Draft report public webinar: Question & Answer summary

Below is a summary of the Question & Answers raised in the public webinar for the independent assessment into the NSW 2020 Northern Basin first flush assessment.

Why were elected representatives left out of the consultation process?

The Panel approached Local Government NSW to nominate local government representatives to sit on the water user reference group established for the review - one representative was nominated for each of the Northern Tributaries, Barwon-Darling and Lower Darling communities. Some local government representatives have also participated in the consultation process to date through survey responses and written submissions, and of course, there were further opportunities for elected representatives to provide feedback to the Panel on its draft report.

How have Aboriginal people received the first flush event and are there any opportunities for ongoing cultural management?

The Panel has heard that Aboriginal people were generally pleased to see rivers run again and that they could undertake related customary activities. However, as the event was not widely communicated there were some missed opportunities. These reinforce the need for communication both before and as an event progresses.

Another important finding of the report is that cultural flow requirements must be identified (quantified and documented) in order to determine what is needed to properly provide for native title rights in a first flush event within basic landholder rights. More generally, there may be opportunities for other types of ongoing cultural management to assist in first flush management, such as assisting in monitoring and communication as an event involves. The final report may consider these matters further.

Did the Minister play a role in the implementation of management decisions?

Based on the information provided to the Panel, the Minister did not play any role in making or implementing management decisions during the 2020 Northern Basin First Flush event.

While the Minister's Office was informed of what was happening, the Minister was not involved in decision-making or carrying out the management actions for this event. Any correspondence received by the Minister's office relevant to event management (such as claims of infrastructure damage) was forwarded to the decision-makers for their consideration.

How much water was available and how much was extracted?

The NSW Department of Planning, Industry and the Environment - Water's (the department's) report 'Assessment of take and protection during first flush flows in the Northern Basin' includes information about inflows and extraction during the event.

Did the lifting of embargoes consider critical environmental needs within valleys, or just those of the Barwon-Darling, Menindee Lakes and Lower Darling?

Information available to the Panel indicates that decisions to lift or maintain embargoes considered critical environmental needs within valleys, as well as those further downstream.

How was the decision-making framework and flow forecasting reasonably robust when the floodplain harvesting embargoes were lifted at a very early stage?

The Panel has reviewed the framework and evidence used for decision making and, overall, has made a draft finding that they were reasonably robust based on the data and information the decision maker had at the respective times. However, the Panel has also identified some important gaps in that data and information, including that relevant to floodplain harvesting and also local information and insights.

The Panel understands that the decision to temporarily lift the floodplain harvesting embargo around 9 and 10 February 2020 was made according to the decision making principles which were applied throughout the event and principally having regard to a key concern that the embargo was causing risks to property and life.

Since at that time, there was limited local information to verify the validity of these claims (being complaints and photographs submitted by landholders), the embargo was lifted in certain areas in the interests of risk management.

The Panel understands that the decisions to lift floodplain harvesting embargoes later in February and March were made only after it was forecast that enough flows would enter the system to enable connectivity to the Murray River.

Should extraction have been denied until connectivity with the Murray River was achieved?

It's important to note that the volumes of rain which fell in mid to late February (and which materially contributed to the flows to the Murray River) were not foreseen or predicted when the first flush event started in late January/early February. Whether access should be allowed on the basis of targets actually being met, or only being forecast to be met, must have regard to the availability of information and the practical and physical considerations of the large northern basin.

It takes several weeks to months for water to flow from the upstream tributary parts of the basin to the downstream parts (including the Menindee Lakes and the Lower Darling), and the flows available to be taken in the upstream parts may well have stopped before flows into the Menindee Lakes had started.

However, the more information available regarding system water requirements based on antecedent conditions, and better precision of forecasts, the greater the ability to make decisions based on forecast, rather than point-in-time conditions. But sufficient information must be available to make those decisions with reasonable certainty and recognising the risks and who bears them.

Why did restrictions in Northern NSW stay in place for so long that targets for inflows into the Menindee Lakes were overshot by five times?

The 2020 Northern Basin First Flush event was not a single event, but rather a series of rainfall events over a broad area over a number of months. Targets were set based on what was known and forecast at the time.

As more water came into the system and flows changed, so did the target for Menindee Lakes, as it was realised that the additional later flows could reach further downstream, providing water for the Lower Darling community, achieving connectivity of the Darling River with the Murray River, and providing for 12-18 months' supply for the Lower Darling water users. This does mean that the initial target was exceeded by a significant amount and was a consequence of the dynamic nature of this event.

Given the current limitations of forecasting, the Panel considers that it is appropriate for first flush arrangements to include provisions for targets to change if more water becomes available to take advantage of additional flows to meet critical needs down the system, as far as possible. However, these arrangements need to be decided as part of the planning and preparation for various scenarios prior to an event and effectively communicated.

In this case, the flows that eventuated were beyond initial expectations. While the change to the target was communicated in fact sheets, the initial target, nor the possibility of the target changing, was not communicated prior to the event.

The Panel recommends that in future, the process for management should be communicated in advance, so any feedback can be provided about the process before an event occurs and the community understands how and why flows will be managed in a particular way. Further, post event analysis will improve the ability to develop rules that effectively manage these real time events.

What are the constraints limiting delivery of water from certain valleys?

Not all river valleys contribute to Barwon-Darling flows in the same way. Contributions can be affected by physical issues, such as channel constraints and flows onto floodplains, which may or may not make their way back into river systems. It is important to understand these matters in order to set appropriate targets and how they can be met. Experiences from previous events need to be used to refine the targets, estimates and volumes over time.

How much supplementary licence water was impacted by the restrictions and forgone by irrigators?

The department's report 'Assessment of take and protection during first flush flows in the Northern Basin' includes a comparison of the amount of supplementary water actually taken and the maximum amount that could have been taken without restrictions. It shows that a further amount of approximately 100,000 megalitres (ML) could have been extracted by supplementary water licence holders in the absence of restrictions.

What is the comparison between what was actually achieved and what would have been achieved under water sharing plan rules, if embargoes were not introduced?

Although the Panel would have liked to consider these comparisons as part of its assessment to date, the modelling required to make these comparisons has not yet been completed. The Panel recognises it is important for these comparisons to be done, not only to respond to such stakeholder requests and provide transparency around these matters, but also because they are instructive to improve the management of future first flush events.

Consequently, the Panel has suggested that the NSW water agencies do the necessary work to enable the comparisons to be made and to report on that work, and in the interim, that the NSW water agencies prepare and publish a report outlining water balances by river system from the 2020 first flush event.

On Thursday 23 July 2020, the department released their report 'Assessment of take and protection during first flush flows in the Northern Basin' which includes some of these analyses, and the Panel will consider this information further in its final report.

The Panel emphasises the usefulness of reforms (like metering) to improve real-time monitoring and water take information, as they will enable better active management of these events. It has also recommended that the progress of an event be regularly communicated to stakeholders during an event and a full evaluation of the event should be published after its conclusion.

Would the nominated benefits of the first flush event have largely occurred if the restrictions were not imposed?

This information has not been available at the time of the Panel's review. The Panel considers it important to provide transparency on what actions or events led to particular outcomes, even if this shows that the ultimate outcomes were not the result of decisions made early on in the event.

Ultimately, what is important is whether the decisions made based on the information available at the time would have achieved what they set out to do, had conditions not changed.

Where is more data about historical flows available?

The written submissions of WaterNSW, the Murray Darling Basin Authority and the Commonwealth Environmental Water Office all included historical data about inflows to Northern Basin river systems. The Interim Inspector-General of Murray–Darling Basin Water Resources report into the Impact of lower inflows on state shares under the Murray–Darling Basin Agreement also includes some information on this topic.

What does the Panel consider to be the potential impacts on the Southern Basin (Menindee and beyond)?

By 26 March 2020 there was sufficient water to restart the Lower Darling River without fish kills, a salinity problem or blue green algae outbreaks, with water reaching the Murray River in mid-April 2020. By the end of June 2020, Menindee Lakes had received 583 gigalitres (GL) of inflows - sufficient for 12 to 18 months of water supply to Lower Darling landholders, managing water quality

and impacts on remaining fish populations. Thus full connectivity of the system was achieved with its attendant benefits.

Menindee Lakes remains in NSW control under the Murray-Darling Basin Agreement arrangements. Impacts further afield have not been assessed for the 2020 Northern Basin First Flush event.

For future events, the Panel has recommended that *"Water management must provide for and promote connectivity between water sources."* Connectivity within and between water sources is key and must be a primary objective of first flush management.

More specifically, the Panel has recommended that further policy work is carried out to determine how competing needs across the system are balanced, and what measures need to be in place in order to share risks transparently and equitably between water users and between communities along the length of the system, especially in times of drought.

There needs to be a better understanding of the extent to which various tributaries contribute to downstream systems and this needs to be transparent to the community. This work will also need to clarify where the 'end of the system' will be, for the purposes of all cases of first flush management, and that will have implications for Menindee Lakes and further downstream.

What are the Panel's thoughts about how to manage the question of scale? In other words, a simple blanket restriction across the northern basin versus a more complicated localised approach?

The northern basin is a very large area and blanket restrictions have the potential to exclude irrigators from legitimate extraction after critical needs targets have been met. A more complicated localised approach would have higher data and information requirements and these were not available at the time of the 2020 Northern Basin First Flush event.

These data and information requirements may be available in the future as more real-time (or near-real time) metering and monitoring systems are established, e.g. when implementation of the metering and telemetry reforms is complete. Improvements in flow forecasting would also assist.

The Panel envisages that a blanket restriction could be appropriate if for example, a target was set to achieve 640GL at Menindee Lakes before any extraction was allowed. However, the appropriateness of a target of this nature is a water sharing issue beyond the scope of the current review.

The communities downstream of Bourke are currently 90 days since the river ceased to flow. If a small rainfall event was to occur above Walgett and the water was only expected to reach Brewarrina, what would be your recommendation regarding lawful interception?

In this hypothetical example, the Panel would recommend reviewing the objectives, targets and principles for critical needs and then managing flows according to those principles. Generally, flows should first be directed to meeting critical needs before any additional water is shared between users according to appropriate arrangements. Agencies should communicate the details of management arrangements as much as possible before, during and after the event.

Will the new Active Management procedures recently introduced in NSW water sharing plans address the Panel's recommendations?

While the Panel has requested modelling to understand what would have happened under the new Barwon-Darling water sharing rules (for example, the new resumption of flow rule), the draft recommendations deal with a lot of matters not covered by the new rules, such as improving communication, decision-making principles and incident management processes. The Panel considers these matters to be an equally important part of first flush management.

However, the suggested process to develop first flush management rules is similar to that of developing water sharing plan rules, whereby the best available science and evidence is brought forward and there is effective and active engagement with communities.

How should the recommendations be incorporated into water sharing plans?

Given the time required to embed first flush management into the regulatory framework, the Panel has recommended that in the first instance, guidance material is published to provide transparency about how a first flush event will be managed (draft Recommendation 3).

The Panel recommends that the objectives, principles and targets used to manage the 2020 Northern Basin First Flush event be further tested and outstanding policy issues (such as connectivity) further considered (draft Recommendation 1 and 4). The Panel recommends that the framework is gradually built into incident response guides, the extreme events policy, water sharing plans and the *Water Management Act 2000* (draft Recommendation 7).

But while some aspects could be done reasonably quickly, other aspects (such as amending the Act and water sharing plans) will take time. The Panel considers that when water sharing plans are next reviewed, as much of the first flush management framework as reasonably practicable is built into those plans. In the meantime, guidelines will assist to increase transparency and certainty.

Do you expect DPIE staff would need to be based locally to make real-time decisions on event management?

A number of people raised the importance of access to local information when actively managing an event. When floodplain harvesting embargoes were lifted to mitigate the risk of damage to life and property, local information was helpfully provided by peak bodies, but it would have been highly valuable if local staff of DPIE, WaterNSW or other related government agencies were available to provide local information to decision-makers.

Given the imperfections of weather forecasts, there needs to be provision for decision-makers to take on board local information when events unfold in an unpredicted manner.

If the principles adopted to manage events did not consider potential future rainfall events, would this miss an opportunity to achieve connectivity?

The area of connectivity needs to be considered carefully by the Government and in consultation with communities and water users. The ‘end of the system’ for the purposes of connectivity has not been clearly defined. Connectivity could seek to reach the next target within a single river system,

the Murray River, or further downstream. The objectives of connectivity need to be considered and discussed with the community, so that everyone is clear about what water management is trying to achieve.

What recommendations are the Panel making to address improvements to information about Queensland extraction and flows?

The Panel considers that there is substantial room to improve the information exchange between NSW and Queensland agencies and to enable real-time information about flows and extractions in Queensland to be incorporated into the forecasting of flows expected to reach the Barwon-Darling.

The area of improving real-time metering and monitoring across the whole of the Northern Basin area generally is also an area of improvement. The Panel is aware of programs in place in both QLD and NSW to improve these systems and emphasises the importance of those programs being rolled out and communication being improved.

The report mentions the importance of communication between all water users and communities. Why are irrigation community communication networks so much more effective than non-irrigation community networks?

The Panel considers that irrigation communities generally have a constant and financial incentive to run communications effectively and efficiently, and to do so because the interests of those within the network are largely the same.

While the interests of other community networks may be similar, they are less likely to be the same and are less likely to be motivated by financial incentives. This means that other communities are likely to have fewer resources and capacity to engage in water management issues, even if those interests are equally valid.

This reinforces the need to improve and adequately resource the communication and coordination capabilities of government agencies, to improve water literacy across the community and the ability of all stakeholders to meaningfully engage in water management processes.

How will the Department demonstrate how the recommendations are being implemented and how would you like to see your recommendations proceed?

The Panel's final report will indicate which of its recommendations it would like to see implemented in the near future, and which of those are likely to take longer.

If the NSW Government accepts the recommendations, the Panel hopes it will produce a plan which sets out a transparent timetable to implement the recommendations, report on implementation, and do so accordingly, similar to the approach to reporting on the implementation of other reforms set out in draft Recommendation 9.