NRM Element 2 Final Output Long-term Storage Options

NRM Climate Change Adaptation
Information Management Support Project

		*Transportable devices or external hard Drives	Local drives	Institution storage (network drives)	Institutional repositories (e.g. a university repository that holds metadata)	Public cloud services (e.g. Dropbox)	Private cloud services (e.g. CloudStor)	Project websites (Element 2 project website)	Portals (Sectoral or geographic)	Terra Nova
Data attributes	Large data sets (greater than 100gb)	B	B	✔	?	?	?	X	X	✔
	Data/information is in its final state	B	B	✔	✔	✔	✔	✔	✔	✔
	Data/information which requires access restrictions	B	B	✔	✔	X	?	X	X	X
Audience	Project members	B	B	✔	✔	✔	✔	X	X	✔
	Domain Specific/practitioners	B	B	X	✔	X	X	✔	✔	✔
	General public	B	B	X	?	X	X	✔	✔	✔
Compliance	Data/information is to be retained for long periods of time	B	B	✔	✔	X	X	X	?	✔
	Able to feed other repositories eg: Research Data Australia	B	B	X	✔	X	X	X	?	✔
	Adaptation specific or scientific description required	B	B	X	X	X	X	X	?	✔

? – May vary by institution. Please seek advice from storage provider or institution.

B – Suitable for local backups only. Regular backups your data and information is recommended.

	Benefits	Limitations / Considerations
Transportable devices or external hard drives	• Readily available and cheap to buy • Easy way to move large volumes of data • Easy way to back up data	• Responsibility lies with the owner/purchaser, e.g. security and backups • Longevity is questionable; devices are prone to failure, theft and obsolescence, therefore not suitable for long-term storage • Not recommended for master copies of datasets • Encryption is required for 'sensitive' data - BitLocker to Go (Win7) can be used on USBs and external hard drives
Local drives	• Suitable for small to large datasets • Easily accessible • Easy way to back up data	• Not recommended for sensitive data • Short-term storage for working data; not a permanent storage solution • Local hard drives can fail from time to time • Not shareable in a secure manner • Manual Backup required
Institution storage (network drives)	• Appropriate for research datasets • Is suitable for 'sensitive' (critical) data where the data is used within the institution • Suitable for small to large datasets • External accounts may be available for sharing non-sensitive data • As a rule, institution storage is backed up	• Metadata not usually stored with the objects (with the exception of file level metadata eg: name, file size, creator etc) • May be restricted to content owned by the institution • Size may be limited
Institutional repositories (e.g. university repository that holds metadata) ·	• Institution provided services • Appropriate for research datasets • Is suitable for 'sensitive' (critical) data where the data are used within the institution • Suitable for small to large datasets • External accounts may be available for sharing non-sensitive data • Check with your institution to see what options are available	• Level of data description can be variable depending on the product and configuration the institution uses • May be restricted to content owned by the institution itself • May not be easily accessible to those outside of the institution. • The metadata fields may not be the best fit for adaptation information • Inconsistences in metadata are likely when multiple institutions are involved
Public cloud services (e.g. Dropbox)	• Online, mostly free, services to share and co-edit documentation. • Cloud-based: provides access to files locally and remotely for sharing and collaboration • Quick and easy to setup and use • Easy to add additional users through email addresses • Not tied to institution restrictions	• Not recommended for sensitive data • Data in many public cloud options have an end user licensing agreement that relinquishes rights to host company • Access to modify and delete files is distributed, often with no ability to restrict new users access • Metadata not usually stored with the objects (with the exception of file level metadata eg: name, file size, creator etc) • Responsibility lies with the owner to ensure separate mater copies are maintained
Private cloud services (e.g. CloudStor)	• Approved by your institution • Easy to share files for collaboration • Available to University based researchers	• Varies by institution solution • Access may be restricted to University based researchers only
Project website (Element 2 project website)	• Good for making project outputs, videos and project specific information accessible • Integrated view of project deliverables to the public • Good for marketing/promotional materials	• Only suitable for public data • Difficult to store and retrieve metadata for content items. • Unstable as a repository • Limited storage space
Portals (sectoral or geographic)	• Good for spreading content for industry/research theme specific audiences • Discipline specific portals already have existing practitioner audiences eg: Rangelands portal	• Doesn't provide an integrated view of project outputs • Variable lifespan depending on provider
Terra Nova	• Specific climate adaptation metadata to describe objects • Able to feed Research Data Australia and CSIRO element 2 project websites • Able to share metadata with other repositories such as Research Data Australia • Contributors able to login and upload content • Longer term Storage option	• Only suitable for public data • No video/audio streaming capabilities