Widespread oil pollution in the Amazonia?

R. YUSTA[1], M. ORTA-MARTÍNEZ[1,2], P.G. MAYOR[3] , N. MORALEDA[1] AND A. ROSELL-MELÉ[1,4]

[1]Institut of Environmental Science and Technology, Universitat Autònoma de Barcelona, Bellaterra, Catalonia, Spain

[2]Centro di Documentazione sui Conflitti Ambientali, Roma, Italy

[3]Dept. Sanitat i Anatomia Animals, Universitat Autònoma de Barcelona, Bellaterra, Spain

[4]ICREA, Barcelona, Catalonia, Spain (antoni.rosell@uab.cat)

All the distinctive tropical rainforests in Southeast Asia, Central Africa and South America contain oil and gas reserves. The Western Amazon has large reserves of hydrocarbons in rainforests that host unparalleled biological and cultural diversity, and it is home to most of the last uncontacted peoples living in voluntary isolation. Oil production started in the 1920s, peaked in the 1970s and current growing global demand are stimulating a renewed growth in oil and gas extraction activities. About 69% of the Peruvian Amazon has already been tapped for oil and gas at some point in time between 1970 and 2009

The Corrientes and Pastaza rivers watersheds were declared in 2013 under Environmental Alert by the Peruvian government. Unfortunately the current debate on the impacts of exploration and exploitation of oil resources in tropical rainforests is taking place with little factual scientific knowledge. An underlying issue is the lack of surveillance systems to monitor activities of oil companies in the rainforests, and the remoteness of the regions represents a challenge to undertake large scale surveys even for government agencies.

To overcome some of the challenges we have compiled and analyzed environmental chemical data obtained by a range of Peruvian public agencies and oil companies over different periods of time. Our aim is to derive a comprehensive data set of the region to distill information on the distribution of heavy metals and hydrocarbons over a significantly large area, and over time, to trace the occurrence of occasional or chronic spills of crude oil and production waters, and their transport along the rivers. In addition, we have undertook field expeditions to ground truth the data and conduct parallel chemical analysis. Our results indicate that indeed contamination is widespread in remote areas of the Peruvian Amazon, and that there is a risk it may affect the human food chain through the consumption of wildlife by local indigenous people for their subsistence diet.