WORK PLAN 2018-19

Prepared by the Australian Bureau of Agricultural and Resource Economics and Sciences

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ABARES’s role, contributions and work planning process

What we do

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) is the research arm of the Australian Government Department of Agriculture and Water Resources. Our mission is to provide professionally independent and world-class multi-disciplinary research, analysis and advice to inform decision-makers in this department, other government agencies and the private sector on significant issues affecting Australia’s agriculture, fisheries and forestry industries.

ABARES provides professionally independent research and analysis to inform public and private decision-making, underpinned by authoritative economic and scientific data and analysis, and multidisciplinary research. We work at the interface between research and policy, with strong connections to agricultural, fisheries and forest industries, with strengths across agricultural and natural resource economics and sciences.

ABARES undertakes a number of different activities:

- data collection and management, including undertaking farm, forestry and fisheries surveys, publishing official statistics nationally and internationally, and ensuring the discoverability, accessibility and usability of our data holdings
- forecasting the price, volume and value of Australian agricultural output, for a wide range of farm, fishery, and forestry commodities
- undertaking and publishing public good research and analysis on issues of relevance to Australian agricultural, forestry and fisheries policy and industries
- providing analysis and advice directly to the Australian Government Department of Agriculture and Water Resources, and other government agencies

We also convene the ABARES national Outlook conference and about five regional Outlook conferences each year, and participate in a wide range of expert workshops, technical committees, and conferences in Australia and overseas.

How we plan and prioritise our work

Our work is arranged in nine themes under the three high-level objectives of the Department of Agriculture and Water Resources, as set out on below.

Before setting our research priorities for the year ahead, we consult with stakeholders within and beyond the department to identify current and emerging issues over the next three-to-five years. We use this process to shape and focus our near-term research and other activities, including the development of new research and analytical capacity where required. This also helps identify opportunities for collaboration with our stakeholders and other research organisations.

This work plan summarises our priorities and project themes for 2018-19.
How we report our outputs and achievements

From 2019, ABARES will publish an annual summary and overview of our publications, outputs and other activities for the previous financial year, complementing the Department’s annual report.
Contents of this work plan

ABARES 2018-19 Work Plan ........................................................................................................................................ 2
ABARES’s role, contributions and work planning process .................................................................................... 2
Contents of this work plan ........................................................................................................................................ 4
More information and ABARES contact details ............................................................................................... 4

Priorities for the year ahead .................................................................................................................................. 5
Improving agricultural productivity....................................................................................................................... 5
  1. Commodity analysis and forecasts .................................................................................................................. 5
  2. Farm Performance and Analysis ................................................................................................................... 5
  3. Industry Policy .............................................................................................................................................. 6
Increase, improve and maintain markets.............................................................................................................. 7
  4. Trade and Global Analysis .............................................................................................................................. 7
  5. Biosecurity .................................................................................................................................................... 7
Support sustainable high-quality natural resources .............................................................................................. 8
  6. Natural resource management (climate, water and land) ............................................................................ 8
  7. Fisheries ......................................................................................................................................................... 9
  8. Forestry .......................................................................................................................................................... 9
Improving data and knowledge systems ................................................................................................................ 10
  9. Information Systems ................................................................................................................................... 10

More information and ABARES contact details

More information on our outputs and publications is available at the ABARES website.

The ABARES Executive’s responsibilities are published on the Leadership Team page of the website.
Priorities for the year ahead

Improving agricultural productivity and risk management

1. Commodity analysis and forecasts

ABARES commodity analysis and forecasts provide up-to-date data and information on Australian and world markets for agricultural commodities. These are delivered through regular publications, briefings and forecasts to support private decision making and core activities in the department.

Our publications and data are available to the department and external stakeholders, including industry and international organisations such as the Organisation for Economic Cooperation and Development and the United Nations’ Food and Agriculture Organisation. The commodity forecasts and other analysis is presented at ABARES regional and national Outlook conferences.

This work is underpinned by ABARES collection of domestic and international agricultural statistics, including seasonal conditions, production, consumption, exports, imports and prices, and through more informal information collected from our professional and industry networks.

Key publications include:

- *Australian climate, water and agricultural update* (weekly)
- *Australian Crop Report* (published quarterly)
- *Agricultural Commodities* (published quarterly)
- *Agricultural Commodity Statistics* (published annually).

In 2018-19, we will work to maintain and improve the quality of our analysis and forecasts while also increasing the utility of ABARES commodities information to stakeholders. This will include increasing the accessibility of ABARES information and data through improved online resources and considering the scope and timing of forecasts.

2. Farm Performance and Analysis

ABARES research on farm performance seeks to provide new information and insights into farm production, productivity, profitability, risk management, and related issues. This research is centred on farm businesses. Results are typically able to be disaggregated by industry and region. The work is underpinned by ABARES’ long-running farm survey program which collects a comprehensive dataset on the physical and economic performance of Australian farms, and can be linked to other datasets.

The key purpose of this work is to support the Department and industry in the pursuit of a profitable, resilient and sustainable agriculture sector by providing accurate, independent data and advice. While the next hot topic for policy is unknowable, having a solid evidence base on the factors that underpin farm performance and the welfare of farmers is crucial for making the best possible decisions.

In 2018-19, the main areas of focus for this research theme will include:
• **Farms:** includes the ongoing work of collecting and summarising the data from our farm survey program and analysis of the structure of the farm population, labour use and the adoption of information and communications technologies

• **Labour markets:** ABARES received new funding in the 2018-19 Budget to undertake new data collection and analysis of the agricultural workforce. This year we are implementing new questions within ABARES existing set of farm surveys to gather detailed information on farm labour use, to provide a better evidence-based understanding of labour supply and demand, and the experiences of Australian farmers in recruiting and retaining appropriate workers. This work will have a national focus and broad industry coverage.

• **Productivity:** includes ongoing improvements to ABARES models for estimating productivity and new applications of these models to Australia’s vegetable industry and the Chinese agriculture sector

• **Policy:** identifying factors that affect industry growth and the effects of variability on farm incomes.

• **Data:** includes exploring better ways to share the research and data we produce and identifying potential new sources of data

3. **Industry Policy**

ABARES industry policy analysis and advice seeks to provide advice and insight across a broad range of issues concerning Australia’s agricultural industries. While this research area covers all food and fibre industries, including forestry and fisheries, our primary current focus is on agriculture (including on farm production and first-stage processing, such as wine and dairy products).

The scope of this theme covers all off-farm aspects of industry performance, such as the role of research and development, industry support, competition policy, infrastructure, and is intended to complement the enterprise level focus of the farm performance theme. The theme keeps a proactive watching brief on areas of industry policy such as competition policy, industry support and value chains.

In 2018-19, areas of focus will include:

• **Scanning:** Improving ABARES’ capacity to anticipate and provide policy relevant analytical advice on emerging issues. This emerging capacity will be integrated into the Department’s Agricultural Industry Analytical Framework.

• **Policy design:** ABARES will work with policy colleagues to integrate economic perspectives into policy design and reviews, and work to improve the accessibility and relevance of economic advice across the Department.

• **Longer term issues:** ABARES will work with policy colleagues, industry and researchers across Australia to pre-emptively promote policy relevant economic research into longer term strategic issues.
Increase, improve and maintain markets

4. Trade and Global Analysis

ABARES provides analysis and advice on trade and global policy issues to inform strategic policy and decision-making on issues affecting Australia’s agriculture, fisheries and forestry sectors. The analysis advances the department’s knowledge and capability to improve market access, thereby assisting Australia’s competitiveness in global markets.

ABARES received new funding in the 2018-19 Budget to increase our analytical support for public and private efforts to grow Australian agricultural exports and the benefits they provide. Over the next three years ABARES will expand and deepen our capacity to undertake and deliver market and strategic analyses that support the ability of the department and industry stakeholders to anticipate, plan and realise opportunities for growth in Australia’s agricultural exports.

We also intend to establish one or more collaborations with other research agencies, beginning this year, to leverage and develop existing global modelling frameworks to explore a range of issues in global agricultural trade and food systems, and inform priority setting for policy development and implementation.

We expect specific issues will include near term volatility and events, and longer term trends and scenarios relevant to Australian agricultural production, trade, farm incomes. The scope of this work will include the development of alternative global scenarios that can assist public and industry foresighting and strategic risk management.

In 2018–19, ABARES will undertake new analysis in several areas including

- **Global value chains**: identifying and understanding the linkages and influences along the supply networks for Australian agricultural, fisheries and forestry sectors. This research will extend over the longer term to highlight areas of interest and influence on industries within these sectors

- **Chinese price volatility**: undertaking a model-based assessment of price volatility of key commodities within China, and how this is shaped by different institutional settings. As Australia’s largest agricultural export market, this research will assist in understanding potential impacts on the domestic and global markets of China’s market adjustments, and inform government of opportunities for Australia’s exporters

- **Non-tariff measures**: analysis of non-tariff measures and their impact on trade and associated economic benefits to Australia and our trade partners.

5. Biosecurity

ABARES biosecurity research and analysis provides ongoing advice to inform policy development and operations for many components of the biosecurity system. ABARES will focus on the development of new models, approaches and tools; adoption and application of existing and newly emerging

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1 Biosecurity is relevant to all three objectives of the department’s 2018-19 Corporate Plan but is grouped under the Increase, improve and maintain markets objective because of the importance of the biosecurity system to providing confidence in Australian competitiveness in global markets.
methods; maintenance and enhancement of datasets relevant to biosecurity; and maintaining critical capability to contribute to responses to biosecurity emergencies.

Priorities for 2018-19 will include:

- **Impact of pests and diseases**: quantifying the potential impacts of pest incursions and diseases not currently in Australia to underpin biosecurity return on investment decisions.

- **Developing and applying imports-related risk assessment**: addressing crucial questions and issues related to managing the risk posed by imported goods and their conveyances, with a focus on using existing departmental data systems to quantify risk; and developing sampling systems for inspections that best satisfy the risk-return trade-off.

- **Analysis of surveillance systems design**: developing, assessing, and implementing analytical methods for designing cost-effective surveillance systems to detect pests and diseases.

- **Social systems analysis**: understanding how social systems and insights can contribute to the management of biosecurity risk.

- **Emergency response decision making**: developing and supporting methods to inform policy, strategic and tactical decisions made during emergency responses, including technical feasibility of eradication, benefit-cost and return on investment, and interpretation of surveillance data.

- **Invasive species management and support**: analysis and advice on the management of nationally significant pests, weeds and diseases to support the national biosecurity system, including the development of prioritisation tools and scientific support to sectoral committees.

**Supporting sustainable management and use of natural resources**

6. **Natural resource management (climate, water and land)**

Natural resource management (NRM) applies to a whole of landscape approach to resources including water, native vegetation, soil, pests and diseases and ABARES undertakes a considerable body of work across these various aspects. A particular focus of ABARES research on natural resource management is on interactions between farms and the environment, including the effects of climate, the use of natural resources, and the maintenance of natural capital. The work is underpinned by ABARES’ farm survey program and data assets, along with recent work to integrate this data with other datasets, including on climate, weather and seasonal conditions.

In 2018-19, ABARES will continue its water and NRM research programs. This will include:

- **natural capital**: contributing to the development of new integrated data sets for analysing links between farm profit and sources of natural capital (such as vegetation and soil quality)

- **climate variability**: evaluating the effect of different future climate scenarios on Australian broadacre farms, using a simulation model recently developed using ABARES farm survey and Bureau of Meteorology data
• **water markets and policy**: including contributing to the monitoring and evaluation of the department’s water recovery programs within the Murray-Darling Basin, undertaking new analysis of the drivers of water market prices within the southern Murray-Darling Basin, and investigating trends within the Australian irrigation sector, particularly trends in water use efficiency.

This theme gives particular attention to the development of new models and tools. In 2018-19, this will include development of new farm level models of Australian crop production (in collaboration with the Australian Bureau of Statistics), to better understand the links between areas, yield and weather conditions for a range of crop types, and further development of the ABARES Water Trade Model.

This NRM work is complemented by separate themes on fisheries and forestry, as set out below.

7. **Fisheries**

ABARES fisheries research provides national and international fisheries management-related information and advice, and supports the development of improved methods for assessing effectiveness and efficiency in fisheries and fisheries management.

Key activities include facilitating scientific support for policy development in high seas fisheries management, involvement in fisheries-related international obligations that have a direct impact on Australian domestic fisheries, independent assessment of the status of Commonwealth fish stocks and associated fisheries management programs, and economic research to assist with Commonwealth fisheries resources management.

In 2018–19, ABARES will continue to deliver research, data and advice as part of supporting Commonwealth fisheries to remain productive and economically efficient. This work includes:

- **fisheries management**: new editions of the *Fishery status reports*, *Australian fisheries and aquaculture statistics* and *Australian fisheries indicators* reports

- **resource sharing of Commonwealth fish stocks**: monitoring the catch and economic value of Commonwealth commercial fisheries and recreational fisheries, including facilitating the next national survey of recreational fisheries, the upcoming survey of Southern Bluefin Tuna catch by recreational fishers; and an economic survey to determine the value of retained catch of southern bluefin tuna by recreational fishers

- **building resilience in Australia’s Commonwealth fisheries**: ensuring sustainable and profitable fisheries that benefit the broader community. ABARES will continue to monitor and assess the impact of marine reserves on fishery opportunities, assist the Australian Fisheries Management Authority to refine catch quota management and trading schemes applied within Commonwealth fisheries, and analyse the economic performance of commercial fisheries under Commonwealth and State jurisdictions.

8. **Forestry**

ABARES forest research, analysis and data collection supports the competitiveness and profitability of Australia’s forest industries, the rural and regional communities that rely on them, and the sustainable management and use of the natural resource. Key activities include preparing nationally
consistent data on forests and forestry and providing evidence-based advice. Key outputs include national compilations and syntheses that provide the primary national data sources for Australia’s forest industry and inform and support implementation of the National Forest Industries Plan.

In 2018-19, ABARES priorities for forest research and analysis will include:

- **Essential industry statistics**: assemble and update data and statistics on the forest industry’s plantation and native forest resource base, economic status and contribution to Australia’s economy. This information will be published biannually in *Australia’s forest and wood products statistics*.

- **Sustainable forest management**: maintaining authoritative and current information to provide domestic and international stakeholders with evidence of the sustainability of Australia’s forest management, including through the UN Sustainable Development Goals. ABARES will publish this information through *Australia’s State of the Forests Report 2018* and associated spatial data, and submit Australia’s country report to the FAO Global Forest Resource Assessment 2020. ABARES will separately publish a series of reports on the innovative method associated with compiling the new spatial data. ABARES will continue to update and analyse Commonwealth-held data to support the requirements of ministers, policy analysts and other stakeholders relating to Regional Forest Agreements and threatened species.

### Improving data and knowledge systems

In addition to our three high-level research objectives, ABARES will continue to progress a modernisation agenda for its research information systems to deliver better intelligence for the department and its stakeholders to underpin policy development, regulatory reform and decision making.

9. **Information Systems**

In 2018-19, ABARES will:

- **improve the agricultural statistical system**: continue working with the Australian Bureau of Statistics (ABS) and industry stakeholders to modernise and improve Australia’s agricultural statistical system.

- **improve public information and data sharing**: work to facilitate improved sharing of our publically available data and information with the department and external stakeholders as well as integrating information from external agencies more effectively through open data services and business intelligence services.

- **support multi-agency data integration**: work with the ABS and other agencies to demonstrate and assess potential benefits of integration and analysis of multi-agency data within highly secure data environments.

- **move to modernise ABARES data, applications and business processes**: continue to transform our data and applications onto an enterprise data platform, transfer our core business activities into a standardised business process model, strengthen our data
governance arrangements and establish an authoritative spatial reference library to enhance integration of the department’s data holdings.