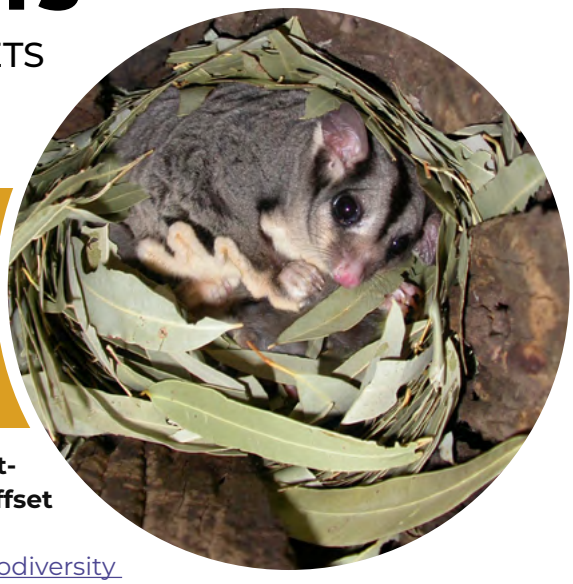
Biodiversity

FACT SHEET 3 – JULY 2025

AN INTRODUCTION TO ENVIRONMENTAL MARKETS

A GROWER'S GUIDE TO ENVIRONMENTAL MARKETS AND HOW TO MEASURE WHAT MATTERS



Right: A Squirrel Glider

IMAGE: COURTESY OF PHIL SPARK

WHAT ARE ENVIRONMENTAL MARKETS

Cotton growers contribute to biodiversity by protecting vegetation, managing pests sustainably, and maintaining healthy waterways. Environmental markets provide a new way to recognise, reward, and enhance these efforts.

These markets assign financial value to activities that benefit nature, such as restoring habitat, planting native vegetation, or improving ecosystem health. Outcomes may include enhanced carbon storage, increased habitat for threatened species, or improved farm resilience. Environmental improvements may attract funding from government programs or private buyers.

While these markets are still developing and trade volumes are relatively low in some areas, they offer growing potential as governments and buyers increasingly seek ways to support measurable environmental outcomes. Types of environmental markets include:

- **Government-regulated offset markets** (e.g. NSW Biodiversity Offset Scheme)
- **Biodiversity credit schemes** (e.g. NaturePlus, Nature Repair Market)
- **Carbon markets with biodiversity co-benefits** (e.g. Queensland Land Restoration Fund)

WHY GROWERS MAY BE INTERESTED

For growers, environmental markets may provide an additional source of income and support long-term sustainability. Potential benefits include:

>

- **Financial gains** (biodiversity or carbon credit sales)
- **Risk mitigation** (improved pest control from increased native species)
- **Policy alignment** (preparing for sustainability disclosures)
- **Market access** (meeting buyer and supply chain expectations)
- **Environmental stewardship** (leaving the land in better condition for future generations)

HOW TO MEASURE BIODIVERSITY FOR MARKET PARTICIPATION

Unlike carbon markets, which use a single metric (carbon equivalents), environmental markets rely on a wider range of data. Many projects begin with satellite imagery to identify areas of potential, but participation requires accurate, on-ground ecological data, especially for:

- **Species occurrence and abundance:** Including threatened species, pest species, or beneficial ones like pollinators
- **Fine-scale condition of habitats and ecosystems:** Focusing on composition, structure, and function – in other words, the health of a habitat for a particular species (e.g. a wetland) or an ecosystem (a Eucalyptus woodland).

These measures are typically gathered using:

- **Standardised ecological condition monitoring:** Using government-approved survey protocols or standardised field monitoring systems, e.g. bird surveys, vegetation condition scoring, spotlight surveys
- **Emerging technologies:** e.g. passive acoustic monitors or eDNA to detect species without visual observation

TOOLS TO HELP YOU PARTICIPATE

Below are examples of tools that can support biodiversity measurement and market readiness. These range from established government-endorsed methods to emerging technologies. Most methods require expert support or the services of accredited providers, see table below.

Tool	Description	What can it measure?	Why use it?
Biodiversity Assessment Method	Government-endorsed method to assess habitat condition for biodiversity offsetting	Native vegetation condition and habitat quality	Approved for NSW Biodiversity Offset Scheme (BOS); provides a biodiversity score; comparable across sites and over time. Useful for offset markets. Requires expert fieldwork.
Native Vegetation Assessment Methodology: **Accounting for Nature (AfN)**	Scientifically valid and approved method under the AfN framework	Native vegetation condition and extent	Aligned with the NaturePlus; provides a standardised condition score; supports biodiversity credit schemes. Requires field data and trained ecologists.
eDNA Sampling and Analysis	Emerging technology using DNA from soil or water to detect species	Species presence (native, threatened, invasive)	Non-invasive; cost-effective in remote areas; useful for tracking elusive species. May be limited by reference database coverage. Requires expert providers and potential method validation for the market.
Bioacoustic Fauna Survey	Emerging technology using recording devices to detect animal calls (e.g. birds, bats)	Fauna presence (native, threatened, invasive) and habitat condition	Low-field effort; scalable; suitable for detecting elusive species. Requires field deployment and expert analysis. May require validation under market rules. Time-intensive data processing.

>

AN INTRODUCTION TO ENVIRONMENTAL MARKETS

CottonInfo

NEXT STEPS

Environmental markets are still developing, but they may offer new opportunities for cotton growers. If you're thinking about whether they could be right for your farm, consider the following:

- **Explore market options:** Look into the Nature Repair Market and the NSW Biodiversity Offset Scheme.
- **Consider what suits your farm:** Think about how your biodiversity or land management might align with market requirements.
- **Understand data needs:** Environmental markets require on-ground biodiversity data, such as surveys or emerging tools like eDNA.
- **Weigh up benefits and costs:** Participation may involve expert support, data collection, and time.
- **Stay informed:** Keep up with changes in policy, markets, and tools.
- **Think beyond markets:** Biodiversity data can also support sustainability reporting, natural capital assessments, and broader farm management goals.

Environmental markets are still developing, but they may offer new opportunities for cotton growers. If you're thinking about whether they could be right for your farm

See also:

- **FACT SHEET: Online Tools for Measuring Biodiversity on Your Farm**
  A guide to assessing biodiversity and establishing a baseline using tools like PLANR
- **FACT SHEET: Tools to track Natural Capital on your farm**
  Monitoring whole-farm biodiversity using Natural Capital Accounting (NCA)

Information current as of August 2025. This fact sheet is informed by research supported by the Cotton Research and Development Corporation (CRDC).

For further information:

Visit www.cottoninfo.com.au

Stacey Vogel

Innovation Broker | Extension Lead (Contractor)

Cotton Research and Development Corporation | CottonInfo

stacey.vogel@crdc.com.au

CottonInfo IS A JOINT INITIATIVE OF CRDC CSD COTTON

BEST PRACTICE