

Q&A Report: Integrated waterway and catchment management at Basin SCALE

#	Question	Answer	Answer Name
1	Sounds like we've been down this path before... how do we stop re-inventing the wheel and make ICM the norm?	live answered	AWS Admin
2	What specific institutional/policy barriers stand in the way of ICM becoming the norm and how can these be tackled?	Fragmentation in policy is a barrier. Not an easy problem to overcome, but with the appropriate vision and leadership from governments, and bringing everyone along, I'd be confident that this fragmentation could be overcome.	Neville Crossman
3	2 billion dollars/year for how many years ?	30 years! For the whole country!	Samantha Capon
4	More of a comment than a question - but broadacre dryland farmers might be in denial in how their land-management practices might be detrimental to waterway management health. For example, in use of urea and herbicides to boost crop production that can leach into waterways, they can be unconvinced that this can be a problem. So recruiting them as allies can be a tough gig. Thoughts?	I believe we need more intergration in our science looking at these problems - so co-designing and involving faremers in the research into these concerns.	Samantha Capon
5	Roughly what proportion of riparian revegetation zones in the MDB are on public v private land? Is this something that can be estimated, Samantha?	Hi, this is definitely something that could be estimated! We are starting to downscleae this work in some regions (starting in West Kimberley) to look at some of these more specific aspects.	Samantha Capon
6	Investing in riparian zone restoration makes so much sense - to we have the right sort of evidence on hand to "demonstrate" the multiple benefits/value of this and if not, what kind of research would help ?	Hi ! The evidence is a bit uneven at present - in terms of geographic regions, functions etc. We still need long-term data at scale and also more integrated models to test predictions. Plenty of opportunity for citizen science though! On this, we are working with a CMA in Victoria on a proof of concept EO based approach to provide some baseline monitoring of environmental flows and their impact that could be applied as a uniform approach across floodplains/wetlands and riparian basin in the basin. The MDBA also developed an historical inundation persistence product from EO in their recent MD WERP research program that could also give baseline reference information.	Samantha Capon
7	When we talk about an integrated approach why is the South Australian South East unconfined aquifer not discussed which historically supplied fresh water flows not only into the Coorong but also into Lake Albert which flowed into Lake Alexandrina . And why isn't the Lake Alexandrina estuary not discussed and the damage the 7.6 kilometres of barrages that have changed a vibrant estuary into a degraded artificial elevated fresh water system ? Ramsar sites do not need to be natural but they do need to be sustainable and the Coorong and Lower Lakes clearly are not	Building Lock Zero near Wellington would tick a lot of boxes and allow the estuary to be returned and maintained	
8	How do we decide the buffer zones and influence zone for the protection of the water bodies and the surrounding land?What are the current best practices/guidelines?	Hi Wesley, we reviewed different buffer zone widths in the Blueprint for Nautre Repair and estimated costs for 100m for major rivers, 50m for minor watercourses and 200m for lakes, wetlands etc. Thanks Sam, would love to see that Blueprint work - Could you post a link? Thank you very much Sam.Can you share any reference link to justify the decisions	Samantha Capon
9	Is treating water as something that can be owned misaligned with effective water management, thus mis framing solutions and leading to oversimplified understanding of its value and thus usage?	Water markets and ownership are one important part of water governance by encouraging efficient use. Water has many other non-market values which should be recognised and valued accordingly. Supporting rules and regulations are needed to ensure the full spectrum of values are considered by managers. In fact water is actually owned by the state in Australia and the states assign rights to use this water. These rights (or entitlements) are are held by water users and can be traded in many instances. Like any market, it needs to be regulated. If the question you are asking concerns whether or not this regulation is consistent with good management, then there was a review of our water markets a couple of years ago. I would suggest you take a look at this review.	Neville Crossman Mike Stewardson
10	What can Australia learn from the USA's Mitigation Credit Nutrient Markets in terms of lessons and scaling?	Good question. Will look into it.	Neville Crossman
11	Hi Samantha - you indicated costs for the riparian veg restoration, but is there info on any costings of the return on investment of improved enviro and other values (i.e. not the \$value ascribed through a carbon or other market approach). Sorry if you already addressed this.	Hi, our work hasn't yet extended to looking at ROI for riparian restoration (other than ACCUs) but it would be great to do!	Samantha Capon
12	WHEN WILL YOU EMAIL THE CERTIFICATE?	The certificates will be emailed with the webinar recordings within 5 business days.	Anushree Mistry
13	Are System Engineers bing included?	We need to be looking for opportunities to innovate our approach to basin managemen, drawing on a broad range of disciplines including System Engineers	Mike Stewardson
14	What will the new (Australian) National Water Agreement provide re: more intergrated approaches? Water management in Aus is very resource centric, which was an OK approach early on, but we need to be more holistic now, as demands on land and water increase and the climate changes, etc.	Good questions for the basin jurisdictions currently progress this.	Mike Stewardson
15	A primary problem we see with carbon markets in our dryland country in the southern Murray Darling Basin is that it's tough to see where nature-repair markets would be more or even close to matching agricultural production in terms of wealth generation.	Does demand for offsets potentially change this?	Samantha Capon

16	How does the panel believe the erosion and sediment control and soil management industry can continue to play in this place? We see a lot of significant effort into construction industry but believe we could be further involved through the ICM.	This is a big questions and the answer will be different in each part of the basin.	Mike Stewardson
17	Regulating markets is always costly. That cost is taken on by the government. Is it cheaper to run a market for commodified goods of nature or for governments to simply take on land restoration projects. (I recognise the problem of political appetite and culture, which Mike mentioned, but I'm interested in what actually are the costs)	Its all about trade-offs and government priorities. If the impacts/costs of poor regulation are high, then one would hope government would invest in regulation, compliance and enforcement.	Neville Crossman
18	Thanks all, great discussion and food for thought that we at NSWIC are always chewing over. Farmers are increasingly interested in a return to integrated catchment approaches as a way to secure genuine co-design of local projects to continue to improve local environmental outcomes across the MDB. We hear consistent stories across the state of the failures of policy implementation because they lacked co-design, which have significant cost consequences to farmers and the state (and us, as tax payers) alike. However, many view true ICM as difficult to return to because there is no regional departmental footprint within key departments (e.g. the NSW Water Group), and increasingly few skilled experts living in the regions, as jobs have been centralised in key urban areas. I'd like the panel's thoughts on what genuine co-design looks like in the absence of departments having a regional footprint, and (in a fiscally constrained environment) what your recommendations to gvt would be in light of (or despite) this?	live answered	AWS Admin
19	What's the panels view on using on-farm water-use efficiency improvements, in conjunction with water sales to CEWH, to fund IWCM activities?	Interesting idea. Will think about it.	Neville Crossman
20	Question for Michael Pisasale and Mr Stewardson, -do you think all public Murray river floodplains should be irrigated, and have huge infrastructure built across the floodplain, removing natureal overbank events? Isnt this a very costly and expensive way to do it? Regulators, levy banks, hard stands, etc etc , plus the planning, premissions, regulatory requirements are huge. Then the risk of having humans turning off and on into the future...? Risky and potentially damaging, not giving equivalent ecological outcomes.	Hi, I'd love to discuss this! Murray, Murrumbidgee and other districts were developed by the NSW Government in the 1900s for food security and privatised in 1995. The "should we be doing this" question has already been answered, supported by decades of government-industry improvements in water use and crop efficiency. Northern irrigation is similar but without private districts. The water market -including environmental water - ensures efficient allocation for both private and environmental outcomes. Happy to chat more; my contact details are on the NSWIC website.	Mike Stewardson
21	Assuming that ICM is the latest jargon used, replacing IWRM that was use in the noughties but are basically the same thing?	Yes, basically the same. There may be nuances, but the principles would be consistent. These are both taking a system approach, ralthough the objectives and boundaries of the system might differ. Catchment Mmanagement generally includes land and water management. Integrated Water Resources mangement is focused on the multiple sources and uses of water.	Neville Crossman Mike Stewardson
22	Sorry, my comment in response to Samanth's question to my earlier comment.	Would be an interesting question to model....	Samantha Capon
23	Institutional reform in the MDBasin?? The COAG Water reforms of the 1990s called for "institutional separation" particularly separating the Operator from the Resource Mgr, but have we gone too far, now with multiple overlapping agencies and utilities at State and Federal levels? However, these agencies have lost a lot of local 'corporate knowledge' and been replaced with capital city politicians and bureaucrats, with misconceptions of catchment Management. Can further indtitutional reform be constructive rather than another round of downsizing, and remote Mgt?	Yes, water governance is complex with many agencies involved in decision-making. Perhaps reform is needed? Agree that need to be careful reform doesn't result in loss of expertise.	Neville Crossman
24	Town and industry sewage discharges along the Murray River is a major problem yet receives little attention . This starts with the largest urban centre at the head waters of the basin called Canberra . Sensible solutions would mitigate a lot of the quality issues facing the River Murray	I think there is a need for more work to understand the nature and source of water quality issues in the basin in relation to the variety of chemical found in rivers including those sourced from wastewater discharges. There is reason for some concern but in general we lack the data to target action.	Mike Stewardson
25	What policy or legislative mechanisms can support Indigenous communities to have secure, non-negotiable water rights that uphold cultural practices and access to traditional aquatic foods—particularly for communities who would like to limit engage with western economic systems? How can governance systems shift away from defining water primarily through economic power so that cultural values hold equal or greater authority?	Great questions.	Mike Stewardson
26	To capture and demonstrate the full range of environmental and societal benefits from nature-based solutions like riparian zone restoration, we need the right people and right frameworks. Suitable robust frameworks are available, eg. The e-DPSEEA framework (ecosystem-enhanced DPSEEA) model , Happy to follow up with anyone interested.	Yes, SEEA and its variants offer a lot of promise. DCCEEW and CSIRO did run a pilot ecosystem accounting project in early 2020s, including an MDBA case study. Details here: https://publications.csiro.au/publications/publication/Plcsiro:EP2023-5630	Neville Crossman
27	How important is site-specific data and ground truthing for making planning decisions?	very important if targets, outcomes and indicators are local!	Samantha Capon
28	How important is site-specific data and ground truthing for making planning decisions?	Appreciated your reply Sam.Local inputs needs to included and the planning process defined in the project standards to be adopted for projects .	
29	How do we build a better system wide decision-making and accountability framework at multiple scales that enables greater investment, innovation, local ownership, and the adaptability needed?	That is a very good problem to be tackling.	Mike Stewardson

30	Many years ago there was a push for 'biolinks' where connecting natural parkland reserves or 'islands', some based on waterways, at a landscape scale was all the rage. Is this concept something being considered?	habitat linkages are still a big focus for conservation planning! just not at the scale of the MDB...	Samantha Capon
31	Is there a way we can get government agencies to revisit an ICM approach?	Now is an opportune time Mark through the Basin Plan Review and the Water Act review due in 2027.	Neville Crossman
32	From a financial perspective - particularly regarding the economic valuation of critical assets such as civil infrastructure and productive agricultural land - are there studies that quantify the cost of not implementing Integrated Catchment Management or environmental resilience measures? In simple terms, what is the financial impact on private landholders and Local Governments when they fail to invest in ICM practices? Ultimately aiming to showcase healthy catchments mean healthier financial outcomes for stakeholders	Great question. I'm not aware of any studies doing this in MDB. There is work on the costs of continued land degradation in various parts of the world. UNCCD is a great source of information.	Neville Crossman
33	Any thoughts on drawing upon modern landscape and water monitoring methods with a view to revisiting catchment protection legislation coupled to fines and penalties for polluting that make it cost-effective not to pollute?	Polluter pays principle is very good in theory, but hard to implement in practice when there is a long history of land and water degradation. Politically challenging to implement also.	Neville Crossman
34	Have the attitudes of land managers changed, and how do you think they have changed?	Definitely yes. I think land managers better recognise what is at risk and therefore the benefits possible through good stewardship.	Neville Crossman
35	In a time of growing water shortage, to what extent should we be exploring improving water-quality outcomes with recycled water resources and the potential to return this asset to the environment?	We should be using more recycled water provided we can get past the community acceptance barrier. I think we should be evaluating wastewater recycling as part of any town water supply planning program.	Neville Crossman Mike Stewardson
36	How do we engage State Gov's who have the control of lands and water. Need joint consistent approach from all State Gov.?	Commonwealth leadership would be a great first step.	Neville Crossman
37	What are your thoughts on regulating minimum practice standards for agricultural practices such as done in the Great Barrier Reef catchment? It is a traditional and unpopular approach but how do you get land holders to improve their land practices that are not willing to change ie. through voluntary incentives?	I believe there are examples of successes where landholders are more involved in developing and evaluating these standards	Samantha Capon
38	Australia's urban population share has increased from ~82% in the 1980's and 1990's to ~87% now. How connected are Australia's urban dwellers to outcomes on country? Urban tax payers might need convincing of the "value" that would be delivered from nature repair.	I agree. This is a challenge.	Mike Stewardson
39	Sounds like we're going too slow for the challenge we face. How can we make it go faster - e.g. adjust a reg that's out of date and slowing us down?	Funding is key to the pace of progress. We know what we need to do. At the moment waterway management funding is far below what it needs to be.	Mike Stewardson
40	This is all very good and highly valued, useful, and great information, but it seems we are having exactly the same discussions today that we were having when I started 25 years ago.	That doesn't make it the wrong conversation	Mike Stewardson
41	To reinforce Michael, farmers are here to help - they're practical and solutions-focused. We want policies that are co-designed with communities, cost-effective, and locally viable, so they can actually be implemented. Early engagement with irrigators helps secure better outcomes for everyone. Happy for anyone to reach out via NSW Irrigators' Council with questions about the benefits of (or how to) working directly with irrigators.	Good to hear	Mike Stewardson
42	Let's have a go! Move forward collectively... Lots of good organisational structures are in place.	Agreed.	Mike Stewardson
43	What does SCALE represent?	Systems-based Catchment-Aligned and Locally Empowered	Mike Stewardson