

## Global Warming Can Not Melt the Polar Ice Caps From Below

The Earth is being heated by the Sun every day. Almost 174,000 Terawatts of energy hits the Earth. One Terawatt is equal to one million megawatts! So the Sun is heating the Earth with 174 billion megawatts of energy! Of this, about 30% is reflected back due to the white reflectivity of the Earth which is known in science as the albedo effect. So the net energy absorbed by the Earth is 122 Terawatts.

If so much energy is being absorbed by the Earth, it should continue to heat up and its temperature must continue to rise constantly. Within days the temp should surpass the maximum that any life could bear. All life would die and the trees whither and char.

But this does not happen. The Earth has its own temperature stability. Why? Because, at night the Earth radiates the heat absorbed during the day into deep space. Of the 122 TW that the Earth absorbs from the Sun, it radiates 121TW back into deep space and the difference is converted into work for moving the air, the clouds and the sea currents and tides. Radiation always takes place between two bodies, the heat going out from the hotter to the cooler body. We can actually feel this cooling effect at night, but the truth is that it is happening all 24 hours. The Earth is constantly cooling by radiating out its energy into deep space. We don't feel it during day because the effect of the Sun's radiation is to annul the cooling and go on further to warm the Earth. Over the millions of years the Earth has achieved a balance of its temperature equating the heating by the Sun and the cooling at night.

The sea has a vast reserve of water which is capable of absorbing the heat of the Sun without change in its temperature. Sun's radiation penetrates a long distance down in the water and the heat is absorbed into a very big mass of water. In places where there are algae or plankton as a mixed layer, its depth makes some difference. Observations of sea surface temperature (SST) where there was ocean mixed layer (OML) at 5 feet below surface showed a day night temperature difference of 1.5 degrees centigrade. But when the OML was 50 feet deep, the temperature difference was only just 0.1 degree!

The Oceans hold 1.3 billion cubic kilometers of water. Physics has given us a way to calculate the rise of temperature of water knowing its mass, specific heat and the amount of heat input. Intergovernmental Panel on Climate Change (IPCC) has reported that the effect of greenhouse gases on global warming is 1.6 watts per sq. meter which works out to a heat input of 800TW on the surface area of 500 Tera sq. meters for the whole planet. This heat input for the whole year without considering the night-time radiation from the sea surface, can only raise the temperature of the sea by ½ degree over a period of 111 years! It is therefore impossible for the global warming arising out of the greenhouse gases to warm the sea enough to melt the polar ice caps from underneath.

eMaya the expert on Climate Change, suspects that it is more likely caused by undersea volcanic activity. You can read how she plans to stop global warming in the book 'eMaya' at [www.trafford.com/08-0434](http://www.trafford.com/08-0434)

### About the Author

The author Dilip Dahanukar studied engineering in India and management in the USA. He has rich experience in corporate management and finance. His interest in environment and computer possibilities has resulted in this book '[eMaya](#)'. He spends his weekends in his forest-garden abode in the hills in India.

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