Conseils sur les coûts et les avantages de l'infrastructure verte/fondée sur la nature au Nouveau-Brunswick

CONGRÈS DE L'AFMNB OCTOBRE 2023

Introduction au RENB

- Le Réseau environnemental du Nouveau-Brunswick (RENB), fondé en 1991, est un réseau de communication composé de plus de 110 organisations à but non lucratif et en environnement au Nouveau-Brunswick.
- L'histoire du travail sur les solutions climatiques basées sur la nature avec le project RCERA.

NBEN
RENB

New Nouveau Brunswick
Your Environmental Trust Fund at Work
Votre Fonds en fiducie pour l'Environnement au travail

AFMNB
Association francophone des municipalités du Nouveau-Brunswick

Nature NB

UMNB

CLIMAtlantic

Infrastructure Canada

L'initiative de recherche et de connaissances

- Dirigé par le RENB et partenaire primaire Nature NB
- Comité consultatif : CLIMAtlantic, Infrastructure Canada, le secrétariat du changement climatique du Nouveau-Brunswick, l'Union des municipalités du Nouveau-Brunswick et l'Association francophone des municipalités du Nouveau-Brunswick

Qu'est-ce que ce projet implique ?

- Sessions d'engagement dans les communautés
  - Dieppe, Fredericton, Quispamsis, Edmundston, en ligne/online, webinaires avec UMNB et engagement avec AFMNB
- Sondage d'opinion publique
- Développement d'un outil d'analyse coûts-avantages
- Cours de formation sur l'outil d'analyse coûts-bénéfices

Objectif et portée

Objectif :

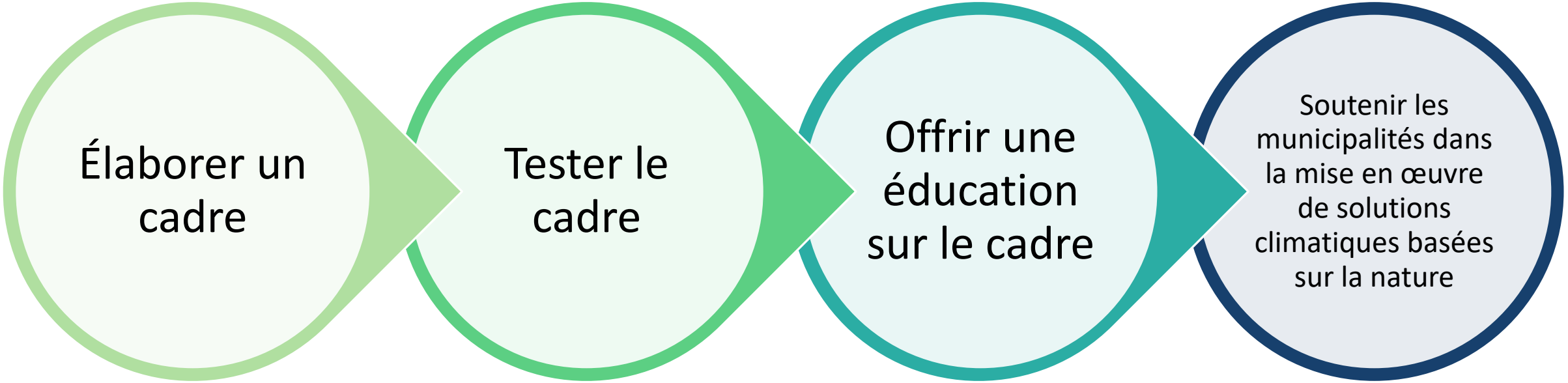
- Développer et faire la démonstration d'un cadre coûts-avantages pour les projets d'infrastructures basées sur la nature avec une pertinence particulière pour le Nouveau-Brunswick et les provinces des maritimes.
- Mettre en place une procédure et fournir des informations complémentaires afin que les décideurs municipaux puissent établir des ratios coûts-avantages approximatifs pour les projets d'infrastructures basées sur la nature potentiels.
- Les documents de référence mettent l'accent sur les données nécessaires et sur la manière dont ces données peuvent être utilisées pour informer la prise de décision.

Portée :

- Restauration de la côte (les côtes vivantes)
- Bassins de gestion des eaux pluviales

Audience cible :

- Planificateurs, ingénieurs, élus et autres décideurs municipaux et provinciaux


Élaborer un cadre
Tester le cadre
Offrir une éducation sur le cadre
Soutenir les municipalités dans la mise en œuvre de solutions climatiques basées sur la nature

ÉTAPE 1 : Identifier le problème climatique	• Quel est le problème ou la question que vous essayez de résoudre ?
ÉTAPE 2 : Définition du projet	• Identifier les possibilités d'infrastructures vertes qui pourraient contribuer à résoudre le problème • Sélectionner les options d'infrastructures basées sur la nature à analyser
ÉTAPE 3 : Estimation des avantages et des coûts	• Évaluer la base de référence (par exemple, un scénario sans infrastructure basées sur la nature) • Évaluer les alternatives (par exemple, les scénarios avec l'infrastructure basée sur la nature)
ÉTAPE 4 : Comparer les avantages et les coûts	• Évaluer le flux des coûts et des bénéfices dans le temps • Taux d'actualisation • Valeur actuelle nette • Rapport coût-bénéfice
ÉTAPE 5 : Analyse de sensitivité et répartition Considerations	• Étudier les implications d'autres hypothèses • Déterminer qui en bénéficie • Étudier qui supporte les coûts

ÉTAPE 1 : Identifier le problème climatique

Quels sont les types de problèmes climatiques que les municipalités du Nouveau-Brunswick essaient de résoudre grâce à l'infrastructure basée sur la nature?

- Inondations côtières et ondes de tempête
- Inondations causées par de fortes pluies

D'autres pourraient être inclus à l'avenir :

- Chaleur urbaine
- Inondations riveraines
- Sécheresse et manque d'eau
- Autres

OPTION D'INFRASTRUCTURE BASÉE SUR LA NATURE	COMMENT CELA AIDE-T-IL ?	QUEL(S) PROBLÈME(S) ABORDE-T-IL(S) ?
Restauration des plages et dunes de sable	• Réduction de l'érosion et des inondations • Protection contre les ondes de tempête et les hautes vagues	• Inondation • Dégradation de la qualité de l'eau
Restauration de la végétation marine et des champs d'herbiers marins	• Réduction de l'érosion • Offrir un abri et de la nourriture aux animaux	• Le changement climatique • Perte de la biodiversité • Dégradation de la qualité de l'eau
Restauration des zones humides et des marais salants	• Absorber les eaux de tempête et atténuer les inondations • Stabiliser les sédiments du littoral • Préserver les habitats importants et améliorer la biodiversité.	• Inondation • Dégradation de la qualité de l'eau • Perte de la biodiversité
Bassins de rétention des eaux pluviales naturalisés	• Amélioration de la qualité de l'eau • Augmentation de la séquestration du carbone • Réduction de l'érosion • Amélioration de la biodiversité	• Inondation • Perte de la biodiversité • Le changement climatique

ÉTAPE 3
Estimation des coûts et des bénéfices

Avantages des infrastructures basées sur la nature

- Bénéfices liés aux services écosystémiques
- Coûts évités
- Coût de l'infrastructure basée sur la nature
- Base de données des coûts de l'infrastructure basée sur la nature
- Base de données publiée, par Bayraktarov et al. 2020
  - La base de données comprend des informations sur les coûts liés à 1) la restauration des récifs ostréicoles, 2) la restauration des marais salants et 3) la restauration des herbes marines.

Base de données des bénéfices de l'infrastructure basée sur la nature

Couvre 6 types d'IG

- Restauration des plages et des dunes de sable
- Restauration de l'herbier marin et prairie d'herbier marin connexe
- Zones humides et marais salants concernés
- Gestion des eaux pluviales
- Hybride

De 9 pays

- Les États-Unis (la majorité)
- Le Canada
- L'Australie
- La Chine
- La France
- L'Inde
- La Mexique
- Le Néerlandaises
- Royaume-Uni
- Mondiale

Informations essentielles

- Types de services écosystémiques (par exemple, valeur récréative, coûts d'infrastructure grise évités, séquestration du carbone, contrôle de l'érosion, régulation du climat, etc.)
- Estimation de la valeur monétaire des services écosystémiques

Un total de 317 valeurs uniques

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	GI	GI_details	Ecosystem Service types	Country	Provinces/Stat	Location or community name	year or duration	Area or Volume or Length	it for Area/Volume/	Benefits_original	Year if differe	Benefits_2022_CAD$	nverted Unit for be
2	Mixed	Permanently open riverine estuaries and	Flood control	United States	Louisiana	All wetlands Louisiana	2011	1214575	ha	$21,192	(2020 level US)	$31,264.98	$/ha/yr
3	Mixed	Permanently open riverine estuaries and	Waste treatment	United States	Louisiana	All coastal marshland Louisiana	1970	47215	ha	$212,495	(2020 level US)	$313,498.12	$/ha/yr
4	Mixed	Permanently open riverine estuaries and	Food	United States	Louisiana	All coastal marshland Louisiana	1970	425101	ha	$1,125	(2020 level US)	$1,659.74	$/ha/yr
5	Mixed	Permanently open riverine estuaries and	Food	United States	Louisiana	All coastal marshland Louisiana	1970	159109	ha	$345	(2020 level US)	$508.99	$/ha/yr
6	Mixed	Permanently open riverine estuaries and	Food and Recreation	United States	Louisiana	All coastal marshland Louisiana	1970	159109	ha	$855	(2020 level US)	$1,261.40	$/ha/yr
7	Mixed	Permanently open riverine estuaries and	Aesthetic and Recreation	United States	Louisiana	All coastal marshland Louisiana	1970	159109	ha	$420	(2020 level US)	$619.63	$/ha/yr
8	Mixed	Permanently open riverine estuaries and	Food	United States	Louisiana	All coastal marshland Louisiana	1970	890688	ha	$720	(2020 level US)	$1,062.23	$/ha/yr
9	Mixed	Permanently open riverine estuaries and	Flood control	United States	Michigan	All coastal wetlands Michigan	2011	1214575	ha	$3,934	(2020 level US)	$5,803.91	$/ha/yr
10	Oyster Reef Related	Coastal reefs	ing, regulating, habitat and cultura	Worldwide	-	-	2012	-	-	the total montary value of ecosystem services (including provisioning, regulat		$1,597,709.60	$/ha/yr
11	Oyster Reef Related	two oyster reef restoration projects with	Fishery and Food	United States	Alabama	Northern Gulf of Mexico	2012	-	-	Fisheries: 6,900 pounds/year of additional finfish and crab, with an economic		$66,384.82	$/year
12	Oyster Reef Related	oyster reef construction	Fishery and Food	United States	Maryland / Virginia	Choptank region, Chesapeake Bay	2020	377	acres	mature oyster reef produced an estimated increase in Blue Crab harvest of 16		$222,410.12	$/ha/yr
13	Oyster Reef Related	Shellfish beds and reefs	stormwater service value	United States	Mixed	Southeastern United States	2006	-	-	$860		$1,336.43	$/ha/yr
14	Oyster Reef Related	Shellfish beds and reefs	Soil erosion control services	United States	Mixed	Southeastern United States	2006	-	-	$1,292		$2,007.76	$/ha/yr
15	Oyster Reef Related	Shellfish beds and reefs	ıtment, Retention and breakdown c	United States	Mixed	Southeastern United States	2006	-	-	$4,050		$6,293.66	$/ha/yr
16	Oyster Reef Related	Shellfish beds and reefs	Food	United States	Mixed	Southeastern United States	2007	-	-	$4,123		$5,933.66	$/ha/yr
17	Oyster Reef Related	Shellfish beds and reefs	Fishery and Food	United States	Virginia	Chesapeake Bay	2002	-	-	$640.000/year of recreational fishing benefits		$1,517,537.92	$/ha/yr
18	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2002	1000	acres	$23,547 for 1000 acres ($23.55/acre) of oyster reef, Delaware scenario		$137.99	$/ha/yr
19	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2002	2500	acres	$14,913 for 2500 acres ($5.97/acre)of oyster reef, Delaware scenario		$34.98	$/ha/yr
20	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2002	5000	acres	$6,288 for 5000 acres ($1.26/acre) of oyster reef restoration project, Delawar		$7.38	$/ha/yr
21	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2003	10000	acres	$2,804 for 10,000 acres ($0.28/acre) of oyster reef restoration project, Delaw		$1.42	$/ha/yr
22	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2004	1000	acres	$160,764 for 1000 acres ($161/acres) of oyster reef restoration project, Maryl		$745.50	$/ha/yr
23	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2005	2500	acres	$119,203 for 2500 acres ($48/acre)of oyster reef, Maryland scenario		$202.60	$/ha/yr
24	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2006	5000	acres	$56,788 for 5000 acres ($11.4/acre) of oyster reef restoration project, Maryla		$43.78	$/ha/yr
25	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2007	10000	acres	$19,637 for 10,000 acres ($1.96/acre) of oyster reef restoration project, Mary		$6.97	$/ha/yr
26	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2008	1000	acres	$141,194 for 1000 acres ($141/acres) of oyster reef restoration project, New J		$490.77	$/ha/yr
27	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2009	2500	acres	$99,311 for 2500 acres ($40/acre)of oyster reef, New Jersey scenario		$148.93	$/ha/yr
28	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2010	5000	acres	$40,367 for 5000 acres ($8/acre) of oyster reef restoration project, New Jerse		$26.27	$/ha/yr
29	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2011	10000	acres	$16,735 for 10,000 acres ($1.7/acre) of oyster reef restoration project, New Je		$5.19	$/ha/yr
30	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2012	1000	acres	$15,244 for 1000 acres ($115/acres) of oyster reef restoration project, North (		$349.32	$/ha/yr
31	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2013	2500	acres	$10,911 for 2500 acres ($4.4/acre)of oyster reef, North Carolina scenario		$13.66	$/ha/yr
32	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2014	5000	acres	$5,981 for 5,000 acres ($1.2/acre)of oyster reef, North Carolina scenario		$3.93	$/ha/yr
33	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2015	10000	acres	$3,378 for 10,000 acres ($0.34/acre)of oyster reef, New Jersey scenario		$1.28	$/ha/yr
34	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2016	1000	acres	$92,146 for 1000 acres ($92/acres) of oyster reef restoration project, Virginia		$352.59	$/ha/yr
35	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2017	2500	acres	$63,580 for 2500 acres ($25/acre)of oyster reef, Virginia scenario		$92.19	$/ha/yr
36	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2018	5000	acres	$27,796 for 5,000 acres ($5.6/acre)of oyster reef, Virginia scenario		$20.08	$/ha/yr
37	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2019	10000	acres	$12,736 for 10,000 acres ($1.3/acre)of oyster reef, Virginia scenario		$4.69	$/ha/yr
38	Oyster Reef Related	Shellfish beds and reefs	Existence, bequest values	United States	Virginia	Chesapeake Bay	2020	11,000	acres	$114,950,000, Aggregate non-use value of a ten year oyster reef project, cons		$38,096.44	$/ha/yr
39	Beach Nourishment and Sand Dune Related	coastal beach and dune	Flood control	Mexico		all coastal region	2020	-	-	avg storm buffering value: US$27,429.73/ha/yr		$40,467.63	$/ha/yr
40	Beach Nourishment and Sand Dune Related	coastal beach and dune	Recreational value	Mexico		all coastal region	2020	-	-	avg aesthetic and recreation value: $9088.38/ha/yr		$13,408.27	$/ha/yr
41	Beach Nourishment and Sand Dune Related	sand beaches and dunes	Erosion control	United States	-	-	2011	-	-	$4.45/household for an erosion control program to perserve 8 km of beach		$5.50	$/household
42	Beach Nourishment and Sand Dune Related	sand beaches and dunes	Recreation and Education	United States	-	-	2011	-	-	$166/trip or $1574 per visiting household per year for North Carolina beache		$205.28	$/trip
43	Seagrass Restoration and Seagrass meadow related	seagrasses	ry service supporting commercial fis	Australia	Queensland	Cairns Harbour	1993	-	-	nursery funciton of the seagrasses, it is responsible for commericial prawns w		$1,775.61	$/ha/yr
44	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	ry service supporting commercial fis	Australia	South Australia	Aadelaide	2003	2700	ha	$95	(2020 level US)	$140.16	$/ha/yr
45	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	Climate regulation	China	Guangxi	-	2005	540	ha	$88	(2020 level US)	$129.83	$/ha/yr
46	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	Maintenance of genetic diversity	China	Guangxi	-	2005	540	ha	$13,776	(2020 level US)	$20,324.01	$/ha/yr
47	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	formation for cognitive developme	China	Guangxi	-	2005	540	ha	$233	(2020 level US)	$343.75	$/ha/yr
48	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	Maintenance of soil fertility	China	Guangxi	-	2005	540	ha	$85,720	(2020 level US)	$126,464.43	$/ha/yr
49	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	Waste treatment	China	Guangxi	-	2005	540	ha	$121	(2020 level US)	$178.51	$/ha/yr
50	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	Erosion prevention	China	Guangxi	-	2005	540	ha	$55	(2020 level US)	$81.14	$/ha/yr
51	Seagrass Restoration and Seagrass meadow related	Seagrass meadows	ther natural aquatic biomass provis	China	Guangxi	-	2005	540	ha	$65,439	(2020 level US)	$96,543.47	$/ha/yr

living shoreline benefit | Living shoreline Cost | Grey Alternative Cost | Exchange rate and inflation | Unit Conversion

Calculation Mode: Automatic Workbook Statistics Give Feedback to Microsoft 100%

Base de données sur les coûts des infrastructures basées sur la nature

Couvre 6 types d'infrastructures basées sur la nature

- Nourrissement des plages et dunes de sable en rapport
- Restauration des herbiers marins et des champs d'herbes marines
- Zones humides et marais salants
- Gestion des eaux pluviales
- Mixte

De 7 pays

- États-Unis (majorité)
- Canada
- Australie
- Nouvelle-Zélande
- Suède
- Pays-bas
- Royaume-Uni
- Mondial

Information clé

- Estimation du coût total et/ou unitaire de la mise en œuvre de la mesure d'infrastructure verte spécifique

Un total de 318 valeurs uniques

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	GI	GI_details	Country	Provinces/Stat	Location or community name	year or duration	GI_Costs_Details	Cost category	Total Cost	Unit Cost	Original Unit for the cost	Total Cost_CAD$_2022	Unit Cost_CAD$_2022	Conv
422	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Lake Borgne	2012	Lake Borgne, 2,230 acres, 620M$, 278,000$/acre	CAPEX	$620,000,000	$278,000	$/acre	$762,142,440.00	$844,444.42	
423	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Central wetland	2012	Central wetland, 2,010 acres, 234M$, 116,400$/acre	CAPEX	$234,000,000	$116,400	$/acre	$287,647,308.00	$353,573.13	
424	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Golden Triangle	2012	Golden Triangle, 2,440, 392M$, 160,000$/acre	CAPEX	$392,000,000	$160,000	$/acre	$481,870,704.00	$486,011.18	
425	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Large scale Barataria	2012	Large scale Barataria, 8,070 acres, 293M$, 36,000$/acre	CAPEX	$293,000,000	$36,000	$/acre	$360,173,766.00	$109,352.52	
426	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Grand Liard	2012	Grand Liard, 560 acres, 34M$, 6,000$/acre	CAPEX	$34,000,000	$6,000	$/acre	$41,794,908.00	$18,225.42	
427	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	New Orleans Eastl Landbridge	2012	New Orleans Eastl Landbridge (2nd phase), 8,510 acres, 1,89	CAPEX	$1,890,000,000	$222,000	$/acre	$2,323,305,180.00	$674,340.51	
428	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Biloxi	2012	Biloxi, 33,280 acres, 3,046M$, 91,000$/acre	CAPEX	$3,046,000,000	$91,000	$/acre	$3,744,332,052.00	$276,418.86	
429	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Large scale Barataria	2012	Large scale Barataria (2nd phase), 8070 acres, 1,980M$, 245	CAPEX	$1,980,000,000	$245,000	$/acre	$2,433,938,760.00	$744,204.62	
430	Wetland and Salt Marshes related	marsh creation	United States	Louisiana	Barataria Bay Rim	2012	Barataria Bay Rim, 2,010 acres, 216M$, 107,460$/acre	CAPEX	$216,000,000	$107,460	$/acre	$265,520,592.00	$326,417.26	
431	Wetland and Salt Marshes related	low crested sill, planted marsh, and bern	United States	New Jersey	Gardner's basin	2016	Construction costs: $135,000, or $1350/ft	CAPEX	$135,000	$1,350	$/ft	$209,378.52	$6,869.37	
432	Wetland and Salt Marshes related	low crested sill, planted marsh, and bern	United States	New Jersey	Gardner's basin	2016	Design and Permitting Cost: $39,000, or $390/ft	CAPEX	$39,000	$390	$/ft	$60,487.13	$1,984.49	
433	Wetland and Salt Marshes related	low crested sill, planted marsh, and bern	United States	New Jersey	Gardner's basin	2016	Total cost: $174,000, or $1,740/ft	CAPEX	$174,000	$1,740	$/ft	$269,865.65	$8,853.86	
434	Wetland and Salt Marshes related	marshes with or without sills	United States	North Carolina	Pine Knoll Shores	2012	marsh planting cost $70/linear meter.	CAPEX	-	$70	$/linear meter	-	$86.05	
435	Wetland and Salt Marshes related	marshes with or without sills	United States	North Carolina	Pine Knoll Shores	2012	A granite marsh sill including marsh planting cost $500/linea	CAPEX	-	$500	$/linear meter	-	$614.63	
436	Wetland and Salt Marshes related	saltmash restoration	United States	Rhode Island	Galilee Bird Sanctuary	1997	restoration of 14 ha cost 1.4 million, or $100,00/ha	CAPEX	$1,400,000	$100,000	$/hectare	$3,217,810.40	$229,843.60	
437	Wetland and Salt Marshes related	convert shallow subtidal bottom to mars	United States	Texas	Galveston Island State Park Terracing	2005			$362,250	$5,311.58	$/hectare	$618,749.81	$9,072.58	
438	Wetland and Salt Marshes related	convert shallow subtidal bottom to mars	United States	Texas	Pierce Marsh Preserve Terracing	2005			$277,000	$8,765.82	$/hectare	$473,136.50	$14,972.67	
439	Wetland and Salt Marshes related		United States	Texas	Jumbile Cove	2005			$140,375	$11,896.19	$/hectare	$239,770.89	$20,319.57	
440	Wetland and Salt Marshes related		United States	Texas	I-45 East	2005			$74,200	$10,753.62	$/hectare	$126,739.09	$18,367.98	
441	Wetland and Salt Marshes related		United States	Texas	I-45 West	2005			$350,000	$40,697.67	$/hectare	$597,825.90	$69,514.64	
442	Wetland and Salt Marshes related	saltmarshes restoration	Worldwide	-	-	2010	the total restoration cost for saltmarshes was $213,690/ha	CAPEX	-	$213,690	$/hectare	-	$283,957.47	
443	Wetland and Salt Marshes related		Worldwide	-	-	2016	median cost of $1.11/ m2	CAPEX	-	$1.11	$/ m2	-	$1.72	
444	Wetland and Salt Marshes related	salt marsh restoration	Worldwide	-	-	2020	unit cost of the salt marsh restoration	CAPEX	-	$89,660	$/ha/yr	-	$132,277.19	
445	Stormwater management related	rain garden	Canada	New Brunswick	Queen Square West	2019	18.9 m2 (200 ft2) of land is converted to rain garden. 200 pla	CAPEX	$9,375	$496.03	CAD$/m2	$10,312.50	$545.63	
446	Stormwater management related	rain garden	Canada	New Brunswick	Social Enterprise HUB	2019	13.4m2 (144 ft2) of land is converted to rain garden, with 14	CAPEX	$1,750	$130.60	CAD$/m2	$1,925.00	$143.66	
447	Stormwater management related	rain garden	Canada	New Brunswick	Montgomery Crescent Park	2021	200m2 (2125ft2) of land is converted to rain garden, with ov	CAPEX	$18,387	$91.94	CAD$/m2	$19,674.09	$98.37	
448	Stormwater management related	rain garden	Canada	New Brunswick	Glen Falls School	2022	34.2 m2 (368 ft2) of land is converted to rain garden, with 1	CAPEX	$11,283	$329.91	CAD$/m2	$11,283.00	$329.91	
449	Stormwater management related	commercial bioswale	Canada	New Brunswick	Town of Shediac	2022	capital cost of CAD$15,000 (inlcuding excavation, materials,	CAPEX	$15,000		CAD$	$15,000.00		
450	Stormwater management related	Green roof	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$269.66	$/m3 of runoff reduction		$323.59	$/m
451	Stormwater management related	Rain water harvesting	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$14.46	$/m3 of runoff reduction		$17.35	$/m
452	Stormwater management related	vegetated swale	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$15.16	$/m3 of runoff reduction		$18.19	$/m
453	Stormwater management related	permeable pavement	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$157.24	$/m3 of runoff reduction		$188.69	$/m
454	Stormwater management related	bioretention	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$28.69	$/m3 of runoff reduction		$34.43	$/m
455	Stormwater management related	infiltration trench	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$15.91	$/m3 of runoff reduction		$19.09	$/m
456	Stormwater management related	vegetative swale + porous pavement	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$91.25	$/m3 of runoff reduction		$109.50	$/m
457	Stormwater management related	vegetative swale + green roof	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$60.59	$/m3 of runoff reduction		$72.71	$/m
458	Stormwater management related	porous pavement + green roof	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$200.74	$/m3 of runoff reduction		$240.89	$/m
459	Stormwater management related	porous pavement + rain water harvesting	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$157.24	$/m3 of runoff reduction		$188.69	$/m
460	Stormwater management related	infiltration trench + porous pavement	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$57.78	$/m3 of runoff reduction		$69.34	$/m
461	Stormwater management related	infiltration trench + green roof	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$32.73	$/m3 of runoff reduction		$39.28	$/m
462	Stormwater management related	bioretention cell + green roof	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$50.32	$/m3 of runoff reduction		$60.38	$/m
463	Stormwater management related	bioretention cell + rain water harvesting	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$28.82	$/m3 of runoff reduction		$34.58	$/m
464	Stormwater management related	bioretention cell+ porous pavement	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$71.39	$/m3 of runoff reduction		$85.67	$/m
465	Stormwater management related	bioretention cell+ porous pavement +gre	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$88.43	$/m3 of runoff reduction		$106.12	$/m
466	Stormwater management related	bioretention cell+ porous pavement+rain	Canada	Ontario	city of London	2014	cost per unit volume of runodd reduction	CAPEX		$71.13	$/m3 of runoff reduction		$85.36	$/m
467	Stormwater management related	swale	United States		Boston	2020	cost per unit volume of runodd reduction	CAPEX		$3.75	$/m3 of runoff reduction		$5.53	$/m
468	Stormwater management related	swale	United States		Atlanta	2020	cost per unit volume of runodd reduction	CAPEX		$2	$/m3 of runoff reduction		$2.95	$/m
469	Stormwater management related	swale	United States		Chicago	2020	cost per unit volume of runodd reduction	CAPEX		$6	$/m3 of runoff reduction		$8.85	$/m
470	Stormwater management related	swale	United States		Dallas	2020	cost per unit volume of runodd reduction	CAPEX		$2.50	$/m3 of runoff reduction		$3.69	$/m
471	Stormwater management related	swale	United States		San Diego	2020	cost per unit volume of runodd reduction	CAPEX		$32.50	$/m3 of runoff reduction		$47.95	$/m

living shoreline benefit | Living shoreline Cost | Grey Alternative Cost | Exchange rate and inflation | Unit Conversion

Calculation Mode: Automatic Workbook Statistics Give Feedback to Microsoft 100%

green ANALYTICS

Base de données sur les coûts des infrastructures grises

Couvre 6 types d'infrastructures grises

- Récif artificiel
- Cloison
- Brise-lame
- Épi
- Revêtement et revêtement incliné
- Digue

De 2 pays

- États-Unis (majorité)
- Canada

Informations clés

- Coût unitaire de la mise en œuvre de l'infrastructure grise

Un total de 50 valeurs uniques

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Type of Grey Infrastructure	Details about the Gray Infrastructure	Details about the Cos	Year	Unit Cost	original Cost Uni	Unit Cost_in CAD$	nverted Cos	Country	Provinces/State	Location	Referer	Link
28	Bulkhead	Wooden bulkhead w/toe protection	Material Cost	2013	$241	$/Linear Foot	$994	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
29	Bulkhead	Wooden bulkhead w/toe protection	Installed Cost	2013	$652	$/Linear Foot	$2,688	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
30	Bulkhead	Concrete bulkhead w/toe protection	Material Cost	2013	$476	$/Linear Foot	$1,963	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
31	Bulkhead	Concrete bulkhead w/toe protection	Installed Cost	2013	$1,002	$/Linear Foot	$4,131	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
32	Revetment	Granite Type 1 Rip Rap w/ Type 1 toe pr	Material Cost	2013	$164	$/Linear Foot	$676	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
33	Revetment	Granite Type 1 Rip Rap w/ Type 1 toe pr	Installed Cost	2013	$469	$/Linear Foot	$1,934	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
34	Revetment	Granite Type 3 w/ Type 1 toe protection	Material Cost	2013	$155	$/Linear Foot	$639	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
35	Revetment	Granite Type 3 w/ Type 1 toe protection	Installed Cost	2013	$443	$/Linear Foot	$1,827	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
36	Revetment	Granite Type 3 w/ Type 3 toe protection	Material Cost	2013	$152	$/Linear Foot	$627	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
37	Revetment	Granite Type 3 w/ Type 3 toe protection	Installed Cost	2013	$440	$/Linear Foot	$1,814	$/m	United States	Georgia	Little St Simons Island	Georgia Di	https://www.livingshorelinesacademy.org/index.php/resources/literature/item/gadenr-2013mackinnon
38	Breakwater	Offshore structures intended to break w	Construction Cost	2015	$5,001	$/Linear Foot	$24,968	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
39	Breakwater	Offshore structures intended to break w	Construction Cost	2015	$10,000	$/Linear Foot	$49,927	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
40	Breakwater	Offshore structures intended to break w	O&M cost	2015	$500	$/Linear Foot	$2,496	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
41	Groin	Perpendicular, projecting from shoreline	Construction Cost	2015	$2,001	$/Linear Foot	$9,990	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
42	Groin	Perpendicular, projecting from shoreline	Construction Cost	2015	$5,000	$/Linear Foot	$24,963	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
43	Groin	Perpendicular, projecting from shoreline	O&M cost	2015	$101	$/Linear Foot	$504	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
44	Groin	Perpendicular, projecting from shoreline	O&M cost	2015	$500	$/Linear Foot	$2,496	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
45	Revetment	Lays over the slope of a shoreline (mini	Construction Cost	2015	$5,001	$/Linear Foot	$24,968	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
46	Revetment	Lays over the slope of a shoreline (maxi	Construction Cost	2015	$10,000	$/Linear Foot	$49,927	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
47	Revetment	Lays over the slope of a shoreline (mini	O&M cost	2015	$101	$/Linear Foot	$504	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
48	Revetment	Lays over the slope of a shoreline (maxi	O&M cost	2015	$500	$/Linear Foot	$2,496	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
49	Bulkhead	Parallel to the shoreline, vertical retaini	Construction Cost	2015	$2,001	$/Linear Foot	$9,990	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
50	Bulkhead	Parallel to the shoreline, vertical retaini	Construction Cost	2015	$5,000	$/Linear Foot	$24,963	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
51	Bulkhead	Parallel to the shoreline, vertical retaini	O&M cost	2015	$101	$/Linear Foot	$504	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
52	Bulkhead	Parallel to the shoreline, vertical retaini	O&M cost	2015	$500	$/Linear Foot	$2,496	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
53	Seawall	Parallel to shoreline, vertical or sloped v	Construction Cost	2015	$5,001	$/Linear Foot	$24,968	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
54	Seawall	Parallel to shoreline, vertical or sloped v	Construction Cost	2015	$10,000	$/Linear Foot	$49,927	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
55	Seawall	Parallel to shoreline, vertical or sloped v	O&M cost	2015	$500	$/Linear Foot	$2,496	$/m	United States			National C	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
56	Rock Armour	a 1070-meter facility (minimum)	capital cost	2022	€2121	$/m	$2,906	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
57	Rock Armour	a 1070-meter facility (maximum)	capital cost	2022	€9427	$/m	$12,918	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
58	Impermeable revetments and seawalls	a 1070-meter facility (minimum)	capital cost	2022	€4624	$/m	$6,336	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
59	Impermeable revetments and seawalls	a 1070-meter facility (maximum)	capital cost	2022	€11,560	$/m	$15,841	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
60	Impermeable revetments and seawalls	a 1070-meter facility (minimum)	capital cost	2022	€1099	$/m	$1,506	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
61	Impermeable revetments and seawalls	a 1070-meter facility (maximum)	capital cost	2022	€8483	$/m	$11,624	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
62	Permeable rock revetments	a 1070-meter facility (minimum)	capital cost	2022	€2312	$/m	$3,168	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
63	Permeable rock revetments	a 1070-meter facility (maximum)	capital cost	2022	€6936	$/m	$9,504	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
64	Permeable rock revetments	a 1070-meter facility (minimum)	capital cost	2022	€1021	$/m	$1,399	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
65	Permeable rock revetments	a 1070-meter facility (maximum)	capital cost	2022	€4477	$/m	$6,135	$/m	United Kingdom			Hynes, S., Burger, R., Tudella, J., Norton, D. and Chen, W., 2022. Estimating the costs and benefits of protecting a coastal	
66	Stone Revertment	5.9 acres	total cost	2019	$242,638	$/acre	$875,062	$/ha	United States	Virginia	Man and Boy Marsh	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
67	Stone Revertment	3.2 acres	total cost	2019	$225,212	$/acre	$812,216	$/ha	United States	Virginia	Little Tom's Cove	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
68	Stone Revertment	5.5 acres	total cost	2019	$203,510	$/acre	$733,949	$/ha	United States	Virginia	Short Prong Marsh	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
69	Stone Revertment	11.2 acres	total cost	2019	$194,177	$/acre	$700,290	$/ha	United States	Virginia	Assateague Bay	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
70	Stone Revertment	16.8 acres	total cost	2019	$84,303	$/acre	$304,035	$/ha	United States	Virginia	Tom's Cove	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
71	Stone Revertment	0.8 acres	total cost	2019	$862,374	$/acre	$3,110,109	$/ha	United States	Virginia	Beach Ave, Norfolk	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
72	Stone Revertment	0.6 acres	total cost	2019	$1,466,037	$/acre	$5,287,190	$/ha	United States	Virginia	mitage Museum West Coast, Nor	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
73	Stone Revertment	0.4 acres	total cost	2019	$862,374	$/acre	$3,110,109	$/ha	United States	Virginia	Knitting Mill, Norfolk	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
74	Stone Revertment	1.2 acres	total cost	2019	$1,466,037	$/acre	$5,287,190	$/ha	United States	Virginia	North Shore, Norfolk	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
75	Stone Revertment	1.7 acres	total cost	2019	$862,374	$/acre	$3,110,109	$/ha	United States	Virginia	Villa Circle, Norfolk	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
76	Stone Revertment	0.5 acres	total cost	2019	$648,402	$/acre	$2,338,430	$/ha	United States	Virginia	False Cape	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s
77	Stone Revertment	0.4 acres	total cost	2019	$648,402	$/acre	$2,338,430	$/ha	United States	Virginia	Back Bay Visitor Center	Abt Associ	https://www.nfwf.org/sites/default/files/hurricanesandy/Documents/hurricane-sandy-living-shoreline-case-s

living shoreline benefit | Living shoreline Cost | Grey Alternative Cost | Exchange rate and inflation | Unit Conversion

ÉTAPE 4 : Comparaison des coûts et des avantages

Évaluer et articuler l'échéancier des coûts et des bénéfices

- Les coûts d'établissement sont généralement encourus d'emblée
- Il peut également y avoir des coûts de fonctionnement et d'entretien permanents (annuels ou semi-réguliers).
- Les bénéfices des services écosystémiques sont généralement mesurés en flux de services annuels.

Choisir le taux de remise

- Les taux d'actualisation couramment utilisés pour la réduction des inondations et la protection des côtes se situent entre 1 % et 10 %
- Le gouvernement du Canada et Jenkins et Kuo (2008) suggèrent un taux de 7 %.
- Dans certaines circonstances, un taux d'actualisation social (3%, suggéré par le gouvernement du Canada) peut être utilisé.

Calculer la valeur actuelle nette

- En utilisant le taux d'actualisation et l'échancier connu des coûts et des bénéfices, la valeur actuelle nette peut être déterminée.

Calculer le rapport coût-bénéfice

- La valeur actuelle des coûts et des bénéfices peut également être exprimée sous la forme d'un ratio bénéfices/coûts.
- Tout rapport supérieur à 1 signifie que les avantages du projet l'emportent sur les coûts associés.

1. Discount Rate Assumption (%) 3

Step 1: Select appropriate discount rate here

Note: ***User Input required***

1) determine appropriate discount rate [**should be the same as the one used to discount cost**]; 2) choose an appropriate interval assumption; 3) insert dollar values

2. Benefits categories

Step 2a: Choose benefit interval (i.e., frequency of benefit occur) for applicable category

Step 3: input annual benefits values (future values) in the corresponding year, for each chosen benefit category

Excel for the web does not support

Reset all your input here if needed

Incremental Dollars Values at the end of different point of time

	Interval Assumption																					
Flood protection and mitigation (inland)	1	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		user input required						$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.00	$34,430.
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$28,834.58	$27,994.74	$27,179.36	$26,387.73	$25,619.15	$24,872.96	$24,148.51	$23,445.15	$22,762.29	$22,099.31	$21,455.64	$20,830.72	$20,224.00	$19,634.95	$19,063.06	$18,507.
		Sum of Present Value	$728,196																				
Flood protection and mitigation (Coastal)	0	Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		user input required																					
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Sum of Present Value	$0																				
Surface runoff and erosion reduction	0	Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		user input required																					
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Sum of Present Value	$0																				
Surface Water Quality Enhancement	1	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		user input required											$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.00	$819,390.
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$591,944.77	$574,703.66	$557,964.72	$541,713.32	$525,935.26	$510,616.76	$495,744.43	$481,305.27	$467,286.67	$453,676.38	$440,462.
		Sum of Present Value	$14,093,148																				
Recreation	1	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		user input required											$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.00	$54,010.
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$39,017.97	$37,881.53	$36,778.18	$35,706.97	$34,666.96	$33,657.25	$32,676.94	$31,725.18	$30,801.15	$29,904.03	$29,033.
		Sum of Present Value	$928,948																				
Biodiversity	1	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		user input required											$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,350.00	$1,120,35
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$809,364.68	$785,790.95	$762,903.83	$740,683.33	$719,110.03	$698,165.08	$677,830.18	$658,087.55	$638,919.95	$620,310.63	$602,243.
		Sum of Present Value	$19,269,528																				
Carbon Sequestration	1	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		user input required											$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.00	$4,180.0
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$3,019.72	$2,931.77	$2,846.38	$2,763.47	$2,682.98	$2,604.84	$2,528.97	$2,455.31	$2,383.80	$2,314.36	$2,246.9
		Sum of Present Value	$71,894																				
Waste and Nutrient Regulation	0	Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		user input required																					
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Sum of Present Value	$0																				
Microelimate regulation	0	Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		user input required																					
		Present Value	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Sum of Present Value	$0																				
Other Benefits: Specify below																							
Avoided Grey alternative	1	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		user input required	$1,600,000.00	$800,000.00	$480,000.00	$160,000.00	$160,000.00																
		Present Value	$1,553,398.06	$754,076.73	$439,268.00	$142,157.93	$138,017.41	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
		Sum of Present Value	$3,026,918																				
	0	Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Step 2b: add other benefit categories if necessary

Example_Background Information | Exampe_Results | Example_Benefit Calculation | Example_Cost Calculation

Calculation Mode: Automatic Workbook Statistics Give Feedback to Microsoft 100%

ÉTAPE 5 : Analyse de sensibilité et considérations distributionnelles

L'estimation des coûts et des bénéfices repose sur plusieurs hypothèses.

L'analyse de sensibilité doit être utilisée pour déterminer dans quelle mesure les conclusions sont sensibles aux hypothèses formulées. Par exemple :

- Coûts unitaires supposés +/- 10 %.
- Hypothèses relatives aux avantages (par exemple, nombre de personnes bénéficiaires, valeur moyenne par hectare, etc.)
- Taux d'actualisation

Les considérations distributionnelles pour étudier comment le projet pourrait affecter les différentes parties prenantes.

- Identifier les principaux bénéficiaires.
- Identifier qui subit les coûts
- Dans quelle mesure les résultats sont-ils équitables ?

Qu'est-ce qui est inclus dans le cadre/outil coûts-bénéfices ?

- Base de données sur les avantages des solutions climatiques basées sur la nature
- Base de données des coûts des solutions climatiques basées sur la nature
- Base de données des coûts des solutions alternatives grises
- Modèle de calculateur de ratio coûts-bénéfices
- Exemple complet d'étude de cas et exemples de calculs
- À l'avenir : outil web interactif qui guidera les utilisateurs à travers toutes les étapes.

Événements et opportunités à venir

Tout au long des mois de novembre et décembre 2023 : Sessions de formation approfondie sur l'outil d'analyse coûts-bénéfices, à la fois en personne et en ligne.

déc. 2023

nov. 2023 et déc. 2023

Conférence du RENB sur l'adaptation au changement climatique décembre 2023