Round Table: Environment Law

The Experts

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Colin Kelly is a partner in Alston & Bird's Products Liability and Litigation & Trial Practice Groups in Atlanta, Georgia. He focuses his practice in the areas of mass/toxic torts and he has bet-the-company crisis management experience. Colin has a history of trying difficult cases in difficult places and over the past several years has tried seven fatal cancer cases in courtrooms from Miami to Boston. Colin recently served as national counsel to a green technology company involved in consumer product-related lawsuits throughout the US and Canada. Colin has litigated complex matters for many Fortune 500 companies and has prepared cases for trial in 15 different states.

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Karen Price has over twenty years' experience in integrated risk management, major infrastructure projects and climate change. Karen has consented numerous significant projects and leads large project teams on major and contentious developments from their inception through to consent, providing legal advice and strategy to get projects over the line.

Karen is experienced in the use of Alternative Disputes Resolution to achieve this. Karen is recognised as a world leader in climate change issues. She negotiated the only two Negotiated Greenhouse Agreements with the Crown, and facilitated securitisation and trading in carbon credits on international markets for a range of clients. Karen is listed as a leading environment and climate change lawyer in a number of international directories including the recently released Chambers Global where she is described as an "extraordinary environmental lawyer" and is distinguished not only for her sharp intelligence and knowledge about the law, but also for her keen strategic vision. Karen was award Best Australasian Environment Lawyer 2012 at the inaugural Women in Business Law Awards.

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Alexandra is a Partner in Makarim & Taira S and has extensive experience in handling litigation and dispute resolution cases including police investigations into allegations of forestry and environmental crimes, civil lawsuits, arbitration and alternative means of resolving disputes, anti-corruption investigations, internal/independent investigations and terminations of employment, and has handled liquidation, bankruptcy and due diligence, general corporate and commercial issues, as well as power projects. She is also a registered sworn translator from English to Indonesia and vice versa.

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Lisa Bromberg is a principal of Porzio, Bromberg & Newman P.C. and a member of the firm's Environmental Law and Litigation department. Her practice encompasses the full gamut of compliance matters with a focus primarily on development and redevelopment work including permitting developments; marshalling support, financial and otherwise, from state and federal regulatory agencies; and negotiating the environmental provisions of property transfers. Ms. Bromberg counsels clients in the developing "green" movement by providing services in such green areas as renewable energy deals, lease provisions, financing for such transactions and newly emerging greenhouse gas emissions control and reporting obligations.

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John Willms, LL.B., B.Sc., is an Environmental Law Specialist, certified by the Law Society of Upper Canada. John has practised environmental law, land use planning and municipal law since his Call to the Bar in 1974. John is rated as Distinguished by Martindale-Hubbell and rated by his peers for inclusion in Best Lawyers in Canada. The Lexpert Canadian Legal directory recognizes John as a Repeatedly Recommended leading practitioner in environmental law. John is named annually to The International Who's Who of Environment Lawyers.

John is the managing partner of Willms & Shier Environmental Lawyers LLP. He is an active participant in a number of industry associations. He is a member of the Canadian Brownfields Network and serves on the Technical Advisory Committee. He is a member of three MOE Brownfields Stakeholder Working Groups, at which he represents concerns of site operators, consultants and developers:

- The Brownfields Stakeholder Working Group
- A&WMA/MOE's Air Practitioners' Stakeholder Working Group
- Modernization of Approvals Working Group.

John serves as a Director of the Ontario Environmental Industries Association (ONEIA). He is a member of and active participant in the Air & Waste Management Association. He belongs to the Ontario Stone, Sand & Gravel Association and the Canadian Manufacturers and Exporters.

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Claire Tucker is a partner at Bowman Gilfillan in the environment and regulatory practice area. She was appointed a partner in 2003. She practices in and advises on a wide range of regulatory and environmental and energy issues. She has experience and expertise both in challenging the findings and procedures imposed by government in the environmental sphere and in acting for government in drafting legislation and implementing programmes for the protection of the environment.

She has a particular interest in the socio-economic aspects of the constitutional right to a clean environment.

Claire is ranked as First Tier in Environmental Law in South Africa by Which Lawyer Plc. She is also ranked by Who's Who Legal as "leading" in Public Procurement Law in South Africa and endorsed by IFLR1000 in association with Petroleum Economist as a Leading Lawyer in the following areas of expertise: Climate change energy, regulatory and natural resources

A sample of her most relevant experience is her appointment in 2010 to present as the Regulatory and environmental advisor to Department of Energy, National Treasury and the Development Bank of South Africa on all aspects of the 3725MW Request for Qualification and Proposals for New Generation Capacity under the Independent Power Producers Procurement Programme work includes evaluating environmental legal compliance of bidders.

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Alice Whittaker is recognised by Legal 500 (2013) as a leading Irish expert in planning and environmental law, also stating that; "Alice Whittaker is 'top class', and provides 'an excellent service through clear communication and super response times'". Alice is also head of the firm's 'Top Tier' Planning and Environment Group, and advises both public and private clients on major planning, environmental and climate, transport, telecommunications, energy and marine infrastructure projects. She also advises operators in connection with applications for environmental permits, licences and certification, and related compliance and enforcement.

Environment Law

We have spoken to some key figures from around the globe to dissect the issues which surround environment law such as recent regulatory changes and litigation risk. We also discuss the best strategy going forward for reducing emissions and attempt to predict what eco-friendly products could potentially dominate 2013 while also trying to foresee possible, future key trends.

1. What areas are currently creating the most work for environmental lawyers?

Bromberg: The practice of environmental law has changed considerably over the last 25 years – from responding to notices of violation and understanding how best to comply with myriad regulations – to determining how to get ahead of the curve and be proactive. Areas such a green law and related marketing practices, issues pertaining to renewable energy and integrating it into the existing grids, introducing consumers into the renewable energy world, Power Purchase Agreements, understanding fracking and representing the various parties to agreements governing their respective rights (and managing the PR aspects of this divisive issue) are all matters creating work for environmental lawyers today. I strongly suspect that there will be a fair amount of litigation over the "green" claims that have become so ubiquitous and, in many instances, so misleading or inappropriate. I anticipate litigation arising from solar installations including property damage (to the roofs) as well as complex contract claims. Of course, any time an environmentally distressed property is involved in a transaction; environmental lawyers are needed to negotiate the terms of the agreement, allocating the environmental risks, liabilities and obligations. This provides significant work in the more industrialized states/areas where nearly all properties have environmental issues. Before the last economic downturn in the US, there was considerable interest in acquiring and rehabilitating environmentally contaminated properties. As the economy continues to recover, I am beginning to see renewed interest in this area, from entrepreneurs to investors (both private and public).

Price: Large hearings, particularly before Boards of Inquiry specifically appointed under the RMA to determine applications for nationally significant projects, are currently dominated by roading (or state highway/expressway) proposals. Minerals and petroleum exploration continues to be very active, with support from Government policy (and reform) promoting investment in and development of this sector. At the same time the use of fracking to exploit resources has become increasingly controversial. There has also been work in fisheries and aquaculture, with recent legislative reform to aquaculture legislation, and new regulation of New Zealand's exclusive economic zone and the continental shelf. Energy work (particularly renewable energy generation) continues, but at a much lower volume than in previous years as a result of reduced demand post GFC.

Willms: Willms & Shier focuses on environmental, energy and Aboriginal law, and all three practice areas have seen a major increase in litigation over the past five years. First Nations and Métis communities are increasingly relying on the courts to resolve complex issues centred on the duty to consult prior to resource development, as well as to clarify their treaty and constitutional rights. Green energy policies promoting solar and wind-based projects are running into fierce local opposition, while the hydraulic fracturing of unconventional oil and gas reserves is raising new environmental concerns. Finally, provincial regulators are becoming more aggressive in utilizing their enforcement powers, while the courts appear to be more willing to impose the higher sentences mandated by our amended environmental statutes. For example, while the number of prosecutions in Ontario have held relatively steady over the past three years, the fines levied have increased dramatically from $1.1 million in 2010 to almost $3.3 million in 2011 and more than $5 million in 2012.

Gerungan: In Indonesia, the major environmental issues include illegal loggings or mining operations, deforestation, and environmental pollution or damage. Legal representation and support are, therefore, usually required in defending litigation cases related to these problems. In addition, due to regional government autonomy, in, among other things, protection of environment, implementing regulations of the Environmental Law can be formulated at national and regional levels. As such, companies whose activities likely to have an impact on the environment commonly seek legal advice and assistance with, among other things, obtaining the required licenses and approvals to ensure compliance with the applicable environmental laws and regulations.

Whittaker: Since joining the European Union 40 years ago this year, Ireland has continued to adopt and implement EU environmental legislation. Ireland therefore enjoys some of the highest environmental standards in the world. However, there have been difficulties implementing of key legislation, resulting in infringement proceedings against Ireland. This has resulted in a large volume of new and highly complex environmental legislation and associated compliance and enforcement activity in the last few years, addressing environmental assessment, protection of habitats and species, regulation of chemicals and hazardous substances, protection of the marine and rural environment with associated constraints on the aquaculture fisheries and agri-food sectors. Our specialist EU Environmental practice at Philip Lee advises both public and private clients on risk avoidance, securing licences and consents, compliance and enforcement.

Kelly: Over the last decade, more than 7,000 regulations have been enacted by the United States Environmental Protection Agency (EPA) and published in the Federal Register. One American group recently estimated that compliance with EPA regulations costs the U.S. economy $353 billion per year. Understanding and complying with such a large volume of existing federal environmental regulations is the biggest challenge facing most small and medium sized manufacturing companies with US-based facilities. More specifically under the Clean Air Act, the EPA has recently moved forward with federal controls on emissions of greenhouse gases and also addressed emissions of conventional pollutants from a number of industries.

Tucker: The Renewable Independent Power Producer Programme in South Africa is entering its Third Bid Submission Window. To date 28 renewable energy projects have reached financial close in this programme, with 19 scheduled to reach financial close in April in 2013. There is a steady stream of environmental review work for developers, sponsors and lenders arising from this programme.

Compliance matters, appeals and criminal defence work are growing in importance as the enforcement directorates of the Department of Water Affairs and the Department of Environmental Affairs (called the Blue and Green Scorpions respectively) increase the range of enforcement activities.

Mining continues to be a big source of work, notwithstanding the present state of the world economy. New mining developments are often contentious from an environmental perspective and are opposed by community and environmental groups; this can lead to appeals of Environmental Management Programmes, Water Use Licences Judicial review and interdict applications which are amongst the matters that we have assisted new mining developments with.

2. Have there been any recent regulatory changes in your jurisdiction?

Bromberg: The regulatory program in New Jersey has experienced significant changes over the last several years. Through the promulgation of the Site Remediation Reform Act ("SRRA"), New Jersey has shifted from a program largely led by the state environmental agency, the New Jersey Department of Environmental Protection ("NJDEP"), to a privatized program led by Licensed Site Remediation Specialists ("LSRPs") or private environmental consultants, much the way both Massachusetts and Connecticut have done. This shift was necessitated by a long and large backlog of cases languishing at the Agency. The intention was to put compliance with the regulations into the hands of the LSRPs, who, hopefully, would expedite environmental compliance and avoid bureaucratic insistence on unnecessary regulation. The program has been mostly successful although the transition is ongoing. Some unfortunate results have arisen, however. As predicted, because their licenses may be on the line in the event of error or misjudgement, many LSRPs have become as or more conservative than the NJDEP had been. The allegiance of the consultant has, in many instances, shifted from serving the interests of the client to serving the interests of the NJDEP. This has also resulted in the need to employ two consultants – one to do the work and the other, the LSRP, to review that work for consistency with the applicable regulations and laws, resulting in higher costs to clients, which is, perhaps, ameliorated by a shorter compliance period.

Price: The Government is currently pursuing a very active reform phase. A bill reforming the main environmental legislation, the Resource Management Act (RMA), was introduced in December 2012. It is currently before Select Committee. In March 2013, the Environment Minister released a discussion document regarding further, and very substantive, reforms to that Act. A new bill is expected to be introduced later in 2013. A separate discussion document regarding reform of freshwater management has also been recently released which highlights general structural reforms to happen in the future. Reforms to a number of other relevant statutes, including the Historic Places Act, Local Government Act, Crown Minerals Act and Conservation Act have either recently come into force, or are currently making their way through the legislative process.

Willms: Federally, the current government has been redrafting long-standing statutes – such as the Canadian Environmental Assessment Act, the Fisheries Act and the Navigable Waters Protection Act – to encourage resource development and cut the so-called red tape that may be slowing approvals of these projects. Willms & Shier has recently opened a branch office in Ottawa to better guide our clients through this rapidly evolving federal regulatory regime.

Ontario has been less active on the legislative front. However, the Ministry of the Environment has been streamlining its approvals regulations and continues to develop its contaminated site clean-up standards, the Ministry of Natural Resources has been rewriting policies under the revamped Mining Act, and the Ministry of Energy has been fine-tuning its green energy and feed-in tariff programs.
We are also tracking Alberta's reorganization of the departments responsible for its upstream energy resource activities involving oil, gas, oil sands and coal, including a new arm's-length environmental monitoring agency. British Columbia has just signed a memorandum with the federal government to implement a "one project, one environmental assessment" system, and is amending its Integrated Pest Management Act to ensure cosmetic pesticides are being used responsibly. Saskatchewan is implementing a new, legally-binding Environmental Code to consolidate and coordinate environmental management activities in the province. And Nova Scotia has released new regulations covering the clean-up of contaminated sites that take effect in July 2013.

Finally, we expect both Ottawa and Ontario to introduce legislation to meet their greenhouse gas reduction targets. While the federal government is drafting regulations to control emissions on a sector-by sector basis, Ontario is looking at a broader approach that could include some kind of cap and trade system. However, it is still uncertain whether these initiatives will be coordinated and complementary.

Gerungan: Yes. Following the enactment of the current Environmental Law (No.32 of 2009), which replaces the previous law (No.23 of 1997); several implementing regulations have been issued. These include a government regulation on the procedures for obtaining environmental licenses (No.27 of 2012) and a number of Environment Minister's regulations, such as on the guidelines on the involvement of the community in the process of composing Environmental Impact Analysis Study (AMDAL) documents and environmental licenses (No.17 of 2012), the guidelines for imposing administrative sanctions in the environmental protection and management sector (No.2 of 2013), and on the environmental audit (No.3 of 2013).

Whittaker: Yes, a significant volume of new regulations have been adopted recently to bring Ireland in line with its obligations under EU, particularly in the area of Environmental Impact Assessment, Water Services, Renewable Energy, Environmental Liability and Chemicals and Dangerous Substances Regulations.

A new Irish Water utility company is being established in 2013, with resulting contractual, governance, financing and legislative changes. Also domestic water charges are to be introduced following a national water meter installation project, and we are likely to see an overhaul in the way that water services and water infrastructure is delivered, managed and financed in the future. It is intended that this will drive greater efficiencies and technical innovation. The Commissioner for Energy Regulation is to take over the role of Water Services Regulatory Authority.

Tucker: The Department of Environmental Affairs continues to implement a new regime for air emissions compliance and licensing and a new regime for waste licensing. These are in a transitional phase and the Department of Environmental Affairs has recently required the registration of waste activities lawfully carried out when the new waste regime commenced but which would require a licence under the new regime.

The Department of Environmental Affairs has also proposed amendments to the "Section 24G" regime in terms of which a company can "regularise" the unlawful commencement of a listed activity for which an Environmental Impact Assessment should have been done. The amendments propose making it more difficult to obtain a 24G authorisation.

3. Given the fast pace of change and an increased sensitivity to litigation risk, is there a greater emphasis on due diligence?

Bromberg: The effect on due diligence depends on the transaction and the dynamics of the deal. There are instances in which other aspects of the transaction make the risks of environmental issues of less import. While there may, in fact, be other drivers for a transaction, the environmental issues associated with the assets being acquired should always be well and thoroughly vetted because in the end, whatever the original impetus for the deal, it is often eclipsed by environmental issues that were not fully delineated or understood. In a number of instances of which I am aware, the failure to properly and fully understand and track down all of the environmental concerns before the closing have totally "flipped" the economics of the proposed redevelopment. For example, significant contamination that was not detected prior to the closing could result in millions in unexpected remedial costs, rendering the redevelopment far more costly than had been planned and narrowing, if not totally eliminating, and the profit margin.

Because environmental issues carry such potentially expensive consequences, I consider the due diligence provisions of the transaction to be critical. They should be addressed early on in the deal in the Letter of Intent and subsequent documents. The more facilities involved at the more locations the more time is required.

Another wrinkle in the due diligence world in New Jersey was introduced with the SRRA, to which I alluded above. LSRPs are obligated by law to report to the NJDEP what are known as Immediate Environmental Concerns ("IECs"), potentially leaving the seller with lingering environmental issues while allowing the buyer to escape from the deal. While IECs are generally extreme environmental conditions that occur infrequently, the associated obligations for LSRPs lead many parties to elect not to have an LSRP conduct due diligence. Indeed, I generally counsel owners/sellers of assets with potential or known environmental issues to stipulate that an LSRP may not be used by the buyer to conduct the due diligence. For that reason, many environmental consulting firms in NJ have elected to have both LSRPs and non-LSRPs (who do not have similar obligations) on staff.

Price: In terms of environmental due diligence, no. This is despite increases in the maximum statutory penalties, and correspondingly increasing fines being imposed by the Courts, for environmental non-compliance. Most companies pay general attention to environmental compliance, and may even have policies and procedures in place for this purpose. However, it appears the potential implications of non-compliance, and resultant enforcement action, remain insufficient for this to be a high priority for most businesses operating in New Zealand. It is therefore not uncommon to see breaches of resource consent conditions (for example) which are completely preventable, and due to either poor management practices, or a focus on time/cost issues (or both). Many businesses continue to pay scant regard to environmental matters in a mergers/acquisitions context, again perceiving these to be of insufficient consequence.

Willms: Yes, especially with the province utilizing enforcement provisions that impose liability on directors and officers. We are also seeing cleanup orders for contaminated sites and other environmental problems being issued directly on D & Os. Much of the heightened emphasis on due diligence is focused on transactions involving real property. Phase I and II site assessments, designed to reveal any toxic contamination problems on a property, have become the norm. For manufacturers and service companies, it also makes sense to work with your legal counsel to craft and implement an effective due diligence program. Due diligence will prevent mishaps and is a defence if a mishap results in prosecution.

Gerungan: Yes. The Environmental Law requires any business and/or activity likely to have a significant impact on the environment (e.g. to cause changes to land formation and the landscape or to potentially cause environmental pollution/damage) to be furnished with Environmental Impact Analysis Study (AMDAL) documents and obtain an Environmental License prior to commencing the business/activity. The community must be involved in the process of composing the AMDAL documents. The AMDAL document forms the basis for determining environmental worthiness. Also, an environmental audit to assess compliance with prevailing laws and government policy is required for, among others, any business and/or high-risk activity (e.g. nuclear power plant).

Kelly: In my experience, absolutely yes. Environmental and toxic tort verdicts and settlements in most major US states like California, New York and Florida continue to rise steeply. High profile environmental spills and mining explosions have created renewed public, governmental and media interest in criminal prosecutions for violations of environmental regulations. These confounding factors make even the most innocuous manufacturing or product-related industry a litigation risk and require acquisition companies to dig even deeper in their environmental due diligence. Although I am a litigator, I counsel companies about environmental due diligence and have seen environmental/toxic-tort indemnity issues sink a deal.

Tucker: A more rigorous approach to contaminated land proposed in the National Environmental Management: Waste Act ("Waste Act"), which provisions have not yet commenced, is likely to have a big impact on the due diligence investigation required before a sale of business is undertaken. This is because the Waste Act prohibits the transfer of contaminated land without first informing the person to whom that land is to be transferred that the land is contaminated. Where the land in question is the subject of a remediation order, the Waste Act prohibits its transfer without notifying the Minister or MEC. The Minister or MEC may impose conditions which must be complied with before the transfer can proceed.

As such, in a transactional context it will be important to establish in the first place whether or not the land is contaminated. The importance of this will now no longer only be for the determination of the price, but also for liability reasons as the purchaser (on becoming an owner) may be liable for assessment and remediation costs, even if contamination occurred before the acquisition of ownership.

Where a sale of business transaction is dependent on the transfer of the land, the transaction will be delayed. This will especially be the case where the land is a remediation site because the Minister or MEC will have to be informed of the pending transfer and then determine the conditions under which the transfer must be permitted.

4. With carbon prices plunging, what measures can be taken to generate real incentives to reduce emissions rather than just the purchase of cheap credits?

Bromberg: The Wall Street Journal has sponsored an "Economics: Creating Environmental Capital" conference for the last several years that generates ideas and innovations to economically stimulate change that could result in the reduction of emissions and stimulate renewable and alternative energies. There seems to be a clear consensus that the private market, through large investment funds such as the California Public Employees Retirement System ("CALPERS") and Dominion Resources Inc. can and are making a difference through their investment policies. Unfortunately, these investments have thus far been largely losing propositions, with CALPERS chief investment officer noting that such investments have been a "noble way to lose money." By way of solution, he posits perhaps taking illiquidity risks and getting paid for those risks. He notes that what would be needed to make these markets take off is for some entity to step in and either raise the price of carbon or lower the cost of the alternatives. Similarly, the CEO of Skoll Global Threats Fund believes that there can be no big change in the production of greenhouse gases unless there is a price on carbon that results in entrepreneurs knowing what to aim at and companies knowing what to produce. Others believe that as a country and world community we need to focus more on making green energy cheap and investing in research and development in that regard. Clearly, turning around the waning investments in the greenside of the energy spectrum would go a long way to stimulating change. While natural gas folks right now think it to be an attractive alternative, many warn that the energy needed to extract it bears more of a carbon footprint than was previously believed, even while it now accounts for some 30% of the US energy profile, up from 13% in 2000 and taking place only behind coal.

A tax incentive program tied into the reduction of emissions is always an attractive alternative to business and would, I believe, produce meaningful results. Since economics is always a powerful driver of change, I would challenge the economists to come up with a scheme that would induce business and industry to cut back on harmful emissions while impacting the bottom line. As a policy matter, it may be advantageous to first incentivise those businesses, such as power plants, that are creating a disproportionate amount of the carbon issues. A global solution, however, requires the participation of all countries in the world, a goal that has thus far proven elusive given the varying conditions of the world's economies.

A somewhat different economic approach to reducing emissions, while not specifically addressing industrial operations, is to continue to broker innovative approaches to the donation of land to Land Trusts across the country and world. This succeeds in protecting land from future development and increasing forests whose ecosystems can help to offset (NO HYPHEN) the escalation of the output of greenhouse gases. Approaching the top industrial entities as well as banks and other financial entities and discussing such options with them can lead to extensive and complicated negotiations but can ultimately result in very real tax, environmental and PR benefits.

Price: The NZETS aims to cover all gases and all sectors, and includes the forestry sector. Prices for NZUs issued by the NZ Government have plunged following a similar track to carbon prices in Europe. However, due to the bankability of NZUs for future commitment periods, they receive a premium price to other international units. The Government has recently moved to restrict certain types of international credits from being able to be surrendered in New Zealand. However, what will likely have much greater impact on pricing of NZUs, is the inability to access and surrender Kyoto credits beyond 2015. This is the outcome of the NZ Government signalling in December 2012 that it was not prepared to commit to further Kyoto reductions. It is possible that the NZ Government will need to put in place some kind of fixed price regime for the post 2015 period to keep the forestry sector incentivised to plant sinks.

Willms: Ontario is falling behind its self-imposed targets to cut the greenhouse gas (GHG) emissions that are linked to global warming and climate change. To close the gap, the Ministry of the Environment is crafting a "made-in-Ontario" GHG emissions reduction program to address major emitters of carbon dioxide, methane, nitrous oxide and other GHGs. Targeted sectors would be expected to cut their current emissions by five per cent over the first five years of the program. Among the proposals on the table are several "flexible compliance options," including a market-based emissions trading system, offsets for projects undertaken by unregulated sectors (such as landfill methane capture and forestation projects), and support for efficiency investments in energy conservation and renewable energy. However, according to a recently released provincial discussion paper on the subject, "a carbon tax is not an approach that is being developed in Ontario." Meanwhile, we are watching developments in other provinces. For example Quebec has just adopted a cap and trade system as part of the Western Climate Initiative, with the first joint auction planned for August 2013. British Columbia has been imposing a "revenue neutral" carbon tax on GHG emissions since 2008. Alberta uses a combination of efficiency improvements, carbon off-set credits and payments into its Emissions Management Fund to promote reductions. Nova Scotia has imposed a hard cap on GHG emissions from electricity providers. Saskatchewan is collecting baseline emissions data to determine future reduction requirements and/or payments in its Technology Fund Corp. And the federal government is proceeding with a series of regulations to control and reduce emissions from the major GHG producing sectors, beginning with coal-fired electrical generating plants.

Whittaker: We are advising the Sustainable Energy Authority of Ireland and a number of Energy Services Companies on the development of standard and bespoke Energy Performance Contracts (EPC). No other Irish law firm can boast our level of experience and expertise in this emerging area. EPC offers a contractual solution to reduce emissions and energy costs, and usually consists of an arrangement between an energy user (typically a building owner) and the provider of energy efficiency measures, payment for which is subject to careful measurement and verification processes. EPC common in other jurisdictions, including Canada and the US, but is still in its infancy in Ireland. The opportunities for the water, agriculture, food, technology, public and private sectors are huge. The investment required to implement energy efficiency measures (e.g. purchasing plant and equipment) is recouped from the cost savings achieved in implementing such measures during the lifetime of the project. Funding for these projects typically comes from third parties or directly from the ESCO itself. This makes EPC an attractive method to building owners for financing and implementing energy efficiency improvements. EPC is driven by the need to increase energy and operational efficiencies, reduce costs and in some cases to meet new legal obligations. At an EU level, it is underpinned by Energy Efficiency in Buildings Regulations and Green Procurement rules. Ireland has endorses the European Union's policy on green public procurement, which provides for an EU indicative target of 50% green procurement, meaning that 50% of all public contracts should be procured using core green criteria.

5. Does your jurisdiction offer any incentives for organisations which meet compliance with environmental legislation?

Bromberg: While New Jersey has no incentives, as such, for organizations complying with environmental regulations, a number of attractive funding programs provide monies to entities that are redeveloping environmentally contaminated properties. In many instances these monies are outright grants as opposed to loans (although lower cost loans are also available). We have worked extensively with many companies and the various state agencies (such as the New Jersey Economic Development Authority and the NJDEP) to successfully analyze and maximize the financial incentives available to developers and redevelopers from among the various programs. By way of example, one such program offers reimbursement of up to 75% of qualifying remedial costs at Brownfield sites. Because there are a number of such programs, it is advisable to review them all in the context of the proposed project so as to factor them into the economic pro forma. This has been a great boon to developers working in New Jersey.

Price: The main "incentive" for compliance with environmental legislation is the penalties that can be imposed under the Resource Management Act for non-compliance. If an individual or organisation is prosecuted and found guilty of breaching environmental legislation, they may be convicted and (in the case of a real person) receive a criminal record. The penalty on conviction can be a fine and/or imprisonment (in the case of an individual), and in some instances clean-up costs. The current maximums are 2 years imprisonment or a $300,000 fine for a natural person, and a $600,000 fine for other bodies (including companies). If the offence is a continuing one, a further fine may be imposed of $10,000 for every day or part of a day during which the offence continues. In addition, the RMA provides councils with powers to investigate possible breaches of the RMA, and to issue abatement notices or apply to the Environment Court for enforcement orders to address such breaches. There are no "positive" incentives for environmental compliance beyond what the private sector offers. For example, insurers may reduce premiums for companies obtaining ISO 14000 accreditation.

Willms: Ontario is implementing a permit-by-rule process to minimize bureaucratic delay and fast track environmental approvals in a growing number of industry sectors for projects that are considered "low risk." However, the province can suspend, revoke or refuse to issue an Environmental Compliance Approval if the past conduct of the applicant (or the directors and officers of a corporation) "affords reasonable grounds to believe that the person will not engage in the activity in accordance with the [Environmental Protection] Act." Similarly, under the proposed amendments to the federal Navigable Waters Protection Act, the Minister can refuse to issue an approval if that refusal is "in the public interest, including by reason of the record of compliance of the owner under this Act." This follows the recent trend, both federally and in Ontario, with regulators amending the enforcement provisions of their primary environmental legislation to increase the fines and other penalties that may be imposed on repeat offenders. The courts are also being given greater latitude in imposing much tougher sentences, including jail terms, on companies and their officers that have poor compliance records. On the other hand, an Environmental Penalty Order in Ontario can be reduced by up to 35 per cent if there was a qualifying environmental management system in place at the time of the violation.

Gerungan: Yes. In general, the incentives provided include exemptions from or reductions in corporate income tax, subsidies, and rewards for good environmental protection and management. The Environment Ministry provides incentives to companies which apply eco-friendly principles in their business activities, such as leniency in acquiring the required licenses, and tax and customs facilities for exporting or importing eco-friendly goods. Incentives provided by the Forestry Ministry to companies that rehabilitate forests or lands include provision of land or facilities and infrastructure. The Government also provides national power efficiency awards and appreciations to companies to encourage efficient energy consumption in their business operations.

Whittaker: The EPA, Enterprise Ireland and IDA Ireland, the Sustainable Energy Authority of Ireland has compiled a guide for business on green enterprise supports called 'Developing a Green Enterprise'. This guide provides information on where businesses can go for State agency assistance and support in relation to water conservation, waste prevention, energy efficiency and clean technology.

The Rural Environment Protection Scheme (REPS) was originally designed to reward Farmers for carrying out their farming activities in an environmentally friendly manner and to bring about environmental improvement on existing farms. More recently, our client the Irish Food Board has introduced a Sustainability Charter for Irish food and drink manufacturers, with associated supports to underpin the 'Origin Green' brand. Quite a number of environmental grants and sustainability funds are also available from the EU. The Irish Government also provides supports for renewable energy which provides alternatives to fossil fuels.

6. Are there any natural resources being factored out?

Bromberg: I am not sure what this means. But, let me take an opportunity to comment on the issue of natural resource damages ("NRD"). For many years, NRD damages were a huge issue in environmental law in the US, generating significant funds for the state and federal environmental agencies and costing companies millions of dollars. In recent times, however, we are seeing less of an emphasis on NRD damages, except in the largest and most egregious instances. We are also seeing a shift from entirely monetary compensation in such cases to a mix of monetary compensation and environmentally advantageous projects such as the creation of wetlands, dedication of property to land trusts, and the like.

Gerungan: Yes. Under the Forestry Law, all forest areas in Indonesia including the natural resources in there are under the authority of the State and must be used for the maximum benefit of the people. In protected forest areas, open-pit mining is prohibited. Quite recently, given the decrease in fossil fuel and the limited ground water reserves, the Government has issued regulations requiring everyone to save energy (particularly, subsidized oil-fuel) and ground water. The Government is also keen to replace oil fuel with renewable energy and to limit coal production quotas, exploitation and export in an effort to conserve its resources.

7. What eco-friendly products or innovative technology can you see taking 2013 by storm?

Bromberg: We are seeing increasingly positive results coming from technologies such as In Situ Thermal Desorption that essentially heat up contaminated soil/groundwater for the purpose of volatilizing-off the contaminants. These technologies are becoming increasingly used and increasingly more effective and surgical in their application (i.e., targeting specific and carefully delineated areas of a site). Unfortunately, this technology requires significant energy, which is a drawback, not only in terms of cost but also in terms of the environment and the carbon footprint for the remediation. Indeed, I firmly believe that we are fast approaching a significant turning point in the treatment of contaminated soil and water, examining that carbon footprint and other consequences of these "fixes" that we have been applying over the last several decades. That I believe to be the biggest challenge to environmental law going forward. We will need to find ways to use renewable energy sources in remedial programs more effectively. We are making a start, for example, BY partnering solar panels on capped waste sites but have a long way to go.

Gerungan: The Government is promoting, among others, agriculture-based goods, green and clean energy development and energy diversification to increase the use of new and renewable energy (e.g. coal bed methane, geothermal and bioenergy). Companies are encouraged to apply efficient energy consumption and eco-friendly principles in their operations. Thus, goods which are reusable, recyclable and bio degradable, and technology which consumes less energy, uses renewable energy (e.g. solar or wind power), and reduces emission level and pollution are highly likely to be successful in 2013. These include water-based chemical products, organic consumer goods, bio-fuel or electric vehicles, and electric power plant using renewable energy resources (e.g. geothermal).

Kelly: A dynamic new technology company in Atlanta is poised to capitalize on consumer and business demand for "greener" or more energy-efficient electronics. This company sells a credit card sized technology chip that helps improve the life span of large electronic products like televisions, washers/dryers, refrigerators, etc. The technology helps electronic equipment manufacturers maximize power efficiency while protecting against common voltage sags, brownouts, over-voltage conditions, and power outages that silently damage most of our large electronic products every day. The irony is that electronics are becoming more sophisticated and more efficient, but the power grid running these products remains relatively antiquated and inefficient by comparison. The market for bridging this divide with a card-sized technology chip is virtually unlimited world-wide.

8. The concerns about possible pollution to ground-water by the chemicals in hydraulic fracturing ("fracking") fluids, and the leakage of methane, a gas that aggravated global warming have resulted in France and South Africa slapping a moratorium on fracking. Are the concerns justified?

Price: New Zealand has a history of fracking. It has been undertaken in the Taranaki Region for more than 23 years. In 2012, as a result of public concern at the increasing use of fracking, often by overseas companies, New Zealand's Parliamentary Commissioner for the Environment undertook an investigation into fracking and its potential effects. This was in response to requests from MPs from both sides of the House, from councils, and from members of the public. The PCE's interim conclusion, released in November 2012, is that the environmental risks associated with fracking can be managed effectively provided, to quote the Royal Society of London, "operational best practices are implemented and enforced through regulation." However, the report also states that at this stage, the PCE cannot be confident that operational best practices are actually being implemented and enforced in New Zealand. The investigation has therefore entered a second phase, examining how well the environmental risks associated with fracking are actually regulated and monitored. The results of this further investigation are expected later in 2013. The PCE has, however, concluded that a nation-wide moratorium on fracking is not presently justified.

Willms: While hydraulic fracturing of oil reserves has been practiced for nearly 60 years in Canada, there have been serious concerns raised over the last few years about the environmental impacts of "fracking" our extensive reserves of shale gas in Western Canada, Ontario, Quebec, Nova Scotia and New Brunswick. These range from concerns about the large amounts of fresh water needed in traditional fracking, to the chemical compounds used in the fracking liquids, the release of fugitive methane emissions, the contamination of groundwater supplies by both the fracking fluids and the naturally occurring contaminants released by the process, practical worries about increased traffic, dust and noise, and even an increase in seismic activity. While agencies in Canada and the U.S. investigate the validity of these concerns, regulators in both Alberta and New Brunswick have developed more detailed technical standards for hydraulic fracturing. These could be implemented on a well-by-well or a drilling pad-by-pad basis through the approvals process to reduce the risk of contamination, require the recovery and proper treatment/disposal of wastewaters, and ensure community concerns are mitigated. We expect that reserves in Ontario and Quebec will not be developed until similar safeguards are implemented and environmental concerns addressed.

Whittaker: The Irish EPA is currently undertaking a consultation process and it is recognised that further studies are required before the effects of the proposed type of hydraulic fracturing on the Irish environment are fully understood. It is commonly accepted that the geological complexity found in Ireland and North West Europe makes it particularly hard to predict potential seismic or groundwater impacts.

It is believed that there are significant deposits of shale gas located in parts of Ireland, and two companies are currently seeking consent to carry out exploratory drilling to ascertain the extent of the shale gas reserves. Significant opposition has arisen against the proposals, and a number of local authority areas have implemented a 'ban', even on exploratory drilling. These decisions are being taken at a local rather than a national level. At Philip Lee, we advised a local authority on the environmental law framework which controls fracking, and that a moratorium was not only ill advised from a policy perspective, it was also unnecessary from a legal perspective given the level of protection afforded by EU environmental law.

Kelly: Those concerns are not grounded in the science and engineering of hydraulic fracturing. The industry operates under multiple layers of strong regulation designed to protect groundwater, using state-of-the-art, closed-loop systems and redundant layers of cement and steel. And the industry's track record speaks for itself: more than a million wells safely drilled in the US alone. With respect to global warming, America's increased use of natural gas has led to the lowest level of GHG emissions in a generation. And with "green completions" and other technical innovations, the industry is shrinking the already-small GHG footprint of natural gas.

Tucker: On 29 April 2011 the South African Minister of Mineral Resources announced that the processing of applications to explore the Karoo for gas would be suspended pending an investigation by a government task team of the implications of shale gas exploration and production using hydraulic fracturing in the Karoo Basin.

On 18 September 2012 government task team released the findings of its investigation entitled "Report on [the] Investigation of Hydraulic Fracturing in the Karoo Basin of South Africa" ("the Fracking Report"). The Fracking Report acknowledges the paucity of reliable information available on the implications of shale gas exploration and production in the Karoo but argues that the information necessary to make informed decisions about the risks and benefits can only be obtained by allowing limited and strictly controlled exploration operations such as drilling, sampling and testing of boreholes (but excluding hydraulic fracturing) and recommends that such limited operations should be authorised.

However, the Minister decided, instead, to prepare regulations governing hydraulic fracturing, based on international best practice, prior to the processing of any new or existing applications. These regulations are expected to be released for public comment in July 2013. We expect that they will cover similar aspects to other best practice regulations around the world such as the disclosure of the chemicals used in hydraulic fracturing, casing of wells, water use and waste water disposal.

Environmental groups have threatened legal action to set aside the grant of any rights to explore for shale gas in the Karoo Basin. It remains to be seen whether their concerns will be adequately addressed by the proposed regulations and the threat of litigation will be averted.

9. On the positive end of the scale, it is also believed that the shale gas boom could cut costs significantly for the chemical industry and ultimately benefit the apparel, electronics, machinery and other industries. How will this affect your national economy, and what affect will it have on a more global scale?

Whittaker: The Irish Government is, on balance, supportive of all private sector initiatives for securing additional sources of energy, including shale gas and offshore oil and gas. Concerns regarding the security of supply and Ireland's exposure to the escalating cost of imported oil and gas are real and it is recognised that they could adversely affect Ireland's competitiveness in a world economy. The impact that shale gas has had on the cost of energy in the US has not gone unnoticed in this jurisdiction, nor has the fact that the companies interested in Ireland, including Tamboran Resources, have estimated that some 4.4 trillion cubic feet of gas may be available in Ireland.

Kelly: Natural gas has already provided an enormous benefit to the American economy generally and to many communities that have long been struggling. You don't have to look further than places like West Virginia or Youngstown, Ohio—an old steel town that is experiencing a manufacturing renaissance due to the shale gas boom in the Mid-Atlantic. Meanwhile, factories are moving back from overseas and recent studies show that natural gas supports almost 3 million jobs nationwide. In current times of global energy instability, there are many benefits for the United States to have a strong source of domestic energy.

Tucker: South Africa may have a technically recoverable shale gas resource of 485 trillion cubic feet ("tcf") in the Karoo Basin, which is potentially the fifth largest resource of its kind in the world and the largest in Africa.

The South African Minister of Energy has acknowledged, even if one were to adopt a conservative estimate of the prospectivity of South Africa's shale gas reserves, it is apparent that, they are likely to be a "game changer" for the South African energy sector and are likely to feature more prominently in Integrated Resource Plan for Electricity 2010 – 2030 in the short to medium term when the resource is proven.

From an investor perspective it is notable that the remaining potentially prospective shale gas acreage is likely to be advertised and awarded through a competitive bidding round (whereas applications are generally processed on a first come first served basis).

10. What key trends do you expect to see over the coming year? In an ideal world what would you like to see implemented or changed?

Bromberg: As noted above, I believe that over the coming year we will begin to start evaluating how and why we are remediating contamination in the soil and groundwater, from both risk/benefit and environmental perspectives. As energy continues to be a consideration, we must look at how and why we may be addressing these issues. While private industry can certainly evaluate these issues, I believe that the environmental agencies of the state and federal government must take the lead in identifying what must be addressed, what "contaminants" we might be able to leave in the soil and groundwater, and in stimulating the private sector to innovate.

Whittaker: A comprehensive licensing regime for the offshore and marine environment, which effectively and efficiently regulates activities including offshore oil and gas, offshore wind and ocean energy, deep sea fish farming, fisheries protection, marine leisure activities, and coastal zone management. Currently Ireland's marine environment is not adequately regulated from an environmental perspective, but certain significant EU legislation is due to be fully implemented including the Marine Strategy Directive and Regulations on Marine Spatial Planning. Regulatory uncertainty stymies development and innovation.

We have also recently published a Climate Change Bill and the Irish Government has re-stated its commitment to using Green Procurement as a significant driver towards change, and the Energy Efficiency and End Use Directive is also going to lead to greater use of EPC by public and private building and facility owners.

On 27 March 2013 the Government announced changes to the financial supports for renewable wind energy generation, which provides greater certainty to the wind sector and which is likely to see an increased level of investment in onshore wind. The highest levels of 'wind to the grid' were also reported in March 2013. Ireland has significant wind resources, some of the highest in Europe, and currently two companies are proposing to construct direct power lines to export Irish renewable energy direct to the UK national grid. Philip Lee is act-

ing for one of these companies.

Kelly: California's Green Chemistry Program enacted by the California Department of Toxic Substances Control (DTSC) was designed to force companies to use chemistry to reduce or eliminate hazardous material components in their manufacturing process. Its scope is massive and applies to all vendors in the consumer product supply chain -- manufacturer, importer, retailer, etc. I expect to see more state governments following California's green chemistry lead (a handful of US states already have done just that). In an ideal world, companies would prefer some level of consistency between California, other states and the federal government regarding those substances now regulated as "chemicals of concern" and would prefer that uniform safe threshold limits for these substances be based on independent science and medicine, rather than politics.

Tucker: The legal regime for dealing with contaminated land, particularly historically contaminated land on which ongoing industrial operations are being conducted, urgently needs regulatory certainty. This impacts on a number of areas, for example:

• The actual reporting and intervention levels for contamination are not presently certain and these need to be established for an appropriate regime to operate;

• The contaminated land provisions in the Waste Act which await commencement are unclear and regulations and guidelines are needed to operationalise these

• In the licensing context the authorities frequently require water quality and other standards for historically contaminated land that are impossible for the operation to comply with.

• Presently there is uncertainty in the Waste Management context regarding when clean up of contaminated land triggers the need for a waste management licence and there is uncertainty regarding the manner in which the authorities should be involved in clean up of minor spills on land.

These are matters which the Department of Environmental Affairs is working on but real progress on these matters in the current year would be welcomed