

JANUARY 2010

Managing water strategically: An interview with the CEO of Rio Tinto

Tom Albanese explains how Rio Tinto is adapting its operations to prepare for a future when climate change may make the world's dry parts drier and wet parts wetter.

Water management has become a strategic issue for Rio Tinto, one of the world's largest mining groups, whose operations tend to be located in areas that are either arid or plagued by torrential rains. In this video interview, CEO Tom Albanese discusses the economics of water, the role of climate change, and how Rio Tinto is adapting its operations and seeking to make water management a source of advantage. Bill Javetski, an editor with the McKinsey Publishing group, conducted the interview with Tom Albanese in Durham, North Carolina.

The Quarterly: *It's now well established that global population growth and economic growth are putting a strain on water resources around the world. What are the challenges that this poses to Rio Tinto?*

Tom Albanese: For Rio Tinto, water has long been a strategic issue, predominantly around the fact that our operations do tend to be located in arid locations. Our processes to extract copper, iron ore—the businesses that we're in—do tend to consume a lot of water. So, we have to develop long-term, sustainable approaches that can provide us the water we need, but also in a way which meets the wide range of stakeholder expectations in many locations, which are predominantly quite arid.

Back in 1999, about ten years ago, we first put in place our first corporate principles for water management on a global basis. And that was pretty much driven around the components of water scarcity, particularly for our operations in arid locations. For example, operations that might be in the high desert in Chile or in desert locations in Australia.

But we should also recognize that when we think about water, it's not only locations that have too *little* water. It may also be locations that have too *much* water, or that we have too much water in a very short period of time.

The Quarterly: *What are the components of your strategy for dealing with scarcity of water resources?*

Tom Albanese: What we find—and we have the same issue with carbon—is that water conservation within an existing facility, to some extent, has some limitations on how much you can actually do, because certain processes just use a lot of water.

Looking forward, probably the most important part of our strategy would be ensuring that future facilities that we build or future mines that we develop are actually designed from the very beginning with the principles of water conservation.

The Quarterly: *How do you think about the economics of water?*

Tom Albanese: Ultimately, there will need to be some pricing of water, some way to make the appropriate capital tradeoffs for water efficiencies. In many locations, it happens by

itself. For example, we're in a joint venture in northern Chile, which is a very dry location, at Escandida. Any incremental water has to be, essentially, through desalination. So, we have one of the larger desalination facilities in South America, which we just constructed over the past two years. It is a large energy consumer. So again, water links back with energy, because as you're accessing additional water, you're beginning to access the scarce energy that's available. But essentially, we're taking seawater, which we could not use directly in our processes, converting it to fresh water, and then using that within the facility. That by itself creates a pricing for that water. It's the price of the energy, it's the price of the desalination, and the price of the pumping; that by itself will lead to that mine having greater incentive to create water conservation going forward in the future. And it is a good example where efficient-market mechanisms, once they're in place, will contribute to water conservation.

The Quarterly: *What are the overlaps between the water scarcity issue and the broader issue of climate change and carbon?*

Tom Albanese: One of the overlays between carbon and water would be the general assumption, which we would embrace, that with climate change, dry parts of the world will get drier and wet parts of the world will get wetter. Which means for us that water management in the dry locations—and water conservation—will be increasingly important. But those other locations in the world where you may have too much water, and you have to manage the water management in large rainfalls, or large storm events—those storm events will get bigger. They will get more violent, and they will put more rain and more water into our mine systems and our mine property in very short, intense periods of time. So, we will have to adapt our operations for drier areas getting drier and wetter areas getting wetter.

The Quarterly: *How much of an investment does this represent for a company of Rio Tinto's size?*

Tom Albanese: Being that water is a strategic constraint, we will see it having an effect on the capital costs of a project. So for example, if we have ore stockpiles or leaching pads in wet areas, we will have to spend more money for water-containment systems. When we say spending more money, it's not just a few million dollars. It could be hundreds of millions of dollars more for water management in anticipation of what would've been called a 100-year rain event, happening every 4 or 5 years.

The Quarterly: *Is your investment in resources to handle water scarcity a cost of doing business? Or is there a return on investment that you see from this?*

Tom Albanese: I think it's an enabler to doing business. I think that, again, having the ability to manage responsibly and properly in areas of water scarcity is an enabler to being in that operation in the first place. Having the ability to manage excessive water, particularly if it's coming in extreme storm events, is also an enabler. I've had some engineering companies come to me and say, "You know, you've been poaching our people." And I said, "I didn't know about that." They said, "Yes, they heard about your watermanagement programs in Australia, and they're really excited to be working with them." So, I do think that, for those water-management specialists, we can create an attractive employment proposition. And that can actually allow us to build greater competencies as we go forward. I think the second thing about how this creates a business advantage, as I said earlier, [is that] this is an enabler. A resource that otherwise may be tough to get permitted, tough to get approved, we may have competitive advantages in creating the enabling characteristics for those permitting it, or those stakeholder approvals.

And again, part of our objective is to be in those best-quality ore bodies anywhere in the world. And if we have a strategic advantage and are attracting ourselves to it because of our water management capabilities, I think that's something that creates business value.

The Quarterly: *You work very closely at the local and regional level at your mining sites. What is the best level at which this issue should be managed—global, local, public, private?*

Tom Albanese: We have to recognize that nearby stakeholders have a completely different set of issues, a different perspective, and a different time frame than global stakeholders. So, we've got to address them all. And let's just focus on, say, local stakeholder issues. What we see is that our water strategy has to very much be closely linked with our strategy on biodiversity. Over the past several decades, the combination of overpopulation and poverty has led to about 85 percent of all the forests in Madagascar being degraded, in one sense or another. So as a mining company coming in, immediately we're going to be put under this specter and the spotlight of that degradation of forests, which took place over the past prior decades. And environmentalists mainly outside of Madagascar are saying, "What are you going to do about that?"

Well, what can we do about something that's happened over the past several decades? We can't ignore it, but we can't fix it overnight. So, things that we can do include, for example, sponsoring scientific surveys of biodiversity, creation of probably what is the largest seed bank in Madagascar of unique species, and having award-winning work in partnership with leading scientists in this area. And again, I think I can be quite proud in saying that we have made a positive net difference in biodiversity in Madagascar as a consequence of our economic development there.