

Webinar on Open Science and Decolonizing Health Knowledge Systems: Perspectives on Global Medical Research Governance in the Pacific Context

Dr. Michael Johnson^{1*}, Dr. Emily Carter¹, Dr. David Williams²

¹Department of Medical Ethics and Health Policy, Harvard Medical School, Boston, USA

²Department of Global Health Research, University of California Medical Center, San Francisco, USA

Key Words: UNESCO, Open Science, Decolonization, Eurocentric, SROS (Scientific Research Organization of Samoa)

Moderator remarks: Prasad Rajendra

Ladies and gentlemen colleagues dear friends first of all I would like to welcome you to this webinar on open science beyond open access foreign communities and thank you for making yourself available for this very important series of consultations that is taking place globally and here in the pacific this is the one that we expect to take some feedback from for the UNESCO consultation this part of the university consultations but I will not go further into that I would like to immediately hand over the flower to Dr. Shahbaz Khan who will be doing the welcoming and the yes, and make some opening remarks.

Welcome remarks: Shahbaz Khan

Thank you very much it's a very important day today as this webinar on open time beyond open access for and with the community for the pacific states is a very important one, I wish to acknowledge the role of UNESCO office for Christmas space and especially the leadership Canadian commission for UNESCO and UNESCO co-chairs in community-based research and social responsibility in higher education which are actively collaborating not only in this webinar but with wider further consultation and this is certainly helping us move towards open science recommendation for the general conference in 2021 I wish to acknowledge Dr. Mahindra Reddy who is our minister finally joining from Fiji he has many backgrounds I'm so impressed by his breadth of knowledge and the chief executive officer for scientific research organization of Samoa and certainly this is an important area for human of course Dr. Rajesh standing the founder president for the participatory research in Asia Priya and of course the fourth year for this very important initiative and working actively with the unit when and Dr. Rajendra you just heard advisor for science he has played a very important role so certainly these are not the usual time for us in terms of where the world is covet is still going on and that's where the global consensus on open signs is a critical consensus as science has to play a role in global health and in this environmental crisis which is going on the pandemic has demonstrated that there is a lack of capacity in scientific infrastructure in terms of also collaboration there are digital divides and we need to work very actively in this health crisis so we in UNESCO under the leadership of science on 30th march organized critical meeting in which 77 ministers from the region and many eminent colleagues joined so the consensus was we must pool knowledge we must reduce gaps we must mobilize the makers receptors innovators and we should provide access to data research findings and very importantly no one should be left behind there has to be better link between science and policy and there must be a science which should go beyond borders.

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So this is all in the context of today's webinar as well I'm sure you will agree that to develop a global consensus on open science is critical timely UNESCO member states have requested a transparent process which should lead to recommendation on open signs there has been an online global consultation online survey for inputs for four months from February to June 2020 and the member states have widely disseminated UNESCO field offices have contributed also UNESCO chairs and centers have actively contributed so through this process there has been a lot of data which has been gathered in the Asia pacific region we organized also 115 September 2020 a consultation which clearly highlighted the issues of infrastructure the platforms which are missing there is a need for international platform which can bring the wider recognition to the open sides and also bring all the key academies of sciences the universities as well as making sure the people who need such knowledge such national platforms will help build national capacity and also provide a science ecosystem so far pacific is very special that we need to have the conservation of the pacific countries properly considered so there would be a chance to continue this process till 2021 January on the recommendation and this will be followed by further consultations in July and of course leading up to the 46 first session of the general conference for the adoption of the recommendation so from today we are very grateful to our office in pacific under the leadership of Nisha and also very importantly the Canadian commission for UNESCO the UNESCO chair and all those colleagues who have joined today please express your views which are important to be captured so this can be part of the process with that I thank you for organizing this very timely webinar and we look forward to how can we work together to make open science really open from open access open data getting rid of the digital divides and very importantly build capacities locally but those capacities which are interconnected with the whole world so thank you very much and I look forward to the keynote speeches which will be following and the panel discussions thank you.

Moderator: Prasad Rajendra

Thank you Dr. Shahbaz Khan Shahbaz as we call you so Shaabas has just very briefly introduced or just made reference to the speakers and appreciating his their attendance I would like to now go ahead with the agenda proper whereby our first speaker is Dr. Rajesh Tandon, he is joining us from New Delhi India Dr. Tandon is an internationally acclaimed leader and practitioner of party participatory research and development he is former president of participatory research in Asia which is clear one of the cost strengths behind this particular event the global center for participatory research and training since 1982 he was appointed co-chair of the prestigious UNESCO chair on community based research and social responsibility in higher education for two terms from 2012 to 2020 his electronics engineer is starting career as an electronics engineer but London has served on numerous expert committees of government of India the UN commonwealth and world bank and in 2015 the Indian adult education association awarded Dr. Tandon dinero literacy award for his distinguished work on gender issues the government of India honored him with prestigious award in social justice in march 2007 the university of Victoria Canada awarded Dr. attendant the degree of doctor of law honoris bowser in June 2008 sorry about the wording he is the first Indian to be inducted in the international adult and continuing education the hall of fame uh so from this brief introduction you can know that Dr. Tandon is really spread in many fields so today we are very fortunate to have him so I hand over the floor to Dr. Tandon to deliver your opening remarks and introduce the paper that is in in discussion today.

Speaker: Rajesh Tandon

Thank you very much Dr. Rajendra and thank you very much for Nishaji the office of UNESCO in the Pacific for hosting this important discussion in the Pacific region I'm thankful to Dr. Shahbaz Khan for his very warm initial introduction and grateful that honourable minister Dr. Mahindra Reddy and professor Sasudi have joined this panel. The UNESCO chair on community-based research and social responsibility in higher education has been partnering with various UNESCO offices additionally in Canadian commission for UNESCO support to convene 11 webinars in different regions on this important issue of open science and I want to therefore be thankful to all of you in my role as the chair president of the Asia south pacific adult education association I traveled extensively in the pacific region in the 1990s up until 2004 the last time i traveled so I've been to Fiji two three times I've been to Samoa I've been to Papua new guinea and Solomon islands and I am exceptionally thankful to our UNESCO office in the pacific for making this consultation possible we will be doing a separate consultation for South Asia on November 17 but this is particularly important given what our own thinking has been on science and its openness so I we you have seen the statement that we had prepared which has been shared with all of you I'm going to try and share a quick PowerPoint which highlights some of those themes and let me see if I succeed in doing so otherwise my colleague Surjit may help me there it is open science beyond open access for and with communities a step towards the decolonization of knowledge that's the theme of the analysis this group of people have done led by our UNESCO chair and in partnership with several others now.

As we all know these are abnormal times these are not normal times so normal science is under if I may use the phrase abnormal virus what it means it means that in the last eight nine months in this 2020 never before science has been under such public gains as virus spreads community leaders local politicians students academics of different persuasion policy makers they're all wondering what is going on with science and therefore attention to science is uniquely focused in this year and it is so timely therefore that UNESCO is taking this initiative on open science at this juncture science is spacing politics of evidence you have seen in many countries I don't know that much about each country in the region that you are all part of you know much better but what evidence scientists are producing they do not necessarily find policy response as supportive you are familiar with the debate on mask for example or the kind of medicine that scientists are facing scrutiny in public for treatment uh all kinds of treatments have been recommended scientists are not sure which ones are working but you know from homemade recipes to ayurvedic treatments to hydro chloroquine to all kinds of things are there and they are facing scrutiny that it does it work will it work and latest of course is the science of vaccines is facing competing truths whose vaccine is out whose vaccine is about to be out whose vaccine will go through all the rounds of testing which vaccines will be certified by who and which vaccines have got which kind of investment from philanthropists or corporate tycoons and which kinds of vaccines will be available for free and as we sit on November 3rd god knows which stage vaccines are and there are competing vaccines in the market and again science is being questioned about the veracity of these claims about vaccine about to hit the market next week or next month or early next year.

So science is under scrutiny scientists are facing questioning science establishments are being closely watched and scrutinized not just by policy makers but by public at large so open science has been generally talked about in last decade as open access and many international agencies

particularly if you look at European union has been for last 20 years promoting what they call responsible research and innovation and under which they insist that all research funded by European union should be open access and what do they mean by open access they mean that it should be open access to fellow scientists around the world all right but open access to fellow scientists is a historical practice up until mid-19th century everything was open and it was believed that research producing is meant for common good and not for private gain by the researchers or their research funders this issue of patenting and using knowledge for profit actually began speeding up in the last century but more so since 1980s when global consensus on disinvestment of higher education increased and research funding gradually moved in the hands of private sector so research investment even from public sources would have a matrix of saying how many patents you have made and how many of those patents have been converted into the commercial products so linking knowledge for profit this has resulted in a very interesting phenomenon where less than 10 internationally multinational educational journals and educational companies are controlling the patenting of all journal articles and published books even though individual researchers do the labor it is their labor is extracted and profits are made by these companies so under the name of open access now you can publish provided you pay for it and last month.

I was approached by somebody a publisher of repute to publish one of my articles and I said I believe only in open access and he said well 3500 euro you pay it will be open access for five years this pay to publish actually this open access cost is being included in research funding proposals these days and interestingly the same funders who insist on open access are willing to pay for publishing under open access and as I mentioned this is entirely controlled by less than 10 companies and professionals and journal houses educational which are all based in northern Europe and north America none of these journals from the southern countries have the same reputation in fact our own research institutions expect our researchers to publish in these so-called very important journals which are controlled by the few in the north but open access is also needed beyond fellow scientists open access is meant for practitioners if you take the case of the current pandemic then open access needed by nurses by paramedics by even families who could learn about the science in a way that they could prevent spread of the virus in their neighborhoods in their communities so civil society organizations non-professionals academics but outside the academia many para professionals many service providers also need access so open access is currently highly distorted and it has to be truly open access to everybody that is what brings us to this question of science is open only for access to scientists or what does openness mean as the is it open to society is science open to society is this scrutiny of science that has been taking place during the pandemic is it going to continue and will it make science more open and responsive to society at large so that there is now increasingly an issue of science citizenship is science part of society in many of our countries decisions about science policy and public financing of science research is actually not even discussed in parliament so it is a group of very senior scientists who discuss this with key ministers and society at large remains unaware of the basis and criteria for development of science and its application then the question comes science is if it is open to society then what is the purpose of science is the purpose of science to engage with public to maximize profits which is resulting in increased inequalities in all our societies many of you may have read then in many countries during eight months of pandemic inequality increased.

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It increased in my country it increased in sub-Saharan Africa and it is increasing in Europe too or is the purpose of science therefore also to contribute to social justice and in recent terms is the purpose of science also to do no harm to our environment and ecology and make science accountable to creating sustainable and resilient communities and societies the third issue about openness to society is that bulk of the global science which is acknowledged and certified is happening in predominantly English language and a few other European languages like French or Spanish but we know that knowledge is culturally and linguistically contextual knowledge depends on the context knowledge is developed through the practices in a cultural and social context therefore when concepts and theories in European languages are the only ones which are certified valued and legitimized they tend to create a disconnect with society which is both linguistic disconnect you know professors in in some countries can only teach in higher education in English language most higher education research in India is done in English language but 95 percent of our people don't read or write or think in English so disconnect is obvious then there is a digital disconnect and Shahbaz has already spoken about it I don't want to belabor that point the issue of openness to society has been gathering momentum in the last decade our own UNESCO chair is an example on this community-based participatory research is an increasingly popular methodology of co-construction of knowledge in partnership with communities there are a global university network for innovation a UNESCO supported institution and a network global network of higher education has been promoting what has come to be known as engage scholarship there are in Europe continental Europe particularly science shops which are partnerships between academics and local civil society tellers network has been promoting it's a network of presidents of universities and has been promoting community engaged scholarship and national coordinating center for public engagement in UK is another example.

There are many other examples in Latin America in Africa I'm sure in your region in the Pacific as well the point I'm making is that the engaged scholarship is as legitimate and valued field that is emerging which makes science openness to society so the point I am making is that there are other knowledges there are other forms of knowledge which had not been acknowledged by modern science which has been historically over the last three centuries Eurocentric these knowledge systems have survived and flourished in our communities in many parts of the world there are I mean not just the Chinese knowledge system on the Indian knowledge system every society has its own and indigenous knowledges rooted in indigenous cultures and indigenous languages have been a very critical part is science open to other forms of knowledge or is science open science only open to Eurocentric science and knowledge systems this is the important question that we have been posing because we believe that pandemic has clarified once again the importance of harnessing and using knowledge which is locally produced locally stored and locally utilized in fact many communities have been able to prevent spread of the virus by using local knowledge based on local practices but that knowledge system that store of vibrant knowledge is not yet seen as legitimate knowledge in the context of conversations on open science so our recommendation therefore arising from this to UNESCO to the communities which are the advisory council which is formulating the open science is to promote policies which make open science as a co-constructed knowledge system accountable to society science research and scientific research institutions should diversify governance of their boards and that governance system should be such that it includes multiple voices and multiple diverse experiences including indigenous voices the funding institutions UNESCO should recommend

that funding institutions promote integrated science which brings best of all traditions the modern European science the indigenous knowledge science and does not delegitimize that in fact flourishes the integration we also recommend that UNESCO should include in the recommendations of open science investment in building capacity investment in building capacity of young researchers so that they are open to these conversations that we are having in most cases training of young researchers in our academic institutions does not make them understand or open to other forms of knowledge systems does not make them open to accountability questions of society in general and it only makes them open to their own fellow academics in a very limited narrow scientific discipline so these are our key recommendations and more importantly we look forward to a conversation and your comments and experiences from our colleagues in the pacific region thank you very much and sorry for this disruption but thank you very much.

Moderator: Prasad Rajendra

Thank you Dr. Tandon we really appreciate you sharing your voice knowledge experience expertise and your views as well as the recommendations that you have made in your paper so we'll talk a bit more about that in the open discussion that will take place later on but ladies and gentlemen as you know we have two very honored invited speakers this afternoon and I'd like to apologize to both Dr. Mahindra Reddy and Dr. Tawati for delaying this thing a little bit I know you both have very tight time schedules and so sorry about that so we'll move straight ahead with our next and the first speaker expect to speak out say and so first of all yeah first I would like to invite Dr. Mahindra Reddy which is minister for agriculture or whatever is in the environment Dr Reddy has served in as minister of education heritage and arts since September 2014 and until July 2007 and in December 2017 he was reappointed to the cabinet minister for waterways and in august 2018 he took on an indeed challenging position as what was portfolio of environment in late 2000 and he was appointed or reappointed to cabinet as minister for agriculture rural and maritime development waterways and environment prior to joining politics he has served as academic in academia first at university of the south pacific as lecturer in development studies in 1998 rising up to the rank of associate press professor of economics in 2000 head of school of economics in 2008 he joined fit and later Fiji national university as the dean of the college of business hospitality and tourism studies he has also served as chair of Fiji commerce commission and as a director in the board of reserve bank of Fiji so Dr. Reddy thank you very much for taking your valuable time to be with us and I invite you to deliver your address and speak on the subject as really as you may wish to thank you sir.

Speaker: Mahindra Reddy

Thank you Rajendra want to thank you and Nisha in particular for inviting me to be part of this discussion on this important topic I believe it's about open signs rather than more on open access science is about knowledge creation and knowledge dissemination and no one or no institution or no country should have a monopoly on knowledge now starting from open access you know coming from an academic background we were struggling when we were in in academia to have access to knowledge created by scientists all over the world and that problem is still existing now I mean I'm here in government now and I'm and my colleagues as well we are required to make policies which are supposed to be very effective policies which are supposed to be meaningful policies which uh are supposed to be efficiently delivered efficiency in terms of delivery in terms of research utilization but the people who are creating this knowledge the people who are

creating this knowledge are not providing that knowledge to us who are these people basically the academia and the intellectuals we don't see uh transformation of the academia the academics into intellectuals much I mean you know much to the extent that we would want to even though they are intellectuals in the universities there a lot of academics in universities but we don't see a real effort being made to from amongst or by these academics to move and become intellectuals and assist us in making difference in policy making I haven't seen we in Fiji we have got three universities the university of Fiji the international university the university of the south pacific and their research institutions I haven't seen any effort made by the universities to open up access of the database that they have to us policymakers.

I honestly I'm struggling to have access to journals general articles to assist me in you know fine-tuning my speeches fine-tuning my articles and of course assisting me in policy-making and developing policies coming from academia I can the massive the enormous amount of material out there in various data platforms the "ebcohost" you know "jstor" to name a few of course I'll be more biased towards economics and commerce databases but look I have to in fact I wrote to when sometime back when I was minister of education and you know asking him to give me access to database and said okay we need to look at how to give you as an external member acceptor I had a few times you know spoke to my former colleagues and you know I don't know to use their you know access and log into and access some of the general databases I mean that kind of what I'm saying that that demonstrates how much uh first I have to access this database so that I can get contemporary research that has been done in these various areas and now on agriculture that I'm you know an environment and waterways that I'm dealing with now we haven't dealt with that particular header of accessing final output now we're talking about open science while I want to really thank Nisha UNESCO for you know starting this discourse on how to get there in terms of opening up of science information which is much broader than open access it's about methodology opening up uh methodology of scrutiny methodology sharing data sharing software entire process allowing people to scrutinize the entire methodology and then converging on a particular data and let the data speak and let everyone analyze the data so we are to me I am now struggling at this stage where I don't have access to the database platforms that already institutions in the country are holding on to now.

When I was the education minister I was saying that look and when I was at the PGS national university the dean of the business college I was saying that look let's share the database let's get together rather than individual universities subscribing and the poor universities are not able to have access to his database now amongst themselves they are not willing to share the data I mean the database which has got final output publications now I'm wondering you know we're talking about you know uh opening up the entire research process the scientific methodology I don't know I think we are we are far behind in terms of getting to that stage let's first share the output now let me I'm going to come to that how that could be possible but let me then press share some light on some of the challenges and stumbling blocks that we might come across the issue of patenting that is something that we need to discuss about how patenting could it be an obstacle to opening up access to methodology and formula data etc. the issue about competition just I just alluded to the about competition amongst universities and which is resulting is resulting in them not opening the database they're marketing to students saying that you know you come here you will have this particular database success etc. so competition amongst businesses the private sector there's so much data held and kept you by private sector what is what is what are we going

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to you know give to them to motivate them to start sharing the data then the formulas and the methodologies they are business secrets so I think when we are discussing about open science we can't ignore the business sector the private sector because they hold certain kinds of data which is very important for policy making and ultimately improving people's livelihoods so let's not lose sight because if we have some this difficulty some misunderstanding then go back and see what is all this knowledge about what is why are we creating knowledge now what is the primary ultimate objective then we will say that look when you're talking about open signs there are various cross-sections of the community where data is held business sector should be part of this as well in your civil society organizations religious groups.

Then we also have in Pacific in particular about indigenous knowledge you know how do we open up how do we get them to share again the issue of sequencing UNESCO has finally got us to start talking about it this is step number one we're not going to get this done overnight in any year's time or two years' time or five years' time absolutely no way but what are the kinds of knowledge and who are the players that we want them to be dealt with in phase one page two basically Facebook the sequencing is very important then the issue about social and societal responsibility you know how do we how do we get society to open up to what are some of the social norms that we need to be mindful of very important is also in this process of sequencing we kind of look at what are some of the public goods in policy making public goods comes best then you know we look at private goods so I think we need to identify what are some of the public goods there is issue about regional blocs you know we could contribute towards developing regional blocs because open signs in some way could contribute to borderless countries so this is something that we need to look at because policymakers might question that is there an issue of sovereignty being challenged.

So let's put these things on the table so that we can have deeper discussion and maybe working pollution papers develop on these areas again uh we must ensure that open signs does not compromise the quality of output I'm very worried when I hear people saying that you know you pay and will publish in the entire academia that is no I mean of course I know there are some generals which are charging peaceful publication but again we need to ensure that we don't open up a new uh totally uh way of getting people or academia or academic research in this institution to publish at the moment universities have their own list of journals and outlets and their ranked and points are given again some institutions some countries may question will open signs encourage pre-riders so that is something that we need to when we develop the framework of open signs we need to again say that what will be the contribution given the status of the country the level of development of the country so that you know from there ago there's no issue about any pre-writers we again we need to identify what are the common pool of resources we're talking about that will be part of open science open access is very clear we're talking about the final output but open access open size is totally different goal of game so I mean we might be jumping the gun I mean for me we are jumping the gun we don't have open access we're talking about open signs but look let's talk about I mean UNESCO has got this discussion disclosure often says let's talk about it and maybe you know eventually it will be open access that we need to deal with in an open size again of course we will be dismantling the monopolization of knowledge.

Which is very critical for the development and advanced advancement of any country any country's progress it depends on knowledge creation and we don't want to duplicate if the knowledge is relevant to the other countries as well so and eventually the knowledge gap that exists there is what we will be able to you know fix and uh enhance and push the country and countries now so how do we how do we make this possible I think we need to uh make data on regional goods in the first phase one biodiversity resources fisheries stock environment climate change etc. publicly available I said that policymakers and managers researchers can be well informed and again I want to stress that if you go and look at any pacific island countries talk to any policymaker I'm talking about when I say policymaker I'm basically talking about the legislation not the executive arm none of us none of us are being given research output basically there's no link between research and policy making tell me if can any university give me evidence apart from the public lecture conferences and seminars that they're doing what have they done in terms of the direct contribution towards policy making when did they develop this paper that they are publishing in this Iran channel come and say minister Dr. Reddy we published this paper in agriculture in this journal in the oxford general of agriculture you know economic theory can we present it another version palatable to you exactly so look I think the fundamentals are missing and again numerous works at work I've been done by university the academia and I want to I want to say thank you I don't want to ruffle them now I don't know how to get into any travel or what I'm saying look I mean we can do more the amount of money that we are giving the grant money that you know government is giving we can do more in terms of them influencing policy making a number of seminars have come down a number of conferences have come down of course this is a different period now this year but even then last year before the what that kind of disclosure debate that used to happen in universities it's not happening at that level so we need to ensure that the link is strengthened and in their contribution to policy making they make the effort whether what we take how much we take whatever we take that's a different matter and we should ensure that there is this dismantling of monopolization of knowledge so regional governments need to sign off open access and data declarations and agreements so that that is something that we need to establish we need to a government level.

We need to agree on and there should be a regional agreement on that and again as I said to start off you look at regional groups you know regional public goods you know for example in biodiversity fisheries etc. agree on regional projects we need to agree on regional projects so when you agree on a regional project again the entire region will have access to the entire process the scientific methodology from you know theorizing from framework to data collection analysis and output etc. there will be no issue in terms of region accepting the findings of that so we need to again develop skills to really effectively deal with this issue of sharing knowledge sharing methodology and the entire science that we're talking about so capacity building work will be required and consortium of funders needs to be identified and pulled in to get us to you know go through the various phases I think probably I will stop there and if there's anything I'll come later on come in again but I want to say that I want to thank Nisha UNESCO and for at least getting us to talk about this and I'm sure there are others here from various universities listening in please I have a lot of respect for universities and academia but I'm saying more can be done so that we can make policy making more sharp and effective thank you.

Moderator: Prasad Rajendra

Thank you minister for sharing some of your very candid views and that's why when I introduce you I said please say openly as you would like to of course you have raised several issues I think speaking more from your wide experience as a minister in government now and before that as an academic at the USP so rather than me commenting on it anything I think we'll since we started late we'll move on to our next speaker and then we'll raise and I'll allow other people to actually comment and add to anyone ask questions to Dr. Reddy. The next honest speak amongst is Dr. Joseph Edward Tawati Dr. Tawati is the chief executive officer for the scientific research organization of Samoa an organization that deals with a range of research activities relating to agriculture health and the environment he was a consultant for the ministry of agriculture and fisheries Sama in particular the crops division where he took the role of advising the CEO yes he has worked in identifying priority budgetary requirements for annual submission of performance measures and budgetary provisions he also assisted with writing research and development proposals he has a sound understanding of agricultural science with several years of scientific research at the international level this included scientific research in Japan at the Kochi university United Kingdom at Bristol university in France it by research science with collaborative research in New Zealand at Oakland university so ladies and gentlemen our pleasure and now asking our Dr. Tawati to take the floor and give us his address on this particular subject.

Speaker: Joseph Edward Tawati

Thank you very much Prasad I want to first give a thanks to Dr. Tandon and the honorable already I was very interesting listening to the talk such as and I do have a lot of questions and especially seeking knowledge from gentlemen director of UNESCO office of the Pacific Islands Canadian commission for UNESCO chairs and representatives honourable ministers excellencies ladies and gentlemen thank you for the opportunity to talk about open science beyond excess but firstly I want to give our heartfelt condolences to those who have lost loved ones to the COVID-19 pandemic we are going through tough times and our unity will bring comfort and assistance to those in need what is SROS for those who have not heard of the scientific research organization of Samoa trust is a government organization with a vision to develop some more through science technology and innovation trust's function is to provide scientific and technical research and develop technologies that would add value to the goods and services provided by the private and public sectors and ultimately contribute to the national economy of Samoa areas of research are environment and renewable energy plant and post-harvest technologies food science and technology and agriculture research to the topic at hand it is without doubt that many of us have come through the educational system of closed science which requires good collaborations and subscriptions to get access to the latest publications.

The research was carried out is only available to those with the correct connections or access now let me talk about the topic at hand that is open science which explores different forms of openness to serve the common good there are three forms of openness from the document that was provided openness to publications and data openness to society and openness to excluded knowledges and as some "epithamologies" sorry about that I feel that is important to mention the critical need to address gaps in diversity in science that is promoting science and scientific research among historical marginalized groups of people and inclusion to ensure individuals have equal access to opportunities and empowerment interest goes towards openness to excrete your openness to knowledges and thoughts that come from our own people scientific research and data produced from the islands are often ignored from mainstream science although this

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knowledge may be complementary to existing knowledge in published scientific material could it be that local island research are not being produced in sufficient volumes for it to be noticed is it possible that we may have been silenced because we do not follow the standard law of science and now given the complex covid 19 situation feared we know should we now be exploring possible avenues for opening science to allow for openness to indigenous knowledge I totally agree that we must return to the conventional ethics of research which considers science as a common good and that scientists must collaborate to advance knowledge whatever their countries or beliefs I greatly support the consideration for UNESCO we support all the considerations mentioned in the document especially consideration one the government's universities and research funders should support strategies and systems for the co-creation and sharing of knowledge that are called designed for and with communities they serve what does it mean for in Samoa.

There's a growing insurgence and recognition for traditional medicine that is recommended by traditional healers why has this been it is because there has been an increase in medical cases that traditional medicine has proven to help tremendously so now we know for sure that these traditional medicines work this is where SROS comes in we are presently studying the locally available plants and sea creatures and working with the traditional healing to understand potential of the plants and sea creatures then carry out scientific questioning and experience experiments so that the information is accepted will it be accepted if our organization writes the paper or would the organization require collaboration from reputed authors for it to be published is this research called traditional knowledge or should it be correctly called traditional science these are the questions what does it mean for small island development in states from the "Sid's" standpoint possible relevant scientific information available only in journals it could be beneficial to ongoing research and relevant educational programs is out of reach either the information is copyrighted held up in journals in developed institution or costly to acquire "Sid's" is looking for equality in the scientific research arena information that may be life-saving to others can be shared with the growing economies in "Sid's" national focus continues to be on policies surrounding trade and environment and lesser attention to science now I ask should there be national science hub made of science-minded individuals and for these hubs to communicate regionally and internationally should these hubs provide sound science policy advice that informs leadership well it seems that I have raised more questions than answers but as one professor told me you know you are on the right track when you have more questions than answers I would like to thank you all for your attention and for UNESCO for the opportunity special thanks goes to Nisha and the UNESCO team here in Samoa wish you all the best and be safe

Discussion:

Rajendra: Thank you Dr. really appreciate your views Nisha would you like to say something at this stage.

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Nisha: I just want to also acknowledge that among the attendees present from 14 different perspectives today we have a few professors like professor Peter Lockhart who is the chair of unit twin on science technology and innovation which covers the messy university USP and nus we also have Ms. Angela Joachim permanent secretary of ministry of education heritage and arts of Fiji I see professor Elizabeth Hollande from Tongan government of course our dear Lucy is there but we also see Tanya Lakula so there are quite a few esteemed accommodations researchers online and two had to leave because of poor connection I have their questions so if it is all right with you maybe we can invite some of our attendees to share their observations and not just move in a question and answer format.

Rajendra: We can do that yes I also saw them and I wish to really hear the views as well so if anybody would like to really speak especially you know the ones that you have mentioned just now I think we are not here to really defend or take against one another but to really try and see how we can move forward so I'm sure honourable minister Dr. Reddy has mentioned some very practical issues that even I faced in my previous job and I think a lot of government civil servants face as well so it's not something new but of course there has been progress in various areas and to also mention seven things that I think we need to consider so I'd like to know open the floor for anybody who wishes to make commented said not really challenge but if other best express I've seen there's from Lucy Maula Mafi of Tonga the secretary general of the UNESCO national commission office so she has got a comment there as well so if anybody has read that probably you wish to take them

Nisha: Please we'll come back to this question but let's invite Professor Holland or Professor Lockhart if you would like to make any observation based on what has been discussed.

Lockhart: Oh thank you I'd like to say I've enjoyed very much the presentations and I think the idea of open science is a wonderful idea and what I personally don't know though is what are the institutional barriers that that need to be overcome you know I'm a professor in a university I'm well aware of the competition there exists between institutions for example New Zealand tertiary institutions but I'm not sure what it would take to initiate a program of open science I think it would be so good and that we could greatly sort of strengthen a network of academic collaboration if we could more freely share information and so I would I personally need to better understand the barriers for that but I would be interested in working towards trying to overcome some of those barriers perhaps some of the other speakers may have some thoughts on how you would begin to bridge that the issue of or deal with the issue of inter-institutional competition and does the is it not possible to still share information and institutions still you know seek to be competitive in that they try and attract students competitively but perhaps we could still manage a program where we share information more freely than we do so I'm intrigued by that issue I don't know enough to really comment on what the barriers are but I might I would very much like to engage in discussion about that and contribute if there's anything that I could help to do so thank you.

Nisha: Thank you Professor Lockhart Angela Joachim permanent secretary from Fiji over to you Angela.

Angela: This is Angela Joachim I'm still at USB until next week but I just wanted to yeah make a few points the first one is most of you should be aware and I'm sure you are aware that there is a pacific islands university research network pyro that was set up back in 2012 with the idea to for the universities in the pacific actually currently test 13 universities as members from within the pacific to do the kinds of things that some of the kinds of things that we're discussing today so I think there is currently a mechanism which could be utilized a whole lot better in terms of sharing resources which the honourable minister talked about if we can just talk about Fiji yes it is a shame that universities don't collaborate as much but I think that's a discussion that needs to be held because as a government that funds the three universities there's no reason why the government may want to insist I guess on putting its resources where it's most effective so that's something that I think we need to discuss in Fiji and see how we can do that but I am very aware that those universities that don't have resources are critically at a loss in in terms of having this kind of resources which is not right so I just wanted to alert you to the pion which may be something that we should probably look at a bit more closely to see how we may use that as a mechanism to get university together.

Nisha: Thank you very much Angela in fact it's very good point that you mentioned Byron it's a network that UNESCO was instrumental in its formation and we tried to have it went a bit quiet for a few years and then again picked up from 2017 and of course now has picked a pace and definitely it's a mechanism that we should look at we also had hands up from two of our national commissions let me first invite Lucy if she would like to make her point now she had a question for honorable minister Reddy Lucy Maula Mafi from Tonga.

Lucy: Thank you Nisha yeah I was just commenting on the presentation by enroll ready on the fact that there's so many research findings and theses that are sent to our governments but we're not too sure how much of it is read or put into practice to influence policy development in tonga's case there's a perceived assumption that the study of science is declining or students are losing interest and perhaps we are thinking of looking into the curriculum and to see how relevant it is and also probably one important issue is some career days for high school students maybe not to leave it until the end of the high school cycle but it would be better to do career open days at the beginning of secondary school so that it will facilitate students to make a choice on what career path that they would follow in science there seems to be very little understanding of science I think it's taken to be general science but students should know more about the different disciplines and what career they could do along those disciplines and I'm also talking about our proposed science and technology innovation policy which has been stalled for some time I think this is mainly due to the just the work overload of the coordinator there's a lot going on in ministries in china relevant to science but just getting the policy to be finalized and adopted it's taken longer than expected.

Nisha: Thank you Lucy and before I ask honorable minister ready to respond to it and also Dr. Tawati may consider pointing out I'm going to read out a question which is from one of the attendees who could not stay connected due to the poor quality of internet and the question was specifically for honorable ready it is what steps the government may take to reimagine and redesign education systems not just at the school level but also at higher education level and research in science as a way to create a supportive environment for open science so I think Lucy's point and this question have a lot of similarity over to you honorable minister Reddy

Reddy: Thank you Nisha, Lucy mentioned about I mean the issue that I raised that the output that we are creating of the output that has been created the knowledge that has been generated created at the university level that is not being passed on to the policy makers is I'm glad to see that tonga is making some effort in terms of getting the thesis to the to the policy makers obviously not all ministers and policy makers would read the whole entire thesis though so what I suggest would be that you know what you need is a simple you know a couple of pages of simpler version more palatable to policy makers on the research findings so that will be a good start I see feature articles like in Fiji we see feature articles on key topics being written by academics in the newspaper which is a very good initiative academia from USP and FNU university Fiji are doing that and it is it's a simple language digestible by most of the people the policy makers as well as others out there so that is a good thing again seminars panel discussion public lectures debates you hardly really see any debate I have not seen I know when I was in USP I engaged in with in the in debate with the professor of economics said oh sorry when I was in the venue the last that's the last debate we had I engaged in a debate on the minimum wage with a professor from USP and that's the last debate formal debate chaired by another deputy vice chancellor at FNU I was at FNU and there was this professor of economics at USP and he opposed what I had proposed I said in email and the email was circulating then I challenged him I said look let's have a debate public domain and we had it at a major largest lecture that happened it was full I mean you know let's have that uh thesis and research article get a different simpler version and pass it to policymakers pass it to our executive the public secretaries you know and no look I mean dump it on us you know and let us then say oh enough you know we got enough now.

The other question that Nisha posed about someone said that what can be done to get universities to give value for you know in terms of assisting governments and policy makers go back to the grant agreement the universities are being provided with grant by the government relook at the grant agreement and say what kind of output you expect from the university so for example you know we're giving so much more money to universities but again we are we have to hire consultants to do research for us I think we can built in into the grant agreement that you know universities should uh provide us with the list of expertise they have and the kinds of research work they can do for us rather than us spending the money again giving the money to someone else so they can do it in their own university time which we are giving grand money for and we here there you go the university can say this is so how meaningful we are so get back to the grant agreement and that's where we need to give details about uh what we expect from the universities in terms of assisting us in political policy making in terms of you know knowledge creation the kinds of research we want to do and we want and of course university academics should not be tied to doing only that kind of research which I would suppose but this is the kind of expertise we need and universities must hold this expertise universities these are the kind of areas that we want more issues to be done and secondly in terms of what kind of skill sets that we want to see universities you know is devoting more resources so that because these skill sets are difficult so the grant agreement should not be a static document the moment is a static document written sometime back the ground agreement should evolve over time and the output should be relooked at you know every second third year so that you know universities remain relevant in terms of and delivering onto what we are paying them for thank you.

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Nisha: Thank you honorable Reddy we have one question in writing and a speaker who from Solomon Islands Christina Buccolo Christina would you like to go with your question for the panel please Sarijit or Niharika if you can please put Solomon Islands as a speaker so they can speak.

Christina: Hello Nisha can you hear me?

Nisha: yes we can hear you it's moving Christina please go ahead so I think we have lost Christina the question in the meantime I can ask the question which is there and this is for Dr. Tawati is what is his perspective on technological advancements and use of technologies new technologies like artificial intelligence or internet of things to be used in promoting open signs with regard to traditional knowledge in particular the medical know-how passed on from generations so Dr. Tawati you may wish to just spark this question because I see Christina online.

Tawati: Thank you Nisha thank you Christina for the question this is how Samoa the way we're doing the research right now is we are looking in towards the future and we're looking at to the past at the same time now I've mentioned this wording quite a few times and what it means is we're using the latest technology well we're looking at we have a very thankful for having quite a bit of molecular equipment with us and some analytical equipment of us we are using these equipment to actually test what the local traditions or local science is coming up with and it's actually complemented each other and I think this is the way going forward is because a lot of the science they need a scientific justification let's so we're aiming to put it together or we are doing it right now is we're getting the local knowledge we're working with them but we're really explaining to the person that by no chance we're trying to exploit you if you have any concern whatsoever then we cease the discussion and you know we make sure that you're very comfortable what you're sharing with us now we always tell them to look into what happens in one year 100 years I mean how can we how can we move forward uh is information you have is it going to be lost can we combine it with someone some other traditional science that's out there can we work together we're looking at the three main things that trust is our top priority right now is cancer research type 2 diabetes research and anti-microbial research and all of this we're working very closely with the local healers and they're providing a lot of this information some from a scientific point of view it might be skeptical it might be questionable and this is why I'm saying why don't why don't we combine the different scientists and make the information available we don't want to hold it and then find out you know our neighbor or something having problems and we're sitting with the plants or the some organism that could be of great help I hope this tries to answer the question but you can really ask it again if I didn't really answer it completely thank you.

Nisha: Thank you very much Dr. Tawati I see that Solomon island's colleague has not been able to join back and I do not see any hands up so I can sort of hand back to Rajendra because I practically hijacked the discussion session from him.

Rajendra: It's okay you are both so it's fine I have Dr. Tandon wanting to comment on some of the issues that have been raised up so Dr. Tandon do you have the floor sir.

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Tandon: Thank you very much Nisha and Rajendra for facilitating this fascinating conversation I have just one important point referring to what minister Reddy was saying you know when we talk about other stakeholders and this is where policy makers can also play a role as Professor Reddy was explaining this is where as Tawati was saying you could co-construct knowledge with local healers difficulty has been that in training of young researchers in science we only train them to look at the discipline and the research question emanating from their supervisors and domain knowledge that their supervisors have instead of looking around to society and then framing a research question in partnership the policy uptake research shows that when research is framed in consultation with policymakers national or regional then the findings have a meaning the second part that we need to train our researchers in is how to disseminate their findings to non-scholarly journals like project Reddy was saying many of them are not even trained they don't know how to share findings with the same community from which they collected data because they only are trained to write academic papers so I think small steps can be taken and a collaborative framework can be developed as professor radio saying to identify research questions over the next two three four years and students would actually like to contribute to fight creating new knowledge which is actionable which is actionable by communities actionable by policymakers actionable by government so I think there is a lot of value in looking at framing of research in collaboration thank you very much.

Rajendra: Thank you Dr. Tandon now I'd like to open the floor to anybody else who wishes to speak or say something to at this stage I think we have already gone our time so before we wrap up if there's somebody else who wishes to speak at this stage I'm still not able to get Elizabeth of professor Alice but to she's online somewhere but she's been muted somehow I don't know whether we can open it up for her to speak or anybody else that wishes to speak at this time.

Nisha: I see Tanya Lakula's hand up Tanya would you like to go yes Tanya yeah.

Tanya: All right can you hear me?

Rajendra: Yes sure.

Tanya: Okay yeah thank you for the coordinators for coordinating this meeting and I just wanted to join the discussions I think all the speeches that's been delivered has contributions to the topic I've been trying hard to uh follow and to see it from uh my point of view so the decolonization of knowledge and open science I think the traditional knowledge is a major topic on this on this thread but from my experience in tonga traditional knowledge are there the science of those knowledge is the gap so the people in tonga were now educated in science can we structure those to teach traditional knowledge and demonstrate or prove to the elders with those knowledge how true it is so in my experience with my background going around consultations since 2002 for the 18 years now elders appreciate how I can demonstrate or describe the science behind their original or traditional knowledge but to decolonize our knowledge or the pacific knowledge from the western knowledge that we have been tied to for many years I think the ties will always be there because the traditional knowledge is passed through verbally and from generation to generations on demonstrating but through the western knowledge the academia they are being knowledge is transferred through writings which I think writing and reading is something that needs to be incorporate more or enforce enhance more in the pacific so that we are able to

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translate our traditional knowledge into paper and that can last for more generations to come but I appreciate discussions today on how we can merge the two and how new scholars can come up and merge with the communities to extract their knowledge so we are on the right path there it's also been noted by my colleague Moala the needs to promote science in high school and all levels and part and parcel the these there needs to be more physical activities in the in all level of education early childhood and also for through uh primary school and high school more outdoors activities rather than just focusing on indoors we can have more practical I think more practical will enhance more that the science and the scientific capability of students rather than having just students who are smart in picking up through reading we can also encourage and expand the number of uh of science talented uh students through practical work in the outdoors but going back to the topic of science and decolonizing knowledge I think you can never decolonize but you can try to merge the western knowledge and the traditional knowledge so these knowledge can be validated locally and also internationally but there's certain level of decolonization and being independent knowledge for the pacific or then being fully independent but they should we should find the commonalities and the ties and just maintain it as pure knowledge rather than having specific knowledge and western knowledge but it's good to have experts in the pacific to recognize them for what we know and what we have learned from our ancestors so I'm speaking in in supporting decolonization but at the same time we should find the two being tied and being linked yes but sorry but thank you again agenda for inviting me to join the discussion.

Tawati: Thank you I just wanted to comment before we uh start to close is Samoa has a slightly different set up between science and policy the government of Samoa or the policy makers because SROS is a government-run research organization it's the policy makers that tend to instruct us of which area we should look into because all the different parts of the country are shall I simply put kind of complaining or some issues are being raised and they're going to the policy makers and this is when the policy makers then give us directives and said look into this area there needs to be an expert there's over production here look to some value-added products some issues are coming with these products look into food safety there are ways that how can you increase production for something is our water still safe is the front of the sea front is this still safe for children give us a report so this is how we're doing as we work with our projects we're working with the existing mandate we have and in addition directly with the policy makers and that's quite as good for us because it means that the work that we're doing right now is needed and they're actually waiting for it so but there's no they don't know this is the good thing about they don't put pressure on us to say well we need it right now because we try to explain to them this is a science and the results will come when the results come don't put pressure on the results because as we know that's not a good thing been a really nice working together of the policy makers and our organization I just want to point that out because it's slightly unique in a way thank you.

Rajendra: Yes, unique but also pretty ideal I think hunting many countries can achieve that kind of arrangement I think our universities and they are pretty much independent to carry out whatever they want to do as long as I think the money that is provided by government is spent in the right for the right purpose is related in the agreements okay is there anybody that wishes to speak at this stage.

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Nisha: Rajendra I think wanted to respond to lens point and then Jutta had his hands up here I think we should go to Julia I have commented on it in the interest of time all right so Jutta would you like to ask your question please if he has disappeared and there is no further question probably Rajendra, we should try to wrap it up.

Rajendra: Yes, I think Dr. Tandon do you want to make any final comments remarks before we finish especially in terms of outcome of this particular session and okay, we should be heading for after the consultations today.

Tandon: Okay I'll just make a quick comment on that we will produce a short quick report out of this share it with you and Nisha to take you know take a look at it and improve it any comments all the 11 webinars that are going to be completed by third week of November these each webinar has its own report that have been shared with the regional UNESCO commissions as well as with the national governments of the region we will do the same we will request you to share that report with your various national governments of the region but we will also synthesize those 11 reports and produce a document for UNESCO Paris and the advisory committee which Dr. Shahbaz referred to in his comment there is an advisory committee on open science and we hope to share that with them before Christmas first week of December so that they can mull over the voices that are coming from the region we expect about 700 plus new voices through these consultations around 11 webinars so that is what we promise to do and we will share it with you both the regional as well as the global synthesis by early December regional one next week thank you.

Rajendra: Thank you very much all of you Dr. Trenton I haven't really discussed with any of the panelists or even with Nisha but those that have attended today may have some comments to offer some views I think we should open to them for a few days probably you know seven days or so or two till end of next week so that they can provide any comments especially I'm hoping that our academic side especially professor Elizabeth holland and others that even from within UNESCO that have not spoken from their various sectors now points of view so they could probably comment and then we'll sum it up and then a report will be produced by Priya as mentioned by Dr. Tandon, Nisha is it okay with you very much Rajendra I think it's good to close now yes yeah okay so without me commenting anything I think we have taken quite a bit of time there have been quite a lot of bills and ideas and even suggestions made still I'm trying to really digest all this and especially where our traditional knowledge sector falls in and how we can capture and then make it all freely available comments and then close this particular session thank you.

Nisha: Thank you Rajendra just as a matcher of closing a few observations and comments from me before I begin though I would like to thank honorable minister Mahindra Reddy Dr. associate and our colleagues from various pacific countries who are with us and some of us who dropped out because of connectivity issues I thank everyone very much for their active participation it was a short notice and also to the colleagues who have stayed online listening to the conversation in particular to academics from universities in the pacific who have shown interest and as we can see from the number of questions that are coming up this despite interruptions and connectivity issues that the interest is there probably we need to plan it together with our stakeholders as to how best we can convene virtually again going through the discussions we heard today on the

topic of open signs clearly all the panel members saw value of open science in helping enhance the quality of research maximizing value and potential impact of scientific research on society and as we can see from some of the comments there's a lot of interest in scientific research to the extent that it contributes to policy making or to public good honorable minister ready highlighted that dialogues like this are needed to bring policy makers research institutions academia also the private sector to critically consider standards for evaluating scientific research what good it is serving as well as the emphasis on research institutions to pursue common good and I would say these discussions are also needed to understand what professor Peter Lockhart said is how the common good can be realized and how science communication can involve citizens and science does not remain a mystery not an enema rather it becomes part of everyday practice of a society.

We also heard that open science sometimes raises doubts in particular in regard to traditional knowledge but it is not always for a reason like this was highlighted in our speaker's comments that there is a resistance to open science because it takes away secrecy around scientific knowledge and as social beings we are also conditioned to believe that what is common is not necessarily of value so these doubts may be genuine may not be genuine but they need to be addressed and we need to transparently consider research integrity and differentiated quality measures for different types of research because we heard about scientific research we also heard about social sciences and clearly when we say open science the interdisciplinarity has to come through as well another important point made by Dr. Tawati is that science is not just research coming from institutions science is also spread in oral traditions and as Dr. Tandon pointed out in linguistically diverse societies which do not speak modern international languages like English or French or Spanish so while this webinar is closing I believe our task of working with the national stakeholders for the implementation of open signs is in front of us we need to consider given specific context and given distances we have that what elements will constitute open science ecosystem for this vast region on this planet earth usually open science ecosystem comprises of identifiers metadata issues around vocabulary citations repositories and other forms of ICT's that form the data infrastructure how it would look like in the pacific and given Pacific's small economies or a small scale of economies this ecosystem cannot be very rigid it will have to remain adaptive it will have to be open to new standards or need for new standards at the same time like everywhere else it must be prepared to respond to emerging ethical dilemmas.

We heard a few suggestions one came from Dr. Tawati about national science hubs connecting to one another to produce regional good and we also heard from Dr. honorable minister Reddy about the need for coming together for regional good production so science has to serve the agenda of national interest and I would define national interest as equitable national development which is inclusive diverse and participatory in nature and probably i would be corrected by many others but let me not go into that I think the point is that irrespective of a scale of economies research still requires policy in the case it is open science policy it will not mean that it doesn't require research integrity or measures of research integrity and open science as Dr. Tandon pointed out is highly dependent on participation at individual and community level and also on a culture that is genuinely curious open and question so this brings me to the last point which was discussed today by the panel and which was related to science education and open science skills which are essential for open science to work while we did not have detailed discussion on this we did hear a bit about ICT's and data literacy knowledge curation and harvesting and use of

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existing mechanisms like Byron so in the closing I would like to thank by our key speakers honorable minister Reddy Dr. Rajesh Tandon Dr. Tawati also my dear colleagues Shahbaz who is also a professor at the Australian national university and Rajendra who I keep remembering is the weatherman of Fiji for this enriching session and I apologize to those attendees who wanted to speak but could not speak I wish we could do something about improved connectivity and in the end I want to thank the two co-chairs their institutions Priya and the Victoria university the Canadian Victoria university not the New Zealand or Australian one I specifically also thank our Canadian commission for UNESCO for acting like a stalk that dropped this baby on us we fumbled a little bit but we finally managed to get through it and definitely we are going to follow up so thank you everyone for your participation for a very uh enriching session and I wish everyone a very good evening here in Samoa lava Vinaka Shu kriya thank you.