











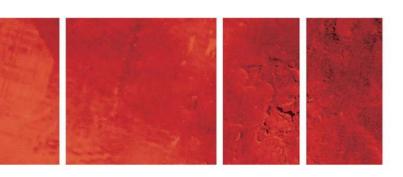
Community Landcare Case Study

for the National Wild Dog Action Plan

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Published by: Centre for Invasive Species Solutions

Telephone: (02) 6201 2887

Internet: http://www.invasives.com.au

ISBN 978-0-6480750-9-7 (online)

Report produced by:

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The Centre for Invasive Species Solutions gratefully acknowledges funding support from the Australian Government.

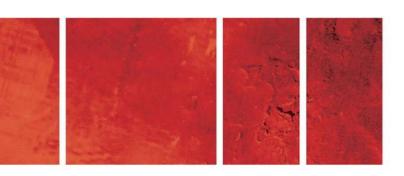
This document should be cited as: Quealy, J (2017). Community Landcare Wild Dog Management Case Study. PestSmart Toolkit publication, Centre for Invasive Species Solutions, Canberra, Australia.

Front cover photo: Photo by Peter Marshall



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Abbreviations

ARC Australian Red Cross

AWI Australian Wool Innovation

CMA Catchment Management Authority (VIC NRMO)

DELWP Department of Environment, Land, Water and Planning (VIC)

IAL Invasive Animals Ltd

ISC Implementation Steering Committee (of NWDAP)

LCGs Landcare Groups and Networks
LLS Local Land Services (NSW NRMO)

NPWS National Parks and Wildlife Service (NSW)

NRMO Natural Resource Management Organisation (i.e. LLSs and CMAs)

NWDAP National Wild Dog Action Plan

PACs Pest Animal Controllers

SCG Stakeholder Consultative Group (of NWDAP)

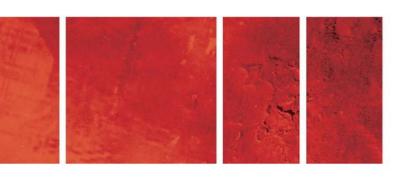
SELLS South East LLS

SF State Forests Agencies

WDAs Wild Dog Association and Groups







1. Abstract

"Dogs ain't dogs", "When man's best friend turns nasty", "Who let the dogs out?"; these could be relevant titles for this research project using interviews with eighty-five people, mostly landholders and community members of both 'Wild Dog Associations and Groups' (WDAs) and 'Landcare Groups and Networks' (LCGs). The rapidassessment by one key researcher, with expertise in landcare, pest animals and community development, spanned five regions of NSW and Victoria during January and February 2017, collecting views in meetings with individual farmers, couples and groups, on farms, in landcare offices, community halls, cafes and showgrounds to gather impressions and primary source material. The reason and purpose? To guide continuing improvement of wild dog management, as part of the National Wild Dog Action Plan (NWDAP). The interviews allowed primary material to be gathered, both textual ('vox populi') and visual (portrait photos) of people who are actively engaged in community groups for wild dog activities and strategies. The material can help define and improve community-led, and agency-supported, public and landholder engagement in wild dog management activity and resourcing, once packaged and communicated for public and other specific audiences.

Key recommendations are summarized into five themes:

- 1. a matured nil tenure and partnership approach
- 2. knowledge sharing
- 3. having the power to persuade
- 4. community building, and
- 5. consistent plans, policies and roles.

All recommendations require adequate recognition of LCG and WDA community group structures and their investments within the NWDAP. If WDAs and LCGs are to be the best they can be, they require the framework for action within the NWDAP to speak directly to and with them, and to be adequately

resourced and supported, to be ready for the (self-recognized) escalation of their wild dog activity. The wild dog issue is a major, growing and wicked challenge both within the five regions reported on, as well as in areas known to be the next fronts for wild dog invasions. The challenge and the responses must be collaborative and known about and shared. The contacts and roles must be clear and easily accessible.

Keywords: wild dogs, NWDAP, Landcare Groups (LCGs), Wild Dog Associations (WDAs), pest animals, community group structures and roles, pest animal planning.

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2 April 2017



2. Summary, Conclusions and Recommendations

Summary

The project aimed to describe and analyze a community approach by both Landcare Groups (LCGs) and Wild Dog Associations (WDAs) to highlight best practice community approaches, both generally and specifically for wild dog management, as well as advantages and disadvantages of relative community approaches and how people in communities can maintain beneficial relationships to get the most out of their engagement.

This report describes and analyses data curated from a selection of community landcare and wild dog groups, through group member field interviews, recordings and photographs, across five regions of NSW and VIC during January and February 2017. The interviews give a sense of the actors, roles, structures, resources, approaches, practices, beliefs, assumptions, frustrations, key messages and recommendations from interviewed community members (primary sources), as well as from key supporting people and organisations (secondary participants). Common themes come from both the LCG and WDA approaches (and are broadly reflected in support partner contributions), summarized into five themes, (derived from analyzing the communities and their recommendations and requests):

1. A matured approach to 'nil tenure' is required to build partnerships with community, government, industry and research groups, so everyone can commit to and help drive successful wild dog management and action, i.e. maturity of the nil tenure approach and policy needs support for wild dog plans with actual, known, secure and adequate resource commitments and actions, that leverage community investments of time expertise and funding, knowing that both partnerships and resources are critical to managing wild dogs and their impacts, for the good of the whole community, industry and environment.

- 2. Knowledge sharing is critical to help all actors (and current non-actors) to willingly and cooperatively participate in wild dog management actions:
 - a. We need to extend the abilities, networking and commitment of current actors, and can do this by better sharing of knowledge, maps, research, data, resources, leadership and skills training and discussions amongst the current partners (the landholder groups, contract controllers and supporting agencies people I'd call 'first responders')
 - b. Without significant public engagement, current efforts of the first responders are severely compromised and can be wasteful of effort and funding; hence we need actions and campaigns to engage the general public and specific groups (non-actors), which can be done through behavior-driven communications and awareness campaigns (e.g. "Please report wild dogs, when you see them, using your mobile phone", or "Community baiting, why are we waiting?" or like flood message "If it's flooded-forget it")
- 3. Having the power to persuade and require actions to control wild dogs and their impacts: Where it is difficult to bring people and organisations on board, we may need actual (or the threat of) mandatory powers to get basic land manager action (i.e. propertybaiting) on wild dogs across all properties and tenures, to effectively achieve a real nil tenure and whole of community landscape approach, and specifically to:
 - a. <u>influence the non-involved</u> (but critical) land owners and managers (who create gaps in otherwise effective control programs), and/or
 - b. <u>close gaps</u> by running mandatory control programs (in the absence or difficulty of getting 'gap' landowners consent, or where there is

lack of care and responsibility for wild dogs on their places), a difficult and ethics-bounded issue, and/or

- c. raise funds and escalate wild dog program funding and actions and build community preparedness and responsiveness to act (e.g. 'levy' recalcitrant land owners and managers through rates, grants or other means until problems are managed), and/or link real estate land valuations to pest animal control engagement and/or raise funds from pet dog /farm dog / hunting dog owner's licences) hence raise the stakes for non-action, and/or
- d. <u>provide incentives</u> that would encourage engagement (e.g. rates reductions, 'free' trees or other resources for people who do get involved in controls and management).
- 4. Community-building and recognition of community expertise, knowledge, funding and activity is critical to wild dog and broader pest management. Community building requires community-centered networking, research, citizen science and innovation; but, currently active community-driven WDA and LCG groups (structures, actors and their investments and energy) are both unrecognized in, and not formally partners of, the NWDAP, yet are widely known to be (and are functionally) primary stakeholders of NWDAP.

In the past, pest animal and other farm community challenges were driven by strongly- connected, supportive and 'aware of each other' networks of neighbours in communities; interviews revealed community network disruptions (for varying reasons), a deep longing for (and some activity towards) more cohesive, proactive and effective community networks.

The outlook is affirming: we have 25 to 30 years of landcare groups developing their members and improving landscapes and enterprises, and 50 to 60 years of wild dog groups developing expertise and landscape knowledge - adding up to significant expertise and energy residing in the many committed, energetic (but currently aging and tired)

community networks (and whose names don't appear in the NWDAP).

With more social support and resourcing these networks "could lead whole valleys" to action and better outcomes (and safer more productive valleys). Currently a hand-out mentality and constant competitive grant-seeking is described, that interviewees feel is dividing communities in their struggle to find the resources to match their efforts and get things done (i.e. get wild dogs reduced); social network support could change this and improve effectiveness of a range of programs.

We have a rapidly changing rural and regional population with 'newbies', anxious to fit into a farming and regional community culture, but possibly taking on properties without the experience and knowledge needed, possibly wary of or not feeling invited into established groups, whilst possibly needing advice and guidance from longer-term generational farmer community members. There is a "mind-boggling" turnover in hobby farm properties and a resulting lack of continuity in landscape management as well as in wild dog knowledge and expertise.

With community-led research and citizen science, members would mobilize, educate and entertain, instead of beg and cajole, new landholders into helping and taking responsibility on their own places - and achieve best results.

The structure of the NWDAP reflects government and industry as formal partners and drivers - but WDAs and LCGs are fundamentally invisible within the NWDAP, in name, role, capability and investment.



5. Consistent plans, policies and roles

Most wild dog plans would benefit from a broadly consistent approach to make sure they all cover the basics and are clear and able to guide the best of landholder, group and agency activity (with the ability for plans to reflect district landholder and group needs).

Clarity is required around divergent rules and policies (e.g. for suggested spacing of baits and inconsistent access to baits (with people getting free baits, and / or paying for baits and /or contributing meat from their own stock for baits). Inconsistencies are happening at the NRMO level with landholders straddling two or more NRMOs which have differing rules and hence abilities to engage landholders and groups with activity; inconsistencies are happening with agencies (e.g. on involvement and on bait policies).

The PAC role is critical to all wild dog activity, but the role's value is not reflected in recruitment, remuneration, training or security of tenure. Different regions have different models and hence governance varies and needs to be professionalized without losing the particularly skilled people who are attracted to and have the necessary skills, experience, and aptitude for the roles.

Conclusions

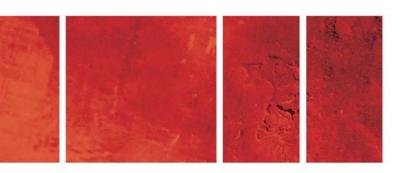
The interviews revealed a lot of detail about wild dog action programs, (great primary source material to understand what people have been going through and realizing) with a deep sense of personal and group pride of their collective and individual achievements and so much real benefit through their efforts, for many people, communities, farm and native animals, enterprises and ecosystems.

But this sense was overshadowed with palpable anxieties, knowledge of an ever-increasing workload and unfunded budget projections, shared frustrations and stress around wild dogs. Everyone is keen for better clarity and shared purpose on roles and resources and the needed (but blocked) ability

to combine energies, plug the gaps and use limited resources most wisely. There is an undercurrent of real concern that people with wayward, differing or unaware opinions (the currently 'non-acting' public) might be stirred into being an anti-wild dog control or anti-farming public, with big risks to families, enterprises and communities, and productivity.

There is a real sense of communities and individuals struggling to manage personal, enterprise and community recovery after wild dog impacts - with analogies that could easily be made with emergencies and natural disasters and the need to prepare and recover (i.e. to go through the impact, assess the damage and recover, over both the short to long term, re-establish, plan and prepare again). Often wild dog problems peak after a natural disaster event (e.g. fire), complicating recovery practice. Such events disrupt both human and animal communities. This needs further research and understanding to leverage the disruptions and achieve better outcomes.

The IAL, the NWDAP committee and other stakeholders might pivot their efforts, with a lead from the LCGs and WDGs, and put a bit more social into the science and management of wild dogs, to tip in more valuing of and support for the community players and their needs as communities. This is achievable through strategic (and not too much greater) investment in the very able community group structures and actors (both landcare and wild-dog groups) that want and need to be active in wild dog management, with a niltenure, partnership approach. There is a significant gap in the NWDAP and in its governance structures, in the non-recognition of community actors and structures most engaged with wild dog impacts and management - the long-established groups and networks of citizens, the WDAs and the LCGs. The NWDAP ISC and SCG probably need to include a formalized representative of both WDAs and LCGs for a better plan and outcomes to be achieved. This would give better governance, commitments and a landholder (both productivity and environmental) focus to activity.



The opinions, messages and discussions shared with the researcher provide material that is rich, deep, complex and messy, and that is ok. The material deserves acknowledgement (through acting purposefully on recommendations) of the valiant efforts of people out there battling wild dogs.

The recommendations suggest investing in the people as separate and currently more important than simply and scientifically on dog management outputs and metrics alone; we know what to do, we need to work on the motivations and engagement of people. The ask and task is relatively straightforward: all stakeholders particularly industry, agencies and NRMOs need to help renew, increase, and mature the nil tenure approach, and make and clearly communicate commitments to nil tenure wild dog management. This requires transparent and adequate investment in the wild dog programs as well as in social enterprises (specifically WDAs and LCGs) that drive community-level efficiencies and outcomes, and which will leverage the community partnerships that are ultimately essential to this critical task.

Recommendations

In summary: the community groups (and partners) need and want:

- 1. A matured agreement around nil tenure, and (whole of) community-government-industry partnerships with adequate resourcing commitments
- 2. **Knowledge sharing** with and through partnerships and regular and ongoing public message campaigns
- 3. The power to persuade the non-actors, and to plug the gaps (in baiting), and to reward the active partners
- 4. Community building and recognition of actors and structures (i.e. to include WDAs and LCGs), and putting the social alongside the science and into the wild dog challenge, and

5. Consistent plans, roles and policies - this is possible and required - and with clarity, alignment and consistency, everyone will benefit: actions and plans might then align with the National Wild Dog Action Plan, critical roles (particularly the PAC) will have tenure security and WDAs, LCGs and agencies who contract with PACs will have more reasonable abilities to forecast and manage PAC turnover and training needs and budgets.

Supplementary recommendations:

WDAs may benefit from a broader-based approach like used in landcare by LCGs (in terms of more diversity of people, interests, issues-focus, resources and approaches) and/or collaboration on specific tasks with LCGs.

LCGs might benefit their broader communities by offering support to WDGs, assisting communities with preparedness and recovery from attacks and impacts, and encouraging awareness and reporting and partnerships for wild dog management.

Acknowledgements

Thanks go to each of the interview participants, as well as those who suggested and coordinated interview subjects and places for our research - all have added to the richness and quality of the material.

The innovative ideas, the shared inspiration and the sheer commitment of everyone to help us all get better at this (fundamentally awful) task, has been humbling and is well worth all the hours and miles I and others put into this project. I hope I have kept the research centered on and with the participants and that I continue to honour the trust people placed in me, to carefully take these thoughts and suggestions into this public space.



3. Context

Frame of reference for the research and analysis

The evaluation criteria for management and citizen focus proposed by Martin P, Low Choy D, Le Gal E, and Lingard K. (2016): "Risk control, management accountability, effectiveness in securing and distributing resources, effectiveness in securing community engagement, key roles and activities, effective and efficient coordination, respect for citizens and administrative requirements that are efficient and feasible for the citizen".

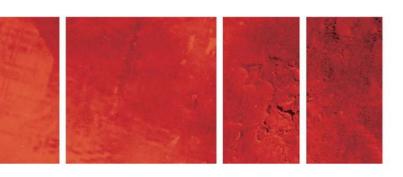
Auspicing

The NWDAP (National Wild Dog Action Plan) is the auspice group through Invasive Animals Ltd (the business management arm of the Invasive Animals Cooperative Research Centre), with Project Manager Jane Littlejohn. The researcher is Jennifer Quealy (TBL Creative Partnerships) who contracted with IAL (November 2016 to July 2017), to do the research and report on findings, to curate and create materials (content) for potential media and communications activity by NWDAP.

Assumptions

- 1. Community-managed approaches are efficient and effective in managing wild dogs and their impacts (as compared with individual and separate activity, by separate actors) and additionally these leverage broader resources and actors in management activity
- 2. Nil-Tenure approaches (i.e. across all land types, with collaborative action by all actors, government, community and industry) work best to manage, and reduce wild dogs and their impacts
- 3. The whole of toolbox approach as currently used is effective where implemented consistently and as per best practice guides (i.e. the toolbox includes aerial and community baiting, trapping, shooting, fencing and stock management)

- 4. Agencies and Industry Groups are effectively co- engaged with communities in managing wild dogs and their impacts, providing a range of resources and support to communities, industry and individuals and driving the National Action Plan for Wild Dogs, with community and landholders
- 5. A variety of community groups, supported by (and partnered with) agencies and industry, are currently and have been historically engaged in managing wild dogs and their impacts; those can be categorized broadly into two groups: 1. Wild Dog Associations and Groups (WDAs) and 2. Landcare Community Groups (LCGs):
 - 5.1. Wild Dog Associations (WDAs) were mostly formed by landholder 'concern' groups, (or by an agency responding to public need) who created both informal (i.e. action groups who get together for a need) and formal (incorporated), outcomes-focus (i.e. action planning) groups, organized around a spatial area (district and neighbours), and being primarily 'single-issue' groups interested specifically in wild dogs and their impacts. The WDAs are characterized by strong links and robust discussions (partnerships) between landholders, agencies (e.g. LLSs, CMAs, NPWS and SF), and industry (e.g. AWI); Numbers of and profile of most WDAs is unclear, but are well known to those who know. Members of WDAs are generally members of many other groups in the district (e.g. Bush Fire Brigades, Tennis and other Sports Clubs).
 - 5.2. Landcare Community Groups (LCGs) were mostly formed (similarly to WDAs) by landholders around single issues, but which are later characterized by their broader development as social groups interested in sustainable farming in alignment with biodiversity, water, soils, productivity, capacity building and/or other NRMO issues. They have broad community memberships, plans, interests and skills in developing and delivering complex, multi- funded projects across public and private tenures. Numbers and public profiles of most LCGs is clear (over 6000 LCGs across Australia),



with LCGs forming connected networks with known contacts, as part of local through to national landcare networks that are structures for communications, advocacy, action, evaluation and other activity. Many groups and the State and National LCG networks have websites, regular social media and traditional media (Facebook, Twitter, Instagram, radio, local press) presence and activity. Members are also involved in or partner with other community groups (including Bush Fire Brigades, broader pest animal and plant groups, farming women's groups (CWA, Rural Women's Networks and Women in Agriculture and on Farms groups), environmental groups (Bird Observers Clubs), Sports Clubs and Service groups (Rotary, Lions).

Comparative Approaches and Structures - Overview

The field research revealed a range of findings through in-person interviews with LCGs (ten districtlevel, four regional and two state-level) and WDAs (five district-level and three regional WDAs) and three combined groups (i.e. both a LCG and a WDA) by asking about and comparing approaches that are specific to the two key groups and other informants. The broader findings are summarized later in the report for both LCGs and WDAs.

Communications sensitivities

Both LCGs and WDAs (and those agency and industry officers most engaged in the issues) are hypersensitive to public communications activity, to avoid messages and images provoking unwanted reactions from the public, or other unintended consequences which might make it difficult for the engaged landholders and agencies to keep reducing wild dogs and their impacts. Groups are concerned about the potential for programs (and as a corollary, for their enterprises and industry) to be 'shut down' because of public concerns and misunderstandings.

Ethical issues which inform broader context

Interviews reveal several issues that might be classed as 'ethical issues' because circumstances unfairly place costs and burdens on some landholders and industries and let others ignore responsibilities, including:

- where 'the few' are putting in major efforts whilst benefiting 'the many', at great personal cost to 'the few' (social/health as well as financial and environmental)
- Where 'the many' (the public) are unaware, inactive and/or hostile to the efforts of 'the few' who have been impacted by wild dogs, which compromises the efficacy of wild dog management efforts (and raises tensions)
- The focus of much wild dog management is rightly on wild dog impacts on sheep and cattle (enterprises); much less focus is given to wild dog impacts on native species (biodiversity impacts), and on social impacts (individual and community wellbeing)
- Other industries (e.g. Real Estate Agents and Tourism) are noticing impacts and community activity; one WDA reported being asked by a real estate agent to reduce their public discussion about wild dogs because of potential impacts (i.e. reducing buyer interest and property values in regional, rural and peri-urban properties for sale). This may also be an emerging issue for regional tourism - both of which are areas for further research
- Agency commitments to nil tenure and active engagement in wild dog research, funding, communications, sharing of maps and data, and active and consistent impact management are strong and highly regarded, but diversely (differently) implemented and regionally idiosyncratic. There are some perceptions that some agency commitments appear not to reflect or activate adequate responses to the needs, the impacts and/or the source of wild dog breeding problems (i.e. in parks, in forests, in towns and tips, on absentee landholder



blocks and properties etc.) which was reported as significant and which may compromise and cause gaps in control efficacy

- Nil Tenure is a term which all the engaged community and agency groups agree to, and use to some extent and in some regions; but nil tenure policy doesn't consistently or materially translate into adequate budgets and certainty of regional plans, commitment and actions, and has unintended financial and other consequences
- Some actions (e.g. cluster fencing), whilst extremely effective for those able to use them, does push the problem on to others (with public and private costs and losses following), who are at the end of fences and/or who can't fence; wild dogs use fences as 'highways' around and onto adjoining (unfenced) properties.
- Resource waste and inefficiency occurs particularly where there are significant gaps in baiting programs with impacts on public and resource management, and the more specific wild dog management approaches.

4. Research methodology, methods and approach

Design

The research uses a mixed-method qualitative methodology to consider current practice and views, through practitioner interviews with individuals, couples and groups, to understand:

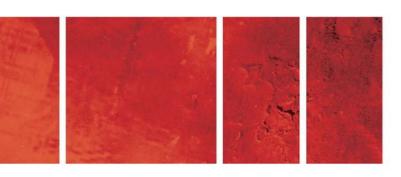
- How the community landcare (and the Wild Dog Association) approach brings people into a collaborative approach for wild dogmanagement
- The advantages and disadvantages that involvement with landcare (and WDAs) brings to wild dog management
- How land managers achieved and maintained a beneficial relationship with landcare

The common and differing values, assumptions and beliefs between the broader landcare natural private funding and commitments; this will be an increasing issue and cost, and deserves further investigation for ensuring adequate resource governance

 Wild dogs and their impacts could be recognized as a natural disaster or emergency on a localized and regional scenario, which is causing economic losses and impacting individual and community wellbeing, and which may be causing PTSD-like anxiety and stress for individuals, partners, communities and industry. Some people and communities interviewed report they are and have been highly stressed, over a long period, with no end in sight, and face a known increase in the problems; some report they are left to cope, without appropriate resources, that other communities undergoing similar levels of stress (e.g. through storms, fires and floods), might attract, and with an aging cohort of those who care enough to volunteer and spend their time and money on the issues.

Population and sample

Priority or primary participants for the research were in five regions, with 64 landholders and community group members (Primary Interview Participants). Additionally, a further group (Secondary Interview Participants) of 19 people, including some who identified as landholders and group members and 'agency' officers, were added to the scope - on the insistence of the primary interviewees, as the project developed and moved around the regions. These additional participants (key informants) were included in interviews as and where possible; they (formally) represented Catchment Management Authorities (VIC), Local Land Services Agencies (NSW), their staff and contractors (Pest Animal Controllers / trappers), some State Agency and 'other' groups (including NPWS, State Forests, a Private Forester, Crown



Lands, DELWP and AWI (the last, not interviewed). Many were also privately engaged as active responders on their own properties and working closely with their communities, as landholders.

The primary participants insisted on this approach and made contacts for the researcher, as they viewed these recommended people as critical to their activity, hold them in very high regard, and as they were known to hold more knowledge about broader issues that should be captured by the research.

This was accepted by the researcher as an effective addition to the qualitative and quantitative, community-centered and citizen-focus methodology approach used, but added more people, time and travel to the research. Not all people on the list or who were recommended could be approached or interviewed (time limits).

Two people (only), who were recommended for the interviews, declined to participate formally, one (SE NSW) due to a lack of confidence in how that person's views might be expressed, interpreted and used (lack of trust) and one (East Gippsland VIC) who didn't return two messages left with his son, to enable his engagement (assuming no time for it, as he is very active otherwise in wild dog management at the community level).

Methods - research approach:

- 1. Survey (Nov & Dec 2016): online search for (and research on) landcare and other community groups who were active in wild dog management generally, including looking at the FeralScan (Wild Dog Scan) web app and map
- 2. Chose five broad regions (Nov & Dec 2016) to conduct interviews, where wild dogchallenges are active, assigned them to regions (using both landcare and NRMO regions and networks) and included Wild Dog Associations and Groups with the landcare groups as potential interview groups; had this broader approach approved by the IAL/NWDAP Project Manager
- 3. Curated a list of potential groups and individuals and their contacts (Nov & Dec 2016) including (starting with) community landcare

members, coordinators, facilitators and executive group members, who, in these phone discussions, both agreed to be involved as participants and / or suggested people and provided contacts from both their own community groups and wild dog-focused groups, appropriate for the interviews

- 4. Called and set up meetings (Dec 2016 & Jan 2017) with the potential 'suggested or known' people and created a schedule of interview, contacts, locations
- 5. Created two briefing documents (Jan & Feb 2017) for the participants, to introduce and provide context for the research:
 - a. A list of discussion-guiding themes and questions (not followed in order or specifically)
 allowing a range of issues and approaches to be drawn from the participants, to talk about their individual and group activities and approaches
 - b. A brief explanatory email sent to participants as pre-interview briefing.

Data Collection and Management

- 1. In-person, in-field interviews (from 21 Jan to 17 Feb 2017): The researcher drove to regions and conducted discussions and interviews with individuals, couples and groups, recorded them for accessibility and further worked on the data as follows:
 - 1.1. <u>Audio recordings</u> via iPhone and iPad recording apps
 - 1.2. <u>Field Journal</u> writing notes of discussions during interviews
 - 1.3. <u>Portrait photos</u> of individuals, couples, groups and property features, except where people preferred not to have photos taken; (e.g. photos of signage, fences, tools, Maremma Guard Dogs etc.)
 - 1.4. Collection (or photographing) of participant materials their Plans, Photos, etc.



- 2. Data Transcription (24 Feb 2017 to April 2017) of audio materials and field journals
 - 2.1. By researcher to determine coding, themes and preparing audio files and codelists for transcription service
 - 2.2. By Pacific Transcriptions (March-April 2017)producing coded text copies of interviews
- 3. Data and Group Analysis (March-April 2017)
 read and analyzed data looking at regional attributes of people and groups, differences and similarities between WDAs and LCGs, general and specific themes and codes, messages, structures, approaches, recommendations, and anomalies, inconsistencies and gaps
- 4. Reporting and recommendations developed over the period 24 Feb to 3 April 2017 from reading, rereading and analysis of data.

Ethical issues and limits of methodology

With a (mainly) mixed qualitative methodology each interview was different in form and flow. Few interviews followed the suggested questions, (even though these were clearly outlined at the beginning of each session, with an iPad presenter and list, and paper list available); the order in which questions arose was mixed and the researcher needed to come back to the list to cover off on issues not raised in open discussion. Whilst this actuality enabled a more comfortable and narrative-driven conversational interview, it is less 'certain' than a more formal interview or survey, where selected questions get specific answers which can then be compared directly amongst groups and regions; the interviews followed where the participants wanted to go with their discussion, and hence felt appropriate, and allowed the very different groups to give their individual responses and story

There was a mix of individuals and couples' interviews, and public and more private settings, and with some larger, more 'assertive' groups involved - hence mixing the approaches. This meant that the discussions were at times quite challenging

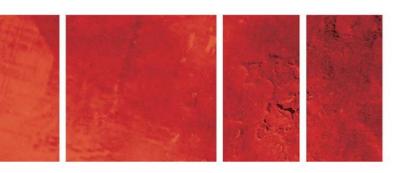
to capture and follow; in some cases, the analysis was also then more difficult to decipher and more time-consuming.

As interviews proceeded, more people, contacts and visits were recommended (and very strongly, i.e. "You really must speak with....") adding to the schedule and complexity, and with some project creep of time, scope and distance happening. Not all those recommended could be contacted.

Data Analysis

To analyse the considerable collected data, which was both quantitative and qualitative, and textual, audio and visual, I made these analytic decisions:

- 1. To create detailed tables of groups and people met and their locality and place in formal and informal structures (n.b. there is some difficulty in 'seeing' and describing these regions; some regions are widely known and accepted (States and NRMO regions), others are 'working' or social regions, that are entirely visible to the members but not always visible to outsiders, and may wax and wane (e.g. LCG and WDA districts, and groups of these groups). There are also lots of cross-border collaborations that blur the actual regional boundaries (three regions particularly). I placed each interview participant into their most likely research or case study region, which has a combination of names, depending on the view people had of what region they aligned to, and/or were within formally. I placed them firstly as a State (NSW, QLD or VIC, or cross-border), then in their self-reported landcare or wild dog region(s), and/or a NRMO region (LLS or CMA), with the following categories:
 - 1.1. Region 1 NSW: South East NSW (also bordering with East Gippsland VIC)
 - 1.2. Region 2 VIC: East Gippsland (also bordering with NSW SE)
 - 1.3. Region 3 VIC (& NSW): North East VIC (Murray/Upper Murray NSW border)
 - 1.4. Region 4 NSW: Hunter (Hunter, Manning and Great Lakes)



- 1.5. Region 5 NSW: Northern Tablelands NSW and Southern New England (with one from Southern Downs OLD and some crossover to North Coast NSW).
- 2. I put them into group type, either LCG and/or WDA (as self-reported and as listed in Appendix 1)
- 3. I coded themes from set questions, gathered responses, and, to facilitate this process, created codes:
 - 3.1. Group structures/characteristics (name, when formed, area covered, members, focus, formal/informal, partners, what group does well/doesn't do well
 - 3.2. Roles and Plans (Who leads the wild dog activity, role you/your group plays; plans, key actors)
 - 3.3. Individual drivers (of action) (what they are going through / have gone through, costs (economic, environmental and social)
 - 3.4. Resources (funding and time spent on management, type (in kind, professional/ technical and cash/grants, source, adequacy)
 - 3.5. Problems and challenges (how many

- dogs, impacts social/health, environmental, economic/financial - and people changing enterprise, industry or other metrics)
- 3.6. Results and efficiencies (c.f. sheep or stock losses from before action taken, to now); dogs killed (impacts reduced); evidence of environmental impacts and recovery

3.7. Context:

- Pest: (other pests, other issues covered, how related)
- Partners: (who collaborate with)
- People: (who engaged, non-landholders, townies etc., new partnerships, new projects
- 3.8. Recommendations and key messages for others, who we want to see involved; what must happen? What will we do next, if we have resources)
- 4. I transcribed the interview audio data files into text data using the coding, (with the help of a transcription service) and ready to import the data into NVivo (qualitative software app) for further analysis if and as required.

Findings (arising from interviewed groups)

General:

- There are inefficiencies and frustrations for all actors within the current frameworks and planning processes and with available resources, and with an increasing anxiety around the escalating population and spread of wild dogs and their impacts
- There are needs and wants for all actors -mostly around resourcing, certainty of approaches and more 'power' to act (e.g. in gap areas and with recalcitrant landholders where no action is taking place and is compromising the efforts of all others involved)
- There are very experienced and skilled actors within the groups, agencies and industry with ideas, innovation mindsets and commitment to act (both personal and role-based)
- Targeted and better communications, reorganisation and re-commitment can make this shared challenge one which LCGs and WDAs and partners together can recruit others to, and can help achieve better outcomes for all, and reduce the shared stress implicit in this challenge.



Coded themes

5.1 Group structures/characteristics

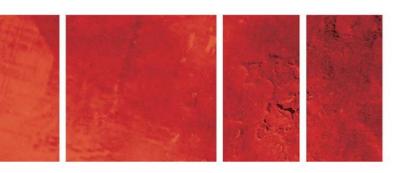
Wild Dog Associations (WDAs)

- WDAs are the most active groups in wild dog management, particularly active in the sheep and wool industry for a very long time (some for up to 60 years)
- WDAs are supported by industry and agencies; they are partnership-structured, i.e. between impacted and active landholders and agencies; many have their administrative and management planning led by (or co-led with) agencies
- WDAs have an organizational structure that begins at local farm neighbour level and extends out with multiple WDAs active across an area, enabling 'scaling up' and broader planning and action with the 'umbrella' group (e.g. a WDA Group like Tenterfield Wild Dog Group, has about 14 WDAs within their area and 'attached' to their TWDG, possiblysharing a District/Regional insurancecoverage)
- WDAs are (mostly) not part of a formal and obvious organizational framework (i.e. Local Regional State National WDAs); the groups are more district specific, needs-driven and with an agency-partnership focus (i.e. at meetings, administering meetings, etc.); this is not to say WDAs don't have a strategic or bigger picture view of either other issues or of the national issues of wild dog impacts management. There may be lists of these groups and formal structures (but these were not seen or found and seem not to be not easily accessible)
- WDAs were generally catalyzed by neighbouring landholders with a strong sense of community mateship and helping out the neighbors (even if you didn't have the problem); the WDAs formed mostly informally, as the problem emerged in a district, and escalated in activity as wild dog activity increased (or had a break asimpacts waned and other enterprise and community

issues took precedence); others were and are catalyzed by an agency, often through public meetings and support for groups with community

Landcare Groups (LCGs):

- LCGs are voluntary-run community member action groups who get landholders together on a local and regular basis (district level) to understand and work on common challenges, as needs and resources allow
- LCGs have an organizational structure, with membership from the local neighbour level, scaling up from district and regional groups and networks, to State and National networks, with a common feature of a representational governance structure throughout the local to national levels
- LCGs are a much-recognized 'go to' group for new and young landholders, for more established landholders and for peri-urban and hobby farmers (with high concentrations of LCGs in NSW and VIC) with highly visible structures, norms, mapping, projects (completed, underway and planned), web and social media presence and networks
- LCGs reveal a heightened awareness of the need to and the actual coordination of active whole of community engagement and management across a range of pest issues affecting farming and land management practice issues. For most of these LCGs, wild dogs are a part of a broader strategy, where they are present in the landscape; LCGs see the links between a range of persistent and growing wild pest and game animals (e.g. wild dogs, rabbits, feral pigs, pest fish, deer etc.) and pest plants (blackberry etc.); they encourage cooperation and regular networking and activity. LCGs are locally innovative.



5.2 Roles and Plans

WDAs

- WDAs focus solely and successfully on, and respond reactively and proactively to wild dogs and their impacts; they know the business of wild dog management and have pride and show a sense of camaraderie and perhaps a bit of competitiveness in their pursuits to reduce wild dogs and their impacts
- WDAs all have close working relationships with agencies including LLSs, CMAs, and Agencies particularly NPWS, DELWP, State Forests, some Crown Lands and other public land managers; albeit these partnerships are at times tough, uncompromising and robust
- WDAs involve their members and others in training (e.g. baiting, trapping and fencing) and cooperative action to reduce wild dogs and their impacts
- WDAs are active reporters of the whereabouts of wild dogs and their impacts, mostly through personal phone contacts with neighbours, pest control professionals, PACs, LLSs, CMAs and agencies)
- Plans: WDA Plans differ within and between Districts, Regions and States making it difficult for some people on boundary catchments to have a consistent approach to their management, planning and resourcing (e.g. Jeogla WDA, Hernani and Ebor WDAs and SELLS and NECMA Plans).

LCGs

• LCG members have had a varying but consistent role to lead landholder and community-based groups, active in pest animal and weed control and other natural resource management issues, through (local) projects and programs over a period of 25-30 years in both NSW and Victoria, in the participant regions and in a diversity of ways and dependent on available and raised resources

- LCGs actively develop and run programs for communications and awareness, education, research and training to increase skills and capacity of landholders and other community members and to engage with non-landholders, as well as to access resources, expertise and partnerships with industry, community, a wide range of agencies and local government, and with the research and education sectors
- LCGs in some areas have been either less active in wild dog management, or 'left out of', or not asked to be involved in wild dog management, for a range of reasons, including that other groups (e.g. WDAs) are focused and doing well on that 'job' in the same landscape and community; those LCGS who are less active have helped guide enquiries from their members and the public to engage with WDAs and NRMOs who are active in wild dog management
- Some LCGs report their use of technology (e.g. FeralScan) and more often personal contact to advise and report on wild dogs and their impacts to members and to relevant management groups
- LCG plans are generally part of a broader pest plant and animal strategy
- Afew specific wild dog plans were tabled (stand alone or supplementary to broader plans); not all groups showed plans

5.2 Individual drivers for both groups (detail in transcripts) can be summarised as:

- Dog numbers and impacts on stock and other animals (i.e. we have increasing numbers of wild dogs here)
- Environmental pressure (i.e. "we know there are impacts on (killing of) native animals and changes to our landscapes")
- Social (health and wellbeing) stress, anxiety,



PTSD and other symptoms and causes, as well as disruption to communities, making them less resilient to other shocks and challenges; wild dogs in many cases are yet another stress level to add to enterprise workload, costs and ability to proceed

• Economic: regional impacts from loss of enterprises, industry and productivity; impacts on real estate and tourism values (driven by perceptions of wild dogs, safety and desirability of a place; and town impacts)

5.3 Resources

WDAs

- <u>Funding</u>: sources include landholder funds (cash and in-kind, labour and meat for baits) as well as critical funds from grants, agencies and industry (AWI)
- <u>Time spent</u>: people reported a regular daily or at least weekly activity to check for or otherwise manage for wild dogs
- <u>Technical / Professional</u>: WDAs work closely with PACs for technical and professional guidance; PACs are either contracted to the group, or to an NRMO (LLS or CMA) or agency

LCG

- <u>Funding</u>: LCGs have invested their own landholder and members funding and resources matching other resources raised for investment into challenges that have public benefit, private benefit and leveraging impacts; Sources of other funding include community-raised funds and in-kind (labour and meat for baits and fencing, as well as (gratefully received) funding from industry (AWI)
- <u>Time spent</u>: people reported regular activity to check for and manage wild dogs, mostly peaking around dog attacks and sightings
- <u>Technical / Professional</u>: LCGs work closely with PACs for technical and professional guidance; PACs are either contracted to the group, or an NRMO (LLS or CMA) or agency

5.4 Problems and Challenges

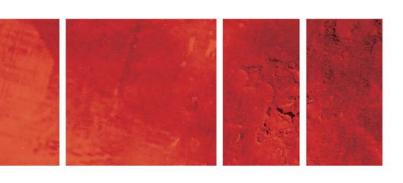
For both WDAs and LCGs wild dog management is very time consuming - for both the individual landholders and members and for the LCGs and WDAs, through:

- Constant vigilance and reporting
- New and/or continued actions on management of wild dogs e.g. fencing, baiting, community baiting drives, shooting and trapping, repair and recovery works (stock, vets, infrastructure)
- Personal wellbeing and recovery from attacks and impacts

Specifically, for each of the groups:

WDAs

- WDAs report high levels of anxiety and stress, forced enterprise change and practices, through the loss of breeding stock, disruption to breeding plans and timetables
- WDAs seem to be less 'showy' than other community groups and LCGs, possibly to avoid potential community backlash (except one interviewed group with a growing web and social media presence and a determination to be highly publicly active); most WDA groups don't appear to have a formal WDA web presence, but various members use social media (mainly Facebook) to inform and show 'results' (mostly pictures of dead wild dogs to notify reduced threats)
- WDAs are impacting (killing) a pest animal but in so doing are open to (and shy of) public criticism because of the potential for disruption of their management programs;
- i.e. some wild dogs (e.g. the contestable 'purer' dingo) is both a 'wild pest dog' and on Schedule 2 Lands, is a protected species, that has (for many) a national icon status; hence WDAs are wary of rigorous and polarized public debates, and further restrictions and economic impacts on their enterprises



LCGs

- People (Social/Wellbeing): LCGs reveal that their members experience anxiety following (and persistent after) threats and wild dog impacts; Anxiety and stress about wild dogs adds another layer of challenge and impacts on member's properties and across District and regional communities, enterprises, economies, ecosystems and industry
- Districts and enterprises which have ongoing wild dog impacts make significant changes in management and lifestyle, including the difficulties related to going out of producing sheep and goats, significant changes to property and farming management practices, property ownership changes and a disruption to important social networks
- LCG members adapt their activities and plans with the impacts

5.5 Results and efficiencies

WDAs

- WDAs have 'tried and true' methods, practices, toolboxes, plans and structures mostly of a similar nature, but with distinct District and Regional variations and idiosyncratic to the landscapes, district, region and people involved in preparing and delivering wild dog management
- WDAs have had considerable success with impact reduction (albeit in a scenario of ever-increasing wild dog numbers and impacts and a need for constant vigilance and action); they quote from memory alone (to the dog) the number killed
- WDAs have much anecdotal evidence about the positive results of their efforts to reduce wild dogs and their impacts, mostly focused on enterprise issues, but also impacts on social (farmer health and wellbeing) and environmental values of their landscapes (e.g. less koala kills) - but see a need for

- a more robust and actual evidence base so they can back their anecdotes and encourage resourcing of the currently neglected impacts (social and environmental); WDAs know they contribute to broader benefits to society, community and regional economies
- WDAs reported a frustration with baiting programs being that the results of these are less visible (no dead dogs visible) so baiting is sometimes seen as possibly less effective which indicates a lack of focus on data collection and analysis on the metrics of impact reduction, as an outcome of their considerable baiting work. This may be having the perverse effect of making some landholders less keen to be involved in the workload of baiting, in preference for trapping and shooting.

LCGs

- LCGs have experience, skills and interests in managing the social, environmental and economic impacts from a range of pest animals, have pest animals and plants as a critical issue in their community business and strategic plans (but not always a specific wild dog plan), and have actively developed and run pest animal projects, as well as awareness raising and skills and capacity development
- Some LCGs have very specific wild dog plans and programs (e.g. Dargo LCG, Benambra-Omeo-Dinner Plain LCG, Granite Border Ranges LCG, Manning Landcare (training landholders) and some may contract wild dog controllers directly
- LCGs are innovative on design and delivery of their pest animal programs - e.g. Dargo LCGs toolbox for members, Mitta to Murray landcare networks and GLENRAC / Granite Borders LCG)
- There appears to be a 'leave it to the district WDAs' approach (in some more regionally-networked groups), until help is asked of the LCG, and hence there may be



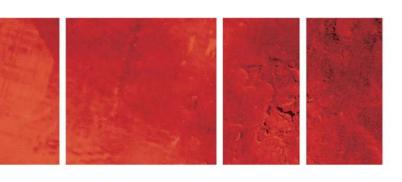
less activity by some groups unless or until there is an active wild dog issue for members or other community members, or WDGs

- LCGs are skilled in engaging wider public and schools in issues and are generally engaged with citizen science approaches, with some use of FeralScan apps
- LCGs have been consistently successful and transparent (as well as unsuccessful as is the norm for competitive grants structures) in a highly competitive grants world, in project design, development and funding and other resource applications and negotiations, and in project delivery and management across all spaces and places (rural, regional, remote, urban, peri-urban, coastal, bushlandetc.) on both public and private land tenures, and characterized by collaborations on other people's and public land as part of the philosophy and practice of landcare.
 - 5.6 Context (pest animal, the community, and action plan partnerships)
- <u>Both LCGs and WDAs</u> report that wild dogs are increasing in range, numbers and impacts. New members and engaged landholders will be needed for scaled-up group activity, as well as more training and resources for continued community baiting, trapping and fencing to cope with more wild dogs. Groups all report an increased need for funding for actions, and for engaging more people over a greater area
- Partners (for action plan delivery) for both LCGs and WDAs are industry (AWI particularly), Government agencies (DELWP, NPWS, State Forests) and NRMOs (LLS and CMAs). Few district and regional groups expressed more than an awareness of the National Wild Dog Action Plan (i.e. not directly having a working knowledge of this, and of relying on agency officers to help guide them to consistent approaches and new knowledge, but appreciation for the national context and framework that the NWDAP brings)

- Both groups report and show signs of anxiety and stress from their encounters and work to reduce wild dogs and their impacts
- There appears to be little interaction between WDAs and LCGs, across most areas; in some areas, there are joint groups, or groups with key people being members of both the LCG and WDA (e.g. GLENRAC / Granite Borders LCG, Southern New England Landcare, Tenterfield WD Association). In some areas, there appears to be either hostility or indifference and in some cases an under-valuing and misconception about the 'other' groups. In some areas, there are observed but unexplained tensions between groups and officers and individuals (both historical and professional). Specifically:

WDAs

- Partners: WDAs reported highly responsive and regular relationships and access to Natural Resource Management Organisations (NRMO) and their resources and expertise, which they value highly. This is apparent mostly through their 'on call' officers, skilled in pest animal controls. These officers are reported to be both critical and valued members of the WDAs and Groups; they are central to planning and rolling out baiting and other management programs and giving some access to financial and other resources. These relationships are present and observable through more traditional means, mostly by phone, email and meetings, with some use of mobile technologies emerging to assist this interaction (SE LLS PACs use iPads)
- WDGs also have impressive and longstanding links to industry groups - who help resource activity
- Members appear to be long-standing drivers of the WDAs; there are also newer younger landholder members (e.g. Hume WDG, Tenterfield WDA, UWDA)
- WDAs experience baiting 'gaps' incoverage of a district - being caused by absentee landholders, new unengaged landholders and



less diversity in enterprise type amongst the engaged landholders (mostly sheep, some cattle, some goat producers)

- WDA members reveal a significant level of anxiety around wild dogs, mostly due to long years of witnessing attacks on their stock and resultant impacts on their enterprises and landscapes, and with the knowledge that the impacts are only going to get worse (without concerted effort and resourcing, involving a greater cross section of the community and with the current trajectory of wild dog breeding and expansion into areas and enterprises that have not been impacted before)
- Few WDAs seemed to have a working knowledge of the NWDAP or of apps like WildDogScan - and instead rely on their agency and PAC partner relationships to guide their activity and put them in touch with people and resources, and report 'in' person to person
- Few WDAs have formal links with LCGs, but members are known to be members of both LCGs and WDAs - each knowing the specific focus and reason for being engaged with the group, depending on the need and focus

I CGs

- LCGs have a diversity of enterprises represented by their members; most cover an impressive area in their group networks from the district to regional scales; governance and contacts are transparent, with partnerships with government, business, industry and research groups
- LCGs are happy to respond to community requests for assistance on wild dogs and impacts - as a reactive stance: once engaged, LCGs become proactive in all aspects from awareness, through training, organising, contracting and recovery works in cooperation with other networks and groups including WDAs (if ad as resources allow).

- Different LCGs (related to their relative maturity as a community development organisation) have particular skills and attributes (e.g. Holbrook LCG say "We offer partnering exercises, not technical learning; we link people to advice; we respond to community and member's needs, but we are limited by the resources we can gather for activities" and "Our LCG success is that we go to the people and properties"
- 5.7 Group Recommendations and Key Messages from both WDA and LCG discussions:

Resources and support

- Resources (funding, in-kind and including community recovery support) are welcomed, necessary and broadly needed for impacted communities
- Decades of change, loss of community spirit and disruptions in community are reasons why there is a lack of community knowledge, ownership and participation in wild dogs and why continuing funds are needed; the traditional sense of community knowledge and activity is lost or missing; we need to work on building community, getting new landholders to understand and be part of the WDGs and LCGs; this isn't just about putting hands out for funding endlessly - it's community building that's needed to make wild dog management work better; hence funds are needed for community understanding and development and for wild dog management activity
- Communities need funds for wild dog plans and action (with estimates from three groups of a minimum \$100K p.a. each region) for the basics like baiting, contracting professional and 'first responder' controllers and activities for everyone's benefit and getting ready for action
- LCGs and WDAs need security of funding and programs; security would mean less dogs, less stock impacts, less anxiety and less disruption of enterprises and networks



- Funding wild dog management gives good returns as it reduces costs across regions of enterprise change, social disruptions, actual cost of management (proactive to reduce impacts and escalating costs) etc.
- We need a pest animal levy campaign to share the cost and improve the benefits
- We need incentives for those who take on voluntary wild dog community roles (e.g. rates relief; free trees)

Training

- Two aspects raised: 1. landholder and group training (ongoing and growing need esp. with property turnovers) and 2. Pest Animal Controller (PAC) training (important for current work and for succession of people being in the positions that support landholder and community activity); these PAC positions need a lead group to do the work to formalise an Award and comparative work conditions for PACs, to ensure there is security in the roles, enough people skilled and ready to take on roles, and for PACs to stay in a District, to know the landscapes, people and groups, and the wild dogs and their characteristics (i.e. it is a highly specialised, but low paid and insecure role); WDAs and LCGs want everyone to know these roles are important, for them and to effectively coordinate everyone for wild dog management
- Trapper Training suggestions that young trainees be recruited and assigned (as part of their training) to 5-6 different experienced PACs and Trappers to be in field with them and learn from a range of approaches for best training; to get a range of skills and approaches to the task (not just one person's view) i.e. there is a lack of a professional structure to the PAC role which is incongruent to the importance people place on this role
- Succession plans are needed in wild dog plans - to look to issues of burnout of groups and key driver individuals, and to have generational passing on of knowledge

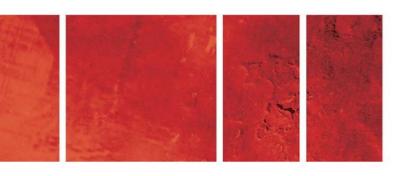
• All regions could follow the lead of LLSs and CMAs who fund and run leadership programs for community members (Murray, Hume, NECMA) to build skill and confidence and take on challenging issues like wild dog management, communications and engagement.

Reporting and technical issues and suggestions

- Have 'dogwatch', like 'neighborhood watch' out of towns (UWDA)
- Put cameras on tip sites and camping sites and share data (and ways to manage) with users, including responsible pet dog, hunting and farm dog practices
- Improve FeralScan and WildDogScan (for 'UX' or User Experience)
- Encourage townspeople to use FeralScan and to report to LLSs & CMAs
- FeralScan: inconsistent messages; some people "told not to use"
- 'Make' agency, industry, mining and town people and organisations use FeralScan; get PACs to use; make apps reporting-friendly for LCGs, WDAs and PACs
- Some misunderstandings about the app and its potential and uses more clarity needed around uses, and to see the results of people putting in efforts to report
- Reporting needs feedback to reporters and to other stakeholders, that people can see and respond to

Nil Tenure

- "Agencies need to kick the tin and get nil tenure really working"
- The concept is understood, but the application of it is inconsistent and patchy and needs work; lots of commentary and beliefs about who (which agencies or others) are not contributing (i.e. both not at all, or not enough); needs a mature model



 People and organisations who are not yet involved need to understand the bigpicture of wild dogs and strongly encouraged to get involved (e.g. real estate, tourism, mining, town folk, communities and non-acting Agencies).

Research

- · Research on wild dogs must be better communicated; make research and mapping accessible to build knowledge
- "IACRC partners need to invest in people and groups and communications - not just the science - but the social science"
- LCGs (e.g. Mitta2MurrayBAG, Mitta Landcare, Talgarno-Wises Creek Landcare, Dargo Landcare, Holbrook Landcare, Manning Landcare) are keen, ready and able to drive research on multi-pest and community development to manage pest animals (and with weeds); maybe needs a 'Landcare Research CRC' to be created, driven by landcare (idea from M2MBAG Mitta group discussions)
- WDAs all keen to get access to research (Hernani WDG, TWDA, Hume WDA, Braidwood to South WDA)
- Research on wild dog impacts on native animals and ecosystems (and/or access to research and mapping done) is needed, for both on public lands and for further consequences off-Parks
- "CRCs and innovation are really important" for community groups (North Central CMA) Landcare program); research helps 'drive' understanding and innovation)

Awareness and Communications

• Questions, assumptions and evidence to be communicated - about where wild dogs are breeding including off-farm, in-parks, at tips and camping sites etc. - not for 'blameshifting' but for monitoring and management of these sites, by all stakeholders including public

- Absentee landholders, small farm landholders need to take part in and/or allow others to do wild dog controls on all properties (for a real nil-tenure approach) whole of community baiting programs are essential to manage wild dogs (which roam widely across landscapes and 'come from' a range of 'sources' and breeding spots)
- Everyone and every enterprise (across a wild dog impacted landscape) benefits from efforts in wild dog control
- Wild dogs do impact on enterprises other than sheep production - e.g. cattle, goat and others will be impacted - it's just a matter of time before others affected
- Public should be aware and wary: Bushwalkers, bike track riders, walkers, on and off farms, at coast, in national parks and tourist parks have reported being approached and threatened by wild dogs (e.g. North Coast, Hunter and Mid North Coast, Snowy Mts, East Gippsland, North East VIC & Murray)
- Information on wild dogs needs to be in Local Government Rural Living Guides and given to new landholders (rural, peri-urban and town) and communities: need to make and provide content for Councils, LLS/CMAs, LCGs and WDGs and businesses like Farm Produce Stores, to regularly hand out and/or put into websites, emails, letters and notices to ratepayers, landholders, community, customers and visitors
- Native animals are being attacked, mauled and killed e.g. koalas - if public know, this may help public to understand the issues and that everyone needs to both support efforts and be alert to and concerned about wild dogs



- Wild dog management "needs better communications and a focus on partnerships and joint recovery"
- When wild dogs are in a landscape they impact (e.g. destroy, change) environmental and biodiversity values.

Ethical issues

- Pet, farm and hunting dog owners must be responsible for ensuring dogs don't become 'wild dogs' - this is a responsibility of and for everyone
- The effort needs to be shared with whole community; what's happening is that a few of us are doing and paying for the work that benefits everyone; people tired, anxious and constantly on-alert.

Plans

- Need to have consistency across all plans: (Paul Meeks: "Each wild dog plan must have 4 key elements: 1. Problem identification, 2. Action needed (implementation), 3. Feedback (reporting etc.) and 4. Monitoring)"
- Plans need to be much more than calendars of events they need an engaged community in making and driving the plans.

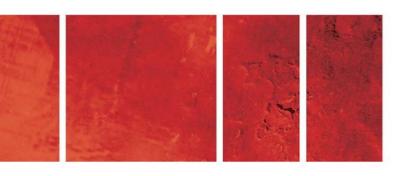
6. Analysis (issue types and discussion of those)

The following issue types were drawn from aims and issues arising from discussions:

6.1 Community structures and knowledge (actors and stakeholders)

 Seems difficult to know and find who is the most relevant group for landholders to connect with, (esp. those new to district) particularly in wild dog management, and at what point to connect

- Need mapping and online sharing of wild dog groups and contacts (like landcare does) so people know the area, groups and agencies to engage with
- LLS & CMA are authorities / agencies (i.e. they are not 'community' groups); WDAs have a potentially 'blurred' role (i.e. are WDAsmore like an agency-outreach group or a community-government partnership model? If seen to be an agency-driven group, this may be a barrier which prevents (wary) people from engaging with them and with their 'agency-driven' wild dog management plans; Most are happy with the arrangements
- Probably difficult for people to get involved in traditional WDAs (except for the community baiting days) as these appear a 'closed shop' (to an outsider), c.f. landcare groups that actively encourage membership growth, diversity, new projects, field day, property visits and initiatives
- Misunderstanding of landcare groups: Who is a LCG? Is a WDA a landcare group but with a single focus?
- Perception that landcare groups and members are not landholder's groups (i.e. seen by some WDAs to be interested in town revegetation issues primarily)
- Veterinarians role (a network and communications point for all pet owners and stock managers) - they are a key 'touchpoint' for all dog owners and could have both knowledge to share and be involved in awareness of the animal health issues of wild dogs (as an added reason and incentive for people being involved in controls).



6.2 Individual motivations (impact-driven), skills, expertise, engagement

Wild dog numbers - most are
reporting that they are seeing wild
dog numbers and impacts increase
(perhaps not on own places but
across their region, and into new
areas and in 'gap' areas) and with
an increase in the number of litters
to two annually, more like 'owned'
dog breeding cycles.



Wild dog - Taken by Yi Zhai



Social - community and individual health and wellbeing impacts:

- Farmer and farm community health seeing their stock and farm or pet dogs mauled and having to euthanize mauled stock is adding to the wellbeing and emotional health of farmers; there are mental health risks for farmers and a reason to reduce the numbers and impacts of wild dogs (to reduce the stress on themselves, families and community wellbeing); people need help; can't do this alone; need their community to rally and help out but see an uninterested, unengaged, unaware public within their communities
- Social networks are disrupted when known people and neighbours go out of enterprises that they've been a part of for generations, leaving the community structures and being replaced by new people with few or no community ties and values.

Financial (stock losses, grazing pressure etc.) and regional economy impacts

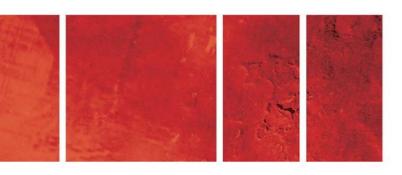
- Wild dogs have been the 'last straw' for enterprises many have restocked, change enterprises, sold up... with resource implications and loss of generational and cultural identities, knowledge and network connections has a cultural and social impact
- Real estate values "The turnover in hobby farms is mind-boggling" (UWDA Wingham); UWDA asked by a local real estate agent to 'tone down' their public and social media activity as is or might be impacting on real estate prices and interest in the region (Helen UWDA); needs engagement with these groups to avoid mixed messages and continue to focus on awareness and action
- Wild dog management forces/ makes farmers change management practices and farm layouts, and at places, the whole enterprise (additional economic costs and time commitments); assisting farmers to make changes is a role for LCGs

Environmental pressures and changes

- People are seeing reduced numbers of native animals and changes to ecosystem function and health (and the reverse of this with proper management and reduction of wild dogs and their impacts)
- There is little shared evidence available to LCGs and WDAs to quote or use
- This issue requires specific targets and actions across agencies and with groups.

6.3 WDG and LCG Approaches: efficiencies and deficiencies

- The partnership focus of LCGs is well suited to public and landholder engagement, training, insurance and governance needs of communities tackling wild dog management; landcare groups are autonomous (whilst being partners with government, occuring from local to national) and are part of a defined community network across district, region, state and country)
- The specific Wild Dogs focus of WDGs is well suited to a rapid response approach (i.e. immediate activation) and hence is an efficient method of getting immediate responses by people in the WD network; The more closed nature of some longstanding WDGs may mean that newer landholders are not as easily or as efficiently informed and engaged (until they become active members).
 - 6.4 Planning (issues, activity and areas covered, formal/informal, with the NWDAP as context)
- Plans are in a variety of formats; many not sharing data with members; discussions indicate a need for consistency, simplicity and for the ability for anyone to access, connect and act on plans



- Plans were 'tabled' (See References), representative of LCG and WDA approaches
- Some indicated their view that some "wild dog plans were little more than calendars of events" at the landholder level
- The NWDAP could better guide and help streamline planning, and needs to recognize WDAs and LCGs within the Plan and in the Plan's governance structures and frameworks

6.5 Research, Data and Evidence

- Wild dog impacts management is a wicked, dynamic and challenging issue, which would benefit from guidance and advice from, and possible partnerships with either or both Australian Red Cross and the St James Ethics Centre, to understand and manage some of the intractable people-based challenges (e.g. for Psychological First Aid and Personal Support for recovery after attacks), ethical and socioeconomic challenges, and to mature the nil tenure policy approaches
- There is a need for further research on (and to communicate) the impacts of wild dogs on native animals and ecosystems; Most research appears to be Industry driven (intended) but lacks a biodiversity approach (unintended); most of the knowledge around environmental impacts (currently) is anecdotal 'evidence' (i.e. landholders "know" and talk about what they believe is happening); there is a lack of actual evidence for use in communication of broader biodiversity issues, and which the public may be more inclined to be convinced by and act on (e.g. wild dog attacks on koalas), and which could also drive better support for wild dogs management
- Involve landcare in research; one LCG (Mitta to Murray) decided through the interview process to seek support and funding to drive research that landcare needs and wants (i.e. as a very different approach to being given or told about research done by

an agency or industry group, which comes as knowledge transfer at the end of research process). They seek to run LCG-engaged research, with the group at the center of the research and for the long term. This group is keen to scale up as the next new (potential) CRC, to form and guide a 'Landcare Research CRC' with a broad investigative research and partnership and knowledge sharing approach; their approach is multicommunity, multi-pest, innovative and collaborative.

6.6 Resources for actions

Funding:

- Current focus (raising and spending wild dog funds) is on supporting pest controllers, baiting, fencing, trapping and other tools, as well as in-field camera monitoring, meetings, sharing of information and reporting activities and other 'things'
- Single-issue groups: seem more specific to control tasks, but not to community development
- Wild dog attacks are a form of an emergency and could be aligned to resourcing communities for plan preparation, actions and recovery following stressful events in communities
- Need for continual funding for community group access to tools, communications, training, support, leadership, community development, and research on broader issues.

Policy:

- Wild Dog Bounties are in use in VIC through both government and LCG driven approaches (e.g. Dargo LCG)
- Consider the potential to levy pet dog, farm dog and hunting dog owners through animal registration (e.g. like the 'potted plant' levy for nursery and horticulture industry funds from the sale of potted nursery plants helped fund industry sustainability programs) or other industry and other levies.



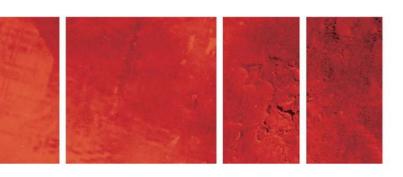
6.7 Key messages and communications

A careful communications campaign is needed to share some key wild dog management concepts and specific messages, with the public and with key target groups.

Actions:

- Prioritise and target 'groups' (some general and some specific), including: public, absentee and small farm landholders, peri- urban landholders, new town residents, dog owners: (pet, farm and hunting dogs); young 'prospects' for PAC roles; real estate, tourism and regional businesses (e.g. vet clinics, farm produce stores and other agribusinesses) and schools
- Create specific messages for these groups (see detail in Appendix 3):
 - Public
 - · LCGs and WDAs
 - Agencies and NRMOs (CMAs, LLSs)
 - Young people (potential PCAs)
 - Absentee, small farm and peri-urban landholders (specific to each)
 - Dog owners (pet, farm and hunting dogs)
 - Veterinary Clinics and Council Dog Pounds and animal welfare groups
 - Regional and Agri-businesses like Real Estates, Tourism, Farm Advisory and supplies and Farm Produce Stores
 - Schools.
- It may be timely to consider wild dog impacts as a (sporadic but regionally-scaled) 'emergency and/or disaster' withappropriate notifications, preparation and recovery planning, and government and community responses to match the impact and needs of individuals and communities; Escalate community communications, preparedness and interventions in the same style as for public emergency preparation, with the sharing of notifications and planned actions.

- Wild dog impacts need to be viewed as additional regional impacts related to global issues including food security, biodiversity, regional economic development, community development and social and health issues (farmer and community wellbeing) - to put into context and potentially access other support and resources
- Use (find) plain language alternatives to terms like nil-tenure and biosecurity - to promote better understanding (and less fear and loathing) of wild dog management
- Share research on terms like 'carnivore bush' (characteristics) and 'predatorfriendly' farming which researchers, LCGs and WDAs are thinking, studying, arguing and writing about
- Immunization analogy communications
 might be improved through use of a publicly
 accepted analogy like immunization, where
 people understand that everyone needs to
 be vigilant, responsible and act as needed it's a preventative measure to make sure
 wild dogs don't become a huge issue for
 people other than (mostly sheep) producers
- Social license to operate for farms and farming communities to grow and develop means we need engaged communities and sometimes we must take part in community accepted (but at times polarizing) issues; e.g. there are both positive and negative community perceptions of both dingo and wild dog controls - but once faced with the menace of, or experience of, an actual wild dog attack, people then understand the need for controls. No one wants to wait until people, and or their prized and loved stock, pets and working dogs or native animals are attacked and continue to be attacked, to take notice and help prevent this growing problem and its consequences.



7. Discussion

The participants willingly gave their views and raised important questions, conundrums and suggestions which may be both instructive and applicable for other wild dog-impacted communities, the public and agencies across Australia. This report and the attachments including interview transcripts, photos and materials for use with media, cover the substance of interviews with individuals and groups, their key messages, issues, approaches and recommendations, direct from those involved.

Each of the participants was happy to share their knowledge and experiences and expressed gratitude that the researcher came to them, and that this allowed them to voice their structures, concerns and approaches to wild dog impact management. Conversations, directed by strategic questioning, were the ideal medium for gathering views and other content.

Participants all expressed their commitment to continuing to reduce impacts, both on their own properties and within their broader communities and were inventive with suggestions, wish lists and recommendations.

Participants were mostly pleased (but some were wary) to understand that there would be broader communications from the project (driven by the IACRC/NWDAP) that might assist them with their ongoing community work, awareness and activity and the support and resourcing of those. All the participants had 'plenty to say' and gave willingly and robustly in the conversations, and worked hard on how to translate issues into actions and messaging for engaging others (a key need for all interviewed). The research has developed a list of messages for the range of audiences which include agencies, industry, regional communities and the public (listed in Appendix 3). All participants agreed to have their views recorded and expressed, but (to keep faith and trust), want to see draft media material before it is released, to allay concerns around potentially damaging backlash.

An alternative would be to aggregate the content into generic views and media content, not assigned to particular voices.

Levels of concern amongst participants about wild dogs were generally very high, with social, economic and environmental concerns and impacts raised. People were equally concerned about the biggest weakness of the current approaches - the gaps, disruptions, inefficiencies and waste caused where people and organisations can simply ignore their responsibility to act on wild dogs, and without consequence. The issue of engaging the noninvolved was a top order, critical issue. Many reasons were given for why this non-engagement occurs, and the additional impacts and costs this causes, i.e. by people - landholders, industries and agencies - who are (as yet) not impacted, are ignorant, absent, unaware and/or under-resourced, or who have made changes to their enterprises, landscapes and relationships to reduce impacts and are hence no longer as interested and active.

Participants also raised concerns about the levels of and ongoing resourcing of wild dog activity, awareness and community development to support action plans, with an underlying, palpable and shared anxiety present around the wild dogs' issue.

The groups which these participants were (are) engaged with range from single focus (on wild dogs alone) through to those with a broader pest focus (both plant and animal), and a productivity and biodiversity focus. The different approaches have both strengths and weaknesses, which are outlined in the summary and recommendations, to guide project outputs and outcomes. Sensitive and effective communications, and 'carrots and sticks' to encourage decent engagement by and for a 'whole of community' response lie at the heart of the recommendations and needs. Some 'tinkering', some leveraging of effort, some pivoting of approaches and effective collaborations are recommended for the 'fix' that participants want.

There is an extraordinary amount of goodwill, energy, expertise, knowledge and resources invested by and available within both WDAs and LCGs.



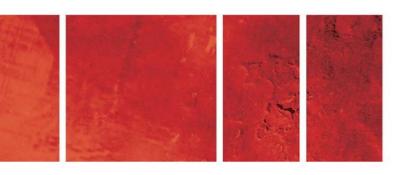
The NWDAP could easily leverage this goodwill with better clarity around roles and partnerships, with appropriate and secure resourcing, valuing of community groups (both WDAs and LCGs) and shared standards for technical officers and plans. The recommendations if accepted and implemented will help improve results, and need to be shared through a 'whole of community, industry, research and government' approach, to leverage and create a matured nil tenure theoretical and resourcing framework and infrastructure.

The interview methodology used was mixed methods with a qualitative focus developed through narrative discourse. The research fits with the required framework of evaluation guided by a practice of 'citizen-focused management and participation'. Discussions were by direct, personal interviews, covering a list of key questions and themes but allowing the participants to guide their involvement and discussions. The researcher and participants engaged in open discussion (ranging from about 30 minutes, to (mostly) 1-2 hours, with some being in the range of 3-4 hours) around key themes, with interviews being voice-recorded and people being photographed (most of them were happy with this). A couple of people were happy to be filmed as well, talking about their 'key messages'; but most chose not to be filmed.

8. Conclusions & recommendations

- 8.1 Description of current WDA and LCG practices and evidence of approaches
 - Plans and Roles:
 - WDAs and LCGs have broad alignment with NWDAP best practices and approaches; some local plans are more akin to a calendar of events that list (and guide) various actors to participate actively in community events (e.g. baiting), to be aware of events (e.g. agency or WDA aerial baiting) and to hear from Agencies, researchers and NRMOs to raise awareness (public forums); Better consistency in planning

- at the District and Regional/NRMO level (and State levels) could be achieved with guidance to those about the wild dog action plan 'must haves', including the need for more in the plan, than just a calendar of events
- The roles of the WDAs, LCGs and PACs need clarity and communication (e.g. through media profiles/features), as these groups are critical to wild dog management and action and impact the efficiency of all plans including the NWDAP
- There are strong and regular communications between both WDAs and LCGs (although varying satisfaction) with agencies but there are some clear problems with communications (e.g. LCGs and WDAs can't get in touch with the 'non-engaged and/or absentee landholders', yet NRMOs can; and the groups speak about deep frustrations on this issue; many seek more activity by agencies for this, as well as for broader and actual nil-tenure and whole of community engagement (whilst understanding this may be caused by their lack of resourcing or inability/power to persuade) and for the potential of Agency and NRMO engagement with all landholders (whom they communicate with otherwise e.g. on rates)
- Governance understanding, knowledge and frameworks vary amongst groups, with LCGs having relatively strong and transparent governance and planning, and with WDAs characterized more by Agency (co-led) governance arrangements (more hands-off in some cases of those issues). Some regions appear to have strong governance models, but which might prove otherwise if tested (e.g. on insurance)
- Financing (sources) and resourcing of wild dog management is by a combination of Landholder (LCG and WDA) funds (members and fundraising) with industry (AWI) and government (pest animal) program funds; types of resources included funding (cash for contractors, fencing, baiting etc.), tools (CANID Pest ejectors etc.) and technical/professional assistance (training,



admin, mapping, research etc.). Everyone reported a lack of enough financial resources (and a great deal of anxiety and concern around this issue) to be able to manage current and future wild dog action plan needs; some suggested the need for a pest animal levy to fund both plans and works

- Ownership both LCGs and WDAs showed a strong sense of ownership of the wild dog challenge, particularly where there were wild dog impacts on those member's properties; there were definite gaps in ownership of the issue, particularly with enterprises which are not yet 'hit' (because of enterprise type -e.g. farms with stock other than sheep - or places with no stock)
- Stakeholder involvement LCGs and WDAs both had strong relationships and engagement of 'known' and most-engaged stakeholders - with much less involvement of others, like non- engaged agencies and landholders, public, other enterprises etc.
 - Knowledge and skills Both LCGs and WDAs have high levels of both - and particular expertise specific to the diversity of their memberships and relative to their ability to find funding and other resources; WDAs have more specific and targeted skills and knowledge for wild dog management; LCGs have more community development skills and knowledge; both LCGs and WDAs are involved in training of their members and the broader community in wild dog and (in the case of LCGs) broader pest animal and weed issues and actions: Some WDAs, LCGs and researchers are looking into other (managementrelated) concepts including the concepts of a 'carnivore bush' (with higher fire danger) and 'predator-friendly' farming practices and landcare research, to continue to improve knowledge and skills, particularly in areas with intractable challenges and highly contested public debates on wild dogs.

8.2 Values, beliefs and assumptions of stakeholders (common and differing)

Values evident through opinions and discussion, included these issues raised:

- Both WDAs and LCGs share the view they hold of the immense value of wild dog plans, activity and PACs for their families, enterprises and communities
- The current structures, roles, plans and budgets are critical to their enterprises, regions, industries and wellbeing, individually and for their communities
- PACs are a necessary part of the solution, and highly valued by both the WDAs and LCGs
- The public have wildly varying values; those in rural, regional and remote communities are (because of the vicinity) more likely to be aware of and influenced by landscape and community and by issues and threats like wild dogs; Some landholders (without stock) "like the sound of wild dogs"; others (with stock) are struck with fear and dread from that sound

Beliefs evident through discussions included these examples:

- Wild dogs are increasing in numbers, scale, impacts and in range (type and breadth) and the farming community as a result is being increasingly impacted by wild dogs particularly in some areas
- Public beliefs vary, specifically around the understanding of the wild dog, and especially the dingo, the role of the dog in natural landscapes
- Some people welcome wild dogs as they may control native grazing animals
- Nil tenure is an aspiration, not always the reality, nor is it used consistently in practice



- Funding from both Government and Industry is essential to match community investments. Some WDAs report needing \$100K p.a. as base funding to reduce wild dogs and their impacts. Groups and individuals fear the loss of PACs and other funding and support, should adequate resources not be committed to the task, particularly in areas with critical and growing levels of wild dog impacts
- Some areas hold strong opinions about, and fear a reduction in real funding and support from both government and industry; this simply requires greater transparency of commitments and budgets and the better involvement of the community in planning and decision making; a matured 'nil tenure' policy and commitment would go a long way to allay fears and concerns
- People believe the most problematic wild dogs are those from interbreeding of the Dingo and 'regular' dogs, and that wild dogs are coming from national parks and State Forests running with dogs coming from urban areas, farms and hunting packs; Most believe wild dogs are breeding and primarily living on public lands; a few landholders discussed dogs coming off farms and the need for farm dog management; wild dogs don't nest on farm lands (until people find this is not always the case, finding dogs nesting on properties as well as coming off publiclands)
- Some find it hard to believe baiting ismaking a difference there is a gulf between baiting and knowing the baiting has killed dogs as landowners don't see dead dogs, they equate this to not working (not looking for or at other evidence e.g. impact reductions)
- Varying beliefs about the ability of wild dogs to travel over large regions (and other knowledge about wild dogs including Schedule 2 Dingos); this is being updated with the sharing of knowledge and maps from the collaring and GPS tracking of wild dogs (e.g. of two dogs, 'Qantas' and 'Midnight' two 'frequent flyers' by NPWS and researchers)
- Some groups and landholders feel they are 'in the dark' about dogs and about what agencies

- and others are doing (or not doing) due to a lack of sharing of data; not enough, not the needed data, and not regularly enough data is being shared i.e. from researchers and agencies and to community LCG and WDA members and broader community and other industry types
- Some people are doing all the 'heavy lifting' with wild dog management; others are not contributing, but all benefit where wild dogs are managed ethical issues arise from the burden of actual responsibility and low levels of shared ownership
- Dingoes (Schedule 2 public land): the greatest threat to the protected species is hybridization by wild dogs (non-dingo breeds)
- Beliefs about what WDAs and LCGs do and stand for (i.e. there are lots of misconceptions which may prevent people from engaging with both groups)

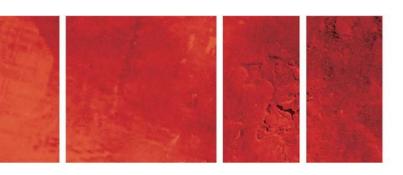
Assumptions:

- Aerial baiting and community baiting are successful and must-do solutions, within a broader 'toolbox' of methods approach a combination of approaches is successful and necessary; The toolbox includes baiting (aerial and on-ground hand baiting), trapping, shooting, stock management, backed in by shared research, mapping and reporting (constant vigilance)
- Need for ongoing training and employment pathway for younger trappers / PCAs - huge need foreseen by most interviewees
- Variety of assumptions held and questions and evidence needed about where wild dogs are breeding including off-farm, in-parks, at tips and camping sites etc.

8.3 Behaviors and intentions of stakeholders

Behaviors:

• Talking about wild dog attacks and sightings is the new 'weather' - i.e. it is the opening line in casual (e.g. in town) conversations and a common talking point



- · Wild dog impacts are recognized as causing PTSD for impacted landholders and others; this requires considered response (reference requires source)
- · Lack of awareness amongst landholders (particularly new, small-acreage landholders) about obligations on them to control dogs - also they can 'turn a blind eye' as can deny wild dogs are on their place (dogs roam freely on and off properties and people must be on property to see the evidence)
- Damaging, costly and unhelpful behaviors: Camera theft (and hence data loss and resource cost) is a big issue (even though cameras are no good for any other users); it may be that this is an indicator of people who are against the research and action, or that perpetrators are wary of being caught on camera and potentially coming to attention of authorities for other behaviors unrelated to wild dog (and other pest) monitoring
- · Agencies may have a nil tenure policy, but it fails where there is no backing through financial commitments and activity by the agencies

Intentions:

- WDAs and LCGs would do more wild dogs work, with community and agencies, if they had the funding support to do this
- · Landcare keen to be driving research and multi-pest research particularly
- · Landcare could take on (could help) WDGs and their issues
- Some LCGs are considering training of young trappers / PACs (Central West NSW, Mid-Macquarie Landcare; not an interview subject of this research)

8.4 Bringing people in to collaborate on wild dog management

- The <u>public</u>: Responsible pet ownership: need to develop communications to prevent dogs going stray and wild
- Absentee landholders: Agencies, Industry and Community WDAs and LCGs need the ability to 'insist' and compel people to do baiting where necessary
- Ratepayers: communications needed with all ratepayers (by Councils and NRMOs) - to raise awareness and engage everyone.

8.5 Advantages and disadvantages of approaches

Advantages of WDAs:

- The WDA's 'single issue' focus on wild dogs is a benefit; members are entirely and consistently focused on the issue (albeit their interest waxes and wanes with priorities)
- Many WDAs have been around for 20 60 years, so have loads of knowledge, skills and direct experience
- WDAs could be more like (could learn from) landcare groups
- Most WDAs share (or have) their administration managed by the Government (LLS or CMA or Agency)
- hence are not 'independent community groups' in the usual sense
- Most WDGs are very happy with how they operate but would like more members and more diversity (but don't appear to be implementing strategies to achieve that)
- Most WDGs work well with most agencies and NRMOs and are highly appreciative of and reliant on the resources and help they get from:
- Regional NRMOs (i.e. LLS and CMAs)
- Industry (i.e. AWI) and
- Other government pest programs.



Disadvantages of WDAs for wild dog management:

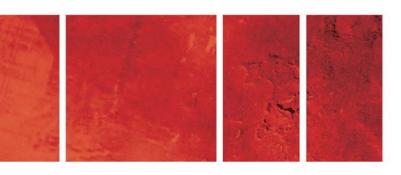
- WDAs have varying governance arrangements probably most WDAs need improvement generally and some alignment, and need more knowledge and precautions in regards insurance and other governance issues
- WDAs suffer (i.e. through additional costs and inefficiencies) from non-engagement with absentee and small-hectare landholders
- Mapping not readily available to all WDAs so it is difficult (for an outsider) to see the boundaries of many groups (or mapping wasn't made available)
- LCGs are rarely represented on the (traditional) WDAs, but members may be members of both networks
- Many areas show little to no interaction between WDAs and LCGs and hence are not getting the benefit of collaboration; LCGsreport that in some cases they are deliberately 'left out', but know they could be very useful to WDAs

Advantages of LCGs, they:

- are great in attracting dollars for works (view of LCGs and some PACs)
- are willing to look at best management practices as an additional method for wild dog management and provide a 'place' (within a group) to trial ways of reducing impacts (e.g. concepts of "farming with threatening animals" is a new and growing interest) and changing enterprises (within a 'community of practice' to share knowledge and make incremental changes)
- have operational effectiveness and organizational strategy
- are local communities of practice
- have integrity and responsiveness with skills, knowledge, expertise which are useful for wild dog management
- link to knowledge from outside the district

(actively seek and bring in knowledge and transfer / communicate widely)

- promote local knowledge, and support wider interests for training
- are enablers, with clarity of goals
- 'speed up learning' by regular practice of bringing in outside influences (broader networks, mature thinking across production, environmental and social/community and disaster/emergency preparation, responses and recovery)
- work with all areas of community incl. schools, media, community groups, business, industry, government, researchers
- have been active for 25-30 years much relevant skills and experience, available within a community and region (available to others who partner or join)
- move and adapt with issues e.g. blackberries,
 M2M, multiple issue strategies and priorities
- have inherent 'incentives' being peer communities of practice; leadership training, access to group resources
- involve the whole family and community in popular 'knowledge sharing and citizen science' events (e.g. crowdsourcing, crowdfunding, raptor nights, rocks and reptile nights, walks, bus trips etc.)
- can assist with new enterprise thinking (c.f. single issue / or 'just solve the problem' approaches)
- have less members actively involved in WDAs;
 LCGs wait for members to raise issues, they'll plan and secure resources, before they get involved in issues
- are skilled and great at project application writing, management, facilitation and delivery, and great at bringing in people to meetings, field days and action planning activities



- are innovative e.g. the Dargo LCG Wild Dog Tool Box and Bounty
- organise their members and community; they get the committed into groups and partnerships e.g. grasslands, blackberries groups etc.

LCG Disadvantages:

- LCGs have a broader focus than just wild dogs, so (possibly) some LCGs don't develop all the skills and expertise needed for the specific wild dog issue (unless, and as the need arises)
- may not want to be involved in WDAs and wild dog activity (i.e. they may have other priorities)
- · have a broader group of interests and members - some of whom may be anti-baiting, trapping and shooting, or simply unaware
- are perceived by WDGs and others to not have landholder's interests at 'heart' (seen as revegetation-only groups) - (n.b. this is perception, not reality); but all LCGs do have specialties and local idiosyncracies; no two groups are alike
- are less active in regions where there is less support for their efforts (e.g. where there is not enough coordinator or facilitator funding and activity)
- rely on funding sources and amounts that are highly contested and variable, with significant regional differences and hence abilities to support the needs of community members

Relationships with other groups (for both WDAs or LCGs)

- Researchers: Research must integrate with community groups; collaboration is the mantra, but "researchers find it difficult"; Communities and landholders rely on innovation and R&D and expressed a need to hear more from wild dog researchers
- Other groups (e.g. tourism): Bushwalkers are seeing and reporting menacing of people and

- animals by wild dogs on walks in remote as well as in popular tourism destinations (e.g. Dinner Plain, NSW North Coast, Hunter and Manning)
- WDAs: Most have no formal links with or intentions to link with LCGs; but many members of WDAs appear also to be members of LCGs - with commitments that wax and wane depending on need, resources and plans
- LCGs: AWI has funded landcare groups but need to know which ones? Get projects and results from AWI and share these with LCGs and WDAs, through case studies
- LCGs are a potential 'structure' and strategic partner for WDAs (governance, diversity)

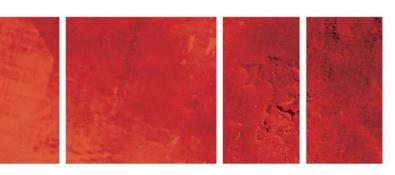
Unintended consequences

- Fences effectively move problem wild dogs on to others (people, farms, landscapes), who may not be able to fence off their place (issue displacement)
- Baiting (both aerial and ground) which doesn't have broad community support causes (or may cause) polarized views in the community and make actions both inefficient and ineffective.



9. References (annotated)

- Braidwood/South Coast NSW Wild Dog Working Group, Larsen, D, Rolfe, J., Kobold, R., Armstrong, J., Walters, L., Garood, D. and McKinnon, R. *Braidwood South Coast Wild Dog Management Plan 2015-2020*; a comprehensive look at this region's Plan (and as reviewed and inclusive of signatures of key stakeholders) of the "coordinated and cooperative" and "living and evolving" Plan with scope, resourcing commitments (to end of 2016), roles, goals, structural and legislative contexts, aims, objectives, twelve significant 'management challenges', a table of annual task allocations, an assessment of techniques, flow chart of reactive control (command structure); charts of processes and impacts, reporting form, map of the region's area, controls, aerial baiting, attacks and 'runs'.
- Croft, T. (2016), *Blackberry Action Groups Briefing Notes*. North East CMA. Describes community (landcare) models and approaches (particularly community-led partnership approach, with cross-tenure and all land manager engagement) to pest weeds (and related issues including governance, resourcing, research, partnerships focus, activity, planning etc.
- Dargo Landcare Group, (2016) Wild Dog Bounty Community Notice (\$50 per dog killed)
- Dargo Landcare Group, Curtain, B, (2016) *Wild Dog Control Program Spring Report* by their Pest Animal Controller (contractor), including the approaches, actions and results of the group member's and PCA baiting, trapping, shooting and monitoring of wild dogs, impacts and controls; includes Google Earth mapping of GPS points where dogs taken, photos of dogs and locations captioning.
- IACRC Feralscan website (accessed 2017), https://www.feralscan.org.au Includes the WildDogScan app, webpages and ability for groups and individuals to map and report wild dog impacts and sighting and help groups connect, and access research and information on wild dogs.
- Hill, Harry, (2010) Dingo Tales (Self Published) ISBN 978-0-9870592-0-8 (Author & Publisher)
- Jeogla Wild Dog Association 2016-2021, (2016, updated 2017) Jeogla Wild Dog Association Wild Dog Management Plan a four-page plan including a timetable, with focus on reducing stock losses (271 losses in 2015/16) and conserving the Schedule 2 Lands Dingo; lists (aware of) significant constraints and inefficiencies; has both strategic and reactive actions planned for, but subject to (restrained by) engagement and available resources issues; focus on aerial and ground baiting, trapping, cluster fencing, shooting, PACs, property signage, monitoring and data collection and sharing; resources include funding, fencing materials; no mention of landcare or use of WildDogScan in monitoring.
- Landcare Australia Ltd Website (accessed 2017) www.landcareaustralia.org.au (for general awareness and information, a National Landcare Directory, grants advice), best accessed in association with the National Landcare Network (the representative community website for community landcare groups): http://nln.org.au/ These organisations are currently working towards merger.
- Martin, P., Low Choy, D., (2016), Recommendations for the Reform of Invasive Species Management Institutions; a review of the institutional reform context. Focus on being 'citizen friendly' as compared with citizen within a community-driven and partnership development and context; i.e. it is individual-client focused, and an understatement of the group structures and their investments and importance. Contains little profiling of the citizen as a part of the structures, frameworks and plans for pest species management, lacks the presence of community groups (i.e. WDGs and LCGs and/or other community groups that are so critical a part of the action and frameworks). Focus on being 'citizen friendly' as compared with 'citizen within community-driven and partnership development and context; i.e. it is individual-client focused, and an understatement of the group structures and their investments and importance.

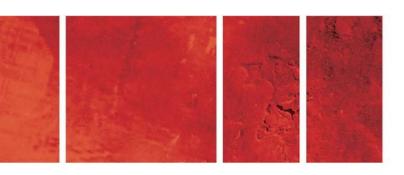


- Martin P, Low Choy D, Le Gal E and Lingard K. (2016) *Effective Citizen Action on Invasive Species:* The Institutional Challenge p19. Invasive Animals Cooperative Research Centre: Canberra.
- Mitta to Murray Blackberry Action Group, 2015 Group Newsletter a community LCG newsletter distributed to every landholder member (and handed out to community) across a broad region, impacted by pest animals and plants; the publication is social, knowledge-sharing and motivational in approach, updating programs, incentives, case studies, links, reminders and contacts.
- *Mitta to Murray Blackberry Action Group, 2016 Group Newsletter* shows this regional group's achievement and comparative analysis from year to year.
- Mitta to Murray Blackberry Action Group, *Blackberries a shared problem* (a community engagement brochure with contacts).
- Mitta to Murray Blackberry Action Group (M2MBAG), (2016), Mitta to Murray Blackberry Action Group Annual Report 2015-2016. Gives background on the engaged landcare group networks of the region and their approach to engaging nil tenure whole of community responses to pest plants (and animals) across the region; covers project background, governance, approaches, resources, actors and structures, achievements and reflections including best practice and what works and doesn't for the community groups, their data collection, monitoring and communications activity (awards and media included) and suggestions for other projects and group approaches to pests.
- Mitta Valley Landcare Group, (2015), *Deer Round Table*. Provides an insight into the approach by the group for another animal which has impacts on enterprises and landscapes, and has connection to wild dog approaches (e.g. deer carcasses left on properties by hunters and shooters provide feed for wild dogs); want deer reclassified as pest animal; intend to design and manage research; broader issues include fencing (needed for both wild dogs and deer in some areas).
- North East CMA, Croft, T. (2016) Blackberry Action Groups Briefing Notes; describes community (landcare) models and approaches (particularly community-led partnership approach, with cross-tenure and all land manager engagement) to pest weeds (and related issues) including governance, resourcing, research, partnerships focus, activity, planning etc.
- North East CMA, Sheehan, P. (2016) Blackberry Action Groups Community Led Practice Change.

 Describes pest issue, community (landcare) approaches and a case study of a highly successful group (one of this study's interviewees: the M2MBAG (Mitta to Murray) network of landcare groups in the North East and Upper Murray region) and their whole of community approach and achievements
- Petaurus Education Group Inc (2016), Annual Report 1 July 2015 to 30 June 2016, an example of a landcare group's community education and action approach (associated with Wirraminna Primary School) which includes managing pest animals, group governance, approaches and successes, and support, contracting and administration for other networked LCGs.
- Scammell, P (2017), *The East Coast Dingo and its Economic and Social Impacts*. A draft (unpublished) discussion paper placing the regional crisis into an historical, policy and current challenges context (from a community landholder perspective). Considers the "inadequate funding and confused methodology" of past approaches (and current) and recommendations for improving responses.
- Scott, Christopher M, (2016) The case for a Wild Dog Management Plan for the Manning/Great Lakes. A University Masters Research paper looking into a community-driven need and planned response for wild dogs; well-referenced policy and legislation review, of economic, social and environmental impacts and factors; looks at the science and the social science of wild dogs and of local community activity, community structures and actors; recommends an LLS-driven, community engagement with a resulting wild dog management action plan for the region; refers to LLS funding of training on baiting and trapping (training available and rolled out through the LCG).



- Sheehan, P. (2016) Blackberry Action Groups Community-led Practice Change. North East CMA. Describes pest issue, community (landcare) approaches and a case study of a highly successful group (one of this study's interviewees: the M2MBAG (Mitta to Murray) network of landcare groups in the North East and Upper Murray region); refers to LLS-driven, community engagement with a resulting wild dog management action plan for the region; refers to LLS funding of training on baiting and trapping (training available and rolled out through the LCG).
- UWDA, (2017) *United Wild Dog Alliance Mid North Coast Incorporated, (2017) website* materials: Landholder notice, brochure, organizational structure, governance, reporting (e.g. D1.4 Local Area Coordinator Incident Report; and 'Report and incident', connections for a range of stakeholders (counselling and technical and professional advice etc.); this is a comprehensive site, but lacking a formal Plan (not on the website); includes WildDogScan as a tool for members touse.
- Wool Producers Australia, with the National Wild Dog Action Plan Project Steering Committee (2014), National Wild Dog Action Plan. The Plan describing and aiming to guide activities, using nil tenure and community partnership approaches, setting the context, the science, current activity, implementation goals and actions for management; little discussion, reflection or valuing of the specific, substantive and critical roles of both LCGs and WDAs as important structures, actors, co-managers and co-investors for wild dog management (i.e. not named even in lists of primary stakeholders), with few references to them or their active roles and are not listed or involved on the Implementation Steering Committee which has both Government and Industry but no community stakeholders yet are crucial to results); could further develop the 'recovery' aspects (social, environmental and economic for individuals, enterprises, groups and communities; could further reflect on and invest in the social and recovery aspects and development and engagement of community for efficacy; needs links to resourcing commitments; the 'Stakeholder Consultative Group' membership (actors) is unclear, not outlined; resources are listed as 'program names' not amounts and types, so requires going elsewhere to find actual commitments.
- Wright, CM., Landholder, (2017), Email links for Wild Dog and Dingo Literature; List of papers looking at alternative thinking around wild dogs and dingos. See Appendix 4 for links.



11. Tables

Table 1 Regions and Group types interviewed

Region	LCGs interviewed	WDAs interviewed	LCG&WDA Combined and
			other Groups
Eastern Monaro and South East NSW	Snowy River Interstate LCG (network of 8-10 LCGs)	• 'Jindabyne Horizon' – 7 of 14 original WDGs	• Snowball Landcare and Gundillion Hall Committee and Krawaree Wild Dog Association,
			Feral Fighters (Jerrawa Creek Landcare initiative now a SE LLS program)
East Gippsland VIC (and bordering SE NSW)	Dargo LCG Benambra-Omeo-Dinner Plain LCG (3 smaller groups have combined as a network)	• Ensay WDG	Swifts Creek - Ensay LCG
Hunter, Manning and Great Lakes (Mid North Coast) NSW	Manning LCG and MidCoast2Tops LCG	United Wild Dog Alliance Mid Nth Coast Inc (UWDA)	
North East VIC and Murray, VIC and NSW	Wises Creek - Talgarno LCG M2MBAG LCG (Mitta to Murray landcare networks) and Mitta Valley LCG Holbrook Landcare Network	Cudgewa WDA Tallangatta Valley WDA Hume Wild Dog Working Group/ Tumbarumba WDGA and Upper Murray WDG	• GLENRAC; Oaky Creek LCG/ Jeogla WDA
Northern Tablelands and Southern New England, NSW	Southern New England LCG (SNEL); Granite Borders LCG/ Stanthorpe Landcare	Tenterfield WDA (14 subgroups) Pyes Creek & Sandy Creek WDA Hernani/Ebor WDA Stanthorpe WDG	



12. Appendices

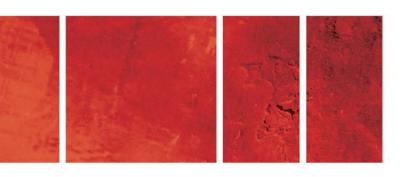
Appendix 1 - Interview questions and themes

- 1. Individual motivation and actions across landcare ideals and wild dog management
- 2. 'scaling up' to neighbour and community action (which includes the nil-tenure landscape approach) and the level of community participation and strategies to achieve these
- 3. community funding, governance and administration for a group's wild dog management strategies
- 4. efficiencies gained through a formal cooperative landcare network approach
- 5. member and neighbour participation what are the drivers and the successes in engaging people thoroughly
- 6. planning approaches the actual approaches and actions taken
- 7. activity data collection, information sharing systems and alert systems and procedures (including the use of WildDogScan) and other approaches to gathering evidence of dogs and their impacts, and of group management success
- 8. community knowledge and skill level
- 9. types and sources of resources.

Appendix 2 - Brief Explanatory Email for participants

I am doing an 'interview and case study writing' project at the moment for Invasive Animals Limited, and would like to include some landholders like yourselves who may be members of wild dog and landcare groups (or both) from your district in this research, either by phone or in person at a place convenient to you.

In person, on farm (or local place) potential: I am coming through the region from this coming Sunday and can either call in on Monday 23rd or Tuesday 24th next week (may be too soon for you), or also I am driving from on 3rd February and could come over to anytime that day if it suits you. If sometime during those day/s don't suit I could phone or connect with you via skype or phone for a 20-minute interview (or up to an hour if you are keen to talk longer). Here is a bit of background on the project and on me: This is a short-term project funded by IAL, who have asked me to talk with some landholders and wild dog association and landcare people in five different landcare networks/regions from QLD to Victoria, about how they manage wild dogs using a landcare or association community approach. I am writing up and gathering content through this task (by early March) for the IACRC so they can publish case studies for different approaches to managing wild dogs in different regions. It is case study writing, and content- gathering and analysis that I am doing (based on discussions and interviews) - the IACRC will do the actual publishing later. People can be named and credited for their input, or may be anonymous - as they feel comfortable. I am recording interviews on (iPhone) video and audio, or simply having a chat and taking notes - with individuals or a group - and I will write up stories and compile 'content' (photos etc.) from discussions. IAL would publish the content in various media formats. If people were keen to have a say, but couldn't meet me, I could provide a written survey (Survey Monkey) of questions, so they could have input as their time and schedule permits. Interviewees will be landholders and some others who are involved in wild dog associations and / or landcare groups and networks (i.e. people using community approaches).



The objective of the Invasive Animals CRC project is: Through the description and analysis of a case study report, the project will describe a 'community landcare' and wild dog association approach to wild dog management. This description will highlight elements of best practice community landcare that (potentially) delivers best practice management of wild dogs, the advantages and disadvantages that landcare or associations bring and how land managers achieve and maintain a beneficial relationship with landcare and assocs. The project manager will speak directly with landcare and wild dog association members, with either a direct or indirect interest in wild dog control operations, in 5 regions and landcare networks, using a social science and community engagement frame of reference. The Project will gather multi-media material from interviews (audio, visual, written) and create a series of news articles, magazine articles and video briefs for use in social media and regular media marketing. The project will not demonstrate the efficacy of reduced wild dog impacts as it is assumed that community driven landscape scale (i.e. nil-tenure) best practice is efficacious. However, the project scope does include an assessment of the efficiency and effectiveness of how community involvement, resource collaboration and nil tenure is done.

My Background:

I was approached by IAL to do the project for them; I initiated RabbitScan in 2009 and later helped develop FeralScan. I wrote/edited the book 'Great Australian Rabbit Stories' (about the wild pest rabbit's impact on our farms and landscapes) I've been involved in Landcare from 1990 to now (NSW and nationally) and wild pest animals from 2009; I am currently a Council Member of the NSW Landcare Council; I am an active member of Australian Landcare International; I worked with Australian Red Cross in post disaster regional, rural and remote locations in Far North and Central QLD and am a volunteer for their Emergency Services Team - working on the issues facing landholders following (and during disasters and emergencies); I am on the VIC Gov't Register of consultants - as a crowdfunding trainer for landcare and community groups for threatened species (for last year and a half).

Appendix 3 - Communications plan, targets, messages and draft content

Wild Dogs - 'the community impact story'
Content for a series on wild dogs, for regular and social media
(to leverage the NWDAP communications plan)

- 1. NWDAP Communications Plan:
 - 1.1. Understand the role and activity of the NWDAP Communications Plan and develop content for that to leverage the communications activity of the national plan
 - 1.2. Develop a draft magazine article, a draft press release and a draft video storyboard for a series on wild dogs (focusing on the people impacted, their concern issues and findings of the research) for use with any, or all, of the following:

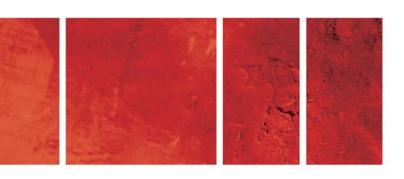


2. Targets:

- 2.1. Events and forums produce submit and pitch press releases and articles with lists of briefed and talented people to interview, for use with promotions and publications around:
- <u>Farm Shows and Field Days</u> (District, Regional and State) most of these have both a community landcare presence and a biosecurity (LLS/CMA) agency presence
- <u>Small farms field days</u> specific focus for peri-urban landowners
- Hunting and shooting events and gatherings (significant memberships and readerships)
- Rural Press Clubs present case and pitch stories to journalists and mastheads (NSW, QLD, VIC, WA)
- Enterprise and industry gatherings e.g. Beef Week
- <u>CWA Country Women's Associations and Rural Women's Networks</u> (Magazines, Facebook and Forums)
- <u>Australian Red Cross regional volunteer networks</u> alert to the potential need for Psychological First Aid, Personal Support, Outreach and Community Recovery activities, for people and communities impacted and going through severe stress events
- <u>St James Ethics Centre</u> in-school programs as well as put this issue to the Centre for policy guidance on a societal level

2.2. Target publications

- <u>Fairfax agricultural media</u>: The Land, QLD Country Life, Stock & Land, Farm Weekly, Farm Online advertorials and key messages
- Hunting and gaming magazines
- · Local papers and local radio
- <u>Landcare groups with regular columns</u> in local and regional papers and sessions on radio
- <u>Landcare (farming and environmental) newsletters, magazines</u> (e.g. Landcare in Focus supplement to Rural Press mastheads and the Victorian Landcare Magazine, Landcare NSW Communications newsletters and posts)
- <u>Agency, NRMO and Council rates, brochures and notices</u> provide content for and ask agencies and councils to publish regular simple community 'notes, reminders and key messages' to be sent on mail to all landholders and ratepayers
- Rural Women's Network magazines and Websites
- Brochures or postcards for generic messaging: produce and distribute to (make available through)
 Councils (suggest include in Local Government 'rural living guides for new landowners'), caravan
 parks, real estates, tourist information counters and centres, farm produce stores and landcare
 group and NRMO offices
 - 2.3. Target web and social media sites: (Pitch and Submit)
- <u>LCG websites:</u> Landcare Online (Australia-wide) and State communications officers of LCG and networks (and any WDA websites n.b. not known)
- NRMO websites: basic key messages for 'highlighted notices'

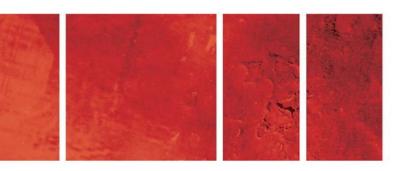


- Farming and Industry Associations Web-based Discussion Panels (farmer's forums)
- **Hunting and Game Animal** websites
- 3. Messages and content for communications to specific target groups (suggestions from community):
- 3.1. Five messages / issues:
 - 3.1.1. We need all people to report (who to/how to) whenever they see a wild dog or pack, and where and when (i.e. to neighbours, to NRMO, to WDGs and LCGs and FeralScan)
 - 3.1.2. With everyone's help we can have 'no gaps' in baiting programs (i.e. otherwise will create 'refuges' from where wild dogs can re-breed)
 - 3.1.3. Native animals like koalas are threatened and mauled by wild dogs, as are pet and working dogs and people
 - 3.1.4. Funding (and other support) is critically needed by and available to LCGs and WDAs to continue to have effective and active community groups able and committed to reducing wild dogs and their impacts
 - 3.1.5. Wild dog attacks on stock, pets, native animals and people can cause distress; don't go it alone talk to your LCG, WDA, or your Doctor or Vet, and/or a support line e.g. Red Cross and Lifeline get early help for the stress and help for your recovery.
- 3.2. For public: wild dogs impact everyone (people) and everywhere (private and shared public spaces, not just sheep farms) and require us all to be vigilant, to report sightings, and to expect, encourage and support efforts to reduce their numbers, range and impacts; if more people understand and allow or get involved in activity (both preventative and impact-managing) across impacted regions, then there will be less need for raising funds (e.g. via levies, rates and grants) to control wild dogs; community groups (both LCGs and WDAs) welcome everyone's help and support, i.e. whether people join as new members, or simply get involved in community field days a couple of times a year, or report through mobile phone and web apps like WildDogScan; the message is: "report, report, report!"; Keep an eye out for and report strays; Ensure your dogs are not free to wander and breed with or join up with packs of wild dogs if they do they can create a huge menace to society, farmers and to native animals; responsibility and care-taking will reduce the need and likelihood for potential levies on dog owners to pay for the costs of dogs 'going wild' or 'breeding wild'
- 3.3. <u>For LCGs and WDAs</u>: there are many benefits to partnering with other groups, industry, agencies and NRMOs who are either specifically interested in the single-focus or the more broader focus groups; LCGs are great at engaging and planning community events and knowledge sharing; WDGs have immense knowledge, skills and expertise on wild dogs and control methods; partner for single events or as a longer-term strategy share the load and reduce the stress and access more support
- 3.4. <u>For Agencies and NRMOs (LLSs and CMAs)</u>: providing support and resources to assist LCGs and WDAs with both the science of wild dog management and the social science of people and community in communities which have contested, wicked challenges like wild dogs; this is a much-needed and valued investment and will provide great (ROI) investment in community goodwill and development, securing reliable and effective



community agents and structures that can assist with bigger picture issues (natural resources, biosecurity, etc.). Better partnerships with community LCGs and WDAs will better achieve community acceptance of wild dog management action plans (and other Agency and NRMO plans and operations)

- 3.5. For young people (potential controllers): wild dog and other pest animal management is a legitimate professional career, much valued and needed in the community, with good prospects for suitable people, where people can work on whole-of-community challenges and being trained by highly experienced agency, community and industry practitioners (e.g. sons and daughters of current PCAs and trappers); but it's a specialized role and not for everyone
- 3.6. For absentee and small farm owners and peri-urban landowners: wild dogs roam through landscapes and can create havoc on any property (not just sheep farms); Everyone is welcome and encouraged to join a LCG or WDA to learn about and help manage wild dogs as a community activity; Whilst you are away from your places, wild dogs may be using them as nesting refuges; Baiting, trapping and other controls need to be managed like immunization everyone in the community needs to understand and allow for or get involved in the control; There can be no gaps in controls (e.g. on 'your place' when you are away); Gaps in baiting allows wild dogs to breed up within those gap zones, to further menace communities and animals
- 3.7. <u>For new landholders</u>: report wild dog sightings and attacks to your neighbours, the NRMO, agencies and your LCG and/or WDA; join the group that suits you (WDA or LCG or both); access help and baits and help by baiting your property when community baiting action is taking place; if attacked, seek help and support from ARC, NRMOs, and health professional
- 3.8. For dog owners (pet, farm and hunting): responsible dog ownership requires dogs to be both well looked after and appropriately restrained, to avoid dogs 'going' (temporarily or fully) 'wild' with the ability to breed with other wild dogs and increase problems for everyone; wild dogs can and will come into towns, recreation areas and farms and attack 'owned' dogs and native animals and will menace people too; Wild dogs are increasing in range and numbers, can have very large ranges and can roam in packs that can be very destructive and menacing to residents, walkers and farmers alike
- 3.9. <u>For veterinary clinics and council 'dog pounds'</u>: develop appropriate messages as both are a 'touchpoint' for dog owners and hence can share knowledge about wild dogs in their areas; vets can also provide data to understand the impacts on 'owned' dogs (economic and social/emotional)
- 3.10. For Regional and Agri-businesses like Real Estates, Tourism, Farm Advisory and supplies and Farm Produce Stores: wild dogs are an issue for a whole community, and may impact on perceptions about local and regional personal safety and wellbeing, as well as land values and farming enterprise sustainability; There can be a roll-on effect from farm attacks to the community and business as a whole; Businesses can be vigilant and can report dog sighting to help keep dog numbers, ranges and impacts down and keep a region secure and diversely productive; The "mind-boggling turnover" in hobby farms may be both a cause and a result of issues like wild dogs, which need a whole of community approach (not just to be a burden and



risk for a small landholder). Engage with your LCGs and WDAs and with the tourism and real estate industries for appropriate messages and responses and their own vigilance and use of apps like FeralScan to assist in managing wild dogs; encourage new landholders to connect with the NRMOs and the LCGs and WDAs that are knowledgeable, active and welcoming of new people

• For schools - create discussion material on the science and social science of wild dogs and their impacts (social, financial, farm impacts); create lesson plans for responsible pet and farm dog and hunting dog ownership, and taking care of and 'restraining' pet, working and hunting dogs, and impacts of wild dogs on native animals like koalas, and for Ethics classes (examples of a challenging discussion issue); have students 'map' their community networks and flag issues, be involved in FeralScan reporting and mapping; help community with mapping and reporting.



Appendix 4 - selection of links from the submission for the research project from Charlie M Wright, Northern Tablelands.

Date: 14 February 2017 at 14:49

Subject: Re: important dingo experiences and research to share - pls confirm receipt

Predator Friendly Farming Network - Predator Friendly Pest Control - Practicing Co-existence

http://www.dingobiodiversity.com/predator-friendly.html

http://www.predatorfriendly.org/how-to/herd.html

https://www.facebook.com/groups/1714422825442170/

Killing dingoes increases stock losses

http://www.dingobiodiversity.com/uploads/2/6/4/9/26494468/an12356.pdf

Dingo Reproduction - Alpha female dingo self-regulation breeding:

http://animaldiversity.org/accounts/Canis_lupus_dingo/

http://creationwiki.org/Dingo

Dingo Fence & Senseless Collateral Damage Wildlife Destruction

 $\underline{\text{https://euanritchie.files.wordpress.com/2014/09/ecological-connectivity-or-barrier-fence-critical-choices-on-the-agricultural-margins-of-western-australia.pdf}$

Demonising the Dingo and Dingo Dogma Science-based Counter arguments

 $\underline{https://euanritchie.files.wordpress.com/2013/05/demonising-the-dingo-how-much-wild-dogma-is-enough.pdf}$

http://euanritchie.org/2014/01/12/the-conversation-the-worlds-top-predators-are-in-decline-and-its-hurting-us-too/?relatedposts_hit=1&relatedposts_origin=1220&relatedposts_position=1

Free Services - Using Dingos as Pest control

http://www.abc.net.au/radionational/programs/scienceshow/dingoes-as-pest-control/4570856

https://euanritchie.files.wordpress.com/2014/02/experiments-in-no-impact-control-of-dingoes-

comment-on-allen-et-al-2013.pdf

 $\underline{https://euanritchie.files.wordpress.com/2013/05/ecosystem-restoration-with-teeth-what-role-for-predators.pdf}$

https://euanritchie.files.wordpress.com/2014/10/status-and-ecological-effects-of-the-world_s-largest-carnivores.pdf

Dingos as Feral Cat Control - Targets with Teeth

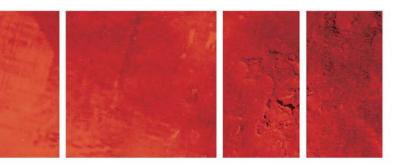
 $\frac{https://euanritchie.files.wordpress.com/2015/09/draft-national-targets-for-feral-cat-management-towards-the-effective-control-of-feral-cats-in-australia-e28093-targets-with-teeth.pdf}{}$

http://www.abc.net.au/radionational/programs/scienceshow/dingoes-as-pest-control/4570856

http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2664.2012.02207.x/full

Dingos as Feral Dog Control http://www.savethedingo.com/info-wild-dog-strategies.html

Dingos as Feral Pig Control http://www.savethedingo.com/feral-pigs.html



Dingos role as biodiversity regulators and preservation

 $\underline{\text{https://euanritchie.files.wordpress.com/2013/05/the-dingo-and-biodiversity-conservation-response-to-fleming-et-al-20121.pdf}$

 $\underline{https://euanritchie.files.wordpress.com/2015/02/resolving-the-value-of-the-dingo-in-ecological-restoration.pdf}$

 $\underline{\text{https://euanritchie.files.wordpress.com/2013/05/top-predators-as-biodiversity-regulators-the-dingo-canis-lupus-dingo-as-a-case-study.pdf}$

 $\underline{\text{https://euanritchie.files.wordpress.com/2014/08/towards-a-cohesive-holistic-view-of-top-predation-a-definition-synthesis-and-perspective.pdf}$

 $\underline{\text{https://euanritchie.files.wordpress.com/2014/08/towards-a-cohesive-holistic-view-of-top-predation-a-definition-synthesis-and-perspective.pdf}$

Ecological Benefits of Apex Predators

http://www.dingobiodiversity.com/uploads/2/6/4/9/26494468/prowse_et_al-2014-journal_of_applied_ecology.pdf

http://invasives.org.au/blog/dingo-great-hunter-greatconservation-hope/

http://www.dingoconservation.org.au/dingo-toporder.html

https://www.ncbi.nlm.nih.gov/pubmed/16094805

Baiting Related research articles

http://www.theland.com.au/story/3956459/wild-dog-pack-dynamics-best-left-to-nature/

Intraguild relationships between sympatric predators exposed to le-thal control: predator manipulation experiments.

Guardian Animals - an Effective way to protect livestock from predators

http://www.pestsmart.org.au/guardian-dogs/

https://theconversation.com/watching-over-livestock-our-guardian-animals-6754

http://www.abc.net.au/news/2012-11-09/bush-donkeys-to-help-tackle-wild-dogs/4362836

Guardian Dogs - Best Practice Manual

http://www.pestsmart.org.au/wp-content/uploads/2010/09/Guardian-Dogs-web.pdf

http://www.pestsmart.org.au/tag/dingoes/



