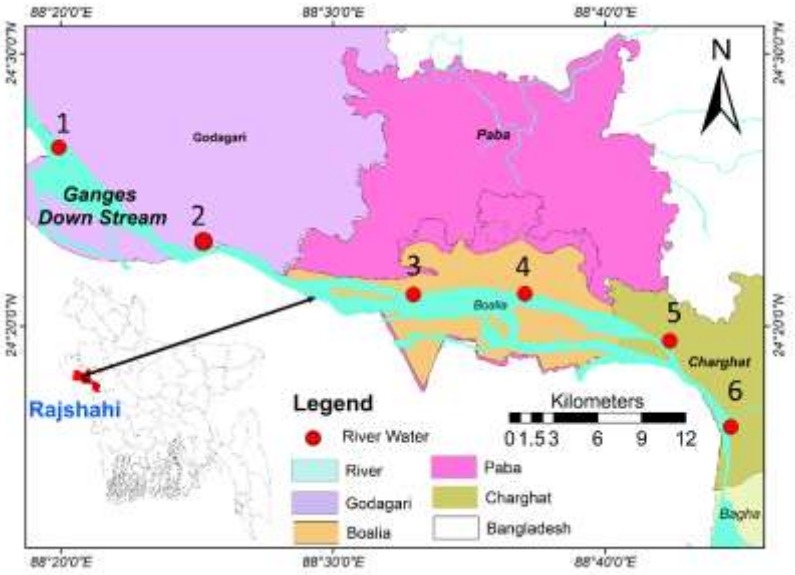
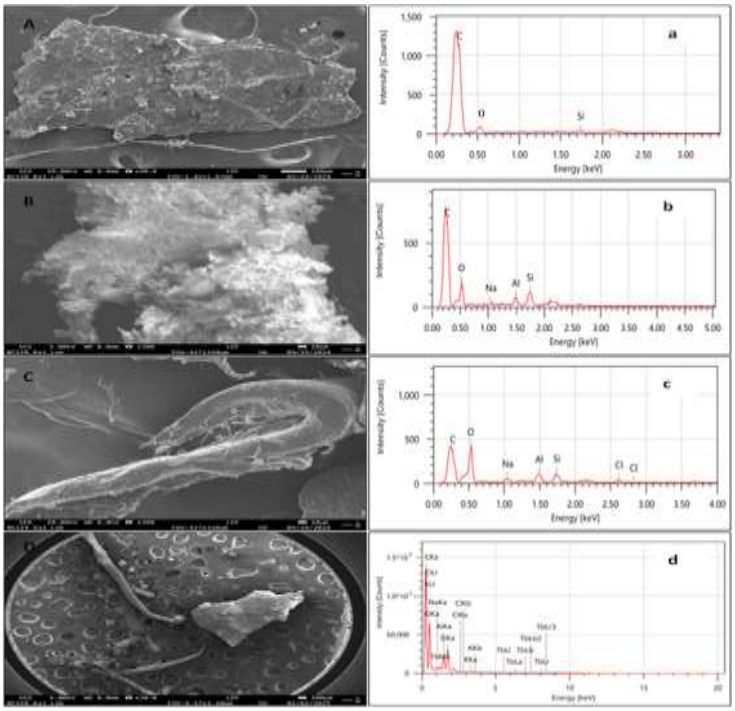
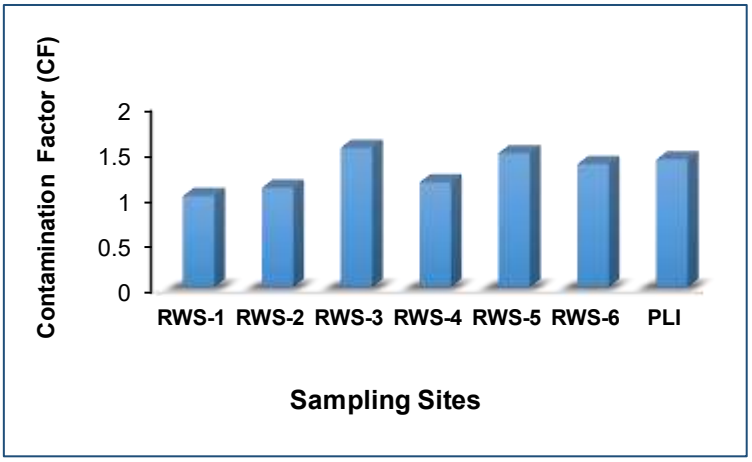
Supplementary Materials



SM Figure 1. Location of the study area of the Ganges downstream.



SM Figure 2. SEM image and EDS of microplastics isolated from river water: Film (A, a); Fragment (B, b); Fiber (C, c), and Granule (D, d).



SM Figure 3. *CF* and *PLI* of water samples.

SM Table 1. Correlation among the physicochemical parameters.

	pH	**EC**	**TSS**	**TDS**	**Turb.**	**TH**	**DO**	**BOD**	**COD**	**Ca^{2+}**	**Cl^-**	**HCO_3^-**	**NO_3^-**	**PO_4^{3-}**	**SO_4^{2-}**
pH	1														
EC	.226	1													
TSS	.673	.726	1												
TDS	.059	**.965**	.593	1											
Turb.	**.908**	-.061	.410	-.168	1										
TH	.049	.615	.055	.675	-.015	1									
DO	**.884**	.354	**.859**	.153	.718	-.169	1								
BOD	-.287	.719	.065	**.763**	-.495	**.828**	-.299	1							
COD	-.230	**.767**	.138	**.797**	-.451	**.830**	-.224	**.996**	1						
Ca^{2+}	.011	.667	.132	.633	-.236	**.840**	-.088	**.919**	**.924**	1					
Cl^-	-.037	.316	-.128	.348	.072	.744	-.140	.528	.544	.512	1				
HCO_3^-	-.446	.305	-.408	.419	-.457	**.842**	-.633	**.850**	**.816**	**.777**	.664	1			
NO_3^-	**.765**	.608	**.934**	.499	.524	.060	**.817**	-.026	.032	.093	-.286	-.425	1		
PO_4^{3-}	.263	.486	**.802**	.432	.030	-.334	.560	-.116	-.072	-.208	-.560	-.577	**.762**	1	
SO_4^{2-}	.143	**.979**	.612	**.951**	-.113	.704	.259	**.799**	**.844**	.742	.484	.440	.457	.323	1

Bold numbers indicate a strong positive relationship

SM Table 2. Water quality and pollution levels for water quality indices (WQI), (HPI), and (HEI).

Water quality indices	Water quality	References
WQI	<50, excellent, 50 –100, good 100 –200 bad, and 200 –300 really bad water	[21]
HPI	< 50 minimal pollutions, 50 -100 moderate pollution and > 100 high pollutions.	[23]
HEI	< 10 low pollutions 10-20 moderate pollution, and > 20 high pollutions.	[24]

SM Table 3. Comparison of microplastic concentrations in rivers of Bangladesh.

Name of river	Abundance (particles/L)	Characteristics of MPs	Abundant Polymer	Reference
Buriganga River	4.33-43.6 items/L	fragment	PP, PE	[27]
Karnafully River	0.57- 6.63 particles/L	Blue, fiber, and <1mm	PE, PET	[28]
Buriganga River	25 -117 particles/L	Blue, fiber, and <0.5mm	PET, PE, EVA	[29]
Ganges River Basin to Meghna Estuary	50.9 particles/L 64.1 particles/L	Blue and red, Fiber and Fragments, <0.1 mm	PE	[26]
Ganges downstream	14.3-17.7 particles/L	Blue, fiber, <1 mm	PE, PP, PET, PVC	Present study