

## EXCURSUS 3

### Thomas Land on WASTELANDS IN AMAZONIA

Evidence published by scientists on the altered water balance of the upper Amazon basin suggests that the long-predicted climatic changes resulting from large-scale deforestation have now begun. Over the long term these changes may endanger the agricultural potential of the world's foremost wheat-yielding areas—Europe and North America.

Stretching across nine Latin American countries and comprising the globe's largest tropical forest, the Amazon region still holds sufficient timber reserves to supply the world for two decades at its present rate of consumption. But large and uncoordinated forest-clearing operations have already created numerous bald patches of wasteland in the once continuous dark woodland—as indeed has happened in the tropical forests of Central Africa and the Himalayan foothills. During the past thirty years about half the world's forests have disappeared.

Increased flooding and basic changes in the Amazon water balance, recorded by Dr. A. H. Gentry of the Missouri Botanical Garden and Dr. J. Lopez-Parodi of the Peru Proyecto Pari Jenaro Herrera, seem to point toward disastrous long-term consequences. The scientists say that these phenomena are probably the result "of increased runoff due to deforestation," and, if so, "the long-predicted regional climatic and hydrological changes that would be the expected result of Amazonian deforestation may already be beginning."

The scientists warn that this could be the start of a self-perpetuating process leading to a rapid degradation of land and the conversion to near-desert of much of Amazonia. Many climatologists believe that a secondary effect of the destruction of the dark forest carpet might be a "shinier" globe, thus shifting rainfall patterns and creating permanent drought in the great bread-basket regions of the Northern Hemisphere.

Roughly half the rainfall received by the Amazon basin comprises water recycled into the atmosphere by trees. Any massive removal of trees from the area would thus break the transpiration cycle that supports the incomparably rich local biosphere, including millions of species of plants and animals that are to be found nowhere else in the world.

Though two-thirds of the Amazon forest remains untouched, the wilderness is in constant retreat from the relentless expansion of industrial enterprises. Peru alone intends to settle two million people in the forest within five years. Ecuador and Colombia hope to exploit several oil and gas fields in the jungle, necessitating new pipelines, supply routes, and various ancillary developments.

Studies conducted during the past decade in the defor-

ested areas of upper Amazonia along the edges of mountains in Ecuador and Peru show a consistently increased runoff—in the absence, so far, of a significant change in the regional rainfall pattern. The high water levels of the Amazon have also increased considerably since 1970 without a corresponding change in the low water levels. Gentry and Lopez-Parodi observe that the magnitude of the damage is already potentially great, since the existing population and agricultural centers of the region tend to lie near the seasonally flooded river margins.

The long-term effects of the change, which could well be self-accelerating, are yet beyond comprehension. But the scientists remark on "the rapidity with which the relatively limited forest destruction appears to have altered [already] the Amazon water balance."

*Thomas Land is a writer on global affairs.*

## EXCURSUS 4

### Janice A. Broun on LITHUANIA: PROFESSION AND REPRESSION

Lithuania, a captive nation of only three million people within the Soviet empire, rarely makes headlines, but the Lithuanian people have shown a resilience unparalleled in any other European "subject" nation except perhaps the Ukraine. Both nations lie in sensitive border areas adjacent to Poland (with whom, in fact, the Lithuanians shared for centuries a huge joint state), and with good reason are considered untrustworthy by the Soviet Government.

Between 1794 and 1914 the czars did their utmost to destroy the Lithuanian culture and language but failed, largely because of determined resistance by the Roman Catholic Church and the people working together. Modern Lithuania enjoyed a mere two decades of prosperity and independence before Russia reinvaded in 1940, deporting a sixth of the population to Arctic Russia, where most perished. To revived oppression the Russians added a new scourge: compulsory atheism in the schools. They forcibly settled Russian colonists to dilute the "native" population and they continue to attempt to replace Lithuanian with Russian in the educational system, to rewrite history texts, and to sap the nation's will to resist. Little is done to combat alcoholism, which affects almost a tenth of the people, or the increase in delinquency, violence, abortion, and broken families that are an outgrowth of Soviet rule.

In 1972 there were widespread anti-Soviet riots after a young Catholic worker, Roman Kalanta, burned himself to death to draw attention to Lithuania's plight. Simmering resentment by rootless elements has led since to sporadic riots—carefully hushed up.

Lithuanian Catholics for the most part reject violence, fight alcoholism (often pledging themselves to total abstinence), and do their utmost to preserve their heritage. It is as a result of their determination, resourcefulness, and united front that persecution of the faith community is less harsh and brutal and church life continues more normally than in other Soviet republics, among which Lithuania has the densest single concentration of Christians. When statutes that had been used to destroy parish life in the Russian Orthodox Church were introduced here in 1976, 522 out of 700 Latvian priests refused on canonical grounds

