



National
Irrigators'
Council

healthy rivers; healthy communities; food and fibre for Australia and the world



Senate Rural & Regional Affairs Reference Committee Water Legislation Amendment (Inspector-General of Water Compliance and Other Measures) Act 2021

July 2021

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National Irrigators' Council

The National Irrigators' Council (NIC) is the national peak body representing irrigators in Australia. The Council supports thirty-two (32) member organisations covering the Murray Darling Basin states, irrigation regions and the major agricultural commodity groups. Council members collectively hold approximately 5,500,000 mega litres of water entitlements.

The Council represents the voice of those involved in irrigated agriculture who produce food and fibre for Australia and significant export income. The total gross value of irrigated agricultural production (GVIAP) in 2017-18 increased to \$17.7 billion (up 14%)¹

The sector produces essential food such as milk, fruit, vegetables, rice, grains, sugar, nuts, meat and other commodities such as cotton and wine.

The Council aims to develop projects and policies to ensure the efficiency, viability and sustainability of Australian irrigated agriculture and the security and reliability of water entitlements. The NIC advocates to governments, statutory authorities and other relevant organisations for their adoption.

Inquiry Terms of Reference

- a. The Water Legislation Amendment (Inspector-General of Water Compliance and Other Measures) Act 2021 be referred to the Rural and Regional Affairs and Transport References Committee for inquiry upon Royal Assent to examine any potential further amendments to improve the operation of the Act, and any related matters; and
- b. The Rural and Regional Affairs and Transport References Committee:
 - i. Present an interim report three months after the date of Royal Assent, and
 - ii. Report six months after the date of Royal Assent.

The Intent of the Act

The Water Legislation Amendment (Inspector-General of Water Compliance and Other Measures) Act 2021 amends the *Water Act 2007* to establish the role of an independent Inspector-General of Water Compliance (Inspector-General) to monitor, and provide independent oversight of, water compliance.

The Act provides the legislative and regulatory framework for the management of the Murray-Darling Basin and enables the Commonwealth to manage, in conjunction with the Basin States, the Murray-Darling Basin resources in the national interest.

The Inspector-General is conferred with the existing compliance functions and powers of the Murray-Darling Basin Authority (MDBA). The Inspector-General also replaces, and assumes the independent assurance functions of, what was previously known as, the Interim Inspector-General.

The Act in part, addresses issues and recommendations made in [2017 Murray-Darling Basin Water Compliance Review \(Compliance Review\)](#) conducted by the MDBA and an independent panel. The Compliance Review recommended amendments to provide a more comprehensive suite of powers and sanctions, including evidentiary provisions and criminal offence provisions.

In 2018 the Australian Government and the Murray–Darling Basin states agreed to the Murray–Darling Basin Compliance Compact, which describes actions to strengthen compliance with water management rules in the Basin. The availability and use of water meters that meet the requirements of the relevant Australian Standard is particularly important if the community is to have confidence in water compliance arrangements.

¹ Australian Bureau of Statistics

The Act also implements the Australian Government's commitment to strengthen compliance and enforcement powers made as part of the *Murray-Darling Basin Compliance Compact (Basin Compliance Compact)*, jointly agreed by the Council of Australian Governments in December 2018 and recommended by the Compliance Review.

The final report of the Productivity Commission's (the Commission) Five-year assessment of the Murray-Darling Basin Plan recommended structural reform. The Commission observed the often lack of clarity about how Governments should respond to issues as they arise and an exposure to a lack of accountability, noting that *the identified and significant risks to successful implementation (of the Plan) cannot be managed effectively without improvements to the governance and institutional arrangements*.

The Commission highlighted the conflicting roles of the MDBA, as regulator of the Basin Plan, when it is required to make final judgments on the success or otherwise of its own coordinated activity (eg supply projects) and to manage breach or non-compliance of all aspects of the Plan.

The Commission pointed to the challenges for the MDBA and its ability to be an impartial regulator in a range of instances, for example, being the agent of, and funded by Basin Governments (providing collaborative leadership, advice and technical capability) compromises the MDBA's ability to be an impartial regulator. This latter role is critical to restoring public confidence in the Plan.

And conversely, the Commission noted, having to regulate and stand in judgment of the States undermines the MDBA's ability to work closely and openly with them as a trusted adviser. The Commission observed that the MDBA had recognised these matters and had sought to manage these types of conflicts through internal structure and processes.

The Commission suggested these conflicts in the MDBA's roles would intensify over the next five years, expecting the MDBA's agent of governments role to grow, for example, as stewards of the shared water resources in the southern Basin. Technical capability and river operations skills will be needed to implement supply projects and to maximise the benefits from an environmental water portfolio that is currently worth \$3.3 billion.

Similarly, as regulator of the Basin Plan and its role in accrediting Water Resource Plans (WRPs), the MDBA will be required to make judgements on whether Basin Governments and river operators manage water resources in a way that is consistent with WRPs.

In short, the MDBA would be required to be a judge of its own performance and therefore recommended structural reform to address such conflicts.

As a result of the Commission's recommendations, the Inspector-General's functions will include *monitoring and providing independent oversight of Commonwealth agencies in the performance of their functions and exercise of their powers under the Act, regulations and other legislative instruments made under the Act, the Basin Plan and water resource plans (WRPs)*.

The Inspector-General's functions would also include oversight of Basin State agencies in relation to their obligations in the management of Basin water resources. The functions will be underpinned by new inquiry powers and the power to issue guidelines and standards. We note that the power to undertake audits will be transferred from the MDBA to the Inspector-General to support identification of compliance issues.

The compliance powers and functions held by the MDBA will be transferred to the Inspector-General and updated to promote consistency with standard Commonwealth regulatory power provisions.

We note the Act also proposes new offence and civil penalty provisions for unlawful conduct relating to the take of water and new civil penalties for conduct relating to trading of water rights. And as

conduct relating to the take of water would also be the subject of Basin State laws, the Act will require the Inspector-General to notify the appropriate State agency before taking certain action. The intent is to enable the Commonwealth to take certain action where the relevant Basin State is unable or unwilling to do so.

The Act provides for the appointment of advisory panels to assist the work of the Inspector-General. NIC suggests that it would be beneficial if appointments to panel/s included persons with a level of knowledge of irrigation.

The Explanatory Memorandum accompanying the legislation, advises the budget of \$38.745 million allocated through the establishment of the Inspector-General:

- \$3.8 million to establish the Inspector-General and the Office of the Inspector-General of Water Compliance;
- \$30.4 million to fund the continuation of the compliance functions that the MDBA currently undertakes (functions now being transferred to the Inspector-General);
- \$2.2 million for on-going assurance and oversight (beyond 2022/23); and
- \$2.3 million independent legal cost for compliance and assurance activity.

We note this funding is in addition to the budget provided for the functions of the former Inspector-General of Murray-Darling Basin Water Resources of \$7.6 million, through to 2023.

Recommendations and key issues

NIC requests the Committee to consider the following key points and recommendations:

- Bipartisanship will be critical in resolving many of the inconsistencies around compliance and it will be in the best interests of all to work towards greater consistency across the jurisdictions.
- Commonwealth owned water, with an extractive water right like all other water users with the same characteristics, should be metered in the same way as the water used by productive agriculture.
- The best compliance and telemetry must be achievable and cost effective for the industry.
- To achieve the highest standards in metering requires genuine consultation and engagement with users and manufactures to ensure standards and targets are practical and effective.
- Consultation and communication with industry in implementation of compliance responsibilities is critical.
- Duplication with the states must be avoided in addressing compliance measures and effort.
- Given the level of concern regarding the practicality of the Australian Standard, recommend:
 - a review of the performance of that standard in terms of its practicality and value.
 - genuine consultation with stakeholders that could assist in identifying alternative arrangements for robust metering.
 - recognise the multiplier effect and benefit from irrigated agriculture in regional development and the economic health of country communities.
- Complementary (non-flow) measures and waterways management must be embedded as part of the efforts to improve river systems and riparian zones.
- Greater accountability is necessary from river operators and governments about losses in the system experienced by irrigators and the management of delivery shortfalls.
- In implementing SDL Adjustment Mechanism (SDLAM) projects, State Governments must be enabled to bring forward new and/or reconfigured supply projects in light of new knowledge.
- Mindful of a full reconciliation of the Basin Plan in 2024, there must be flexibility within the timeframes (beyond the hard and fast June 2024 deadline) to enable the more challenging SDL projects to be secured to deliver the estimated 605GL.

Securing the integrity of water resource management

NIC welcomes the Water Legislation Amendment (Inspector-General of Water Compliance and Other Measures) Act 2021 and we look forward to working with the Inspector-General to ensure the views and the input from those involved in the productive irrigated agriculture sector are heard.

Irrigated agriculture industries support strong compliance as a means of ensuring the rightful owner of water receives what they are legally entitled to whether they be entitlement-holders, irrigators, government agencies or authorities, including the Commonwealth Environmental Water Holder (CEWH).

The CEWH has an extractive water right like all other water users with the same characteristics and in this regard, we recommend that Commonwealth owned water should be metered in the same way as the water used by productive agriculture.

NIC and our members groups have consistently over a long period argued for compliance arrangements which are clear, well-resourced and able to build confidence in the system. Our members have been advocating these positions from well before compliance issues appeared in the media, highlighting the rundown of on the ground compliance resources that occurred in some areas. Irrigators were vocal about paying for a compliance function that they saw was not being adequately delivered.

With the creation of NRAR in NSW, reviews in Queensland, the creation of the Inspector General and the signing of the Compliance Compact, we have seen significant change including a major injection of resources into the job of compliance in the Basin. Irrigators welcome this and continue to work with Government on implementation.

Irrigator groups have been positive and active participants with Government in working through the many issues associated with metering, monitoring and policing of water use, with the aim of achieving a system that is workable and effective.

Compliance is, and should remain, primarily a function carried out by state governments. State government agencies have the capacity to be 'on-the-ground' and that is essential for strong compliance.

The two-tiered system, with the newly instated Inspector-General powers, is a useful guarantee provided there are arrangements in place to ensure there is no duplication of effort and cost.

It is important to recognise the major changes in compliance over the past few years underpinned by a major increase in resourcing and to also recognise that we are in the midst of significant changes in metering and monitoring policies.

The Productivity Commission draft report on national water reform notes the aim to have: *A system of water metering, measurement and accounting, coupled with effective compliance, that promotes water user and community confidence in the integrity of water management and water markets.*

NIC highlighted in our submission to the ACCC inquiry into water markets in the Murray Darling Basin that compliance is a key factor in maintaining market confidence as well as in building community trust around the use of Australia's water resources.

We have provided strong commentary over many years where there has been major progress in better resourcing of compliance activity and metering policies. This includes moving NSW floodplain harvesting from a property right to a fully measured volumetric entitlement consistent with the broader system.

We welcome this progress and support continuing implementation. NIC recommended that the final ACCC report should recognise the progress made and that full implementation of the various state and national metering arrangements should be allowed to continue to conclusion, following which it might then be appropriate to review and assess outcomes.

The ACCC final report released in late March 2021², suggested at **recommendation 17** that metering and monitoring should be strengthened, and that *Australian and Basin State governments, and the MDBA should strengthen existing commitments to better metering and measurement of water take across the Basin through:*

- *continuous improvement and harmonisation of the metering standards and technology in use in the Southern Connected Basin. In particular, South Australia should commit to upgrading its metering standards to require telemetry where cost effective*
- *implementation of telemetry across the Southern Connected Basin, where technologically possible and cost effective*
- *monitoring progress on the measurement and outcomes of overland flows/flood plain harvesting. In particular, Queensland and NSW should continue efforts to more accurately measure overland flows/floodplain harvesting using new technologies; and to bring these forms of water take into the licensing framework*
- *Basin States, in consultation with the MDBA and the proposed Water Markets Agency should implement a consistent approach across jurisdictions and reporting agencies for the collection, storage, transmission and reporting of usage data. This should be consistent with existing Basin Compliance Compact commitments on the automation of reporting of water take, and with any relevant proposed Water Market Data Standards (see recommendation 7)*
- *Basin States should improve compliance and enforcement programs and invest in systems to identify and prevent water users being able to go into negative balances by extracting more water than is available in their account.*

This could be achieved by extending and expanding the scope of the Basin Compliance Compact. These measures will provide a foundation for good management of markets and water resources, increase the confidence and trust of market participants and water users generally, and support other improvements to market architecture, modelling and water information.

National Water Initiative 2004 principles

It is worth revisiting the principles of the National Water Initiative (NWI)³, which are clear though they are in general terms, and given the very different systems across Australia, this remains appropriate.

On Metering and Measuring, the National Water Initiative 2004 noted at **paragraph 87**:

The Parties agree that generally metering should be undertaken on a consistent basis in the following circumstances:

- i) for categories of entitlements identified in a water planning process as requiring metering;
- ii) where water access entitlements are traded;
- iii) in an area where there are disputes over the sharing of available water;
- iv) where new entitlements are issued; or
- v) v) where there is a community demand.

Paragraph 88. Recognising that information available from metering needs to be practical, credible and reliable, the Parties agree to develop by 2006 and apply by 2007:

- i) a national meter specification;
- ii) national meter standards specifying the installation of meters in conjunction with the meter specification; and

² ACCC Murray Darling Basin Water Markets Inquiry, March 2021

³ Intergovernmental Agreement on a National Water Initiative, 2004

- iii) iii) national standards for ancillary data collection systems associated with meters.

Paragraph 89. The Parties agree to develop by mid-2005 and apply national guidelines by 2007 covering the application, scale, detail and frequency for open reporting addressing:

- i) metered water use and associated compliance and enforcement actions;
- ii) trade outcomes;
- iii) environmental water releases and management actions; and
- iv) iv) availability of water access entitlements against the rules for availability and use.

The standard for compliance, metering and monitoring is higher in a system like the Murray Darling Basin than it would be in some smaller irrigation areas, such as some coastal rivers, where the irrigation take is generally supplementary and relatively small scale. The fact that non-Murray Darling Basin jurisdictions are at various stages in metering implementation has been raised by other stakeholders regarding lack of compliance with national metering standards.

Western Australia approved meters, for example, are not required to comply with Australian Standard 4747 and there is no reporting on metering in Tasmania, so it is unclear if metering standards are being enforced.⁴

The Productivity Commission's 2017 review noted significant progress on metering and compliance and since that time there have been further reforms in compliance and metering standards, across the Murray Darling Basin states in particular.

Consistent with the position we have taken on a range of reviews, our view is that no further reform is needed until implementation of the current processes is completed.

Irrigators strongly support accurate metering and compliance regimes, and NIC is on the record as having zero tolerance for water theft. This results in a reduction of water available to legitimate users and represents an unfair cost advantage. The industry has actively engaged with Government in seeking practical standards for rollout of new metering standards.

Many of these points were dealt with in more detail in the Commission's Five-year Review of the Murray Darling Basin Plan. NIC's concerns raised previously around the practicality of some of the standards and timetables, remain. In our submissions to the Five-year Review we raised concerns about the practicality of the Australian Standard and the fact that it simply could not be met in a range of situations.

And given the concerns regarding the practicality of the Australian Standard we have previously recommended a review of the performance of that standard in terms of its practicality and value, and genuine engagement with stakeholders. This will assist in identifying alternative arrangements for robust metering.

NIC was advised informally that Government agencies had reviewed the Standard. This was a surprise as we had not been aware of any public consultation, nor had we seen anything to detail changes or even consultation with manufacturers. This 'in house' approach involving government agencies is completely unsatisfactory.

The Commission agreed with our concerns and suggested at Recommendation 12.2: *Basin States should consider the role, costs and benefits of consistent metering policies including the role of metering standards. Basin Governments should work with Standards Australia to formally revise standards to ensure quality and cost effectiveness in water measurement. The new metering*

⁴ Irrigation Australia Ltd, submission p 3 p 7

*implementation plans being developed by Basin States should be supported by publicly available business cases.*⁵

NIC supported this recommendation and urged authorities to consult industry and manufacturers to ensure it was practical.

Addressing Underuse

While the Act requires action to address water use that exceeds legal limits, there are no provisions to require actions to address underuse against those limits. During the period of Cap accounting from 1997 to 2019, cumulative credits of 20 million megalitres were accrued by water users.⁶ These credits have been extinguished as SDL accounting has commenced.

In the first year of SDL accounting, a credit of 1.6 million has already accrued⁷. Many of the rules that were in place to ensure compliance with Cap have been rolled over into the new Basin Plan Water Resource Plans so it follows that systemic underuse will continue and credits accumulate. Measures to address this underuse and allow water users to take water up to agreed limits, are as valid as measures to ensure no growth in use that results in the SDL being exceeded and must be addressed immediately.

The role of the States

The States are reviewing and updating their non-urban water metering policies and implementation plans in response to the Basin Compliance Compact. Changes to policies and/or implementation plans may occur as the requirements for pattern approved meters change.

Irrigators' concerns remain however, that in some jurisdictions, targets are not practical and that, even with all the best will in the world, some cannot be met. There are concerns regarding differences in criteria in different states (as noted) and the implications this has for practical issues like training sufficient accredited installers.

It is important that the states uphold their responsibilities in this regard. In New South Wales significant work is needed to resolve issues around the ambitious requirements relating to the new standards including telemetry. Irrigators with a genuine determination to reach compliance within the specified timelines must be enabled with access to the correct equipment.

There has been market failure in New South Wales as water users attempt to comply with the ambitious objective to move NSW to a fully compliant AS4747 meter fleet. For some pump sizes no compliant meters were available and needed to be developed and accredited as well as installers needing to become accredited. The requirement for telemetry has also proved a challenge with poor connectivity in many locations.

Irrigators support standards which require accurate meters with telemetric capability, however barriers exist regarding access to meters for high volume uses that comply.

We are aware of the effort of our members in cooperating with NRAR (Natural Resource Access Regulator) in New South Wales to assist in reaching stakeholders to support streamlining communication with irrigators, a critical component of the rollout.

Concerns remain amongst some New South Wales irrigators around the costs that will be incurred in installing the required meters to meet the new standard, when they had their own meters installed and operating prior to the Government moving in 2018 to impose a new gold standard.

⁵ *Productivity Commission Report: Five Yearly Assessment, Murray Darling Basin Plan, 2018, p 312*

⁶ *Transition Period Water Take Report 2018–19, p 156*

⁷ *Murray–Darling Basin sustainable diversion limit compliance outcomes 2019–20, p 22)*

Delays in the rollout of the new standard include limited pattern approved devices and timeliness of approval; lack of market capacity, manufacturing delays and supply issues; mobile coverage issues (for the DAS/telemetry); a shortage of Duly Qualified Persons (DQPs) to install and validate the new devices, and unresponsive administration when DQPs and water users seek advice and assistance to navigate the Government's validation and certification system.

No other state requires its water users to meet the new standard, and until recently, there were no meters available on the market capable of meeting the new standard in the field.

It will be important that issues around privately owned meters versus government owned meters in NSW are resolved. The costs of upgrading privately owned meters are the responsibility of the owner. The NSW Government has decided that WaterNSW will retain ownership of their meters, and the associated costs of maintenance.

We recognize the ambitious compliance program within NSW, though once embedded, it will be of a high standard providing the anomalies described can be resolved.

In South Australia, we understand that around 95% of offtake has been metered for many years. Prior to the new national compliance approach which commenced on 1 July 2019, South Australian offtake meters were installed and managed under South Australia regulation. All offtake meters (using SA Licensed Water) were required to be "an irrigation type meter supplied from a manufacturer compliant with Australian Standard/New Zealand Standard (AS/NZS) 9001(Quality management systems)" and other requirements.

As a result of the new compliance approach, South Australian irrigators are required to have only replacement or new installation meters at the point of diversion, compliant with the new national compliance standards. Diversion meters installed under South Australia's old regulations are still regarded as compliant.

Many regard the national standard as very restrictive as it limits the choice of meters to those "patented" in Australia. Some have found difficulty in securing a "patented" meter big enough for an offtake. We are advised that the cost of one meter, uninstalled was around \$70,000, and that to retrofit smaller meters, would be at an unsustainably high cost and even then, may not have the required structural integrity / engineering.

Bipartisanship will be critical in resolving many of the inconsistencies and it will be in the best interests of all to work towards consistency across the jurisdictions.

The best compliance and telemetry must be achievable and cost effective for the industry.

It is reasonable to acknowledge the significant progress that is being made in metering and monitoring and to acknowledge that the irrigation industry has demonstrated a strong commitment to accurate metering and support for compliance. To achieve the highest standards in metering requires **genuine consultation** and engagement with users and manufactures to ensure standards and targets are practical and effective.

The Compliance Compact (agreed in 2018) has been an important development which, combined with actions taken by state governments, has resulted in improving resourcing of compliance activities. The current process of implementation must be allowed to finish before considering if further development is required.

However, it remains a concern that the Compliance Compact is not delivering a consistent approach between the states, and this reflects inequities in the system.

Questions were raised during consultation on the Senate Select Committee on the Multi-Jurisdictional Management and Execution of the Murray Darling Basin Plan in early 2020, regarding whether the Commonwealth and the states have adequate powers, resources and information to monitor and enforce compliance.

It is expected that the embedding of the Inspector-General role, underpinned by powers and funding will see progress, with resources directed where they are needed. The tools available for monitoring and enforcement continue to develop, particularly around technological solutions.

There are challenges in working through how to effectively manage the large amount of data that will come from telemetric meters; this has been raised as an issue and will require careful consideration of accuracy and privacy issues.

Water entitlement holders must be adequately informed regarding their compliance obligations, and whether they are sufficiently confident in understanding the rules to enable them to act in accordance with their water licenses. NIC has continued to highlight that some license conditions are quite complex and when they interact with a need to measure natural events, there is potential for confusion. This is particularly the case in unregulated systems.

This does not mean everyone needs the same meters or telemetry systems; however, it would be desirable to ensure that systems development keeps pace with technological advances; this means setting standards for the accuracy of meters and the data that needs to be communicated rather than being too definitive in the actual make and model of equipment to be used.

Delivery Shortfalls and Conveyance Losses

It is equally important that, in demanding high levels of compliance from water users, there must also be greater accountability from river operators and governments about losses in the system and the management of delivery shortfalls in the southern Basin.

Our engagement with the Murray Darling Basin Authority and Commonwealth Environmental Water Holder (CEWH) around these matters continues. Against the backdrop of many reports commissioned by the Authority, we expect to see a genuine attempt to progress these issues. This includes the need for the New South Wales and Victorian Governments to step up to demonstrate that they too are genuine about finding solutions.

NIC raised these issues with the ACCC as part of the inquiry into water markets in the Murray Darling Basin. The **ACCC final report** suggested at **recommendation 19** that Basin States and the MDBA should move promptly to:

- formalise their arrangements for managing shortfall events, including how they will enforce those arrangements
- publicly release plans, or a joint plan, that clearly and with consistent messaging, describe:
 - the delivery risks faced by water users
 - how a shortfall would be managed by authorities, including mechanisms and approaches to be used to ration water availability
 - how water users can take steps to mitigate their own risks or potential impacts of shortfall events based on their location in the river system.

The ACCC noted that irrigators need more certainty around how water deliveries will be managed in times of high demand and potential shortfall.

And at **recommendation 21**, the ACCC noted in relation to improving **transparency of conveyance losses** and other delivery impacts, that:

The MDBA and Basin States should improve the transparency of conveyance losses and other delivery impacts. Specifically, that the MDBA should commit to the active and ongoing monitoring and communication about trends and drivers of conveyance losses through the

annual publication of the 'River Losses in the River Murray System' report – in a timely manner following the finalisation of each water year.

Basin States should also consider releasing similar reports to explain the nature and drivers of conveyance losses in other rivers where concerns are present, such as the Murrumbidgee.

NIC notes the regulation to be introduced shortly into the Australian parliament - Part 10AA of the Act – Inspector-General of Water Compliance (special powers) – giving effect at 10AA.01: *Matters to which Inspector-General must have regard in deciding whether a contractor is fit and proper to be an authorised compliance officer and for the purposes of paragraph 222G(5)(a) of the Act.*

- (a) whether the individual has appropriate training;
- (b) whether the individual has been convicted of an offence against the *Water Act 2007* or a law of a State or Territory relating to water management;
- (c) whether an infringement notice has been issued to the individual for contravention of a civil penalty provision of the *Water Act 2007* or a provision of a law of a State or Territory relating to water management;
- (d) whether the individual has been ordered to pay a pecuniary penalty for contravention of a civil penalty provision of the *Water Act 2007* or a law of a State or Territory relating to water management;
- (e) whether the individual has been convicted within the preceding 10 years of an indictable offence, punishable by a period of 12 months imprisonment or more, against a law of the Commonwealth, or a State or Territory;
- (f) whether the individual has been convicted of an offence against a law of the Commonwealth, or a State or Territory, involving:
 - (i) entry onto premises; or
 - (ii) fraud or dishonesty; or
 - (iii) intentional use of violence against another person or intentional damage or destruction of property.

Note 1: In making the decision, the Inspector-General may also have regard to any other matter the Inspector-General considers appropriate (see paragraph 222G(5)(b) of the Act).

Note 2: Application may be made to the Administrative Appeals Tribunal for review of a decision by the Inspector-General that an individual is not fit and proper to be an authorised compliance officer (subsection 222G(6) of the Act).

Additional issues for consideration by the Committee

Securing the Sustainable Diversion Limits (SDL) supply projects

For some years and over many Government initiated reviews and inquiries, NIC has advocated that State Governments should adopt an adaptive management approach to implementing SDL Adjustment Mechanism (SDLAM) projects, with the flexibility to modify projects and be encouraged to bring forward new and/or reconfigured supply projects in the light of new knowledge.

We have advocated this while fully aware of the provisions of the Act. We suggested there should be no downside to allowing maximum flexibility.

Mindful of the fact that there will be a full reconciliation of the Basin Plan in 2024, irrespective of the final shape of projects in an equivalent flow sense, NIC has advocated flexibility within the timeframes (beyond the hard and fast June 2024 deadline) to enable the more challenging SDL projects to be secured to deliver the estimated 605GL.

We have expressed our concerns in many forums that if State Governments fail to deliver the agreed SDLAM projects or the projects fail to generate the envisaged 605GL and associated benefits, it will be food and fibre producers and irrigation communities who will bear the risk if the 605GL is not achieved.

The SDLAM projects are an integral part of the Basin Plan as agreed in 2012 and are critical to achieving environmental outcomes.

In submissions to the Independent Panel (Sefton), WESA and the Productivity Commission we highlighted that the SDL projects were not on track for completion by 2024. We acknowledged the complexity of some of the projects, which required negotiation and agreement with a large number of landholders.

The Sefton panel (Independent Assessment of Social and Economic Conditions in the Basin) recommended:

If the existing SDLAM projects do not deliver the anticipated 605 GL, there should be flexibility to allow new or other existing projects to close the SDLAM gap. The 605 GL must be achieved through SDLAM. Given COVID-19, the progress status of key SDLAM projects, and the need for community consultation to not be rushed or superficial, timeframes for SDLAM measures should be extended to deliver an equivalent value of 605 GL.

NIC has long stated our opposition to any further water buyback and it was pleasing to see the Water Minister in late 2020 committing to no more buybacks – and made it clear that the Government would not put further pressure on irrigators to recover 450GL up-water through buybacks and that the focus would be on off-farm efficiencies to improve environmental outcomes. It has long been NIC's position that the focus should remain on off farm efficiency measures and that State Governments must make a genuine effort on this front.

As we suggested in our submission to the WESA review (Water for the Environment Special Account), we highlighted to Ministers that we do not believe the Schedule 5 environmental outcomes can be delivered via additional flows as it is clear that the assumptions made by the Authority in 2012 for constraints relaxation are incorrect and require amendment.

In December 2018 the Productivity Commission stated: *First, and as a matter of priority, the MDBA should update Basin modelling to establish the environmental benefits of additional water recovery within current operating conditions (including existing constraints), and the expected benefits arising from the agreed constraints proposals. This would identify those constraints projects that are most important for achieving the Schedule 5 outcomes and the entitlement types that should be prioritised in water recovery programs.*

*The 2012 Basin Plan modelling that underpinned the development of the Schedule 5 outcomes and the efficiency measures package made a number of assumptions that have since changed. In particular, the modelling suggested that without easing constraints to allow higher flow rates, additional environmental water would have few additional benefits. Since then, Basin States have developed proposals for constraints projects that will allow lower flow rates than those included in the 2012 modelling.*⁸

Complementary Measures

NIC has advocated consistently over many years on the importance of incorporating complementary, or non-flow, measures as part of the Basin Plan. The Sefton Panel and the Productivity Commission, on a number of occasions, have endorsed this approach.

The Commission recognised that providing water in itself is not necessarily enough to secure environmental outcomes. Environmental water provisions can help achieve flow regimes and extraction rates which better reflect ecological need.

NIC has long highlighted that the reference to a 'flow' must be seen as an input and not an outcome, where 'flow targets' cannot be described as delivering environmental outcomes. Achieving these outcomes should not be simply a matter of ticking off flow targets. We have argued that greater

⁸ Productivity Commission, *Five-year assessment of the Murray-Darling Basin Plan Report 2019*. P 23

innovation and imagination is needed in the effort to support river systems and to deliver environmental benefits more broadly.

Complementary measures might include projects designed to improve the river environment by enhancing conditions for native fish, improving riparian zones and tackling weeds and feral animals.

These types of complementary measures would be designed to support the best environmental outcomes. The Commission has previously recognised that providing water *in itself is not necessarily enough to secure environmental outcomes. Environmental water provisions can help achieve flow regimes and extraction rates that better reflect ecological need.*

The Sefton Review noted that most complementary measures are local in scale, such as:

- integrating fish and environmentally friendly designs into irrigation infrastructure investments
- installing fishways and fish diversion screens
- investing in and building infrastructure to manage local cold water pollution
- using flexible flow related market based mechanisms for environmental watering in lieu of recovering water from the consumptive pool
- using riparian management to improve sediment transport.

The Sefton Review panel suggested that progressing complementary measures should be a priority and also noted that (at that time), it was not clear what quantum of environmental water recovery volume reduction could be achieved from complementary measures, suggesting that this should be explored further as an opportunity in the southern and northern Basins.

Pleasingly, these types of measures are now incorporated in the Northern Basin toolkit measures as part of the response to the Northern Basin Review. In March 2021, a suite of ten projects put forward by the NSW and Queensland Governments, was announced. Some of these measures include measures to deliver environmental outcomes for waterways, wetlands and marshes, and will also support the right environment for native fish to breed and thrive.

These projects are critically important and deliver measures such as installation of fishways to improve native fish access to aquatic habitat in the Barwon-Darling river system and Border Rivers region of New South Wales and Queensland.

Reflecting this approach, NIC welcomes the first round of projects announced by the Government under the Murray Darling Healthy Rivers Program. The program enables communities and farming and land care groups to undertake practical, on-ground projects to improve the health of rivers and wetlands across the Basin. The types of projects to be funded under this round include:

- better management of creeks and floodplains
- erosion mitigation and biodiversity improvement along creeks
- revegetation along waterways
- protecting vulnerable floodplain and riverine landscapes from feral pigs
- grazing management through fencing waterways
- restocking river systems with native fish
- weed removal and riparian restoration along creeks
- restoration of aquatic vegetation along mid-Murray waterways

Irrigated Agriculture in Australia

Irrigated agriculture farmers in Australia, producing food and fibre, perform a vital role feeding and clothing Australians and the world, making a major contribution to the social and economic wellbeing of many rural communities and to the national economy. Australia's irrigators are among the most efficient in the world, with efficiency driven by industry innovation and investment assisted in part by government programs.

Irrigators operate in all states of Australia producing a variety of fresh and bulk foods and other commodities. Major irrigated foods include fruit and vegetables, dairy products, nuts, rice, fruit juice, wine, sugar, cereal grains and sheep and beef cattle. Sustainable irrigation is the key that has made the Australian cotton industry, for example, a global leader and a highly sought after product.

In 2017-18, total Gross Value of Irrigated Agricultural Production (GVIAP) increased to \$17.7 billion (up 14%).⁹

The four commodities with the highest GVIAP were:

- Fruit and nuts (excluding grapes) at \$4.2 billion (up 20%)
- Vegetables at \$3.4 billion (up 3%)
- Cotton at \$2.3 billion (up 52%); and
- Dairy products at \$2.2 billion (up 37%).

These four commodities in total accounted for 69 per cent of total GVIAP for the 2017-18 year.

The Murray Darling Basin is Australia's most important agricultural region, with irrigated agriculture a key component. The most recent ABS figures show that irrigators grew 36 per cent of the value of production in the Basin, worth more than \$8.6 billion in 2017-18. As a wholesale value that number is likely to underestimate the full flow on impact in the communities of the Basin.

Agriculture uses around 70 per cent of the water consumed in Australia per annum and irrigation uses 90 per cent of that.

The increasing demand for irrigated agriculture and the challenge of declining water availability is driving increases in the efficiency of irrigated agriculture. Efficiency is improved through more water-efficient crop varieties, more precise application of water, technology enabling improved farm management practices, irrigation infrastructure and river management.

In terms of the agriculture sector more broadly, ABARES most recent quarterly report ¹⁰ notes the *gross value of agricultural production is forecast to reach a record \$66 billion in 2020–21, boosted by Australia's second-biggest winter crop on record. Significantly larger harvests in every Australian state are forecast to result in a 59 per cent increase in the gross value of grains, oilseeds and pulses compared with the 2019–20 season. The gross value of livestock production is forecast to fall 8% due to falling slaughter, despite record high prices for cattle and sheep.*

With the global demand for food and fibre steadily increasing against the backdrop of a world population forecast to exceed 9 billion by 2050, Australia is well positioned to take up the opportunities presented and to be at the forefront of this global demand.

The future prospects for irrigated agriculture in Australia are strong. This ambition is not without challenges for the sector as part of its responsibility in meeting the climate change task and meeting community expectation to reduce emissions, while participating in the broader effort to contribute to global action.

Climate variability is not new for farmers. The agriculture sector has over a long period worked with a variable climate, adapting to significantly reduced water during times of drought. For the irrigated agriculture sector in particular, irrigation storages and the trading platform have been built in Australia as a way to ensure capacity to produce food and fibre during prolonged dry conditions.

⁹ Australian Bureau of Statistics: Gross Value of Irrigated Agricultural Production, 2017-18 financial year

¹⁰ Department of Agriculture, Water and the Environment: Agricultural Overview: March 2021

The ability to store water for use in dry times is the very essence of irrigation, serving as one of many drought mitigation measures and to also serve as a climate change mitigation measure. It also serves as an important strategy to help deliver environmental and community water.

Climate change and climate change policy impacts on irrigators in two key areas – water supply (including changes in run-off into catchments) and energy policy. While efforts to ameliorate climate change impacts on the environment are supported, it is not possible to avoid all negative impacts, and it would therefore not be reasonable to expect food and fibre producers and the communities to bear the whole.

NIC recognises climate predictions pointing to less run-off overall and more variability with storm events and drought. This presents challenges for agriculture and the community and in the medium to longer term, it will mean long term averages change. It is important to recognise that trade may also be affected in the future as trade partners look to countries with strong climate policies to source goods.

The success of agricultural businesses depends on the capacity of the sector to continue to innovate and adapt, using best practice to manage climatic risks and securing investment for the future. This includes the uptake of opportunities provided for the sector's participation in carbon markets to contribute to Australia's emissions reduction goals.

Energy costs have presented a major barrier for Australian irrigated agriculture and impacted the competitiveness of many industries. Energy for pumping and pressurising irrigation water, heating and cooling used in some industries, is a significant part of the cost structure for food and fibre production.

The irrigated agriculture sector expects to play a part in moving to lower carbon emissions and meeting Australia's international obligations and community expectation. The evidence shows that agriculture has been an enthusiastic leader in the take up of renewable energy – where it is able to be shown to be cost effective for the farming business.

The irrigated sector will continue to participate on a fair and equal basis, as part of the broader effort to secure Australia's water resources into the future.

