

# What influences farmers and landholders' participation in environmental markets?

Focus: Barriers and facilitators, interventions

## BRIEF INTRODUCTION

This brief summary represents a 6-page synthesis of a rapid literature review and practice interviews, conducted as part of a collaboration between *BehaviourWorks Australia* and Ethical Fields.

## KEY HIGHLIGHTS

### For farmers and landholders

If you are feeling overwhelmed by the complexity and diversity of options in environmental markets for your farm- you are not alone, and nor is it your fault.

Our research indicated that while some farmers are engaging, they tend to be early adopters with sufficient resources and capacities to explore new opportunities. The situation with Environmental Markets (EM) is inherently complex and changing, placing substantial barriers in front of farmers curious about it. Unless you have some spare time, knowledge and resources, you will need support to work out whether or what is right for you in this area. That said, you will want to ensure that support you access is on your side, and not seeking to make undue profit off your taking on the risks and costs of participating.

A key recommendation to increasing participants' experience of facilitators include providing information and advice to create a clearer and more concise perspective of EMTs, and allow farmers to create quicker and more accurate decisions when facing uncertainty. By prioritising this recommendation, this can guide farmers and landholders to enhance their understanding of EM but realise the opportunity and upfront costs that may arise when participating in this space.

EMTs are changing rapidly: providing more inherent scientific, policy, economic and social complexity in helping agricultural workers in becoming more aware of the sustainability space. Landholders can engage with EMTs in a range of ways including 'market shaping', 'market preparation', 'market entry' and sustainable land management practices.

## For behaviour change/engagement programs

Interventions need to be tailored to suit farmers' and landholders' needs as they continue to practise their agricultural operations, ensuring they still advantage in their work economically and socially. Barriers and facilitators vary across the farming population, therefore behaviours and consequences are needed to be identified across the context; such as their level of engagement in sustainability.

That said, our review and practice interviews indicate that attention should be given to the perceived cost, flexibility, complexity and integrity of EM options. It may be that farmers are more likely to engage in EM when they have the social and technical support to overcome these barriers- such as when they have support from a trust, non-profit advisor from their NSM group or a farmer cooperative.

While environmental markets exist and are continually emerging, participation remains relatively low, resulting in farmers unknowingly missing out on incentives when participating in EMTs, and some continue to be unaware of the value in supporting and adopting sustainable land management.

There is available schemes from federal and state government in supporting farmers' move to sustainability, but not enough for farmers to become fully aware of the action. EM programs can be beneficial in guiding farmers into the direction of altering their practices and becoming more environmentally-conscious. One of the first steps in providing the accessibility into EMTs is by identifying the barriers and facilitators of farmers' entering the sustainability space.

## RECOMMENDATIONS

There are an array of recommendations from behaviour change researchers that can help farmers and landholders to participate further in EMTs, which include:

- providing clear and concise information and advice about EMTs, and allowing time for questions and guidance on decision making
- ensure participants are able to learn and monitor their environmental data about their land, and to know what they can do with that information and how to use it including but not limited to EMTs
- minimise the barriers of accessing EMTs by ensuring program design does not include information that is too complex or include high upfront costs and uncertain returns
- implement a learning model of peer to peer, interactive and demonstrative/case based learning
- understand of what comes down to the emotions and behaviours of farmers and landholders and how they see their land, and what they want to obtain out of the EMT experience



# KEY FINDINGS

## Identifying the barriers of participating in environmental markets

There are a number of barriers that impacted participants when entering the environmental markets, which are paired with the Behaviour Change Wheel, using the COM-B ('capability', 'opportunity', 'motivation' and 'behaviour') model.

**Table 1:** List of barriers and the associated key findings

Barriers	Key findings
<b>Costs</b> eg. financial and material resources <i>Opportunity-Physical</i>	<ul style="list-style-type: none"> <li>• Opportunity costs was emphasised among the farmers, particularly involving relative value of credits overtime, impact on property value and business</li> <li>• Upfront costs including measuring, reporting and validating the data</li> <li>• Costs relative to size of farm/operation</li> </ul>
<b>Risk/uncertainty</b> eg. plans and evaluations <i>Motivation-Reflective</i>	<ul style="list-style-type: none"> <li>• Externally imposed uncertainty and risk is more of an issue than internal risk appetite</li> <li>• Present concern/doubts about the longevity of policies, funding and scheme arrangements</li> <li>• Fear of inflexibility in arrangements, which can lead to extra opportunity costs</li> <li>• Risk of unexpected climate that can prevent planned environmental goods and services (EGS) production or maintenance</li> </ul>
<b>Social norms/known participants</b> eg. culture and social norms <i>Opportunity-Social</i>	<ul style="list-style-type: none"> <li>• The presence or absence of neighbours or familiar stakeholders was highlighted in the findings</li> <li>• Farmers are more likely to observe neighbouring workers in their work; they are trustworthy and would support their operations. In this case, not many farmers were interacting in EMTs</li> <li>• Not enough knowledge in EM was found to limit others in experiencing it</li> </ul>
<b>Values misalignment</b> eg. plans and evaluations <i>Motivation-Reflective</i>	<ul style="list-style-type: none"> <li>• More than half the farmers' involved in the research emphasised values clashes, particularly with programs that held environmental tones</li> <li>• Values/expectations from farmers were misaligned with outcomes of specific schemes, also did not align well with personal, business, social goals and priorities</li> <li>• lack of trust for specific scheme managers, including working in government or private practice</li> </ul>
<b>Distrust/low credibility of scheme and intermediaries</b> eg. culture and social norms <i>Opportunity-Social</i>	<ul style="list-style-type: none"> <li>• Multiple interviewees including policy makers, researchers, cooperative members, and such, expressed conceptual difficulty and complexity of participating in Environmental Markets</li> <li>• Poor credibility of schemes, as well as untrustworthy intermediaries such as carbon brokers were highlighted among barriers of participation</li> </ul>

**Understanding**  
eg. understanding  
and memory  
*Capability-psychological*

- It was highlighted that there was grand conceptual difficulty and complexity of EMs, including:
  - understanding and clarifying property and rights of EGS
  - understanding current policies and longevity of obligations
  - understanding and learning carbon credits, carbon offsetting and the general Australian environmental portfolio
  - complex capacity of gathering environmental data

## Integrating the barriers

Considering all the barriers identified, farmers often face a complex mix of external barriers, some of which are intrinsic to individual scheme design, their own goals and implementation, and others of which emerge from the proliferation of EMs and parties who participate in EGS. Furthermore, these barriers interact in challenging ways across the COM-B wheel. Refer to the end of this summary to learn more about the behavioural framework.

## Identifying the facilitators of participating in environmental markets

**Table 2:** List of facilitators and the associated key findings

Facilitators	Key findings
<b>Environmental orientation and identity</b> eg. plans and evaluations <i>Motivation-Reflective</i>	<ul style="list-style-type: none"> <li>• 'Early adopters' motivations can be largely environmental</li> <li>• Stronger motivators for farmers included stewardship values and blending farming productivity with sustainability and longevity</li> </ul>
<b>Neighbours</b> eg. culture and social norms <i>Opportunity-Social</i>	<ul style="list-style-type: none"> <li>• It was highlighted that neighbours were considered positive social role models as they are more involved in the space</li> <li>• Neighbours can help to share information to help others access the tools needed to examine EMTs and access biodiversity protection policies</li> </ul>
<b>Experience and skills</b> eg. understanding and memory <i>Capability-Psychological</i>	<ul style="list-style-type: none"> <li>• Farmers were able to highlight that there was capacity for change and were willing to learn new things</li> <li>• There was also increasing interest in trying new things and diversifying their business model</li> <li>• Farmers and landholders were able to experience managing the land with high values and were able to apply existing skills and knowledge when entering the space</li> </ul>

<p><b>Price/benefits/incentives</b> eg. financial and material resources <i>Opportunity-Physical</i></p>	<ul style="list-style-type: none"> <li>• Linking programs to economic benefits was essential for farmers as it helped set an expectation of financial return, thus leading to intrinsic rewards</li> <li>• The higher the EGS participation, more likely for increased productivity</li> <li>• Transaction costs were reduced or shared among farmers and landholders</li> <li>• Cost or profitability of the traditional practice would be replaced by innovative approaches derived from EMTs</li> <li>• Reduced input costs including fuel and labour- techniques were able to cut down costs for farmers and landowners</li> </ul>
<p><b>Information and assistance</b> eg. plans and evaluations <i>Motivation-Reflective</i></p>	<ul style="list-style-type: none"> <li>• Information and technical assistance was highly regarded as a facilitator for farmers and landholders</li> <li>• This helped to understand the EGS assets and the potential it had on the farms, including all the requirements and implications</li> <li>• There was technical assistance present in helping farmers and landholders access information accordingly, which guided them to understand their environmental data further on</li> </ul>
<p><b>Extension and networking</b> eg. culture and social norms <i>Opportunity-Social</i></p>	<ul style="list-style-type: none"> <li>• Engagement, extension and networking were often emphasised in the literature review and among the farmers and landholders</li> <li>• Best outcomes in interventions were facilitated in existing farmer groups, not alone; this helped to trust others and share problems in the local area</li> <li>• Increased social role modelling and mentors; farmers and landholders were more intrigued to hear from other people with the same or similar roles rather than an expert in the field</li> <li>• In-person events and services were more beneficial for information dissemination</li> </ul>
<p><b>Values alignment with scheme</b> eg. plans and evaluations <i>Motivation-Reflective</i></p>	<ul style="list-style-type: none"> <li>• There was a present emphasis on values alignment with the environmental scheme, which also included 'stewardship' as a key facilitator</li> <li>• Ensuring that compatibility is present between new practice and already existing beliefs and values (including social, economic and environmental)</li> </ul>
<p><b>Younger age</b> eg. balance <i>Opportunity-Physical</i></p>	<ul style="list-style-type: none"> <li>• Age was mentioned in both the literature review and among the farmers as a positive driver in adopting new practices</li> <li>• Generational change and having different values, including adopting an environmental value, were a part of participating in EMTs</li> </ul>

## Integrating the facilitators

The facilitators above were able to help behaviour change researchers identify what guides farmers to participate in and co-create markets where they have both social and technical support. As a result, this can help them to realise their own values and beliefs; while ensuring that they are aware of their own EMTs and business models for the farms and land.

# SUMMARY OF METHODS

The primary research for the literature review developed by BehaviourWorks Australia is:

*'What are the barriers and facilitators to farmers participating in, and co-creating, environmental market transactions?'*

The question proposes a wide level of involvement in EMT, ranging from a relative lack of awareness or disengagement, early exploration, active participation, and lastly taking on a leadership or entrepreneurial role. The COM-B model is used to explore different behaviours for farmers and landholders in the research study. The COM-B framework describes a central system of behaviour that can be mapped to commonly used intervention types and policies.

The **COM-B** ('capability', 'opportunity', 'motivation' and 'behaviour') **model** was used to determine the barriers and facilitators of the farmers' and landholders' experiences engaging in EM. This model acknowledges that behaviour is part of an interacting system, which is often referred to interventions where one or more components need to change in such a way to change behaviour or minimise the risk of reverting the previous behaviour.

**Figure 1:** The COM-B framework for behaviour change, which is a part of the Behaviour Change Wheel



## PROPOSED INTERVENTION

The BehaviourWorks Australia research team partnered with Ethical Fields to create a proposed intervention that aims to inspire and equip a network of primary producers and land managers from New South Wales- the **Environmental Markets Leadership Program** (EMLP). The program helps farmers and landholders to be provided the knowledge, skills, confidence and aspirations to have a leading and entrepreneurial role in EMs.



**Figure 2:** The Environmental Markets Leadership Program

The program is supported through four main activities, including:

- Environmental Markets Leadership Development Program (EMLdP)
- Environmental Markets Farm Plan
- Network Building
- Behaviour Change framework, research, monitoring and evaluation