

# **TOXIC NEWS**

## **Fifth Edition**

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## ***Editorial: Toxic Subjectivities***

Alice Mah, Department of Sociology, University of Warwick

*The sense of cautious optimism following the Paris climate change agreements last December already seems worlds apart.*

Featured image: photo credit: Petter Rudwall, [unsplash.com](https://unsplash.com)

This issue marks the one-year anniversary of *Toxic News*. It has been a significant year for toxic issues around the world. The sense of cautious optimism following the Paris climate change agreements last December already seems worlds apart. The [Alberta tar sands are still burning](#), the Brexit vote threatens to unravel environmental protections in the UK, and a vehement climate change denier is running for the US presidency.

It has also been an important personal journey for each of us at Toxic News. Through our editorial and research work, we have become more sensitized to toxic issues: from greater awareness of our complicity in environmental injustice through our high consumption lifestyles; to deeper concern about toxic exposures in our everyday lives; to reckoning with the truly frightening implications of the climate crisis.

*But this journey has also been inspiring, sharing stories about how people live with, understand, and resist toxic environmental challenges.*

At some points, this journey has led to a sense of disorientation and powerlessness, in the face of such monumental challenges. Toxicity is uncertain and deeply politicized. Faced with toxicity at multiple levels and scales, it can be a paralyzing issue. But this journey has also been inspiring, sharing stories about how people live with, understand, and resist toxic environmental challenges.

This issue addresses toxic subjectivities – different people’s experiences and confrontations with toxicity – at varying levels and scales. The stories span evacuation retreats in Japan, a polluted town in Serbia, an electronic waste site in Ghana, and industrial pollution controversies in China. The narratives show contrasting gendered dimensions of collective toxic subjectivity, between societal roles of women and mothers in Cousins’ study, and the macho bravado of muscular heroism in Jovanovic’s study. They also examine the importance of colonial legacies, and how environmental hazards of toxic exposure and climate vulnerability are concentrated in poor, marginalized communities.

The stories in this issue show tensions between values about what is “good” or “bad”, with competing values around health and safety, livelihoods, and economic development. They also highlight tensions in collective identity, or toxic subjectivities, how people experience, endure, and attempt to resolve their complex subject identities within toxic landscapes.

In the opening article, Deana Jovanovic focuses on the [ways that people living in the heavily polluted industrial town of Bor in Serbia cope with the “smoke”](#). Although *Borani* (Bor

residents) acknowledge that there are risks in living in such a polluted place, some residents have adopted an ironic narrative of “heroic endurance under the smoke”. They represent themselves as nearly invisible, having developed a super-human immunity to pollution through prolonged exposure.

Following this theme of endurance, Elicia Cousins explores [how families in Fukushima spend time away from contaminated areas in evacuation retreats](#), as a way of minimizing harm, particularly to children. Her account is both political and personal, showing the ways that ordinary citizens have mobilized in the face of invisible hazards and neglect by the state. They have little choice but to endure everyday life in areas with radioactive contamination, but they place hope on these retreats as spaces of physical as well as emotional recovery.

This political question- of what is to be done- is explored further in [Peter C Little’s piece about “pyropolitics” in Agbobgloshie in Ghana, the infamous electronic waste dump](#). Peter discusses tensions between different visions and experiences of toxicity in Agbobgloshie. This site has attracted global attention as a top toxic threat, with a host of journalists, photographers, and non-governmental organisations, and polarized narratives about what is “good” and “bad” for the intractable problems of public health and economic survival. Peter challenges simplistic explanations that either vilify or celebrate particular practices of burning or recycling e-waste. He calls our attention to the complex negotiations, dilemmas, and difficulties of everyday electronic “pyropolitics”.

[Zhang Hubiao addresses the question of political action at a broader national scale, providing a sociological perspective on the significance of PX events in China](#)—large scale public controversies surrounding PX (paraxylene) plants. The first mass public anti-PX protest occurred in the city of Xiamen in 2007, and over the past decade, there have been a number of similar mass protests against PX in cities throughout China. In many ways, PX has become a byword for toxic pollution in China. The knowledge controversies surrounding PX have parallels with environmental controversies around the world, with competing interests from state, community, corporate, and civil society representatives.

Contested toxic expertise was the focus of [the first public engagement event of the Toxic Expertise project](#), held on 3<sup>rd</sup> November 2016 at the Shard in London. Thom Davies reports on the key themes of the event and the thought-provoking contributions from our speakers. During this event, we pointed to deep tensions about how expertise is valued. On the one hand, there is growing public mistrust of experts. Expertise is all too often misused, manipulated, or ignored. On the other hand, we rely on expertise, despite its flaws, for advancing social justice, economic development, and environmental protection. Through this afternoon, we raised the provocative questions: Has expertise itself become toxic? If so, how can we detoxify it?

Finally, [Leon Sealey-Huggins shifts our attention from the micropolitics of everyday life to the geopolitics of climate justice, oil development, and postcolonialism](#). He provides a sobering overview of the politics of oil development and indigenous rights in Belize, a Caribbean country that joins other island nations in the climate justice plight of “1.5 (degrees) to stay alive”. The article highlights the gap in media attention about climate issues, where the issue of coral bleaching received a great deal of attention in the case of Australia, but has been sidelined in relation to a similar story in Belize. It also points to the ways in which

colonialism and environmental hazards are interlinked, both historically and in the present day.

Together, these stories from around the globe the important challenge of how to make connections- politically and analytically- across different scales of toxic expertise, justice, and experience.

## *Heroic Endurance Under the Smoke: Ethnographic Notes from an Industrial Town in Serbia*

Dr Deana Jovanović, Postdoctoral Research Fellow, Center for Advanced Studies of Southeastern Europe, University of Rijeka

The smoke had its own character, and evoked a particular sentiment.

The town of Bor is a copper-processing town in East Serbia that developed right “under the chimney”. The rundown smelting plant and the worn out sulphuric acid plant (that was supposed to absorb the toxic gases from the smelting plant) are both located close to the old town centre. When I was living in Bor between 2012 and 2013, the by-product of the smelting plant or so-called “smoke” - how people from Bor referred to air pollution - frequently “fell down” onto the streets of Bor. It contained a great amount of sulphur dioxide, but also arsenic, lead, zinc, cadmium, and soot, among other particulate matter.



Bor 2012, Photo credit: author

While doing my anthropological fieldwork, I spent some time in the streets affected by this smoke. I could sense a shadowy, squeaking feeling in my lungs and felt short of breath for the next half an hour. This repulsive smoke gave me strong nausea and a cough. Despite the fact that many Bor residents (*Borani*) disliked living in the most polluted town in Serbia, there was something peculiar about this smoke. There was something powerful about it, especially people’s endurance under the smoke.

The smoke had its own character, and evoked a particular sentiment. For instance, a friend of mine commented once while we were observing the smoke coming out of the smokestacks:

“It’s somehow *šmekerski*”.<sup>[1]</sup>

“What do you mean?” I asked him.

“It’s like when you smoke a cigarette [he imitated smoking with enjoyment] and you look into the smoke and you say ‘*To!*’ [‘Yeah!’]”.

The ambivalent dispositions of Bor people towards the smoke reflected perceptions of both hope and risk at the same time (see [Jovanović 2016](#)). Very often, residents expressed semi-ironic celebrations of the smoke. By adopting this stance, they portrayed themselves as strong, resilient people who had the capacity to endure hazards. The people of Bor positioned themselves as individuals who adapted and heroically endured the smoke. They represented themselves as intoxicated subjects who were almost resistant to toxicity. The following glimpse from Borani’s everyday relationship with the smoke can give you a sense of their heroic endurance.

For instance, one of my interlocutors from Bor shared on his Facebook wall a poster from a website, a popular Serbian user-generated urban dictionary and humorous encyclopaedia ([vukajlija.com](#)). The poster represented Bor’s landscape of buildings and the smoke descending on the town from the smelting factory chimney. Under the image there was a caption: “BOR. Because Fukushima is for sissies”.



“BOR. Because Fukushima is for sissies”. Source : [www.vukajlija.com](#)

Comparing intoxication with the recent nuclear disaster at the Fukushima Nuclear Power Plant, endurance under pollution in Bor was represented as much more severe and more heroic. People who commented on this picture made jokes about how people from Bor had a particular stamina that stemmed from their intoxication.

Another poster shared on Facebook by a Bor resident is also illustrative:



A comic taken from the author's friend's Facebook page in January 2014.

Superman was being defeated in an arm-wrestling duel with a skinny young boy from Bor. Superman, getting his hand pinned down on the table, asks the boy in wonder: "Where are you from, which planet are you from?!!" The boy answers "From Bor, you pussy!!"

I could also hear the stories about an image of the "rough" Boranin. While I was strolling down the main street with one of my interlocutors from the local commune, her daughter, who also joined us that evening, told me that she saw a TV report from a resort at a lake somewhere in Serbia. According to her, in this TV report people were making a barbeque and burning leaves that created an enormous amount of smoke around them. One man on TV was asked whether he was bothered by the smoke. According to her, the man replied: "I'm from Bor, man, how can it bother me?!!" she recounted proudly, while smiling. She explained that people in Bor were tougher since they knew how to bear such intoxication.

What I encountered in Bor and what these and similar humorous representations encapsulated was a particular sense of endurance under pollution and a perverse feeling of stamina that people claimed they obtained just from enduring pollution. This was accompanied by a

feeling of pride and a sense of belonging to such a polluted, toxic environment, sometimes even mixed with a particular ironic enjoyment of such endurance and impudence.

But, how can we fully understand Borani's endurance under the smoke and anthropologically make sense of it?

### **“Stuckedness” – or ‘Sve se ne zna’ (“It’s absolutely known that nothing is known”)**

Heroic endurance under the smoke was a strategy that Borani used to negotiate the stigma of the toxic exposure of their town. People used this strategy to deal with their feelings of powerlessness to do anything to change the situation.

First, let me note that endurance under the smoke has had a long history in Bor. Even an anecdote from the Yugoslav times brings it to mind: when the Yugoslav president Tito visited the smelting factory in Bor in 1948, many members of Tito's escort started to cough from the smoke while entering and exiting the smelting plant. Tito turned to his escort and said: “Oh, you are all so feeble [ ... ] You see how we workers endure it very well” (Radulović 1987: 66). Tito was here clearly making a reference to his apprenticeship to a locksmith and work as an itinerant metalworker before the World War II. The leitmotif of endurance is here present, only in the context of industrial socialist working endeavours.

Whilst Bor was once a symbol of socialist industrial prosperity and modernism (always polluted), after the dissolution of Yugoslavia in the 1990s (and especially after 2000) it became emblematic of post-socialist crisis, pollution, precarious lives, and a devastated economy. Today the whole town is still characterised by its mono-structural economy, where the copper-processing company (state-run at the time of my stay) dominated areas such as employment and all municipal and political issues. The year of my stay in Bor was supposed to be the final year of the smoke.

Heroic endurance under the smoke was a strategy that Borani used to negotiate the stigma of the toxic exposure of their town. People used this strategy to deal with their feelings of powerlessness to do anything to change the situation. And the ‘situation’ was not easy. The beginning of effective work of the new smelting factory, which was being built during the time of my fieldwork, was completely uncertain, and many people regarded the project to be politically corrupted. The exact consequences on people's health were unknowable, as the state institutions could not monitor and provide information about the long-term impact. “Sve se ne zna” people would say, or “It’s absolutely known that nothing is known”.

I think “stuckedness” here is very useful for thinking about Borani's endurance under pollution. Contamination and a rising precariousness and a condition of unknowability significantly shaped their world.

The *šmekerski* character of the smoke, mentioned at the beginning, and a feeling of stamina that people felt, brings to mind what Ghassan Hage calls the “heroism of stuckedness”, and a “celebration of survival” (Hage 2009: 101) which he developed in his research on transnational Lebanese migration and white racists in Australia. Hage identified this kind of sentiment as a contemporary condition in his research on yearnings for existential mobility which offered to his informants an imagined or felt movement of “moving well”. The latter served people to avoid the feeling of existential immobility (Hage 2009: 98), and led to a



particular sense of “stuckedness” (Hage 2009: 97). “Stuckedness” was opposed to “going somewhere” as a future-oriented movement (and not just a particular status), “a social capacity, enhanced by sociality” (Jansen 2015: 52). Hage argued that the social and historical conditions of permanent crisis led to the proliferation and intensification of the sense of stuckedness among his informants. Rather than being perceived as something one needed to escape at any cost, the stuckedness simultaneously coexisted with a feeling of “an inevitable pathological state which has to be endured” (Hage 2009: 97). According to him, “stuckedness in crisis” could be transformed into an endurance test: a crisis was confronted by a celebration of one’s capacity to “stick it out” rather than calling for change.

I think “stuckedness” here is very useful for thinking about Borani’s endurance under pollution. Contamination and a rising precariousness and a condition of unknowability significantly shaped their world. Many of my interlocutors were “waiting out” (Hage 2009): for polluting conditions to finally end, for the state to do something about it, for the new smelting factory to start working and so on. The heroic celebration of endurance under the smoke refers exactly to “a subjection to the elements or to certain social conditions and at the same time a braving of these conditions” (Hage 2009: 102).

However, in contrast to Hage who uses the feeling of “stuckedness” to explain a sense of “not moving well”, the ability to stick it out, *šmekerski*, with dignity and pride in the polluting setting which was not of people’s choosing became domesticated as a significant marker of a particular “mode of life”, a lifestyle that contained much of irony. Even though this strategy perhaps did not enable Borani to feel that they were “going somewhere”, such a sense of stamina and heroic endurance under pollution did enable them to grab some agency “in the very midst of its lack” (Hage 2009: 100).

Smoke in Bor was so powerful that it conveyed and awakened various kinds of affects among the people – from proud endurance under the smoke to fear of potential risks and hopefulness (Jovanović 2016). After all the things the citizens of Bor have lived through, including the downfall of copper industry, of their town and a rapid decline of living standard after 2000, I believe that it was no coincidence that my friend from Bor called his co-citizens ‘Borci’ (‘Fighters’) instead of ‘Borani’. For the people of Bor, the heroic endurance under the smoke was one of many social practices entangled with the smoke through which people made their life tolerable, dignified, creative, poetic and even amusing in the midst of their troubles.

[Youtube video footage from June 2015](#), showing the smoke falling down in Bor, used with permission of the author.

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[1] *Šmeker* refers to a person, usually male, who is charming, well-mannered and sometimes flirty, handsome and stylish.

## ***Temporary Refuge from Invisible Threats: Outdoor Evacuation Retreats for Children from Fukushima, Japan***

Elicia Cousins, doctoral student in Sociology at Northeastern University.

Spearheaded by individuals, citizen groups and NGOs across the country, *hoyō* seek to allow children and families to spend time away from the contaminated areas where they still live.

Mornings during school vacation are a busy time at the Fukushima City train station. The platforms and bus loading areas bustle with children heading off to various destinations throughout the country for short-term retreats, widely known as *hoyō*, that primarily focus on outdoor activities and immersion in nature. Such evacuation retreats have been going on since the months following the Fukushima Daiichi nuclear disaster of March 11<sup>th</sup>, 2011.

Spearheaded by individuals, citizen groups and NGOs across the country, *hoyō* seek to allow children and families to spend time away from the contaminated areas where they still live. I had the opportunity to volunteer for two such retreats during the summer of 2012, and have done so ever since. This past summer I continued my work as a volunteer and organizer with the additional role and lens of a researcher; I visited one of the most well-established retreat sites (Kumi No Sato, described below) and interviewed ten other retreat leaders and staff members in order to explore the various methods of implementation of *hoyō*, and their goals with regard to physical, mental, and social health and well being for participants.

Residents are not eligible for governmental support or compensation should they wish to evacuate, and evacuees are increasingly pressured to return.

After the nuclear accident, the maximum allowable limit for radiation exposure in Fukushima prefecture was quietly raised to an alarming 20 mSv/year, far above the 1 mSv/year limit for the rest of Japan. To put this in context, a 1991 law developed to protect victims of Chernobyl mandates evacuation from any areas exceeding 5mSv/year, and anyone living in areas between 1mSv–5mSv/year has the right to government support for evacuation and for specialized health care. While the Japanese Nuclear Accident Child Victim’s Law of 2012 outlined similar plans for financial and medical support, it remains largely toothless and unimplemented. In any case, several cities that lie well outside of the government-designated evacuation zone, including Fukushima, Date, Koriyama, and Iwaki, not to mention several areas outside of Fukushima prefecture, remain hotspots of radiation contamination yet are still labeled “safe.” Residents are not eligible for governmental support or compensation should they wish to evacuate, and evacuees are [increasingly pressured to return](#).

Government campaigns instead assert that radiation is “not a big deal,” and that worrying about radiation is more harmful to one’s health than radiation itself.

As of February 2016, the number of confirmed or suspected thyroid cancer cases [totaled 166](#) among roughly 380,000 children under 18 being surveyed by the Fukushima prefectural government. Despite the fact that the Japanese National Cancer Center estimates that thyroid cancer in the late teen-age bracket is only found in [0.9 out of every 100,000 individuals](#), the Japanese government denies that radiation exposure could be a potential cause of greater incidence. Government campaigns instead assert that radiation is “not a big deal,” and that worrying about radiation is more harmful to one’s health than radiation itself. Such power dynamics and the denial of causal influence are recurring themes in the history of understanding the human health impacts of low-dose radiation exposure; this terrain of

scientific and public knowledge remains highly contested despite extensive literature on adverse health outcomes of victims of the Hiroshima and Nagasaki bombings and the 1986 Chernobyl disaster, nuclear industry workers, and of populations living near normally operating nuclear power plants.

As featured in Hitomi Kamanaka's 2015 documentary "[Little Voices from Fukushima](#)," post-Chernobyl communities in Belarus and Ukraine have been sending children away on yearly 3-week evacuation retreats for decades, with hard-won funding support from their governments. Any child who has any level of exposure to radiation contamination is eligible to receive this support, including children who were born after the accident at Chernobyl. In Japan, however, the official narrative dictates with increasing compulsion that radiation is not an issue—logic that leads to the conclusion that evacuation retreats are not necessary, and thus not worthy of substantive government support. A meager, highly restrictive government grant does exist, but it is designed to support environmental education and nature immersion for children of Fukushima—surely not refuge from radiation exposure. In accessing such grants, retreat organizers are forced to adopt this depoliticized language, steering away from explicitly stating the underlying rationale. Many simply choose not to deal with the burdensome paperwork and red tape, relying instead on non-governmental grants and crowdfunding.

One of the most well-known retreat programs in Japan is run by the non-profit organization [Okinawa Kumi No Sato](#), nestled on the site of a former pottery studio on the lush island of Kumejima, about a four-hour ferry ride from Naha City, Okinawa. Established in 2012 by the renowned investigative photojournalist Ryuichi Hirokawa, the program hosts 10 to 14-day retreats all year round and has welcomed over 2,700 children and mothers to date. Hirokawa is the editor-in-chief of the monthly magazine [Days Japan](#), and was deeply involved in setting up the Hope 21 recuperation center in Belarus in 1994 for child victims of Chernobyl.

Such opportunities to openly talk about health concerns are rare, if not nonexistent, for most mothers living in Fukushima, as such topics are largely treated as taboo; many mothers find themselves surrounded by family and community members who shun anyone who raises their voice about radiation, health, and food safety.

Kumi No Sato is unique in that it offers comprehensive thyroid examinations. Mothers are informed of their own and their children's results on the spot, but when children attend without a guardian, the results are sent directly to the parents. After all examinations happen, the visiting doctor holds an informal meeting with participating mothers to answer any questions they may have. Such opportunities to openly talk about health concerns are rare, if not nonexistent, for most mothers living in Fukushima, as such topics are largely treated as taboo; many mothers find themselves surrounded by family and community members who shun anyone who raises their voice about radiation, health, and food safety. Individuals who are outspoken about such issues may be labeled as disruptive and paranoid, spreading harmful rumors or *fūhyōhigai* (referring to the sales decline of produce from affected areas, spurred by radiation contamination concerns). As Dr. Aya Kimura argues in [Radiation Brain Moms and Citizen Scientists](#) (2016), the discourse of *fūhyōhigai* is highly gendered, and has largely been used to depict concerned women—especially those who avoid food from affected areas and pursue other exposure reduction strategies—as unpatriotic, confused, and irrational.



Two mothers and their children take a break from grasshopper-catching. Photo credit: Elicia Cousins.

In such a climate, it is no wonder that many mothers with young children feel isolated and highly stressed, and struggle to access information about radiation and health, methods of reducing exposure, or the range of available retreat programs. Some retreat leaders have even told me that some mothers attend retreats in secrecy for fear of being judged by community or family members; these individuals ask not to be photographed in any material that appears on retreat blogs or other social media platforms. I'll never forget when one mother explained to me that her neighbor once knocked on her door after she returned from a retreat program with her two children, questioning where she'd been and why.

What they all share is the compulsion to somehow mobilize against the silent yet egregious injustices continuing to confront residents of highly contaminated areas.

Those who are involved in leading these retreats come from a wide range of backgrounds. I've met and/or worked with a traditional Okinawan musician and singer, a motorcycle gang member-turned-disaster relief activist, protesters against military bases in Okinawa, a former

Tokyo salary-man, a long-time anti-nuclear activist who hosted Chernobyl-affected children...and the list goes on. Though some have a past of anti-nuclear or related activism and volunteer activity, others admit to having felt rather disengaged from societal issues before the nuclear accident. What they all share is the compulsion to somehow mobilize against the silent yet egregious injustices continuing to confront residents of highly contaminated areas. While there is no cohesive national network of such leaders, several smaller networks exist on the local or regional level.

I believe it's reasonable to conclude that retreat organizers are well aware that their work does little to address the underlying issue at hand—that at the end of the day, these children must go back to live in an environment that is potentially detrimental to their health. Having chaperoned many groups of children traveling to and from various retreat destinations, I am not unfamiliar with the sinking feeling of saying goodbye at Fukushima station. While some groups such as [Friends of the Earth Japan](#) simultaneously engage in activism directly targeting victim support policy, the vast majority of retreat organizers (many of whom take on such projects on top of full-time work and are volunteers) barely have the resources to plan and host more than one retreat a year

### *Physical Detox*

But there is also hope in some tangible benefits. Retreat leaders often refer to three main goals they have for participants, the first being physical detox, or the chance for participants to reduce their overall body burden. Most retreat leaders recognize that at least three weeks is needed for any significant reductions to occur—this became common knowledge among retreat leaders who had hosted children from areas affected by Chernobyl—and yet most programs are less than ten days long. Thus, many hope that children attend as many retreats as possible throughout the year so as to equal at least 3 weeks in sum. Nevertheless, retreat staff members believe that by eating large amounts of fresh, nutritious, and uncontaminated food even for a few days at a time, participating children can strengthen their immune systems and resilience.



Soaring through the air on a makeshift swing by the forest. Photo credit: Elicia Cousins

### *Restorative Impact of Nature*

Children may also benefit psychologically through the chance for unlimited playtime in outdoor environments like the ocean, rivers, forests, and outdoor playgrounds. The healing and health-promoting impacts of outdoor environments, including such benefits as stress reduction, attention restoration, and the evocation of positive emotions, have long been recognized in public health, environmental psychology, and geography scholarship.



Discovering small creatures in the river. Photo credit: Elicia Cousins.

Increasing children's exposure to nature is not only psychologically beneficial, but has often had the added effect of cultivating in them an appreciation for nature and interest in environmental issues.

Though most schools in Fukushima no longer restrict playing outside, concerned parents are understandably less willing to allow their children to play outside for prolonged periods of time. As one mother explained to me, "I'm not a nervous, uptight kind of mother—but parents in Fukushima feel that something mustn't happen to their children as a result of this radiation—that they must protect their children... Children here seem to be fully absorbing the notion that they cannot play outside." Many children have thus grown accustomed to staying inside and are [not particularly interested in physical activity](#). Indeed, older children often insist on playing with their smartphone or eating junk food even during retreats, prompting some organizers to strictly prohibit even bringing such items.

Increasing children's exposure to nature is not only psychologically beneficial, but has often had the added effect of cultivating in them an appreciation for nature and interest in environmental issues. During the retreat that I've led each year since 2013, for example, we

always stay at an environmental education non-profit's facility in Yamanashi prefecture and hike with the very knowledgeable rangers on staff.



A ranger points out animal tracks to a captive audience. Photo credit: Elicia Cousins.

I learned this past summer that one girl who has been attending this retreat since the beginning decided to join the environmental science club when she entered middle school last April. She shared with us that the opportunity to explore the nature of Kiyosato each summer had largely sparked her new interests. At the bi-annual retreat sponsored by Friends of the Earth Japan, which I have been volunteering for since its inception, topics including nuclear power and Fukushima, renewable energy, and sustainable lifestyles are routinely discussed with all participants. At this retreat, the goal is to inspire participants to later come back as volunteers, and to provide them with opportunities for leadership; two boys who first joined the project as 6<sup>th</sup> graders now participate as high school volunteer staff members. Some retreat programs that target older students in middle or high school offer significant opportunities for networking and leadership building alongside peers from other affected areas, and sometimes even peers and volunteers from other countries and cultural backgrounds.

### ***Stress Relief and Social Networking***

For some mothers, retreats offer the final nudge of inspiration and confidence to pick up and move with their children, even if it may lead to further financial instability, divorce, and leaving extended family behind.



The third broad goal has to do with stress relief and building social capital, particularly for participating adults. Mothers often describe the immense joy of seeing their children look so happy and energized, and the relief of not having to constantly say, “no, you can’t touch that,” or “no, you can’t play over there.” As one mother shared with me after the first retreat I led, “When my daughter and I were looking at photos from the trip after we returned to Fukushima, she turned to me and said: “Mommy, I was happy because you looked like you were having so much fun.”” As mentioned earlier, retreats also provide valuable opportunities for networking with like-minded mothers and highly sympathetic staff members and volunteers. Many stay in touch through Facebook and instant messaging, continuing to support each other, share frustrations, exchange useful information, or even share avenues to activism. For some mothers, retreats offer the final nudge of inspiration and confidence to pick up and move with their children, even if it may lead to further financial instability, divorce, and leaving extended family behind.



Exploring new outdoor playgrounds. Photo credit: Elicia Cousins.

While some have deliberately chosen to remain in Fukushima, many others have remained for lack of a feasible alternative, despite deep concerns regarding their children’s health.

The challenges ahead are many. Retreat leaders increasingly struggle with funding and having enough volunteers, and some face various pressures to stop engaging in projects that surreptitiously oppose government logic. It is not easy to take responsibility for the safety and wellbeing of large groups of young children, and meeting the needs and expectations of parents; burnout and feelings of discouragement are not uncommon. Leaders are further aware that their efforts do not reach all, and that many residents of Fukushima remain

excluded from retreat opportunities due to various constraints: many retreats charge transportation and participation fees, and researching and applying for participation in retreats can demand a considerable amount of time and web literacy. Single mothers and dual-earner parents may be especially hard-pressed in devoting the time to researching retreats and in attending them with infants and preschool-aged children.

While some have deliberately chosen to remain in Fukushima, many others have remained for lack of a feasible alternative, despite deep concerns regarding their children's health. Financial, work, and family constraints leave them with little choice, and government policies have all but abandoned them. Concerned residents—particularly young mothers—are continually in search of ways to find peace in their decision to stay and to minimize harm to their children in whatever way possible. Evacuation retreat leaders hope that they can provide temporary mobility, respite, and access to new social networks and opportunities. This is a story about how normal citizens have mobilized in the face of daunting, uncooperative power structures and invisible hazards—and it is one that is sure to continue for many years to come.



Five boys from Fukushima City gaze out to sea after a satisfying day of swimming and finding sea creatures. Minami-boso, Chiba Prefecture. Photo credit: Elicia Cousins.

*Elicia Cousins is a doctoral student in sociology at Northeastern University, where she is also a member of the [Social Science Environmental Health Research Institute \(SSEHRI\)](#). She also collaborates with [Silent Spring Institute](#), a non-profit dedicated to researching environmental chemical causes of women's health issues, particularly breast cancer. Her current research addresses retailer and consumer-based campaigns to reduce emerging*

*chemical exposure, as well as the ethical barriers to reporting individual biomonitoring and personal exposure results to study participants. Originally from Tokyo, Japan, Elicia continues to work with children still living in contaminated areas of Fukushima and other prefectures, and hopes to pursue further research in nuclear power and environmental justice.*

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## *On Electronic Pyropolitics and Pure Earth Friction in Agbogbloshie*

Peter C. Little, Department of Anthropology, Rhode Island College

Agbogbloshie is ablaze.

For scholars and activists engaged in global environmental politics of high-tech rubbish, Agbogbloshie is a familiar name. A scrap site in Accra, Ghana, Agbogbloshie has attracted numerous international environmental NGOs, engineers, environmental health scientists, slum tourists, journalists, photographers, and social scientists.

Most visitors witness what they have been told about this place. Agbogbloshie is ablaze. It is a toxic postcolonial zone of intense metal recovery, a site where the burning of discarded electronic and electrical devices (DEEDs) to recover valuable metals, especially copper and aluminum, is an everyday activity. It is space of electronics toxicity, an environment of lead, mercury, cadmium, PVC, and plastics containing brominated flames retardants that present health and environmental risks (Caravanos et al 2011; Feldt et al 2014). Agbogbloshie is also a place of contentious green NGO intervention that seeks to “eliminate” burning of electronics by migrant laborers who make up the majority of workers in the scrap site. In many ways, this is a place and space not only of controversial e-waste, but also a location of vibrant and toxic electronic “pyropolitics” (Marder 2015).

...what ethnographic research is revealing is the front-and-center significance of the micropolitics of fire, ignition, burning, and NGO intervention.

I have spent the last two summers in Agbogbloshie conducting ethnographic research. Supported by research grants from Rhode Island College and the Wenner-Gren Foundation for Anthropological Research, my project aims to better understand how these e-waste workers understand their environment, labor, health, and futures in a toxic postcolonial context where multiple forms of social and environmental injustice endure. This is the general focus, but what ethnographic research is revealing is the front-and-center significance of the micropolitics of fire, ignition, burning, and NGO intervention.

Like other visitors to the site, it is common to find workers burning bundles of copper wires to remove the plastic insulation. The primary fuel source for the fires includes junked tires, insulation from refrigerators, and any petrochemical product that ignites. These wire bundles range in size and are worth between 8 and 10 Ghana cedi (roughly between \$2.00 and \$2.50), though metal market values directly impact local copper prices. It takes workers about 10-15 minutes to burn off all the plastic insulation. The copper wire is then bagged and sold to scrap metal dealers, usually Nigerians, who then sell the copper for export in Tema, the planned industrial port of Accra, which is about 20 miles east of the city center.



Workers breaking down their aluminum scrap. Photo Credit: Peter Little

Aluminum is another sought after metal in this landscape of DEEDs. Once heated and broken down, sheets of aluminum are packed tightly into large white bags (see photo above). In the summer of 2016, aluminum was selling for 1.7 Ghana Cedi (about 40 cents) per pound. A full bag weighs about 25-30 pounds, so they make about \$10-12 per bag, but observe how many workers there are, which means the profits are distributed among the workers.

According to a Basel Convention report on e-waste in Africa, “in the informal collection and recycling of e-waste, daily revenues vary greatly from between US\$ 0.22 and US\$ 9.50. This income has, in most cases, to be shared with other family members and is only earned on economically active days and not during periods of sickness or other emergencies. Therefore, it is concluded that a significant segment of e-waste workers in Nigeria and Ghana live below the internationally defined poverty line of US\$ 1.25 per day.” (Basel Convention Report, 2011). The distribution of cash is highly structured, meaning some workers receive more than others, depending on many things: how long they have been working in Agbogbloshie, their social ties and connections with local chiefs or chiefs in their villages in the north that have close kin working in the scrap yard, or whether they have a wife and/or children.

Also, recent social science research finds that workers who run the scales are notorious for taking their cut or manipulating their scales, which again further diminishes the actual value of the bag of aluminum or copper collected (Akese 2014).

The primary mission: “Eliminate Burning at Agbogbloshie.”

In 2014, Agbogbloshie became the site of a “model” e-waste recycling center built to make e-waste recycling work safer and more environmentally friendly. The primary mission: “Eliminate Burning at Agbogbloshie.” With support from a variety of government and nongovernment agencies, the new recycling facility, recently named the Agbogbloshie Recycling Center (ARC) has a clear risk reduction goal. In short, the new facility aims to reduce the health risks of electronic cable burning —only one of many sources of air

pollution in Agbogbloshie—by using automated machines to strip coated cables and wires of various sizes containing copper and other valuable, yet toxic, materials.



The Agbogboloshie Recycling Center sign. Photo Credit: Peter Little.



The granulator in action. Photo Credit: Peter Little

This is one of several cable stripping machines, also known as granulators, used at the ARC. Pure Earth/Blacksmiths organization has helped train six workers to use the granulators who, when a shipment of wires arrives, feed the cables through the machines to separate the plastic

insulation from the valuable aluminum (see above photo). The NGOs supporting the use of these granulators include Green Advocacy Ghana and the Pure Earth organization (formerly Blacksmiths Institute) which is a solutions-based international environmental NGO that targets the most polluted or toxic places on Earth.



Plastic discard from the e-waste granulator. Photo Credit: Peter Little

Most, if not all, of the cables received by the ARC are large diameter electrical cables from either Ghana's electrical utility company or from neighboring countries. These larger cables contain valuable aluminum. For example, the shipment pictured above came from Burkina Faso, likely from the primary electrical company, the Societe Nationale d'Electricite Du Burkina. The bundles of wires that the burners have access to and burn are obviously much smaller in diameter and are coming from small household electronics made up of largely copper wiring.

The ARC amounts to a pyropolitical project fueled by “techno-optimism.” The NGOs supporting this risk reduction mission are strong promoters of this optimism, but how this optimism registers among workers in Agbogboshie is more difficult to know. As anthropologist Damien Drooney observes in his study of medical science and technology facilities in Ghana:

“Techno-optimism is taken as a stance toward technological innovation where new technology tends to be perceived as a good thing. By approaching this attitude from a

location in Ghana, we can better understand some of the cultural features of contemporary techno-optimism and the stakes involved. Places like Silicon Valley are characterized by boundless, blinding optimism that sometimes seems like an unshakable faith in the inevitable (and profitable) unfolding of technological progress as an inherent good. But this is not limited to California; places like Ghana are a part of this same culture of techno-optimism” (Drooney 2015:224).

The cable stripping machines may raise the level of market optimism, but most everyone I have interviewed is a bit more skeptical of the idea that these technologies will meet the environmental health goals that helped justify their installment and use in Agbogbloshie in the first place.



Communicating Risk and Risk Mitigation. Photo Credit: Peter Little

To burn is to be bad, even if burning e-waste to extract copper is done simply to make a living.

Risk communication signs now line the walls of the ARC facility. These signs (pictured above), contain pictures of “good” and “bad” practices, things workers should either avoid or do. Translated into Dagbani, the primary language of workers, the risk communication message is straight forward: “Burning is bad,” “Don’t burn but strip,” “Protect your health,”



and “Wear shoes.” Continuing to burn is considered an act of ignorant destruction. To burn is to be bad, even if burning e-waste to extract copper is done simply to make a living.

But Pure Earth and their partners involved in the ARC are overlooking several front-and-center matters of fact that the burners are dealing with: 1) small diameter electronic wires are the most common wires burners deal with and the granulator can’t process them; 2) even with the recent installment of a new granulator that can feed small diameter wires, the bundle and tangle of wires burners deal with would require extra time to untangle and feed through the machine, time that could be spent simply burning; 3) it is unclear what the charge is to use granulators, since it costs money to power the machines to do this “greener” e-waste recycling.

There is a large cascade of questions that could be raised about the actual efficacy and sustainability of the ARC, but what is certain is that the burners will continue doing their work autonomously and will do so until they see how the ARC has a direct benefit to them. These are just some of the ground-level politics informing the management of “rubbish electronics” (Lepawsky et al 2014) in Agbogbloshie and I am sure more electronic pyropolitics and NGO friction are on the horizon.

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## *PX Events from the Perspective of Social Constructivism*

ZHANG Hubiao, Associate Professor, Sociology Department of Hohai University, China

In recent years, a series of PX (paraxylene) events have occurred in China. Public concern in China over PX first started with the [mass protests in the city of Xiamen in Fujian province](#), over a planned paraxylene plant. The basic logic of their process is as follows: first of all, PX projects were rapidly promoted by local government; secondly, along with the gradually increasing public awareness of safeguarding basic rights and environmental protection, people started to express their demands by "taking a stroll on the street"; lastly, the PX projects were suspended with local government's concession.

Different perspectives of risk cognition lead to different attitudes towards PX project. Consequently, environmental risks easily become social stability risks.

Surrounding PX events, various stakeholders, especially the local government and the public, have different views on a few sensitive issues, such as the identification of pollutants and toxicity, and environmental risks brought about by the PX project, and the distance between petrochemical enterprise and residential area. Generally, local government considers environmental risks from the perspective of a quick development of a PX project. However some public intellectuals have concerns about environmental protection. On the one hand, they put emphasis on quoting information from the media and on the other hand, they also question the general public knowledge. The public often understands environmental risk based on their daily experience, yet their cognition is sometimes affected by rumor and hearsay. The discourse from scientists and experts as the third party, are often absent. Moreover, the objectivity of science and technology experts is also relative. Different perspectives of risk cognition lead to different attitudes towards PX project. Consequently, environmental risks easily become social stability risks.

Social theorists argue that in the pursuit of knowledge, a transformation from "certainty" to "uncertainty" has been happening. Certainty of knowledge is one that has clear cause and effect; and uncertainty of knowledge means that scientific knowledge is situated in a certain context and be tested and negotiated to be applied under the specific circumstance. The uncertainty knowledge also means a new type of social relationship among the public, the scientific world and the government, and it has a close relationship with the social construction theory. It holds that all knowledge, including scientific theory, is formed through the participation and function of society, politics, culture and other elements. In other words, scientific knowledge has a close relationship with various stakeholders and their interests, and it is also affected by social opinion.

Behind the differences of knowledge lies competition of interests. Haicang Development Zone where the Xiamen PX project was originally planned to locate has experienced a change from being an area for chemical industry to real estate development, and then back to chemical industry. During the PX project planning period, Xiamen city government's main consideration is GDP (Gross Domestic Product), namely the project will bring 80 billion yuan GDP every year to the city, but not the petrochemical plant's impact upon the new residential area. On the contrary, residents generally think that the PX project construction will lead to the devaluation of real estate. In the Ningbo PX event, the environmental problem is also only a fuse, the key issue behind is local villagers' hope to get compensation for

demolition and more material benefits through the implementation of the PX project. This type of dispute is mainly a struggle between the "GDP" and "public opinion".

Under China's current political system, from project planning to approval, PX projects are subject to the intervention of government administration mechanisms, which often results in a lack of legitimacy according to law.

Knowledge is the result of negotiation among different stake holders. Under China's current political system, from project planning to approval, PX projects are subject to the intervention of government administration mechanisms, which often results in a lack of legitimacy according to law. The procedure of a PX project generally includes two major steps: firstly, experts guided by enterprise, design the plan behind closed doors. Secondly, the project plan passes relevant government departments approval, and suddenly emerges with strong support of the local government in front of the public. Public concern is not included in the agenda of the experts and the government during the approval stage, and public participation is only a mere show case. Due to the lack of public participation, there is no consensus on scientific knowledge from different stake holders.

Some people who oppose the PX project are not only opposing the PX project; instead, they are using the occasion to vent their distrust and dissatisfaction towards the society and the government.

Knowledge is also influenced by social opinion or social attitude. During social transition, while social contradictions increase, PX events thus easily become a channel for the public to express their dissatisfaction and grievances. Some people who oppose the PX project are not only opposing the PX project; instead, they are using the occasion to vent their distrust and dissatisfaction towards the society and the government. In this sense, the opposition to the PX project becomes a reflection or catalyst of wider social problems.

## ***Toxic Expertise Public Engagement Event***

*Dr Thom Davies*, Research Fellow, Department of Sociology, University of Warwick. [@ThomDavies](#)

The context of post-Brexit politics was never far from discussion, and the uncertain role that expertise is playing within complex political and environmental debates led to some interesting interventions by the invited speakers as well as members of the audience.

Last Thursday at [The Shard](#) in London the Toxic Expertise project hosted our first public engagement event. The theme of the event was '[Toxic Expertise: Environment, Economy, Politics](#)', and we were joined by a range of excellent speakers, including serving politicians, academics, and members of think tanks. The objective of the workshop, jointly funded by the [ERC](#) and [ESRC](#), was to discuss important challenges in our society and the changing value of expertise, as well as how expertise is used, manipulated, and strategically ignored.

The context of post-Brexit politics was never far from discussion, and the uncertain role that expertise is playing within complex political and environmental debates led to some interesting interventions by the invited speakers as well as members of the audience.

[Dr Alice Mah](#) introduced proceedings by discussing her ERC funded project '[Toxic Expertise](#)'. She talked about how the project is providing the first systematic sociological analysis of the global petrochemical industry in relation to corporate social responsibility and environmental justice. Giving an overview of our initial findings from the five-year project, including fieldwork snap-shots from Louisiana's 'Cancer Alley' and petrochemical sites in China, Alice invited the audience to think about how expertise might become 'detoxified'. A recently published [briefing paper](#) was also available, which gives an overview of the project.

*'The decision to leave the EU will affect few areas of policy more than the environment' -  
Mary Creagh MP*

[Mary Creagh](#) MP, who has been Labour MP for Wakefield since 2005, gave the first keynote presentation during the opening panel session. As chair of the [Commons Environmental Audit Committee](#) she has been at the forefront of environmental issues for some time and was very well placed to comment on the day's theme. She has [previously commented](#) on the environmental threat that 'hard' Brexit poses, and reiterated this in her talk, stating that '*the decision to leave the EU will affect few areas of policy more than the environment*'. She further pressed this point by saying that leaving the EU will be the biggest administrative challenge since the Second World War. Indeed, she cited Brexit as a key example of how '*this government has ignored the advice of experts*'. '*Politicians are brilliant at language*' she explained - noting the battle of words surrounding how Brexit is described - but Politicians are not always good at listening to and following the advice of experts, she described.



Figure 1 ‘Everything is political’ says Mary Creagh MP as she gives a keynote talk at the Toxic Expertise event in the Shard. Photograph by [Angeliki Balayannis](#).

On expertise, she reminded the academics in the room and the other gathered experts that *‘there is no point being a scientist if you can’t communicate with lay people’*. Mary drew attention to the engaging environmental work of her co-panellists [Dr Erik Van Sebille](#) (Imperial) and [Professor Frank Kelly](#) (King’s College) as strong examples of good scientific communicators. She also gave an interesting example of an *‘unholy coalition’* between herself and the Daily Mail, where she managed to help push through legislation this summer that outlawed toxic microbeads from polluting the ocean. You can read the Daily Mail coverage of this unlikely environmental justice collaboration [here](#).

*‘These particles are very small and they get to parts of your body that they shouldn’t be’ - Dr Erik Van Sebille, Imperial College*

Following nicely from this talk, [Dr Erik Van Sebille](#), an oceanographer and climate scientist from Imperial College, gave a fascinating presentation titled *‘A picture and a thousand words: how images of the “islands of trash” have skewed the discussion about microplastic pollution in the ocean’*. In his talk Erik described the global mass of tiny plastic particles that are constantly being washed into the world’s oceans. He said that the *‘we need new mental images’* to come to terms with this environmental crisis, stating that images of floating piles of plastic waste are misleading. Instead he suggested that the problem is far worse than these images can convey, with more than 250,000 tonnes of plastics at the upper level of the ocean and an unknown quantity beneath. *‘These particles are very small and they get to parts of your body that they shouldn’t be’* he explained. He suggested that the crisis could be re-framed from a purely environmental issue to one that acknowledges the impact micro-plastics have on the food chain. He explained that it is unusual today to find marine animals that *do not* contain tiny plastic particles in their bodies.

*'Air Pollution: just because its invisible should not mean it's ignored' - Professor Frank Kelly, King's College London*

Following Erik's talk, [Professor Frank Kelly](#) from King's College London who is chair of Environmental Health, gave a talk titled *'Air Pollution: just because its invisible should not mean it's ignored'*. This presentation, which took us from the sea to the atmosphere, focussed on his research in London and other polluted cities where he has looked at long-term exposure to air pollution. Frank told the audience how air pollution causes the premature deaths of 29,000 people in the UK. Yet he also said that the deaths from pollution are only one side of the coin, and *'hides the many other impacts'* that effect standards of life, such as hospital visits and increased respiratory problems. His pollution maps of London reminded me of John Snow's [cholera maps](#) from the mid-1800s. Just as Snow removed the handle of a [contaminated water pump](#) to prevent cholera in the Victorian era, Frank offered an air pollution solution, describing how controlling traffic and creating pedestrian-only days could significantly improve people's health.

*'Experts help us to think what the problems are, but we cannot only depend on this' - Dr Jennifer Gabrys, Goldsmiths*

[Dr Jennifer Gabrys](#) from Goldsmiths, University of London acted as a discussant for the first panel. Her work on the project [Citizen Sense](#) had many crossover's with Professor Frank Kelly's use of sensors to monitor air pollution in London. She showed the audience one of her Dustbox sensors that she uses for research on ['urban sensing'](#) in South London. *'Experts help us to think what the problems are'* she explained, *'but we cannot only depend on this'*. She discussed the importance of engaging citizens themselves in own environments as a means of creating positive change. She invited the audience to think about how we might bring lay perspectives into environmental debates.

*'Sometimes the truth takes longer' - Neena Gill MEP*

The second panel was titled *'Environment, Politics, and Economics'* [Labour MEP Neena Gill](#) gave the keynote presentation. She talked directly about the EU referendum and Gove's now infamous comment about how the UK public has – in his view - ['had enough of experts'](#). Neena explained how this dismissal of expertise during the referendum debate *'turned the referendum'* through an *'anti-truth campaign'* that we are also witnessing in the USA. She talked about the struggle to put across complicated and nuanced arguments during the referendum campaign because of the media's desire for punchy soundbites. Sometimes the *'truth takes longer'*, she explained. She predicted that the economic impacts of Brexit will hit fully next year and ended her talk by quoting a [song by Billy Joel](#), stating *"We didn't start the fire but we are going to have to fight the flames"*.

*'Everyone in the room needs to stand up for regulation' - David Powell, New Economics Foundation*

[David Powell](#), from the think tank [New Economics Foundation](#), which promotes social, economic and environmental justice, gave a presentation titled: *'Economics, regulation, and the toxification of expertise'*. He took up Neena's Brexit theme and reminded the audience that in the referendum *'people voted clearly against their economic interest'*. He noted that *'increasingly policy around complicated things is being made by converting everything into a number...we see ridiculous numbers on both sides of campaigns'*. In light of Brexit, David called upon the audience to become defenders of regulation, which is often misrepresented as

unnecessary ‘red tape’, as opposed to laws that defend social and environmental rights. He explained that years of corporate lobbying has meant that every government department has a specific policy to cut regulation. ‘*Everyone in the room needs to stand up for regulation*’ he said, and warned against the threat of losing Europe’s [precautionary principle](#).

*‘Trade does not just effect business and profit, it now relates so much to so many areas, that this limiting of expertise to one particular area becomes very toxic’*.- Ruth Bergan, Trade Justice UK

[Ruth Bergan](#) from the [Trade Justice Movement](#) provided the third presentation of this final session, giving a talk titled ‘*Groupthink: policy processes that allow trade to trump climate*’. In her discussion of trade negotiations, she drew upon the idea of ‘[Groupthink](#)’ – a psychological phenomenon that excludes voices outside the immediate circle and thus rejects other perspectives. Ruth discussed how trade talks are given priority over every other issue. Strange situations occur, where trade and climate discussions are ‘*happening in parallel, but never the twain shall meet*’. By only talking about trade during global summits and international forums, all other issues are side-lined by governments, despite being intimately connected with how countries trade with each other:

*‘Yet this falls flat because trade has expanded to cover many aspects of daily life where you need to look beyond pure trade where you need to gather experts from beyond pure trade’,* Ruth explained. ‘*Trade does not just effect business and profit, it now relates so much to so many areas, that this limiting of expertise to one particular area becomes very toxic*’.

She explained how expertise per se is not toxic, but rather the way any expertise that is not directly related to trade ‘*gets triaged at such an early stage, then it becomes toxic*’. She concluded that we need to think about trade more holistically and from angles and take on board different expert perspectives beyond the ‘groupthink’ of trade negotiators.

*‘Expertise goes from being toxic to being sceptic. You have to change the nature of the debate sometimes’* - David Elmes, Warwick Business School

[Professor David Elmes](#) from Warwick Business School acted as discussant for the public engagement event. He talked about the danger of applying spurious economic models to make predictions about the future, as both sides of the EU campaign did before the referendum. He said that this kind of analysis is like ‘*building on sand*’. *One really should question the expertise these models bring.*’ Instead he made the point that ‘sometimes expertise needs to be refreshed’ and new perspectives need to be found. He suggested that some forms of expertise, even if they are factually correct can sometimes become boring and stagnant. When this happens, he explained, ‘*expertise goes from being toxic to being sceptic. You have to change the nature of the debate sometimes*’.

*‘What gives you hope?’* - Angeliki Balyannis, geographer

At the end of the event, which had been a fascinating but sometimes sobering account of the perilous, toxic and ‘sceptic’ role that expertise plays in society, an audience member - geographer [Angeliki Balayannis](#) - ended on a lighter note, asking the panel ‘*What gives you hope?*’ David Powell’s response, that it gives him hope that climate change has gone from the scientific fringes to a universally accepted scientific fact within only a few years was

reassuring. It was a reminder of the important role that experts have, and continue to have in our changing society.



## *‘Dis Da Fi Wee?’: Oil, Conservation and Development in Belize*

Leon Sealey-Huggins, Lecturer, Global Sustainable Development Programme,  
University of Warwick

### *‘Fi Wee Belize’*

*Pickney march tru di street di sing  
yah dah fu wee Belize  
mis Matie cross di street di halla  
yah dah fuh wee Belize  
even Shiela granny di brokdong to di tune  
yah dah fu wee Belize  
but tell mi, weh all dat really mean?*

*Yu si lang time befo time was time  
dem bring wee yah pan this side  
wi ancestors dem work sweat fi sweat  
wid axe eena dem hand  
yuh grampa neva tell yuh di stories  
bout di logwood camp?  
an how da slave blood build this nation,  
not Europeans?*

*Bot dah more dan one story ah must tell  
cause like mi fren Wilford seh  
from the sarstoon to di Corozal land  
all a wee dah wan  
and the Maya yuh see  
mi deh yah lang before Columbus and colonization  
Dem build temples and great cities  
at the height a dem civilization*

*So yah dah fu wee Belize  
this blessed land by the Carib sea  
all mi Garinagu brothers and sistas  
join in wid wee  
from Africa to St. Vincent  
to a jewel in Central America  
you brought a vibrant culture  
and helped build our nation*

*So on our independence day  
all a wee di sing ‘yah dah fu wee Belize’  
cause Mestizo, East Indian, everyone  
we made Belize what it is  
Belize dah truly fi wee*

*‘Fi Wee Belize’, Ritamae Hyde (1)*

***‘1.5°C to stay alive’?***

[Hurricane Matthew struck Haiti](#) with predictably destructive force on Tuesday 4<sup>th</sup> October. Over 1000 people lost their lives, countless more lost their houses, farmland and livelihoods. [Reports suggest](#) that almost 800,000 are in urgent need of food; and the threat of cholera looms. Particularly depressing about these impacts was not just that they had been predicted, and would have been minimised were global societies organised more equitably, but rather that this is only one of what is likely to be an ever-increasing number of ‘extreme weather events’ that will blight the Caribbean region in years to come.

Many of the news media reports in this country focussed on [Australia’s Great Barrier Reef](#). Few made mention of the largest barrier reef in the Western hemisphere, and second-largest in the world, which is located off the coast of the Caribbean country of Belize.

Just over two months ago, for instance, it was widely reported that we were witnessing the [third-ever global coral bleaching event since 1998](#). Coral bleaching events, linked to the warming that accompanies climate change, essentially constitute an underwater heatwave on a global scale. They threaten to wreak havoc on ocean ecosystems by killing off coral. Many of the news media reports in this country focussed on [Australia’s Great Barrier Reef](#). Few made mention of the largest barrier reef in the Western hemisphere, and second-largest in the world, which is located off the coast of the Caribbean country of Belize. This neglect is unsurprising given that the Caribbean is not afforded a particularly prominent role in the discussion of global issues generally.

In relation to climate change, Caribbean countries have joined other vulnerable states in demanding an upper limit to warming of 1.5°C (‘to stay alive’), not the 2°C favoured by richer countries. In Paris at the recent COP21 UN climate change conference, the 1.5°C target was only given the vague ‘commitment’ that countries would ‘pursue efforts’ towards this figure, with the ‘long term goal of’ 2°C being that which was [formally agreed](#). In practice, much of this is moot. Under countries’ current commitments [we’re heading towards 2.8 - 3.8°C of warming](#). Such a trajectory spells more disaster for a region already disaster-prone through [no fault of its own](#).

Back to Belize then, where I spent 3 months in 2010 – 2011 while conducting fieldwork on the sociology and politics of climate change in the Caribbean region. While there, I was alerted to the conflicts and tensions that arose over proposed oil drilling in protected areas. A sociological examination of Belize’s history can help to better explain how and why conservation and development come into tension in Belize, and why drilling for oil – a notoriously toxic activity – came to be represented as a desirable development option.

***‘Drill we will’... ‘is not Belize’? (2)***

In 2010 a collection of NGOs managed to get hold of a map depicting the whole of the country divided into oil exploration concessions (the map can be found [here](#)). Crucially, the concessions included the over 26% of Belizean land and sea currently designated as a protected area. Joining forces to form a coalition, [the Belize Coalition to Save Our Natural](#)

Heritage, these NGOs launched a concerted campaign to stop the Government of Belize from allowing drilling to take place both offshore and in Belize's protected areas.

Part of the reason that the leak of the map, and the campaigning that accompanied it, generated such opposition was because it came in the wake of the Deepwater Horizon Oil spill. This spill, which occurred in the neighbouring Gulf of Mexico, has seen irrevocable damage done to the ocean, wetlands, and their flora and fauna, costing BP, the company found legally responsible, tens of billions dollars. For a country like Belize, that relies on a substantial proportion of its revenue from 'eco-tourism', the prospect of an off-, or on-, shore spill seemed unthinkable. Of particular concern was the threat to the UNESCO world heritage designated Great Barrier Reef.

...in a perversely paradoxical parallel, both as the leaked oil concession map and the Government of Belize's bullish initial statements indicated, one proposed 'solution' to the problem of development is the drilling of the very same fossil fuel that has contributed so much to the climate crisis in the first place.

Belize, like all Caribbean nations, is being particularly hard-hit by the unfolding of climate change. The prospect of rising sea-levels threatens inundation for much of Belize's low-lying land, for instance. In spite of not having contributed much by way of carbon emissions, and with much of Belize's virgin forest acting as a carbon sink, the country does not have many resources to actually respond to these climate changes, hence the need for some form of financial support, or 'development'. Yet, in a perversely paradoxical parallel, both as the leaked oil concession map and the Government of Belize's bullish initial statements indicated, one proposed 'solution' to the problem of development is the drilling of the very same fossil fuel that has contributed so much to the climate crisis in the first place.

Those in favour of drilling look to Trinidad and Tobago, where oil has helped to make it one of the richest countries in the region, with the lowest sovereign debt ratios in the Caribbean. The benefits of oil revenues are somewhat undermined by the vulnerability that accompanies global oil price shifts, however, as well as the damage caused by the seemingly inevitable spills that occur.

Oil is also, of course, a resource whose consumption exacerbates climate change through the emission of CO<sub>2</sub>. The latest projections are clear that '[n]o new fossil fuel extraction or transportation infrastructure should be built, and governments should grant no new permits for them.' Unless this happens, alongside a rapid, justly organised decline in the production of all existing fossil fuels, then the 2°C target will be missed, let alone 1.5°C. Just the other week, the Ecuadorian government, who had once been held up as an alternative model for keeping oil in the soil, began drilling in the Yasuní national park in the Amazon. The Ecuadorian government noted that they had received nowhere near the \$3.6 billion that was promised in return for not drilling, and that many of the country's people are living in poverty.



### *'Dis da fi wee'? (3)*

In addition to the potentially toxic effects on the environment, one of the main flashpoints in the conflicts surrounding oil drilling occurred around the struggles over the rights of some of Belize's indigenous Maya peoples. Since 2005, the Sarstoon-Temash Institute for Indigenous Management (SATIIM), co-manager of the Sarstoon Temash National Park, a protected area in southern Belize, has been engaged in ongoing disputes with the Government of Belize over the latter's [granting of a permit for seismic drilling in the park](#). Not only was the creation of the park itself seen as a potential threat to the Maya communities who had occupied the area for generations, but the granting of permits to a foreign company without the permission of these communities was seen as a deliberate disenfranchisement of these people from their traditional lands. ([The majority of indigenous peoples in Southern Belize are officially landless](#)).

As mentioned above, part of the reason why protests over the proposed drilling by environmental and conservation NGOs had such traction in Belize is because of the strong recent history of a legislative framework for conservation in the country. In 1996, for instance, UNESCO designated the Belize Barrier Reef as a World Heritage Site. An expansion in marine conservation followed. Whereas once the barrier reef offered protection to buccaneers and pirates, now it is protected for its biodiversity. Over half of the country's 69% of forested land is currently designated as one or another form of 'protected area'. It is worth asking, then, why such a potentially toxic activity is being pursued with such gusto by the government. This can only be understood if the history of Belize, and its status as a former British colony, is taken into account.

### *Unsustainable colonial development*

Part of the reason why oil exploration seems attractive is due to the fact that, again, like most Caribbean countries, [Belize has a substantial sovereign debt burden](#). Consequently, a considerable amount of the revenue generated by the Government goes **towards keeping up the interest payments on that debt**. Yet the reasons why the country is struggling financially can be linked to the history of development in Belize.

Throughout its time as a British colony, ‘development’ in British Honduras meant the structuring of the country, and the use of its natural resources, was done in such a way as to serve the needs of the colonial elites. The focus of the initial colonial administration was thus geared towards ensuring the smooth extraction of tonnes of mahogany, for the European luxury furniture market, and logwood, for the dyeing industry. Land was portioned out to the new settlers with little regard for the existing indigenous inhabitants. Indeed, Maya peoples were often viewed either as a threat to the lucrative logging industry, or, especially in the wake of the abolition of slavery, as a potential source of cheap labour.

Following Belize’s independence, the country was entered into global relations in a disadvantaged position in part because of the fact that colonial elites had expropriated much of the wealth that had been generated by the colony. [Belize’s economy is therefore a highly dependent one](#).

And so it is that the relatively benign practices of communities of forest dwelling indigenous peoples, whose co-existence with the myriad species of tropical flora and fauna has been a model of sustainability for centuries, comes to be recast as ‘unsustainable’ when judged according to technocratic notions of sustainability applied in line with global north social imaginaries.

Promise has been sought in forms of conservation-orientated ‘sustainable development’, yet lurking in the background are often neoliberal models of economy and society which neglect peoples’ differing interests. Problems are reframed as opportunities for economic growth, with nature being protected via investment and consumption as in the case of the widespread promotion of ‘eco-tourism’. The system of protected areas management that underpins conservation in Belize, for instance, strictly regulates peoples’ use in accordance with quite specific development ideals. And so it is that the relatively benign practices of communities of forest dwelling indigenous peoples, whose co-existence with the myriad species of tropical flora and fauna has been a model of sustainability for centuries, comes to be recast as ‘unsustainable’ when judged according to technocratic notions of sustainability applied in line with global north social imaginaries.

Community members who have for generations practiced forms of subsistence agriculture might get retrained as tour guides for protected areas. Fishermen might be encouraged to change their practices of fishing in protected areas, and instead to participate in community banking. Inexperienced people are not always very well equipped to become market actors, however, and can be taken advantage of even when formal property rights exist. Moreover, financial recompense might not constitute sufficient compensation for the loss of access to land, particularly if part of that loss is spiritual. In addition, tourism is a fickle industry which

is subject to fashion trends, often leaving those who rely upon it vulnerable and less self-sufficient than previously.

Fortunately, it does seem that the efforts of the Belize Coalition to Save Our Natural Heritage have borne some fruit. The Government recently announced a policy to partially [ban offshore drilling in an area near the reef](#). Elsewhere, the government has since [allowed offshore exploration contracts to lapse](#). Not all of the limitations on oil drilling stem from positive policy action though: the company, US Capital Energy, was forced to abandon drilling in the Sarstoon Temash National Park after [dangerous levels of the potentially hazardous gas hydrogen sulphide were encountered](#).

Ultimately, the situation in Belize will be largely dictated by the aforementioned developmental pressures, but in conjunction with worsening climatic conditions bringing ongoing bleaching events, and more intense hurricanes. Crucially, as we are set to far surpass 1.5°C of warming, concerns over the health of the barrier reef may fade in favour of the existential threats induced by catastrophic climate change.

## References

- (1) From the collection ‘Mahogany Whispers’. Reproduced here with the author’s expressed permission.
- (2) The Prime Minister of Belize stated ‘Drill we will’, while members of the Belize Coalition to Save Our Natural Heritage claimed that ‘Offshore drilling, is not Belize!’
- (3) Belizean Kriol phrase meaning ‘This is ours’.

An earlier version of this article appeared on [Discover Society](#).

**Image Credit:** [Yeti-legs](#), Belize 2015: Coral Gardens Flickr; [Wikimedia Commons](#)