Please do not cite this document until the final version is completed.

Development project* of the Stock Trajectory (Kobe Diagram) Software (2009-2010)

Outline

Nishida[1/] Matsuo[2/] & Itoh[2/]

1/ National Research Institute of Far Seas Fisheries (Japan)

2/ Environmental Simulation Lab. (Japan)

(*) (funded by Fishery Research Agency)

Nishida[1/] Matsuo[2/] & Itoh[2/] (GIS team)

- 2/-3/ Experts software & visualizations
- 1/ Illiterate (programming) ➔ Idea

balanced team

Stock Trajectory (Kobe：神戸 Diagram*)

- *In the Tuna RFMOs, '**Kobe diagram**' or '**Kobe plot**' is used as the nickname.*

- *But in the other non tuna RFMOs such as NAFO and many others, "**Stock Trajectory**" is commonly used in general.*

Objectives

Stock Trajectory ➔ key tool* for managers & scientists

To produce the Stock Trajectory (Kobe Diagram) **easily, quickly and effectively** using the software including following options:

(1) Point estimates with CI (any %)

(2) Multiple plots of points estimates

Trajectories of the future projection can be included.

(* Comments by the SC chair)

nOw: Very very initial stage

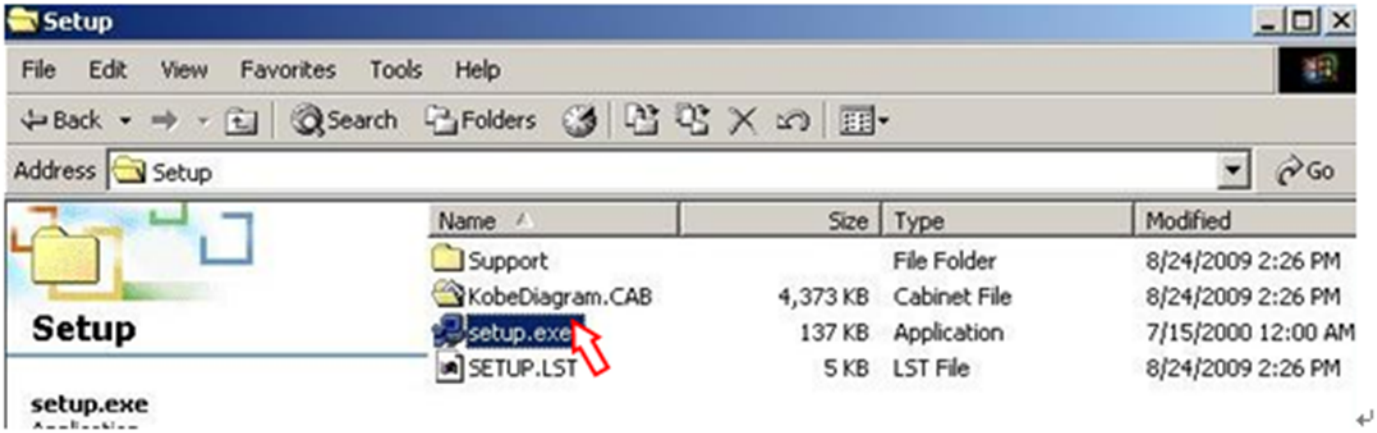
Just started last month (September, 2009)

Suggestion for improvement are welcome

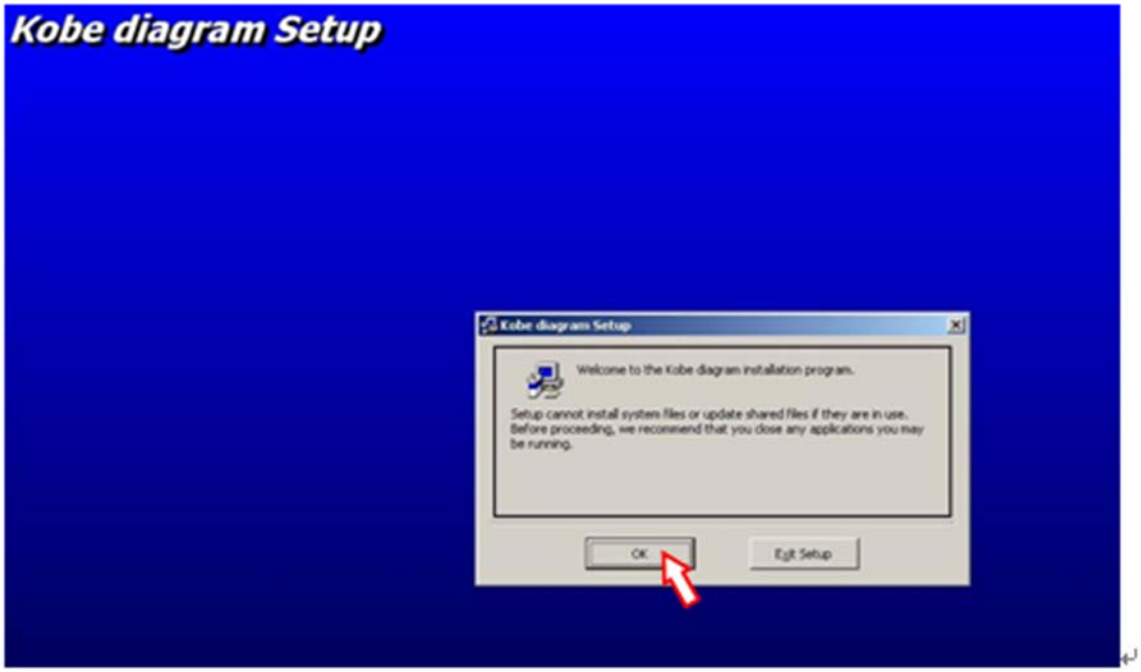
Software : 5 MB

Set up & install (1)

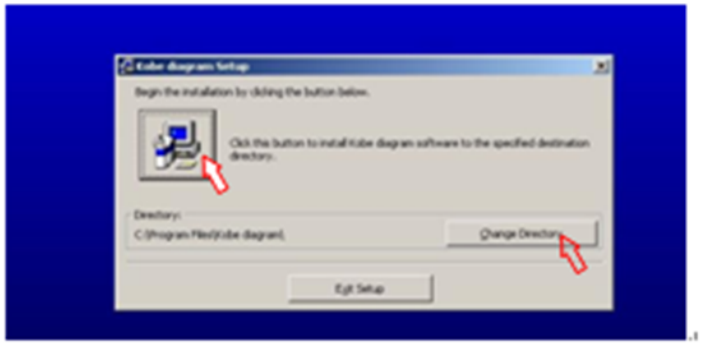
1) Double-click Setup.exe.



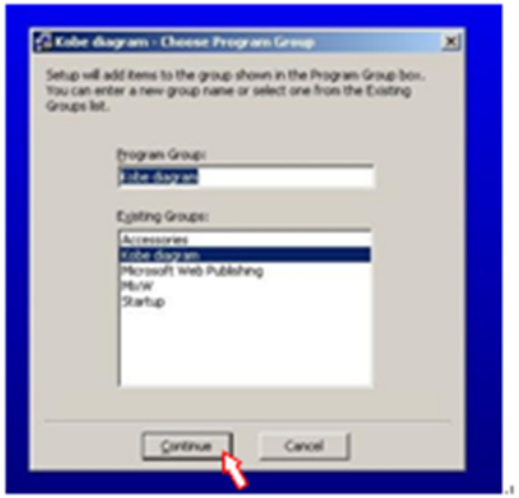
2)



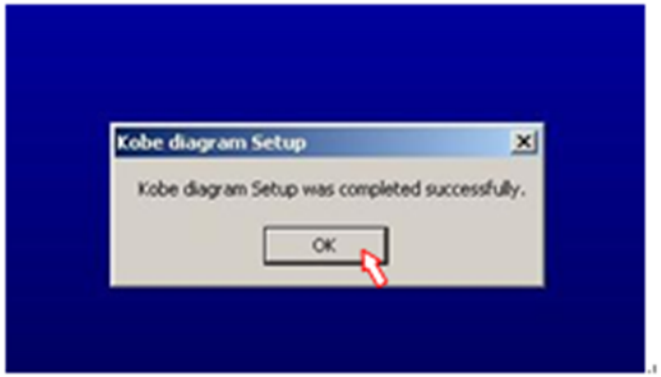
Set up & install (2)



4) .

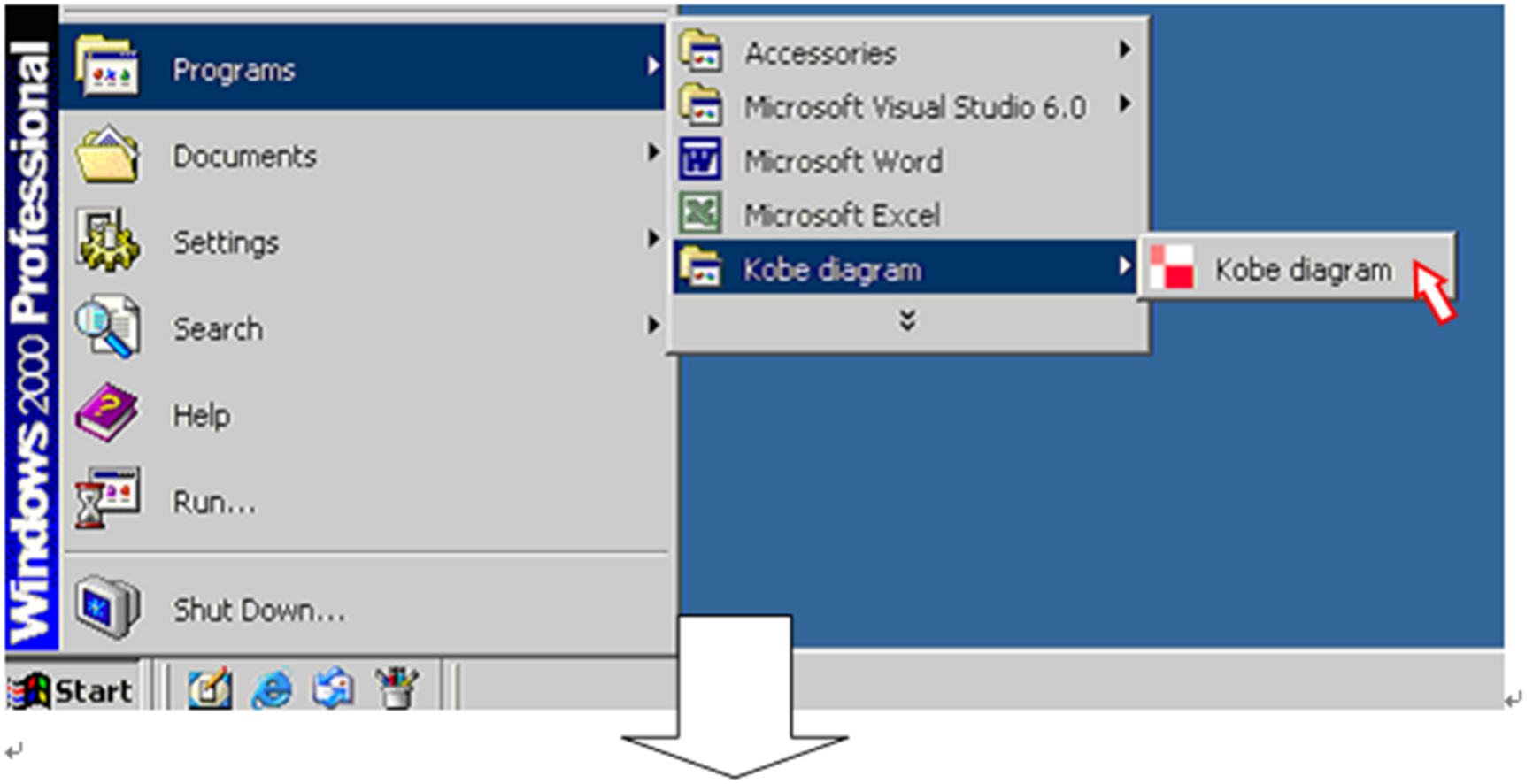


5) **Finish**.

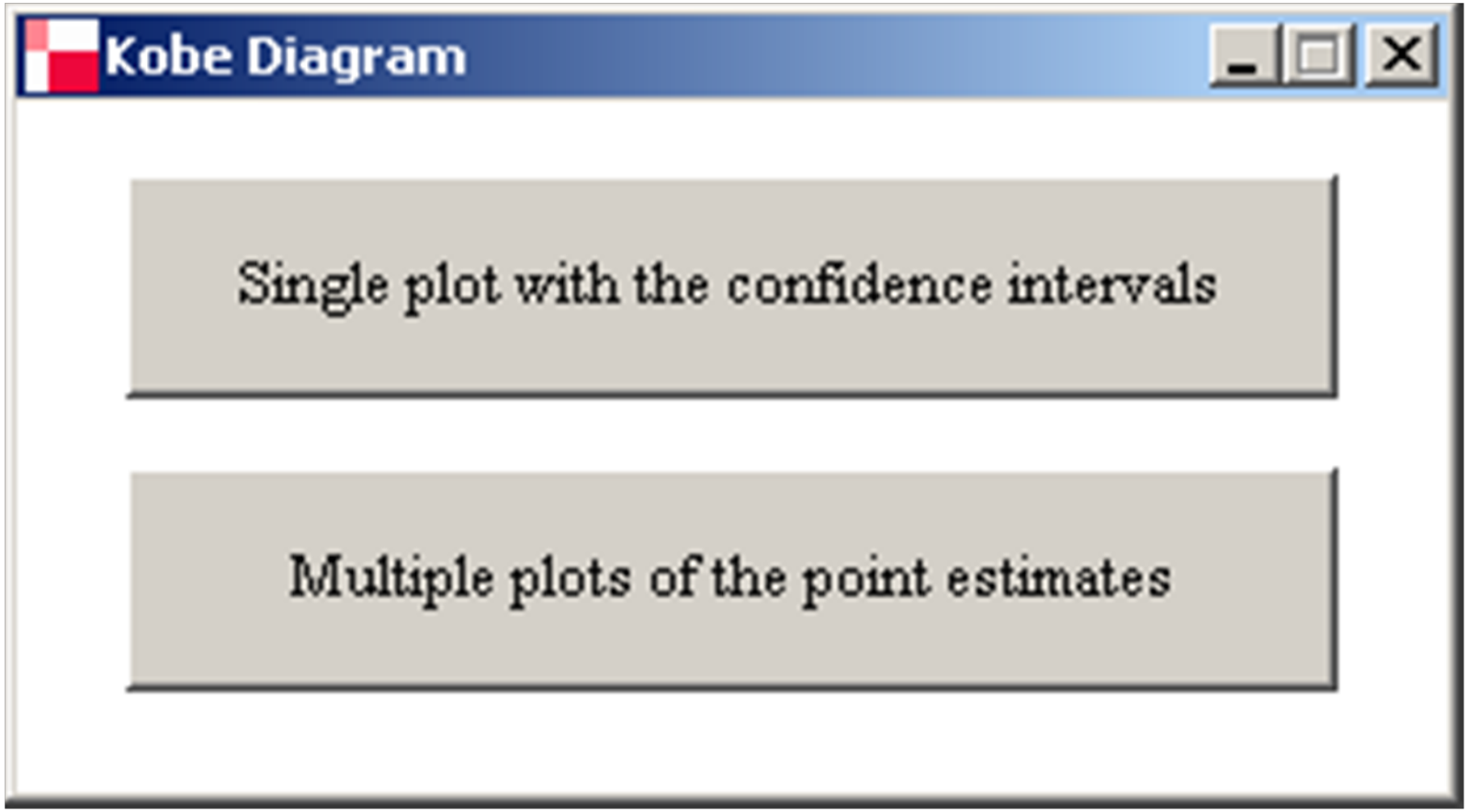


To start

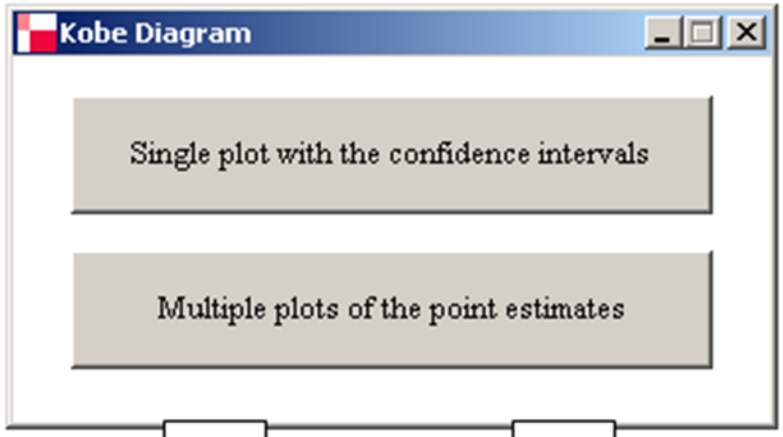
Start -> Programs -> Kobe diagram -> Kobe diagram



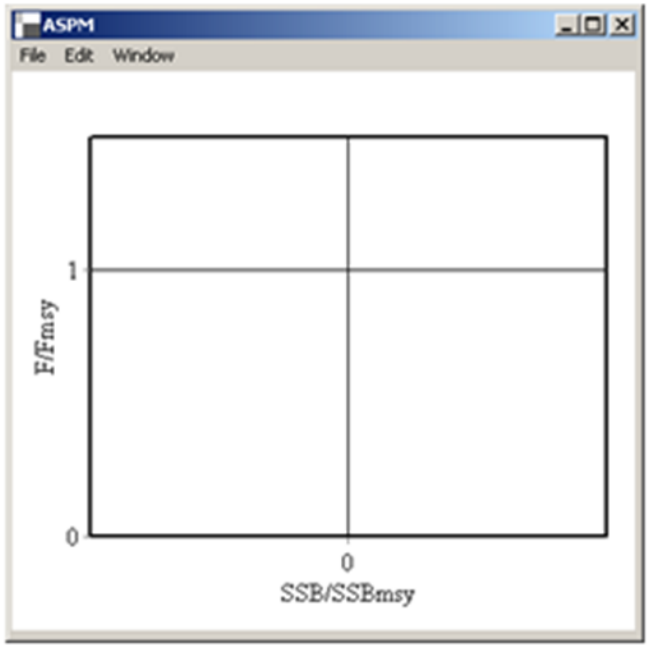
Main menu

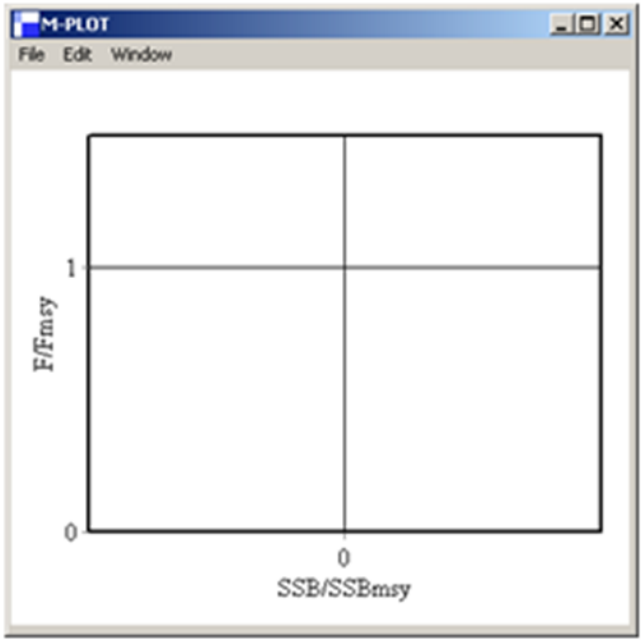

Kobe Diagram
Single plot with the confidence intervals
Multiple plots of the point estimates

Main menu and Canvas for the plots



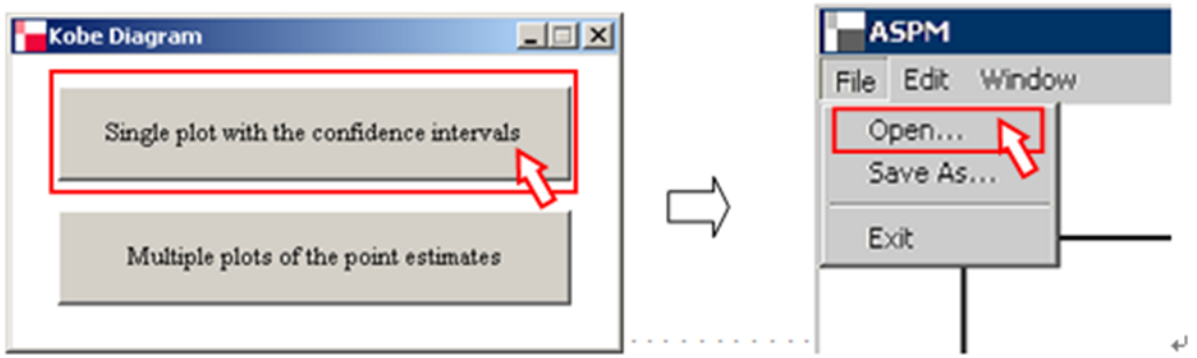
Scatter chart windows



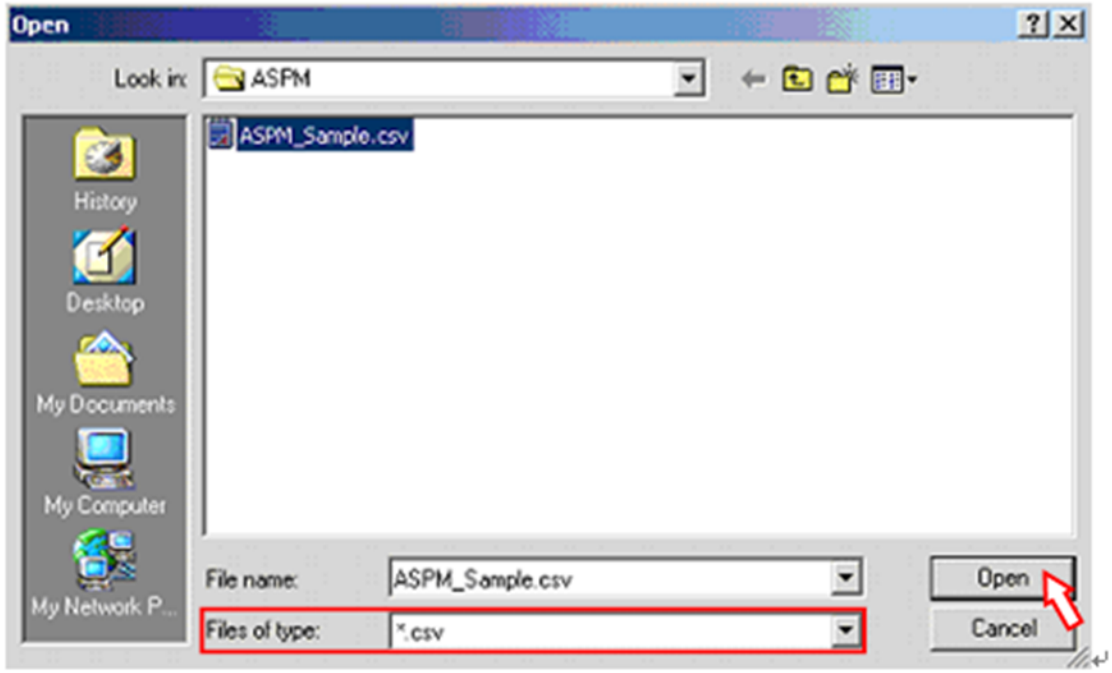


Single plots with CI (projections)

1) File -> Open…



2) Select the CSV file according to the following format.



Create the **self-made** data file (CSV) to be plotted

Results from any SAs (**APSIC, PROFIT, PROCEAN, ASPM, SS2, SS3, CASAL, MFCL, ASIA, XSA, VPA, ADAPT** and others) can be applied

Data format

SSB or TB (ratio)

[year] [pt] [CI(L)] [CI (U)]

F(ratio)

[pt] [CI(L)] [CI (U)]

You can put any % of CI

Self made CSV data set (example)

F(ratio)

SSB or TB (ratio)

(CSV File Format)

Year	Point(SSB/SSBmsy)	Lower CI	Upper CI	Point(F/Fmsy)	Lower CI	Upper CI
1950	5.31E+00	3.79E+00	6.84E+00	6.90E-05	5.29E-05	8.51E-05
1951						-04
1952						-03
1953	5.44E+00	4.33E+00	6.54E+00	1.76E-03	1.42E-03	2.10E-03
1954	5.41E+00	4.27E+00	6.55E+00	4.18E-03	3.35E-03	5.00E-03
1955	5.46E+00	4.40E+00	6.52E+00	3.06E-03	2.48E-03	3.64E-03
1956	5.41E+00	4.29E+00	6.53E+00	4.61E-03	3.70E-03	5.51E-03
1957	5.45E+00	4.39E+00	6.50E+00	5.45E-03	4.40E-03	6.50E-03
1958	5.39E+00	4.29E+00	6.50E+00	5.71E-03	4.58E-03	6.84E-03
1959	5.38E+00	4.28E+00	6.48E+00	6.90E-03	5.53E-03	8.27E-03
1960	5.36E+00	4.26E+00	6.47E+00	8.43E-03	6.75E-03	1.01E-02
1961	5.42E+00	4.37E+00	6.46E+00	8.31E-03	6.70E-03	9.92E-03
1962	5.36E+00	4.28E+00	6.44E+00	1.05E-02	8.39E-03	1.25E-02
1963	5.28E+00	4.13E+00	6.43E+00	1.12E-02	8.90E-03	1.35E-02
1964	5.26E+00	4.12E+00	6.41E+00	1.09E-02	8.67E-03	1.31E-02
1965				-02	1.06E-02	1.63E-02
1966				-02	1.16E-02	1.75E-02
1967	5.28E+00	4.24E+00	6.33E+00	1.66E-02	1.33E-02	1.99E-02
1968	5.30E+00	4.28E+00	6.33E+00	2.11E-02	1.70E-02	2.52E-02
1969	5.28E+00	4.25E+00	6.30E+00	1.67E-02	1.34E-02	2.00E-02

Order is observed strictly though the name is free.

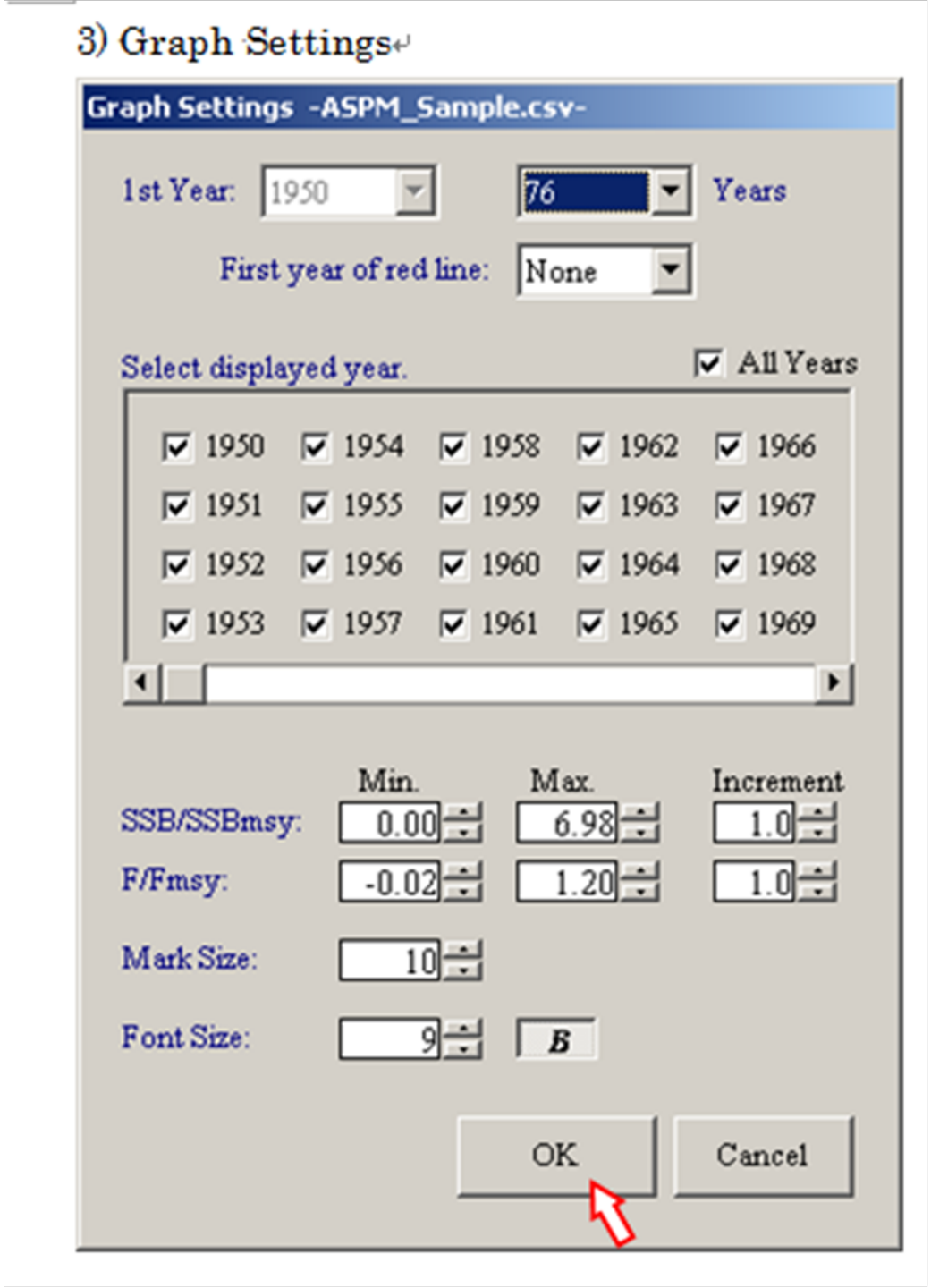
You should prepare the data of every year.

Graph setting

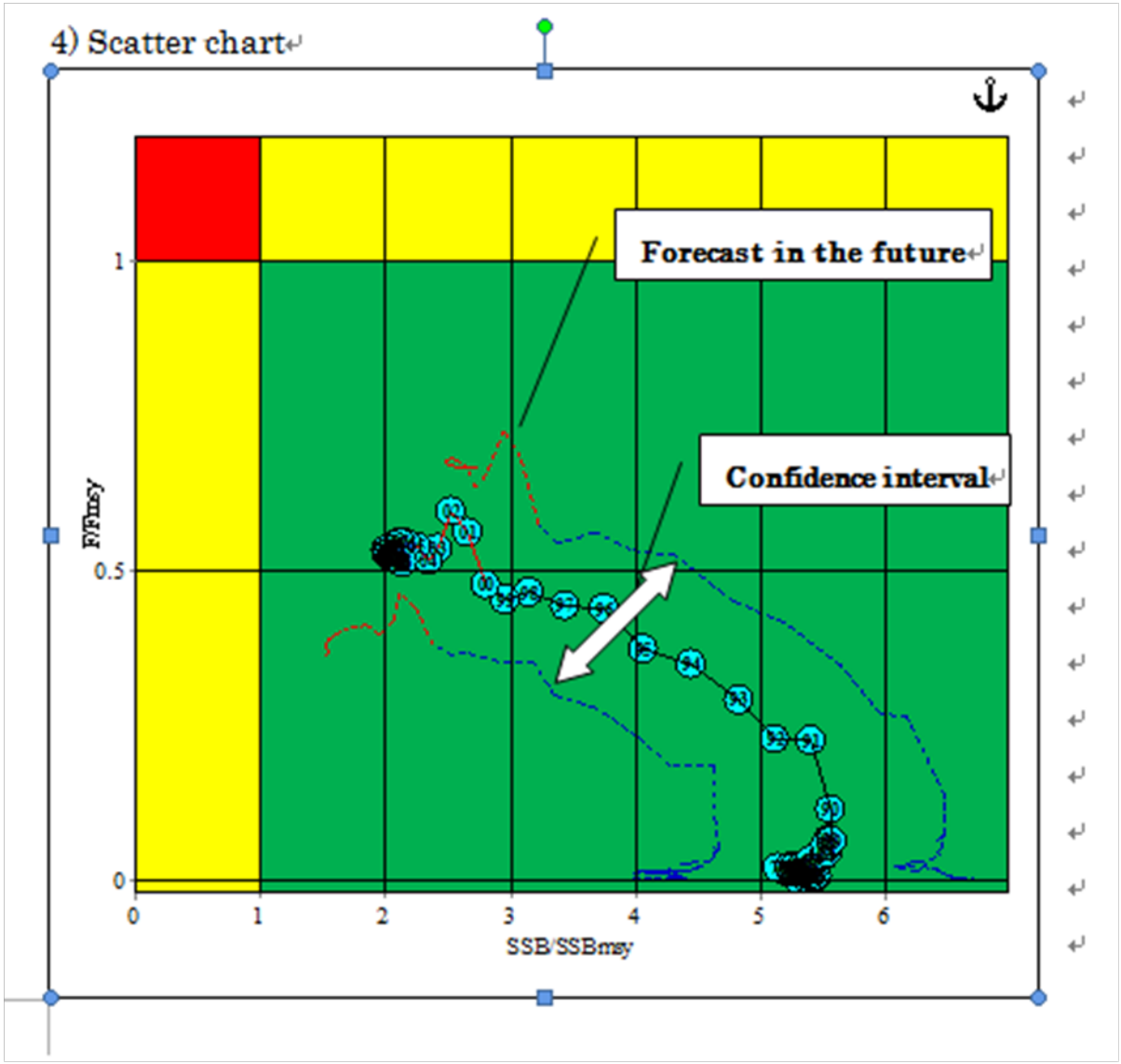
INPUT
- 1st year
- no of years

SELECT
- line color
- Fonts
- labels (years)

SET
- scales
  of X, Y axis

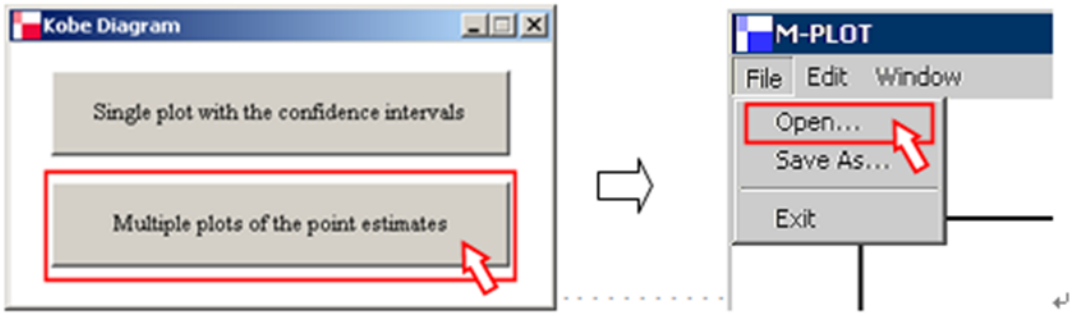


Single plots with CI : Sample (incl. projection)
(users can edited the label and move to anywhere)
(users can change line colors, FONTS etc)

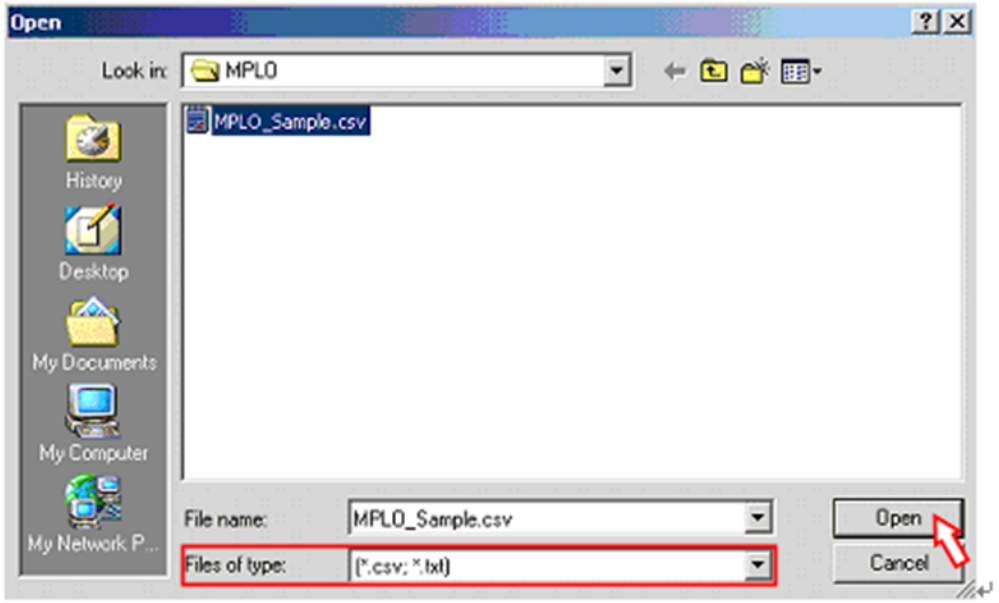


(2) Multiple plots of points estimates

1) File -> Open…



2) Select the CSV file according to the following format.



Data format (Multiple plots of point estimates) self prepared CSV data set

1st set

2nd set

3rd set

(CSV File Format)

Year	Fratio(1)	TB(ratio)(1)	Fratio(2)	TB(ratio)(2)	Fratio(3)	TB(ratio)(3)
1950	2.78E-02	3.74E+00	5.21E-03	3.13E+00	6.90E-05	5.31E+00
1951	1.69E-0					E+00
1952	1.20E-0					E+00
1953	1.22E-0					E+00
1954	2.35E-0					E+00
1955	3.52E-02	6.71E+00	2.20E-02	1.86E+00	3.06E-03	5.46E+00
1956	3.66E-02	5.29E+00	3.00E-02	1.77E+00	4.61E-03	5.41E+00
1957	3.83E-02	4.39E+00	1.67E-02	1.99E+00	5.45E-03	5.45E+00
1958	3.67E-02	4.09E+00	1.22E-02	2.17E+00	5.71E-03	5.39E+00
1959	5.11E-02	3.95E+00	1.23E-02	2.19E+00	6.90E-03	5.38E+00
1960	4.93E-02	3.85E+00	1.91E-02	1.82E+00	8.43E-03	5.36E+00
1961	4.98E-02	3.72E+00	1.77E-02	1.96E+00	8.31E-03	5.42E+00
1962	4.80				-02	5.36E+00
1963	5.26				-02	5.28E+00
1964	5.89E-02	3.25E+00	1.17E-02	3.05E+00	1.09E-02	5.26E+00
1965	6.32E-02	3.10E+00	1.09E-02	2.95E+00	1.34E-02	5.20E+00
1966	1.09E-01	3.08E+00	1.69E-02	2.78E+00	1.46E-02	5.27E+00

① Order is observed strictly though the name is free.

The number of scenarios is not limited.

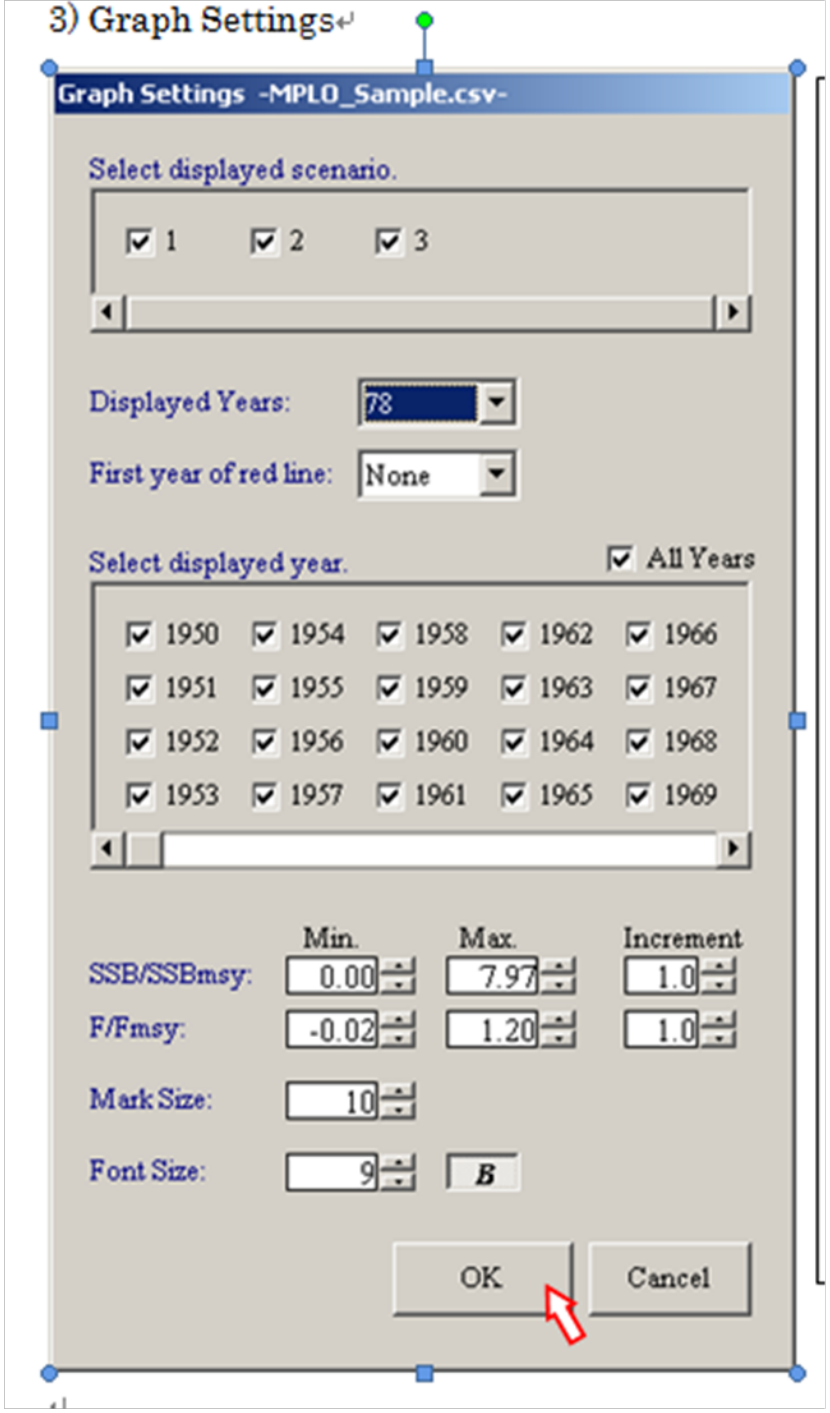
You should prepare the data of every year.

Graph setting

INPUT
- 1st year
- no of years

SELECT
- line color
- Fonts
- labels (years)

SET
- scales
  of X, Y axis



Sample : Multiple plots of point estimates (users can edited the label and move to anywhere) (users can change line colors & FONT etc)