

# Balancing investment in localized and dispersed NRM assets

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A key decision for regional NRM managers is the balance of investment between:

- *localized assets*: discrete, high-value assets in particular locations, e.g. a wetland; and
- *dispersed assets*: groups of assets that are spread across the region, such as agricultural land, or the many small parcels of remnant vegetation on farms.

*Why treat localized and dispersed assets differently?* The payoff from successfully investing in well chosen localized assets is likely to be high. This means that it may be feasible to use relatively expensive approaches, such as engineering works, or high levels of incentive payments, to protect those assets. The assets selected for funding would be particularly valuable, facing high environmental threat, with high feasibility of protection, and high adoptability of the relevant works needed to protect them.

To compete with investment in localized assets, investment in dispersed assets needs to be relatively low-cost per hectare, and highly effective over large areas. Appropriate responses may include technology development (developing new land-use options that are both sustainable and highly adoptable), extension (where such land-use options already exist but have not yet been adopted), and conservation tenders (which may reveal highly cost-effective interventions).

*Weighing up localized and dispersed investment:* The different asset types have different strengths and weaknesses (see Table 1 and the Appendix). The optimal balance of investment will vary by region, depending on factors such as:

- the number of threatened iconic assets needing investment in the region;
- the degree and urgency of the threats to iconic assets
- the feasibility of averting those threats.

Table 1. Main advantages and limitations of investing in different asset types.

<b>Asset type</b>	<b>Main advantage</b>	<b>Main limitation</b>
Localized	High confidence of NRM outcomes	Small areas managed
Dispersed (technology development)	Large areas of land-use change attainable	Long time lag
Dispersed (extension)	Engagement of the community	Poor NRM outcomes
Dispersed (conservation tenders)	Well targeted investment in dispersed environmental assets	High transaction costs

Environmental managers need to make an explicit decision about the balance of effort between localized and dispersed assets, and the appropriate tools to use. See Table 2 for some examples that illustrate the way that the balance of investment might change for different types of regions. The breakdown for different tools would depend on the local situation. For example, there would be a greater emphasis on technology development where:

- there is a lack of existing sustainable technologies that are attractive to landholders;
- there are good opportunities for development of improved technologies that are attractive to landholders;
- landholders are commercially motivated, rather than lifestyle oriented.

Table 2. Some illustrative examples of fund allocations between localized & dispersed assets. (The numbers are illustrative only, and are intended to provoke discussion.)

<b>Region</b>	<b>Localized: dispersed</b>	<b>Possible localized breakdown (%)</b>	<b>Possible dispersed breakdown (%)</b>
<i>Region A:</i> Many iconic assets, moderate adoptability of sustainable land uses, good prospects for technology development, high levels of dispersed biodiversity	50:50	20 engineering 10 extension 20 incentives/tenders	30 technol. devel. 10 extension 10 veg. tenders
<i>Region B:</i> Some iconic assets, low adoptability, poor prospects for technology development, low dispersed biodiversity	90:10	40 engineering 15 extension 35 incentives/tenders	0 technol. devel. 10 extension 0 veg. tenders
<i>Region C:</i> Few iconic assets, low adoptability, good prospects for technology development, some dispersed biodiversity	30:70	15 engineering 5 extension 10 incentives/tenders	45 technol. devel. 10 extension 15 veg. tenders
<i>Region D:</i> Some iconic assets, low to moderate adoptability, moderate prospects for technology development, high dispersed biodiversity	50:50	15 engineering 10 extension 25 incentives/tenders	25 technol. devel. 10 extension 15 veg. tenders

There can be synergies between the two categories. Targeted investment in localized assets does provide some benefits in the form of protection of farmland that is close to the targeted assets. Conversely, the tools suggested for dispersed assets can assist with localized assets as well. For example, technology development can benefit localized assets by reducing the cost of land-use change close to those assets, or by increasing the adoptability of practices.

**Appendix:** Different features of investment in localized and dispersed NRM assets

<b>Issue</b>	<b>Localized NRM assets</b>	<b>Dispersed NRM assets (technology development)</b>	<b>Dispersed NRM assets (extension)</b>	<b>Dispersed NRM assets (conservation tenders)</b>
Time lag until land-use change	Short	Long	Moderate	Short
Area of land-use change for a given budget	Low	High	Moderate, if adoptable options are available	Low-Moderate
Ability to target the changes	Highly targeted	Loosely targeted	Low-moderately targeted	Highly targeted
Certainty of results (in terms of land-use change)	High (if targeted and designed well)	Moderate	Low to moderate, depending on the adoptability of new land-use options.	High
Reliance on government funding in the long term	Probably need large ongoing funding.	Major up-front funding, but profits drive later adoption.	Need short-term funding only, if practices adoptable.	Probably need ongoing funding.
Community engagement	Low, apart from in a localized area	Moderate, when new technologies are being trialed. High in long term.	High	Moderate, although some may feel uneasy about the tender approach.