

**Table S1** Number of research studies that have linkages with Sustainable Development Goals

SDG	Research Studies
Goal 1: No Poverty	(Moschetto et al., 2021)(Datta, 2018) (Hernández-Delgado, 2015)
Goal 2: Zero Hunger	(Kh'ng et al., 2021)
Goal 3: Good Health & Well-being	(Kibria et al., 2019)
Goal 4: Quality Education	(Martínez-Espinosa et al., 2020) (Rakotomahazo et al., 2019)
Goal 6: Clean Water & Sanitation	(Kh'ng et al., 2021)
Goal 8: Decent Work & Economic Growth	(Abdullah-Al-Mamun et al., 2017) (Schmitt & Duke, 2020) (Hernández-Delgado, 2015) (Stoeckl et al., 2011)
Goal 9: Industry Innovation & Infrastructure	(Moschetto et al., 2021) (Mahmoudi et al., 2020)
Goal 11: Sustainable Cities & Communities	(Schwenke & Helfer, 2021) (Moschetto et al., 2021) (Rakotomahazo et al., 2019) (Osorio-Cano et al., 2019) (Akber et al., 2018) (Damastuti & de Groot, 2017) (Abdullah-Al-Mamun et al., 2017) (Schmitt & Duke, 2020) (Marois & Mitsch, 2015) (Jumnongsong et al., 2015) (Stoeckl et al., 2011)
Goal 12: Responsible Consumption & Production	(Sannigrahi et al., 2020) (Castillo et al., 2017) (Son et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Nortey et al., 2016)(van Oudenhoven et al., 2015) (Jonell & Henriksson, 2015) (Son et al., 2015) (Marois & Mitsch, 2015) (Jumnongsong et al., 2015) (Kauffman et al., 2014) (Nguyen et al., 2013) (Barbier, 2013) (Wilkinson & Salvat, 2012) (Martinez-Porchas & Martinez-Cordova, 2012) (Chen et al., 2012) (Fontalvo-Herazo et al., 2011) (Stoeckl et al., 2011) (Srinivasana et al., 2008) (Barbier, 2007)
Goal 13: Climate Action	(Schwenke & Helfer, 2021) (Vorsatz et al., 2021) (Kh'ng et al., 2021) (Mahmoudi et al., 2020) (Suyadi et al., 2020) (Harada et al., 2020) (Sannigrahi et al., 2020) (Bakhtiyari et al., 2019) (Ochoa-Gómez et al., 2019) (Osorio-Cano et al., 2019) (Lewis et al., 2019) (Rogers et al., 2019) (Dai et al., 2018) (Adame et al., 2018) (Etemadi et al., 2018) (Abdel-Hamid et al., 2018) (Pham & Brabyn, 2017) (Tang et al., 2017) (Castillo et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Schmitt & Duke, 2020) (Jonell & Henriksson, 2015) (Marois & Mitsch, 2015) (Hernández-Delgado, 2015) (Jardine & Siikamäki, 2014) (Kauffman et al., 2014) (Wingard & Lorenz, 2014) (Osland et al., 2013) (Barbier, 2013) (Wilkinson & Salvat, 2012) (Srinivasana et al., 2008)
Goal 14: Life below Water	(Vorsatz et al., 2021) (Sheaves et al., 2020) (Theuerkauff et al., 2020) (Nortey et al., 2016) (van Oudenhoven et al., 2015) (Hernández-Delgado, 2015) (Wingard & Lorenz, 2014) (Nguyen et al., 2013) (Osland et al., 2013) (Martinez-Porchas & Martinez-Cordova, 2012)
Goal 15: Life on Land	(Vorsatz et al., 2021) (Harada et al., 2020) (Lewis et al., 2019) (Rogers et al., 2019) (Estoque et al., 2018) (Datta, 2018) (Abdel-Hamid et al., 2018) (Abdel-Hamid et al., 2018) (Damastuti & de Groot, 2017) (Pham & Brabyn, 2017) (Castillo et al., 2017)

(Son et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Schmitt & Duke, 2020) (Son et al., 2015) (Giri et al., 2015) (Marois & Mitsch, 2015) (Jumnongsong et al., 2015) (Jardine & Siikamäki, 2014) (Wingard & Lorenz, 2014) (Hookham et al., 2014) (Pendleton et al., 2013) (Nguyen et al., 2013) (Osland et al., 2013) (Nascimento et al., 2013) (Chen et al., 2012) (Fontalvo-Herazo et al., 2011) (Santos et al., 2011) (Srinivasana et al., 2008)

Goal 17: Partnerships for the  
Goals

---

(Tang et al., 2016) (Giri et al., 2015) (Friess & Webb, 2014) (Pendleton et al., 2013)

**Table S2** Number of research studies that mention about each sub-category of mangrove ESs

	Supporting					Provisioning										Regulating										Cultural				
	Nutrient cycling	Nursery and breeding ground	Biomass production	Habitat (Terrestrial & marine fauna)	Reducing Eutrophication	Food Products	Fuel Wood	Timber Products	Charcoal Production	Medicines	Fresh Water	Fishing & Aquaculture practices	Water Transport (Ports)	Construction Materials	Climate Regulation and mitigation	Coastal protection	Sequester and store carbon	Flood protection	Storm protection	Wastewater bioremediation	Prevention of salt water intrusion	Tourism or Eco-Tourism	Nature-based Recreation	Aesthetic value	Cultural Amenities	Education				
	S1	S2	S3	S4	S5	P1	P2	P3	P4	P5	P6	P7	P8	P9	R1	R2	R3	R4	R5	R6	R7	C1	C2	C3	C4	C5				
S1	18	4	2	6	2	4	3	4	1	2	0	5	1	0	5	6	2	3	4	8	1	3	6	2	1	1				
S2	4	24	2	11	0	7	6	9	4	1	0	6	0	1	4	10	14	8	10	6	3	5	6	4	1	1				
S3	2	2	9	2	0	2	0	3	0	0	0	3	1	1	1	5	3	2	5	3	0	3	1	1	1	1				
S4	6	11	2	23	0	4	7	8	3	2	1	8	1	1	5	12	10	6	7	5	3	4	6	4	2	1				
S5	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
P1	4	7	2	4	0	17	8	8	2	4	1	4	0	2	3	9	6	5	7	5	1	6	5	1	0	1				
P2	3	6	0	7	0	8	14	8	4	4	1	4	0	1	4	6	2	4	5	3	2	1	6	3	1	1				
P3	4	9	3	8	0	8	8	17	5	4	0	5	1	2	6	8	4	6	9	6	3	5	6	3	2	1				
P4	1	4	0	3	0	2	4	5	5	1	0	1	0	0	2	1	0	2	2	2	1	1	2	2	0	1				
P5	2	1	0	2	0	4	4	4	1	6	0	4	1	0	3	5	2	1	0	2	0	2	3	2	0	2				
P6	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
P7	5	6	3	8	0	4	4	5	1	4	0	17	2	0	5	10	10	3	4	5	0	5	5	4	1	2				
P8	1	0	1	1	0	0	0	1	0	1	0	2	3	0	2	2	2	1	1	1	0	3	2	1	1	1				
P9	0	1	1	1	0	2	1	2	0	0	0	0	0	3	0	3	1	1	3	0	1	1	0	0	0	0				
R1	5	4	1	5	0	3	4	6	2	3	0	5	2	0	10	6	2	4	3	6	1	3	7	3	3	2				
R2	6	10	5	12	0	9	6	8	1	5	0	10	2	3	6	25	15	7	10	9	2	9	8	4	2	2				
R3	2	14	3	10	0	6	2	4	0	2	0	10	2	1	2	15	33	4	8	5	1	8	4	3	0	1				
R4	3	8	2	6	0	5	4	6	2	1	0	3	1	1	4	7	4	15	8	4	2	4	5	2	2	0				
R5	4	10	5	7	0	7	5	9	2	0	0	4	1	3	3	10	8	8	22	6	3	5	4	2	2	0				
R6	8	6	3	5	0	5	3	6	2	2	0	5	1	0	6	9	5	4	6	14	0	6	6	2	1	1				
R7	1	3	0	3	0	1	2	3	1	0	0	0	0	1	1	2	1	2	3	0	4	1	2	2	1	0				
C1	3	5	3	4	0	6	1	5	1	2	0	5	3	1	3	9	8	4	5	6	1	15	5	3	1	1				
C2	6	6	1	6	0	5	6	6	2	3	0	5	2	0	7	8	4	5	4	6	2	5	12	6	3	3				
C3	2	4	1	4	0	1	3	3	2	2	0	4	1	0	3	4	3	2	2	2	2	3	6	7	2	3				
C4	1	1	1	2	0	0	1	2	0	0	0	1	1	0	3	2	0	2	2	1	1	1	3	2	4	1				
C5	1	1	1	1	0	1	1	1	1	2	0	2	1	0	2	2	1	0	0	1	0	1	3	3	1	4				

**Table S3** List of research studies based on categorization of ESs

Types of ESs	Categorization	Research Studies
Supporting	Nutrient cycling	(Schwenke & Helfer, 2021) (Vorsatz et al., 2021) (Harada et al., 2020) (Theuerkauff et al., 2020) (Abdel-Hamid et al., 2018) (Giri et al., 2015) (Jumnongsong et al., 2015) (Kauffman et al., 2014) (Wingard & Lorenz, 2014) (McGenity, 2014) (Osland et al., 2013) (Bouchez et al., 2013) (Barbier, 2013) (Chen et al., 2012) (Santos et al., 2011) (Liu et al., 2010) (Feller et al., 2010) (Kaplowitz, 2001)
	Nursery and breeding ground	(Kh'ng et al., 2021) (Martínez-Espinosa et al., 2020) (Lei et al., 2019) (Ochoa-Gómez et al., 2019) (Osorio-Cano et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Abdel-Hamid et al., 2018) (Abdullah-Al-Mamun et al., 2017) (van Oudenhoven et al., 2015) (Jonell & Henriksson, 2015) (Son et al., 2015) (Jumnongsong et al., 2015) (Jardine & Siikamäki, 2014) (Hookham et al., 2014) (Pendleton et al., 2013) (Nascimento et al., 2013) (Barbier, 2013) (Martinez-Porchas & Martinez-Cordova, 2012) (Lebata et al., 2012) (Santos et al., 2011) (Srinivasana et al., 2008) (Schmitt & Duke, 2020) (Barbier, 2007)
	Biomass production & high organic content	(Sannigrahi et al., 2019) (Ochoa-Gómez et al., 2019) (Adame et al., 2018) (Avtar et al., 2017) (Giri et al., 2015) (Marois & Mitsch, 2015) (Santos et al., 2011) (Lucas et al., 2020) (Bakhtiyari et al., 2019)
	Habitat for terrestrial and marine fauna	(Friis & Burt, 2020) (Sheaves et al., 2020) (Harada et al., 2020) (Sannigrahi et al., 2020) (Lei et al., 2019) (Sannigrahi et al., 2019) (Kibria et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Abdel-Hamid et al., 2018) (Son et al., 2017) (Nortey et al., 2016) (Giri et al., 2015) (Jumnongsong et al., 2015) (Jardine & Siikamäki, 2014) (Wingard & Lorenz, 2014) (Nguyen et al., 2013) (Nascimento et al., 2013) (Martinez-Porchas & Martinez-Cordova, 2012) (Lebata et al., 2012) (Kaplowitz, 2001) (Schmitt & Duke, 2020) (Barbier, 2007)
	Reducing Eutrophication	(Bouchez et al., 2013) (Chen et al., 2012)
Provisioning	Food Products (Fish, Crab, Honey, Nypa palm etc.)	(Schwenke & Helfer, 2021) (Yancho et al., 2020) (Sannigrahi et al., 2020) (Martínez-Espinosa et al., 2020) (Sannigrahi et al., 2019) (Kibria et al., 2019) (Osorio-Cano et al., 2019) (Datta, 2018) (Damastuti & de Groot, 2017) (Avtar et al., 2017) (Abdullah-Al-Mamun et al., 2017) (van Oudenhoven et al., 2015) (Jumnongsong et al., 2015) (McGenity, 2014) (Barbier, 2013) (Sanchirico & Mumby, 2009)
	Fuel Wood	(Yancho et al., 2020) (Martínez-Espinosa et al., 2020) (Kibria et al., 2019) (Rakotomahazo et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Damastuti & de Groot, 2017) (Nortey et al., 2016) (van Oudenhoven et al., 2015) (Jumnongsong et al., 2015) (Nguyen et al., 2013) (Nguyen et al., 2013) (Barbier, 2013) (Sanchirico & Mumby, 2009) (Kaplowitz, 2001)
	Timber Products	(Schwenke & Helfer, 2021) (Yancho et al., 2020) (Martínez-Espinosa et al., 2020) (Lei et al., 2019) (Sannigrahi et al., 2019) (Rakotomahazo et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Avtar et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Nortey et al., 2016) (Giri et al., 2015) (Jumnongsong et al., 2015) (Barbier, 2013) (Wilkinson & Salvat, 2012) (Srinivasana et al., 2008) (Barbier, 2007)
	Charcoal Production	(Schwenke & Helfer, 2021) (Martínez-Espinosa et al., 2020) (Rakotomahazo et al., 2019) (Akber et al., 2018) (Jumnongsong et al., 2015) (Barbier, 2007)
	Medicines	(Schwenke & Helfer, 2021) (Yancho et al., 2020) (Damastuti & de Groot, 2017) (Nortey et al., 2016) (Jumnongsong et al., 2015) (Stoeckl et al., 2011)

	Fresh Water	(Kibria et al., 2019)
	Fishing and Aquaculture practices	(Sannigrahi et al., 2020) (Lei et al., 2019) (Ochoa-Gómez et al., 2019) (Damastuti & de Groot, 2017) (Owers et al., 2016) (Nortey et al., 2016) (Jonell & Henriksson, 2015) (Giri et al., 2015) (Marois & Mitsch, 2015) (Jumnongsong et al., 2015) (Wingard & Lorenz, 2014) (McGenity, 2014) (Lebata et al., 2012) (Fontalvo-Herazo et al., 2011) (Stoeckl et al., 2011) (Srinivasana et al., 2008) (Kaplowitz, 2001)
	Water Transport (Ports)	(Iswandi et al., 2020) (Giri et al., 2015) (Stoeckl et al., 2011)
	Construction Materials	(Avtar et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Nguyen et al., 2013)
Regulating	Climate	(Schwenke & Helfer, 2021) (Lewis et al., 2019) (Estoque et al., 2018) (Owers et al., 2016)
	Regulation and mitigation	(Giri et al., 2015) (Jumnongsong et al., 2015) (Barbier, 2013) (Stoeckl et al., 2011) (Kaplowitz, 2001) (Barbier, 2007)
	Coastal protection (Shoreline stabilization and erosion control)	(Schwenke & Helfer, 2021) (Sannigrahi et al., 2020) (Sannigrahi et al., 2019) (Osorio-Cano et al., 2019) (Estoque et al., 2018) (Damastuti & de Groot, 2017) (Avtar et al., 2017) (Son et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Owers et al., 2016) (Nortey et al., 2016) (van Oudenhoven et al., 2015) (Giri et al., 2015) (Marois & Mitsch, 2015) (Jumnongsong et al., 2015) (Jardine & Siikamäki, 2014) (Kauffman et al., 2014) (Wingard & Lorenz, 2014) (Pendleton et al., 2013) (Nguyen et al., 2013) (Martinez-Porchas & Martinez-Cordova, 2012) (Fontalvo-Herazo et al., 2011) (Santos et al., 2011) (Stoeckl et al., 2011) (Schmitt & Duke, 2020)
	Sequester and store carbon	(Kh'ng et al., 2021) (Mahmoudi et al., 2020) (Suyadi et al., 2020) (Sannigrahi et al., 2020) (Iswandi et al., 2020) (Lei et al., 2019) (Sannigrahi et al., 2019) (Ochoa-Gómez et al., 2019) (Osorio-Cano et al., 2019) (Rogers et al., 2019) (Dai et al., 2018) (Pham & Brabyn, 2017) (Tang et al., 2017) (Castillo et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Owers et al., 2016) (Nortey et al., 2016) (Tang et al., 2016) (van Oudenhoven et al., 2015) (Jonell & Henriksson, 2015) (Marois & Mitsch, 2015) (Jardine & Siikamäki, 2014) (Kauffman et al., 2014) (Wingard & Lorenz, 2014) (Friess & Webb, 2014) (Hookham et al., 2014) (Pendleton et al., 2013) (Nascimento et al., 2013) (Martinez-Porchas & Martinez-Cordova, 2012) (Lebata et al., 2012) (Stoeckl et al., 2011) (Schmitt & Duke, 2020) (Etemadi et al., 2018)
	Flood protection	(Sannigrahi et al., 2020) (Osorio-Cano et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Damastuti & de Groot, 2017) (Avtar et al., 2017) (Son et al., 2015) (Giri et al., 2015) (Hernández-Delgado, 2015) (Hookham et al., 2014) (Barbier, 2013) (Feller et al., 2010) (Schmitt & Duke, 2020) (Barbier, 2007)
	Storm protection	(Vorsatz et al., 2021) (Kh'ng et al., 2021) (Sannigrahi et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Fickert, 2018) (Avtar et al., 2017) (Abdullah-Al-Mamun et al., 2017) (van Oudenhoven et al., 2015) (Son et al., 2015) (Giri et al., 2015) (Marois & Mitsch, 2015) (Hernández-Delgado, 2015) (Kauffman et al., 2014) (Wingard & Lorenz, 2014) (McGenity, 2014) (Hookham et al., 2014) (Nguyen et al., 2013) (Wilkinson & Salvat, 2012) (Martinez-Porchas & Martinez-Cordova, 2012) (Sanchirico & Mumby, 2009) (Srinivasana et al., 2008) (Barbier, 2007) (Bakhtiyari et al., 2019)
	Wastewater bioremediation	(Schwenke & Helfer, 2021) (Vorsatz et al., 2021) (Theuerkauff et al., 2020) (Sannigrahi et al., 2019) (Owers et al., 2016) (van Oudenhoven et al., 2015) (Giri et al., 2015) (Jumnongsong et al., 2015) (Wingard & Lorenz, 2014) (Hookham et al., 2014) (Barbier, 2013) (Fontalvo-Herazo et al., 2011) (Santos et al., 2011) (Barbier, 2007)

	Prevention of salt water intrusion	(Harada et al., 2020) (Estoque et al., 2018) (Akber et al., 2018) (Abdullah-Al-Mamun et al., 2017)
Cultural	Tourism or Eco-Tourism	(Schwenke & Helfer, 2021) (Iswandi et al., 2020) (Martínez-Espinosa et al., 2020) (Sannigrahi et al., 2019) (Ochoa-Gómez et al., 2019) (Osorio-Cano et al., 2019) (Datta, 2018) (Son et al., 2017) (Abdullah-Al-Mamun et al., 2017) (Giri et al., 2015) (Hernández-Delgado, 2015) (Wingard & Lorenz, 2014) (Hookham et al., 2014) (Fontalvo-Herazo et al., 2011) (Stoeckl et al., 2011)
	Nature-based Recreation	(Schwenke & Helfer, 2021) (Osorio-Cano et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (van Oudenhoven et al., 2015) (Giri et al., 2015) (Jumnongsong et al., 2015) (Richards & Friess, 2015) (Wingard & Lorenz, 2014) (Barbier, 2013) (Stoeckl et al., 2011) (Kaplowitz, 2001)
	Aesthetic value	(Ochoa-Gómez et al., 2019) (Estoque et al., 2018) (Akber et al., 2018) (Jumnongsong et al., 2015) (Richards & Friess, 2015) (Wingard & Lorenz, 2014) (Stoeckl et al., 2011)
	Cultural Amenities	(Lewis et al., 2019) (Estoque et al., 2018) (Giri et al., 2015) (Richards & Friess, 2015)
	Education	(Adame et al., 2018) (Jumnongsong et al., 2015) (Richards & Friess, 2015) (Stoeckl et al., 2011)