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E-Tech International 2016 Letter and News Dick Kamp, Director's vision

While E-Tech feels strong, 2016 is ending with a sense of darkness for those of us in the U.S. who see a surge by Donald Trump to divide American society into winners and losers. We expect that U.S. foundations will be scrambling to protect victims—immigrants and racist targets, the environment, the poor, women, climate change. I find, as do many friends, that it's hard to separate personal difficulties from our nation's; we have to celebrate our illuminating moments more. Perhaps a bit ironically, our environmental work is international and so our commitments and hopefully progress will strengthen, domestic politics notwithstanding.

E-Tech's mission is environmentally technically assisting communities in developing countries to address and/or prevent large-scale environmental industrial impacts. It's encouraging in these times that we've made considerable headway this year in our South American work which is defining our path in Peru and Ecuador. As an elder (Jew, not indigenous), I was informed by indigenous folks a few weeks ago at a Swift Foundation retreat in Lima, my job is not to piss and moan but to help keep our work in the world moving among the next generations. ***So, Below: Kukama Maraonon River community environmental monitors establish permanent environmental monitoring station during E-Tech June, 2016 training in Loreto, Peru. Photo: Lucy Kamp age 16.***



In Loreto, Peru, we see increasingly profound changes in our work that are moving us in some unexplored directions seeking strategies to cleanup 45 years of injustice with hundreds of locations of crude oil contamination spread over 2500 square miles of 4 Amazon river basins: Marañon, Tigre, Pastaza and Corrientes Rivers. With indigenous federations, civil society, government and universities we seek cleanup initiatives, that can be successful in the jungle and continue for decades after we leave.

Right: Diana Papoulias and Ricardo Segovia (foreground) conferred with Loreto Amazon Basin Apus on E-Tech 2017 strategy. December 15, 2016.

Photo: Renato Pita, Puinamudt. Subjects included pollution monitoring, development of curricula and public interest certified laboratory capacity to analyze pollution samples, promoting a national fund in coordination with the Peruvian government and seeking funds for unemployed indigenous communities to implement accords and formal acts made with Ollanta Humala that can restore and remediate lands and water. E-Tech works for these guys and their communities and taking time to consult is critical.



Empowering Loreto Indigenous while cleaning up crude oil land and water under Kuczynski: Decades ago new Peruvian President Pablo Kuczynski helped bring Occidental Petroleum (and oil pollution) to Loreto on a large scale. Now, he's promised to honor President Humala/indigenous agreements to clean up and to expand funding for remediation beyond the \$15 million managed by the Peruvian Government Environmental Fund FONAM. Costs will probably be in the billions. E-Tech continued to seek expanding support for federations and FONAM indigenous capacity building funding including meetings in Washington with USAID, Ford Foundation, and E-Tech staff and board the week before Christmas. The Kuczynski administration continues the dialogue with federations, although many

political and legal obstacles remain to implement the cleanup in a way that provides impoverished indigenous employment and control. E-Tech and indigenous monitors have been monitoring relatively unknown area of science: applying traditional ecological knowledge combined with modern science. Knowledge of fish, plants, soil in the tropical jungle is key to interpreting biological pollution as well as observations related to applying standards that may or may not work in the Amazon to laboratory analysis



Photo: Dick Kamp signed an agreement, October 23 with the University Amazonia Peruana (UNAP) in Iquitos, Loreto to develop certified lab capacity as well as curricula in the service of indigenous communities remediating land and water. Photo by UNAP Professor Duma Rengifio who has worked tirelessly on this and also acts as our consultant.

E-Tech has also been working with Peruvian allies in the field, with the Dutch 3ie project (also in Ecuador) and with Peru Equidad, a human rights organization that teams with E-Tech's toxicologist Diana Papoulias and indigenous coalition platform, Puinamudt, on environmental and health analyses. Independent consultant Mario Zuniga, both Puinamudt and E-Tech consultant, expedites indigenous-

government meetings to implement accords and is working on an impending congressional commission to seek solutions to halt the endless (10 large spills in 11 months!) flow of oil from corroded pipes and infrastructure. We hope to play a major advisory role for this commission. Remediation can only be successful when the spills stop.

Elsewhere in Peru: Chief Engineer Bill Powers continues to assist indigenous communities in the Madre de Dios region with best practices closure of exploratory drilling.

Niger Delta and Loreto: Another goal during 2017 will be to begin an interchange with Nigerians who, despite a \$1 billion legal settlement to clean up Shell and other oil contamination struggle with corruption, violence, and terrorism focus in the north of the country to get cleanup implemented.

Loreto and the Niger Delta could be sites of the first successful large scale tropical remediation of oil pollution; elements are similar in the UNEP brokered plan: local capacity building and employment for example. That raises the stakes for our work!

Ecuador: Working as Visiting Faculty in field and classroom as Ecuadoran

Military battles indigenous Shuar. E-tech work in Ecuador as a US NGO became a political concern several years ago. E-Tech chose to become visiting faculty at Ecuadoran universities including the Geology and Petroleum Engineering faculty of the state-run Escuela Politecnica Nacional (EPN) in Quito where we work under a contract (fulfilling national government mandates) with the Prefecture (elected state government) of Pastaza to develop community monitoring and EPN/E-Tech evaluations of crude oil and produced water impacts. Dr. Steven Emerman, E-Tech consulting expert on mine tailings impacts, gave presentations in July in Zamora Chinchipe and Morona Santiago, as E-Tech continues to work on developing contracts with and between EPN and those prefectures. Our principal foci in the latter two, have been analyses of impacts and potential monitoring of the Chinese Ecuacorriente Mirador copper mine and Fruta del Norte gold-silver mine (both based in Zamora Chinchipe) on regional rivers including the Rio Santiago (in Morona Santiago) that enters the Marañon River. We have been working with CEDHU (Centro Ecumenico de Derechos Humanos) and EPN to integrate environmental analyses of the Morona Santiago Ecuacorriente Panantza-San Carlos mine with assessing potential indigenous community resources. **The mine-site has, since October, been the center of increasing violence between military and indigenous Shuar demanding the company leave their territory. A mid-December gun battle with one fatality and eight injuries brought increased military occupation. Shuar are warriors; escalation to a (Peru) Bagua-type massacre is possible.** The impending February Presidential election adds tension and slowing of development of formal contracts and implementation of EPN/E-Tech (among other universities) technical analyses in the Cordillera del Condor.

Right: A classroom EPN Engineering Students/ E-Tech Monitoring Exercise. Quito, November, 2016.

Photo: Diana Papoulias



Tragic violence and politics notwithstanding, work advances in Ecuador. October 27-November 1 produced mining workshops at the request of the Prefecture of Morona Santiago followed by monitoring workshops in Quito at the EPN. Steven Emerman has an interchange funded between his Utah Valley University program and EPN faculty. Three project researchers from another E-Tech academic partner, University of San Francisco de Quito (USFQ), participated in an EPN November workshop and met to outline plans and strategies for joint E-Tech USFQ indigenous monitor workshops on oil contamination in the Oriente of Ecuador as well as potential collaboration in the Morona Santiago region.

Mexico: Working Slowly The pace has slowed of E-Tech work in Northeast Sonora near the U.S. border with the Proyecto Fronterizo de Educacion Ambiental integrating long term watershed monitoring and a citizens' committee that can address water issues in the section of the Rio San Pedro Rio Sonora and a small Grupo Mexico Cananea copper impacted by the giant mine. In large part this has been driven by immersion in Peru and Ecuador issues however we will be returning in early 2017 to visit collaborators in municipalities, academia, government, and civil society. The project is theoretically viable and has popular support; at issue will be viability of permanent monitoring projects and fundraising for the same. **Photo: Bill Steen**



Canada First Nations: Husky Oil Spill and BC Mine Tailings. E-Tech Field Coordinator Ricardo Segovia, working as a Canadian-Salvadoran volunteer with no funding, has been providing technical support to first nations in British Columbia and Saskatchewan who have watched their land and water saturated with mine tailings spills and oil pipeline spills. Since the August 2014 Polley Mine western BC tailings spills left many miles of devastation on Soda Creek and Williams Lake Indian Bands, Ricardo has made numerous trips to evaluate damages and battle re-issue of a tailings permit. Following a July 21 up to 250,000-liter oil pipeline spill into the North Saskatchewan River Ricardo sampled oil pollution on behalf of Cree for hundreds of kilometers downstream; while Husky claimed there was no problem. At year end, three cities have no potable water from the river or are using expensive filtering.

Colombia Mining: E-Tech Chief Scientist Ann Maest is collaborating with nonprofit TERRAE and mining focused AIDA in west-central Colombia exploring strategies to identify and communicate environmental risks associated with the development of the Anglo Gold Ashanti La Colosa gold mine that would be one of the largest mines in South America if fully developed. The available technical information on water quality and quantity, mine facilities, and seismicity has been gathered, and a report by Terrae is currently under review.

In all our work we are grateful to the MacArthur Foundation, Swift Foundation, Wick Family Fund, 3IE Project, International Funders for Indigenous People, Puinamudt and the federations and communities of Loreto, Peru, Peru Equidad, Escuela Politecnica Nacional, our staff and consultants Ricardo Segovia, Lupita de Heredia, Diana Papoulias, Ann Maest, Bill Powers, Mario Zuniga, Duma Rengifo, Steve Emerman, Laurie Silvan, Seri Gillengerten, Laurie McKenna, Bill Steen, a wonderful board, you great individual friends and donors who stand behind us. In memory of Michael Ferry who volunteered his time and love as accountant and a hug for Alberto Barandarian and Bram Willems who watch out for us in Peru and our friends on the Rio Sonora and Catalina Denman in Mexico.

Our profound gratitude.

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-----WE STILL OPERATE WITH A MINIMAL BUDGET, MINIMAL INFRASTRUCTURE, ON PROJECTS THAT LAST DECADES, AND PAY OFTEN FOR INDIGENOUS EXPENSES. WE SEE ENVIRONMENTAL AND ENVIRONMENTAL HEALTH SOLUTIONS LINKED TO ALLEVIATING POVERTY. WORKING IN PERU ON GROUNDBREAKING SOLUTIONS TO OIL CLEANUP WITH WRONGED INDIGENOUS AMAZON BASIN COMMUNITIES WHO CAN PRESERVE HUGE EXPANSIVES OF FOREST IS LONG-TERM AND EXPENSIVE. WORKING IN INCREASINGLY CONFRONTATIVE ECUADOR DRAWS FEW FUNDERS AND IS NOT SEXY. E-TECH HAS LITTLE FUNDING FOR RICARDO SEGOVIA WORK WITH FIRST NATIONS IN CANADA.

FELIZ DIAS DE FIESTA

Y UN ABRAZO FUERTE, DICK KAMP IN SNOWY NEW MEXICO 12/22/16