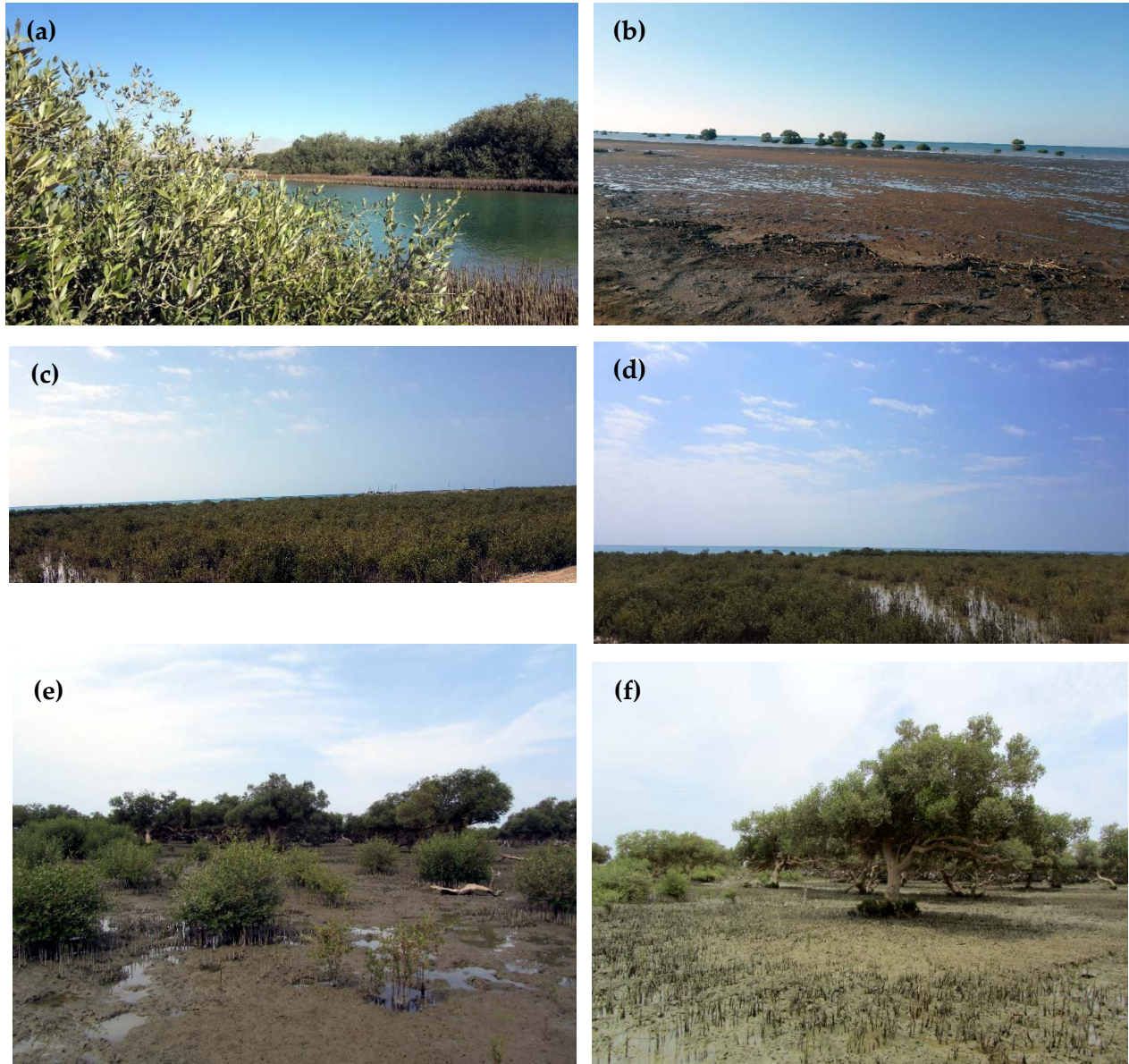
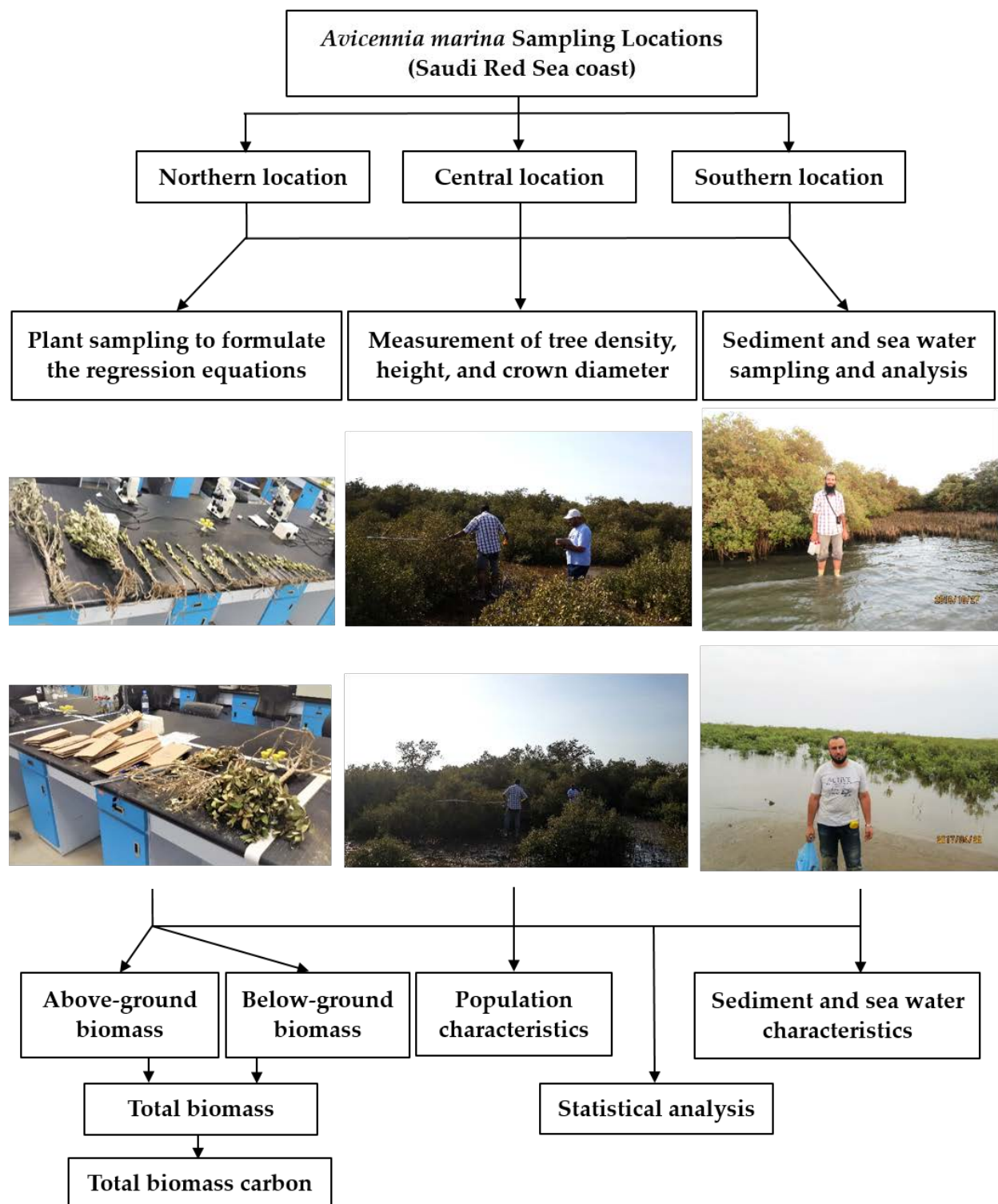


**Table S1:** Date of sampling and coordinates of each sampling stand from different locations of *Avicennia marina* populations along the Red Sea coast of Saudi Arabia.

Location	Site	Stand	Stand coordinates	Date
Northern	Duba	1	Lat. 27° 26' 01.5" N, Long. 35° 36' 02.1" E	2/1/2018
		2	Lat. 27° 10' 25.4" N, Long. 35° 47' 29.1" E	
		3	Lat. 27° 09' 58.8" N, Long. 35° 47' 19.0" E	
Central	Jeddah	1	Lat. 21° 15' 52.4" N, Long. 39° 07' 43.8" E	31/1/2017
		2	Lat. 21° 16' 01.5" N, Long. 39° 07' 37.7" E	
		3	Lat. 21° 16' 08.8" N, Long. 39° 07' 33.1" E	
Southern	Amaq	1	Lat. 18° 25' 20.3" N, Long. 41° 27' 11.2" E	27/12/2016
		2	Lat. 18° 25' 26.5" N, Long. 41° 27' 07.9" E	
		3	Lat. 18° 25' 35.9" N, Long. 41° 27' 06.1" E	
	Al-Birk	1	Lat. 18° 15' 56.6" N, Long. 41° 30' 43.6" E	14/11/2016
		2	Lat. 18° 13' 42.1" N, Long. 41° 31' 40.9" E	
		3	Lat. 18° 11' 55.5" N, Long. 41° 32' 25.4" E	
	Al-Shuqaiq	1	Lat. 17° 48' 03.3" N, Long. 41° 53' 13.2" E	14/11/2016
		2	Lat. 17° 47' 56.4" N, Long. 41° 53' 02.2" E	
		3	Lat. 17° 47' 33.1" N, Long. 41° 53' 19.5" E	
	Sabya	1	Lat. 17° 08' 00.7" N, Long. 42° 24' 55.6" E	27/10/2016
		2	Lat. 17° 08' 20.0" N, Long. 42° 25' 05.5" E	
		3	Lat. 17° 08' 34.8" N, Long. 42° 25' 11.4" E	
	Jazan	1	Lat. 17° 32' 40.7" N, Long. 42° 11' 24.0" E	4/5/2017
		2	Lat. 17° 32' 28.4" N, Long. 42° 11' 39.2" E	
		3	Lat. 16° 50' 21.4" N, Long. 42° 34' 39.9" E	



**Figure S1:** *Avicennia marina* mangrove in the different studied locations. a and b- from the northern location (Dubai City); c and d- from the central location (Jeddah City); and e and f- from the southern location in the Saudi Arabian Red Sea coast.



**Figure S2:** Flowchart represents research design and sample analysis.