**Environmental Biosecurity Webinar to Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) supported by Department of Climate Change, Energy, the Environment and Water (DCCEEW)**

Transcript

Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)

Thematic assessment of invasive alien species and their control

Presented in April 2023

**Presented by:**

**Andy Shepard**

Coordinating lead author of IPBES

[*Opening visual of slide with text saying ‘IPBES with Crest (logo)’* *Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)’, ‘Thematic assessment of invasive alien species and their control’, ‘Webinar 2 – Overview’, April 2023*]

**Andy:**

thank you for the opportunity to talk at the Environmental Biosecurity webinar. My talks really an announcement rather than about an assessment that will be made public later in the year, which is directly relevant to Australia's environmental biosecurity activities.

And my participation in it was supported by the Chief Environmental Biosecurity Officer and the team there. So, I'm very proud to be part of it, to represent Australia along with a couple of other Australians. So IPBES, the Intergovernmental Platform on Biodiversity, not biosecurity Jamie and Ecosystem Services is to biodiversity, what the IPCC is to climate change.

So, it's that big international collection of scientists coming together to collect evidence, to support how our environment is changing in the context of global threats. IPBES is not as old as IPCC and hence its much earlier in its development, but it did release its first global assessment a few years back, I think in 2020, where the headline item was that a million species are now threatened with extinction around the world.

So, if you remember that statistic, you may remember the global assessment. It has done a number of regional assessments that feed up into the global assessment, and it does a number of what they call these thematic assessments. It's done one on pollinator and pollinator services. It's done on scenarios and modelling it's done one on land use change.

And a number of them are all outlined. And what I'm talking to you about today is the thematic assessment on invasive alien species and their control, which was approved by the plenary, a multi-disciplinary expert group of IPBES, to start in 2018. And we all came together across the world to develop this assessment in 2019 and then of course, COVID hit.

But despite that, we've managed to keep on schedule, which is a pretty amazing achievement. So, the whole purpose of this talk is to introduce the assessment. Who is the expert group? And what's the assessment timeline that’s got us to where we are today?

Then I'll be just talking in more detail around the objectives and scope of the assessment and the methodology applied. And finally, a bit on the assessment structure and policy relevance. And what I cannot tell you, unfortunately, today is any of the key messages that have come out of the assessment because like all of these big UN reports, that's embargoed until the final assessment is released later this year.

So, this is really an advertisement to encourage you to keep your eyes out and open and available to that assessment, which is the first ever global review of invasive alien species. So IPBES like the IPCC is managed under UNEP and it is a very structured process to deliver these assessments. Each of the assessments has a number of co-chairs.

They are responsible for the delivery of the assessment. And then under the co-chairs is a number of coordinating lead authors which lead the individual chapters of the assessment. Generally, there are three coordinating lead authors for each assessment, each chapter sorry. And then there are a number of lead authors that make contributions to one or more chapters. And so, I think we were a group of about 87 people.

These are the three the co-chairs. They've been working on this incredibly intensely now for four years. There's no way I could have put that amount of time into it. So, we're really appreciative of the time and energy they put into leading this and they are Anibal Pauchard from Chile.

Helen Roy from the UK Centre for Ecology and Hydrology. So, Anibal is an invasive plant person. Helen is an invasive invertebrate person. And Peter Stoett from Ontario Tech University in Canada is a social and economic scientist, so brings up that multidisciplinary component. This is all of the group as we got together just before COVID in 2019, 87 nominated and selected experts.

On top of the three co-chairs are 14 coordinating lead authors, 46 lead authors, 12 fellows. These are young and up and coming scientists. 172 contributing authors are bringing their individual expertise. Twelve Review Editors So there's a whole community of review editors that support the whole review process and the technical support unit to make sure we all do what we're supposed to.

And you can see this is a picture of us. I’m in the top right-hand corner there. This is the timeline of the assessment. It all started back in May 2019. We got together in in October 2019, in Japan as the first author meeting. And since then, we've been working through not only the assessment itself, but also developing in parallel the summary for policymakers, which is probably the document that will be most read and really tries to capture those key high-level messages on which the assessment is delivered.

And it is the summary for policy makers that the IPBES plenary in Bonn in August this year will be focusing on in terms of making sure that we they believe we've got the messaging right. The assessment went through three external reviews of both the main assessment and the summary for policymakers, which I think led to over 9000 comments and edits.

And we as a team had to reply to all of those individually. So, it's a huge task, but it means that the assessments had a lot of external input and we've had a number of author meetings to get us to where we are today and so IPBES member government representatives and experts participated in the external review and the IPBES activity is supported under the DCCEEW team.

And here we are right at the end just waiting to go to plenary to be approved. The assessment this week got submitted to be translated into a number of UN languages. So, what was the objectives and the scope? So, this was all laid out to us before we started. So invasive alien species were identified as one of the main drivers in the global assessment and of course in Australia we know them as being the number one direct driver of the impacts on biodiversity loss.

So, this assessment assesses the available knowledge on states and trends of invasive alien species, the impacts on nature, nature's contributions to people and good quality of life, the major pathways and drivers that affect biological invasions, the management approaches, tools and technologies and their effectiveness. And then finally, the regional, and national policy and governance approaches.

So those are the five areas that the assessment covers. Now it aims to support the formulation of better policies and management responses to prevent invasive alien species and reduce their impacts going forward. Just to give you a couple of examples of the kind of high-level data that we called upon. Here's a graph by Dawson et al. in 2017 that shows you the hot spots and cold spots of cross-taxon established alien species richness.

And of course, some of this is due to the research and effort and some of this is due to literally areas that are more exposed to invasive species than others. Then you've probably seen these graphs, but also from Seebens’ paper in 2017 and, and Hannah Seebens led the Status and Trends chapter about how the numbers of exotic species in these different groups are still increasing logarithmically around the world as a way of recognizing the huge pressure that biodiversity and ecosystems are on from this particular threat.

The methodology of the IPBES thematic assessments was, as I say, very clearly defined from the start by the IPBES process, and the authors assessed more than 10,500 pieces of evidence with the aim of including various knowledge and value systems, including local and Indigenous knowledge. We had to make sure we represented all regions and contexts.

So, we had contributors from most countries from around the world. We included all disciplines. So, it’s a multidisciplinary approach. We identified knowledge and data gaps, but the whole process had to respect the fair principles of findability, accessibility, interoperability and reusability, and a strong data management policy. So, any statement we made had to be backed up through a number of mechanisms.

Then the authors were guided by the IPBES conceptual framework and previous IPBES assessments. I'll just tell you a little bit more if you're not aware about the IPBES conceptual framework and this really was developed within the first few years of IPBES and drives the lenses through which we look at it at all of these processes in the context of biodiversity and ecosystem services.

And they are, they are divided into nature, so that's both biodiversity and ecosystems, the direct effect on biodiversity and the intrinsic values in that biodiversity, there's nature's contributions to people, which is understanding ecosystem goods and services that nature provides to people and the impact that invasive alien species has on that, and then good quality of life for human well-being.

So, living in harmony with nature, living well in balance and harmony with Mother Earth. And so, you can see there's a strong human focus of the way IPBES undertakes its assessments, particularly a very strong focus on local and Indigenous communities. And these are themes that run through the entire assessment and that drives all of the IPBES processes.

Now, the structure and policy relevance. Here we get at what was the structure of the assessment. Well, it really follows the scope. So, there are there are a number of, they are no longer draft chapters, they are now final chapters. Chapter one introduces biological invasions and the IPBES thematic assessment of invasive alien species and their control. So, it talks about it at a high level.

And you can imagine in the middle of this assessment we had a COVID pandemic. So, a lot of the work we did early on had to be rewritten in the context of the impact of invasive diseases, particularly infectious diseases. Then the trends and status of invasive alien species calling on all of that global data that's been collated by many around states and trends, drivers of biodiversity change affecting biological invasions.

So, this is trade, tourism, climate change. So, a number of direct and indirect drivers and even invasive species themselves in the way invasive species encourage the establishment of other invasive species. Chapter four was a big chapter on the impacts of biological invasions, where they did a lot of original work, bringing together thousands of publications and carrying out the review with a strong focus on nature's contributions to people and good quality of life.

A lot of economic impact work had been done prior to the assessment, but not these more intangible impacts. Then the chapter that I co-led, which was on management challenges, opportunities and lessons learned, which was like your solutions focused chapter. What is the decision supports tools and technical solutions that are available. How effective have they been in the past and what are the challenges around management?

Things like climate change, conflict species and the importance of community and stakeholder engagement in terms of developing management. And then finally, chapter six, which was also co-led by an Australian, Professor Melody McGeoch from La Trobe University, which looked at governance and policy options globally and nationally at different levels that can support prevention and control of biological invasions. With crosscutting themes of, as I've already mentioned, in terms of Indigenous and local knowledge, quality of life and scenarios and models and of course a glossary to make sure that all our terms were met.

And then the summary for policymakers, which I mentioned, which looked at an overview of important terms, key messages and background paragraphs on what a biological invasion is, states and trends, prevention and mitigation, and integrated governance. So, a lot of work on graphical figures to provide this complex information in a very readable form for audiences from around the world and appendices around degrees of confidence and uncertainty, that element of how do we assess the quality of the evidence we use and the quality of the knowledge that we present.

And finally, the knowledge and data gaps. And why is this thematic assessment important? Well, it's been very important in terms of being able to provide policy relevant advice as with all of these assessments, including the IPPC, we cannot be policy prescriptive. So, we cannot use words like should or would or make any recommendations.

We can simply present evidence, which is what's unique about these kind of assessments. But we can present policy options for decision-makers and the summary for policymakers in the chapters executive summaries include IPBES confidence levels, and these are: is the information well established? Is it established incomplete? Is it unresolved or is it inconclusive?

And in a global positive quality context, the assessment early on contributed and benefited from the thinking of the CBD. Conventional biological diversity Aichi Target nine, which finished in 2020. It's contributed a lot to the thinking that went into the coming Montreal Global biodiversity framework, which is the new CBT target that was launched at the end of last year.

And the DCCEEW delegation was in Montreal to do that. And it also supports the Sustainable Development Goal 15, which includes invasive species. So where to from here? As I say, the report will be assessed, evaluated and endorsed by IPBES in Bonn in Germany, in August and September. And I'll be there for that. Final corrections will be made in the days immediately after that plenary with an expected launch in 2023.

[End of Transcript]