

8 Implementation Structure, Mechanisms and Principles

The SHS aims to guide investment in a range of actions that will enhance natural and built assets in the Corangamite region and protect them from a number of soil-based threats or threatening processes.

8.1 Understanding the implementation structure

The Soil Health Strategy sits within a context of regional, state and national frameworks (Section 1.4). The link between soil health and catchment health provides great potential to develop synergistic relationships between the Soil Health Strategy and programs from other Corangamite CMA strategies concerning the region's water, landscapes, plants and animals.

Within the region, many different aspects of the natural and built environment are linked to each other. A change to one may have impacts on others. For this reason alone, this Soil Health Strategy should not, and in any case cannot, be implemented in isolation.

It is therefore both appropriate and essential for those implementing this strategy to understand and take account of other current catchment programs and to identify those topics and activities where mutually beneficial outcomes may be created through close cooperation and support of one for the other.

Role of the Corangamite Catchment Management Authority

The Corangamite CMA recognises that a diverse range of asset managers and other stakeholders influence soil management practices, and therefore soil health, in the region. These same individuals and entities also provide significant inputs into other aspects of natural resource management.

The Corangamite CMA is an active facilitator of strategic communication and cooperation between the diversity of asset managers and other stakeholders, helping to ensure that potentially complementary projects addressing a range of NRM threats are implemented in collaboration, enabling the achievement of multiple outcomes.

As part of this facilitation and communication, the authority has a central role in ensuring that multi-agency or multi-asset manager-based projects are proposed, developed, implemented and reported to investors in common.

Importantly, the Soil Health Strategy is just one sub-strategy in the implementation of the Corangamite Regional Catchment Strategy which provides the framework for the Corangamite CMA to address the full breadth of natural resource management issues in the region.

Operational Portfolio Groups have been created by the authority to provide input into and support the implementation of each of the sub-strategies.

The Soils and Salinity Operational Portfolio Group will be responsible for providing advice on investments in soil health projects, using the Soil Health Strategy as a key guide.

The Regional Implementation Committee (RIC) makes investment decisions based on received advice and recommendations from various Operational Portfolio Groups, and provides these decisions and recommendations to the Corangamite CMA Board. The board approves appropriate investment proposals from the RIC and nominates these to the investors for final approval (*Fig. 8.1*).

Funding mechanisms for implementation

Action plans will be developed for one to three-year periods and will reflect the priority actions for investment as outlined in Section 5.1. Action plans will be written specifically, detailing the 'who, how, when and where' of implementation, describing:

- How do the projects proposed in the action plan fit under the priorities of the Soil Health Strategy?
- What assets are being protected or enhanced by addressing which types of threats?
- Where within the priority landscape zones will treatments be carried out?
- What types of treatments will be used?
- Who are the asset managers and collaborators that will be involved and in what capacity will they be involved with implementation?
- What community engagement processes were conducted with the relevant asset managers while developing the action plan?
- What are the co-investment arrangements between asset managers and investment partners/collaborators for each of the projects outlined in the action plan?
- How will the projects within the action plan integrate with existing projects or other proposed projects?
- What are the targets of the projects outlined in the action plans and how do they contribute to meeting the MATs and RCTs outlined in the Soil Health Strategy?
- How will the outcomes of each of the projects outlined in the action plan be monitored and reported back to the investors?

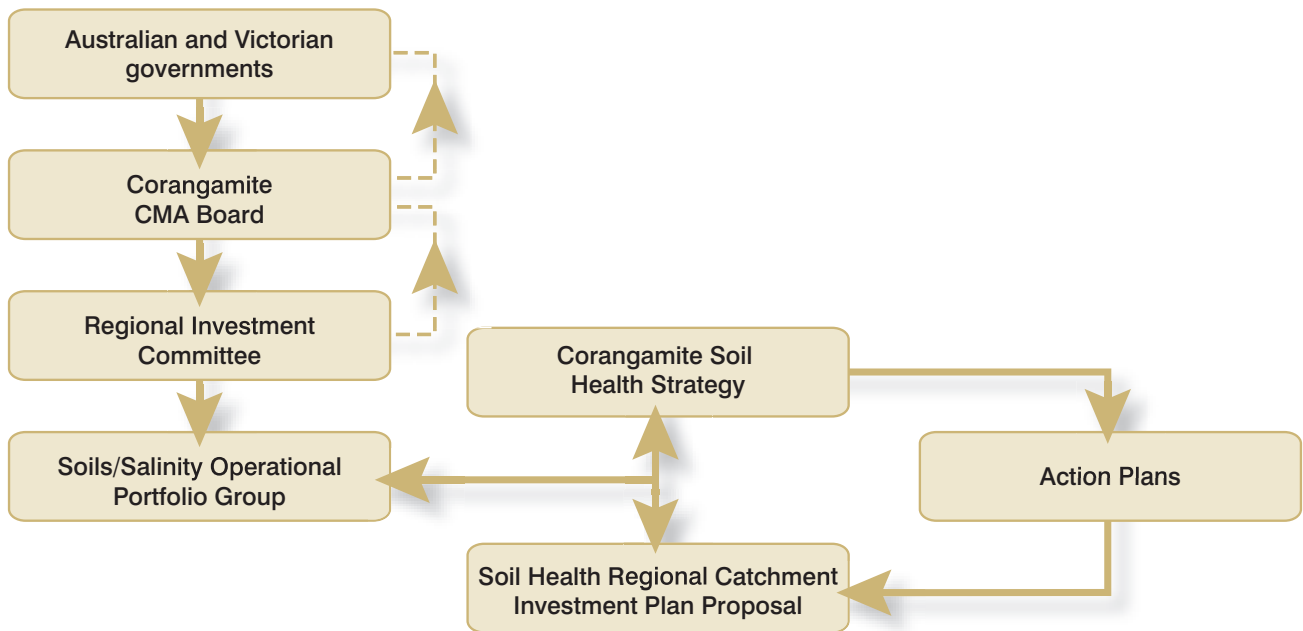


Figure 8.1: The flow diagram shows the framework for investment for the Soil Health Strategy through the Corangamite Catchment Management Authority investment process. Dashed lines indicate reporting back to investors.

The SHS will be implemented predominantly by the Corangamite CMA and will guide investment according to the criteria set by the Regional Catchment Investment Plan and Victorian and Australian government agencies as 'investors'.

The over-arching goal of these investors is mostly to protect and enhance high-value public assets. This is reflected in the selection of specific target areas found within the priority areas as outlined in Section 3.6. Target areas may be specific to the sites or areas where threats pose high risk to assets. There may be a number of target areas in a priority area. 'Target area' describes the specific location of investment within the priority area. For example, investment may be targeted to address gully erosion in the Rokewood area, with gully and tunnel erosion identified as a priority area for the Woody Yaloak Landscape Zone. Target areas have not been defined in this strategy, but will be detailed in action plans. The current investors likely to invest into priorities outlined in the SHS through the Corangamite CMA investment process are outlined in Table 8.1.

The SHS identifies 12 separate soil-based threats. As a result, a number of these threats have not been identified as priorities in this document. This does not mean that they are unimportant, because they all impact on important assets throughout the region. The SHS aims to improve the understanding of these soil-related threatening processes and with additional information there may be justification for the Corangamite CMA to invest in addressing them sometime in the future.

There are investors currently operating outside the Corangamite CMA investment process who may be interested in investing in actions to reduce the impact of threatening processes identified in this strategy (Table 8.2). For example, investors may wish to help address soil acidification as it is significantly impacting on high-value agricultural land and productivity. The Corangamite CMA will help investigate and coordinate potential investment opportunities to address these other important soil-related threatening processes and engage with the relevant asset managers.

The Corangamite CMA encourages asset managers to use the SHS for guidance and support for any soil-based funding applications. The Corangamite CMA is receptive to co-investing in projects that have some private benefits, but these will be assessed case by case.

Investor	Investor's Criteria	Examples of potential soil health projects
National Action Plan (NAP)	Benefits water quality and manages secondary salinity.	Develop an Erosion Management Overlay with Golden Plains Shire Council for the local planning scheme to help reduce the risk of water erosion threatening water quality.
Natural Heritage Trust (NHT)	Benefits to coast, river and native vegetation assets.	Work with the community to revegetate and stabilise bare soil with native vegetation to control active wind erosion in the Bellarine Landscape Zone.
National Landcare Program (NLP)	Improve profitability, competitiveness and sustainability for primary industries.	Work with the Heytesbury Landcare Network to monitor soil health and to develop more sustainable management practises that help improve various aspects of soil health and sustain long-term agricultural productivity.
EnviroFund	Small community projects with environmental outcomes.	Work with the Leigh Landcare Group to implement on-ground works to control soil erosion that is threatening the habitat of significant AROT species.

Table 8.1: Current investment opportunities for the Soil Health Strategy through the Corangamite CMA (2006/08)

Investor	Investor's Criteria	Examples of potential soil health projects
Victorian Department of Sustainability & Environment	Address threats impacting on environmental and natural resources (public assets).	To develop a project that involves controlling soil erosion and other threats impacting on Lake Corangamite (public asset) to achieve multiple outcomes.
Victorian Department of Primary Industries	Improve primary production and sustainability.	To assist broadacre grain growers to apply appropriate amounts of agricultural lime to acidic soils to combat the loss of productivity through soil acidification.
Water authorities	Protect and enhance their water reservoirs and associated infrastructure.	Through the Corangamite CMA, provide funding to private landholders, helping them stabilise active erosion sites upstream, which add sediments to water reservoirs.
Local municipalities	Protect and enhance public assets and the local community.	Develop and implement an Erosion Management Overlay to reduce the risk of landslides and erosion through local planning schemes.
Private landholders	Protect and enhance private and public assets.	Co-investing in on-ground works to stabilise active erosion sites located on private property which contribute sediments to the Barwon River.
Land and Water Australia	Encourage sustainable agricultural practices.	Develop soil health indicators across SW Victoria to monitor and assess the condition of soil health.
Industry investment groups	Improve sustainable productivity in the grains and livestock industries.	Work with the Southern Farming Systems members in SW Victoria to develop trials that investigate the effects of various cultivation methods on structure decline, helping to ensure long-term soil health and agricultural productivity.
WestVic Dairy	Benefits to the dairy industry's profitability and sustainability.	Work with dairy farmers in the Heytesbury district to develop trials to investigate practises that help reduce the impact of waterlogging on productivity.
National Disaster Mitigation Plan	Addresses natural disaster relief or risk management.	Map the high-risk landslide areas, which may be triggered by storm events, throughout the Corangamite region.
Universities and educational institutions	Building the capacity of communities to undertake soil health programs through education, training, investigation, research and development.	Develop and deliver soil health education programs, undertake or participate in soil investigation and research projects, develop soil health monitoring tools and programs, undertake soil health monitoring programs and maintain soil knowledge databases.
Research institutions such as CSIRO	Discovery of regional soil information through investigation, research and development programs.	Undertake or participate in soil investigation and research projects and disseminate the knowledge to rural communities.

Table 8.2: Other investors who support soil health activities across south-west Victoria

8.2 Predicted costs for implementing the Corangamite Soil Health Strategy

The Soil Health Program has been delivered throughout the Corangamite region since 2000. During this time, the Victorian and Australian governments have supported this program financially through the Corangamite CMA. *Table 8.3* outlines the investments implemented through the Soil Health Program from 2003 until present.

Over the past few years, research and development projects have helped further understanding of the risks associated with the deterioration of soil health in the Corangamite region. This information indicates that far greater investment is needed to address soil-threatening processes and to maintain soil health. The predicted costs for implementing the SHS from 2007 to 2012, which meets existing targets, are outlined in *Table 8.4* and illustrated in *Figure 8.2*. These costs will change as information comes to hand on trends, risk to assets and treatment technologies.

Action Type	2003/04	2004/05	2005/06	2006/07
1. Strategy development	\$0	\$50,000	\$50,000	\$60,000
2. Communication of information to asset managers	\$35,000	\$60,000	\$60,000	\$55,000
3. Education and extension activities	\$70,000	\$80,000	\$80,000	\$70,000
4. Developing planning tools to prevent risk through municipal planning schemes	\$0	\$80,000	\$80,000	\$30,000
5. On-ground incentives for remedial works	\$0	\$0	\$0	\$80,000
6. Research and development	\$0	\$60,000	\$60,000	\$90,000
7. Monitor the adoption of best management practises and its impact in changing resource conditions	\$0	\$0	\$0	\$15,000
Total	\$105,000	\$330,000	\$330,000	\$400,000

Table 8.3: Investment provided by the Australian and Victorian governments through the Corangamite CMA for all soil health-based activities 2003 to 2007

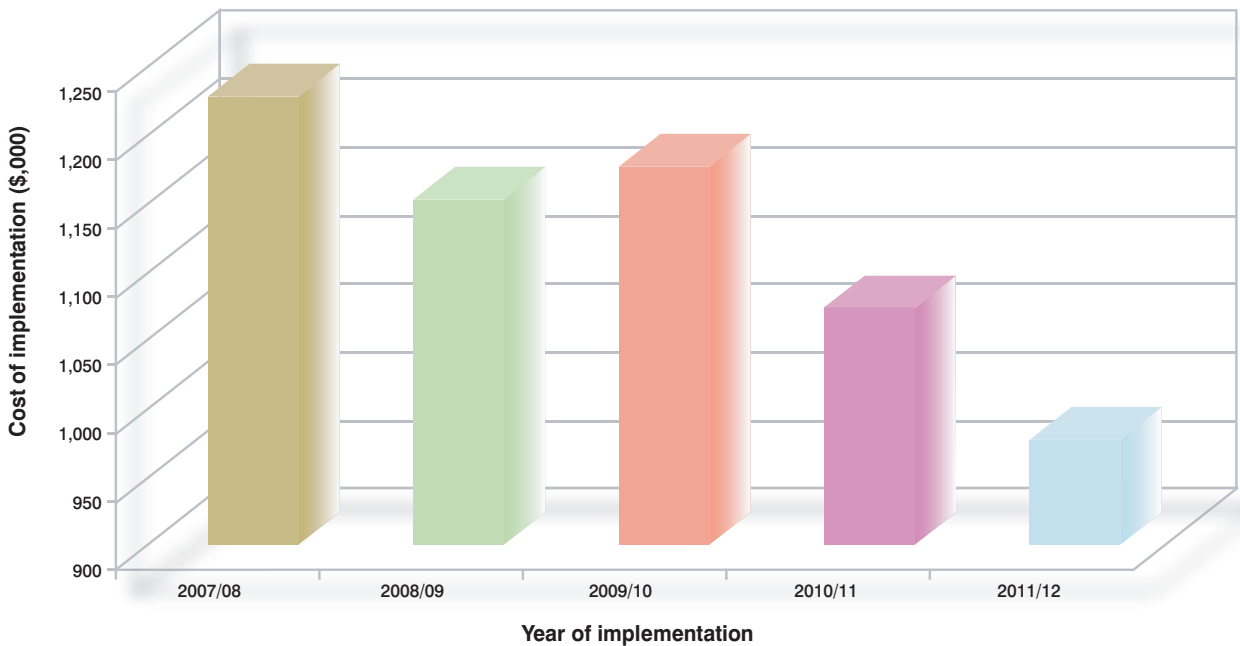


Figure 8.2: Predicted annual costs of implementing the Corangamite Soil Health Strategy from 2007 to 2012

Action Type	Funding required per year	
<p>Communication program – Indirect contact with public and private sector asset managers via e.g. direct mail, using the summary document, print media, electronic media (interviews etc) seeking managers to contact CCMA for information or assistance. A communication program is needed to:</p> <ul style="list-style-type: none"> • improve awareness and information about the core of the Soil Health Strategy, especially about the impacts and need for action by all asset managers in the region • create interest and provide information about how to take action and incentives/support that may be available • provide references/testimonials in regard to practical experience of others taking action • secure on-ground works and promote in media and via field days, workshops, conference papers etc • inform asset managers of relevant research and development findings. 	Year 1 (2007/08)	\$180,000
	Year 2 (2008/09)	\$150,000
	Year 3 (2009/10)	\$140,000
	Year 4 (2010/11)	\$110,000
	Year 5 (2011/12)	\$110,000
<p>Extension/education with private and public sector. This would involve:</p> <ul style="list-style-type: none"> • direct unsolicited contact with asset managers at known 'hot spots' • supporting the communication program by providing a 'face' or point of contact to would-be participants in the actions • direct face-to-face contact with public and private sector asset managers to demonstrate the situation and highlight alternative actions, funding and implementation • delivery of targeted training courses, field days and presentations. 	Year 1 (2007/08)	\$250,000
	Year 2 (2008/09)	\$250,000
	Year 3 (2009/10)	\$250,000
	Year 4 (2010/11)	\$250,000
	Year 5 (2011/12)	\$250,000
<p>Planning tools to prevent risk (municipalities) – especially EMOs, landslide overlays etc. A pilot program has resulted in the production of Erosion Management Overlays for the City of Greater Geelong and Colac Otway Shire. These overlays address landslide risk through the municipal planning schemes. A priority task is to assist these shires to use the Erosion Management Overlay provided (or equivalent) by securing an amendment to their planning scheme that adequately addresses the risk of landslides and erosion. It is also a priority to engage with all other municipalities within the Corangamite region and assist them to address landslide and erosion risk through their planning schemes by using the Erosion Management Overlay or other tools and policies.</p>	Year 1 (2007/08)	\$100,000
	Year 2 (2008/09)	\$50,000
	Year 3 (2009/10)	\$50,000
	Year 4 (2010/11)	\$40,000
	Year 5 (2011/12)	\$40,000
<p>On-ground incentives for remedial works – Investment in on-ground activities will help asset managers pay for materials, contractors and technical expertise to reduce the impact of threats that are located on private or public land, but which impact on high-value public assets. Costs include marketing of incentives, delivery of incentive payments, risk assessment, work design and supervision, materials, contractors and monitoring. Erosion and landslide works could range from \$2,000 to \$50,000 per site depending on magnitude and risk.</p>	Year 1 (2007/08)	\$420,000
	Year 2 (2008/09)	\$500,000
	Year 3 (2009/10)	\$530,000
	Year 4 (2010/11)	\$560,000
	Year 5 (2011/12)	\$500,000
<p>Research and development – This involves implementing research projects that improve understanding of the nature of the threats and their impact on assets. This knowledge will help to improve targeting of high-risk areas. It also includes project management of research projects (0.5 person), technical experts, data collection, analysis and report write up.</p>	Year 1 (2007/08)	\$200,000
	Year 2 (2008/09)	\$160,000
	Year 3 (2009/10)	\$160,000
	Year 4 (2010/11)	\$80,000
	Year 5 (2011/12)	\$50,000
<p>Monitoring of adoption and resource conditions – Ongoing monitoring is required to assess 1) the impact of high-risk degradation sites on public assets 2) the adoption of best management practises 3) the changes in resource conditions. Costs include monitoring equipment, data collection and analysis, conducting interviews and report writing.</p>	Year 1 (2007/08)	\$60,000
	Year 2 (2008/09)	\$20,000
	Year 3 (2009/10)	\$20,000
	Year 4 (2010/11)	\$20,000
	Year 5 (2011/12)	\$60,000
Total		\$5,560,000

Table 8.4: Estimated strategy implementation costs characterised by resource condition targets and management action targets

8.3 Principles of implementation

The principles for implementing this Soil Health Strategy are consistent with those of other sub-strategies within the Corangamite region, especially those of the overlapping Salinity Action Plan. This ensures that implementation across the two sub-strategies follows the same principles and is as complementary and consistent as possible.

Overseeing the implementation of both sub-strategies are the strategy project managers with assistance from the Soils and Salinity Operational Portfolio Group of the Corangamite CMA.

The Terms of Reference for the Operational Portfolio Groups (OPG) states:

“The broad function of the OPG is to provide additional strategic direction for, and monitoring of, the implementation of the particular Corangamite CMA portfolio area, in line with the RCS and associated sub-strategy(s). The OPG will undertake the role in light of the existing Corangamite CMA management structures, investors’ policies and associated priorities for investment.”

Integrated delivery

It is important that soil health projects which are implemented on-ground, integrate with other relevant land and water on-ground projects being carried out in the same locality or region. Soil health and its related threatening processes link strongly with many other natural resource management issues. For example, the degradation of soil health can lead to water or wind erosion, which may destroy significant biodiversity areas, and add sediments to watercourses, cause secondary soil salinity and nutrient leaching or deposition to waterways and wetlands. For integration between natural resource management projects to be effective, there must be synergy between different sub-strategies under the RCS.

Customised delivery to each location

There is a temptation to standardise delivery of soils projects across all targeted landscape zones in the Corangamite region. However, community engagement conducted through the Soil Health Strategy development phase, and other sub-strategy development, has identified that asset managers have diverse attitudes to and capabilities for the implementation of treatments.

The individual or group capability and attitudes of asset managers should be considered when developing appropriate action plans.

Use existing delivery mechanisms where appropriate

Before establishing new mechanisms or channels to the community, the Soil Health Strategy should consider the use of existing community groups, programs or mechanisms as opportunities for the delivery of soil health projects. In some instances, new partnerships will be required.

Community engagement and partnerships

Community engagement and partnerships are vital for the successful implementation of the Soil Health Strategy. Community engagement has been a feature of the development of the strategy and will be continued in the development of detailed action plans.

Community partnerships are mechanisms for coordinated and effective engagement of key stakeholders. Partnerships provide mutual benefits and opportunities to greatly enhance the effectiveness of individual actions.

The relevant Victorian Government departments, such as DPI, DSE and EPA, have vital roles in the implementation of this Soil Health Strategy.

Likewise, municipalities and built infrastructure/utility asset managers will be able to make a large contribution to the effectiveness and success of many of the strategy’s actions. Relationships established between the steering committee and during the development of this strategy should be consolidated and supported during its implementation.

Ultimately, it is the active, supportive and co-operative participation of public and private landholders in the Corangamite region that will determine the success of the implementation of this strategy. It is they who will have the final ‘say’ in regard to on-ground works and thus achievement of the desired improvements in soil health.

Especially important are the private landholders – broadacre farmers and graziers in particular – since they control the largest proportion of land in the region. Strong partnerships must be developed and nurtured with these landholders as individuals or within groups such as Landcare and/or agricultural industry networks.