

AWP Partner Webinar: India Update

Meeting Notes & Transcript

7 April 2017

Table of Contents

1	Meeting Notes.....	1
1.1	Opportunities for AWP partners to work in India.....	1
1.2	How to engage with India in consulting and construction	2
1.3	Support from Austrade & AWP.....	3
2	Webinar Transcript	4

For more information:

Vijay Kumar

Water & Environment – South Asia

Australian Trade and Investment Commission (Austrade)

T +91 11 4575 6226

vijay.kumar@austrade.gov.au | www.austrade.gov.au

Grantley Butterfield

Manager, Australian Water Partnership

T +61 2 6206 5237

grantley.butterfield@waterpartnership.org.au | www.waterpartnership.org.au

1 Meeting Notes

Friday 7 April 2017 (Canberra/online)

Vijay Kumar (Austrade, India) provided background on opportunities for engagement with India to AWP Partners (presented live to 35 participants from 26 partner organisations, and distributed to all 135 partners). This webinar mainly covered opportunities in rural water and river basin management, noting that there is a significant parallel stream of urban water supply and wastewater projects.

India has a dual challenge of 1) keeping up with the growing urbanisation as well as, 2) growing enough food to feed an increasing population. It has started an ambitious program of water reform in about the last six months with support from the multilateral agencies. Australia has a very good reputation in India as far as the expertise that is required to help India fulfil its objectives.

Key water reform issues in India:

- Competition for water, esp. between irrigation and urban
- Flooding
- Water quality
- Reduced environmental flows (esp. for flushing pollutants from waterways)
- Salinity in groundwater (coastal areas)
- Water use efficiency in irrigation
- Unsustainable groundwater use.

1.1 Opportunities for AWP partners to work in India

- National Hydrology Project (NHP) –
 - Basin planning for 20 basins, approximately \$5-6 million per basin project, for the Central Water Commission.
 - Mostly less than \$1 million studies for various purposes, as determined by each state offering these. These will be very specific and will be on World Bank and India WRM websites in May.
 - A topographic survey with a budget of \$60 million, with tenders expected to be advertised by June-July.
 - Hydrometeorological network installations for the State water resources department, starting around September.
 - Possible capacity building for the Central Water Commission.
- **Maharashtra Climate Resilience Project (POCRA)** – to help farmers adopt technologies and improve groundwater use (e.g. via MAR, rainwater harvesting or any other solutions), starting after May. It is not clear how much focus will be on water, rather than agriculture.

- **National Groundwater Improvement Scheme** (NGIS, focused on water quantity, from May 2017) and **National Aquifer Mapping Project** (focused on water quality, underway) – tenders will be offered to put 21,000 observatory bore wells in place across India in hard rock, soft rock and alluvium aquifers. Once these bore wells are completed, they will have a consulting assignment to retrieve the data and develop a first layer of the aquifer map as a foundation for the National Groundwater Improvement Scheme. Work on an institution and legal framework for groundwater management across the states will follow later.
- **Jammu and Kashmir project (Jhelum and Tawi Flood Recovery Project)** – addressing critical infrastructure for disaster management, a flood warning system, disaster management capacity and an emergency response system. Already underway with two EOIs from this project in February and January, each valuing at AUD\$4 million.
- **Dam Rehabilitation and Improvement Program (DRIP) Phase II** – \$1B to improve the safety and operational performance of 4,500 existing dams across India, and expected to kick off in June-July. Mainly of interest to asset managers and project managers.
- **The Assam Flood Management Plan** – modelling and planning across the Brahmaputra Basin to protect riparian residents from flooding and boost irrigation water. Possibly from September or October.
- Other projects mentioned but not explored in detail were:
 - National Cyclone Risk Mitigation Project Phase II
 - Watershed Management Project
 - National Ganga River Basin Project.

1.2 How to engage with India in consulting and construction

- Look for partners within Australia first so that you can equip yourself with major parts of the project you aim to tender for.
- Austrade can help you link up with Indian partners in India, which is the best way to achieve results in projects.
- Partner with either Indian consulting firms or multinational firms with Australian and Indian offices. For small firms, a proven strategy is to form a consortium in Australia first and then approach an Indian partner to balance out the cost in a tender to increase the chance of winning the tender. If forming a consortium, Austrade can help you manoeuvre through the process of submitting tenders and identifying the local experts. Most tenders will be available around QCBs (quality cost-based methods), and technical competencies are weighted 80 percent against finances 20 percent in evaluating tenders. So, by focusing your solution on the technical expertise, to score high on the technical marks means that even if financially you are not the cheapest, you increase your chances of winning the project.
- Preparation is vital to success in India. You need a capability document customised for the different projects that you are targeting in India. You must highlight your key contribution to

the project proposal and have a project description sheet covering project briefs, approximate cost, and the client name. This allows potential partners to assess you regarding risks. Indian clients will focus on the quality and scale of work you have done. A description of this will help you profile your company and get a good score going forward. India has a concept of a 'project completion certificate'. This is a letter from a client saying that your firm has done X project having scope XYZ and approximate cost, which can normally be requested from the client later on as well. Another option considered equivalent to the completion certificate is to attach a copy of your work contract along with the payment proof showing that you have done the project.

- There is an ambitious schedule for rollout of water projects in India, but there can be 6-12 months slippage in timelines for the initiation of projects, which should help those wishing to tender.

1.3 Support from Austrade & AWP

- Austrade and the AWP will provide a range of support for partners who wish to take advantage of opportunities for work in India.
- As information becomes available, updates will be provided via the AWP news feed on upcoming opportunities, EOIs, tenders, and the information will also be posted on the 'India opportunities' section of the AWP website (under development).
- AWP partners with requests, questions, technical enquiries, etc., about intelligence or opportunities related to water projects in India should contact Austrade directly.
- Austrade can help you partner with other organisations, either those already working in India or other Australian companies wishing to engage with India. Austrade has good connections with the big multinationals from India, the Netherlands, and the USA. They work with the World Bank and national, state, and local agencies daily and so have access to information and people from these.
- Austrade can help you navigate the tendering process regarding problems in the submission process, information on documents you need to submit, and following up with clients.
- AWP will share partner experiences (esp. success stories) of working in India and possibly draft some principles about how to deal with, for example, the legal complexities of working in India in terms of taxation arrangements, project offices, etc. as suggested in the webinar. This information will be shared online through the AWP partner portal and may form the basis for an event (e.g. a webinar or roundtable) if there is demand for it from partners.
- On behalf of AWP, ICE WaRM will attempt to coordinate that and liaise with Austrade about a capacity building project as part of the NHP, then opportunities for partners will be shared with the whole partnership.
- Austrade can help AWP partners who are experiencing delays in payments for services rendered.

2 Webinar Transcript

Vijay Kumar, Austrade Delhi: Good afternoon everybody, those online from the systems and those sitting in the room. I am Vijay Kumar from Austrade. We'll run you through a quick presentation about giving you an overview of the projects in India, and various upcoming opportunities within those big projects, and how you can look at tapping into this opportunity. Just a word of caution before I start – so I don't want to bother you guys with the big numbers of billion, million dollar. Yes, in India everything scale-wise is quite big, but there is enough room for big players to small players to get a part of the larger cake that we have on offer in the Indian water resource management sector.

[0:00:45]

Just to give you a quick overview of the India water resource potential. Many of you may have seen this many times if you've travelled to India and met with various stakeholders. So, India has got around 20 major river basins. There's a couple of infamous ones: the Kaveri – which you may have heard about the disputes among the states fighting on the river water – among three states, Tamil Nadu, Karnataka and Kerala. So thankfully to resolve the dispute, there's been very good developments in water reform as far as India is concerned – a dispute resolution tribunal and different tribunals for different river basins. So, there would be one single river tribunal which will take care of all the river disputes, and the order of the tribunal will be final, it cannot be challenged even within the Supreme Court of India. So that's a big development which happened last month, February 2017.

[0:01:45]

Just to give you an idea of the source – we have water availability (20 basins), but, as per the research done by International Water Management Institute, the demand is going to go up, and the pressure on the water resource is going up mainly on two factors: irrigation and growing urbanisation, which is obviously trying to get a pie from the irrigation part. So, India has a dual challenge of 1) keeping up with the growing urbanisation as well as, 2) growing enough food to feed the growing population. So that's a dual challenge which, thankfully, India has moved on to a water reform journey in the last six months or so with support from the multilateral agencies as well. That's where we see Australia as a very important player. We do have a very good reputation in India as far as the expertise that is required and being sought from Australia, although there is a competition from other countries which are also trying to knock us off. But we do have very good reputation particularly on the upper end of the water value chain like basin planning, flood modelling, forecasting kind of expertise. And many of us have seen the delegations visiting to Australia from India, I think the last 5-6 years, many senior delegations also come and they're quite aware of what the Australian water industry can offer to India in this journey of water reforms.

[0:03:20]

Some of the quick key issues in the water reform management sector that we see is the increasing competition I mentioned. Recently we saw a few disputes around the Kaveri river basin states fighting over the water uses. There's been increasing concerns of flooding, for example, we saw

heavy floods down South in Tamil Nadu almost a year ago, which led to stopping of all the public service's including airports. As well as we saw in late 2014 heavy floods in Kashmir. Just to give you an idea of the flood, that particular area in Jammu and Kashmir receives an average rainfall of around 70mm, but in that particular one week they got around close to 600mm of rain, and that led to a massive flooding issue with huge property damage across the states, mostly covering 22 districts of the Jammu and Kashmir state.

[0:04:22]

Water quality is a little bit of a challenge in India, there are regulations in place but it's more about monitoring the implementation of those regulations and major issues of water quality deterioration is industrial pollution, urban sewers going untreated into the river and water bodies which is leading to issues of degrading water quality. And the other main challenge for degrading water quality is also the reduced environmental flow in the rivers. That's why the dilution which used to happen in the past, or the pollution coming in, is not getting the proper dilution and that's also an important factor contributing to degrading water quality in our river bodies. Especially on the coastal areas, the east coast side primarily Orissa and the other states they are suffering huge issues of salinity in the groundwater, which is basically coming from the coastal areas and hampering the agricultural productivity. Although, India has been propagating drip irrigation and other measures to improve the water use efficiency in irrigation areas, but there's still a long way to go. The reason being free availability of electricity and that's why flood irrigation is still common in many areas. We are dependent, on average across the country, almost 60 percent of our water demand comes from groundwater, which is used for agriculture, even for drinking purpose in urban areas, and also industries also use groundwater uncontrolled. We welcome what is happening on the groundwater reforms front.

[0:06:10]

Just to give you a quick idea, to date as of now the water resources project in India is valued at around \$5 billion projects, mainly World Bank funded projects. I have not counted the ADB and JICA funded project, which is primarily focused on the urban water supply front. These are projects [listed on the slide] which are related to integrated water resources management covering issues like the cities and the irrigation primarily.

[0:06:44]

I'll be covering in my presentation a few projects – the most important one is the National Hydrology Project, which is a key focus area for Australia with involvement of AWP and a couple of experts from AWP already working with Ministry of Water, Central Water Commission back in India, and through the World Bank, on helping them in technical issues and giving technical inputs for the National Hydrology Project. We've also been asked to be part of the capacity building component of the National Hydrology Project, which we will see later on as you move on through the presentation.

[0:07:23]

There is a new project which is about to be sanctioned that's called the Maharashtra Project on climate change / climate resilient agriculture. This has been triggered because this particular state of

western India is prone to droughts. You may also have heard in the news there has been a lot of farmer suicides in this area because of droughts, and we also saw a couple of power plants closed during drought season because of non-availability of water. So, that leads to overall environment and infrastructure crippling in this area. Hence, this project was conceptualised by the State Government of Maharashtra with funding from the World Bank, covering around 4,000 villages, to help them improve and tackle issues of climate change and address the bigger droughts and how they can cope and design agricultural strategies, including aquifer recharging to improve their livelihood options that's available to them.

[0:08:24]

As I mentioned, Jammu and Kashmir up in north India, they saw a huge flood in the latter half of 2014 primarily across 22 districts, and that's where they approached the Government of India, which in turn approached the World Bank, and they sanctioned a project to address the flood issue and disaster recover in this state, primarily focusing on two big rivers Jhelum and Tawi entering Jammu and Kashmir. Since the dependency on the groundwater in India is very high, as I mentioned earlier almost 60 percent, the Government of India is already running a program on national aquifer mapping and management. That's where the World Bank has further added on to the existing project of the Government of India with \$1 billion of funding that will go primarily towards addressing the institutional reforms in groundwater management and monitoring, and also to support the ongoing aquifer mapping project for all of India. This particular project – the new additional funding from the World Bank on groundwater – will primarily focus on seven states, mostly in the central part of India where groundwater is exploited. We are in the position to reach a stress level. If you go by the figure of the Government of India, it says that by 2025, there will be a demand-supply mismatch in these regions, and that's why it is very important to look at the groundwater reserves. This also has a component of managing aquifer recharge which we will see later on.

[0:10:03]

Another big project which is yet to be approved, but to be expected within a couple of months from the World Bank, is called Dam Rehabilitation and Improvement Program (DRIP) Phase II. Phase I is running with about another one year for it to go. It is focused around 261 dams in India, helping them with the dam break analysis and doing the complete assessment, and also improvement through some of the construction work and repairing of these dams. DRIP Phase II is all about expanding the project across 5,000 dams across India, and moving onto improvement program to an asset management mode to build in-house capability from an asset management perspective. Then there are a couple of other projects like the National Cyclone Risk Mitigation Project Phase II, Watershed Management Project, and then the National Ganga River Basin Project, which is the most publicised and well-known project which is lagging behind. Out of \$1 billion given by the World Bank, hardly \$200 million has been spent to date because of many reasons, including the political reasons, which present another key bottleneck in implementing this project.

[0:11:20]

So, I'll take you through a couple of these important projects, primarily the National Hydrology

Project. This is one of the benchmark projects as far as India water resource reforms are concerned. The idea is to have complete water resource management across India helping all the States. India saw hydrology project Phase I and Phase II in 2005-2009, which was implemented across a few states in south and western India. Now this NHP (National Hydrology Project) will be implemented across India. The idea is to have real-time monitoring of both surface water, groundwater, and precipitation data coming in from states and then merging into something called National Water Information Centre, which will have real-time information of all the data coming in. This is a \$700 million project with 50 percent funding coming from the World Bank, 50 percent from the Government of India. No contribution from the states – that's a key point to note here. This particular model has been adopted so that it becomes difficult to get states on board and asking funding from them as well. And as we have in Australia, water is a state subject and it's a challenge to get the states on board in a project like this where there are always a couple of disputes in the states on the river basin. So, that's one of the major challenges, and that's where this formula has been adopted to have 100 percent funding coming from the Federal Indian Government rather than asking money from the State Government. This project has multiple components and I'll run you quickly through each component to give you an idea of what each component consists of.

[0:13:05]

So, the first major component is to get the data. Data collection is the biggest focus so that all the data field equipment which were installed as part of the National Hydrology Project phase I and phase II. But that was only done across nine states across India. And this will be across the complete range of India, from east-west and north-south. So that involves installation of automated weather stations, rain gauges, snow gauges, river discharge meters, water quality metering stations, hydrometer for groundwater quality levels, and then all the tanks, dams, and reservoirs will have real-time telemetry data coming in that will merge at the state level, and every state will have a State Water Data Centre, which will get this data that they will use for their own purpose, and at the same time, review the data at the National Water Information Centre. So, the entire structure has been designed in such a way that the data will be simultaneously relayed both to the National Water Information Centre, as well as to the State Water Data Centre. Rather than depending on the State to send them filter data which may not serve the purpose.

[0:14:20]

The second component of the National Hydrology Project is the National Water Information System, which is a key component. In order to enable that, the data will be coming from the Hydro-Met Network Station, which will be installed. It will also have data coming in from the district topographical survey which is about to be carried out. Funds have been allocated to do the survey of India. They have approved the consulting to design the tender documents, and they will also provide them. We have other more sensitive data which is only available with institutions like ISRO and national remote sensing laboratories in Hyderabad, plus the data which will be coming in on the various hydrologic modelling at the State and also at the Basin level, one of them we'll see has been floated.

[0:15:07]

The third component is more about the water resource operation planning of the National Hydrology Project, which involves Decision Support Systems for flood and water resource management of river basins; Irrigation operation management primarily around canal automation and water allocation for irrigation purposes. Groundwater management is a key focus area to understand the variation in the groundwater, and how groundwater is also helping recharge the river waters. Then there are purpose driven studies which are part of this – this will be primarily floated by State water resource departments, depending upon the issues in different states. For example, you'll have states floating issues in regards to sediments in the Himalayan River coming in on the eastern states. So they'll have their own sedimentation-based behavioural studies which they'll float separately.

[0:16:03]

So, these are the various components of the water resource operation planning part which will involve different studies. Which – probably, if you are from this field you know or you're more technical than me so you probably understand – these are the projects which will come up across different states within NHP. Some will be floated by a central water commission, and some will be floated by the State department depending upon their requirement. So, as I mentioned earlier, the National Hydrology Project is also, you could say, linked to the National Aquifer Mapping Project. Reason being, groundwater is a very important component. So data will also flow in through the National Aquifer Mapping Project which Central Groundwater Board is running in India.

[0:16:50]

Another important component of the overall National Hydrology Project is the capacity building component. Which involves, as part of this, they have initially thought of setting up three Centres of Excellence across India – one in south India, one in the western part, and one in the eastern part. The main function of these Centre of Excellence will be to address the regional issues and develop capacity in the region itself to address some of their issues going forward. As of now, the Government of India, Central Water Commission, and the key agency National Institute of Hydrology, is in the process of collaborating with universities and institutions across the world so that they have a good pipeline when they start sending people for training and capacity building. They are actually prepping the roadmap for that. These courses that they're looking at could be short-term courses (three to four weeks) and also longer term courses. In fact, one of the things which has been talked about in the meetings is to develop a two-year Master's program in Integrated Water Resources Management, primarily focusing on the environmental and social point of view. The existing courses that is available in India is primarily more on the structural engineering component, whereas they would like to bring the management angle into it. So, that's one big change in the training capacity building part which the World Bank and the Ministry of Water are looking at.

[0:18:24]

I will quickly run you through the different opportunities which have been floated to the National Hydrology Project. The biggest one is they are in the process of appointing a Project Management Unit at the Federal level. Three firms have been short listed. If you want to know the name, it's [inaudible], Eptisa from Spain, and CH2M Hill. Hopefully the results will be out by the end of May

who is going to be appointed as technical management consulting. The main goal of this PMU will be they will be the one specifying the equipment which will be installed in the states to collect the data with regards to hydrometeorology. This is a big bulk of the project, which will run for 8 years. Then, as part of the basin planning which will be done by the Central Water Commission at the macro level, we saw one EOI which was floated for three basins in one package – Krishna, Godavari and Mahanadi – which got closed in January. We expect at least ten similar packages to cover all the 20 river basins that we saw in the first slide for the basin planning which will be done by the Central Water Commission. So expect it to be out. Each package will be in the range of around \$5-6 million as per the design and procurement plan of the World Bank.

[0:19:41]

Then, as I mentioned, there will be purpose driven studies. These will be very, very status specific. Mostly less than \$1 million studies, which will be floated by states. States have already given their activity plan to the World Bank and Ministry of Water what they're going to do in the financial year 2017-18. So, we can hope the tenders or EOIs from the states will be floated by June or July once the PMC comes on board.

[0:20:14]

Then, for those people who are also interested in the topographic survey, capacity building and also hydro meteorological network installations. A topographic survey with a budget of \$60 million has been allocated as of now, which the tender is expected to be floated by June-July. That's what the expectation is. On the capacity building side, as I mentioned, Central Water Commission has already initiated discussions with universities and institutions across the globe. And for those who are primarily interested in hydro meteorological network installations, it's a big, big area, big budget project. This will be floated by State water resources department, once the PMC comes on board. So expect these tenders to be out not before September 2017, and then you have to keep track of each and every tender which will come. The main feature of these tenders for installation will be it involves installation and operation maintenance for eight years. The idea was to get quality equipment, not the low quality one, and have a responsibility of operation and maintenance for the next eight years, and an additional two years will be given depending upon the State's approval.

[0:21:33]

Then, the next big project, as I mentioned, is the Maharashtra Climate Resilience project. The idea was to help farmers who are fighting over the droughts, help them improve their farm income by adoption of technologies, mitigation in how they can address the issues of groundwater, and how they can help improve the groundwater level by more manage aquifer recharge or other interventions that is required, be it through rain water harvesting or any other solutions. This is a big project and very, you can say, early stage. So if you are interested, this is the time to be into the game, start meeting people, start meeting the stakeholders and present your capabilities. This does involve people who are also interested in the agriculture value chain market. Ideally, it's to help improve farmers' income and giving them a link into the market. But it is a major component of how you can use the precipitation water in helping them recharge their groundwater. The project is

expected to be approved by end of May – that will be spread across 4,000 villages in Maharashtra covering across 8 districts.

[0:22:50]

Then the Jammu and Kashmir project – Jhelum and Tawi Flood Recovery Project – this is 100 percent funded from the World Bank. No contribution from states, no contribution from Central Government. This has got various components, primarily to address and set up a disaster relief management centre in Jammu to stop the loss of life and damage to the property which happened in 2014. A majority part of this fund will go towards building up critical infrastructure, but also around having a flood warning system in place, having a disaster management capacity in place, and have an emergency response system. Everything has a budget, but obviously, it will go towards building infrastructure with regards to disaster management. Capacity building, of course, is part of each and every World Bank project, as you are aware of. We saw two EOIs from this project in February and January, each valuing at \$4 million Australian dollars. More projects may come up on early warning system and decision support system in specific, or for smaller sized ones, this feasibility study are completed as part of this project. We have seen interest from Australian companies putting EOIs for this.

[0:24:12]

Now, I will quickly run through the projects which are in the pipeline apart from the Maharashtra Project. So, the National Groundwater Improvement Scheme (NGIS) is a \$1 billion funding coming from the World Bank to support the National Aquifer Mapping Project. This will be focused primarily around seven states, but the rest of the states will be supported through the Aquifer Mapping Project which is already running across India. This project is primarily focused around having creation of an institution and legal framework for groundwater management across the states and this will have incentive base mechanisms to states. So, if states are good at implementing this, they will be incentivised by giving more funds to have better real-time monitoring of the water quality and water quantity. This particular National Groundwater Improvement Scheme is more focused on water quantity. Quality is already being taken care of by the Aquifer Mapping Project. Again, this is a project in the pipeline. This will be expected to get approved by the end of April, but I'm thinking of more leeway and hopefully by May it will be approved. So, the components of the Aquifer Mapping Project which is already running will be tendered very shortly, although already been tendered a couple of projects. As part of this Aquifer Mapping Project the Central Ground Water Board, the key known agency who monitors and manages the groundwater resources in India, are going to float tenders to dig up 21,000 observatory bore wells across India. These bore wells will be 200 to 300 meters deep across all the three kinds of aquifer that India has got – hard rock, soft rock and alluvium aquifers, that's where it will be done. We saw a few tenders coming in and these tenders will also be floated going forward. Once these 21,000 bore wells will be completed, then they will have a consulting assignment to get data from all these bore wells and develop at least first layer of the aquifer map which would be further improved in the National Groundwater Improvement Scheme going forward.

[0:26:26]

Then the big project as I mentioned – phase II \$1 billion project – the focus will be more on improving the safety and operational performance of selected existing dams across the participating states. It is expected all the states will participate and they cover around 4,500 dams across India. The idea is to have rehabilitation of dams and associated infrastructure and institution capacity building, and focus has been given more on the asset management. So, if you have experienced an asset management project and you'd like to intervene now, we are happy for you to profile yourself with those key stakeholders, including Central Water Commission and the World Bank in helping you start sharing your expertise in that field. This project is expected to be online by June or July. We do have time at hand and this is going to be a big project which will be thrown up. The biggest consulting that will come up in this one is the project management consulting, which will be around \$20 million value. So that's something to keep a look out for.

[0:27:32]

Then the two smaller projects. Again, the pipeline is expected to be online by July or August latest. Assam Flood Management Plan which will cover the Brahmaputra Basin, they want to develop. Although there is work going on the macro level for the basin planning for the Brahmaputra (moving slowly), this is particularly around Assam and neighbouring states on having a complete basin modelling planning for the Brahmaputra River. The Brahmaputra River, as some of you may know, is known to flood and is one of the most unpredictable rivers which follows different paths and leads to small rivers flooding, and erosion of some of the villages overnight. That's the biggest problem in this area – flood is a recurring phenomenon. The World Bank and the State Government are looking at using this excess water from the flood that can be used for irrigation and for the longer term, it can be stored. So that's also going to be another component. You can see a big consulting assignment coming up at the beginning of this project, maybe September or October. We will keep you posted on the developments.

[0:28:44]

Now, after all this, I will quickly run through – while there are many opportunities on the plate in India – everybody should look at India as a market – but then how to approach this market. The question is one- in Australia you already have got a strong partnership. You can either collaborate with consulting firms in India or the multinational firms with whom you are already working in Australia as a market which are present in Australia as well. You can collaborate with them. That's the best approach. Most of the multinational firms have got offices in India. You can partner with them beforehand since you have experience working with them. So you know how different firms work together. You can form consortium and we can help you manoeuvre through the process of submitting tenders and identify the local experts if you wish to. For small firms, the best strategy which has worked is when you form a consortium back in Australia first and then approach an Indian partner to balance out the cost in tender so you increase the chance of winning the tender.

[0:29:53]

Most of these tenders will be available around QCBs, quality cost based methods, so eighty percent is given to technical competencies, twenty percent to finances. Your solution will be focused more

the technical expertise so that you will score high on the technical marks. So even if financially you are not the cheapest, you increase the chance of winning the project.

[0:30:15]

For construction projects, those particularly are in the installation of hydro meteorology stations or around the dam safety project. There are different models that work in India. One is you can partner with a JV company. If you don't want to get your hands dirty in India, partner with the company, lend your qualifications, and get a consulting fee once they successfully win the project and let them do the project. There's a reputation risk if the Indian company fails to deliver. So in order to mitigate that, the other model that you can adopt is, again, the same model, form a JV, lend the prequalification, let the Indian company win the project, you will get the fee and also take up the project supervisor role so that your reputation risk is mitigated. And the third model which normally I don't prefer unless you've already had a taste for India as a market, how things work, is form a JV and get to the project straight away and get involved in execution, which is for those people who already have presence in India. Otherwise, it's not for people who want to do business in India, fly in and fly out. You need to be in the market. You need to have good partnerships and that's the way to move ahead.

[0:31:31]

Preparation is very important. Some of the things you wish to start looking at India as a market, one, you already have your capability document, but you need to customize based on the different projects that you are targeting in India. It has to be customized highlighting your key contribution to the project which you have done and run the essential document before you take on the plane and land in India. You need to have project description sheet, covering project briefs, approximate cost, and the client name. That is important to get an idea when you risk with potential partners, when you risk as a stakeholders. The clients in India they actually are looking at what kind of quality you have done, what scale of project you have done. That's what will help you profile your company and get a good score going forward.

[0:32:24]

In India, we have a concept of project completion certificate when you do a project you get a project completion certificate. This is nothing but a letter from a client saying that your firm has done X project having scope XYZ and approximate cost. If you don't get these things from a client, you can ask later on as well. Otherwise, the option is you can attach a copy of your work contract along with the payment proof that you have done the project. That will also be considered as equivalent to something called a project completion certificate. And then once you are you ready with all these things then we will come to market and start talking to people. That's the way to move forward.

[0:33:05]

The support that we can provide from Austrade and AWP would be as we do it now as well and you may have seen through newsletters from AWP going to your email inboxes, we give you regular updates on upcoming opportunities, EOIs, tenders. We can help in identification of partners. Even within Australia there are multiple companies that we work with if you wish us to introduce to them

internally as well, we are happy to do that. All the big multinationals, be it Dutch, Americans, we have good connections and network with them, the Indian operations particularly. We can help you connect with them or identify them, and get them a partner. We do work with World Bank and national, state and local agencies day in and day out so we have access to information. We can help you meet with them, share your expertise, and the key thing is, if you start first there are few hiccups in tender submission documentation, which we are happy to assist you with. What is required in the tendering process in India, what other documents you need to submit, how you need to submit, then we are happy to follow-up and that's what we have been doing and that's our goal to help you, to assist in growing the market.

[0:34:19]

So, as I said the cake is too huge. Everybody will get a part of it, so you can choose which portion you want to have, the smaller one or the larger one. Do you want to start from the top or start from the side, that's all up to you and we are there to help. And now I'm happy to take any questions. Thank you so much for listening patiently to me.

[0:34:41]

Kaye Schofield: Thank you very much, Vijay. It's Kaye Schofield here, chair of the Australian Water Partnership and welcome, everyone. We have people around Australia, about 35 people online or in a very small room in Canberra. So Vijay, we very much appreciated that. Now, Shannon, you will be able to tell us who's inviting questions? Okay so we have about 30 minutes for questions. Is there anyone in the room to start with, would have a question for Vijay or was he so comprehensive that... if you could identify yourself when you're asking a question, please.

[0:35:33]

Simon Tilleard: Simon Tilleard from Alluvium. Thanks, Vijay. As always, a very useful presentation. I have a question about the NHP. You mentioned that the States had put together tenders that have gone to national government. Are they publicly available? Can we see what they are?

Vijay: They will be available on the World Bank website and India WRM website in a months' time or maybe early May, but probably we can ask from the states the activity list that was shared with the World Bank, asking them what they're going to do so I'll try to get the copy if it is a public document and to be shared.

Kaye: And we'll put it up on the AWP website as a follow-up. Any further questions in the room? Yes?

[0:36:26]

Peter Wallbrink: Peter Wallbrink from CSIRO. Vijay, welcome. It probably is more of an observation than a question, one of it we're working on at the moment is some of the legal complexities of working in India in terms of taxation arrangements, project offices and so forth. So, there is significant complexity around that. So one of the ways the AWP could help would be helping partners to share experiences around that and knowledge and procedures and so forth. Legal advice is expensive and some of it, of course is commercial in confidence, but some of the principles can be

shared. So that would be a useful role I think for the AWP that would be able to help navigate those of us who maybe in a position to think about setting a base there.

Vijay: I think that's a good comment. As a way forward, when we see a few successes on board, we will request these companies to share their experience. One more point I would like to highlight, in case of any consulting assignment that you get in India, there's a 10% professional fee that you need to pay but since India and Australia have a dual taxation agreement, so the tax that you pay in India, you can claim it here as well. But that's only 10 percent – which is not mentioned anywhere in the document – is a 10 percent fee that you pay as a professional fee which the client will pay you after deducting 10 percent, normally they would pay you the entire amount.

Kaye: And certainly Peter, that question of aggregating AWP partner experience is certainly something that I think we can look at it in AWP and see how we can do that. I think, Tony?

[0:38:13]

Tony Slatyer: Tony Slatyer, hi everyone and thanks, Vijay, for that terrific overview. In a national groundwater project which is a very large one in the pipeline, you mentioned that it would encompass institutional and legal solutions. Could you just expand a little on what you think is envisaged there? Is that going to be a major part of the project, and is there some institution building plan already in place that we need to know about?

Vijay: As of now, there's no plan. But on the legal part first I'll take it. So as of now, the land and water rights in India are sort of not separate. So if you own a piece of land- which used to be the case in Australia long ago. There's a draft bill pending in the parliament which is talking about separation of land and water rights. That's going to be a big milestone in implementing the overall National Groundwater Improvement Project. The other thing is on the institutional part of it, as of now, Central Groundwater Board, the custodian- you can say the overall manager of the groundwater resources in India. There are talks going on, on merger of having one single body at the federal level and merging of central water commission, which is the custodian of surface water and central groundwater board all together. Presently, there is an effort going on at the state level. As of now, water is managed by 6 departments. So the talk is instead of starting at the federal level, we start at the state level so that it becomes easy when the budget allocation happens from federal government. It goes to one single department of state and then this concept will, again, be merged at the federal level. That's a long shot, but that's where the thing is and the government of India is thinking of those lines. So if that happens, that will be best that we can expect from the groundwater reform story.

[0:40:17]

Kaye: Thank you, Vijay. For those of our partners who are distributed around Australia, and in fact, in New Dehli, could you please, if you do have a question, type them into the GotoWebinar pane on the right-hand side of your screen. Sometimes we have challenges around the voice thing. So if you type your question in, Vijay would be very pleased to answer. Any further questions here within Canberra? Well, one of the things I've been struggling a bit, and we spoke early about it today, Vijay, was the capacity development question and how that's understood in India, and how that's playing

out in relation to the NHP. Because, different countries have different conceptualizations of what that means. You touched upon education and training at one point, but could you just elaborate a bit on the capacity development elements of the NHP?

Vijay: Thanks for asking this question. The capacity development component of National Hydrology Project, it consists of three components. First component is more about giving hands-on training to the water engineers involved across the states and at the federal level in implementing the project so that they are aware of what they are going to implement, they are aware about the basic instrumentation on the hydro-metrological network that's going on. That's the first basic component of the capacity building. The second part of the capacity building which will go towards forming some champions of water across states. Because unless and until you have champions within few states, be the chief engineer level or the principal secretary level, the overall objective of NHP is not going to be achieved. So, it involves a study tours. More of exposure things, so that these principal secretaries and chief secretary rank officials when they see good things across the world they can come back and implement those things which is one of the core motives of NHP.

The third main component of NHP is, which is a longer term engagement on capacity development and hard core classroom training on modelling tools and techniques which can be used as part of the overall NHP implementation. So, that involves universities and institutions in 3-4 week short term courses, as well as 6 months to a year courses. These courses will be around, for example, the department which are using the flood modelling tool. They need to know how the flood modelling tool operates. If they're using early forecasting system, how that system operates so that tomorrow, if the consulting firm is out of the picture, they need to know how to handle that system, how to manage, the entire data centre that they have in place and how they can play with the data going forward. Data can have multiple applications. We're talking about going forward with data which will maybe become part of NHP going forward. It's basically developing capacity in-house so that they can manage and maintain and further improve the overall water information system part of National Hydrology Project. Does it make sense?

[0:43:56]

Scott Walker: Can I add to that? I'm Scott Walker from ALS. When it comes to capacity building, is it separate, or is it going to be embedded in projects as monetization or term increases? Is that what you see the capacity building happening at the same time? Because that's kind of a valuable way to do it.

Vijay: So, as part of your operation maintenance contract for the hardware, hydro meteorological network which will be installed, you also need to give training on operation of these systems to the department's clients engineer or manager going forward. But that's more on how the system will operate and more on your equipment. The other part of capacity building is a separate component which will go at a more macro level which will be managed by different agencies. At the federal level, National Institute of Hydrology which will be the core normal agency to implement the capacity building.

Kaye: Thank you, Vijay. Now, we do have a number of questions that have been typed in. Thank you for that. It's all in 4pt, so I'm going to ask Shannon, who is our communications person from AWP, to read the questions out. Shannon?

[0:45:09]

Shannon: Thanks. Lavanya from Queensland Utilities asks, "Are there any projects regarding drinking water and waste water in the pipeline."

Vijay: Thanks, Lavanya. There are many such project, which I deliberately didn't cover in this one. One of the biggest projects in the wastewater plant is the National Ganga River Cleaning Project. Which, is a big project. Total funding is 3.6Billion, including funding from World Bank, government of India, ADB, and JICA. That does involve the installation of around 800-900 new sewage treatment plants across 112 cities in India, along the bank of Ganga. But, those projects is going to be on a PPP model with 15 years of operation maintenance and 3 years for construction. So, that means, all in all, an 18 year project. And that is for companies who are willing to put in their own investment for 15-18 years. That's where a big opportunity is in the pipeline, so big money on the table. Depends on your appetite, how you wish to take it forward. Apart from this, this smart city initiative of government of India has a big focus on urban wastewater management. So probably, that will also lead to new wastewater treatment, sewage treatment, recycling project coming on board. Particularly of your interest, I think non-revenue water will be of more interest to you as an urban utility. And it is a big pain for most of the utilities in India to address the non- revenue water. And if you go by the projects we see, and we are going to see new projects coming up on mitigating and reducing the non-revenue water from a utility point of view. So, if you wish to enter into that space, more than welcome. We can assist you in introducing you to a couple of utilities and how they're trying to look at reducing non-revenue water.

[0:47:03]

Shannon: Questions from Paul Hart from Metasphere: "Do you know how many of the Hydromet observation network sites will rely on remote battery or solar powered telemetry as opposed to having mains power available. And do the sites have 3G signal?"

Vijay: Well, most of them will be in remote areas, and you need to provide security so it will be covered with a concrete roof, or maybe with barbed wires, for security purpose. Most of them has to be powered by solar. That's what the observation from state governments. You have GSM network available in all parts of India. I'm not sure about the 3G signal, but 2G is available all across India.

[0:47:49]

Shannon: Okay, question from Rachel from WIA: "As you know, WIA has a number of SME companies who are keen to grow their business in India. I'm wondering if you can discuss more about how to identify and engage with possible partners in India and how Austrade can assist this."

Vijay: Thanks, Rachel. As I mentioned in my slides also, once the companies are ready with the documentation that is required to look at business in India, we'll be more than happy to assist them to identify partners. But as I mentioned earlier, my first purpose would be, you look for partners

within Australia itself first so that you are able to equip yourself with major parts of the project which are coming up, and then we can help you link up with Indian partners back in India.

[0:48:37]

Shannon: Okay, question from Declan Hearne: “Along with the technical capacity, what about the need for capacity in soft skills, particularly around integrating across skill sets and providing leadership with decision making.”

Vijay: Unfortunately, that is not part of the NHP component in any of the projects. That’s something that is sort of taken for granted that these basic skills will be there with the senior bureaucrats and the senior engineers who were involved in the implementation of the project.

[0:49:10]

Shannon: One from David Fuller: “Can you share which Australian companies have submitted EOIs to the Jhelum and Tawi project?”

Vijay: David, sorry I’m not sure whether I’m authorized to share this information or not and I will need to come back to you.

[0:49:31]

Shannon: Tony McAlister: “Is there an established network of radar rainfall systems across India, or is there reliance on individual rain gauges?”

Vijay: As of now, the majority of the lands have rain gauges, plus we do have a radar system in place which is owned and operated by Indian Meteorological Department, the counterpart bureau in India. And based on that data, they do forecast rainfalls. As part of NHP, the idea is duplicating and adding more rainfall measuring gauges. Will rather integrate data coming in from meteorology department and distinct data from the departments of state and central, rather than duplicating and putting new systems in place.

Kaye: And that’s the questions from the remote part of- Now, David Harriss, you’ve got a question?

[0:50:28]

David Harriss: Yes, this is David Harriss from Access Water Management. There’s a lot of focus on data acquisition, catchment hydrology, as well as technical acquisition. That’s going to translate into institutional reform and actual action on the ground to address some of these ordinary issues that exist. What institute arrangements are there; who’s actually responsible? Because it’s a federation with a lot of states. We’re actually going about institutional reform and management across borders. Who has the constitutional responsibility for implementing?

Vijay: Good question, but I’m not able to answer it fully as of now. But if you look at the structure of the implementation of the National Hydrology Project, there are identified key water agencies who will take the ownership of implementation and also further improvement going forward. For example, for the capacity building, National Institute of Hydrology has been nominated as a key agency who will consider all the capacity building requirements at the state level and federal level.

Similarly for equipment – all the equipment that’s going to be used for the hydro meteorological network, etc., would be [inaudible]. So similarly, there are some existing institutions. But my hope is, going forward, they will have to come up with new institutions who can take the ownership- cross-boundary ownership, which is important, and which the state also enthrust their faith into that institution, otherwise— But that may come up. As of now, at least let’s get the first step done. Let’s have the data coming in, then we’ll move on to the next step.

[0:52:13]

Shannon: Vijay, just another one from Lavanya from Queensland Utilities: “Are there any existing partnership models with universities and client organisations?”

Vijay: Haven’t seen any yet in India as a market. Although, you know, cities are working with a couple of municipal accounts along that front. But these are mostly research project, and small scale projects. But probably- I think- we had some of the people from Queensland University of Technology visited India almost 7-8 months ago to look at some of the partnership with council level. So that’s something which we can explore going forward.

[0:52:56]

Russell Rollason: It would be – Russell here – fair to say then, to say that some partnership models with universities take the MOU route, they sign an agreement. And that opens up an opportunity then, to get in the discussion of what they’ll do together.

Shannon: Just a clarification that that’s referring to “existing models that universities provide expertise in.”

Vijay: I haven’t come across any such model, but one thing which you can look at is probably as couple of your experts. They can provide unusual expertise into project coming up as part of smart cities and non-revenue water management. Or, you can say improving the water revenue for utilities could be a question. Some of your individual experts can join hands with these companies.

[0:53:44]

Shannon: Just a question from Tony McAlister, Water Technology: “Can you expand on some of the receiving water quality opportunities, and are these addressing state or federal requirements and guidelines?”

Vijay: Tony, on the water quality front, National Aquifer Mapping Project is one of the main projects driving the water quality in the ground water primarily. Otherwise, maintaining water quality in the river is the task of EPA, which we call them Central Pollution Control Board in India. They are also working closely. So all the data on the water quality which will go in as part of the National Hydrology Project, we need to come from Central Pollution Control Board- the brand of EPA in India. And although it’s not mandated, but Central Water Commission also collects water quality data. There will be a few specific projects on collection of water quality data across surface water bodies and ground water bodies that we can see going forward. But particularly in the Ganga River basin as well, we will keep you posted if any specific water quality opportunities comes about.

[0:55:06]

Russell: So the cleaning Ganga project has a fairly strong focus around water quality.

Vijay: Yes. So, in the cleaning Ganga, they are installing 130- water quality maintenance to 130 across the whole basin. And then, they will collect data on a real-time basis coming up from these. And then aligning those data, and then take action based on these data. Plus, all industries along the bank of Ganga has been mandated to put online affluent monitoring station at the exit gate of their factory premises, which will be linked to the server of EPAs for more stricter monitoring.

[0:55:43]

Russell: So, I suspect the next issue around water quality will be these industry clusters on the Ganga. The STPs will address waste water from the urban scenes, but the industry clusters- tanneries, sugar, brewing, clothing, textiles...

Vijay: We have seen at least a very good, I'll say, strong environmental activism in India in last 6 months or one year, thanks to National Green Tribunal which is the main body spearheading these environmental regulations. And we also have noticed heavy penalties being imposed on industries for polluting. Plus the regulation has been very strict. One more information, the National Mission for Clean Ganga, they have been given the status of an authority. Authority means they have been given power under the environmental law in India to impose penalty on any industry polluting in the river. In fact, they have power that even if you are throwing garbage in the Ganga River, they can send you to jail with a financial penalty. That kind of power has been given. The question is, when do they wake up and start exercising these powers? But, that's a new development that happened in October, with the complete authority power, independent authority, reporting to a committee headed by the Prime Minister of India.

[0:57:03]

Russell: So, do they also start to look at working with companies to try and reduce pollution so they don't have to prosecute them?

Vijay: As of now, what they're saying is they're asking companies to comply with existing pollution laws. If they're not complying, they are being served closure notice. If they are complying and they are facing a challenge, then they are most welcome- they can come up, propose a solution. There is funding available. Funding is not a question mark. But industries have to come forward and say, look, X amount of funding is required. We can give you half of X. We need X from you. That's kind of thing that's going forward. Hope so, in the next 3-5 years, we'll have some improvement of the Ganga water quality.

Kaye: Any other questions in the room?

[0:57:51]

Peter: Indeed it's a very big cake, it's a very large portfolio of projects with a substantial amount of money, but also, the timelines seem quite tight, also. So, if we use the Ganga portfolio as a guide, what's your judgement as to what we can see in terms of how much of the scope comes to pass

according to the timelines? What should we expect as partners looking in around how this might come to pass?

Vijay: Going by the track record, these timelines, you can add plus 6 months or a year. This does happen. Even NHP is running at least one year behind the schedule. So, these timelines- World Bank does approve the project, but when it comes to actual project being floated by state department or Ministry of Water, government of India, that does get involved in some of the administrative hurdles and there is delay. So, although there's a lot of projects, but you do get enough time to respond. That's something.

[0:59:05]

Peter: Again, intelligence on delays is as useful as is knowing things are coming to market as well.

Vijay: So probably what we can do going forwards is these kind of webinars every quarter or every four months to keep update on what's happening on the project, any delay on this project. And also, the taxes and the legal point.

[0:59:27]

Tony: Tony here. Excuse me for asking questions that are a result of me being quite new to this AWP internal process. But the first question I have is, how do people get more information about each of these activities? Is this something which you provide directly to us, or we generate inside of AWP? And how does that work? And the second question, sort of related to that, is if partners have an interest in participating, is that best organised in the first instance in AWP, or do we come independently to you, or can anything work? Just- how does this, if people want to take forward some of the ideas you just presented to us, what really should be the next step?

Kaye: Well, Vijay as Austrade is a member, is a partner of AWP. And we've expressed that partnership through Vijay using AWP news feeds as an avenue for telling the AWP community what's coming up, etc. We will, of course, put this up, the webinar and a record of it. But Vijay, you've said on a number of occasions that you're open to receiving requests and questions from AWP partners. You're happy to take those direct?

Vijay: Yeah, I'm happy to take direct queries. But, as mentioned, we do share through AWP network, any opportunities coming on board. And if any specific issues are to be addressed, the companies do approach us directly as Austrade if any technical inquiries are required, any assistance is required as part of their submission of the EOIs.

Kaye: And if there were a need amongst our partners – for example, Peter is saying perhaps partners should put their heads together on the legal questions – we could organise events. Then there may be possibilities to invite partners who are interested in a particular aspect, and if there's enough partners, then I can't see why we couldn't put on a webinar, Shannon, to have partners – physically meeting is just too hard, and I think everyone's very busy. But, I think if there was enough demand from our partners for a sharing and a collaboration around something that's quite tangible like legal, then AWP would be open to that and open to arranging a webinar. Because, we found when we first

started trying to bring together partners who had been working in China, it was invaluable to pool the experience. It was kind of like the benefits of collaboration are greater than competition, if you care about Australia's entry into the Chinese market. So, we're open to that, so it would be just a matter of sending an email if you think it's important enough and we can aggregate interest across the partnership.

Vijay: There's another question from Tony.

[1:03:09]

Simon: If I can just add off that one, then we can go to Tony. It's Simon from Alluvium. You mentioned that a couple of AWP activities that have fed into NHP. Is there any more potentials in the pipeline in terms of AWP's various projects and...

Kaye: Well, there is one that is in very early stages. AWP was up recently in India. And with Vijay's help, we did have- not myself personally, but AWP people- had conversations with the head of an NHP implementation group. And one of the questions that arose out of that was could ICE WaRM help frame a capacity development initiative. Now, it isn't a matter of ICE WaRM delivering. The way AWP works is – certainly we don't deliver, our partners deliver – but there are discussions underway of how could ICE WaRM help AWP as a partnership respond to this request and say that's active at the moment. And we would want to go back to India and just test out whether our understanding of the need is accurate. Vijay, is there anything further because Darryl Day is here; he had the conversation- is there anything further you want to add on that interaction? It's a kind of pipeline thing, but unformed.

Vijay: Yeah, I think, as of now unformed. But will further demystify going forward.

Kaye: Darryl, do you want to add anything?

Darryl: No, I think it's very early that they've identified that whilst a number of project elements, including capacity development, there is a need for some broader capacity development, particularly in the institutions of things, and particularly in some of the decision making that will be needed for managing this going forwards.

Kaye: On behalf of AWP, ICE WaRM will attempt to coordinate that and liaise with Vijay, and then we'll share it with the whole partnership.

[1:05:35]

Russell: I have to add – Russell here – that AWP has also explored engagement in POCRA, this Maharashtra project on climate resilient agriculture, and I notice that the two people participated have just popped up on the screen. They were the two AWP people who went to our early design workshops. It's still taking shape. It's not going to be to the board in May, as you indicated. And AWP is struggling a little to know how much water there is in it. There's certainly a lot of agriculture, and ACIAR is showing considerable interest. And it will possibly be a great opportunity for ACIAR as Clive may wish to- not comment, but he can type, since there's still a bit of a question mark about the water element of this project. So we're exploring that, but it is giving us a bit better understanding of

what the project is about. And as soon as we've built an understanding, we'll certainly share that as well.

Kaye: Shannon, do you want to read Clive's question?

[1:06:41]

Shannon: Clive Lyle: "Just a clear statement on the tax situation is critical as that is currently holding up some joint projects."

Vijay: So probably, we can look a similar webinar on tax implications. We could prepare a write up that we could share with the members if the webinar is not possible.

Tony: [inaudible] is that a similar way of setting it out, as we could understand how to go about that.

Vijay: To this question. Payment, especially if it is a state government funded project, Tony, there are challenges on payments and delayed payments. We recently helped- not recently, almost a year ago- on a payment that got stuck we helped expedite that payment through meeting with the head of the department a couple of times. But in these World Bank projects, thankfully, we have a recourse. We can always go back to the team within the World Bank saying, look, they're holding up payment. So, that recourse is always there, especially in the World Bank projects and ADB projects. Which is a big comfort as it's totally funded by state governments.

[1:07:59]

Shannon: Just a question from Uday Bhaskar: "A large number of projects seem to be World Bank funded. A webinar on the tender application processes would be useful."

Vijay: We'll be holding a webinar again hopefully end of May or beginning of June on the World Bank funding process and the tender application process. We'll keep you in the loop once the dates are finalised.

[1:08:24]

Shannon: A comment from Clive Lyle: "What Russell said about POCRA is correct – mostly agriculture. However, there are some significant watershed issues for water resource management which you would expect to come through NHP and GMIP."

[1:08:43]

Kaye: So, there are questions Shannon? That's it. Okay. Well, I think unless there are any other questions in the room, I think we can draw the webinar to a close. Can I firstly, and most importantly, thank you, Vijay, very much. We've generated demand for further engagements, so you're not going to just go home. Thank you, it's incredibly helpful to have this first-hand information. And whole of India perspective, which we don't often achieve. And I thank all our partners, wherever you are in the world, for joining us. And of course, thank other people in the room. We will put DeeJay- Vijay's presentation- you can be DeeJay if you like [laughter]. We'll put Vijay's presentation in a PowerPoint up on the AWP, through the partner portal. We've also agreed that we'll do a short summary note, which would be just a written note that can accompany that, so that everyone understands and

doesn't have to sit there and listen if they read faster than they listen. Can I thank you, Shannon, and Raymond in the AWP team for setting all of this up, and hope everyone has a terrific weekend, and thank you for joining us.

- *Webinar end* -