

CHAPTER TEN

Investigating Environmental Issues for African Media Workers

by Sipho Kings with Wanjohi Kabukuru and Gwen Ansell



Marikana, Rustenburg, South Africa pic. J Seidman

Learning objectives

By the time you have worked through this chapter you should be able to:

- Approach the basic science of climate change and environmental issues confidently;
- Identify and describe the key environmental issues affecting Africa, and localise world and continental problems
- Distinguish trustworthy from misleading sources of environmental information and effectively interrogate the latter;
- Know how to develop sufficient working knowledge of the field, its role-players, terminology and debates to identify and plan stories;
- Build up and use relevant contacts to support your work;
- Interview scientists and other specialists confidently and competently;
- Contextualise, and where relevant link, the multiplicity of environment-related problems communities may have.
- Make the scientific aspects of environment stories accessible, relevant and interesting to your readers

This chapter assumes that you have some understanding of basic investigative journalism techniques. To learn more about, or refresh, these, see Chapters 1-9 of the handbook. Be sure you grasp the professional standards that govern ethics and interactions with news subjects (Chapter 8). Chapters 6 and 9 provide important tips on handling numbers, statistics and science, and we strongly recommend that you revise these.

Introduction

WHAT DO YOU THINK? Mariam and the disappearing fish

Mariam Mzige is a journalist at a weekly newspaper in an East African city. Her contract describes her post as ‘Science/environment/general reporter’ – but she has been in the job for a year and is finding that general reporting fills her whole week. Her editor’s idea of environment stories seems to be reporting the speeches made by government ministers at international conferences, or the local councillor’s promises (rarely kept) to improve water and sanitation. “This is so frustrating!” Mariam complains to her sisters. “The job isn’t what I hoped it would be at all. I need a break! I think I’ll visit Uncle Ali at the coast next weekend.”

Mariam has happy memories of childhood holidays with Uncle Ali : trips every day on his fishing boat; and Aunt Fatima’s delicious fish curry. But when she gets off the bus, she finds her uncle sitting outside his house, gazing miserably into space. “I expected you’d be out at sea,” she says, after greeting everybody. “What’s wrong?”

Over recent years, it seems, fewer and fewer fish have been coming into the bay. “We’ve all seen that the weather has changed. The water feels warmer than it used to,” says Ali. “Some kinds of fish we used to catch don’t come here any more. We find dead fish and sea-plants washed up. It’s not worth taking the boat out more than once a week. If this goes on, I’m thinking of selling up and moving to the city...”

That makes Mariam sad – but it also excites her, because in the plight of Uncle Ali and his neighbours she thinks she might have a real environment story, relevant to her readers. She spends the whole weekend talking to old people in the village about the changes they’ve experienced in weather, tides, and the movement of fish shoals – and the ways the shrinking fish stocks are affecting their lives. She’s confident she can talk to people at the Weather Bureau and the university when she gets back to her newsroom in the city and find out what’s really going on.

But her editor stops her plans in their tracks. “I’m sorry Mariam,” he sighs, “but we can’t waste resources on a story like this. It will take forever to do and we need you for news stories. You’re not a scientist, and this global warming stuff is complicated. From what I’ve read, it might not be happening at all; we must be balanced. Besides, our readers don’t have patience with long, scientific stories full of waffling experts. If you want to write a science story, why don’t you have a go at jazzing up that report on the High School Science Fair I need for the Community News pages?”

If you were Mariam, what would you have said to your editor to answer his arguments and persuade him the story was worth doing?

We’ll return to this discussion at the end of the chapter...



fishing off Luanda, Angola, pic. J Seidman

Being an environmental journalist in Africa

Mariam Mzige isn’t alone in feeling frustrated about covering the environment beat. It’s a worldwide frustration. A Knight Foundation study of environmental journalists in America presented in 2008 found that “roughly half of environment reporters spend only a third of their time or less reporting on environmental issues. Only 26 percent [cover] the environment more than two-thirds of the time.”

But despite this near-universal pressure on reporting time, the importance of the subject matter has been steadily increasing.

Previously dismissed as specialism for activists who need not be taken seriously, environmental journalism is fast becoming one of the critical beats in the newsroom. Environmental issues have a cross-cutting effect on a wide range of other news areas, so the journalists who cover the environment beat acquire knowledge and contacts relevant to energy, agriculture, water, health and even politics stories.

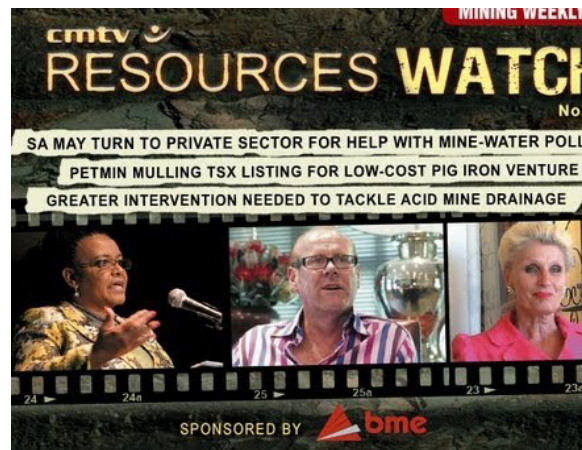
Kenyan environment reporter Wanjohi Kabukuru recounts how his team overcame this problem:

“To this day I still recall how we were chided by colleagues in politics, sports, business and courts sections. At the time we were only three reporters who were allocated two pages each week to write environmental stories. For nearly a year we were the laughing stock of the newsroom as we were scolded with childhood rhymes of singing birds and funny animal jokes. We were derided that we should give up the pages to other “deserving sections”. We justified our existence not because of the support of our editor but because we went deeper in our environmental stories and soon were allocated four pages which went on to become a Special 8-page Pull-out. In our second year as environmental reporters we scooped awards and that marked the realization that we were in effect reaching our target more effectively than other sections.”

Within the environment beat, climate change (we’ll discuss later what the term covers) is undoubtedly one of the biggest stories of the millenium. It is a story that will play out across the world and affect every person on the planet – especially the most vulnerable. And Africa is likely to be the worst-affected continent. So African newspapers, broadcasters and websites will need more journalists who have at the very least a basic knowledge of the issues and science underlying environmental journalism and driving climate change. Ideally, they will be seeking journalists who have moved beyond that, and who can undertake deep investigations of environmental stories.

By using your skill and reach as a journalist to talk to communities and educate them about present and future problems, you will create a respected niche for yourself within your newsroom. More importantly, you will also help to make your community (and the continent) a better place, and give your audience knowledge to help them fight exploitation and neglect.

Being an environmental IJ isn’t a soft option. The environment is a complicated story that involves the ability to handle both scientific data and aspects of knowledge from many other specialisms. You’ll need to be able to interact with news sources from all walks of life, often in challenging contexts. But it is both a valid (and increasingly important) career option, and a thoroughly worthwhile thing to do.



WORSETHANBAD.ORG

LIVING WITH SHELL IS BAD. AND IT IS GETTING WORSE EVERY DAY. TELL THE WORLD.

TIMELINE OF SHELL'S OIL POLLUTION IN THE NIGER DELTA

2012

- 2012 SHELL AGM DISAPPOINTING
- RUSTY PIPELINE COVERS K.DERE COMMUNITY WITH OIL
- FRIENDS OF THE EARTH NETHERLANDS SENDS LETTER TO CEO SHELL
- SHELL ADMITS FUNDING NIGER DELTA WARLORDS

Environmental journalism as your specialist beat

STOP & THINK:

Journalism researchers Declan Fahey and Matthew Nisbet conducted a study of science journalism in 2011. They concluded that science journalists could play all or any of the following roles. While the roles are not exclusive,

Which roles do you think provide the best 'fit' for a journalist working the environment beat on a general daily or weekly newspaper?

Are any of the roles problematic or inappropriate for a journalist in that position?

- The **conduit** explains or translates scientific information in their reporting from experts to non-specialist publics.
- The **public intellectual** synthesizes a range of complex information about science and its social implications – in which the writer has a degree of specialization – presenting that information from a distinct, identifiable perspective.
- The **agenda-setter** identifies and calls attention to important areas of research, trends and issues, coverage of which is then picked up and reflected in other science news outlets.
- The **watchdog** holds scientists, scientific institutions, industry and policy-orientated organizations up to scrutiny.
- The **investigative reporter** carries out in-depth journalistic investigations into scientific topics, especially where science meets public affairs.
- The **civic educator** informs non-specialist audiences about the methods, aims, limits and risks of scientific work.
- The **curator** gathers science-related news, opinion and commentary, presenting it in a structured format, with some evaluation, for audiences.
- The **convener** connects and brings together scientists and various non-specialist publics to discuss science-related issues in public, either online or physically.
- The **advocate** reports and writes driven by a specific worldview or on behalf of an issue or idea, such as sustainability or environmentalism.

COMMENTARY:

Journalists to whom this list was shown felt that a journalist on any specialist beat, was at various times, a conduit, watchdog, investigator and civic educator. Whether it was possible – or desirable – to function as a public intellectual, curator, agenda-setter or convener depended on the kind of news outlet you were working for, and your own status in the profession. Among the comments were:

- “The public intellectual could only operate on the op-ed pages. You’d have to be pretty senior and respected, and your paper’s science coverage would have to be respected by other media.”
- “If you had strong online science pages, then curator is a really nice idea to think about to plan those pages, but I don’t think it could work for a print-only local paper...”
- “Agenda-setting happens through specialised publications usually, for something like science. Like *Nature*. Then we pick it up. But we don’t have the position to start it...”
- “Convener is probably more a role for an organisational journalist, for example within a university. Or maybe if your paper ran discussion breakfasts, or something. It’s not very realistic for a small general newspaper.”

The role that produced the most vigorous debate was advocate. Many journalists saw the natural disasters caused by climate change as “something you have to fight – like crime. It’s not advocacy, but common human

duty.” Others raised issues of balance. Some argued a journalist too closely associated with one side of a cause might have difficulty doing his/her job and thus presenting a complete story. Others worked for newspapers where active membership of political parties and pressure groups was against the house ethics code.

Remember, when you are writing for the public, you are an environmental journalist, not an environmentalist. Environmental journalism is often a variety of civic (or public) journalism – it embodies the belief that journalism should listen to how communities define their problems and work with communities to deal with those concerns. Journalism by its nature plays a role in public life: it can never be just a spectator.

So there is always an advocacy element in this kind of reporting: when your story describes how township children are playing in raw sewage, you are clearly not saying that’s a good thing. But your work is advocacy for the public good, not advocacy for a particular politician or pressure group. How you write the story should make this clear. As Wanjohi Kabukuru, whose influential stories about dangerous pesticides in Kenya we feature throughout the chapter says:

“My story was not a personal vendetta aimed at individuals or public body. It was a public concern. To avoid the risk of victimization and ward off fear, I stuck to the naked facts on the dangers of the chemical, what it had done to wildlife, who were responsible, the tonnage of obsolete pesticides in the region, what the international community thought of the chemical, the legal position and the future scenario. This aspect made the article to become an investigative and dispassionate searing of truth rather than a sensationalist narrative that lacks facts.”

The boundary between journalism and activism remains a tricky one to negotiate. It depends on your own context and conscience, and you are your own most effective watchdog. What journalists who considered the question agreed on were one ‘do’ and one ‘don’t’:



DO let all voices be heard in your story – but DO contextualise those voices



DON’T be dishonest about any affiliations you have

Stories about science or stories about people?



Stories in the first-world media tend to concentrate on big scientific events associated with the environment and to look at the ‘plight’ of people who are suffering as a result. But as an African IJ you live on a continent where people struggle to survive in harsh conditions, where the changes that loom as a result of climate change will have the greatest impact. Much of the population already lives on the edge of survival so even small changes could have catastrophic results.

Because you live and work here, you have the chance to talk to and about people. The people who are adversely affected by the environment are the ones other people want to read about. By putting a face to an issue you can make a more powerful story that will attract greater attention to that issue around the world. That’s especially true if your newspaper has an online presence: a story written in Yaounde can be read the same day in New York. As well as arming communities to better handle changes to their environment, your stories can change the way the world thinks. Consider the impact of African stories about people affected by landmines, exploitative diamond-mining or child recruitment to armies: they helped shift the international policy climate.

But this does not mean that you can neglect the science. If you can read science and interpret the basic elements for yourself, people will be less able to lie to you. This is critical. There are very potent interest groups that will try to sway you, and your reporting of the science around environmental issues. If you grasp the science, you can evaluate their agendas. We will discuss the science you need to know later in the chapter. We’ll suggest techniques for improving your understanding and point you to the many online resources that exist to help you learn, and you’ll find a full reading list at the end.

Flooding, Nairobi, Kenya, 2012

Informal settlement,
Luanda, Angola,
pic. J Seidman



What are the key environmental issues worldwide?

'The environment' is the term we use to describe something huge: everything that makes up our surroundings and affects our ability to survive and operate, including all the plants, creatures – and other people – with whom we share the planet. Science writers use the terms 'brown' and 'green' to classify environmental issues. Broadly, 'green issues' relate to nature; they are what we stereotypically think of as 'the environment'. So, tree-planting, rhino-poaching or the pollution of a pristine mountain stream are green issues. But cities, shack areas and industrial areas are environments too. So the term 'brown issues' has developed as category for those issues that directly affect the living and working spaces of people in settlements. 'Flying toilets' in Kenya's townships is a classic brown issue.

STOP & THINK:

For each of these worldwide environmental issues, think about their 'green' and 'brown' aspects, and take time to consider whether you know of examples in your community:

- **Energy Consumption:** How much power does our community use? What kind of power/how is it generated? What happens to emissions and waste products? Could we use less energy? What are the policies and how are they being implemented?
- **Air Quality:** Is air 'clean'? How do you know: has it been tested? Are there dust/chemicals/smoke/fog/bad smells in the air in your community? Where do these pollutants come from and are there plans to control them?
- **Land Use:** Who owns the land and what do they use it for? What's the balance between cash crops for export and food crops people need to eat? What's the environmental cost of inputs (fertilisers, insecticides) on the land and what happens to waste products from this land use? What's happening to wildlife on the land? Are there rules about land use and are they enforced?
- **Forestry:** Are trees being cut down? What's the impact? Are there plans to re-grow trees so forests and their ecosystems don't disappear? What's happening to former forest-dwellers? What are the rules?
- **Biological Diversity and Wildlife:** Are there more or fewer animal and plant species in your community than your grandparents can remember? Which ones have disappeared? What's been the impact? Are there national plans to protect and preserve species?
- **Oceans and Freshwater Resources:** You can ask all the same questions about water as you can about air and land.
- **Industrial, Nuclear, Medical and Solid Waste:** How are these disposed of? Is the process safe and effectively monitored? Is disposal having an effect on land, air and water resources, and the people and animals in the area?

*pics: Marikana mine, Rustenburg, South Africa ;
overgrazing, South Africa; Clear-cutting forest,
Penguin in oil spill, South Africa.*



Localising an international story.

'Local' is defined by your readership and might mean your village, your province or your country. Localising an international story on one of the topics above can make your publication distinctive. It is also the quickest (although not the best) way of ensuring that your paper carries sustained coverage of environmental topics. If your publication already subscribes to a wire service, it is more economical for your editor to give you a few hours to localise a story, rather than a few days or weeks to create an original story. But if that story is well-received, it can open the door for your original stories later.

Make sure that the story is related to local conditions in some way. (*Will it grow here? Will the bug spread here or not?*) Ring an expert to get the local angle. When you've found it, find a relevant source or sources, and conduct short interviews. Put that material at the top of the story, and try to get the local angle headlined. Examples of a 'local angle' might be:

- Local people and communities who have experienced the effects
- The specific detail of local causes: is it just global warming, or have local farming practices, for example, made things worse?
- The local budget position: what's the cost of the problem? How can repair be funded?
- Local solutions: are there existing initiatives? Is your country in a position to try something innovative?
- Local villains: is a specific mining company, for example, ignoring the law?

In the rest of the story:

In lists, statistics etc, make sure local information is included high up in the story. If it's not in the wire copy, go to other sources to find it.

Use page furniture (pull-quotes, graphics, crossheads etc) to give any local information prominence.

When you use generic graphics or maps, get them adapted if necessary so your locality is visible. Replace obviously irrelevant foreign photos with local photos.



Footage shot in the Karoo for the documentary entitled *Unearthed*.

... to show fracking 'full picture'

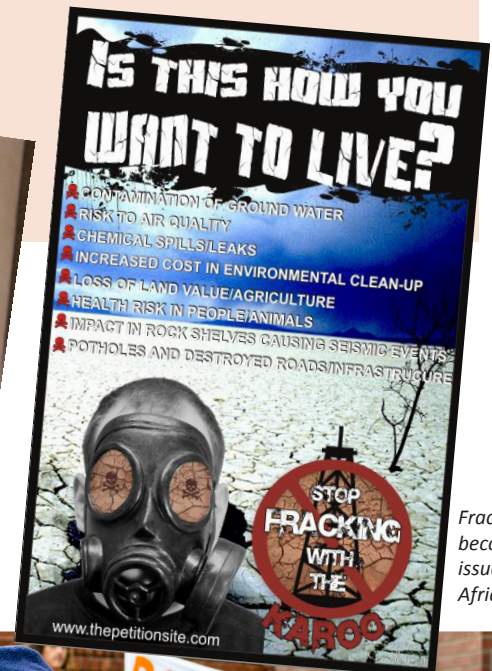
RICHARD CLARKE

GRAAFF-REINET — The fracking debate in South Africa has a lack of information, hands on experience and case studies in comparison to the United States. This is due to the fact that SA has little or no history of gas extraction and none of hydraulic fracturing. Trying to find an expert on hydraulic fracturing resident in South Africa has therefore been like a hunt for a teardrop in a waterfall. It is slowly changing but the fact remains that South Africa might just go in for this research into the dangers and risk that hydraulic fracturing poses to people, water and the environment. Director Jolynn Minnaar is looking at getting as much info into the public domain as possible via her documentary entitled *Unearthed*. It has been in the pipeline for a while and recently travelled to the US to meet with Dougie Stern

This Wednesday at the John Rupert...

Never send a boy to do a man's job... especially if he's a she!

GRAAFF-REINET — On Wednesday evening, August 3, Twelfth Night, a comedy by William Shakespeare, will be screened by the John Rupert Theatre. A once-in-a-lifetime cast, starring Helena Bonham Carter, Richard E Grant and Imogen Stubbs, shines in this beloved Shakespearean comedy. Over the entire madcap affair, A delight from start to finish, this dazzling treat is British comedy at its best! Trevor Nunn's Twelfth Night maintains the delicate balance of comedy and drama, carried out in one amazing cast. Nunn does



Fracking becomes an issue in South Africa, 2012



What are the key problems for Africa?

Thinking about the world environmental issues listed above probably convinced you rapidly that examples of most of them can be found just about anywhere. However, there are certain problems which are currently particularly acute in Africa. Those below are the most important. As you'll see, each problem has several aspects; investigating only one of these aspects could provide you with a story.

- **Selling land and water rights for cash-crop farming to international companies.**

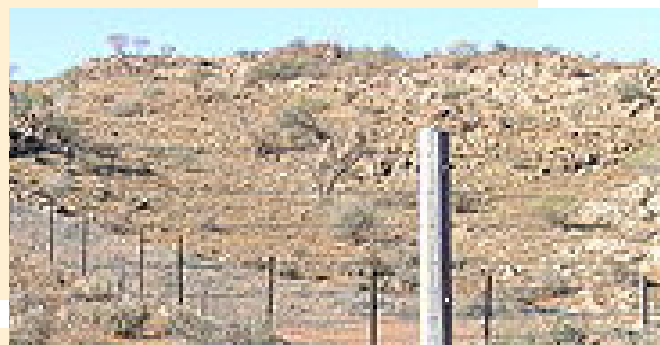
The story of land-grabs is not a new one for Africa. In 1884, the Berlin Conference was all about splitting the continent between European powers, allocating to each country certain territories whose resources they could exploit.



But in current times land-grabs have taken new forms and have been rapidly accelerated by the activities of international groups such as global agri-business companies. These companies buy land in African countries to farm cash crops – at the moment, the focus is on crops that can be turned into biofuels. Local people are thrown off their smaller farms and plots; very often they do not have written deeds that would entitle them to compensation. These plots are merged into huge estates offering wage-work to the displaced peasants. The country concerned becomes reliant on one kind of crop, which it exports without beneficiation. The crop is processed by the company, usually somewhere else in the world. Foodstuffs that were formerly grown on the land need to be imported. To keep the cost of the crop low, wages are kept low. If the crop concerned fails, or international demand and thus the world price, falls, there is no work and no revenue to buy imports. Either way, most of the capital that this kind of agriculture raises flows out of the country and the continent.

- **Desertification.**

In both the north and south of Africa, deserts are steadily creeping further upwards and downwards into formerly settled and farmed land. This is destroying acres of farming land and also driving populations to flee towards the cities because they have lost their livelihoods. Big climatic factors (see below) play a role, but poor farming methods, inadequate irrigation and the destruction of trees and bushes for firewood are speeding the problem up.



- **Growing extremes in climate change**

It's important to understand the difference between 'weather' and 'climate'. 'Weather' describes the state of the atmosphere you experience day-to-day: today the wind is blowing; tomorrow it might rain. 'Climate' describes the big, very long-term patterns within which these small events take place. The long-term trend is that the planet is warming – but that does not mean there won't sometimes be exceptionally cold days or weeks: these weather events (data points) don't alter the temperature trend (the data set) which is rising: global warming

Africa has always been a tough continent to live in: it covers a huge area with many different types of habitat and has often experienced extreme weather events. But now, because of global climate change, extremes in climate are becoming more pronounced over shorter periods of time. Climate change means that everything will be more extreme - rain may fall less often but more violently, causing landslides, or it may cease completely. People who are barely scrounging a living off the land in current conditions will gradually be left with nothing as crops fail and rivers dry up. There are many associated problems: for example, traditional crops and livestock may not flourish as they used to.



Pics (from top): cash crop farming, Somalia; desertification, Botswana; flooding, Tanzania



Oil spill, Niger Delta

- **Damage from new oil-extraction activities**

As in the Middle East in the past, the relatively recent discovery of oil around Africa has significantly enhanced development in countries that previously had little going for them. Success stories like Angola have seen cities shooting up and people's lives apparently improving. Not unreasonably, African governments have welcomed these operations. The situation of political uncertainties and reducing oil-stocks in the Middle East has encouraged oil companies to launch very large African extraction operations very quickly. However, oil extraction has extensive, long-lasting effects on the areas where it takes place. Not all oil companies have adequate safeguards in place, and the governments which welcome them do not always demand environmental repair plans as part of the package. When the oil dries up, the land may be useless for anything else. (And of course, increased use of oil and petroleum-based technologies contributes to climate change.)

- **General problems with mining and resource extraction**

Mining is a very invasive undertaking with a massive impact on the environment. When they dig into the ground and remove large quantities of earth, only to dump most of it in mounds around the mines, companies can create a long-term legacy of problems: dust; potential mud-slides; poisonous processing chemicals and minerals in the dust blown on to food-crops and open water. Often these operations are in remote locations the media cannot (or are not inclined to) reach. Local populations can suffer long-term health damage. Weak environmental legislation and oversight often mean these companies are not required to clean up the mess they create.



Acid mine drainage, Johannesburg



Deforestation

- **Deforestation.**

In poorer African nations, selling timber to multinational corporations has been one way to earn foreign exchange. In areas of Central Africa, vast historic forests are filled with hardwoods much in demand for furniture, building and other uses in the West and China. In addition, for poor communities, wood is the only 'free' fuel that can be gathered for heating and cooking.

But forests are not 'free'. Trees are the lungs of the planet - they take in carbon dioxide and give us oxygen - and as the world produces more carbon dioxide and warms, this function is becoming increasingly important. Deforestation is one of the biggest threats to human survival. But initiatives like the hoped-for UN Reducing Emissions from Deforestation and Forest Degradation (REDD) Programme could turn this problem into a way to make money for poor countries if they can halt large-scale felling. Trees are also an essential habitat for many birds, animals and insects which will become extinct if the forests disappear. We do not yet fully understand the role of all these species in the ecosystem. The disappearance of one tiny insect could mean, for example, that an important food-crop dies out because the one depends in some way on the other.

- **Scarce water and falling water quality**

Apart from those nations close to the Equator, African countries face severe problems of water scarcity (see Desertification above). More people and industrial processes are using water; climate change is altering rainfall patterns; large-scale agriculture, industry and the building of dams are all affecting the flow of rivers. Even for countries that do have water, its quality is being severely affected by waste from human settlements and by industrial activities. Water-borne illnesses and those spread by inadequate hygiene or pollution consequently damage health and reduce life expectancy. Since water shortages also affect many other parts of the world, some commentators have also suggested they will cause disastrous future world wars.

Water scarcity, South Africa



STOP & RESEARCH

Before you go further, go through the list of African environmental problems above and note down any issues that have arisen in your community or country that seem to be related to these:

African environmental issue	Local issue related to it:
Selling land & water rights	
Desertification	
Apparent shifts in climate	
Impact of oil extraction	
Impact of other mining	
Deforestation	
Scarce & poor-quality water	
Anything else?	

Marikana, Rustenburg, South Africa pic. J Seidman







It's not always about crime and blame (though it often is)

You will have noticed that many of the problems above have developed via processes: either a process in nature (climate change) or a human/political process (gathering firewood; inadequate monitoring of extraction activities).

The most sensational environment stories are those that can find somebody to blame: "Minister Took Bribe To Ignore Pollution!". But they are not the only kind of story you can write.

Sometimes, a problem arises because the processes to control and monitor it are simply inadequate – for example, the budget for mining inspectors may be too small. There may not be one individual you can name and shame. Everyone in the Ministry may carry a small share of blame for not complaining more loudly, but in fact what needs exposing is that the system does not work. Sometimes the most effective environmental investigations are these quieter, process stories, where you point out:

-  **what should be happening;**
-  **what actually is happening;**
-  **why it's going wrong ; and**
-  **how it can be fixed.**

Snow in Johannesburg, July 2012, South Africa pic. J Seidman



One important aspect of environmental journalism is **sustainability reporting**: looking at issues around resource consumption, and initiatives to use resources more efficiently and sustainably. As an investigative journalist, you would not simply describe these. You would ask whether they work, and are being supported and adopted, and ask the 'why/why not?' questions. Such stories need not involve wrongdoing.

So just because you can't find a villain, that doesn't mean you don't have a story

STOP & THINK

If you had to provide a short definition of each of the following terms for an info-box in your story, what would you write?

Environment

Climate Change

Global Warming

COMMENTARY

There are broad definitions of all these terms in the text you've just read. But when you are writing explanations for your specific audience, you need to take into account their likely level of knowledge. While everybody's first impulse is probably to cut-and-paste a definition from Google, you must ask yourself whether your readers will understand it. Similes (comparisons with something they already know) or concepts from local culture or folklore can be very helpful. Your aim is not to 'dumb down', but to make sure readers grasp the idea and so make sense of your story. If you publish online, you can add a link to a good explanatory article you have identified.

THE BIG ISSUE: WHAT IS SCIENCE AND HOW DOES IT WORK?

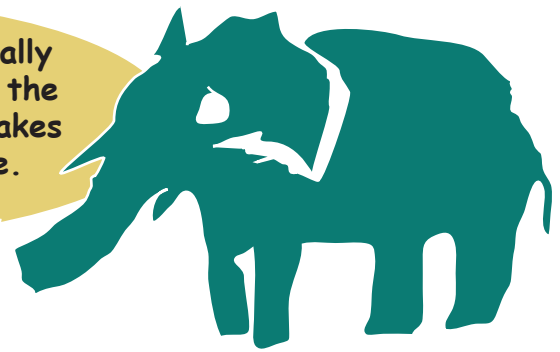
Stop being intimidated by science

Environment journalism is a challenging beat because it does demand some understanding of science – a science that is constantly and rapidly evolving. Journalists have to grasp the science so they can find the stories in the reams of information that appear in publications such as those from the Intergovernmental Panel on Climate Change (IPCC). For the beginner in this area this can be overwhelming and scary – especially when you face an interview with a world expert and you can't imagine how you will speak at their level. You will find tips on interviewing scientists and other experts later in the chapter; with a little tweaking, your basic journalism skills will still work, even in such a specialised area.

But there is also a great deal of work you will have to put in. There are hundreds of laws and regulations relating to the environment, both locally and internationally. Over time, you need to become familiar with these and grasp their significance. So if you are working the climate beat, when the IPCC releases its next report – even if there are thousands of pages and attached documents – you have to read it. There will be summaries available, but many of these come from individuals and organisations with their own agendas. And, again, it will take you time in the field to learn which of these sources of short-cut summaries are balanced and reliable. There is no way you can do justice to your readers and your topic without a thorough working knowledge to back you up. It seems like a huge task.

Q: How do you eat an elephant?

A: If you're environmentally conscious, you don't! But the proverbial answer still makes sense: one bite at a time.



So, you do need to make time for reading, and you may need to work on your reading skills, so that you can use techniques such as skim-reading and searching for key terms to help you employ time better. You can't become an instant expert – but remember that every environmental IJ began where you are now. If you start with one topic – the one your current investigation needs you to understand – and get a working knowledge of that, you can slowly branch out until you have learned something about everything. And, as journalists, we have all learned techniques for quickly familiarising ourselves with new areas.

STOP & RESEARCH

At the end of this chapter you'll find a list of international and African conventions concerning the environment. Find out which of these your government has signed, and what related national legislation it has passed or proposed.

In the 2011 FAIR Awards submissions, several journalists tackled environmental themes. None of these stories focused on a huge topic demanding comprehensive knowledge of all aspects of environmental science. A good investigative story needs precise focus, rather than a wide, vague picture. Knowing this, each writer selected an area of local impact, and used expert local sources intelligently to fill in the science relevant to the topic. These writers have all added one area of environmental science to their repertoire by tackling that story, and can now move on to an additional area – or probe more, to develop deeper knowledge.

- Ghanaian Benjamin Tetteh investigated the impact of coastal erosion on a small traditional community
- Kenyan Ken Opala looked at the health effects of high levels of natural radiation in a scenic area near Mombasa
- Nigerian Tolosi Ogunseye surveyed the state of school latrines in Lagos, spurred on by a news story about the death of a child who fell into a pit latrine while trying to use it.
- Mozambican Estacio Valoi looked at official involvement in illegal logging in Zambezia Province
- Ivoirian Selay Marius Kouassi studied the environmental costs of gold-mining.



Luanda, Angola, 2007 pic. J Seidman

You CAN phone a friend: making contacts

For help with mapping and cultivating sources, see Chapters 3,4 and 6. Contacts are your key to survival. If you don't understand something, you need to be able to ask a reliable expert what it means. If you are working on a sensitive story, you need that contact to respect you enough to maintain confidentiality. You don't get that kind of relationship from a phone call or a random business-card you have picked up.

So don't write stories from your desk. Take the time whenever you can to meet people, and make sure you attend events relevant to people working in the environmental sector. Even if it means giving up your own time after work, it will make you better at what you do. After a person has talked to you and is able to put a face and personality to your name, they will relate to you as a person, and not simply as a journalist who may be trying to use them. If you can, develop a friendly (but professional) relationship with contacts. They are much more likely to call you in the future when something interesting happens.

By attending events you can ensure yours is the name people associate with environmental reporting. People will look for your articles because they know you have a passion for the topic and have taken the time to familiarise yourself with it. And they will talk about you to other people they know, thus growing your circle of contacts and sources.

Look also for people who may not be in the limelight. Your local university's Life Sciences or Environmental Science department will be a rich source of knowledgeable researchers who may never feature as 'star' speakers at public events. So will your government's Public Health structures. These can be excellent, unique sources. Every country has a 'Rent-A-Quote' group of experts that most journalists use. Developing your own sources means your story will be distinctive.

In Chapter 8 of the IJ handbook we discuss fully the ethics of dealing with sources: respect, honesty, and discretion where it is requested. These apply in every investigative area.

Remember: a journalist who uses people will not get far

Evaluating sources in science: keep off the Astroturf

It is becoming increasingly difficult to evaluate reliable sources, especially online sources, simply from their public face. Many interest groups create 'Astroturf' (fake grassroots movements) or 'sock-puppets' (fake individual voices and wholly sponsored organisations, journals or 'research institutes') so that their interests are asserted worldwide – these days, especially via social media. That is why looking for summaries of complex policies online is such a risky business. So if you are investigating the environment, you also need to investigate the organisations that speak and write about it.

Establishing 'information' websites is one common way for multinational companies to deal with protests and criticisms. Such websites are often not immediately identifiable as the creation of the company concerned, but provide press release-type responses to what are described as FAQs about a controversial product or project, under a heading such as 'The facts about...'. Dealing with controversy in this way allows an organisation to say only what it wishes to say, and avoid answering awkward questions from the media directly. Presenting such sites as

'information' sites also gives them a misleading first-glance appearance of objectivity – if you choose to quote from such propaganda in your story, you must make the identity of the source very clear.

For an investigative journalist, this is not a new task: you need to find out who the main role-players are, what causes and interests they are associated with, and where the money backing an outfit comes from. When reading alleged journal articles, find out whether the journal in question is recognised and 'peer-reviewed' (articles read by a range of independent experts before publication) and how many 'citations' it has attracted (sufficiently respected to be quoted by others in the field, see Chapter 9). Your expert contacts in science – whom, we hope, you have also checked out! – can advise you very usefully here.

Neglected, minority ideas in obscure, non peer-reviewed, un-cited journals are not always fake or corrupt. They may sometimes simply be very new (although that certainly also means they are less well-tested). But in environmental debates, huge interests are at stake: changing the way we regulate carbon emissions, for example, may threaten the activities of trillion-dollar industries. So you always need to conduct the same checks you would for any other investigative story. Don't timidly assume that just because something was written by someone titled 'Professor' and is published in something called a journal, it is automatically valid. For an account of some organisations currently active in "greenwashing" their activities, see:

<http://www.newint.org/features/2012/06/01/greenwashing-companies-corporation/>

In addition, "greenwashing" can sometimes take the form of tempting freebies:

"Interaction with scientists, conservationists and publicists is a normal endeavour in environmental writing. In the environmental field there are so many activists, scientists, and influence peddlers. Avoid being sucked in to become their unofficial spokesperson. ...Don't be swayed by the myriad "freebies" offered by environmental NGOs and government PR officers such as "rare trips" to far-flung national parks, air travel to backwater towns, sponsorship to conferences overseas and the celebrity craze. Cultivate your antennae to see through the PR glut. In an age of shrinking newsroom budgets it is true the corporate world and governmental behemoths have incredible financial power to support journalists for these trips. The reality however is that a freelance reporter who travels by public means, mingles with local people in the markets and farms, shares meals with locals in the shebeens and hippy-like lodgings will end up getting a better story than one who is chauffeured, pampered and fed by publicists." (Wanjohi Kabukuru)

However – especially if your academic background is in the arts – it is easy to be intimidated by something that appears credible. That's why, even before you untangle the science around a specific environmental topic, you need to understand what 'science' is and how its community operates. Having that understanding will give you the confidence to ask all the awkward questions.

Science is about uncertainty – but that does not mean it's untrue

You'll find an excellent online tutorial on 'What is Science?' on the website of the World Federation of Science Journalists (WFSJ), written especially for journalists and available in seven languages including French and Portuguese.

<http://www.wfsj.org/course/page.php?id=131#mbarga>

If you don't have a science background, we recommend you work your way through this tutorial (including the exercises) before you read on.

The basic point to grasp is that scientific knowledge is well-founded, and has been subjected to rigorous testing. But it is also always today's knowledge. Research and experimentation conducted tomorrow will definitely add to – and sometimes change – that knowledge.



Scientists don't discover unchanging truths; they gather information using the best tools and methods available, and make and test models (experiment). Science grows on the basis of what all that tells them: what works better, and what they don't yet know. As Carlo Rovelli, a physicist at the University of Aix-Marseille, told magazine *The Edge* in 2011: "A good scientist is never 'certain'. Lack of certainty is precisely what makes their conclusions more reliable than the conclusions of those who are certain; because good scientists will be ready to shift to a different point of view if better elements of evidence or novel arguments emerge. Therefore certainty is not only something of no use, but is in fact damaging if we value reliability." Another physicist Lawrence Krauss of Arizona State University told the same publication: "In the public parlance, uncertainty is a bad thing, implying a lack of rigour and predictability. The fact that global warming estimates are uncertain, for example, has been used by many to argue against any action at the present time. In fact, however, uncertainty is a central component of what makes science successful. Being able to quantify uncertainty and incorporate it into models, is what makes science quantitative, rather than qualitative. No number, no measurement, no observable in science is exact. Quoting numbers without attaching uncertainty to them implies they have, in essence, no meaning."

That may be quite disturbing for us as journalists, because the pressure on us is to tell stories briefly, and in hard-and-fast terms. Understanding that communicating science can't always be fitted into such a narrow frame is one of the first steps to becoming an effective environmental journalist. Instead of interviewing on the basis of, "So, windmills will solve the energy problem: yes or no?", we need to ask questions like:

- "How do you know?"
- "How certain are you?"
- "What do we still need to learn?"
- "What options for action exist on the basis of current knowledge?"

We need to learn how to communicate uncertainty clearly to our readers (without making it sound like a bad thing), and we need to make sure that the way our stories are presented and headlined does not undermine or over-sell what we have discovered.

Avoiding false balance: is there another side to the 'human-made' climate change story?

We saw one very good example of the consequences of not understanding the science at the start of this chapter. Mariam's editor told her it would be too complex to tackle a story about climate change because the arguments were not clear, even about whether it was really happening.

It is true that there are many loud voices around, either arguing that climate change resulting from human activities is not happening at all, or saying that the evidence for and against is so evenly balanced the case is not proven. Many of these voices are sock-puppets for rich multinational backers who want the freedom to continue environmentally-damaging activities. Some are simply wishful thinkers who want to believe that our future use of resources won't need to change.

So while it is valid for the media to expose all sides of the debate, one does not necessarily 'balance' the other. Overwhelmingly, climate scientists accept the evidence that average global temperatures are higher now than they were before the 1800s – and that human activity has played a major role in this change. When the Intergovernmental Panel on Climate Change (IPCC) says it is 'very likely' this is the case, what they mean is that there is at least a 90% chance they are correct. If you quote climate-change denialists, you need to explain this context: there is nothing unfair about calling minority views, "minority" or accurately conveying the likelihood of these views being correct (less than 10%). Environmental journalists such as George Monbiot of the UK *Guardian* go further: they provide online links to the full, relevant research in their stories, so readers who want to can check for themselves.



*Seascape, Angola,
pic. J Seidman*

Finding environmental investigations

Getting to know contacts and spending time in a community are the best possible ways to keep abreast of issues. But there are several other straightforward, accessible sources of stories:

Special events: conferences, international treaty signings etc

On any specialist beat, these are your bread and butter. From government to NGOs and civil society formations, every group seeks a platform at or around such events. There's a tendency to dismiss such events as tedious, because they are dominated by official speeches and one-way communication with the public. But they do provide an automatic news-peg that will make your story topical.

Covering a conference: going beyond the speeches to get a 360-degree view

- Consult your friendly experts in advance to get context and likely angles
- Find out about your own government's policy positions in advance. (This is one aspect officials are usually happy to talk about, but be aware positions change during negotiations.)
- Find local attendees (officials and civil society delegates) who will keep you abreast of what's going on inside and outside the sessions
- On the basis of all this – and your own investigative interests – pick the topics that you will focus on. Don't try to cover everything
- Don't waste time sitting through top officials' speeches: they are invariably distributed online or in press releases. (But you must read them)
- Read the programme carefully, especially the biographies of speakers/delegates. Find interesting-sounding people to talk to.
- If you have an online edition, conferences lend themselves very well to live-blogging: again, centred on the topics you want to emphasise.
- Hook up with journalists from other places to find out what they are discovering from their sources inside the delegations.

Calendar Events

Note the international 'days' where an issue is given special focus: World Water Day; Tree-planting Day, etc. (You can find these on the calendars of the UN and its various agencies online, and in your country's Government Gazette.) Put them on a wall calendar or into your diary, so you can plan stories in advance for the day or week when they will be trending. Having such a topical peg makes your story far more marketable to an editor. You may have been working on a long-run investigation of corrupt forestry management for months; Forest Day instantly makes it a news story.

Past Stories

Every time you write a story, you will collect interesting ideas, information and questions that do not quite fit the angle. List these as you work, or note them in your ideas file, and make sure you check these lists regularly. They can provide your next investigation, or a follow-up, and will give you the opportunity to revisit stories you wrote in the past to see how the people affected are getting on.

Legislation

Most developments in the environmental sector come from governments, their official positions and the laws they pass. Make sure you are on the press release list and always keep abreast of what your environment minister and parliamentary committee (and their local government counterparts) are doing. Even the smallest tweaks in legislation can have profound impacts on people on your beat. At election time, ask the candidates concrete questions about the laws they plan on environmental issues relevant to your readers.

Disasters

Sadly, too many environmental issues come to light only when there is a disaster. But because people are interested, and hungry for more information, disasters provide a cue for talking about the context of an issue. So think about the long-run implications of short-term news (the landslide; the flood) and the bigger story behind the story of one village's polluted water.

Writing about disasters without alarmism

Use these stories to make the local (the disaster) global, and the global (broader climatic factors) local

Avoid sensational language: use the most accurate, up-to-date estimates of deaths and injuries you can access and describe what you see and what is known, rather than editorialising in a very emotional way. Make sure headlines also respect this principle.

Talk to experts and do research to get the basics right. If the landslide was caused by monsoon rains made worse by long-term climate trends, find ways of explaining that to your audience in clear, jargon-free ways.

Think about good graphics to show how it happened.

Talk to experts and officials for accurate context and perspective. Is it really “our country’s worst landslide” or “the worst in the past 10 years” or “the worst for 30 years in this province”?

Respect the grief of your interviewees: you can give your audience a picture of the human impact without being insensitive and intrusive.

If there could be villains (in a chemical factory explosion, for example) take your time to get all the facts straight before you point fingers. Not only is it dangerous and unethical to ride on the strong emotions of the moment, inaccurate coverage can impact on subsequent legal action for compensation.

Tell people what they can do, in the short and long terms. Is there a relief appeal (short-term)? Are there farming practices that can minimise the likelihood of future landslides (long term)?

Always follow up. It is in your follow-up investigation that a bigger picture of causes and solutions will likely emerge. For an investigative journalist, a disaster is not an incident but a running story.



Mudslide buries village, Uganda

Special Interest Groups

Non-governmental organisations (NGOs), environmental pressure groups and civil society pressure groups rely on the media to get their message across, and are filled with individuals passionate (and often highly expert) about their cause. For this reason they are often the most willing to provide information about topics, and the most generous with time, access and answers. But of course, that is precisely because they have an agenda they want to bring to public attention. Their information is useful, but it may not be balanced or bias-free.

Achieving balance in a story from a special interest group

Always use the ‘three-sources rule’. Cross-check what you are told with a less organisationally-tied expert, and see what their opponents say. You are not looking for the ‘middle view’ (that is just as likely to be wrong as either of the extremes!); you are seeking a representative set of voices for your audience.

Source and contextualise everything you quote. And contextualise fully: tell us what the group stands for, not just its name. If you publish online, direct readers to a website for more background and information.

But if the group’s analysis seems the most solidly grounded and credible, do not be afraid to cite it simply because it comes from a pressure group



*Community activism, Phola Park, Ekurhuleni, South Africa
pic. J Seidman*

Experts and specialist publications

Know the role-players (scholars and researchers) in your field and the publications in which their work appears. Scholars are often just as passionate about their work as NGOs, because they want people to know about it. International publications, such as the scientific journal *Nature*, will give you an idea of wider research and issues that you can take up and localise. For example, if someone has found that a special kind of plant soaks up more carbon than others, see if that offers an option for local agriculture or industry. But scientists and scholars are not 'neutral': they are coming from a specific position within their field. As we have seen, scientific knowledge grows through ideas and models being challenged and modified: there are always debates.

"As a cardinal rule don't depend on the same scientists, public relations executives, research bodies and governmental agencies. Build a pool of them as most often than not they differ on opinions. Divergence in opinions is not necessarily a bad thing for you as a journalist, if anything it's a motivation to you to dig deeper and enhances the quality of your stories." (Wanjohi Kabukuru)

Again, you need to know the field well enough to contextualise controversies – and to present them as a normal part of the growth of knowledge, not a negative. See our tips on page 20 about questions you can ask scientists during an interview to illuminate the debates.

Letters

If you can build a reputation as a concerned, capable environmental journalist, people will contact you with their problems and issues. People understand that exposure in the media can draw attention and put pressure on officials to do something. So good story ideas can emerge from the letters that members of the public send to you personally or to your publication's letters page. Again, always be wary of what your informant's agenda might be. We discuss in Chapter 4 of the IJ Handbook safe approaches to handling apparent 'free gifts' of information.

Listserve

Try find out where people in the know 'talk'. For scholars, scientists, activists and environmental journalists these days, those locations will not be local bars, but global forums in cyberspace. These include organisational sites, dedicated email servers, and specialist professional chatrooms. Often, specialists treat these forums as relatively private spaces and discuss issues more freely. Where possible, sign up for them. You can use your membership to keep abreast of the issues, or to ask for information from a worldwide range of experts and to crowd-source opinions.

But:

- There are 'gossip' aspects to what is said in these in-groups. Subject them to your usual cross-checks
- Don't be a troll. Be open about your own status as a journalist; don't join rude, aggressive arguments; don't provoke for the sake of creating a story; respect the professional role and (where requested) the professional confidentiality of other participants. Behaving badly in worldwide online forums can damage your reputation and career more easily than behaving badly in one local interview.
- Do be aware that – just as in the local bar – state and other security services (including those of multinational corporations) can also listen in on these conversations and act as provocateurs.

Your own daily experiences

Ground yourself in your beat and your community. This will give you a chance to know what the big issues are and what everybody is talking about at any given time. Listen to conversations in taxis and bars. Notice the gushing water-pipe that has not been fixed for weeks or the pothole that keeps on getting deeper. By "taking your readers' pulse" you can narrow global environmental issues down to the most relevant local angle of investigation

Marikana, Rustenburg, South Africa pic. J Seidman





Pitching an environmental story

We have discussed the general principles of pitching in Chapters 2 and 3 of the IJ Handbook, so this is just a short recap, with specific reference to environment stories:

- **Before you pitch, think about the options for different coverage angles.** Environmental stories can relate to business, politics, human rights, human interest and many other areas. What you might not sell as an environmental investigation might be more useable if adjusted to foreground one of these other angles. This is how Wanjohi Kabukuru handled it:

“We wrote about the science of environmental conservation but because our paper was political we slanted the science of environment and introduced the raw politics of conservation and how the common man was affected. In a story of titanium mining we went deeper and investigated how many people were involved, the land mass to be covered, the amounts invested and expected returns on investment, the change of lifestyles for the villagers, how many would be employed, what titanium is used for, current global prices for the titanium, conservation NGO voices, government regulations and position and the mining conglomerates track record. In other words we broke it down, unbundled science and environment and simply recounted a titanium story to a common man in the street. This way we increased our audience and accommodated everyone.”

- **Think about why the story is right for your paper in particular.** If your paper focuses on politics, is there a link to a prominent government or opposition figure or a policy? If your paper likes human stories, is there a villager who could be the lead figure around whom you construct the text?
- **Do some preliminary research** so you can verify there really is a story and pitch from an informed position that demonstrates foundation work
- **Don't talk in jargon:** your editor and the team aren't specialists. Sum up the story in one straightforward, plain-language sentence.
- **Don't over-sell the story:** describe what you are likely to be able to get evidence for. Don't promise: “This story will bring down the government” if you are not yet sure it can. Be precise about what the story definitely ‘will’ do and what it ‘might’ do given enough working time.
- **Don't pitch solid doom and gloom:** editors often say readers don't want “depressing” stories. So if there are solutions (even distant ones), include them in your pitch.
- **Discuss time and resource budgets for the story.** Investigations often fall at the pitching stage because they sound too time-consuming and expensive. Read the very important section below for tips on finding the time.

Making time for the story

- Plan carefully and realistically. Set your own mini-deadlines within the big story plan, stick to them, and tick off tasks as they are completed. This is vital to make the task manageable – but you will also find those ticks are a great motivator.
- Consider the two-story solution: offer your editor one (or more) relatively short stories on self-contained aspects of the topic, in return for time to do the deeper work. Don't promise things that will sabotage your investigation by saying too much too soon, but think about eg profiles of role-players, analysis of relevant public policy, etc. When your big investigation finally appears, the paper will also have a credible archive of backgrounders and context pieces and a good track-record on the issue. Enhancing the prestige of the paper always appeals to editors.
- Take out an initial block of time to create a number of other unrelated stories (maybe from your ideas book) that you can submit, one at a time, over the period you need to devote to your big investigation.
- Consider a team approach collaborating with specialist reporters on other beats. If the story has a political angle, see if the politics reporter would like to work on that section and share the byline.
- Be meticulous about noting sources and typing up small pieces of information and interview quotes as you uncover them. That way, the final writing becomes more like putting together a jigsaw puzzle and less like starting *War and Peace*.

Interviewing scientists and experts

(See also Chapter 5.) If you don't have a science background, it can be intimidating to face a famous scientist with questions. So it is critical to remember that you are speaking to another human being.

Too much shoddy journalism, plus their own lack of understanding of our trade has put scientists off interviews, and they have little trust in journalists. So try to be neither timid nor aggressive. Talk to them like one ordinary person to another. Explain where you are coming from, how much you know, and ask them to talk you through anything you do not understand. If you admit where your knowledge stops, the scientist should hopefully take more time to explain. All you need to say is: "Our readers are not scientists. Could you please explain that in basic terms?" Scientists usually have a passion for their field and so will want you – and the public – to understand it.

Never be afraid to ask people to explain. "Can you tell me more about that?" is an extremely powerful request. Environmental stories often deal with complex ethical and scientific issues, and you don't want to take away a bunch of notes and quotes that you do not really understand. A few people may become irritated, but in general experts respond well to a humble explanation that you're trying to ensure your story is as factually correct as possible. This is one situation where sending back the relevant section of your story to the expert interviewee for factual correction may be both ethical and useful.



DO

Here are some do's and don't for interviewing scientists and experts.

- ✓ Make sure you know who the person is and what they do. That is a basic courtesy in any interview. Check for yourself, rather than basing questions on a second-hand media report about them. Look for their work in reputable journals.
- ✓ Decide what kinds of answers will clarify your investigation; know what you are looking for.
- ✓ Always record these interviews. It is easy to make errors in written notes where you are not familiar with terminology.
- ✓ Start with warm-up (ordinary conversation) just as you would with any other interview
- ✓ Remember a scientist may not understand your job. Tell them a bit about what you do, for what audience, and what you are working on. It will help them to answer
- ✓ Remember a scientist's reputation can be damaged by how you portray their answers in your story. Any caution is understandable.
- ✓ Ask closed questions about matters of straight scientific information, and open questions about interpretation and analysis.
- ✓ Ask for copies of documents
- ✓ Double-check any numbers you note
- ✓ Ask what assumptions the work is based on
- ✓ Ask basic research questions about methodology such as sample size, controls, research ethics and whether the work is reproducible (and under what conditions)
- ✓ Ask about alternative explanations: 'Is there any other way to interpret your data?'
- ✓ Ask about certainty
- ✓ Ask whether other scientists of similar status in the field might view the work differently – then get their contact details.
- ✓ Ask who is paying for the work
- ✓ Ask at the end what they would like to add

DON'T

- ✗ Be afraid to ask 'stupid' questions. You are there on behalf of readers who may know less than you.
- ✗ Push for absolute yes-or-no answers and ignore nuance and qualification
- ✗ Assume that work funded by a corporation is corrupt or biased. Corporate funding of research is common these days. Safeguards like peer review ensure the work is still credible – but you should be very concerned if they are absent
- ✗ Use or note jargon you don't understand. Where you need a term spelled or 'translated': ask
- ✗ Paraphrase as much as you would in an area you know. You need their precise words.
- ✗ Treat a scientist as an expert on everything. Outside their specialism, their views may be no more 'scientific' than yours.
- ✗ Ask huge 'suitcase' questions like "Is the forest doomed?". Break your concern down into a series of small manageable questions that will give you concrete, specific answers: "What's the future of the tree species? Can they regenerate? And the animals? How long will recovery take? What would help it? What could hinder it?"
- ✗ Fill the interview with awe and flattery. Good conversations happen on the basis of mutual respect
- ✗ Forget to follow up or seek further clarification if you need it
- ✗ Forget that you are there to serve your readers: not your own or the scientist's ego.

Writing the story

There is a full account of the process of writing up an investigation in Chapter 7 of the *IJ Handbook*. The story we use as an example – about pesticide spraying – is an environment story, so you will find important pointers about spotting and filling gaps, using scientific input and achieving balance in that example. If you have not looked at the volume before, we suggest you consult it before reading further.

You may also find the following tipsheet from the Knight Center For Environmental Journalism, Telling Environmental Stories Better, useful. Find it at: ej.msu.edu/media/tipsheet_storytelling.doc

The article *Creating Environmental Activism One Story At A Time* from Bowdoin University contains a very useful discussion of the problem of reducing environmental stories to a simple tale of opposing sides. Here is an extract:

"Basically, reading environmental reporting is like eating your vegetables boiled with no butter and no salt," said [environmental journalist Amanda Griscom] Little, to the amusement of the class. "It's like this bland, predictable experience. And part of it is there's such an expectation of what you're going to hear from your average environmentalist ... which is, bad guys-good guys; polluters are bad ... It's this very purist, preachy approach, which frankly makes it boring to read. That binary good and bad paradigm is shifting, so that a lot of the stories today are about looking at environmental tradeoffs," added Little. "Look at Walmart," she said, by way of example. "There are elements of what Walmart is doing to become more sustainable that are good. They are saying: we will be purveyors of affordable green products ... for less; we'll be the democratizing force for the environmental movement. It's a great marketing scheme. But there are elements that are really problematic: Walmart's social issues, its relationship to unions. And, my gosh, the environmental problems of having these massive big-box stores that are covering the ground in asphalt." So, as a writer faced with these kinds of complexities, how would she begin to write a compelling truth? "It's very helpful to have a very targeted question that you are asking" said Little. "'Will it work to create a hybrid truck fleet at Walmart?' Instead of: 'Can Walmart go green?' The small example becomes a way in for the larger question."

Find the whole story at: <http://www.bowdoin.edu/academics/features/2008/curriculum/creating-environmental-activism-one-story-at-a-time.shtml>

Remember that environmental stories are first of all about people. While new data or theories may be what spark your story, people want to read about what these mean for other people. So talk to people, write about people, and frame your story through the experiences of people. Few readers can relate to large helpings of what such-and-such a scientist said.

Seek the colour and the anecdotes. Dull narratives about chemicals (or who paid what bribe to whom) will turn readers to another page very quickly. Show, don't tell. If people live beside polluted water, talk about the colour and smell of the water, and the grimaces of people as they drink it. Woo readers with your writing, and reward them with a story that takes them to the scene of the problem and puts them in the shoes of the community. If you feel strongly enough about an issue and have talked to many sources, this should be easy.



Oil pipeline fire, Nigeria

Dealing with jargon and technical terms

Environment stories do deal with science, and are often sourced from communities with their own specialised vocabulary. So there will be some specialist terms you need to use to be accurate. For example, the explanation earlier in this chapter makes it clear why you cannot use the term 'weather' (a term everybody understands) as a simpler substitute for 'climate'. They do not mean the same thing.

- Spot and distinguish between three kinds of jargon: necessary technical terms, terms that can accurately be simplified, and pretentious waffle whose only purpose is to make the speaker sound clever.
- Learn what the key technical terms and concepts mean, and what are acceptable 'translations'. Our glossary at the end of the chapter gives you a start, and the specialist websites in the reading list offer more help of this type. If an interviewee throws you a term you do not know, stop them and ask for a spelling and an explanation. Similes (explanations that compare something unfamiliar with something known) are very useful here, eg 'evaporation' could be explained by reference to a pot boiling dry
- Include a 'Key terms and concepts' box in your story, so that explanations do not interrupt the narrative flow.
- If your publication has an online edition, create links to online glossaries or other explanatory articles
- Cut or paraphrase the pretentious waffle – if, in fact, it has any useful meaning at all. When a government spokesperson says: "The President is fully cognisant of the environmental implications of developmental issues such as underground mineral exploitation," that can boil down to: "He said the President understood mining could have an impact on the environment"

EXAMPLES: HOW WE WROTE THE STORIES

The community sustainability story:

Cookers provide alternative for poor by Siphso Kings

(reprinted by kind permission of the Johannesburg Mail&Guardian where this story originally appeared.) Find the online version at mg.co.za/article/2012-04-26-cookers-provide-alternative-for-poor

The SunFire parabolic cooker harnesses the sun's abundant power, allowing one to cook using sunlight as the energy source.

Harnessing the sun's abundant power could provide a partial solution for people who cannot afford escalating electricity costs. Its rays, directed by curved dishes, can cook food and boil water.

"There are 300-million people in Southern Africa and they all need to cook. So solar cookers could be like the next cellphone," said Crosby Menzies, owner of SunFire.

This realisation, reached while watching people using solar cookers in Zambia, started Menzies on a path to founding his business and crisscrossing the country to spread his dream. He even has [South African] President Jacob Zuma's endorsement.

"At Cop 17 [Minister of Planning] Trevor Manuel came to look at my cookers and was so amazed he called the president over. Both of them said this is exactly what the country needs," said Menzies.

But since then, he has had no feedback from the government, not even when he has approached it.

"People just aren't willing to believe that an idea this simple can change so much," he said.

The way the solar dishes work is simple. They use a large area to focus the sun's rays on a point where a pot or kettle is placed—just like the way in which you used a magnifying glass to burn holes in a paper.

He said although overcast conditions meant only slow-cooking food such as stews could be prepared, South Africa enjoyed "extremely high radiation and a high frequency of sunlight.

"This means you can harvest more than twice the amount of energy that you could from a similar appliance in Germany."

Menzies is a one-man operation so growth has been slow, but he is beginning to train agents to promote his product.

The township of Thokoza, east of Johannesburg, is one of the bases for his operation. Here Noluthando



SunFire parabolic solar cooker, E. Cape, South Africa

Lebaka plays the role of magician to the crowds who gather around the demonstration model in her parents' yard. Pedestrians passing the house are lured in by the whistling of a kettle boiling on her solar cooker.

The 21-year-old tells her audience about the basic science behind the power of the sun. Then she takes a newspaper and puts it under the kettle. It bursts into flames and the crowd gasp in amazement. Many of them want to repeat the trick themselves—her stack of newspapers is burnt away quickly.

Her mother, Ntombifikile, has been using the solar cooker for several months and says it has saved her so much electricity that it no longer runs out half way through the month.

As most of the audience drift away with promises to call Lebaka, there are always a few who want to see the back of the solar cooker. They want to check for electrical wires that must be powering it. After a thorough search even the most sceptical are satisfied.

"I am amazed. I never thought the sun had this much power," said Nyalakalo Sithembe.

But for many, even though it provides free power, the cooker is too expensive—the basic model costs R1 200. SunFire provides a lay-by [instalment] system to help people, but the uptake has still been slow. Lebaka has sold only five cookers this year.

Nomarussia Bonase, an energetic woman, lives a short distance away, off the tar road and down a dirt track. Her father called her Russia because he was an ardent communist.

She is living up to her name and her father's influence through her influential community empowerment organisation, Khulumani.

Bonase believes solar cooking can be an empowerment tool.

From her garage, which serves as Khulumani's meeting place, she tells her audience: "Ours is a struggle for economic justice and we are not getting this.

"So let's use this to show the government that we can be self-sufficient — only by being active can you stop being a victim and become a victor."

Menzies's biggest project is in the areas around Thohoyandou in Limpopo. There, people have been quicker than those in Gauteng to adopt his product. They do not have electricity and normally cook with wood fires or paraffin. The solar cookers allow them to cook in their homes without the risk of fire or smoke inhalation.

To help subsidise the cookers Menzies has tapped into a carbon offset initiative in the United Kingdom.

Airline passengers can voluntarily pay a fee to the Tourism Industry Carbon Offset Service to offset the carbon emissions they rack up while flying. Because SunFire's cookers replace conventional cooking methods, such as using electricity or open fires, they lessen the environmental impact these communities have on the planet. So money from the subsidy is used to reduce the cost of a basic model to R800 and because of this he has managed to sell 67 cookers in the area.



Left: Solar panel, North Africa; right: Solar heating, Cape Town

How I wrote the story

Sipho says:

"I recently read a column that complained about the damage endlessly hammering-on about climate change was doing to the entire green sector. It – correctly, I think –said that by giving so much attention to this one aspect, the world's media, politicians and activists were wearing the public down and also taking attention away from other parts of the green debate. "The recent Rio+20 conference was a good chance to remind everyone that, yes, there is a problem with the changing climate, but humanity's biggest focus needs to be on sustainable development.

"And as a journalist in this sector it's good to be aware of this as it opens up your writing to a much wider array of stories. Environmental journalism can, therefore, become 'environment journalism': where you talk about the whole array of flora, fauna and human interaction, rather than looking at articles that are driven by policy and events only.

"With this in mind I am always on the lookout for 'brown' issues. These tend to be the kinds of stories that readers do want to look through, because they often have a direct link to their own lives. They are also the kinds of stories that will embody human achievement, and how the simplest idea at home can have profound consequences for the surroundings.

“The idea of using the sun to heat our water and cook our food is one of these. But it’s one that is often sidelined by government and big organisations - in a way it’s too simple a solution to be liked by people who cannot think out of the box. It’s also the kind of solution that I am often guilty of overlooking because it’s the big things that drive policy and make ‘the news’.

“So when a colleague in the office said she knew a person who was doing this project, I latched onto it. And her tip was thanks to the time she had spent at COP17 in Durban in 2011. “Wandering around the gigantic venue she bumped into a man who was promoting his idea for changing our electricity usage habits by moving to free solar-powered cooking. At the time she took his business card and put it somewhere and moved on - focusing on the chaos of the immediate stories that she had to do. And it was only many months later that she remembered, and passed the tip onto me.

“I then contacted him and immediately started planning the logistics.

“I also realised that this would be a good story to use across all the platforms that my newspaper has. So when I did go for the story, I took a photographer and a multimedia person - this meant that we were able to use that one story across both the newspaper and online platforms, giving readers more insight and colour while only having to take one car.

“Before I left the office I did a broad web search, both locally and abroad, to familiarise myself with the level that solar technology had reached. I also checked to see if anyone else had been writing about the issue - which they had not. It is vital to do this because you do not want to write something that has just been done and will have readers wonder why you did it again, and it also gives you a chance to investigate a different angle. And the joy of environmental stories is that there are endless angles. I also had a chat with people in the industry to see what their thoughts were about the technology and its hopes in South Africa. All of this meant that I could ask the people involved reasonably deep questions and ensure they were not selling me their version of the story.

“The story itself was easy - this is the joy that comes with doing ‘feel-good’ articles that focus on the positive work that people are doing. Because there is no ‘bad guy’ you get to talk to people and they will share anything you want and give you the context and colour that you need to make a good feature. But I was still cognisant that I was writing about a profitable venture, so no matter how soft the story is, always remember that people have their own agendas and that you are a journalist, and owe it to your readers to make sure you have asked all the questions. And in this case I did. While it was awkward given the hospitality of the main people in the story, I asked as part of easy conversations. In this case there was nothing dodgy lying under the surface - but always remember that green issues are a huge business these days so unscrupulous people will sneak their way in.



“With this story being a straight look at one project, it did not need much contextualising. But in hindsight, if there had been space, it would have served as a perfect chance to interrogate South Africa’s energy mix and why smaller projects are not getting the attention they deserve. It would also have been a chance to look at the legislation and funding issues that bedevil small ideas that can make a huge difference. However, given space and time constraints it was well worth a chance to highlight something that might make readers think and maybe change the way they cook.

“With the multimedia component the story did very well online and drew many comments. So if your publication does have several platforms, always remember them - they will always bring more value to your articles and give you a wider audience.”

Installing Solar panel, South Africa

The transnational investigation: Wanjohi Kabukuru and Furadan

For three months in 2010, Kenyan freelance investigative reporter Wanjohi Kabukuru followed the trail in East Africa of a pesticide imported from the USA: Furadan, US-based multinational chemical company FMC's brand name for the chemical carbofuran. What he found was shocking. It was a long investigation, backed by the Fund for Investigative Journalism (FIJ) and in the course of which Kabukuru was mentored by Ron Nixon of the New York Times. It eventually resulted in several stories that we do not have space to reprint. You can find some of Kabukuru's work on the topic online at:

www.biyokulule.com/view_content.php?articleid=3137

www.shout-africa.com/news/east-africa-toxic-dumping-in-east-africa/

His reflections on his work process below should be read in conjunction with these stories.



The Furadan story: a timeline

Kabukuru noticed containers of what he knew to be a banned chemical being carried in the streets in 2010. He investigated whether the chemical was still on sale, and looked retrospectively at how it could have stayed on the shelves for so long. This is what he discovered...

- 1989** • The pesticide chemical carbofuran is registered for use in Kenya. In the following years, international concerns about its possible side-effects grow...
- 1991** • Use of the granular form of carbofuran (trade-named Furadan) is phased out in the USA by the Environmental Protection Agency (EPA). It remains on sale in large parts of the developing world and is widely used across East Africa.
- 2004** • Furadan is banned in Kenya. The regulations around banning a chemical in Kenya however, mean that import and retail sales can continue for an undefined period while the product is being "phased out" (removed from retail outlets and stocks moved to an obsolete chemicals storage facility).
 - Manufacturer FMC continues sending what it describes as 'additional' granular and liquid Furadan to Kenya. 'Phasing out' seems to environmentalists to be taking a suspiciously long time.
 - A Kenyan campaign gathers momentum, spearheaded by internationally-renowned campaigner Richard Leakey.
 - At the same time, environmentalists in other parts of the world are also investigating and campaigning about the risks associated with Furadan.
- 2008** • Furadan is banned in the EU
 - FMC announces that it plans to halt exports of 'additional' Furadan to Kenya
- 2009** • (May)The EPA revokes "all uses and tolerances" of granular Furadan in the US and recommends a ban on the liquid form too
 - FMC and other manufacturers begin a legal challenge to this ban. They set up an information website www.furadanfacts.com to state their case.
 - Furadan is banned in Canada
 - Kenyan environmental scientists conduct extensive studies on the deaths of raptors and large predators, to see if carbofuran is implicated.
 - Kenyan pesticides agency, the Pests Control and Products Board (PCPB: tasked with monitoring and implementing the official ban on the product) defends Furadan and its manufacturer.
 - According to the Furadan website, an 'official government investigation' by the PCPB, found that the deaths of several lions was due to other causes and not Furadan. [During his 2010 investigation, Kenyan environmentalists tell Kabukuru that at this time the PCPB did not have a functioning research laboratory.

Environmental campaign group WildlifeDirect, told him the PCPB “told us that they have only just built and equipped a lab, but it is not yet functional,” according to WildlifeDirect director Paula Kahumbu. “When reports are made” she said, “the PCPB does not take action. In fact, they have never acknowledged receipt of reports from us on pesticide poisoning. To date the PCPB has refused to consider toxicological results from tests done by the government chemist; they insist that they should be involved in collecting samples. Yet they have never responded to any incident report that we have sent. They tell us that they have budget and human resource constraints.”]

- Late in the year, in the face of mounting protests, the PCPB announces that the ‘phasing out’ period is over and sales of Furadan have been ‘stopped’.

2010 • Kabukuru notes new-looking Furadan containers being used to carry water. He investigates further and finds Furadan still on sale in several agro-veterinary shops.

- FMC initiates a buy-back programme
- The results of the Kenyan research studies are released. They leave little doubt as to the toxicity of Furadan. One, *Soil and Water Contamination with Carbofuran Residues in Agricultural Farmlands in Kenya Following Furadan Application*, by the Ornithology Department of the National Museum of Kenya (NMK), the Chemistry Department of Maseno University, and the German National Research Centre for Environmental Health finds that Furadan poisoning has affected birds, hyenas, camels, lions and hippos in Kenya. “The large number of reported cases of Furadan poisoning and misuse by farmers and pastoralists has sparked off strong lobbying against Furadan use in the country, fronted by wildlife conservationists and the National Museum of Kenya calling for its ban,” the report says. Joseph Lalah, a chemist at Maseno University who participated in the study, affirms this to Kabukuru: “I can tell you for a fact that Furadan is killing birds on our farmlands. In all the samples we collected and conducted toxicological tests on, the traces of Furadan were there.” The second paper, *Decline of raptors over a three-year period in Laikipia, Central Kenya*, conducted by Darcy Ogada and Felicia Keesing, published in the *Journal of Raptor Research*, makes it abundantly clear that raptors, which are listed in the IUCN “Red List of Threatened Species”, are even more in danger from carbofuran exposure: “Recent studies have implicated carbofuran in the poisoning of African white-backed and other vultures throughout Kenya.”
- Wanjohi’s first article is published in the *New African*. A second story appears in *Diplomat East Africa*
- The United States Supreme Court denies a petition by FMC corporation and three US national growers’ groups. The petition requested that the Supreme Court review a lower appellate court ruling upholding the US Environmental Protection Agency’s decision to deny an administrative hearing on the revocation of domestic tolerances for carbofuran. (‘Domestic tolerances’ are the permissible limits for traces of the chemical in foodstuffs destined to be sold in the US).

2011 • The last update appears on the www.furadanfacts.com website, although it still remains open.

- Wanjohi and other journalists continue to receive reports of Furadan on sale.

2012 • Kenyan conservationist Shiv Kapila reports that Furadan remains on sale around the wildlife-rich Lake Baringo area. www.eawildlife.org/swaraonline/swaras/Shiv2012_03_01.pdf

*Lion allegedly killed
by Furadan
poisoning, Kenya*



How I wrote the story

Kabukuru describes nine key stages in his work:

- **Observation**

One evening, he was driving home when he noticed some pedestrians carrying barrels –some of them filled with water- which had ‘Furadan’ written on them. “As an expert on the environmental beat, I was aware that this chemical was banned because of the danger it posed to the environment. When I arrived home I decided to do some little research and *voilà*...Furadan was a banned chemical. I had mixed feelings at first. One was revulsion at official malfeasance and the second was excitement that a good grasp of the environment beat had given me a tip on my next IJ project.”

- **Targeted observation**

Several visits to agro-veterinary shops confirmed that Furadan was still handled by some shops and farmers. It was available for a dollar a bucket.

- **Broad internet search**

A broad search of banned pesticides on the internet revealed that Furadan (in both granular and liquid form) had been banned in both forms in Canada and Europe and the granular form banned in the US since 1991.

- **Expertise search**

Next, Kabukuru assembled expertise from conservationists, veterinary officials, doctors, NGO representatives and scientists. This exercise confirmed that Furadan was damaging in both granular and liquid form; that it had damaged the Kenyan environment – especially the wildlife – and that it was correctly banned. It also confirmed that the chemical had still entered Kenyan shelves at least until late 2009.

- **Targeted internet research**

More internet research found digital footprints: in spite of the ban in Kenya, and the ban on the granular form since 1991 in the US, Furadan had still been sold up to and throughout 2009 to most East African countries by the US company FMC. It had been distributed in Kenya by Juanco Distributors. “I came to learn that the chemical’s continued import into Kenya was a deal between a ‘politically-correct’ businessman who had influence in the corridors of power and managed to make environmental monitors and other involved state officials look the other way even when lives were at stake. Indeed, when this information was being leaked to me the person who did it looked around suspiciously and was clearly scared. This was the first time when doing this story that I also got scared. If a world renowned eco-activist could be scared – what about me?”

- **Aggrieved sources**

Interviewing conservationists, who had alerted PCPB on the Furadan issue, resulted in severe accusations of passivity against the PCPB, including the accusation that the PCPB had cooperated with the FMC company in an investigation that released findings that exonerated the company. FMC cited the 2009 PCPB investigation on its website and in a response submitted to a journalistic investigation by US news organisation CBS. It did not mention that at the time in question, the PCPB did not have the resources to conduct such a study.

- **Questioning the institutions**

Kabukuru put questions to the UN Agency, the FAO and the international fishing agency, the Indian Ocean Tuna Commission (IOTC), and was given detailed information. Why did Kabukuru approach FAO and IOTC? He approached FAO because the Kenyan agricultural ministry officials and the bureaucrats at the country’s environmental agency, the National Environment Management Agency (NEMA) and PCPB bosses had refused to meet him and answer his questions. (“Sometimes when the officials in your country refuse to give you the information you need or even dodge your enquiries, chances are highly likely that the dossier you need has been deposited to a relevant UN body. In other words: keep asking,” he recommends.) Most countries concerned were UN member states so information was available through this channel. Kabukuru also turned to the IOTC to corroborate claims of toxic dumping in the Indian Ocean. Kabukuru’s gut feeling about using this route paid off; he got the answers he needed.

- **Questioning those accountable**

He also put questions to all the accountable authorities, particularly to the Kenyan Government, distributors Juanco, the PCPB and the US-based company FMC. None of them replied. Neither the US company, the Kenyan distributors nor the PCPB ever explained why, if Furadan was as blameless as they claimed, it was banned in Kenya in 2004 in the first place, and banned in the US, Canada and Europe? PCB would not comment on its initial foot-dragging around monitoring the ban and initiating withdrawal, or its sudden declaration of the halting of sales when protests mounted. FMC would not discuss the ‘additional exports’ to Kenya during the ‘phasing out’ period, nor the buy-back programme of Furadan from Kenyan veterinary shopping outlets it initiated in March 2010.



Questions on all these issues were also put to Kenya's Secretary for Agriculture, and to the director of Kenya's National Environment Management Authority (NEMA). All responded only with silence.

The mere fact that all the parties involved in the saga were unwilling to respond to his questions did not in any way impede Kabukuru's research or stop him from finalizing his piece. He attempted to give them a chance to put their side; they chose not to respond. The unwillingness of the major players in the scandal to speak simply meant that Kabukuru had extra work to do and fresh sources to cultivate. It fortified the belief that they had something to hide, and this was the aspect that Kabukuru had to prove with credible sources.

"Throughout the investigation FMC never responded directly to any of my phone and email interview requests. I still retain the records," says Kabukuru. The website, with its generic commentary, was the only company source regarding the safety of Furadan. Although Kabukuru quoted from it in his stories for balance, it gave him none of the detailed answers to specific questions he needed. "My experience with FMC," he says, "is what made me to seek for other sources of information as both FMC and the Kenyan government officials kept mum. What does a journalist do when the concerned officials decide to keep quiet? You keep digging..."

• Deciding on the Final Stories

Having uncovered so much information, Kabukuru ended up with quite a raft of potential stories squeezed from his travels and interviews. He selected two key areas of approach. The first was an investigation into how sales (and imports) could have continued in Kenya for so long after the initial ban, and on the belief of environmentalists that there was collusion between the manufacturer, the distributor and Kenyan regulatory agencies. Informants were fearful, as Kabukuru notes above, and since he was conducting a retrospective investigation in a very information-poor environment (with no access to official records and silence from those questioned) it was hard to get a 'smoking gun'. For this story, Kabukuru would have had to be content with assembling as much circumstantial evidence as he could.

He says "When officials decided to keep quiet, I could have taken the easier option: to back off and deny my readers a good story. I was also very aware of a second reality: that the story would take an obvious slant in favour of conservationists and scientists, and fail to take note of other parties involved in the chain. Incidentally it was this seemingly unbalanced aspect that triggered that rare 'eureka' moment.

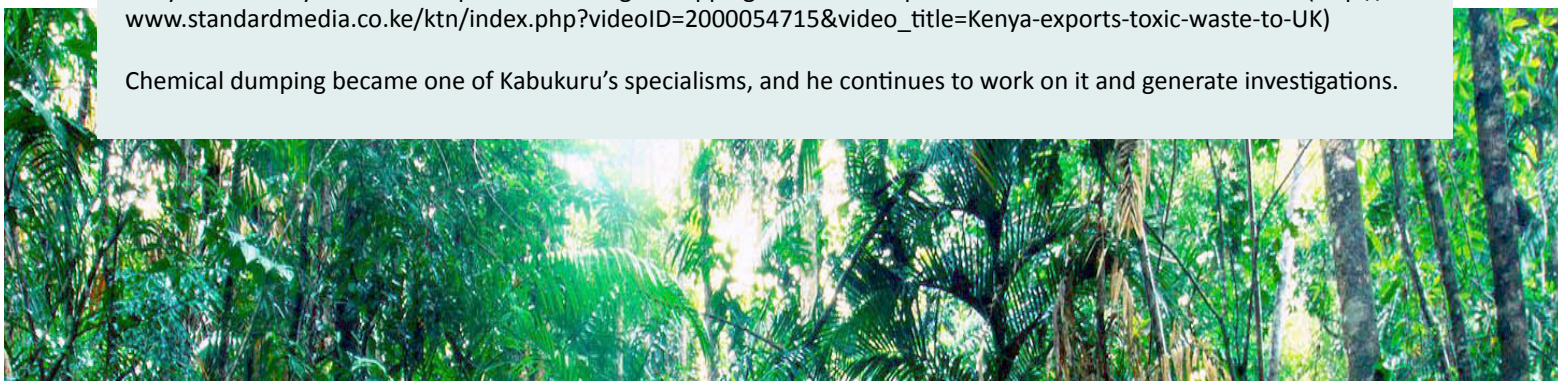
"I decided not to be frustrated with the indifference of FMC and government bureaucrats but to look at the bigger picture. The bigger picture here was that Furadan and other obsolete chemicals were a danger to everyone. Poisoning of horticultural produce and rare wildlife species and water-ways is a direct threat to East Africa's lucrative tourism and horticultural sectors. Even with the silence of FMC and government officials, the evidence gathered indicated that the larger East African Community bloc was in danger.

"So at this point, I changed tack, and focused on the dangers posed by Furadan rather than the rumoured dealings of manufacturers, importers and chemical regulators. I deliberately stopped looking for the main personalities but decided to bring out the danger of 'economic sabotage' posed by Furadan. This way the story was no longer tangling with potential defamation, but dealing with scientific evidence backed by the latest empirical data available. Having felt apprehensive about the 'complicity' story, I was no longer afraid as I took this new angle."

So Kabukuru's story now lay in the process, and in the factors that made such environmental damage possible. Multinational chemical companies seemed to be 'dumping' chemicals banned elsewhere across East Africa. An inadequate regulatory environment allowed both incompetent and corrupt stretching of the period during which banned chemicals could remain on sale. Finally – and this was new information that emerged from his research – there was a complete lack of environmental care around the warehouses where withdrawn chemicals ended up.

His initial objective was to get a story with an international pesticides dumping slant for New African magazine. He did this and then wrote a second story on the pesticides business for *Diplomat East Africa* magazine. Five other full-feature environmental stories came from his notes. Kabukuru won the East African Community Secretariat Media Green Award (for environmental reporting) for this second story. He also won two other awards: the Media Council of Kenya Journalism Awards (Science and Environment Category) and the Annual Media Excellence Awards Award (Mazingira Award Category). But for Kabukuru, the biggest satisfaction came from something that happened in March this year (2012): "I am glad to note that after decades of complicity with such poisons, the Kenyan government in March 2012 -- a year since my stories were published -- began shipping out obsolete pesticides for destruction in the UK." (http://www.standardmedia.co.ke/ktn/index.php?videoID=2000054715&video_title=Kenya-exports-toxic-waste-to-UK)

Chemical dumping became one of Kabukuru's specialisms, and he continues to work on it and generate investigations.



Key points from this chapter:

Problems resulting from climate change are putting the environment more and more into the news. Africa is often at the sharp end of these problems. Good environmental investigations are now not only socially worthwhile, but highly marketable.

But stories focusing on problems and wrong-doing are not the only environmental stories. There are important opportunities for sustainability reporting too.

Editors may be wary of environmental stories because they are 'difficult' or 'depressing'. It is important to emphasise that these are essentially stories about people, animals and the surroundings we live and work in, and to investigate solutions as well as problems.

Environmental journalists need to master the science of the field, the role-players, legislative frameworks and debates. But you can tackle these in small, story-related, steps and make intelligent use of expert contacts to support your own skills.

Understand that science is about uncertainty and discovery. It may be necessary to write in a far more nuanced way to convey this accurately.

Beware of false balance. The opinions of a minority of scientists do not 'balance' the findings of the overwhelming majority on an issue such as climate change. Your story needs to reflect diverse voices and views – but you must contextualise these.

When interviewing scientists and experts, be sensitive to the culture and conventions of their profession, and take these into account in your questions.

When writing your stories, avoid preaching and editorialising. Use local incidents and news and accessible language to illuminate the big global debates, to help your audience learn more and make up their own minds.

POSTSCRIPT: Mariam replies to her editor

Mariam was very upset by her editor's refusal to let her work on her story. But later that evening she realised his comments revealed he didn't know much about environmental journalism. Maybe she should have anticipated that, and put more information into her pitch? So she sat down and wrote him an email:

Dear Mr Juma,

Thank you for talking to me this afternoon about my story. You were clearly busy and I appreciate it. But I hope that now deadline is past, you will reconsider your decision.

Nearly 20% of our readers are from the Coastal Strip. I know they would be interested in, for example, the story of the Abubakr family, who have been fishing for seven generations and now may have to stop. Grandfather Abubakr, whom I interviewed, is 98 and still goes out on the boat – can you believe it?

I still need to talk to the university and the Weather Bureau about whether this is a 'global warming' story. If it is not, we have a great human feature with the possibility of beautiful photos for a full-page spread.

Even if there is a link with world climate trends, it won't be an academic science story: it is a story about people's lives, just like the one we ran about miners last month. Readers loved that. My specialist sources will make sure I put the climate issue in proper context.

Can I submit a short feature on one of the families I interviewed to show you what I mean? It would work for our People section. If you like that, can we please meet again to plan for a longer investigation on what's happening to fishing along the Coastal Strip

Please let me know & thanks

Miriam Mzige

Environment Reporter



FURTHER READING

Tips, tools, hints and resource guides for reporting the environment

Bad Science by Ben Goldacre (Fourth Estate 2008)

A comprehensive deconstruction of the ways journalists get science wrong, with examples and explanations to help you write it better next time. There is an archive of all Goldacre's articles (of which his book is a compilation) on the UK Guardian newspaper site at www.guardian.co.uk

- Earth Journalism Network <http://www.earthjournalism.org>
- The Knight Center for Environmental Journalism <http://ej.msu.edu/resources.ph>
- The New Internationalist <http://www.newint.org>
- The Poynter Center. The Poynter Center's NewsU online training resource offers a free course on water-quality reporting at <http://www.newsu.org/courses/covering-water-quality-what-you-need-know>
- Society of Environmental Journalists <http://www.sej.org>
- The Science and Development Network <http://www.SciDev.Net>
- The World Federation of Science Journalists <http://www.wfsj.org>

Books about environmental science and related social issues

- *Boiling Point: people in a changing climate* by Leonie S Joubert (2009)
- *Fast Food Nation: the dark side of the all-American meal*, by Eric Schlosser (2005)
- *Gaia: a new look at life on Earth*, by James Lovelock (2000)
- *Heat: how to stop the planet from burning*, by George Monbiot (2006)
- *An Inconvenient Truth: the planetary emergency of global warming and what we can do about it*, by Al Gore (2006)
- *Silent Spring*, by Rachel Carson (1962)
- *The River Runs Black: the environmental challenge to China's future*, by Elizabeth C. Economy, (2004)
- *Scorched: South Africa's Changing Climate* by Leonie S Joubert (2006)
- *When the Rivers Run Dry: what happens when our water runs out?* by Fred Pearce (2006)
- *A Climate of Corporate Control: how corporations have influenced the US dialogue on climate science and policy*. Union of Concerned Scientists (2012)
- *Merchants of Doubt: how a handful of scientists obscure the truth on issues from tobacco smoke to global warming* by Naomi Oreskes and Erik M. Conway (Bloomsbury NY 2010)

The broader context: sustainability, world business and world futures

- *Banker to the Poor: micro-lending and the battle against world poverty*, by Muhammad Yunus (1999)
- *Capitalism at the Crossroads: aligning business, earth, and humanity*, by Stuart Hart (2005)
- *Changing Course: a global business perspective on development and the environment*, by Stephan Schmidheiny and WBCSD (1992)
- *The Chaos Point: the world at the crossroads*, by Ervin Laszlo (2006)
- *The Civil Corporation: the new economy of corporate citizenship*, by Simon Zadek (2001)
- *Development as Freedom*, by Amartya Sen (2000)
- *The Economics of Climate Change: The Stern Review*, by Nicholas Stern (2007)
- *The End of Poverty: economic possibilities for our time*, by Jeffrey Sachs (2005)
- *No Logo: no space, no choice, no jobs*, by Naomi Klein (2002)
- *Open Society: reforming global capitalism*, by George Soros (2000)
- *Our Common Future, by The World Commission on Environment and Development (1987)*
- *Staying Alive: women, ecology and development*, by Vandana Shiva (1989)

APPENDICES

APPENDIX ONE:

CHECKLIST FOR A GOOD ENVIRONMENTAL INVESTIGATION

You need to be able to answer 'yes' to these questions:

- Does your story have a precise focus on the issue you are investigating, rather than being cluttered with many interesting but tangential points? (And does your writing make that focus clear for readers?)
- Are you looking for the 'why?' and 'how?' – these are what distinguish an investigative story from the simple description of a problem?
- Are you presenting ideas and information that are fresh, relevant and meaningful to your readers?
- Have you shown the human impact?
- Do the ideas and information reflect current research and debates (rather than a ten-year-old Google article)?
- Have you used accessible language and writing style and explained any vital scientific/ technical terms?
- Have you drawn on a representative and balanced range of voices, views and sides (rather than a single source)?
- Have you used accurate quotes, attributed wherever possible?
- Have you explained relevant frameworks (laws, budgets, processes: local and/or international)?
- Have you included all the other context readers need for understanding?
- Is the information in the most useful order for understanding?
- Did you investigate ethically, and could you justify any aspects of your work that might be challenged?
- Have you clearly and explicitly shown all the links in the causal chain leading to who or what caused the problem?
- Have you given any who are named and blamed a reasonable opportunity to respond?
- Have you protected the confidentiality of sources who need it?
- Have you offered a future perspective (solutions, results, actions) where relevant?
- Have you fact-checked everything (preferably twice – and calculations three times)?
- Have you shown rather than telling, and avoided editorialising?
- Have you used nuance and accurately explained uncertainty where it exists?
- Have you avoided sensational language and spin?
- Is the presentation of the story (headlines, illustrations etc) attractive, and does it reflect the content properly?

*Luanda, Angola, 2007
pic. J Seidman*



APPENDIX TWO: INTERNATIONAL CONVENTIONS

International treaties that exist to regulate the environment:

- Kyoto Protocol (and its link to UNFCCC)
- UN Framework Convention on Climate Change (UNFCCC)
- Montreal Convention on Substances that Deplete the Ozone Layer
- Stockholm Convention
- Cartagena Protocol on Biosafety
- Basel Convention
- International Convention for the Prevention of Pollution of the Sea by Oil
- Convention on the High Seas
- Convention on the Continental Shelf
- International Convention for the Prevention of Pollution from Ships
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter
- Treaty banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- United Nations Convention on the Law of the Sea
- International Convention of the regulation of Whaling
- International Plant Protection Convention
- Convention on the African Migratory Locust

African Environmental Conventions

In general the various bodies of the African Union, and the smaller divisions within it such as SADC, take their lead from international conventions. So when an international agreement is signed, it becomes adopted by the relevant local body as well.

The major pan-African body for environmental issues is the African Ministerial Conference on the Environment (AMCEN). Established following a meeting of environment ministers from around the continent in 1985, it drives the moves for environmentally-friendly and sustainable initiatives across all continental bodies. It does a lot of its work through the New Partnership for Africa's Development (NEPAD), where it advises programmes and pushes the environmental agenda. Its major publication is the African Environmental Outlook (http://www.unep.org/DEWA/Africa/docs/en/AEO2_Our_Environ_Our_Wealth.pdf)

This is a document published by the United Nations Environment Programme (UNEP). It gives a periodically updated, but definitive, guide to the state of the continent's environmental resources and should be a guide that all journalists have close at hand. NEPAD has its own framework, the Action Plan of the Environment Initiative

UNEP is also a critical source for all African journalists. The recent Rio+20 conference has dramatically increased its power and influence. And being based in Kenya it is a place where all journalists should have contacts, or at least sign up on the mailing list. In the future this will drive the United Nation's green programmes and frameworks, so it will become one of the most important environmental organisations in the world.

Remember that many of these agreements, and the international ones, are supposed to be ratified by your country. Sometimes a country will sign up to something at an international conference and give a press release to local media about its commitments, but then never enact any changes to its laws to accommodate these. While very few of these agreements have any muscle in mechanisms to enforce compliance, the nature of such international agreements is one of goodwill. Your country would lose international standing if you did some research and found it had lied.

There are some conventions that are native to Africa, and have been negotiated and created to address the specific problems that the continent does have. These are:

- African Convention on the Conservation of Nature and Natural Resources (Algiers Convention) (This is the main environmental framework for the continent, and the original one. It is constantly updated and guided for the changing world, so remains the first place to turn.)
- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention)
- Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention)

APPENDIX THREE: GLOSSARY: SOME TERMS YOU WILL ENCOUNTER

(This is not a comprehensive list; we have simply picked out terms that occur regularly in environment reporting. For other terms, this is one context where Wikipedia really can help you: its entries are relatively useful and reliable when used as a simple dictionary rather than for analysis or explanation. Remember that anybody can post a Wikipedia entry – and consult a trustworthy specialist site or a friendly expert for anything more than what a term means.) The Knight Center for Environmental Journalism (see Further Reading) has a tipsheet on common writing errors when using scientific terms.

Acid Rain

Normal rain has a pH of just under 6. Acid rain occurs when this falls under 5.6. It is caused by sulphur from fossil fuels and nitrogen in the air combining with oxygen to form sulphur dioxide and nitrogen dioxide.

Agriculture

In most of Africa this is the primary source of employment and sustenance for people. With climate change affecting things like rainfall patterns this will be particularly damaged and remains one of the continent's biggest issues and stories.

Atmosphere

This is the stuff that sits between the Earth's surface and space. It is the thin layer that contains all the elements that allow life to continue, and it is where our energy-intensive economies pump much of their waste. It absorbs the sun's ultraviolet radiation and ensures that earth temperatures remain fairly stable. It is the excess carbon that is being added to this system by greenhouse gases that is heating the earth up.

Biodiversity

Biodiversity is the variety of life: the different plants, animals and micro-organisms, their genes and the ecosystems of which they are a part. Biological diversity has no single standard definition and can include species, ecosystems and genes.

Biotechnology

Biotechnology is any technological application that uses biological systems, living organisms (or derivatives), to make or modify products or processes for specific use. See also Genetically modified organisms, Human genome, Cloning.

Biodegradable

Capable of being decomposed by biological agents, especially bacteria: for instance, apple peels are biodegradable, but most plastics are not.

Biofuels

Biofuel is any fuel that is derived from renewable resources, such as cow manure or waste from the palm oil plant. Burning it does not result in a net increase of carbon dioxide in the Earth's atmosphere.

Biomass

Plant material, vegetation, or agricultural waste used as a fuel or energy source.

Climate Change

In recent usage, especially in policy, the term refers only to the ongoing changes in modern climate, including the average rise in surface temperature known as global warming.



Luanda, Angola, 2007 pic. J Seidman

Cloning

A clone in the biological sense is a single cell (like bacteria, lymphocytes etc.) or a multi-cellular organism that is genetically identical to another living organism.

Consumption

Discussions of human consumption of resources play important roles in both economics and environmentalism. Consumption can also be defined as “the selection, adoption, use, disposal and recycling of goods and services”, as opposed to their design, production and marketing.

Demographics

Demographics is a shorthand term for ‘population characteristics’. Demographics include age, income, mobility, education, employment, etc.

Endangered Species

Animals or plants in danger of dying out because there are too few of their species left to provide a healthy gene pool for reproduction and survival.

Environmental Impact Assessment

A technique used for identifying the environmental effects of development projects. In many countries these are a legal requirement for development, but often they are either ignored or developers pay officials to give them certificates without meeting the requirements. This is a big area for articles and for journalists to be watchdogs.

Forests

A forest is an area with a high density of trees. These plant communities cover large areas of the globe and function as carbon dioxide sinks, animal habitats, hydrologic flow modulators, and soil conservers, constituting one of the most important aspects of our biosphere.

Fracking

Pumping high-pressure water below the ground surface to extract natural gas.

Fresh Water

Fresh water is water that contains only minimal quantities of dissolved salts, especially sodium chloride, thus distinguishing it from seawater or brackish water. All freshwater ultimately comes from water vapour in the atmosphere falling (rain, mist, snow etc). Access to fresh water is a critical issue for the survival of many species.

Genetically Modified Organisms

A genetically modified (GM)organism is an one whose genetic material has been altered. Examples include commercial strains of wheat, experimental animals such as mice, or various microscopic organisms altered for the purposes of genetic research. What is produced in this process is often not something that could occur naturally or through conventional breeding. GMOs are not necessarily harmful, but many have been around for only a short time so it has been hard to asses their full impact. Often they have social impacts (eg farmers are not permitted to save the seed from patented GMOs and must buy fresh each year; some countries ban their import, so if fields are accidentally seeded with GMOs, exports can suffer.)

Global Warming

The gradual increase of the temperature of the earth’s lower atmosphere as a result of the increase in greenhouse gases

Greenhouse gases

Gases that trap the heat of the sun in the Earth’s atmosphere, producing the greenhouse effect. The two major greenhouse gases are water vapour and carbon dioxide. Other greenhouse gases include methane, ozone, chlorofluorocarbons and nitrous oxide.



Hazardous Waste

A substance is hazardous if: it can ignite, is corrosive, reactive or toxic. Listed hazardous wastes are generated by specific industries and processes.

Human Genome

The complete set of human genetic information, stored as DNA sequences. Mapping the human genome lays the foundation for more focused study of diseases and their treatment, and of human evolution and can provide insight into how environmental changes in the distant past affected human development.

Nexus

A link. Environmental journalism cannot be seen in isolation. It links with every single sector and any article needs to consider how everything links. The most important nexus to consider is the water-energy-agriculture nexus. Any change in any of these will impact on the others.

Ozone Layer

The region of the upper atmosphere (stratosphere), between about 15 and 30km high, containing a relatively high concentration of ozone. The ozone layer prevents most ultraviolet (UV) and other high energy radiation from penetrating to the earth's surface. However, it does let through enough ultraviolet rays to support the activation of vitamin D in humans. Depleting the ozone layer has been linked increases in skin cancers and cataracts, and has been implicated in the decline of certain amphibian species.

Pesticide

A substance or a mixture made to destroy or repel any type of pest including fungi, insects and termites.

Solid Waste Management

Waste management can involve solid, liquid or gaseous wastes, with different methods for each. Waste management practices differ between developed and developing nations, urban and rural areas, and residential, industrial, and commercial producers. Often Africa's water resources become polluted because solid waste is not managed properly.

Transport

Transport burns most of the world's petroleum. Hydrocarbon fuels produce carbon dioxide, a greenhouse gas widely thought to be the chief cause of global climate change, and petroleum-powered engines, especially inefficient ones, create air pollution, including nitrous oxides. Other concerns include traffic congestion, toxic runoff from roads and parking lots that can pollute water supplies and aquatic ecosystems, and automobile-oriented urban sprawl, which can consume natural habitat and agricultural lands.

Wetlands

Wetlands generally include swamps, marshes, bogs, or water, whether natural or artificial, permanent or temporary, with water that is static, flowing, fresh, brackish or salty, including areas of marine water whose depth at low tide does not exceed six metres.





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Sipho Kings McDermott is an environmental reporter at the *Mail & Guardian* in South Africa. Having followed his parents' development work around Southern Africa he has seen, and lived, at all levels of society. He therefore knows the differing relations that people have with the environment, from the woman walking five kilometres for water each day, to the child taking a bubble bath every evening.



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