

zones, we must endeavour to solve the problem of the mean tension of the vapours contained in the atmosphere in different latitudes, and at different heights above the surface of the ocean.

A great number of local circumstances cause the produce of evaporation to vary; it changes in proportion as more or less shade covers the basin of the waters, with their state of motion or repose, with their depth, and the nature and colour of their bottom; but in general evaporation depends only on three circumstances, the temperature, the tension of the vapours contained in the atmosphere, and the resistance which the air, more or less dense, more or less agitated, opposes to the diffusion of vapour. The quantity of water that evaporates in a given spot, everything else being equal, is proportionate to the difference between the quantity of vapour which the ambient air can contain when saturated, and the quantity which it actually contains. Hence it follows that the evaporation is not so great in the torrid zone as might be expected from the enormous augmentation of temperature; because, in those ardent climates, the air is habitually very humid.

Since the increase of agricultural industry in the valleys of Aragua, the little rivers which run into the lake of Valencia can no longer be regarded as positive supplies during the six months succeeding December. They remain dried up in the lower part of their course, because the planters of indigo, coffee, and sugar-canes, have made frequent drainings (azequias), in order to water the ground by trenches. We may observe also, that a pretty considerable river, the Rio Pao, which rises at the entrance of the Llanos, at the foot of the range of hills called La Galera, heretofore mingled its waters with those of the lake, by uniting with the Caño de Cambury, on the road from the town of Nueva Valencia to Guigue. The course of this river was from south to north. At the end of the seventeenth century, the proprietor of a neighbouring plantation dug at the back of the hill a new bed for the Rio Pao. He turned the river; and, after having employed part of the water for the irrigation of his fields, he caused the rest to flow at a venture southward, following the declivity of the Llanos. In this new southern direction the Rio Pao, mingled with three other rivers, the