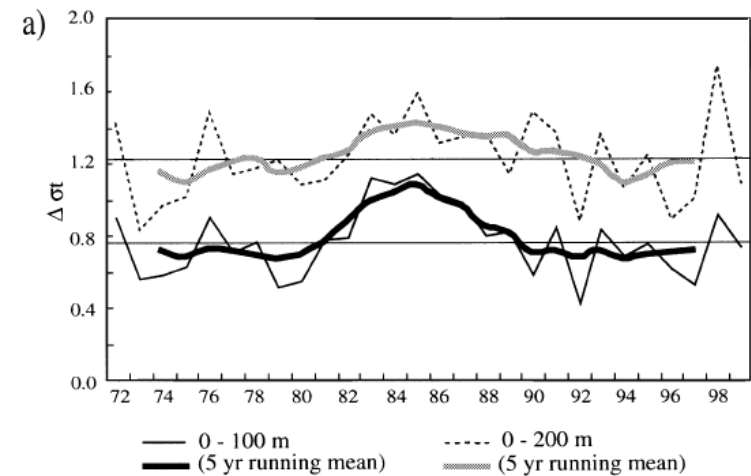
- Good scientific knowledge of the NOWPAP ecosystem? **Yes. But not enough.**
- Joint cooperative monitoring and assessments? **Not yet and just starting.**
- Common understanding of the current status and common environmental goals? **Not enough
And not yet.**
- At least to some extent shared sense of urgency related to the environmental status? **Maybe. Need more discussion.**
- "NOWPAP family" – sense of community and trust? **Yes.**
- Proactive Secretariat? **Yes!**
- Involvement of International Funding Institutions? **Not yet.**

How can we make Eutrophication Map?

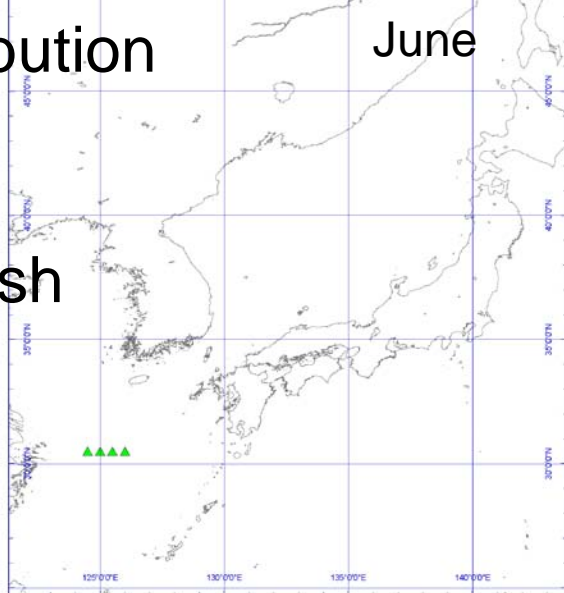




PM line (Chiba and Saino, 2002)



Distribution of Giant Jellyfish In 2007



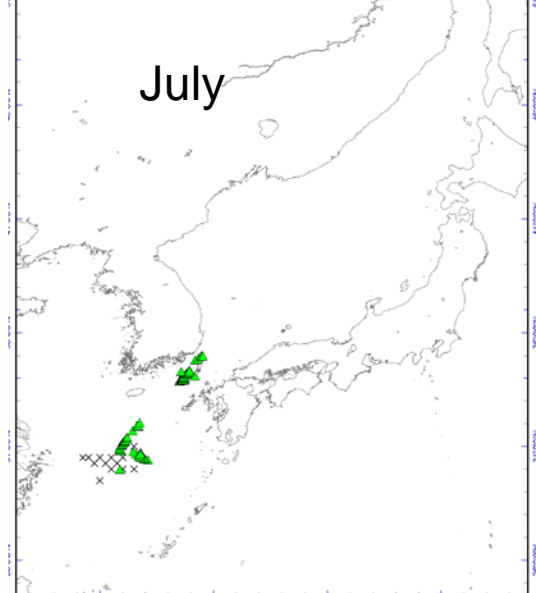
TEL03-5547-8888 FAX03-5547-8881 <http://www.jafic.or.jp/kurage> kurage@jafic.or.jp

2007年度大型クラゲ出現情報 9月14日現在

沖合で採集する漁業種別(はき網等)等、発見位置が曖昧な場合は、報告から暫定的にMAP上には位置を表示していません。
正確な出現位置ではない可能性があります。

▲ 最近1週間の発見位置 △ 2週間～1週間前の発見位置 X 1ヶ月前までの発見位置

大型クラゲ等有害生物被害防止総合対策事業
JF/全漁連
JAFIC/社団法人漁業情報サービスセンター
FRA/独立行政法人水産総合研究センター



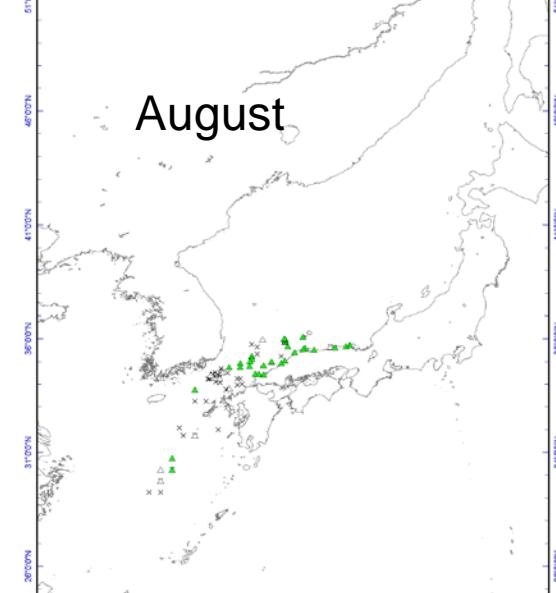
TEL03-5547-8888 FAX03-5547-8881 <http://www.jafic.or.jp/kurage> kurage@jafic.or.jp

2007年度大型クラゲ出現情報 10月18日現在

沖合で採集する漁業種別(はき網等)等、発見位置が曖昧な場合は、報告から暫定的にMAP上には位置を表示していません。
正確な出現位置ではない可能性があります。

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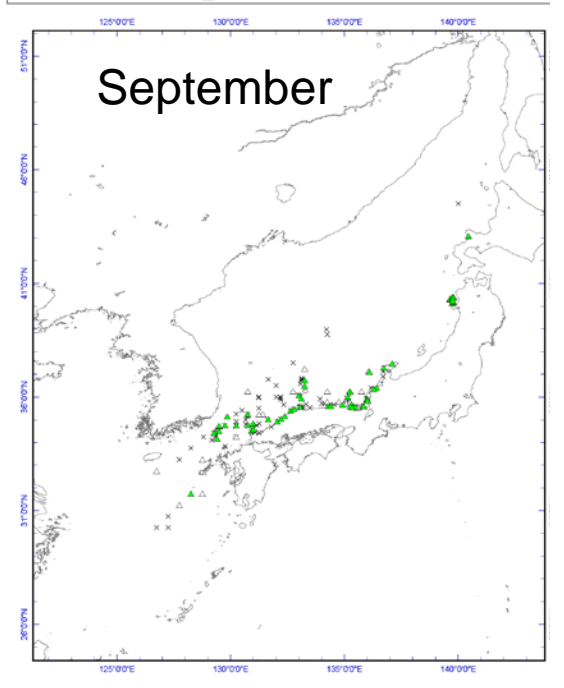
TEL03-5547-8888 FAX03-5547-8881 <http://www.jafic.or.jp/kurage> kurage@jafic.or.jp

大型クラゲ出現量 2007年11月13日現在

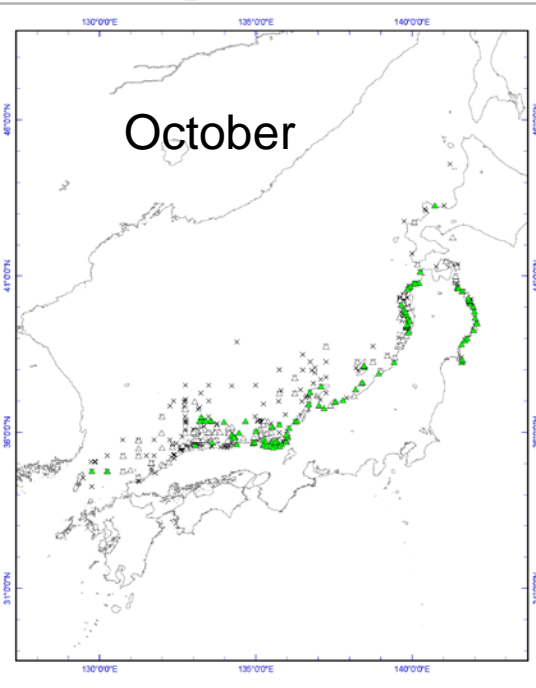
最近1週間の出現情報から、明確な数値の記載があった全てのデータで、1日あたりの航行・調査船等からの報告(人網数、目撃数と定置網等への人網数で分けて表示してあります。報告に幅があった場合は50～100個体は、その数値の大きい方を表しています。
海区単位の報告の場合は海区中央部に表示しており、正確ではありません。

▲ 最近1週間の発見位置 △ 2週間～1週間前の発見位置 X 1ヶ月前までの発見位置

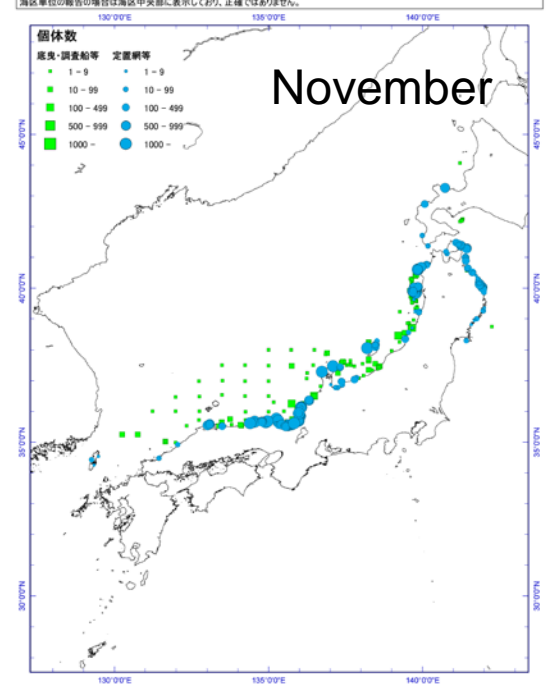
大型クラゲ等有害生物被害防止総合対策事業
JF/全漁連
JAFIC/社団法人漁業情報サービスセンター
FRA/独立行政法人水産総合研究センター

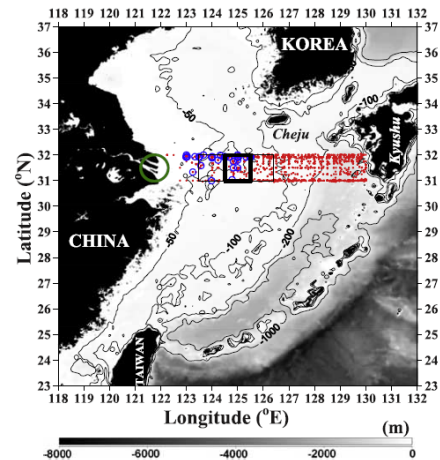


TEL03-5547-8888 FAX03-5547-8881 <http://www.jafic.or.jp/kurage> kurage@jafic.or.jp



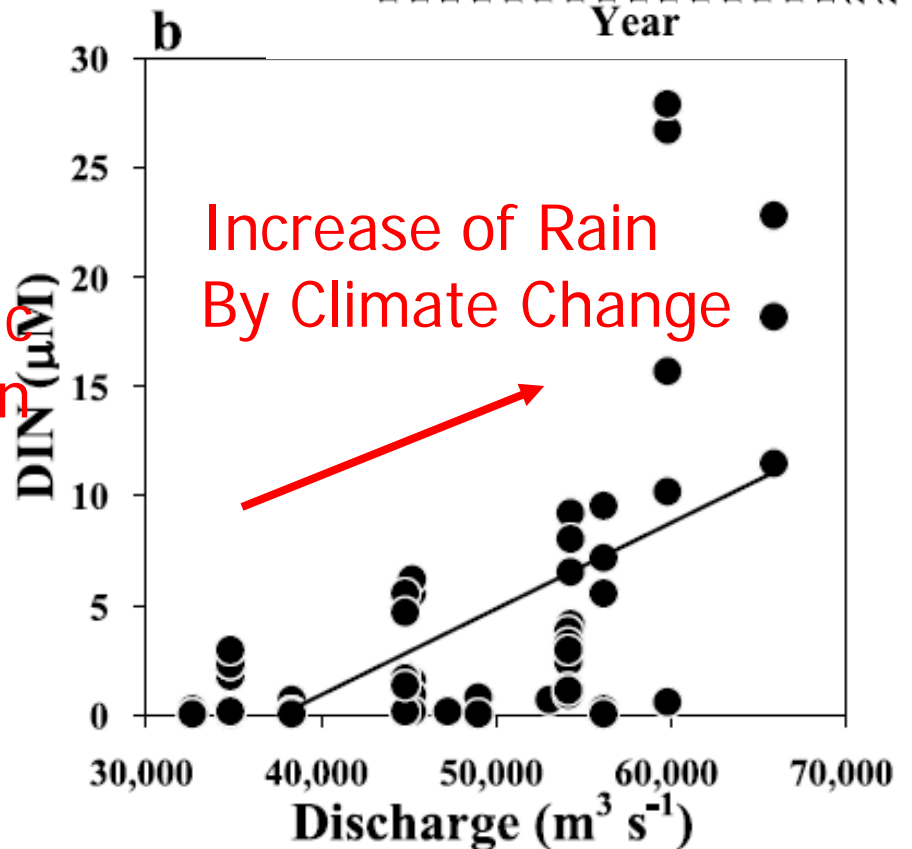
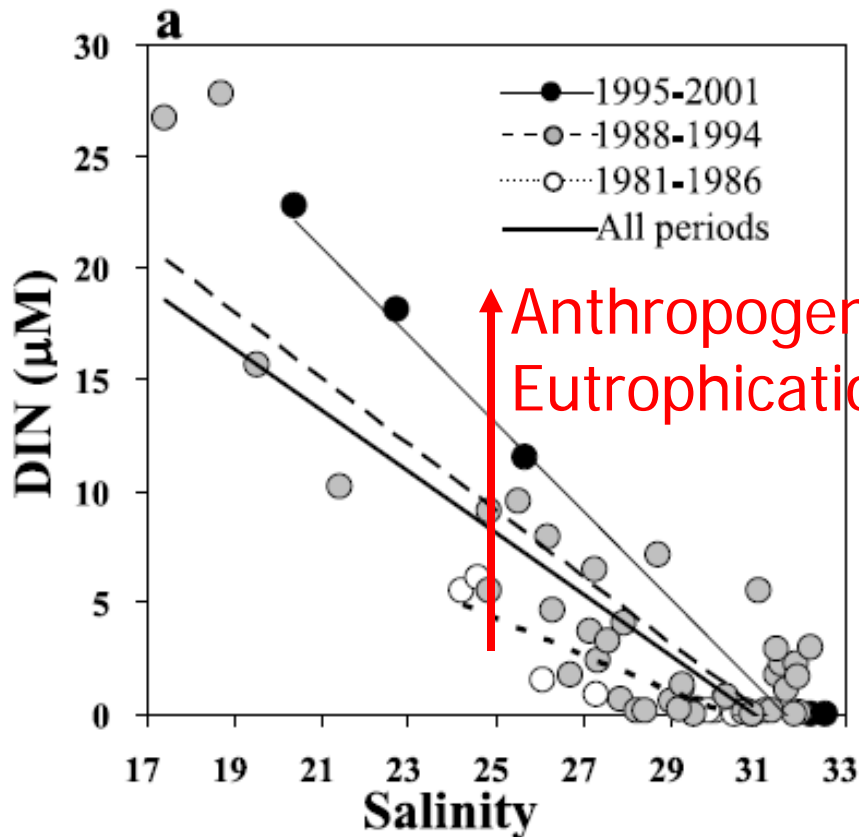
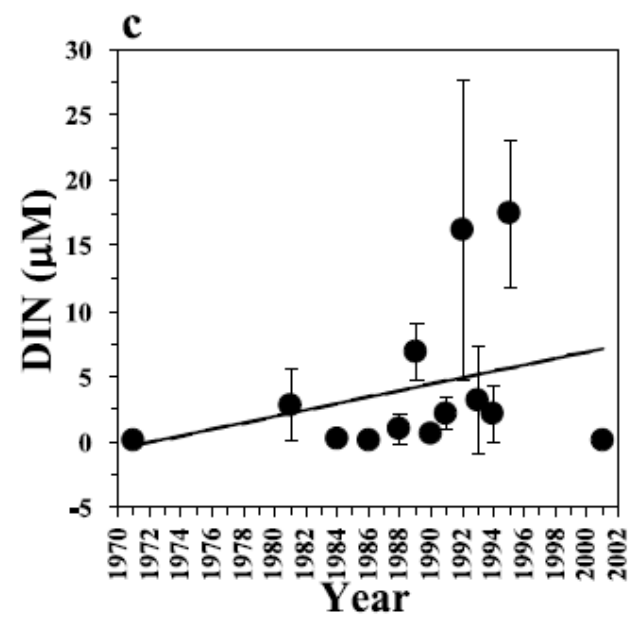
TEL03-5547-8888 FAX03-5547-8881 <http://www.jafic.or.jp/kurage> kurage@jafic.or.jp



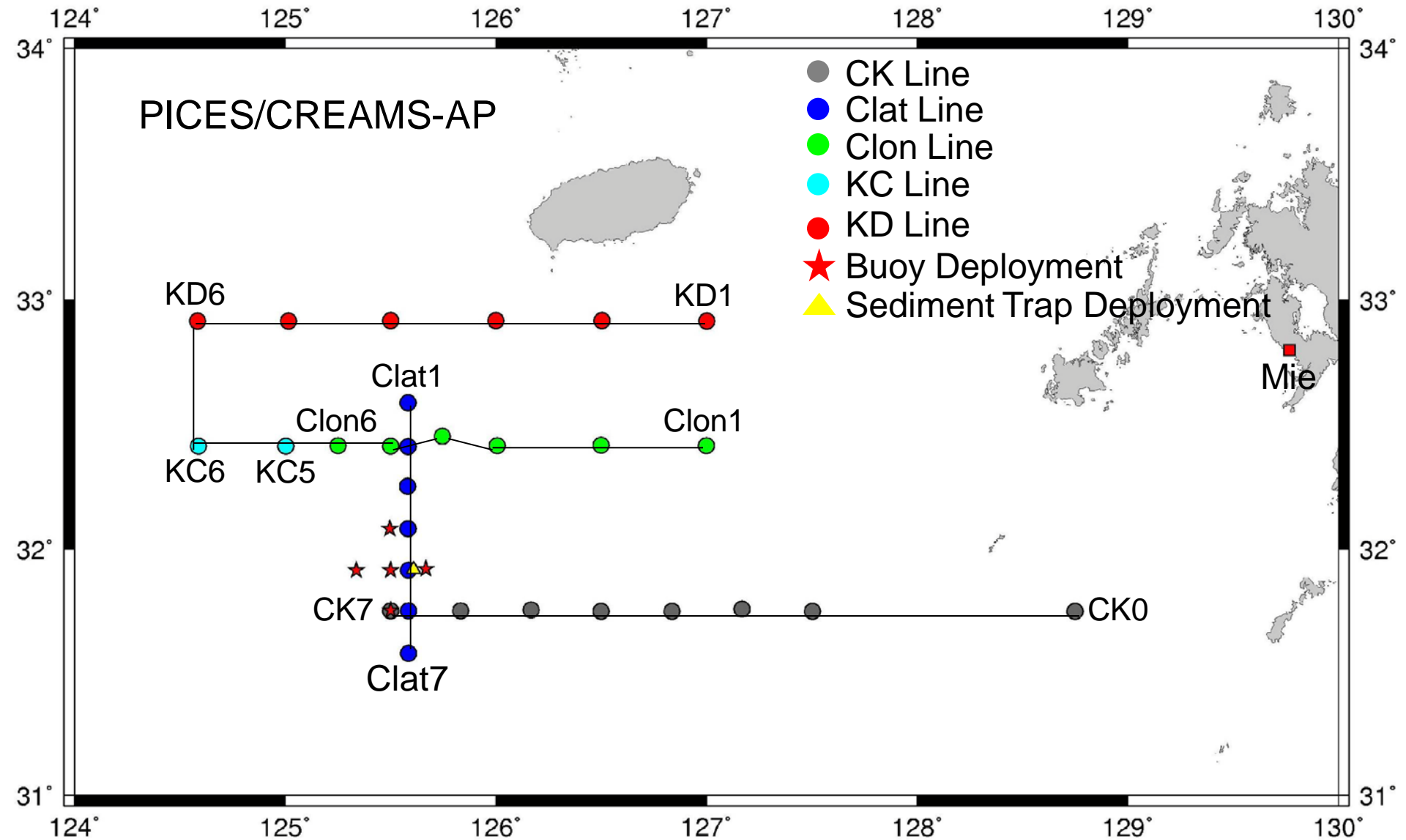


Dissolve Inorganic Nitrogen: Increase of Changjiang River Discharge + Increase by Anthropogenic Sources

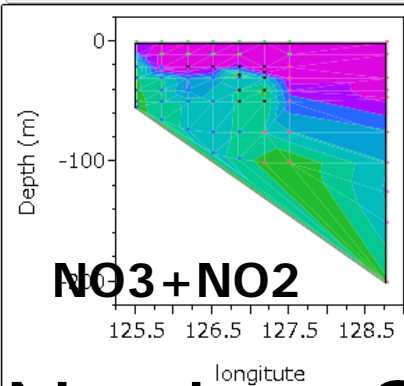
(Siswanto et al., JGR-08)



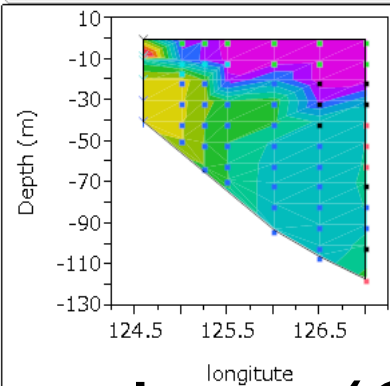
2010 July 17-27 (Nagasaki-Maru) Pla



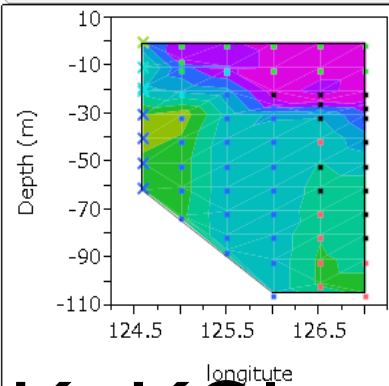
NO3+NO2の等高線図



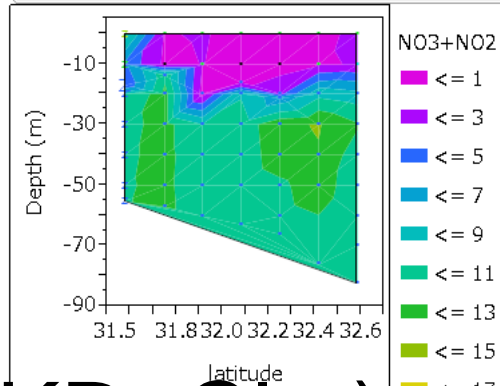
NO3+NO2の等高線図



NO3+NO2の等高線図



NO3+NO2の等高線図



NO3+NO2

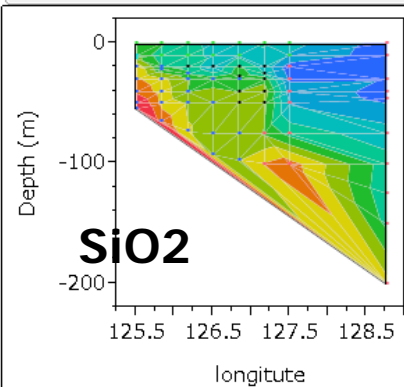
- <= 1
- <= 3
- <= 5
- <= 7
- <= 9
- <= 11
- <= 13
- <= 15
- <= 17
- <= 19
- > 19

NO3+NO2

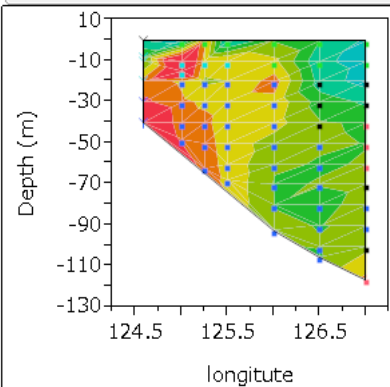
- <= 1
- <= 3
- <= 5
- <= 7
- <= 9
- <= 11
- <= 13
- <= 15
- <= 17
- <= 19
- > 19

Nutrient Sections (CK, KClon, KD, Clat)

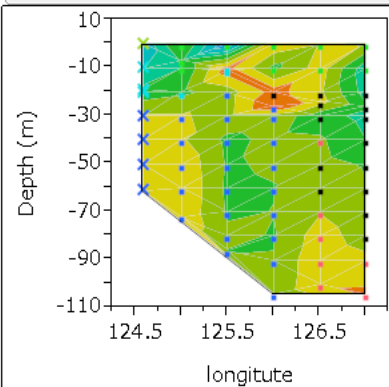
SiO2の等高線図



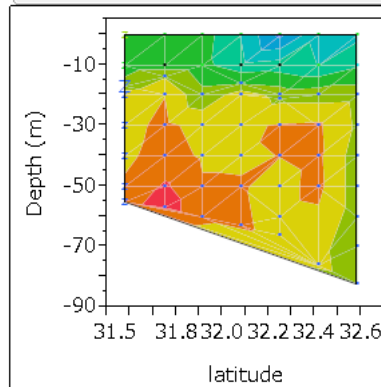
SiO2の等高線図



SiO2の等高線図



SiO2の等高線図



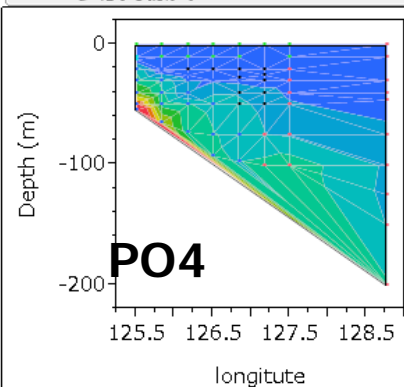
SiO2

- <= 2.500
- <= 5.000
- <= 7.500
- <= 10.000
- <= 12.500
- <= 15.000
- <= 17.500
- <= 20.000
- > 20.000

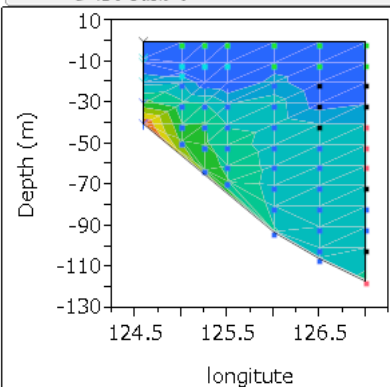
SiO2

- <= 2.500
- <= 5.000
- <= 7.500
- <= 10.000
- <= 12.500
- <= 15.000
- <= 17.500
- <= 20.000
- > 20.000

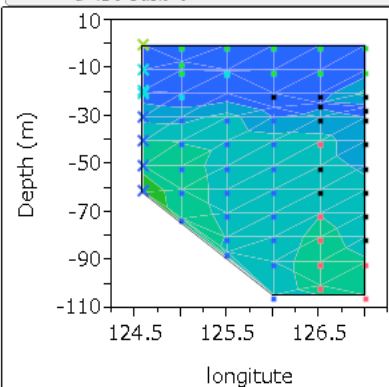
PO4の等高線図



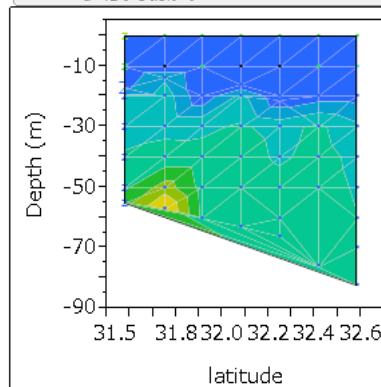
PO4の等高線図



PO4の等高線図



PO4の等高線図



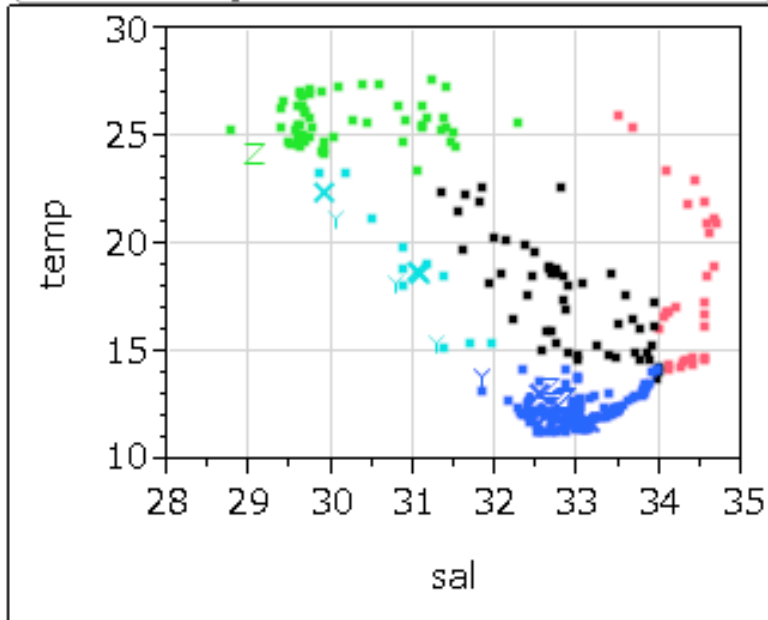
PO4

- <= 0.250
- <= 0.500
- <= 0.750
- <= 1.000
- <= 1.250
- <= 1.500
- <= 1.750
- <= 2.000
- > 2.000

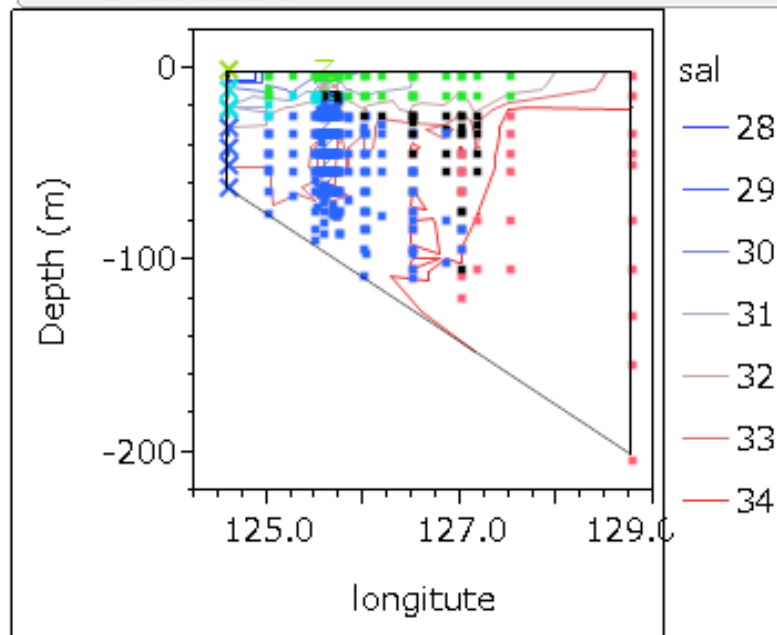
PO4

- <= 0.250
- <= 0.500
- <= 0.750
- <= 1.000
- <= 1.250
- <= 1.500
- <= 1.750
- <= 2.000
- > 2.000

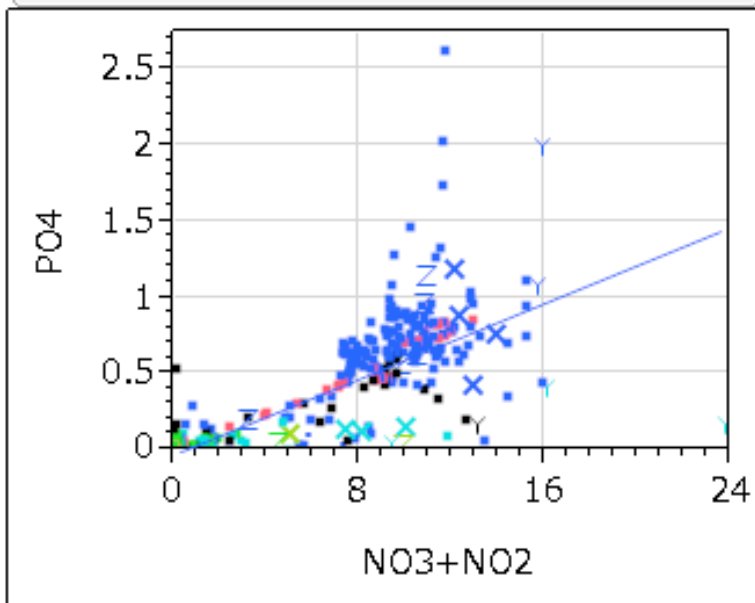
salとtempの二変量の関係



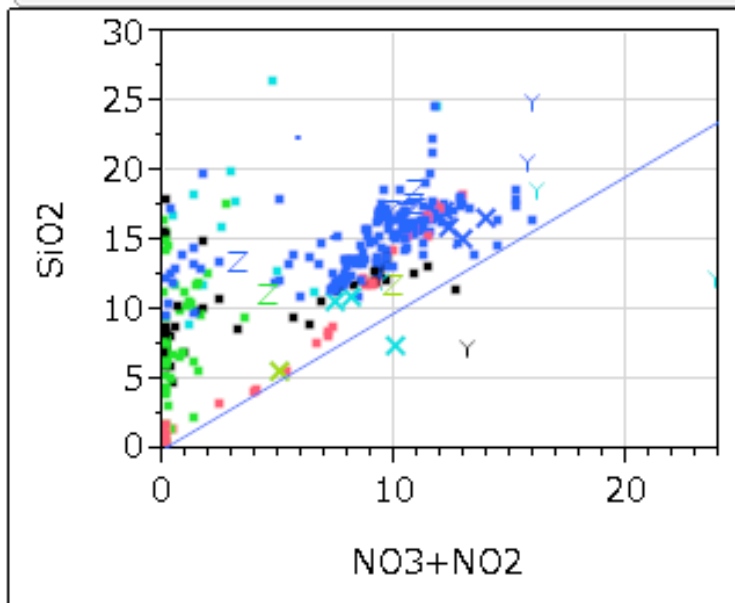
salの等高線図



NO3+NO2とPO4の二変量の関係



NO3+NO2とSiO2の二変量の関係

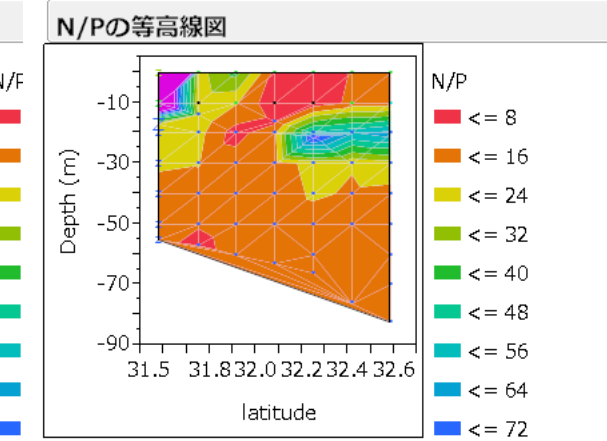
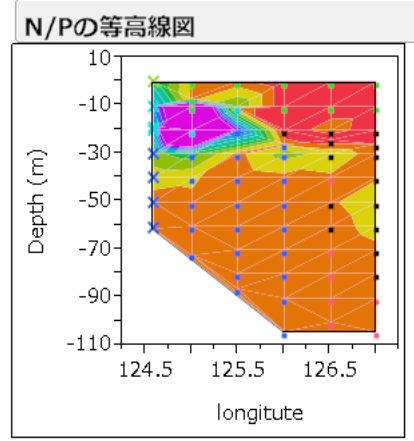
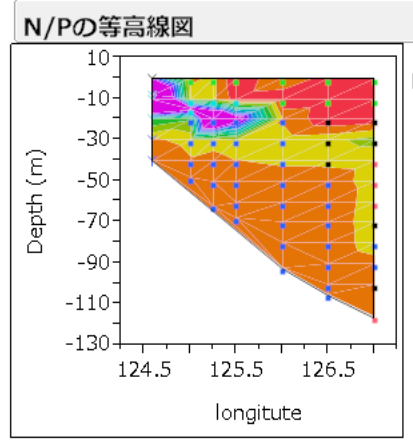
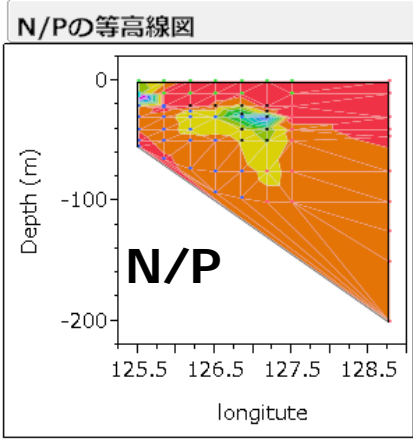
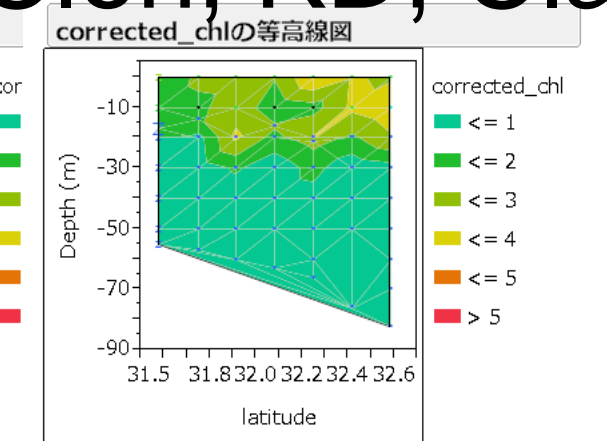
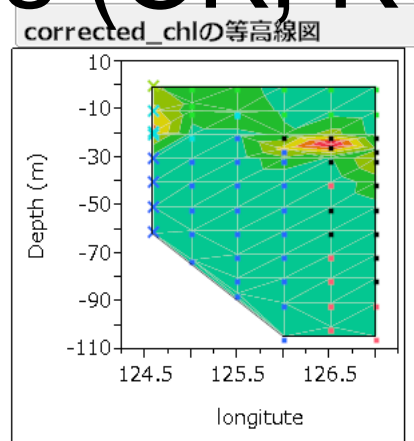
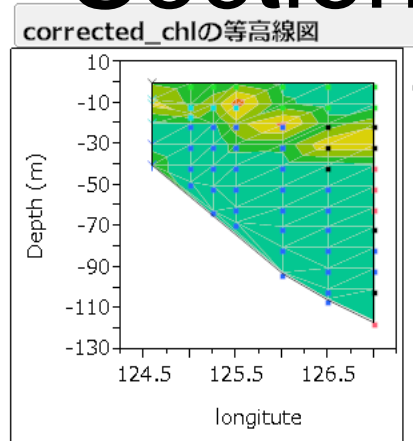
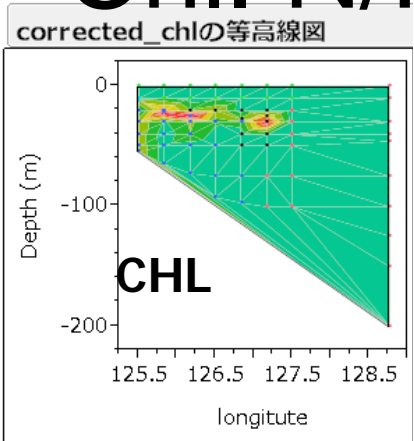
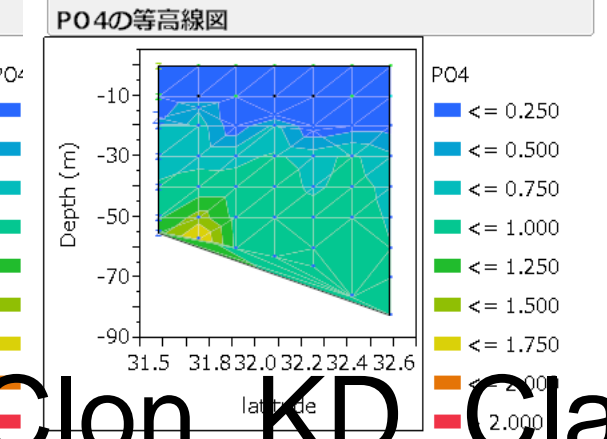
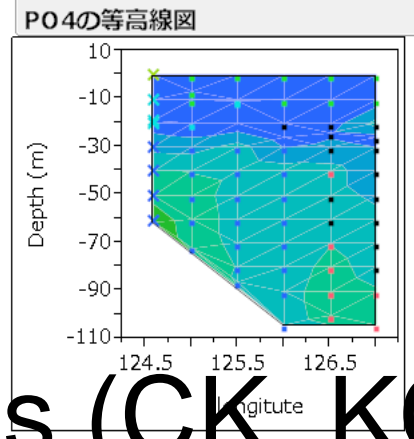
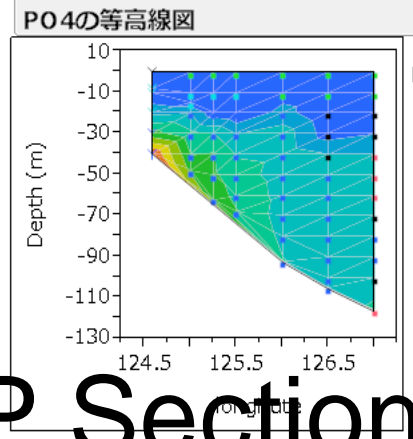
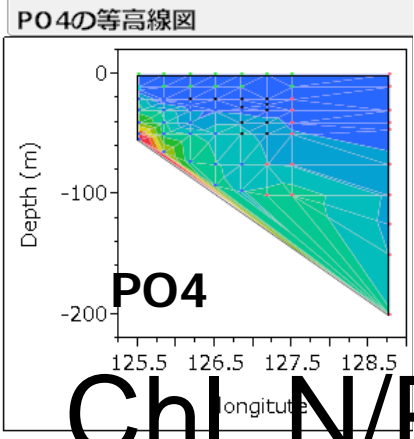


T-S

N/P

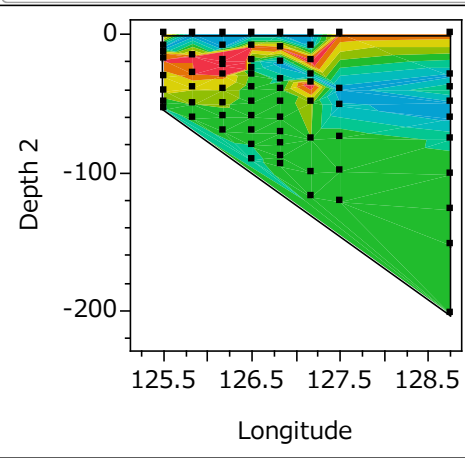
N/Si

Chl. N/P Sections (CK, KClon, KD, Clat)

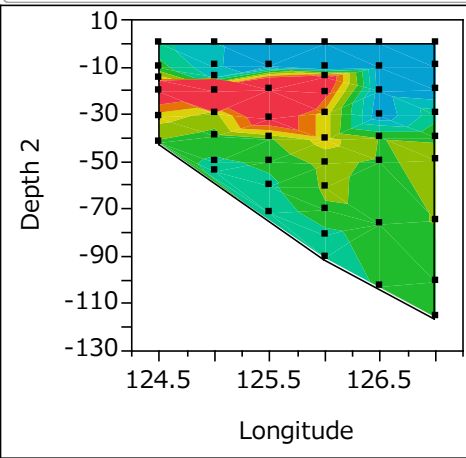


2009 N/P, N/Si

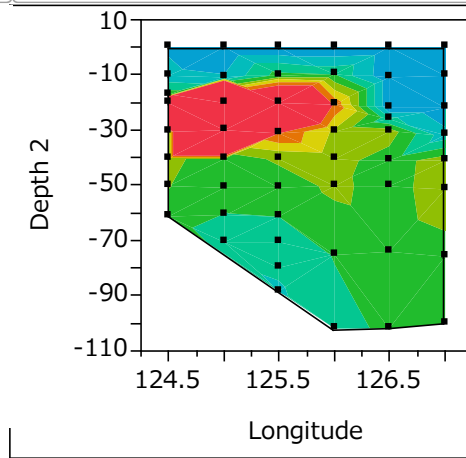
N/Pの等高線図



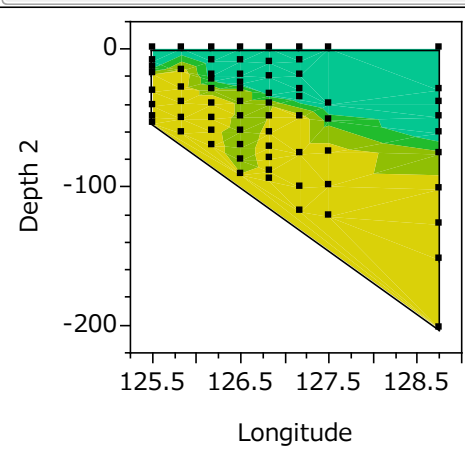
N/Pの等高線図



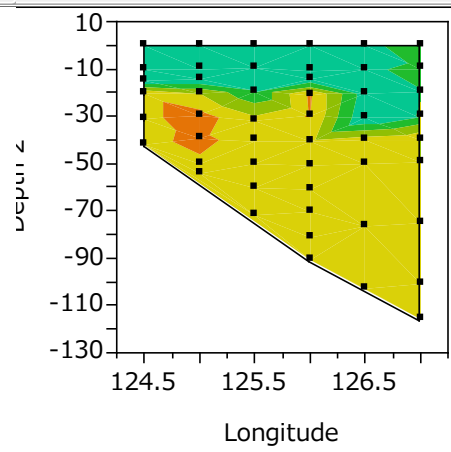
N/Pの等高線図



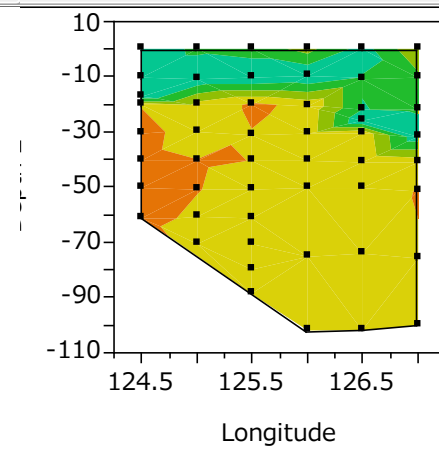
N/Siの等高線図



I/Siの等高線図



/Siの等高線図



CK

KC

KD

How to evaluate whole area?

- Can we increase more local examples?
- Can we extend from coastal area to open ocean?
- Do we have enough data for those areas?
- Can we make cooperative monitoring (or research)?
- Do we have to consider oligotrophication or change of nutrient ratio (N/P/Si)?

Improvement of CEARAC procedures

- What is the difference from other procedures?
- How can we decide standard (background) ?
- What are the minimum parameters?
- What is the minimum time period?
- How to integrate the parameters?
- Other suggested parameters? (bottom DO)
- Can we distinguish difference of local anthropogenic and global (climate change) impacts?

