

Food & water

*Smarter management
of global resources*

Feeding and fueling the nine billion

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Increasing crop yields

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Fisheries-induced evolution

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Improving livestock production

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 ■ GAINS model underpins new UN report ■
 POP goes Wittgenstein ■ New cropland map for Africa
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 Grains of sense from Ghana scientists
 IIASA models G4M and GLOBIOM underpin new report
 WWF's Living Forests Challenge
 Model shows potential to increase ice production

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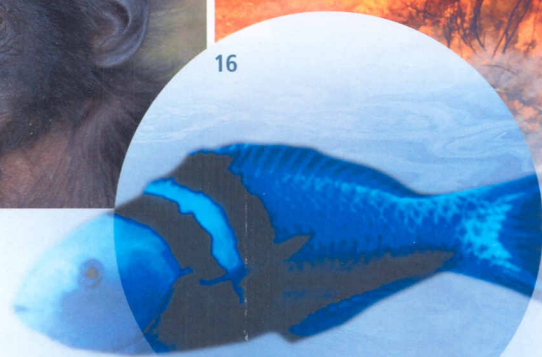
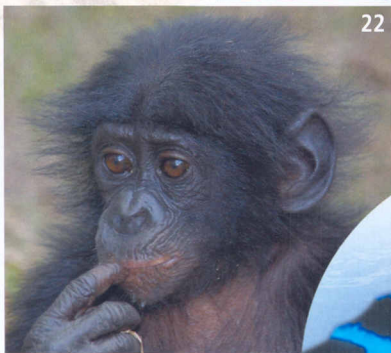
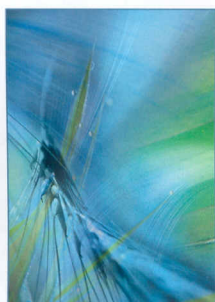
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Dorsamy (Gansen) Pillay
 Vice President and Managing Director,
 Research and Innovation Support and Advancement (RISA),
 National Research Foundation (NRF) of South Africa



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 A major goal of the international and development communities is to satisfy food security needs while achieving a smaller environmental footprint
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 To feed an estimated world population of 9 billion in 2050, agricultural production would need to rise by almost 1.4 percent per year from the year 2000 baseline. But it is uncertain whether such growth can be achieved and sustained to 2050.
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 Pressure from large-scale commercial fishing, as well as intense recreational and sport fishing, is accelerating evolution in some fish populations and threatening the sustainability of fisheries. Scientists are responding with tools to conduct evolutionary impact assessments that can lead to better management of fisheries.
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 High quality feed, improved breeding, and reduced disease could significantly improve the amount of animal protein available for consumption at the same time as limiting the amount of land needed for livestock
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 Nitrogen pollution costs the EU between €70 and €320 billion annually. A new assessment provides guidance to the EU on how to reduce nitrogen pollution and protect human and environmental health.