

Title: Spatial information and analysis on nutrient overloads in Europe, Asia and Latin America

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Description: *Background:* The term 'Livestock revolution' has been used to describe the rapid expansion of livestock production in developing countries, which has mainly been fuelled by population growth, urbanisation and income growth in developing countries. This rising demand for animal products is being met mainly by a rapid growth of specialised intensive pig and poultry production. Industrial systems are primarily directed at producing animal protein at low prices for the urban markets. Since they are demand-driven, intensive animal production and processing often take place near urban areas, while primary feed is produced in distant rural areas or imported. The main environmental problems associated with industrial livestock production systems are: 1) accumulation of animal waste, leading to build up of excess nutrients and heavy metals in the soil, 2) pollution of surface and ground water 3) emission of ammonia, odour and greenhouse gases to the atmosphere, 4) release of chemical inputs, 5) degradation and depletion of fresh water resources, 6) high consumption of fossil energy and 7) loss of bio-diversity in farm animals. The "Livestock, Environment and Development Initiative (LEAD) targets these issues in its programme "Improved decision-making in addressing land, water and air pollution by industrial livestock production".

Objectives: The LEAD initiative is involved in developing tools to assess livestock - environment interactions for early warning and decision support with regard to policy making and activity targeting. In this framework, the objective of the database and study presented here is to assess the spatial distribution of nutrients overloads in Asia, Latin America and Europe, for awareness building and targeting of activities.

Beneficiaries: The main beneficiaries of the "hotspot" maps are expected to be the policy makers and program managers in regional, national and international agencies. The targeted beneficiaries of raw data and methods for analysis are the scientific and technical communities.

Outputs:

- Updated comprehensive spatial data base on land use and nutrient balances
- A predicted map of nutrient overload hotspots
- Scientific and technical publications on the issue and outcomes of the analysis