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When will the oil run out?

George Monbiot puts the question to Fatih Birol, chief economist of the International Energy Agency - and is both astonished and alarmed by the answer

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Can you think of a major threat for which the British government does not prepare? It employs an army of civil servants, spooks and consultants to assess the chances of terrorist attacks, financial collapse, floods, epidemics, even asteroid strikes, and to work out what it should do if they happen. But there is one hazard about which it appears intensely relaxed: it has never conducted its own assessment of the state of global oil supplies and the possibility that one day they might peak and then go into decline.

If you ask, the government always produces the same response: "Global oil resources are adequate for the foreseeable future." It knows this, it says, because of the assessments made by the International Energy Agency (IEA) in its World Energy Outlook reports. In the 2007 report, the IEA does appear to support the government's view. "World oil resources," it states, "are judged to be sufficient to meet the projected growth in demand to 2030," though it says nothing about what happens at that point, or whether they will continue to be sufficient after 2030. But this, as far as Whitehall is concerned, is the end of the matter. Like most of the rich world's governments, the UK treats the IEA's projections as gospel. Earlier this year, I submitted a freedom of information request to the UK's department for business, asking what contingency plans the government has made for global supplies of oil peaking by 2020. The answer was as follows: "The government does not feel the need to hold contingency plans specifically for the eventuality of crude-oil supplies peaking between now and 2020."

So the IEA had better be right. In the report on peak oil commissioned by the US department of energy, the oil analyst Robert L Hirsch concluded that "without timely mitigation, the economic, social and political costs" of world oil supplies peaking "will be unprecedented". He went on to explain what "timely mitigation" meant. Even a worldwide emergency response "10 years before world oil peaking", he wrote, would leave "a liquid-fuels shortfall roughly a decade after the time that oil would have peaked". To avoid global economic collapse, we need to begin "a mitigation crash programme 20 years before peaking". If Hirsch is right, and if oil supplies peak before 2028, we're in deep doodah.

So burn this into your mind: between 2007 and 2008 the IEA radically changed its assessment. Until this year's report, the agency mocked people who said that oil supplies might peak. In the foreword to a book it published in 2005, its executive director, Claude Mandil, dismissed those who warned of this event as "doomsayers". "The IEA has long maintained that none of this is a cause for concern," he wrote. "Hydrocarbon resources around the world are abundant and will easily fuel the world through its transition to a sustainable energy future." In its 2007 World Energy Outlook, the IEA predicted a rate of decline in output from the world's existing oilfields of 3.7% a year.

This, it said, presented a short-term challenge, with the possibility of a temporary supply crunch in 2015, but with sufficient investment any shortfall could be covered. But the new report, published last month, carried a very different message: a projected rate of decline of 6.7%, which means a much greater gap to fill.

More importantly, in the 2008 report the IEA suggests for the first time that world petroleum supplies might hit the buffers. "Although global oil production in total is not expected to peak before 2030, production of conventional oil ... is projected to level off towards the end of the projection period." These bland words reveal a major shift. Never before has one of the IEA's energy outlooks forecast the peaking or plateauing of the world's conventional oil production (which is what we mean when we talk about peak oil).

But that is as specific as the report gets. Does it or doesn't it mean that we have time to prepare? What does "towards the end of the projection period" mean? The agency has never produced a more precise forecast - until now. For the first time, in the interview I conducted with its chief economist Fatih Birol recently, it has given us a date. And it should scare the pants off anyone who understands the implications.

Birol, the lead author of the new energy outlook, is a small, shrewd, unflustered man with thick grey hair and Alistair Darling eyebrows. He explained to me that the agency's new projections were based on a major study it had undertaken into decline rates in the world's 800 largest oilfields. So what were its previous figures based on? "It was mainly an assumption, a global assumption about the world's oil fields. This year, we looked at it country by country, field by field and we looked at it also onshore and offshore. It was very, very detailed. Last year it was an assumption, and this year it's a finding of our study." I told him that it seemed extraordinary to me that the IEA hadn't done this work before, but had based its assessment on educated guesswork. "In fact nobody had done this research," he told me. "This is the first publicly available data."

So was it not irresponsible to publish a decline rate of 3.7% in 2007, when there was no proper research supporting it? "No, our previous decline assumptions have always mentioned that these are assumptions to the best of our knowledge - and we also said that the declines [could be] higher than what we have assumed."

Then I asked him a question for which I didn't expect a straight answer: could he give me a precise date by which he expects conventional oil supplies to stop growing?

"In terms of non-Opec [countries outside the big oil producers' cartel]," he replied, "we are expecting that in three, four years' time the production of conventional oil will come to a plateau, and start to decline. In terms of the global picture, assuming that Opec will invest in a timely manner, global conventional oil can still continue, but we still expect that it will come around 2020 to a plateau as well, which is, of course, not good news from a global-oil-supply point of view."

Around 2020. That casts the issue in quite a different light. Birol's date, if correct, gives us about 11 years to prepare. If the Hirsch report is right, we have already missed the boat. Birol says we need a "global energy revolution" to avoid an oil crunch, including (disastrously for the environment) a massive global drive to exploit unconventional oils, such as the Canadian tar sands. But nothing on this scale has yet happened, and Hirsch suggests that even if it began today, the necessary investments and infrastructure changes could not be made in time. Birol told me: "I think time is not on our side here."

When I pressed him on the shift in the agency's position, he argued that the IEA has been saying something like this all along. "We said in the past that one day we will run out of oil. We never said that we will have hundreds of years of oil ... but what we have said is that this year, compared with past years, we have seen that the decline rates are significantly higher than what we have seen before. But our line that we are on an

unsustainable energy path has not changed."

This, of course, is face-saving nonsense. There is a vast difference between a decline rate of 3.7% and 6.7%. There is an even bigger difference between suggesting that the world is following an unsustainable energy path - a statement almost everyone can subscribe to - and revealing that conventional oil supplies are likely to plateau around 2020. If this is what the IEA meant in the past, it wasn't expressing itself very clearly.

So what do we do? We could take to the hills, or we could hope and pray that Hirsch is wrong about the 20-year lead time, and begin a global crash programme today of fuel efficiency and electrification. In either case, the British government had better start drawing up some contingency plans.

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• Watch George Monbiot talking to Fatih Birol as part of the Monbiot Meets video series, in which Britain's leading green commentator challenges the world's top environmental policy-makers guardian.co.uk/environment/series/monbiot-meets

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