

Supplemental Table 1 – Functions of the distributions utilized in the probabilistic risk assessment using @Risk software version 7.5.0 (Palisade Corporation, Ithaca, NY)

Name	Function	Min	Mean	Max
Commercial Adult Body Weight Distribution (kg)	RiskExtvalue(73.348,17.204,RiskTruncate(45,159),RiskName("Commercial Adult Body Weight Distribution"))	45	82.86351	159
Recreational Adult Body Weight Distribution (kg)	RiskLoglogistic(-26.286,107.6,9.629,RiskTruncate(40,155),RiskName("Recreational Adult Body Weight Distribution"))	40	83.09947	155
Filipino-American Adult Body Weight Distribution (kg)	RiskExtvalue(62.6791,9.5726,RiskTruncate(45,126),RiskName("Filipino-American Adult Body Weight Distribution"))	45	68.15746	126
Commercial finfish consumption (g/kg-d)	RiskLognorm(0.69063,0.84115,RiskTruncate(0,8.25),RiskShift(-0.0050137),RiskName("Commercial finfish consumption"),RiskCorrmat(Commercial,1))	-0.0050137	0.6747016	8.244987
Commercial shrimp consumption (g/kg-d)	RiskLoglogistic(-0.0040925,0.26596,1.877,RiskTruncate(0,10.37),RiskName("Commercial shrimp consumption"),RiskCorrmat(Commercial,2))	1.73472E-18	0.4211565	10.37
Commercial oyster consumption (g/kg-d)	RiskInvgauss(0.28359,0.077571,RiskTruncate(0,5.59),RiskShift(-0.0018339),RiskName("Commercial oyster consumption"),RiskCorrmat(Commercial,3))	-0.0018339	0.2745509	5.588166
Commercial crab consumption (g/kg-d)	RiskLoglogistic(0.0044641,0.05197,1.4147,RiskTruncate(,6.53),RiskName("Commercial crab consumption"),RiskCorrmat(Commercial,4))	0.0044641	0.1256812	6.53

Name	Function	Min	Mean	Max
Recreational fish consumption (g/kg-d)	RiskLognorm(0.45467,0.4493,RiskTruncate(0,4.1),RiskShift(-0.0076128),RiskName("Recreational fish consumption"),RiskCorrmat(Recreational,1))	-0.0076128	0.441991	4.092387
Recreational shrimp consumption (g/kg-d)	RiskLoglogistic(0.010428,0.1795,1.812,RiskTruncate(,8.09),RiskName("Recreational shrimp consumption"),RiskCorrmat(Recreational,2))	0.010428	0.3079388	8.09
Recreational oyster consumption (g/kg-d)	RiskLoglogistic(0.0053281,0.063046,1.4421,RiskTruncate(,7.55),RiskName("Recreational oyster consumption"),RiskCorrmat(Recreational,3))	0.0053281	0.1479921	7.55
Recreational crab consumption (g/kg-d)	RiskLoglogistic(0.0058625,0.033866,1.212,RiskTruncate(,9.84),RiskName("Recreational crab consumption"),RiskCorrmat(Recreational,4))	0.0058625	0.1159103	9.84
Filipino-American fish consumption (g/kg-d)	RiskExpon(0.78334,RiskTruncate(,5.49),RiskShift(0.11368),RiskName("Filipino-American fish consumption"),RiskCorrmat(Filipino,1))	0.11368	0.8920618	5.60368
Filipino-American shrimp consumption (g/kg-d)	RiskExpon(0.46703,RiskTruncate(,3.22),RiskShift(0.0020181),RiskName("Filipino-American shrimp consumption"),RiskCorrmat(Filipino,2))	0.0020181	0.4657881	3.222018
Filipino-American oyster consumption (g/kg-d)	RiskLognorm(0.14949,0.70558,RiskTruncate(,7.43),RiskShift(0.0093166),RiskName("Filipino-American oyster consumption"),RiskCorrmat(Filipino,3))	0.0093166	0.1448571	7.439317

Name	Function	Min	Mean	Max
Filipino-American crab consumption (g/kg-d)	RiskLognorm(0.069572,0.16379,RiskTruncate(,1.86),RiskShift(0.0062743),RiskName("Filipino-American crab consumption"),RiskCorrmat(Filipino,4))	0.0062743	0.07289762	1.866274
Naphthalene in oiled area fish (ng/g)	RiskLognorm(0.50981,2.037,RiskTruncate(,21.6),RiskShift(0.089548),RiskName("Naphthalene in oiled area fish"),RiskCorrmat(Oiledfish,1))	0.089548	0.5575954	21.68955
Naphthalene in oiled area shrimp (ng/g)	RiskCumul(0,1.03,{0,0.1,0.25,0.35,0.92,1.03},{0,0.57,0.93,0.96,0.98,1},RiskCorrmat(Oiledshrimp,1),RiskName("Naphthalene in oiled area shrimp"))	0	0.1327	1.03
Naphthalene in oiled area oyster (ng/g)	RiskCumul(0,3.83,{0,0.25,3.83},{0,0.957,1},RiskCorrmat(Oiledoyster,1),RiskName("Naphthalene in oiled area oyster"))	0	0.207345	3.83
Naphthalene in oiled area crab (ng/g)	RiskCumul(0,14.7,{0,0.1,0.25,0.6,1.7,2.4,9.6,13,14.7},{0,0.47,0.63,0.74,0.79,0.84,0.89,0.95,1},RiskCorrmat(Oiledcrab,1),RiskName("Naphthalene in oiled area crab"))	0	1.92875	14.7
Naphthalene in non-oiled area fish (ng/g)	RiskLoglogistic(0.0092744,0.12443,1.2138,RiskTruncate(,34.4),RiskName("Naphthalene in non-oiled area fish"),RiskCorrmat(Nonoiledfish,1))	0.0092744	0.4102802	34.4
Naphthalene in non-oiled area shrimp (ng/g)	RiskCumul(0,0.74,{0,0.1,0.25,0.35,0.57,0.74},{0,0.61,0.86,0.92,0.96,1},RiskCorrmat(Nonoiledshrimp,1),RiskName("Naphthalene in non-oiled area shrimp"))	0	0.13685	0.74

Name	Function	Min	Mean	Max
Naphthalene in non-oiled area oyster (ng/g)	RiskCumul(0,6.4,{0,0.1,0.2,0.25,0.3,0.9,1.6,3.2,4.7,6.4},{0,0.37,0.45,0.89,0.93,0.95,0.96,0.97,0.99,1},RiskCorrmat(Nonoiledoyster,1),RiskName("Naphthalene in non-oiled area oyster"))	0	0.3235	6.4
Naphthalene in non-oiled area crab (ng/g)	RiskCumul(0,6.5,{0,0.1,0.2,0.25,0.5,1,2.7,6.5},{0,0.51,0.7,0.88,0.91,0.95,0.975,1},RiskCorrmat(Nonoiledcrab,1),RiskName("Naphthalene in non-oiled area crab"))	0	0.297	6.5
Acenaphthylene in oiled area fish (ng/g)	RiskCumul(0,0.3,{0,0.1,0.2,0.25,0.3},{0,0.31,0.91,0.997,1},RiskCorrmat(Oiledfish,2),RiskName("Acenaphthylene in oiled area fish"))	0	0.1259	0.3
Acenaphthene in oiled area fish (ng/g)	RiskCumul(0,15.2,{0,0.1,0.2,0.25,3.2,8.7,15.2},{0,0.31,0.9,0.986,0.993,0.996,1},RiskCorrmat(Oiledfish,3),RiskName("Acenaphthene in oiled area fish"))	0	0.201075	15.2
Acenaphthene in non-oiled area oyster (ng/g)	RiskCumul(0,2.56,{0,0.1,0.2,0.25,2.56},{0,0.38,0.51,0.99,1},RiskCorrmat(Nonoiledoyster,2),RiskName("Acenaphthene in non-oiled area oyster"))	0	0.16055	2.56
Fluorene in oiled area fish (ng/g)	RiskInvgauss(0.39185,0.28864,RiskTruncate(0,12.49),RiskShift(-0.0084099),RiskName("Fluorene in oiled area fish"),RiskCorrmat(Oiledfish,4))	-0.0084099	0.3834466	12.48159
Fluorene in oiled area shrimp (ng/g)	RiskExpon(0.13977,RiskTruncate(,1),RiskShift(0.047504),RiskName("Fluorene in oiled area shrimp"),RiskCorrmat(Oiledshrimp,2))	0.047504	0.1864939	1.047504

Name	Function	Min	Mean	Max
Fluorene in oiled area crab (ng/g)	RiskCumul(0,3.63,{0,0.1,0.2,0.5,2.65,3.63},{0,0.68,0.79,0.9,0.95,1},RiskCorrmat(Oiledcrab,2),RiskName("Fluorene in oiled area crab"))	0	0.32475	3.63
Fluorene in non-oiled area fish (ng/g)	RiskCumul(0,3,{0,0.1,0.2,0.25,0.5,1,1.5,2,2.5,3},{0,0.34,0.58,0.8,0.87,0.87,0.9,0.96,0.98,1},RiskCorrmat(Nonoiledfish,2),RiskName("Fluorene in non-oiled area fish"))	0	0.37125	3
Fluorene in non-oiled area shrimp (ng/g)	RiskCumul(0,2.72,{0,0.1,0.25,0.5,0.75,0.94,1.12,2.72},{0,0.76,0.86,0.88,0.94,0.96,0.98,1},RiskCorrmat(Nonoiledshrimp,2),RiskName("Fluorene in non-oiled area shrimp"))	0	0.1764	2.72
Fluorene in non-oiled area oyster (ng/g)	RiskCumul(0,1.1,{0,0.1,0.2,0.25,0.61,1.1},{0,0.42,0.54,0.97,0.985,1},RiskCorrmat(Nonoiledoyster,3),RiskName("Fluorene in non-oiled area oyster"))	0	0.155025	1.1
Fluorene in non-oiled area crab (ng/g)	RiskCumul(0,0.5,{0,0.1,0.2,0.25,0.5},{0,0.56,0.7,0.98,1},RiskCorrmat(Nonoiledcrab,2),RiskName("Fluorene in non-oiled area crab"))	0	0.1195	0.5
Phenanthrene in oiled area fish (ng/g)	RiskPearson5(1.3433,0.38367,RiskTruncate(0,55.5),RiskShift(-0.041723),RiskName("Phenanthrene in oiled area fish"),RiskCorrmat(Oiledfish,5))	-0.041723	0.8500915	55.45828
Phenanthrene in oiled area shrimp (ng/g)	RiskInvgauss(1.247,0.16962,RiskTruncate(0,39.6),RiskShift(-0.02003),RiskName("Phenanthrene in oiled area shrimp"),RiskCorrmat(Oiledshrimp,3))	-0.02003	1.174517	39.57997

Name	Function	Min	Mean	Max
Phenanthrene in oiled area oyster (ng/g)	RiskInvgauss(1.7981,0.47003,RiskTruncate(0,37),RiskShift(-0.03245),RiskName("Phenanthrene in oiled area oyster"),RiskCorrmat(Oiledoyster,2))	-0.03245	1.720091	36.96755
Phenanthrene in oiled area crab (ng/g)	RiskCumul(0,22.7,{0,0.1,0.2,0.8,12.9,13.9,15,22.7},{0,0.53,0.69,0.8,0.85,0.9,0.95,1},RiskCorrmat(Oiledcrab,3),RiskName("Phenanthrene in oiled area crab"))	0	2.783	22.7
Phenanthrene in non-oiled area fish (ng/g)	RiskInvgauss(1.2525,0.25015,RiskTruncate(0,30.8),RiskShift(-0.020716),RiskName("Phenanthrene in non-oiled area fish"),RiskCorrmat(Nonoiledfish,3))	-0.020716	1.192392	30.77928
Phenanthrene in non-oiled area shrimp (ng/g)	RiskCumul(0,10.7,{0,0.1,0.25,0.7,1.75,3,4.5,5.2,7,10,10.7},{0,0.69,0.76,0.78,0.82,0.88,0.9,0.94,0.96,0.98,1},RiskCorrmat(Nonoiledshrimp,3),RiskName("Phenanthrene in non-oiled area shrimp"))	0	1.01575	10.7
Phenanthrene in non-oiled area oyster (ng/g)	RiskCumul(0,8.4,{0,0.1,0.2,0.25,0.5,1,1.3,4.2,8.4},{0,0.32,0.46,0.87,0.89,0.95,0.97,0.985,1},RiskCorrmat(Nonoiledoyster,4),RiskName("Phenanthrene in non-oiled area oyster"))	0	0.3405	8.4
Phenanthrene in non-oiled area crab (ng/g)	RiskCumul(0,1.5,{0,0.1,0.2,0.25,0.65,0.85,1.25,1.5},{0,0.51,0.67,0.88,0.93,0.95,0.98,1},RiskCorrmat(Nonoiledcrab,3),RiskName("Phenanthrene in non-oiled area crab"))	0	0.19325	1.5
Anthracene in oiled area fish (ng/g)	RiskCumul(0,4,{0,0.1,0.2,0.25,0.5,1,2,2.4,4},{0,0.29,0.72,0.8,0.86,0.89,0.993,0.997,1},RiskCorrmat(Oiledfish,6),RiskName("Anthracene in oiled area fish"))	0	0.3149	4

Name	Function	Min	Mean	Max
Fluoranthene in oiled area fish (ng/g)	RiskCumul(0,5.2,{0,0.1,0.2,0.25,0.5,1,2.3,2.5,3.4,5.2},{0,0.27,0.75,0.82,0.93,0.96,0.99,0.993,0.996,1},RiskCorrmat(Oiledfish,7),RiskName("Fluoranthene in oiled area fish"))	0	0.24775	5.2
Fluoranthene in oiled area shrimp (ng/g)	RiskCumul(0,0.96,{0,0.1,0.25,0.96},{0,0.68,0.98,1},RiskCorrmat(Oiledshrimp,4),RiskName("Fluoranthene in oiled area shrimp"))	0	0.0986	0.96
Fluoranthene in oiled area oysters (ng/g)	RiskPareto(1.9079,0.2,RiskTruncate(,10.08),RiskName("Fluoranthene in oiled area oysters"),RiskCorrmat(Oiledoyster,3))	0.2	0.4085737	10.08
Fluoranthene in oiled area crab (ng/g)	RiskCumul(0,0.8,{0,0.1,0.2,0.8},{0,0.47,0.89,1},RiskCorrmat(Oiledcrab,4),RiskName("Fluoranthene in oiled area crab"))	0	0.1415	0.8
Fluoranthene in non-oiled area fish (ng/g)	RiskPearson5(2.0339,0.33559,RiskTruncate(0,6.9),RiskShift(-0.016187),RiskName("Fluoranthene in non-oiled area fish"),RiskCorrmat(Nonoiledfish,4))	-0.016187	0.2950051	6.883813
Fluoranthene in non-oiled area oyster (ng/g)	RiskCumul(0,11.7,{0,0.1,0.2,0.25,0.5,1,1.3,2.7,3.7,11.7},{0,0.39,0.5,0.88,0.92,0.92,0.95,0.97,0.99,1},RiskCorrmat(Nonoiledoyster,5),RiskName("Fluoranthene in non-oiled area oyster"))	0	0.352	11.7
Fluoranthene in non-oiled area crab (ng/g)	RiskCumul(0,0.25,{0,0.1,0.2,0.25},{0,0.63,0.79,1},RiskCorrmat(Nonoiledcrab,4),RiskName("Fluoranthene in non-oiled area crab"))	0	0.10275	0.25

Name	Function	Min	Mean	Max
Pyrene in oiled area fish (ng/g)	RiskCumul(0,1.62,{0,0.1,0.2,0.25,0.5,1,1.62},{0,0.32,0.91,0.983,0.986,0.99,1},RiskCorrmat(Oiledfish,8),RiskName("Pyrene in oiled area fish"))	0	0.13815	1.62
Pyrene in oiled area shrimp (ng/g)	RiskCumul(0,1.58,{0,0.1,0.25,0.5,1.58},{0,0.64,0.91,0.98,1},RiskCorrmat(Oiledshrimp,5),RiskName("Pyrene in oiled area shrimp"))	0	0.1263	1.58
Pyrene in oiled area oyster (ng/g)	RiskUniform(0,0.25,RiskCorrmat(Oiledoyster,4),RiskName("Pyrene in oiled area oyster"))	0	0.125	0.25
Pyrene in non-oiled area fish (ng/g)	RiskCumul(0,0.73,{0,0.1,0.2,0.25,0.5,0.65,0.73},{0,0.47,0.72,0.96,0.98,0.99,1},RiskCorrmat(Nonoiledfish,5),RiskName("Pyrene in non-oiled area fish"))	0	0.13515	0.73
Pyrene in non-oiled area oyster (ng/g)	RiskCumul(0,0.25,{0,0.1,0.21,0.25},{0,0.41,0.54,1},RiskCorrmat(Nonoiledoyster,6),RiskName("Pyrene in non-oiled area oyster"))	0	0.14645	0.25
Pyrene in non-oiled area crab (ng/g)	RiskCumul(0,1.2,{0,0.1,0.2,0.25,1.2},{0,0.58,0.74,0.95,1},RiskCorrmat(Nonoiledcrab,5),RiskName("Pyrene in non-oiled area crab"))	0	0.1365	1.2
C1 Naphthalene in oiled area fish (ng/g)	RiskCumul(0,1.95,{0,0.1,0.2,0.25,0.5,1.95},{0,0.3,0.91,0.993,0.996,1},RiskCorrmat(Oiledfish,9),RiskName("C1 naphthalenes in oiled area fish"))	0	0.1312	1.95

Name	Function	Min	Mean	Max
C1 Naphthalene in oiled area crab (ng/g)	RiskCumul(0,1.38,{0,0.1,0.2,0.43,1.18,1.38},{0,0.56,0.83,0.89,0.94,1},RiskCorrmat(Oiledcrab,5),RiskName("C1 naphthalenes in oiled area crab"))	0	0.20445	1.38
C1 Naphthalene in non-oiled area fish (ng/g)	RiskLognorm(0.16796,0.15181,RiskTruncate(,1.4),RiskShift(0.049343),RiskName("C1 Naphthalenes in non-oiled area fish"),RiskCorrmat(Nonoiledfish,6))	0.049343	0.215904	1.449343
C1 Naphthalene in non-oiled area crab (ng/g)	RiskCumul(0,1.1,{0,0.1,0.2,0.25,1.1},{0,0.58,0.77,0.98,1},RiskCorrmat(Nonoiledcrab,6),RiskName("C1 naphthalenes in non-oiled area crab"))	0	0.11825	1.1
C1 Phenanthrene in oiled area fish (ng/g)	RiskCumul(0,2.92,{0,0.1,0.2,0.25,0.5,2.92},{0,0.22,0.75,0.92,0.997,1},RiskCorrmat(Oiledfish,10),RiskName("C1 Phenanthrenes in oiled area fish"))	0	0.162755	2.92
C1 Phenanthrene in oiled area crab (ng/g)	RiskCumul(0,9.21,{0,0.1,0.2,0.25,7.24,9.21},{0,0.56,0.67,0.89,0.94,1},RiskCorrmat(Oiledcrab,6),RiskName("Phenanthrenes in oiled area crab"))	0	0.77475	9.21
C1 Pyrene in non-oiled area crab (ng/g)	RiskCumul(0,0.63,{0,0.1,0.2,0.25,0.63},{0,0.71,0.94,0.98,1},RiskCorrmat(Nonoiledcrab,7),RiskName(" C1 Pyrenes in non-oiled area crab"))	0	0.0878	0.63

Supplemental Table 2 – Correlations utilized in the probabilistic assessment using @Risk software version 7.5.0 (Palisade Corporation, Ithaca, NY)

@RISK Correlations for oiled fish	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	C1 Naphthalenes	C1 Phenanthrenes
Naphthalene	1									
Acenaphthylene	0.43	1								
Acenaphthene	0.21	0	1							
Fluorene	0.42	0	0	1						
Phenanthrene	0.44	0	0	0	1					
Anthracene	0.41	0	0	0	0	1				
Fluoranthene	0.4	0	0	0	0	0	1			
Pyrene	0.36	0	0	0	0	0	0	1		
C1 Naphthalenes	0.29	0	0	0	0	0	0	0	1	
C1 Phenanthrenes	0	0	0	0	0	0	0	0	0	1

@RISK Correlations for oiled shrimp	Naphthalene	Fluorene	Phenanthrene	Fluoranthene	Pyrene
Naphthalene	1				
Fluorene	0.48	1			
Phenanthrene	0.36	0	1		
Fluoranthene	0.51	0	0	1	
Pyrene	0.33	0	0	0	1

@RISK Correlations for oiled oyster	Naphthalene	Phenanthrene	Fluoranthene	Pyrene
Naphthalene	1			
Phenanthrene	0.34	1		
Fluoranthene	0.55	0	1	
Pyrene	0.52	0	0	1

@RISK Correlations for oiled crab	Naphthalene	Fluorene	Phenanthrene	Fluoranthene	C1 Naphthalenes	C1 Phenanthrenes
Naphthalene	1					
Fluorene	0.39	1				
Phenanthrene	0.44	0	1			
Fluoranthene	0.22	0	0	1		
C1 Naphthalenes	0.22	0	0	0	1	
C1 Phenanthrenes	0.3	0	0	0	0	1

@RISK Correlations for non-oiled fish	Naphthalene	Fluorene	Phenanthrene	Fluoranthene	Pyrene	C1 Naphthalenes
Naphthalene	1					
Fluorene	0.4	1				
Phenanthrene	0.43	0	1			
Fluoranthene	0.47	0	0	1		
Pyrene	0.4	0	0	0	1	
C1 Naphthalenes	0.2	0	0	0	0	1

@RISK Correlations for non-oiled shrimp	Naphthalene	Fluorene	Phenanthrene
Naphthalene	1		
Fluorene	0.53	1	
Phenanthrene	0.38	0	1

@RISK Correlations for non-oiled oyster	Naphthalene	Acenaphthene	Fluorene	Phenanthrene	Fluoranthene	Pyrene
Naphthalene	1					
Acenaphthene	0.39	1				
Fluorene	0.39	0.39	1			
Phenanthrene	0.39	0.39	0.39	1		
Fluoranthene	0.39	0.39	0.39	0.39	1	
Pyrene	0.39	0.39	0.39	0.39	0.39	1

@RISK Correlations for non-oiled crab	Naphthalene	Fluorene	Phenanthrene	Fluoranthene	Pyrene	C1 Naphthalenes	C1 Pyrenes
Naphthalene	1						
Fluorene	0.28	1					
Phenanthrene	0.28	0.28	1				
Fluoranthene	0.28	0.28	0.28	1			
Pyrene	0.28	0.28	0.28	0.28	1		
C1 Naphthalenes	0.28	0.28	0.28	0.28	0.28	1	
C1 Pyrenes	0.28	0.28	0.28	0.28	0.28	0.28	1

@RISK Correlations for commercial workers	Finfish	Shrimp	Oyster	Blue crab
Finfish (g/kg-d)	1			
Shrimp (g/kg-d)	0.43	1		
Oyster (g/kg-d)	0.23	0.19	1	
Blue crab (g/kg-d)	0.43	0.33	0.23	1

@RISK Correlations for recreational fishers	Finfish	Shrimp	Oyster	Blue crab
Finfish (g/kg-d)	1			
Shrimp (g/kg-d)	0.42	1		
Oyster (g/kg-d)	0.38	0.1	1	
Blue crab (g/kg-d)	0.19	0.14	0.35	1

@RISK Correlations for Filipino-Americans	Finfish	Shrimp	Oyster	Blue crab
Finfish (g/kg-d)	1			
Shrimp (g/kg-d)	0.52	1		
Oyster (g/kg-d)	0.17	0	1	
Blue crab (g/kg-d)	0.25	0.55	0.31	1