

by the mere surface alone, but a considerable layer of water near the surface receives the heat.

At the equator the evaporation of the ocean appears to be about 2.3 meters per year,<sup>1</sup> which involves more than 1,000,000,000,000,000 calories of latent heat per square kilometer. The amount of heat which is employed in evaporating water from 100 square kilometers of the tropical ocean is accordingly vastly more than all the energy employed in the metabolism of the total population of the United States, and it amounts to more than 100,000,000 horse power. This is equivalent to more than one horse power per square meter day and night throughout the year. To a greater or less extent all over the earth this same process goes on, and as a result the water vapor in the air probably averages between 15 and 20 kilograms per square meter of the earth's surface, an ample supply for the formation of rain. The effect of this enormous evaporation to moderate the temperature of the tropics is very considerable; but the heat which thus disappears is not lost. Rendered latent at the place of evaporation, it is turned back into actual heat at

<sup>1</sup> This and other similar facts will also be found in the work of Hann.