

# Environmental performance affected by ethnicity and religion

December 19 2012

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Ethnically or religiously diverse countries underinvest in measures to improve their environmental performance, according to new research by an academic at the University of East Anglia (UEA).

Dr Elissaios Papyrakis also found that religious diversity has a more detrimental impact on [environmental performance](#) than ethnic differences. These social differences, if they cannot be overcome, may lower [collective action](#) and reduce public spending on environmental protection and performance.

The study, *Environmental Performance in Socially Fragmented Countries*, is published online today in the journal *Environmental and Resource Economics*.

Dr Papyrakis assembled data on environmental performance, ethnicity, religion, industry, income and population density, as well as conflict and control of corruption, for 127 developed and [developing countries](#). He then analysed what influences a country's environmental performance and investment in protection measures and whether this is associated with [social diversity](#). It is believed to be the first study to explore the link between ethnic and religious diversity and a country's environmental performance.

Dr Papyrakis, a senior lecturer in UEA's School of International Development and a senior researcher at Vrije Universiteit, in Holland, said: "Social fragmentation has a negative effect on environmental

performance. Countries that are either ethnically or religiously diverse tend to underinvest in [environmental protection](#), even when one controls for differences in income and industrial activity, for example.

"This might be because of differences in preferences across the various, and often geographically concentrated, ethnic or religious groups about which environmental measures should be introduced and when and where. For example, public spending for waste treatment facilities or [reforestation](#) can become particularly contentious issues when different ethnic or [religious groups](#) do not benefit equally. Even when preferences over what should be done do not differ much, differences in language and culture may hamper communication and collective action. If these differences cannot be bridged, investment will not be made and positive action will not be taken."

The data analysed related to the period between 1960 and 2006, the most recent available. Environmental performance was measured using data on the monetary damage (as a share of GDP) attributed to a country's carbon dioxide emissions and the dependence of energy consumption on 'clean', or renewable, sources such as hydropower, geothermal, nuclear and solar power. Dr Papyrakis also took into account the country's adjusted net savings – a measure of sustainable development that looks at the true rate of saving in an economy after taking into account investments in human capital, depletion of natural resources and damages caused by pollution.

Although several factors influence environmental performance simultaneously, ethnic and religious diversity alone can explain a substantial part of the differences observed in environmental performance across countries. For example, an ethnically fragmented country such as Tanzania invests 11 per cent less for the future (adjusted net savings) compared to other Sub-Saharan African countries, such as Madagascar, that are ethnically similar.

Some of the worst environmental performers, given their level of economic development, have been either ethnically or religiously fragmented nations such as China, Democratic Republic of Congo, Angola and the United Arab Emirates. The more ethnically diverse United States and UK also score much lower in terms of adjusted net savings (US 2.92 per cent of GDP, UK 13.88 per cent (2005 figures)), while higher in terms of damage attributed to CO<sub>2</sub> emissions (US 0.344 per cent of GDP, UK 0.178 per cent (2005 figures)) compared to less diverse Scandinavian economies such as Denmark (adjusted net savings 13.88 per cent, CO<sub>2</sub> damage 0.13 per cent (2005 figures)).

Dr Papyrakis said the findings have significant policy implications: "Policy-makers need to promote collective action and communication among different groups, acknowledging that investment for the public benefit often requires broad social consensus and solidarity.

"The question of what makes some countries more successful than others in managing their environment is certainly one of the most fascinating environmental economists can ask, but also one that is difficult to answer due to the interaction between several factors. This analysis is a first step in exploring the intriguing relationship between ethnic and religious diversity and the environment."

Provided by University of East Anglia

Citation: Environmental performance affected by ethnicity and religion (2012, December 19) retrieved 5 May 2024 from

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