

■ Geographic implications of the NGMC's nutrient transition

The global pattern of daily calorie intake is only part of the picture of the increased pressure that rising affluence places on food production systems. The pressure is intensified even further by the inefficient way food chains operate:

- Animals use up a lot of converted biomass energy roaming around, defecating and respiring.
- Beef cattle eat about 8 kilograms of grain or meal for every kilogram of flesh they produce.
- Cattle rearing therefore places excessive and wasteful demands on grain (and water) supplies that could be used to provide for human populations directly.
- Fewer grains and cereals are left to be sold as food on global markets if large volumes are being used as inputs for wasteful cattle farming systems.

Dietary and lifestyle changes have further implications for agricultural production systems and the species they rely on:

- Livestock farming has become the new focus of Asian agriculture, bringing with it a steep rise in emissions of methane, a powerful greenhouse gas. This contributes to climate change, which may affect crop yields negatively in some parts of the world (see pages 58–59).
- Rising affluence also puts pressure on particular plant and animal species if their use or consumption is linked culturally with social prestige. Southeast Asia is being stripped of Siamese rosewood as a result of the ability of China's emerging middle class to purchase sought-after hardwood furniture that used to be out of their price range. Shark fin soup is an important but expensive dish traditionally consumed at Chinese weddings by those who can afford it. As incomes have risen, the number of sharks killed worldwide to meet growing demand has doubled. Unless action is taken, stocks of these and other renewable plant and animal resources may eventually collapse altogether.