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Title	*Beyond the Bottom Billion*
Description	Prof. Paul Collier discusses the contradiction of resource rich countries with troubled economies, including how the harnessing of natural assets can go wrong, and what can be done to ensure their correct handling.
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Paul Collier Well thank you for devoting your Sunday morning to listening to me. Can you hear me? Okay.

All the work that I write about in my books is done in a research centre that's in the department in Oxford. The Centre for the Study of African Economies. And we've built it up, gradually year by year over a long time.

All academics is now obsessively rated. Not just nationally but internationally. There's international rating for anything to do with economics called RePEc and on Africa we are the world number one. So…

Now and the strength of the centre is its young people, its doctoral students, its postdocs, that's where the energy, the intelligence, the enthusiasm is really. And we've been able to harness that and then I can try and distil that in the books that I write.

Now, what I'm going to talk to you about today, 'Beyond the Bottom Billion', is actually one stage further beyond than Jim said, because it's true the book 'Beyond the Bottom Billion' was Wars, Guns and Votes. But one of the wonderful developments in the Department of Economics over the last three years has been that we've managed to poach from The London School of Economics one of its top Economics Professors, Tony Venables, who has come and joined us in the department and works very closely with me. He's got a sister centre on resource rich economies. And a lot of the most troubled economies in the world are places which in a way shouldn't be troubled. They're resource rich and yet. And so over the last couple of years Tony and I have really brought our research forces together to try and study how could things be different?

Over the summer I distilled that into a third book, which is called 'The Plundered Planet' and is coming out with Penguin and Oxford University Press in April.

And so I thought actually I would talk to you about that, because this really is new. The talk I am going to give to you, the first time I gave it was two weeks ago and I gave it in Sierra Leone. Sierra Leone, a resource rich country. In fact as I was there they discovered oil. This is a country that for years has had diamonds. And as I was there they discovered oil.

Now not many economists visit Sierra Leone and so they were sufficiently intrigued that the President summoned together himself, the Vice President, his entire Cabinet and the top sixty officials in the country and gave me an hour to give them the lecture I am going to give you.

So that's the sort of reach that Oxford now has. I started by congratulating them on having discovered oil. And I said to them "With diamonds and oil you could be Angola." (Laughter)

A couple of years ago the Angolan government had me do Angola to lecture and I said "The best investment you can make is to buy 30 airline tickets for the Cabinet." Actually two sets of airline tickets. Because you can see your future. You can see Angola in another quarter century. And one set of airline tickets will take you to Kuala Lumpur. Malaysia could be your future. And the other set will take you to Lagos. And let me tell you, at the moment you're booked on a plane for Lagos. After I said that they invited in the government of Malaysia to come and help them.

Now let's get down to the economics in all this. Why is it that the harnessing of natural assets for development goes so badly wrong and what would it take for it to go right?

And to my mind the essential feature is that it's what economists call a 'weakest link' problem. There's a chain of decisions. And I'm going to describe the four key decision points today.

And if any link in that chain breaks, the chain breaks. And there are four links in it. And they're all quite tricky. And so usually one or other, sometimes all of these links breaks.

So let's go through, there's no substitute for the long march of going through the chain. And the first link in the chain of harnessing natural assets for prosperity, the first link in the chain is find your natural assets. It's a discovery process.

Now I'm going to tell you that that usually goes wrong. But to convince you I'm going to get you to – I realise this is a Sunday morning so it's a bit cruel, but I'm going to get you to think. And here's the challenge. This is a little bit of research that one of my bright young people dredged up.

If you take the average kilometre, square kilometre, in the rich countries, the OECD, the value of subsoil assets in that square kilometre is about $125,000. So if this was the average square kilometre and we dug down, we'd expect to find $125,000 of subsoil assets.

And now let's take that same statistic, the average square kilometre for Africa. And I'm going to ask you to vote on it could be less, it could be more. Who thinks it's less? Who thinks it's more?

I'll warn you it's not the first time I've done this, so I've set you up. It's the minority who's right. It's less. In fact it's radically less. It's not $125,000, it's about $23,000.

Now what's gone on. Why? Because they're both huge slices out of the worlds surface. If we just think statistically, the statistical chance of taking two huge slices of the world's surface, almost random slices, and have such a big difference in the average, that's pretty unlikely.

So what's gone on? There's two possibilities. One is, which is a possibility which cannot be discounted, given history, is that God has been really unkind to Africa. (Laughter) And the other possibility is that, of course the figures I've given you are of known subsoil assets. How could it be otherwise. I mean I can't give you the figures for unknown subsoil assets. You know they're kind of unknown.

So the alternative explanation to God being unkind is that something has gone wrong with the discovery process. That there's a lot down there yet to be discovered. Now that has two powerful implications.

One is the reason why most of you put your hands up for more, is that we think, and in a sense quite rightly, that Africa's a resource rich continent. It is resource rich relative to all its other assets. If you compare subsoil assets, known subsoil assets compared with invested capital. Subsoil assets are far more important to Africa than they are to us. Because they've so little invested capital. This is their lifeline, subsoil assets.

So one implication is multiplied by five what we know they've got, to have some idea of what they've probably got. In fact maybe more than five because the OECD has been digging out its subsoil assets for 200 years. Africa has only just started. So this tells you that subsoil assets could be huge for Africa. They're already the biggest asset. Multiply by five or more.

But the second thing, and the thing I want to talk a little bit about now, is it tells you something has gone drastically wrong with the discovery process. Which is an economic phenomenon. It's a matter of incentives and rights, that have been so mis-designed that there hasn't been enough discovery. By a large order of magnitude.

Why? One problem is the guy who thought up this bit of theory that I'm just going to pull off the shelf, got a Nobel Prize for it. The theory is known as 'The Time Consistency Problem'. And 'The Time Consistency Problem' arises when a say a government has an incentive to say what to promise one thing and then if somebody acts on that promise and acts in a way that is irreversible, the government then has an incentive to break the promise.

Now discovery is like that because discovery requires a big investment in search. You've got to drill. And if the probabilities are low, suppose you just say well the government of Sierra Leone, I've no resources to go and search, so I get in your company sir and you go and I say to you "Okay here's the deal. If you find something here's the tax regime. If you don't find it too bad." And suppose there's a 10% probability you will find $1billion and a 90% probability you'll find nothing, the mathematical expectation of that is $100million. Would you sir pay $100 million for that, if I'm the government of Sierra Leone? No. Because if you don't find anything you've lost the cost of search. If you find something then either I as a government of Sierra Leone or some coup leader behind me is going to say "This guy only paid $50 million and he's found $1 billion, forget that." That's the time consistency problem. That the government doesn't have a capacity to lock itself in to a deal which subsequently will turn out to be so – it could turn out to be so disadvantageous for him.

One solution to that is to narrow the odds of search. And the way we can do that is to improve the quality of public information. So that the first cut of prospecting really needs to be public. There needs to be some public spending to generate enough geological information that the odds narrow from one to ten. If they odds were 50/50 we'd have less of a time consistency problem. If we pushed it all the way and really found something and then sold the rights, there wouldn't be a time consistency problem.

So one of the conclusions that Tony and I have come to is that there is a need to invest in public geological information before the rights to prospecting are sold. You can't do very expensive geological information but you can do some.

Last week I was in Zambia and I talked to them, the government's geological department. It said "Do you know we're still using the geological information from the 1950s that's the most recent we've got. That's the most recent public information we've got."

And is there a prospecting problem in Zambia. Nobody has ever prospected further than ten miles from a major road. So there's tons of stuff there that they don't know about and if they just sell the rights to prospecting blind they will harness very little of the assets, of the true value.

So the first cut as it were of thinking about this problem, the first link in the chain, is get some public information on geology, before you do anything else.

We've been working with the International Monetary Fund tax people to try to get that as a concept. And we're just doing work for the World Trade Organisation, which has asked us to advise it on whether it could have a role in contract enforcement. And our point there is yes. The World Trade Organisation helps to lock in contracts but there's limits. And it can't be used to lock in contracts that are really fundamentally disadvantageous to a government.

And so step one has to be in my mind, get this public information on geology.

Let's turn to the second link in the chain. So suppose we've actually done some discovery process. Step two is to try and capture the revenues or a significant amount of the revenues from exploitation for the government, for the society.

Natural assets are distinctive in having what's called 'rents' attached to them. By 'rents' economists mean returns that are not returns to either investment or effort. They're just there. And who should rents belong to, the rents to natural assets? The people in the society. And so the government should be there on behalf of the people in the society, capturing those rents.

That's a matter for the tax system. In many of these countries the tax system goes disastrously wrong. In Zambia I learnt that they've just lived through. Does anybody know what Zambia exports? Copper, yes.

They've just lived through the biggest copper boom in the world's history. They managed to capture 0.6% of GDP as tax revenue. 0.6%, practically nothing right. Of something around $2 billion of copper exports, they managed to $24 million last year. So something radically, radically mis-designed in the tax system.

They've just re-negotiated it and they've again got it wrong. They've again got it wrong.

And the nature of how to get it wrong, in the process of negotiation there are various various impediments. One is what economists call an agency problem, which is a polite word for something less polite. Corruption.

The Minister of natural resources is the agent of the society. And society often has rather some difficulties controlling what he does. So it's easy for the minister to abuse his position of agency. And do something which is good for the minister and good for the company but bad for the society. So that's an agency problem.

Beyond that there's what economists call an asymmetric information problem. Which is a fancy way of saying "If you don't understand that, you're an example of it." Asymmetric information problem in that case would mean "I know something you don't."

Now the asymmetric information problem in resource extraction is particularly acute because you've got companies specialised in resource extraction, negotiating with governments which frankly haven't a clue.

There's a simple economic technique which economists at Oxford have done more work on than I think any other place on earth and that's auctions. And I think I'm right Jim in saying that the example I'm going to give was actually a team of Oxford economists who saved the day. Because the example I'm going to give is not – I've used this in Africa but it's not an African example. It's an example of the use, just in time, of an auction by the British Treasury.

Now the British Treasury at the time was under the wise guardianship of Chancellor Brown, and the rights to be sold were not actually resource extraction rights. We do auction those. They were the third generation mobile phone network. Does anybody remember what happened?

The Treasury in its infinite wisdom, worked out that the value of these rights was going to be £2 billion. And so negotiated with a telecoms company to sell them for £2 billion. And just in time, I think I'm right Jim in saying it was a team from Oxford, got to him and said "You're doing it wrong."

And anyway for the only time in his known life, he actually listened. And auctioned them, and we got £20 billion.

So I say to my friends in Africa, if the British Treasury with its infinite wisdom, under the wise guardianship blah blah, could be out by a factor of ten, what's your Treasury going to be out by?

They need to auction these mineral rights. At the moment they don't. The genius of auctions is very simple. It's that it doesn't matter that the government doesn't know what it's doing. If you auction, and as long as you've got as bidders, rival companies with good information, that competition between companies with good information, inadvertently reveals the true value.

Now it's not quite as simple as that. This is where the auction theories really come into their own. They can tell us "Well it's not a good idea if you only have two bidding, they'll probably form a

cartel. It's not a good idea if you have twenty bidding. They won't take it seriously, they'll all bid low.

So there's an optimal number of bidders. And it gets fancier. Auction theory is complicated. But we can at least point an African government in the direction of a body of knowledge and say "This is how to get round the asymmetric information problem."

So we've done agency. We've talked about time consistency before and now we've talked about the auction. And the auctions as a way around that.

So let me move from the second link in the chain, which is capture. Suppose we've captured, which is quite a big suppose. So we've discovered and we've captured. Then the third link in the chain is going to be what we do with the revenues.

So the first two links suppose hold. Got the discovery process right. We've got public geological information, then we've auctioned it off.

Oh I'll give you one little extra – I knew there was one little twist on the tax story missing. And it's this. That the IMF advice on this is, you see a lot of IMF economists have done text book economics, but often they did their text book economics a little while ago. And so what you learn in text book economics, for the taxation of rents is that what you need is what's called an excess profits tax. Excess, because that's what the rents are. They are that component of profits which isn't a return on either capital or risk.

Great, so you have a normal rate of tax on normal profits and an excess tax of, maybe you can do it in theory, you can do it at 99% on the excess profits. Great. That's what the Zambians have just done. And why is that wrong?

It goes back to our asymmetric information problem, which is that profits are not something which is instantly observable. They're observable in the sense that the company will show you what profits are and show you the books. If we were sociologists we would be talking about the social construction of reality. And thank God we're not, but anyway. (Laughter)

But the profit accounts are the social construction of unreality in these environments. Because the company knows vastly more than the government. Basically the government has typically very little capacity to audit or anything. Even in Nigeria the oil companies for years were completely unaudited by the government. They just sent in cheques saying "This is what we owe." When they finally actually my friend Ngozi Okonjo-Iweala became Finance Minister and said "Well lets actually check on it." And they hired an audit company, they got another $300 million, you know just like that.

So the alternative to this excess profits tax is something much simpler. Which is not first best if only you could observe profits. But the something simpler is called a royalty system. Where you tax something which is much harder to disguise, namely the gross revenues. What's coming out of the ground and being sold. That's harder to disguise because the physical quantities have to be reported and there's a world price. And so if you grossly under report the world price that can be spotted fairly easily.

So there's a raging ideological debate in economics between the purists who want excess profits taxes and the kind of people like me who just think "Well face reality." Of course it's so much harder to game a royalty system. The disadvantages, and there are disadvantages, are outweighed by the advantages.

The Chileans, who are the other big copper exporting economy. And the Chileans are now regarded as sort of the world experts in how to run a sort of developing government. They tried an excess profits tax for years. And the copper companies during this period were expanding like mad. But you know what, they never made any taxable profits. (Laughter)

And so eventually the Chileans gave up on that and switched to the royalty. Just in time for the copper boom. So my figuring is this is why the Zambians not only got only 0.6% of GDP from

the copper boom, but why that's what's going to happen in the next two or three years, unless they change.

So what I've tried to convince you is that an awful lot has gone wrong with the discovery process, link one. An awful lot has gone wrong with the taxation process, link two. Things which economics could put right. If we just take off the shelf the economic theories which my colleagues are generating and apply them to an African context, we can make a big difference. That's what the Centre of the Study of African Economies has been all about. Trying to apply intelligent modern theory to these situations.

Let's look at link three then, which is what to do with the money. And I'm going to make two distinctions here. One is between consumption on the one hand and savings on the other. You can either consume or save. And then I'm going to look at what you do with those savings. And you can either save that money abroad or invest it in the country. So I'm going to take these two together.

And let's first take the consumption versus not consuming. Why are natural assets or the revenues from natural assets distinctive? And they're distinctive because of one very fundamental feature, they're not sustainable. Copper is depleting. Oil is depleting. And so the extraction of natural assets is the removal of an asset. It's selling an asset. And analytically if we're selling an asset we need to have some sort of broadly offsetting replacement. Asset per asset.

It can make a lot of sense to sell the assets under the ground, because the rate of return on the assets you acquire may be much higher than the rate of return on the assets you sell. So it can be a good idea. But you still basically got to replace an asset with another asset.

That's quite unlike ordinary taxation, which is sustainable forever. And so ordinary taxation you don't have to have a high savings rate. But taxation out of national assets you do have to have a high savings rate.

Well, do they have a high savings rate? The best work on this is a team under Nobel Laureate Ken Arrow and I'm going to use the work by Partha Dasgupta that's slightly adapted as part of that work. And they constructed a concept known as comprehensive wealth. Which is the wealth of a country, both its natural assets and its physical assets and that ugly concept human capital, which is education.

So comprehensive wealth. And they then build a time series, and here's the figures for Africa. They've got data from 1970 to 2000. So a thirty year period. And during that thirty year period comprehensive wealth per person in Africa halved. Halved. So in effect the natural assets were being taken out of the ground but not offset. That to my mind is plunder. I've called my book 'The Plunder Planet' and it embraces two distinct types of plunder.

The one that springs to your mind from the word plunder is if the few steal what is the property of the many. And my God we've seen that in Africa. Natural assets that are looted by the few rather than benefiting the many.

But there's a second concept of plunder. Because natural assets belong not just to the current generation but to all generations. In fact I think rightly considered, natural assets have no natural owners and therefore by default they belong to everybody present and future. And so the second form of plunder is where natural assets are used to benefit the present generation at the expense of all future generations.

One of my friends in Zambia said to me "What will our children say about us when the copper runs out?" In other words he fully recognised the obligation not to plunder the future.

Kuwait, a totally different culture right. Zambia culture is different as night and day from modern Britain. Kuwait is different again. And yet what has Kuwait done? They've set up a future generations fund so that as they deplete the oil they build up a stock of financial assets.

So I think this concept of, what I call custody, a responsibility to the future, not a responsibility to preserve natural assets but a responsibility to preserve the value of natural assets, an economic concept. I think that is a pretty deep concept ethically which is common to a lot of very different cultures.

So if we go back to this consumption versus savings decision. What should be happening is a pretty high savings rate. Some consumption is sustainable but it's certainly sort of less than 50% of the revenues.

One of the things that Tony Venables and I have done is work out the full sort of rigorous economics of what sort of proportions make sense. And I'm not going to go through that now.

So this third link has got two pieces to it. One is savings versus consumption and then the other piece is suppose you save it, what do you do with it? Save it abroad? Invest it at home? Now during the commodity booms of the last three or four years, some governments of low income countries did save. A team of my friends temporarily had charge of Nigerian economic policy. And they'd seen the tragic mess of the first oil boom in Nigeria. And they knew never again.

During the first oil boom instead of saving out of that oil revenue, the Nigerian government back in the 1970s had done the opposite. They'd actually borrowed and thrown a magnificent consumption party. Now if you talk to a lot of ordinary Nigerians they look back upon that time as the golden time. And they think that that was the time when government was really good. And of course it's very hard for ordinary people if they're not furnished with the right analytic building blocks. It's very hard for them to interpret what's going on.

That was the time when Nigerians had full bellies. But they had full bellies in a totally unsustainable strategy. Which then crashed when the oil price crashed. And Nigeria then spent ten years sweeping up the broken glass from the party.

That period of sweeping up the broken glass was called structural adjustment and so every Nigerian knows that the World Bank ruined Nigeria, you know. And Africa still needs the sort of – something like the Financial Times that actually provides a medium of sort of intelligent, informed, economic opinion. And it hasn't got it.

So we've now got to this stage that we've saved the money, just like my friends in Nigeria did this second time around. They accumulated $70 billion from the recent oil boom. I have to say that is more than the British Foreign Exchange Reserves accumulated by my good friend Gordon Brown. So he might have usefully taken some lessons from the Nigerians. We'd have been less in a mess now, but anyway.

So what do you do with that $70 billion? You've saved it, what do you do with it?

Now there's one model out there and it's the Norwegian model of a prudent resource rich economy. And you know what there are sufficient prudent finance ministers from developing countries, that the Norwegians are deluged with requests for advice. I've worked closely with the Norwegian government. They've had 50 government requests for advice. Unfortunately none from us. (Laughter)

Now the wrong people have been asking for advice from Norway. Britain could actually have usefully copied Norway. It would have helped a lot actually. But it would be rather silly for Sierra Leone to copy Norway. And here's why.

Let's go back to this concept of wealth per person. But let's now take a slightly different number. It's the amount of invested capital per person or per member of the labour force. There's data on a lot of things. There's data on that country by country. And I've checked on this and Norway has more invested capital per member of the workforce than any other country on earth.

Now one thing that implies is, as economists we believe that there's a tendency for diminishing returns to capital. So that if you've already got more invested capital per worker than anywhere else on earth and you use your oil money to add to the capital stock per worker, the returns

on that are not going to be very high. So it makes sense for the Norwegians to put the money internationally. Let those wise New York banks do it.

But it makes no sense for the Sierra Leoneans to do that. Because again on that same data they've got less invested capital per member of the labour force than anywhere else on earth. And so the idea that they should invest their savings abroad is just ridiculous. They shouldn't be doing a Kuwait, they should be investing their savings at home.

And so the only model that we've got out there at the moment, the Norwegian model with 50 governments going and asking "How do we do it? What do you do?" Is the wrong damn model for them. A little knowledge is a dangerous thing as it were.

Now, we come to the final link in the chain. It's all very well to say "Invest domestically." But it's easier said than done. The IMF is very wary of the message invest domestically and they're not fools. They're right to be wary because historically big efforts on domestic investment in the bottom billion have come to grief.

Way back in the mid 1970s the Nigerians tried it and they worked out, they weren't fools, they worked out the following. That first they'd need a big investment push. If they were going to do a big investment push they'd have to build a lot of structures within the country. They then worked out if you're going to build a lot of structures, you need the inputs for structures. And a key input, which they were short of, was cement.

Now those of you who are like me, of a certain age, if you can think back to 1975 you'll remember a time when Nigeria hit the front pages, certainly of the business sections, for something which Nigerians now rather comically call 'The Cement Armada'. Because then everything went tragically wrong. The Nigerian government went out and ordered cement from all over the world, then that cement couldn't be unloaded at Lagos docks, they ordered in an un-co-ordinated fashion. They bought too much. And then the companies then discovered that this was a wonderful scam. You only had to buy any old rubbish old cement, load it into some old tub that was about to sink and just hope it got to Lagos harbour, where it couldn't be unloaded for three or four years, and then you'd benefit from the small print of the contract. In all these contracts there's a thing called demurrage. And if there's any shippers here they will know what demurrage is. Which is that once you get it to the port they have to pay you, day by day, if they can't unload it. And so the Nigerian government found itself paying a fortune for this useless cement, which was just clogging up Lagos harbour.

So that's an example of how it can go really drastically wrong. So the fourth link in the chain is to make sure that investment actually does have a high return.

There are three components of that. Now I call them together the strategy of investing in investing. I'm actually working on this with IMF at the moment. I'm very proud that the IMF, twenty years too late, has set up something called a 'Low Income Unit' in its strategy department. And the head of it is a former Postdoc at the Centre for the study of African economies. So that they knew where they had to go and look. And we're trying now to set down precisely what an investing in investing strategy would look like, so that it would not be suicidal for low income countries to borrow to finance investment.

So there are three components to investing in investing. The first component is get a high rate of return on public investment. Which means select projects well and implement them well. Both stages easier said than done. And we've got a lot of work on that, but I'm going to skip over it.

The second stage is on private investment. Because private investment is a complement to public investment. If you get public investment and no private investment the return's bound to be low. Think trucks and roads. The government does the roads but the roads are useless unless there's investment in the trucks.

So what's the evidence on the rate of return on private investment in Africa? I teamed up with a very smart graduate student who got married forty minutes ago. I've just had to leave his wedding

to come and speak to you. And we triangulated three different data sets on the rate of return on investment in different parts of the world. We looked at the return on US foreign direct investment. We looked at the return on equity in as many equity markets as possible. And we looked at the return on manufacturing investment across 23,000 firms around the world. We integrated a huge data set to do that.

All three show that the rate of return on private investment was higher in Africa than any other region. That was so sensational that the Harvard Business Review chose it in February as one of its twenty ideas of the year. And I cannot imitate how Harvard Business School packages one of the twenty ideas of the year.

Not to be outdone, then Newsweek decided that it wasn't one of the twenty business ideas of the year, it was one of the ten world ideas of the year. So that was March.

We've still got three months to go. (Laughter)

Anyway that was to say this result was really surprising. Private investors had felt Africa waste of time. Now of course you can have high rates of return to private investment and yet it not be a good idea to put more investment in. And that's the configuration we're in at the moment.

In fact since the financial crisis, bank financing for Africa, international bank financing for Africa has virtually completely dried up. It's fallen far more than any other region in the world. Far more. And in effect the appetite for risk globally has collapsed, Africa seems the riskiest region, and so there has been a pulling back.

But that is, to my mind, it means that there are unexploited opportunities. And the challenge for African governments is how they can reassure the investment community that the environment isn't anything like as politically risky as is imagined. Because it's the political risks that are often seen as the killer.

The third component of investing in investing is to get the cost of capital goods down. Both the cost of structures, construction, and the cost of equipment. And at the moment the costs of capital in Africa are higher than any other region in the world. One of the first pieces of research we've commissioned in the international growth centre that I co-direct, that Jim was talking about earlier, is to study differences in the price of capital goods around the world and try and understand what's going on with these very high costs in Africa.

So, there's the decision chain. The four links in the chain. Each one hard. Each one needs to hold in order for the enormous potential of natural assets. African national assets dwarf aid, any conceivable amount of aid. So it's the chain by which that potential can be harnessed.

Why that chain usually doesn't hold is partly that there are these four different things in it and they're different types of decisions. So that it spans a lot of decision takers. But also it's something that has to be got right not just once, but like all economic processes the path from poverty to prosperity takes time. At least a generation.

I mean quite possibly not much longer than a generation. The amazing thing we've learnt in the last two or three decades is that it is possible to get these sensational growth rates that transform over a generation.

But basically society has got to get a whole chain of decisions right, again and again and again for a generation. How to do that?

You know my Nigerian friends went back to Nigeria finance minister, governor of the Central Bank, Head of Procurement. They thought that the three of them could do it. And they discovered that the three of them couldn't do it. They are now all out of the country again, in exile.

What they learnt is that for a range of decisions like this, for a natural resource economy to actually harness its assets, there is no substitute for an informed society. You need an informed society to get the whole chain of decisions right and to get them right again and again. So that decisions taken by senior civil servants and ministers are embedded, constrained by an informed society.

And so to my mind the challenge is to build an informed society. That's why I've tried to write an accessible book, 'The Plunder Planet' discussing that. I've also been working with a team of people, actually often people who read 'The Bottom Billion' and where I suggested that what we needed was something called a natural resource charter. A way to manage. A sort of public statement of the decision chain.

And over the last couple of years a group of us have been building that natural resource charter. Under the auspices of Michael Spence, Nobel Laureate in Economics. We've now got a board for the charter, chaired by Ernesto Zedillo the former reforming President of Mexico. Who believes that oil has wrecked Mexico and doesn't want to have that happen in Africa.

So we've got Zedillo, we've got Soludo, who was voted governor of the year, Central Bank Governor of the Year, when he was governor of the Central Bank of Nigeria. And Gaidar who is the reforming finance minister of Russia. So that's the board for this resource charter. And we've been building it with lawyers, economists, political scientists, civil society NGO activists. It's been anchored in Oxford.

Last week the British Department for International Development just gave us a quarter of a million pounds to ramp it up. And it's a website. You can all look at it. It's called naturalrsourcecharter.org. The website is building in different levels. So the top level is just twelve, what we call Precepts. The twelve decision points you have to take. You can fit that on one page so as it were the busy President can spend a couple of minutes glancing at that before getting on with the business of plundering his country. (Laughter)

The next level down is pitched for journalists, ordinary citizens.

The next level down which is still not quite finished is the more technical bit. Detailed, so each Precept. If you're the permanent secretary in a ministry, what do you do?

Or if you're managing an oil company, what are your responsibilities? So we work with the oil industry and the international council on metals and minerals, to look at the corporate side as well.

So that's a sort of Oxford in it's a civil society trying to behave responsibly; trying to help in the internal struggles in these societies.

Britain no longer runs Africa thank God. But we can at least help in the internal struggles, which have so often been lost and which have had these assets being plundered.

So let me close there.
