

# Meat and the Planet: A Human View

by Zbigniew Jaworowski, M.D., Ph.D., D.Sc.

*Professor Jaworowski here responds to a New York Times editorial, Dec. 27, 2006, entitled "Meat and the Planet," which calls for "pushing livestock production in more sustainable directions" to help stop "global warming." Jaworowski's letter was not printed by the Times.*

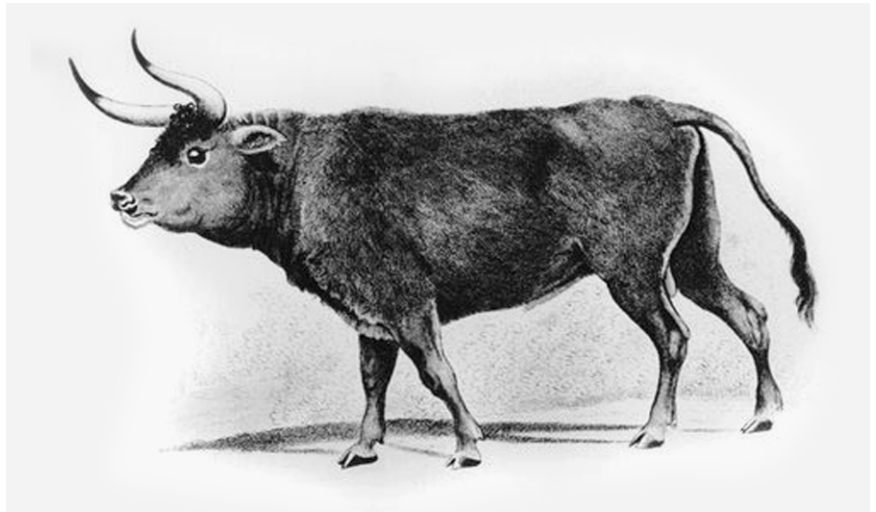
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The editorial "Meat and the Planet" is imbalanced. The 3.2 billion cattle, domestic buffalo, sheep, and goats, plus pigs and poultry, are not just meat, they are also living organisms, which desire to live no less than we do. Stopping rearing them, would mean stopping the lives of these billions. Having a say, would they appreciate this?

Human activity has increased the plant and animal biomass of the cultivated part of the biosphere. In the paleolithic period, the number of aurochs (*Bos primigenius*) that lived in Europe until 1627 A.D., was probably some 100 times lower than the number of cows (descendants of this *Bos*) living there now. Similar calculations are easy to perform for pigs or birds. The cultivated ecosystem is able to provide more food for large mammals and birds than ecosystems of old. This is because we increased production of vegetal nutrients by many folds, in comparison with non-human ecosystems.

The editorial stated that methane released by these domesticated animals is responsible for 18 percent of the global greenhouse effect. This is incorrect. According to the 1990 report of the Intergovernmental Panel on Climate Change (IPCC 1990), methane (CH<sub>4</sub>) from all sources (man-made plus natural), contributes 18 percent not to the total greenhouse effect, but only to its man-made fraction.

But the man-made greenhouse effect is only a tiny part of the natural greenhouse effect, the dominant cause of which is



*This lithograph is of the last of the aurochs (in Polish tur, similar to Greek tauros and Latin taurus, but also to German Tier, and English deer). They lived throughout Europe after the last Ice Age, but slowly disappeared because of hunting and agriculture. For several hundred years a small group of these animals lived in the large forests in Poland, protected by the king and local princes. The last group lived in Jaktorowski Forest not far from Warsaw, under the protection of the Prince of Masovia. This small group died out in a couple of years, probably because of a disease contracted from domesticated cattle. The lithograph depicts the last female, which died in 1627.*

water vapor present in the atmosphere—a fact that the greens and the media tend to ignore. According to various estimates, water is responsible for about 96 to 98 percent of the natural greenhouse effect (Ellingson et al. 1991, Lindzen 1991).

Four other-than-water greenhouse gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and CFCs) add only 2 to 4 percent to the natural greenhouse effect. Taking even the upper limit, 4 percent, methane contributes only a tiny fraction to the global greenhouse effect.

The total natural and man-made atmospheric emission of methane is 0.525 gigaton per year (IPCC 1990). This (according to the IPCC data) contributes 0.68 percent to the total greenhouse effect. All animals with enteric fermentation (wild plus domesticated) add to the global emission of methane only 0.080 gigaton per year (IPCC 1990), contributing 0.10 percent to the total greenhouse

effect. This is 180 times less than stated in the *New York Times* editorial, and obviously far from being alarming, as heralded by the *Times*.

The increased nourishing potential of the biosphere should be regarded as a beneficial influence of humans on the planet. The climatic effect of domestic animals is imperceptible. What is really alarming is the misanthropic tune and green blinders with which the *New York Times* treats humankind and its civilization.

## References

R.G. Ellingson, J. Ellis, and S. Fels, 1991. "The Intercomparison of Radiation Codes Used in Climate Models: Long Wave results," *Journal of Geophysical Research*, Vol. 96(D5), pp. 8929-8953.

IPCC, 1990. *Climate Change: The IPCC Scientific Assessment*. (New York: Cambridge University Press).

R.S. Lindzen, 1991. "Review of Climate Change: The IPCC Scientific Assessment," *Quarterly Journal of the Royal Meteorological Society*, Vol. 117 (499), pp. 651-652.