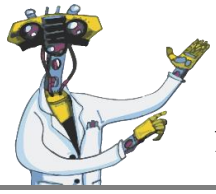


Science Communication

Tutorial: The Science Communication video tutorial can be found on the MEDDLE for Multiple Drivers Research YouTube channel.

Speaker: Sam Dupont, University of Gothenburg, Sweden

Video: Christina McGraw, University of Otago, New Zealand

Transcripts: Rebecca Zitoun, University of Otago, New Zealand

Resources: The complete resources for the *Best Practice Guide for Multiple Drivers Marine Research* are available on the MEDDLE website.

Most of the stressors that we are studying in the lab like temperature, oxygen, or pH, all relate to the same thing, which is carbon dioxide. We know that we produce more and more carbon dioxide every year. If you want to fix these problems, what we need to do is mitigate and decrease carbon dioxide emissions. And we also know that this is going to be a really challenging task as we need to reach large-scale collective action.

Text (0:29): Reducing CO_2 emissions requires large-scale collective action.

Meaning that we are going to have to work at a global scale on a wide range of stakeholders, like kids, citizens, industries, or policy makers. And all these different people want different things. If you talk to a policy maker, they don't want more problems, what they want is solutions. If you talk to citizens, they want to know what is going to happen to things they care about. And most of the time the science we do is producing a lot of information, but that is not really relevant for these particular tasks, so it is not really driving the change we want in society. So we were arguing that, if you want to be more efficient at reaching impact and driving changes, what you need to do is develop science targeting these goals.

Text (1:03): Increase your impact by answering questions that citizens and policy makers care about.

But that is not what we (*scientists*) do most of the time. So we need to move from science that is complicated and not really society relevant to something that is really targeting what people care about - emotions - and have a science that is clear and simple enough. And if you reach this (*science people care about*) then you can drive impact.

One example of this is one study of my lab, where we decided to go onto the street and ask people in Sweden what they care about. And one thing they (*Swedes*) really care about is seafood and in particular one species of shrimp, the northern shrimp. If you are going into any restaurant in Sweden you are going to see a shrimp sandwich and this shrimp sandwich is really popular. Everybody loves it. Everybody remembers the first time they tried it. And so, if you can show that there will be in impact on this shrimp due to global warming, ocean acidification, or de-oxygenation, then you can really have an impact. We tried that. We collected shrimp in the field, we exposed them to different pH, simulating ocean acidification, and we could see that people could actually taste the difference.

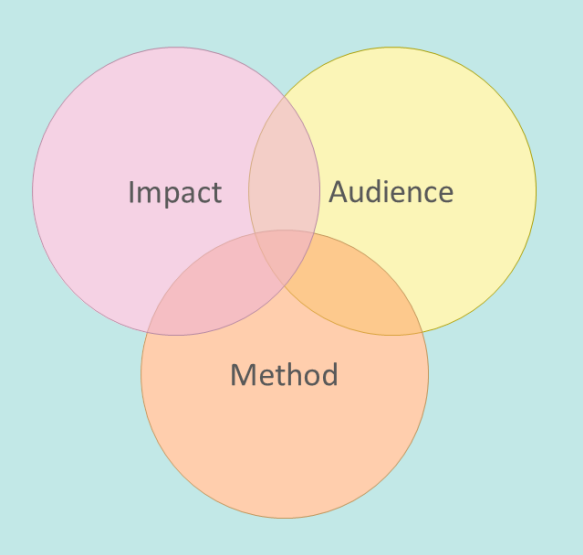
Text (2:04): J. Shellfish Res. 33(3), 857-861 (2014)

And because of that, that was a fantastic communication opportunity and we had a lot of impact in the press, the web, and so on. But even better, we could show that if the people experience physically ocean acidification instead of just hearing about it - so they had an emotional connection with the stress - what happens is that they are more willing to change.

Text (2:24): If people have an emotional connection to ocean acidification, they are more willing to change.

So if you want to be efficient at driving impact in society you have to think about 3 things:

1) **Audience:** who am I talking to and what do they want? You have to understand the culture of your audience;
2) **Impact:** What is my goal? What do I want to achieve? Do I want to make a change?
3) **Method:** When you have these two pieces of information, what is the most optimal method to reach my goal?



Good luck.