

What is the El – Nino?

How was it discovered?

What causes it?

What are the consequences of its appearance?

Anchovy harvest vs. soybean harvest.

Fish of cold waters.

Temperature of the ocean.

Lee side of the tropical landmasses of Central and South America.

Trade winds

Upwelling of deep-ocean water nearly constant.

From time to time it falters.

Winds strengthen

Accumulation of warm tropical water on the western side of the Pacific.

Winds lose their driving force, and

The warm water mass moves eastward and depresses the upwelling of deep-ocean water.

This sequence is known as El-Nino (Christ Child).

The increase of coastal surface temp. ends by April, sometime more than a year.

1982-83

- *ocean surface T rose 7° C - tropical species found in Gulf of Alaska

- * displacement of atmospheric pressure cells influenced weather over large areas of the Earth
 - unusually dry conditions in Hawaii
 - high precipitation along W coast of the USA
 - heavy rains in Ecuador, Peru, Polynesia
 - droughts in Australia, Africa, India Indonesia

1997-98

- began in March
- severe storms came out of the Pacific Ocean into California
- mild winters in the Pacific Northwest and Midwest
- prolonged drought in Indonesia

Atmospheric pressure changes in the Pacific Atmosphere

Pressure centers above Easter Islands (eastern) and
Indonesia (western)

Increase on one side and decrease on another

Reversal of this atmospheric pressure distribution.

Southern Ocean Oscillation

Normal conditions: high-pressure above Easter
Islands; low-pressure system above
Indonesia (Fig.9.17)

La-Nina (the girl)

The trade winds strengthen and surface water
temperatures of the Eastern Pacific are colder,
whereas those to the west are warmer than
normal.

Opposite effect.