

BAB 2

Chapter 2

Kualiti Air Sungai
River Water Quality

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PENGAWASAN KUALITI AIR SUNGAI

Jabatan Alam Sekitar (JAS) meneruskan program pengawasan kualiti air sungai pada tahun 2016 bagi menentukan kualiti air sungai dan mengesan perubahan ke atas kualiti air sungai. Sampel-sampel air sungai diambil daripada stesen-stesen yang telah ditetapkan dan diukur kualitinya secara *in-situ* serta dihantar ke makmal untuk dianalisis bagi tujuan menentukan kriteria dari segi fizik-kimia dan biologi. Indeks Kualiti Air (IKA) digunakan untuk mengukur tahap pencemaran dan kesesuaian jenis guna air seperti yang digariskan oleh Standard Kualiti Air Negara (rujuk **ANNEX**). IKA telah diperolehi berdasarkan kepada parameter oksigen terlarut (DO), keperluan oksigen biokimia (BOD), keperluan oksigen kimia (COD), ammonia nitrogen ($\text{NH}_3\text{-N}$), pepejal terampai (SS) dan pH. Pada tahun 2016, kualiti air sungai telah dinilai berdasarkan kepada sejumlah 5,256 sampel air sungai yang telah diambil daripada 891 stesen pengawasan manual yang terletak di 477 sungai. Stesen-stesen tersebut adalah terdiri daripada 801 stesen ambien dan *baseline*, 55 stesen di hulu muka sauk terpilih, dan 35 stesen bagi projek *River of Life* (RoL). Kualiti air sungai turut dinilai berdasarkan data daripada 10 stesen pengawasan automatik.

RIVER WATER QUALITY MONITORING

The Department of Environment (DOE) continues with the river water quality monitoring programme in 2016 to determine the status of river water quality and to detect changes in river water quality. Water samples were collected at regular intervals from designated stations for in-situ and laboratory analysis to determine its physico-chemical and biological characteristics. The Water Quality Index (WQI) is used to indicate the level of pollution and the corresponding suitability in terms of water uses according to the National Water Quality Standards for Malaysia (refer to **ANNEX**). The WQI was derived based on dissolved oxygen (DO), biochemical oxygen demand (BOD), chemical oxygen demand (COD), ammoniacal nitrogen ($\text{NH}_3\text{-N}$), Suspended Solids (SS) and pH. In 2016, the river water quality was evaluated based on a total of 5,256 samples taken from 891 manual monitoring stations located at 477 rivers. The stations comprised of 801 ambient and baseline stations, 55 stations at selected upstream water intakes, and 35 stations for River of Life (ROL) project. Water quality was also evaluated from 10 continuous water quality monitoring stations.

STATUS KUALITI AIR SUNGAI

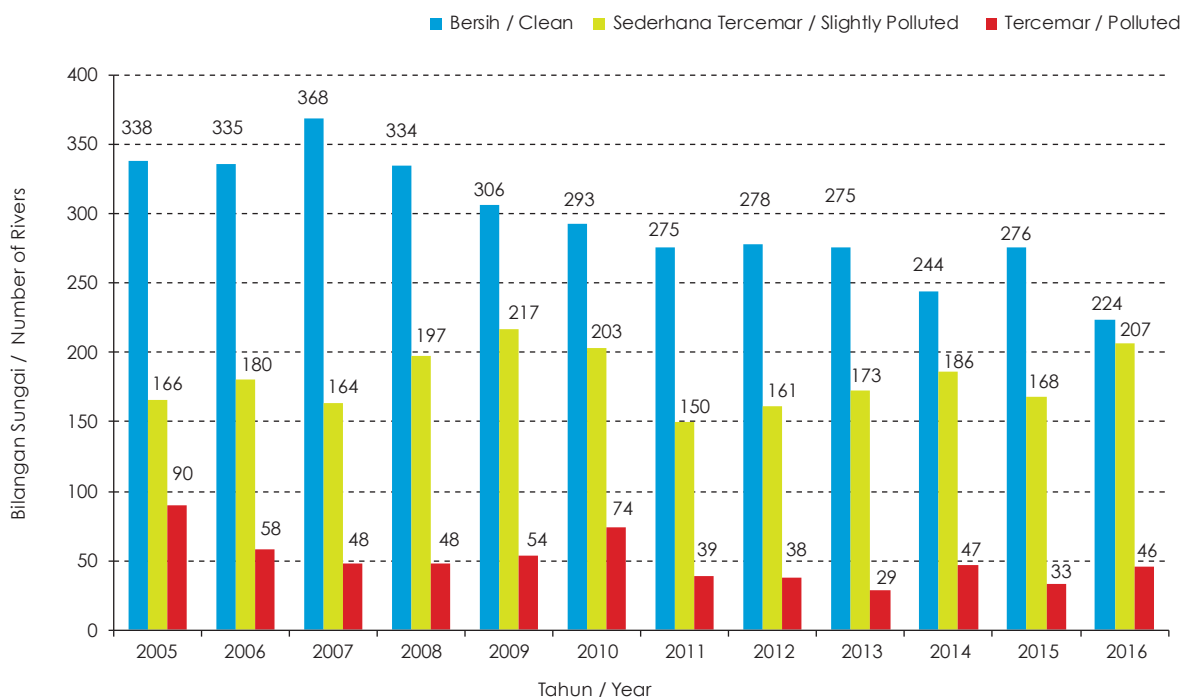
Daripada 477 sungai yang diawasi, 224 (47%) didapati bersih, 207 (43%) sederhana tercemar, 46 (10%) adalah tercemar (**Rajah 2.1**). Tren kualiti air sungai-sungai yang diawasi adalah seperti dalam **Jadual 2.1, Jadual 2.2 dan Jadual 2.3**.

Seperti tahun sebelumnya, pencemar utama yang dikesan adalah Keperluan Oksigen Biokimia (BOD), Ammonia Nitrogen (NH₃-N) dan Pepejal Terampai (SS). BOD yang tinggi kerap kali dikaitkan dengan kumbahan dan effluen yang sebahagiannya dirawat daripada industri-industri pengilangan dan berasaskan pertanian. Punca utama NH₃-N pula boleh dikaitkan dengan aktiviti penternakan dan kumbahan domestik manakala punca utama SS adalah kerja-kerja tanah yang tidak teratur dan aktiviti pembukaan tanah.

RIVER WATER QUALITY STATUS

Out of 477 rivers monitored, 224 (47%) were found to be clean, 207 (43%) slightly polluted and 46 (10%) polluted (**Figure 2.1**). The trend of river water quality is shown in **Tables 2.1, Table 2.2 and Table 2.3**.

As in previous years, the major pollutants detected were Biochemical Oxygen Demand (BOD), Ammoniacal Nitrogen (NH₃-N) and Suspended Solid (SS). High BOD can be attributed to adequate partially treated sewage and effluent from agro-based and manufacturing industries. The main sources of NH₃-N were animal farming and domestic sewage whilst the sources for SS were earthworks and land clearing activities.



Rajah 2.1 Malaysia : Tren Kualiti Air Sungai, 2005 - 2016
 Figure 2.1 Malaysia : River Water Quality Trend, 2005 - 2016

Jadual 2.1 Malaysia: Status Kualiti Air bagi Sungai Bersih, 2016
Table 2.1 Malaysia: Water Quality Status of Clean Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
PERLIS	SG. PERLIS	SG. WANG KELIAN	1	89	B/C	II	89	B/C	II
		SG. PELARIT	1	93	B/C	I	88	B/C	II
		SG. JARUM	1	74	ST/SP	III	82	B/C	II
		SG. JERNIH	1	85	B/C	II	82	B/C	II
KEDAH (LANGKAWI)	SG. KISAP	SG. KISAP	1	93	B/C	I	90	B/C	II
	SG. MELAKA	SG. PETANG	1	93	B/C	I	91	B/C	II
KEDAH	SG. KEDAH	SG. JANING	1	93	B/C	I	91	B/C	II
		SG. PEDU	1	86	B/C	II	88	B/C	II
		SG. PADANG TERAP	3	84	B/C	II	84	B/C	II
	SG. MERBOK	SG. TUPAH	1	93	B/C	I	91	B/C	II
		SG. TOK PAWANG	1	85	B/C	II	88	B/C	II
KEDAH/ P.PINANG	SG. MUDA	SG. CHEPIR	1	85	B/C	II	89	B/C	II
		SG. KETIL	2	81	B/C	II	85	B/C	II
		SG. KARANGAN	1	88	B/C	II	84	B/C	II
		SG. MUDA	4	85	B/C	II	84	B/C	II
P.PINANG	SG. JAWI	SG. JUNJONG	1	90	B/C	II	90	B/C	II
	SG. PINANG	SG. AIR TERJUN	1	87	B/C	II	89	B/C	II
	SG. KLUANG	SG. ARA	2	87	B/C	II	84	B/C	II
P.PINANG/ KEDAH/ PERAK	SG. KERIAN	SG. KECHIL	1	90	B/C	II	86	B/C	II
		SG. KERIAN	4	84	B/C	II	81	B/C	II
PERAK	SG. BRUAS	SG. ROTAN	1	92	B/C	II	89	B/C	II
		SG. DANDANG	1	88	B/C	II	87	B/C	II
		SG. BRUAS	3	84	B/C	II	82	B/C	II
	SG. KURAU	SG. ARA	2	92	B/C	II	89	B/C	II
	SG. PERAK	SG. CHEPOR	1	91	B/C	II	90	B/C	II
		SG. KINJANG	1	88	B/C	II	90	B/C	II
		SG. CHENDERIANG	1	81	B/C	II	87	B/C	II
		SG. KLAH	1	88	B/C	II	86	B/C	II
		SG. SUNGKAI	2	86	B/C	II	86	B/C	II
		SG. BIDOR	3	83	B/C	II	85	B/C	II
		SG. KAMPAR	2	88	B/C	II	85	B/C	II
		SG. BATANG PADANG	3	84	B/C	II	82	B/C	II
		SG. PERAK	8	84	B/C	II	82	B/C	II
		SG. RAIA	2	88	B/C	II	81	B/C	II
	SG. RAJA HITAM	SG. NYIOR	1	93	B/C	I	92	B/C	II
	SG. SEPETANG	SG. JANA	1	93	B/C	I	93	B/C	I
		SG. LIMAU	1	90	B/C	II	87	B/C	II
		SG. TEMERLOH	2	89	B/C	II	87	B/C	II
		SG. TRONG	1	92	B/C	II	86	B/C	II
		SG. BATU TEGOH	3	87	B/C	II	85	B/C	II

Jadual 2.1 Malaysia: Status Kualiti Air bagi Sungai Bersih, 2016
Table 2.1 Malaysia: Water Quality Status of Clean Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
SELANGOR/ PERAK	SG. BERNAM	SG. INKI	1	90	B/C	II	90	B/C	II
		SG. TROLAK	1	89	B/C	II	88	B/C	II
		SG. SLIM	2	87	B/C	II	86	B/C	II
		SG. BERNAM	4	86	B/C	II	84	B/C	II
SELANGOR	SG. SELANGOR	SG. KERLING	1	88	B/C	II	89	B/C	II
		SG. KANCHING	1	90	B/C	II	88	B/C	II
		SG. SERENDAH	1	88	B/C	II	87	B/C	II
		SG. BATANG KALI	1	87	B/C	II	84	B/C	II
		SG. SELANGOR	4	80	ST/SP	II	83	B/C	II
SG. SEPANG	SG. SEPANG	2	76	ST/SP	III	81	B/C	II	
SELANGOR/ WPKL	SG. KLANG	SG. PENCHALA	1	88	B/C	II	85	B/C	II
SELANGOR/ PUTRAJAYA/ N.SEMBILAN	SG. LANGAT	SG. LUI	1	90	B/C	II	89	B/C	II
		SG. CHUAU	2	88	B/C	II	86	B/C	II
MELAKA/N. SEMBILAN	SG. MELAKA	SG. TAMPIN	1	89	B/C	II	89	B/C	II
		SG. BATANG MELAKA	2	82	B/C	II	81	B/C	II
		SG. KEMUNTING	1	85	B/C	II	81	B/C	II
	SG. LINGGI	SG. BATANG PENAR	1	90	B/C	II	89	B/C	II
		SG. PEDAS	1	84	B/C	II	87	B/C	II
		SG. KUNDUR BESAR	1	82	B/C	II	86	B/C	II
		SG. REMBAU	2	84	B/C	II	86	B/C	II
		SG. SIPUT	1	83	B/C	II	84	B/C	II
SG. CHEMBONG	1	75	ST/SP	III	83	B/C	II		
MELAKA	SG. KESANG	SG. CHO HONG	2	87	B/C	II	86	B/C	II
	SG. DUYONG	SG. GAPAM	1	90	B/C	II	84	B/C	II
JOHOR	SG. BATU PAHAT	SG. BANTANG	1	93	B/C	I	92	B/C	II
		SG. MEREK	1	85	B/C	II	85	B/C	II
		SG. CHAAH	1	83	B/C	II	82	B/C	II
	SG. JOHOR	SG. BUKIT BESAR	1	82	B/C	II	89	B/C	II
		SG. PELEPAH	2	88	B/C	II	89	B/C	II
		SG. TELOR	1	88	B/C	II	88	B/C	II
		SG. LAYANG	1	87	B/C	II	87	B/C	II
		SG. REMIS	1	88	B/C	II	87	B/C	II
		SG. SEMANGAR	1	88	B/C	II	87	B/C	II
		SG. LINGGIU	1	86	B/C	II	85	B/C	II
		SG. SAYONG	4	83	B/C	II	84	B/C	II
		SG. JOHOR	4	80	ST/SP	II	83	B/C	II
		SG. LAYAU KIRI	1	86	B/C	II	83	B/C	II
	SG. BELITONG	1	84	B/C	II	81	B/C	II	
SG. PALOI	SG. PALOI	1	78	ST/SP	II	84	B/C	II	
SG. SEDILI BESAR	SG. AMBAT	1	79	ST/SP	II	83	B/C	II	
	SG. DOHOL	1	83	B/C	II	82	B/C	II	
	SG. TEMUBOR KANAN	1	79	ST/SP	II	81	B/C	II	

Jadual 2.1 Malaysia: Status Kualiti Air bagi Sungai Bersih, 2016
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NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
JOHOR/ N.SEMBILAN/ PAHANG	SG. MUAR	SG. AIR PANAS	1	92	B/C	II	90	B/C	II
		SG. JUASSEH	1	92	B/C	II	88	B/C	II
		SG. MUAR	8	83	B/C	II	81	B/C	II
PAHANG/ JOHOR	SG. ENDAU	SG. JASIN	1	91	B/C	II	90	B/C	II
		SG. SELAI	1	86	B/C	II	88	B/C	II
		SG. ENDAU	3	85	B/C	II	83	B/C	II
		SG. KAHANG	1	84	B/C	II	83	B/C	II
PAHANG/ N.SEMBILAN	SG. PAHANG	SG. TERANUM	1	91	B/C	II	91	B/C	II
		SG. TERAS	1	92	B/C	II	90	B/C	II
		SG. BENUS	2	90	B/C	II	89	B/C	II
		SG. KELAU	1	91	B/C	II	89	B/C	II
		SG. LIPIS	3	90	B/C	II	88	B/C	II
		SG. TELANG	1	87	B/C	II	87	B/C	II
		SG. TEMBELING	1	88	B/C	II	87	B/C	II
		SG. PERTING	1	90	B/C	II	86	B/C	II
		SG. TAHAN	1	89	B/C	II	86	B/C	II
		SG. TANGLIR	1	87	B/C	II	86	B/C	II
		SG. KOYAN	1	88	B/C	II	85	B/C	II
		SG. LEPAR	3	85	B/C	II	85	B/C	II
		SG. LUIT	1	81	B/C	II	85	B/C	II
		SG. BENTONG	1	90	B/C	II	84	B/C	II
		SG. MARAN	1	85	B/C	II	84	B/C	II
		SG. SEMANTAN	4	85	B/C	II	84	B/C	II
		SG. TEKAL	1	83	B/C	II	84	B/C	II
		SG. JEMPOL	2	86	B/C	II	83	B/C	II
		SG. KERTAM	1	86	B/C	II	83	B/C	II
		SG. KUNDANG	1	84	B/C	II	83	B/C	II
		SG. T. PAYA BUNGOR	1	80	ST/SP	II	83	B/C	II
		SG. TRIANG	2	83	B/C	II	83	B/C	II
		SG. JELAI	2	86	B/C	II	82	B/C	II
		SG. PAHANG	8	83	B/C	II	82	B/C	II
SG. TERIS	3	84	B/C	II	82	B/C	II		
SG. BERKAPOR	1	86	B/C	II	81	B/C	II		
SG. CHINI	1	78	ST/SP	II	81	B/C	II		
PAHANG	SG. BERTAM	SG. BURUNG	1	89	B/C	II	90	B/C	II
		SG. HABU	1	90	B/C	II	87	B/C	II
		SG. TRINGKAP	1	85	B/C	II	87	B/C	II
		SG. LENGGOK	1	80	ST/SP	II	85	B/C	II
		SG. RINGLET	1	83	B/C	II	84	B/C	II
		SG. TERLA	1	84	B/C	II	83	B/C	II
		SG. TELOM	2	77	ST/SP	II	82	B/C	II
	SG. CHERATING	SG. CHERATING	1	77	ST/SP	II	82	B/C	II
	SG. KUANTAN	SG. KENAU	1	90	B/C	II	82	B/C	II
		SG. PANDAN	1	89	B/C	II	82	B/C	II
	SG. MERCHONG	SG. MERCHONG	1	81	B/C	II	82	B/C	II
	SG. ROMPIN	SG. PONTIAN	1	80	ST/SP	II	85	B/C	II
		SG. PUKIN	1	83	B/C	II	85	B/C	II
		SG. KERATONG	2	83	B/C	II	82	B/C	II

Jadual 2.1 Malaysia: Status Kualiti Air bagi Sungai Bersih, 2016
Table 2.1 Malaysia: Water Quality Status of Clean Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
TERENGGANU	SG. BESUT	SG. BESUT	2	86	B/C	II	86	B/C	II
	SG. DUNGUN	SG. DUNGUN	4	88	B/C	II	85	B/C	II
	SG. KEMAMAN	SG. CHERUL	1	81	B/C	II	81	B/C	II
		SG. KEMAMAN	2	85	B/C	II	81	B/C	II
	SG. SETIU	SG. SETIU	2	90	B/C	II	82	B/C	II
	SG. TERENGGANU	SG. BERANG	1	86	B/C	II	89	B/C	II
		SG. PUEH	1	87	B/C	II	87	B/C	II
		SG. TELEMONG	1	86	B/C	II	87	B/C	II
		SG. NERUS	1	82	B/C	II	84	B/C	II
		SG. TERENGGANU	3	83	B/C	II	84	B/C	II
KELANTAN	SG. GOLOK	SG. GOLOK	5	88	B/C	II	86	B/C	II
		SG. LANAS	1	87	B/C	II	84	B/C	II
	SG. KELANTAN	SG. BER	1	92	B/C	II	91	B/C	II
		SG. PERGAU	6	89	B/C	II	89	B/C	II
		SG. TUANG	1	90	B/C	II	88	B/C	II
		SG. BELATOP	2	87	B/C	II	87	B/C	II
		SG. BETIS	1	89	B/C	II	87	B/C	II
		SG. BEROK	3	85	B/C	II	84	B/C	II
		SG. GALAS	5	86	B/C	II	84	B/C	II
		SG. KERILLA	1	89	B/C	II	84	B/C	II
		SG. LEBIR	3	82	B/C	II	84	B/C	II
		SG. NAL	2	87	B/C	II	83	B/C	II
		SG. NENGGIRI	3	83	B/C	II	83	B/C	II
		SG. RELAI	1	82	B/C	II	82	B/C	II
SABAH	SG. APAS	SG. APAS	1	85	B/C	II	83	B/C	II
	SG. BALUNG	SG. BALUNG	1	78	ST/SP	II	83	B/C	II
	SG. BENGKOKA	SG. BENGKOKA	2	88	B/C	II	82	B/C	II
	SG. BINGKONGAN	SG. MENGGARIS	2	90	B/C	II	86	B/C	II
		SG. BANDAU	1	89	B/C	II	85	B/C	II
		SG. BINGKONGAN	2	90	B/C	II	85	B/C	II
		SG. TANDEK	1	88	B/C	II	85	B/C	II
	SG. BRANTIAN	SG. BRANTIAN	1	84	B/C	II	82	B/C	II
	SG. KALUMPANG	SG. KALUMPANG	3	76	ST/SP	III	81	B/C	II
	SG. KEDAMAIAN	SG. KEDAMAIAN	1	83	B/C	II	88	B/C	II
		SG. WARIU	1	85	B/C	II	87	B/C	II
		SG. TEMPASUK	2	84	B/C	II	85	B/C	II
	SG. KINABATANGAN	SG. KOYAH	1	81	B/C	II	87	B/C	II
		SG. KARAMUAK	1	88	B/C	II	86	B/C	II
		SG. MENANGGUL	1	81	B/C	II	85	B/C	II
		SG. KINABATANGAN	3	78	ST/SP	II	81	B/C	II
	SG. LABOK	SG. KINIPIR	2	90	B/C	II	89	B/C	II
		SG. LIWAGU	2	87	B/C	II	88	B/C	II
		SG. MALIAU	1	88	B/C	II	88	B/C	II
		SG. LABOK	1	83	B/C	II	85	B/C	II
SG. TUNGUD		1	79	ST/SP	II	84	B/C	II	
SG. LAKUTAN	SG. LAKUTAN	1	91	B/C	II	86	B/C	II	
SG. LIKAS	SG. MENGGATAL	2	88	B/C	II	85	B/C	II	
SG. LINGKUNGAN	SG. BUKAU	1	84	B/C	II	86	B/C	II	
	SG. LINGKUNGAN	1	86	B/C	II	84	B/C	II	

Jadual 2.1 Malaysia: Status Kualiti Air bagi Sungai Bersih, 2016
Table 2.1 Malaysia: Water Quality Status of Clean Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016			
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	
	SG. MENGGALONG	SG. MENGGALONG	2	88	B/C	II	87	B/C	II	
	SG. MEROTAI	SG. MEROTAI	3	86	B/C	II	85	B/C	II	
	SG. MOUNAD	SG. MOUNAD	2	87	B/C	II	86	B/C	II	
	SG. MOYOG	SG. MOYOG	4	86	B/C	II	87	B/C	II	
	SG. PADAS	SG. BUNSIT		1	92	B/C	II	90	B/C	II
		SG. LIAWAN		1	91	B/C	II	88	B/C	II
		SG. PEGALAN		3	85	B/C	II	87	B/C	II
		SG. TANDULU		1	92	B/C	II	87	B/C	II
	SG. PAPAR	SG. PAPAR	3	84	B/C	II	85	B/C	II	
	SG. SAPI	SG. SUALONG	1	90	B/C	II	87	B/C	II	
	SG. SEGAMA	SG. SEGAMA	3	83	B/C	II	87	B/C	II	
	SG. SILABUKAN	SG. SILABUKAN	2	83	B/C	II	87	B/C	II	
	SG. SUGUT	SG. MERALI		1	90	B/C	II	92	B/C	II
		SG. BONGKUD		1	91	B/C	II	91	B/C	II
		SG. LOHAN		1	89	B/C	II	91	B/C	II
		SG. SUGUT		3	89	B/C	II	89	B/C	II
	SG. TAWAU	SG. TAWAU	4	87	B/C	II	86	B/C	II	
	SG. TELIPOK	SG. TELIPOK	2	74	ST/SP	III	86	B/C	II	
	SG. TENGHILAN	SG. TENGHILAN	1	74	ST/SP	III	83	B/C	II	
	SG. TINGKAYU	SG. TINGKAYU	2	76	ST/SP	III	86	B/C	II	
SG. TUARAN	SG. SONG SAI		1	88	B/C	II	87	B/C	II	
	SG. TUARAN		2	90	B/C	II	87	B/C	II	
SG. TUNGKU	SG. TUNGKU	2	82	B/C	II	83	B/C	II		
SARAWAK	SG. BARAM	SG. TUTUH	1	91	B/C	II	82	B/C	II	
	SG. LAWAS	SG. LAWAS	3	84	B/C	II	82	B/C	II	
	SG. LIMBANG	SG. LIMBANG	5	80	ST/SP	II	81	B/C	II	
	SG. LUPAR	SG. AI		2	91	B/C	II	87	B/C	II
		SG. SETERAP		1	82	B/C	II	83	B/C	II
		SG. LUPAR		3	82	B/C	II	81	B/C	II
	SG. MIRI	SG. PADANG LIKU	1	84	B/C	II	88	B/C	II	
	SG. NIAH	SG. NIAH	2	85	B/C	II	81	B/C	II	
	SG. RAJANG	SG. BINATANG		1	84	B/C	II	85	B/C	II
		SG. KANOWIT		1	85	B/C	II	82	B/C	II
		SG. SARIKEI		2	83	B/C	II	82	B/C	II
	SG. SADONG	SG. SADONG		4	83	B/C	II	82	B/C	II
		SG. KARANGAN		2	79	ST/SP	II	81	B/C	II
	SG. SARAWAK	SG. SEMADANG		1	88	B/C	II	88	B/C	II
		SG. SAMARAHAN		2	81	B/C	II	81	B/C	II
		SG. SARAWAK KANAN		1	82	B/C	II	81	B/C	II
	SG. SARIBAS	SG. LAYAR	2	85	B/C	II	84	B/C	II	
	SG. SEMUNSAM	SG. SEMUNSAM	1	84	B/C	II	83	B/C	II	
	SG. SIBUTI	SG. SIBUTI		2	83	B/C	II	82	B/C	II
		SG. SATAP		1	85	B/C	II	81	B/C	II
SG. TATAU	SG. TATAU	1	85	B/C	II	81	B/C	II		
SG. TRUSAN	SG. TRUSAN	1	78	ST/SP	II	82	B/C	II		

Nota / Note: B / C : Bersih / Clean ST/SP: Sederhana tercemar / Slightly polluted T/P : Tercemar / Polluted

Jadual 2.2 Malaysia: Status Kualiti Air Sungai bagi Sungai Sederhana Tercemar, 2016
 Table 2.2 Malaysia: Water Quality Status of Slightly Polluted Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016			
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	
PERLIS	SG. PERLIS	SG. NGULANG	1	81	B/C	II	79	ST/SP	II	
		SG. PERLIS	1	69	ST/SP	III	70	ST/SP	III	
KEDAH (LANGKAWI)	SG. MELAKA	SG. MELAKA	5	75	ST/SP	III	78	ST/SP	II	
KEDAH	SG. KEDAH	SG. TEKAI	1	85	B/C	II	77	ST/SP	II	
		SG. PENDANG	1	78	ST/SP	II	72	ST/SP	III	
		SG. KEDAH	1	77	ST/SP	II	68	ST/SP	III	
	SG. MERBOK	SG. MERBOK	1	69	ST/SP	III	70	ST/SP	III	
		SG. BONGKOK	1	68	ST/SP	III	68	ST/SP	III	
KEDAH/ P.PINANG	SG. MUDA	SG. SEDIM	1	85	B/C	II	78	ST/SP	II	
		SG. PEGANG	1	92	B/C	II	76	ST/SP	III	
		SG. JERONG	1	78	ST/SP	II	71	ST/SP	III	
P.PINANG	SG. BAYAN LEPAS	SG. TIRAM	2	75	ST/SP	III	72	ST/SP	III	
		SG. BAYAN LEPAS	1	68	ST/SP	III	68	ST/SP	III	
	SG. JAWI	SG. MACHANG BUBOK	1	78	ST/SP	II	77	ST/SP	II	
		SG. KILANG UBI	4	71	ST/SP	III	69	ST/SP	III	
	SG. JURU	SG. PASIR	1	70	ST/SP	III	63	ST/SP	III	
		SG. RELAU	1	79	ST/SP	II	67	ST/SP	III	
	SG. PINANG	SG. DONDANG	1	66	ST/SP	III	69	ST/SP	III	
		SG. AIR ITAM	5	67	ST/SP	III	65	ST/SP	III	
P.PINANG/ KEDAH	SG. PERAI	SG. KULIM	2	82	B/C	II	79	ST/SP	II	
		SG. JARAK	3	77	ST/SP	II	74	ST/SP	III	
		SG. KELADI	1	81	B/C	II	71	ST/SP	III	
P.PINANG / KEDAH / PERAK	SG. KERIAN	SG. SELAMA	2	81	B/C	II	76	ST/SP	III	
PERAK	SG. KURAU	SG. KURAU	4	81	B/C	II	79	ST/SP	II	
		SG. KUANG	1	84	B/C	II	79	ST/SP	II	
		SG. KERDAH	1	86	B/C	II	78	ST/SP	II	
		SG. KINTA	6	82	B/C	II	74	ST/SP	III	
		SG. KANGSAR	1	82	B/C	II	73	ST/SP	III	
		SG. KEPAYANG	2	75	ST/SP	III	73	ST/SP	III	
		SG. PELUS	2	79	ST/SP	II	72	ST/SP	III	
		SG. PINJI	2	72	ST/SP	III	66	ST/SP	III	
		SG. SELUANG	1	61	ST/SP	III	65	ST/SP	III	
		SG. TUMBOH	1	71	ST/SP	III	65	ST/SP	III	
	SG. PERAK	SG. PARI	1	78	ST/SP	II	63	ST/SP	III	
		SG. SEROKAI	1	75	ST/SP	III	62	ST/SP	III	
		SG. RAJA HITAM	SG. MANJONG	2	74	ST/SP	III	71	ST/SP	III
			SG. RAJA HITAM	2	68	ST/SP	III	63	ST/SP	III
		SG. SEPETANG	SG. SEPETANG	2	79	ST/SP	II	69	ST/SP	III
		SG. WANGI	SG. DERALIK	1	71	ST/SP	III	71	ST/SP	III
			SG. WANGI	1	81	B/C	II	63	ST/SP	III
SELANGOR	SG. SELANGOR	SG. SEMBAH	1	78	ST/SP	II	74	ST/SP	III	
	SG. TENGI	SG. TENGI	3	76	ST/SP	III	74	ST/SP	III	
	SG. BULOH	SG. BULOH	4	63	ST/SP	III	61	ST/SP	III	

Jadual 2.2 Malaysia: Status Kualiti Air Sungai bagi Sungai Sederhana Tercemar, 2016
 Table 2.2 Malaysia: Water Quality Status of Slightly Polluted Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
SELANGOR / PUTRAJAYA/ N.SEMBILAN	SG. LANGAT	SG. JIJAN	1	84	B/C	II	76	ST/SP	III
		SG. SEMENYIH	1	81	B/C	II	76	ST/SP	III
		SG. ANAK CHUAU	1	77	ST/SP	II	74	ST/SP	III
		SG. PAJAM	1	72	ST/SP	III	72	ST/SP	III
		SG. BATANG NILAI	1	63	ST/SP	III	64	ST/SP	III
		SG. LANGAT	7	70	ST/SP	III	64	ST/SP	III
SELANGOR/ WPKL	SG. KLANG	SG. SEMELAH	1	84	B/C	II	80	ST/SP	II
		SG. BATU	4	81	B/C	II	75	ST/SP	III
		SG. ANAK AIR BATU	1	77	ST/SP	II	74	ST/SP	III
		SG. KEROH	2	77	ST/SP	II	73	ST/SP	III
		SG. GOMBAK	3	75	ST/SP	III	72	ST/SP	III
		SG. RASAU	1	80	ST/SP	II	72	ST/SP	III
		SG. DAMANSARA	2	78	ST/SP	II	70	ST/SP	III
		SG. AMPANG	2	71	ST/SP	III	63	ST/SP	III
		SG. JINJANG	3	67	ST/SP	III	63	ST/SP	III
		SG. KLANG	8	68	ST/SP	III	63	ST/SP	III
	SG. TOBA	1	58	T/P	III	62	ST/SP	III	
	SG. UNTUT	1	60	ST/SP	III	61	ST/SP	III	
MELAKA	SG. KESANG	SG. KESANG	3	76	ST/SP	III	76	ST/SP	III
	SG. DUYONG	SG. DUYONG	3	72	ST/SP	III	67	ST/SP	III
	SG. MERLIMAU	SG. MERLIMAU	2	64	ST/SP	III	60	ST/SP	III
MELAKA / N.SEMBILAN	SG. MELAKA	SG. DUSUN	1	85	B/C	II	80	ST/SP	II
		SG. DURIAN TUNGGAL	1	80	ST/SP	II	73	ST/SP	III
		SG. MELAKA	1	77	ST/SP	II	71	ST/SP	III
	SG. LINGGI	SG. KEPAYONG	1	74	ST/SP	III	80	ST/SP	II
		SG. SIMIN	1	73	ST/SP	III	80	ST/SP	II
	SG. LINGGI	5	74	ST/SP	III	76	ST/SP	III	
JOHOR	SG. BATU PAHAT	SG. LENIK	1	82	B/C	II	80	ST/SP	II
		SG. SEMBERONG	2	57	T/P	III	78	ST/SP	II
		SG. AMRAN	1	65	ST/SP	III	74	ST/SP	III
		SG. BEKOK	5	76	ST/SP	III	73	ST/SP	III
		SG. BERLIAN	1	70	ST/SP	III	69	ST/SP	III
		SG. BATU PAHAT	1	61	ST/SP	III	66	ST/SP	III
		SG. SIMPANG KIRI	3	65	ST/SP	III	66	ST/SP	III
		SG. MERPO	1	65	ST/SP	III	64	ST/SP	III
	SG. BENUT	SG. ULU BENUT	1	76	ST/SP	III	72	ST/SP	III
		SG. PARIT HJ. YASSIN	1	77	ST/SP	II	71	ST/SP	III
		SG. BENUT	4	64	ST/SP	III	68	ST/SP	III
		SG. PINGGAN	1	61	ST/SP	III	64	ST/SP	III
	SG. JEMALUANG	SG. JEMALUANG	2	78	ST/SP	II	79	ST/SP	II
	SG. JOHOR	SG. PANTI	1	80	ST/SP	II	80	ST/SP	II
		SG. SANTI	1	82	B/C	II	80	ST/SP	II
		SG. PENGGELI	2	81	B/C	II	79	ST/SP	II
		SG. ANAK SG. SAYONG	1	77	ST/SP	II	77	ST/SP	II
		SG. SELUYUT	1	79	ST/SP	II	77	ST/SP	II
		SG. TIRAM	4	76	ST/SP	III	73	ST/SP	III
		SG. LEBAM	1	68	ST/SP	III	71	ST/SP	III
		SG. PAPAN	1	78	ST/SP	II	69	ST/SP	III
		SG. SEBOL	1	70	ST/SP	III	69	ST/SP	III
		SG. CHEMANGAR	1	68	ST/SP	III	64	ST/SP	III
	SG. TEMOH	1	60	ST/SP	III	61	ST/SP	III	

Jadual 2.2 Malaysia: Status Kualiti Air Sungai bagi Sungai Sederhana Tercemar, 2016
 Table 2.2 Malaysia: Water Quality Status of Slightly Polluted Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
JOHOR	SG. MERSING	SG. MERSING	2	77	ST/SP	II	77	ST/SP	II
	SG. PONTIAN BESAR	SG. AIR HITAM	1	64	ST/SP	III	66	ST/SP	III
		SG. PONTIAN BESAR	5	67	ST/SP	III	62	ST/SP	III
	SG. PONTIAN KECIL	SG. PONTIAN KECIL	2	71	ST/SP	III	72	ST/SP	III
	SG. PULAI	SG. PULAI	2	73	ST/SP	III	68	ST/SP	III
	SG. RAMBAH	SG. RAMBAH	2	67	ST/SP	III	65	ST/SP	III
	SG. SEDILI BESAR	SG. PASIR PANJANG	1	84	B/C	II	75	ST/SP	III
		SG. SEDILI BESAR	5	76	ST/SP	III	75	ST/SP	III
	SG. SEDILI KECIL	SG. SEDILI KECIL	2	81	B/C	II	72	ST/SP	III
		SG. ANAK SEDILI KECIL	1	73	ST/SP	III	69	ST/SP	III
SG. BAHAN		2	67	ST/SP	III	67	ST/SP	III	
SG. SKUDAI	SG. SKUDAI	9	65	ST/SP	III	60	ST/SP	III	
JOHOR/ N.SEMBILAN/ PAHANG	SG. MUAR	SG. GEMENCHEH	1	71	ST/SP	III	80	ST/SP	II
		SG. LABIS	1	85	B/C	II	80	ST/SP	II
		SG. SEGAMAT	1	86	B/C	II	79	ST/SP	II
		SG. MEDA	1	75	ST/SP	III	75	ST/SP	III
PAHANG	SG. ANAK ENDAU	SG. ANAK ENDAU	2	82	B/C	II	79	ST/SP	II
	SG. BALOK	SG. BALOK	2	74	ST/SP	III	72	ST/SP	III
		SG. PANJANG	1	70	ST/SP	III	71	ST/SP	III
	SG. BEBAR	SG. MERBA	1	82	B/C	II	78	ST/SP	II
		SG. BEBAR	1	68	ST/SP	III	75	ST/SP	III
		SG. SERAI	2	76	ST/SP	III	72	ST/SP	III
	SG. BERTAM	SG. BERTAM	1	79	ST/SP	II	74	ST/SP	III
	SG. KUANTAN	SG. TALAM	1	80	ST/SP	II	79	ST/SP	II
		SG. BELAT	1	83	B/C	II	77	ST/SP	II
		SG. CHARU	1	84	B/C	II	77	ST/SP	II
		SG. KUANTAN	5	86	B/C	II	77	ST/SP	II
	SG. RIAU	SG. RIAU	1	75	ST/SP	III	75	ST/SP	III
SG. ROMPIN		SG. AUR	1	81	B/C	II	80	ST/SP	II
		SG. ROMPIN	4	82	B/C	II	79	ST/SP	II
SG. TONGGOK	SG. TONGGOK	1	80	ST/SP	II	74	ST/SP	III	
PAHANG/ JOHOR	SG. ENDAU	SG. LENGGOR	1	79	ST/SP	II	80	ST/SP	II
		SG. TAMOK	1	84	B/C	II	80	ST/SP	II
		SG. MAMAI	1	81	B/C	II	77	ST/SP	II
		SG. PALOH	1	83	B/C	II	76	ST/SP	III
		SG. MENKIBOL	3	71	ST/SP	III	72	ST/SP	III
		SG. PAMOL	1	62	ST/SP	III	66	ST/SP	III
		SG. MELATAI	1	63	ST/SP	III	61	ST/SP	III
PAHANG/ N.SEMBILAN	SG. PAHANG	SG. JENGA	2	83	B/C	II	80	ST/SP	II
		SG. TEKAM	2	85	B/C	II	78	ST/SP	II
		SG. TASIK CHINI	1	80	ST/SP	II	77	ST/SP	II
		SG. BERA	2	81	B/C	II	76	ST/SP	III
		SG. SERTING	2	75	ST/SP	III	76	ST/SP	III
		SG. MENTIGA	1	81	B/C	II	74	ST/SP	III
		SG. TASIK BERA	1	81	B/C	II	74	ST/SP	III

Jadual 2.2 Malaysia: Status Kualiti Air Sungai bagi Sungai Sederhana Tercemar, 2016
Table 2.2 Malaysia: Water Quality Status of Slightly Polluted Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
TERENGGANU	SG. CHUKAI	SG. IBOK	1	84	B/C	II	79	ST/SP	II
		SG. CHUKAI	1	75	ST/SP	III	77	ST/SP	II
		SG. BUNGKUS	1	76	ST/SP	III	75	ST/SP	III
		SG. RUANG	1	72	ST/SP	III	71	ST/SP	III
	SG. IBAI	SG. IBAI	3	79	ST/SP	II	70	ST/SP	III
	SG. KEMAMAN	SG. RANSAN	1	73	ST/SP	III	68	ST/SP	III
	SG. KERTIH	SG. KERTIH	1	81	B/C	II	79	ST/SP	II
	SG. KLUANG	SG. KLUANG	1	75	ST/SP	III	74	ST/SP	III
	SG. MARANG	SG. MARANG	1	80	ST/SP	II	73	ST/SP	III
	SG. MERANG	SG. MERANG	1	67	ST/SP	III	71	ST/SP	III
	SG. MERCHANG	SG. MERCHANG	1	68	ST/SP	III	70	ST/SP	III
	SG. PAKA	SG. PAKA	1	87	B/C	II	76	ST/SP	III
		SG. RASAU	1	81	B/C	II	73	ST/SP	III
	SG. SETIU	SG. CHALOK	2	86	B/C	II	77	ST/SP	II
KELANTAN	SG. KELANTAN	SG. KELANTAN	3	84	B/C	II	79	ST/SP	II
		SG. SOKOR	1	83	B/C	II	79	ST/SP	II
	SG. KEMASIN	SG. SEMERAK	2	84	B/C	II	79	ST/SP	II
		SG. KEMASIN	2	84	B/C	II	73	ST/SP	III
	SG. PENKALAN CHEPA	SG. RAJA GALI	1	75	ST/SP	III	79	ST/SP	II
		SG. PENKALAN CHEPA	2	78	ST/SP	II	76	ST/SP	III
		SG. KELADI	1	80	ST/SP	II	74	ST/SP	III
SG. PENKALAN DATU	SG. PENKALAN DATU	3	78	ST/SP	II	77	ST/SP	II	
SABAH	SG. BONGAWAN	SG. BONGAWAN	1	76	ST/SP	III	76	ST/SP	III
	SG. KALABAKAN	SG. KALABAKAN	3	80	ST/SP	II	78	ST/SP	II
	SG. KIMANIS	SG. KIMANIS	1	77	ST/SP	II	73	ST/SP	III
	SG. LIKAS	SG. INANAM	3	80	ST/SP	II	77	ST/SP	II
		SG. LIKAS	2	73	ST/SP	III	69	ST/SP	III
	SG. MEMBAKUT	SG. MEMBAKUT	1	72	ST/SP	III	80	ST/SP	II
	SG. PADAS	SG. PADAS	3	79	ST/SP	II	78	ST/SP	II
		SG. PANGATAN	1	85	B/C	II	73	ST/SP	III
	SG. PAITAN	SG. PAITAN	1	80	ST/SP	II	78	ST/SP	II
	SG. SAPI	SG. SAPI	3	76	ST/SP	III	79	ST/SP	II
	SG. SEGALIUD	SG. SEGALIUD	2	77	ST/SP	II	80	ST/SP	II
	SG. SEMBULAN	SG. SEMBULAN	2	64	ST/SP	III	65	ST/SP	III
	SG. TUARAN	SG. DAMIT	2	87	B/C	II	78	ST/SP	II
SG. UMAS-UMAS	SG. UMAS-UMAS	1	84	B/C	II	76	ST/SP	III	

Jadual 2.2 Malaysia: Status Kualiti Air Sungai bagi Sungai Sederhana Tercemar, 2016
Table 2.2 Malaysia: Water Quality Status of Slightly Polluted Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
SARAWAK	SG. BALINGIAN	SG. BALINGIAN	2	82	B/C	II	80	ST/SP	II
	SG. BARAM	SG. BARAM	4	83	B/C	II	79	ST/SP	II
	SG. KAYAN	SG. KAYAN	3	84	B/C	II	80	ST/SP	II
	SG. KEMENA	SG. KEMENA	3	83	B/C	II	77	ST/SP	II
		SG. SIBIU	1	81	B/C	II	76	ST/SP	III
	SG. KERIAN	SG. KERIAN	2	86	B/C	II	80	ST/SP	II
		SG. SEBLAK	1	83	B/C	II	78	ST/SP	II
	SG. LUPAR	SG. SEKERANG	1	88	B/C	II	80	ST/SP	II
		SG. UNDUP	1	88	B/C	II	77	ST/SP	II
	SG. MIRI	SG. LUTONG	1	74	ST/SP	III	78	ST/SP	II
		SG. MIRI	2	74	ST/SP	III	78	ST/SP	II
		SG. ADONG	1	78	ST/SP	II	77	ST/SP	II
		SG. DALAM	1	70	ST/SP	III	75	ST/SP	III
	SG. MUKAH	SG. MUKAH	4	82	B/C	II	79	ST/SP	II
	SG. NIAH	SG. SEKALOH	1	84	B/C	II	74	ST/SP	III
	SG. OYA	SG. OYA	3	82	B/C	II	80	ST/SP	II
	SG. RAJANG	SG. BALOI	1	85	B/C	II	80	ST/SP	II
		SG. JULAU	1	81	B/C	II	79	ST/SP	II
		SG. MERADONG	1	82	B/C	II	79	ST/SP	II
		SG. RAJANG	11	81	B/C	II	78	ST/SP	II
		SG. SALIM	1	80	ST/SP	II	73	ST/SP	III
	SG. SARAWAK	SG. SARAWAK	6	84	B/C	II	80	ST/SP	II
		SG. SARAWAK KIRI	1	84	B/C	II	79	ST/SP	II
		SG. KUAP	1	84	B/C	II	77	ST/SP	II
		SG. TABUAN	1	82	B/C	II	74	ST/SP	III
		SG. SEMENGGOH	1	75	ST/SP	III	71	ST/SP	III
		SG. MAONG KIRI	1	65	ST/SP	III	66	ST/SP	III
SG. SARIBAS	SG. SARIBAS	1	88	B/C	II	79	ST/SP	II	
SG. SIBUTI	SG. KEJAPIL	1	86	B/C	II	80	ST/SP	II	
	SG. KABULOH	2	72	ST/SP	III	68	ST/SP	III	
SG. SIMILAJAU	SG. SIMILAJAU	2	82	B/C	II	78	ST/SP	II	
SG. SUAI	SG. SUAI	1	82	B/C	II	77	ST/SP	II	

Nota / Note:

B / C : Bersih / Clean

ST/SP: Sederhana tercemar / Slightly polluted

T/P : Tercemar / Polluted

Jadual 2.3 Malaysia: Status Kualiti Air bagi Sungai Tercemar, 2016
Table 3.3 Malaysia: Water Quality Status of Polluted Rivers, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	BILANGAN STESEN/ NUMBER OF STATIONS	2015			2016		
				IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
KEDAH	SG. MERBOK	SG. PETANI	1	53	T/P	III	54	T/P	III
P.PINANG	SG. JAWI	SG. JAWI	1	50	T/P	IV	47	T/P	IV
	SG. JURU	SG. JURU	2	63	ST/SP	III	58	T/P	III
		SG. RAMBAI	1	52	T/P	III	55	T/P	III
	SG. PINANG	SG. PINANG	1	54	T/P	III	56	T/P	III
SG. JELUTONG		1	49	T/P	IV	44	T/P	IV	
P.PINANG/ KEDAH	SG. PERAI	SG. PERAI	2	63	ST/SP	III	58	T/P	III
		SG. KEREH	2	56	T/P	III	55	T/P	III
		SG. PERTAMA	1	50	T/P	IV	49	T/P	IV
PERAK	SG. PERAK	SG. NYAMOK	1	79	ST/SP	II	57	T/P	III
SELANGOR/ WPKL	SG. KLANG	SG. AIR BUSUK	1	56	T/P	III	57	T/P	III
		SG. BUNOS	3	62	ST/SP	III	57	T/P	III
		SG. BELONGKONG	1	66	ST/SP	III	56	T/P	III
		SG. KERAYONG	2	56	T/P	III	53	T/P	III
		SG. KUYOH	1	56	T/P	III	50	T/P	IV
MELAKA	SG. SERI MELAKA	SG. SERI MELAKA	1	58	T/P	III	58	T/P	III
MELAKA/ N.SEMBILAN	SG. MELAKA	SG. REMBIA	1	63	ST/SP	III	57	T/P	III
JOHOR	SG. AIR BALOI	SG. AIR BALOI	3	62	ST/SP	III	57	T/P	III
	SG. BATU PAHAT	SG. SIMPANG KANAN	2	56	T/P	III	58	T/P	III
	SG. DANGA	SG. DANGA	2	51	T/P	IV	46	T/P	IV
	SG. JOHOR	SG. SEMENCHU	1	45	T/P	IV	44	T/P	IV
	KAWASAN PASIR GUDANG	SG. LATOH	1	68	ST/SP	III	57	T/P	III
		SG. PEREMBI	1	46	T/P	IV	51	T/P	IV
		SG. MASAI	1	57	T/P	III	48	T/P	IV
		SG. BULUH	1	42	T/P	IV	35	T/P	IV
		SG. TUKANG BATU	1	40	T/P	IV	33	T/P	IV
	SG. KEMPAS	SG. KEMPAS	2	59	T/P	III	47	T/P	IV
	SG. KIM-KIM	SG. KIM-KIM	2	68	ST/SP	III	58	T/P	III
	SG. PONTIAN BESAR	SG. AYER MERAH	1	37	T/P	IV	49	T/P	IV
	SG. PULAI	SG. ULU CHOHO	1	59	T/P	III	58	T/P	III
	SG. SANGLANG	SG. SANGLANG	1	59	T/P	III	54	T/P	III
	SG. SEGGET	SG. SEGGET	5	49	T/P	IV	47	T/P	IV
	SG. SKUDAI	SG. MELANA	2	59	T/P	III	50	T/P	IV
	SG. TEBRAU	SG. BALA	1	62	ST/SP	III	48	T/P	IV
		SG. SEBULUNG	1	47	T/P	IV	48	T/P	IV
		SG. PLENTONG	1	57	T/P	III	46	T/P	IV
		SG. PANDAN	1	62	ST/SP	III	44	T/P	IV
SG. TAMPOI		1	52	T/P	III	40	T/P	IV	
SG. SENGGUANG		1	57	T/P	III	39	T/P	IV	
SG. TEBRAU		4	70	ST/SP	III	35	T/P	IV	
JOHOR/ N.SEMBILAN/ PAHANG	SG. MUAR	SG. SARANG BUAYA	1	58	T/P	III	55	T/P	III
PAHANG/ JOHOR	SG. ENDAU	SG. SEMBERONG	5	77	ST/SP	II	59	T/P	III
		SG. SINGOL	1	59	T/P	III	57	T/P	III
		SG. JEBONG	1	59	T/P	III	56	T/P	III
KELANTAN	SG. PENGKALAN CHEPA	SG. ALOR LINTAH	1	66	ST/SP	III	56	T/P	III
		SG. ALOR B	1	64	ST/SP	III	50	T/P	IV

Nota / Note: B / C : Bersih / Clean ST/SP: Sederhana tercemar / Slightly polluted T/P : Tercemar / Polluted

Jadual 2.4 menunjukkan sebanyak 24 daripada 46 sungai tercemar masih tergolong dalam Kelas III manakala 22 sungai adalah dalam Kelas IV. Berdasarkan BOD, 14 sungai diklasifikasikan sebagai Kelas IV manakala 32 adalah Kelas V. Dari segi NH₃-N pula, dua sungai tergolong masing-masing dalam Kelas II dan Kelas III, 14 sungai Kelas IV, dan 28 sungai adalah Kelas V. Dari segi SS, sebanyak 7 sungai telah diklasifikasikan sebagai Kelas I, 19 sungai Kelas II, dan 16 adalah Kelas III manakala empat adalah Kelas IV.

Table 2.4 shows that out of 46 polluted rivers, 24 rivers were classified as Class III, while 22 rivers were classified Class IV. In terms of BOD, 14 rivers were classified as Class IV and 32 rivers as Class V. In terms of NH₃-N, two rivers were classified as Class II and Class III respectively, 14 rivers as Class IV and 28 rivers as Class V. In terms of SS, 7 rivers were classified as Class I, 19 rivers as Class II, 16 rivers as Class III while four rivers as Class IV.

Jadual 2.4 Malaysia: Sungai Tercemar dan Kelas Kualiti Air Berdasarkan BOD, AN dan SS, 2016
Table 2.4 Malaysia: The Polluted Rivers and Classes Based on BOD, AN and SS, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	STATUS 2016		KELAS BERDASARKAN:/ CLASS BASED ON:		
			IKA/ WQI	KELAS/ CLASS	BOD	AN	SS
KEDAH	SG. MERBOK	SG. PETANI	54	III	IV	IV	II
P.PINANG / KEDAH	SG. PERAI	SG. PERAI	58	III	IV	IV	III
		SG. KEREH	55	III	V	IV	III
		SG. PERTAMA	49	IV	V	IV	III
P.PINANG	SG. JAWI	SG. JAWI	47	IV	V	V	III
	SG. JURU	SG. JURU	58	III	IV	V	III
		SG. RAMBAI	55	III	IV	V	II
	SG. PINANG	SG. PINANG	56	III	IV	IV	II
		SG. JELUTONG	44	IV	V	V	III
PERAK	SG. PERAK	SG. NYAMOK	57	III	V	IV	III
SELANGOR / WPKL	SG. KLANG	SG. AIR BUSUK	57	III	V	V	III
		SG. BUNOS	57	III	V	V	II
		SG. BELONGKONG	56	III	V	V	II
		SG. KERAYONG	53	III	V	V	II
		SG. KUYOH	50	IV	V	V	II
MELAKA	SG. SERI MELAKA	SG. SERI MELAKA	58	III	V	V	II
MELAKA / N.SEMBILAN	SG. MELAKA	SG. REMBIA	57	III	V	IV	II
JOHOR	SG. AIR BALOI	SG. AIR BALOI	57	III	IV	II	IV
	SG. BATU PAHAT	SG. SIMPANG KANAN	58	III	IV	IV	I
	SG. DANGA	SG. DANGA	46	IV	V	V	III
	SG. JOHOR	SG. SEMENCHU	44	IV	V	V	III

Jadual 2.4 Malaysia: Sungai Tercemar dan Kelas Kualiti Air Berdasarkan BOD, AN dan SS, 2016
 Table 2.4 Malaysia: The Polluted Rivers and Classes Based on BOD, AN and SS, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	STATUS 2016		KELAS BERDASARKAN/ CLASS BASED ON:		
			IKA/ WQI	KELAS/ CLASS	BOD	AN	SS
JOHOR	KAWASAN PASIR GUDANG	SG. LATOH	57	III	IV	IV	III
		SG. PEREMBI	51	IV	V	V	II
		SG. MASAI	48	IV	V	V	II
		SG. BULUH	35	IV	V	V	III
		SG. TUKANG BATU	33	IV	V	V	III
	SG. KEMPAS	SG. KEMPAS	47	IV	V	V	II
	SG. KIM-KIM	SG. KIM-KIM	58	III	IV	V	I
	SG. PONTIAN BESAR	SG. AYER MERAH	49	IV	V	IV	II
	SG. PULAI	SG. ULU CHOHO	58	III	V	V	III
	SG. SANGLANG	SG. SANGLANG	54	III	V	III	IV
	SG. SEGGET	SG. SEGGET	47	IV	V	V	II
	SG. SKUDAI	SG. MELANA	50	IV	V	IV	II
	SG. TEBRAU	SG. BALA	48	IV	V	V	I
		SG. SEBULUNG	48	IV	V	IV	II
		SG. PLENTONG	46	IV	V	V	II
		SG. PANDAN	44	IV	V	V	I
		SG. TAMPOI	40	IV	V	V	II
		SG. SENGKUANG	39	IV	V	V	II
SG. TEBRAU		35	IV	V	V	III	
JOHOR / N.SEMBILAN / PAHANG	SG. MUAR	SG. SARANG BUAYA	55	III	IV	II	IV
PAHANG / JOHOR	SG. ENDAU	SG. SEMBERONG	59	III	IV	IV	I
		SG. SINGOL	57	III	V	III	IV
		SG. JEBONG	56	III	IV	IV	III
KELANTAN	SG. PENGKALAN CHEPA	SG. ALOR LINTAH	56	III	IV	V	I
		SG. ALOR B	50	IV	IV	V	I

PENGAWASAN KUALITI AIR SUNGAI AUTOMATIK

Rajah 2.2 menunjukkan lokasi 10 stesen pengawasan sungai automatik serta takat pengambilan air yang disenaraikan seperti dalam **Jadual 2.5**.

Oksigen terlarut adalah salah satu penunjuk kepada kehadiran BOD yang disebabkan oleh bahan pencemar organik. Berdasarkan oksigen terlarut, 98.9% daripada bacaan yang direkodkan di stesen automatik di

CONTINUOUS RIVER WATER QUALITY MONITORING

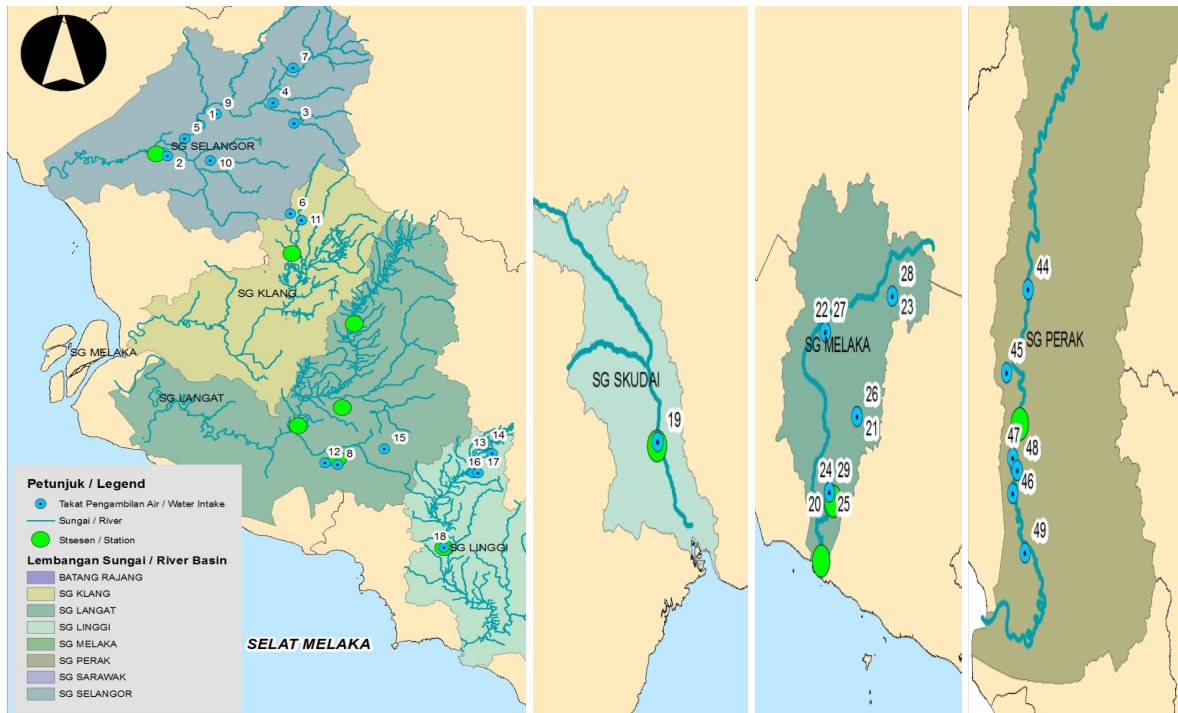
Figure 2.2 shows the location of the 10 continuous river monitoring stations and subsequent water intakes as listed in **Table 2.5**.

The dissolved oxygen is one of indicators of BOD strength exerted by organic pollutants. In terms of dissolved oxygen level, about 98.9% of the data recorded at Sg. Perak were within the Class II of the NWQS, followed by Sg.

Sg. Perak adalah berada dalam julat Kelas II, diikuti oleh Sg. Langat (Cheras) (29.7%), Sg. Melaka (27.0%), Sg. Linggi (21.8%), Sg. Labu (14.9%), Sg. Langat (Dengkil) (10.9 %), Sg. Skudai (9.4%), dan Sg. Semenyih (3.5%), manakala hanya 2% bacaan oksigen terlarut di Sg. Selangor dan Sg. Putat adalah berada dalam Kelas II (**Rajah 2.3**).

Langat (Cheras) (29.7%), Sg. Melaka (27.0%), Sg. Linggi (21.8%), Sg. Labu (14.9%), Sg. Langat (Dengkil) (10.9 %), Sg. Skudai (9.4%), and Sg. Semenyih (3.5%). Meanwhile, only 2% of the dissolved oxygen recorded at Sg. Selangor and Sg. Putat were within the Class II limit (**Figure 2.3**).

Rajah 2.2: Stesen Pengawasan Kualiti Air Sungai Automatik dan Takat Pengambilan Air
 Figure 2.2: Continuous Water Quality Stations and Water Intakes



Jadual 2.5 Senarai Takat Pengambilan Air dalam Kawasan Tadahan seperti dalam Rajah 2.2
 Table 2.5 Water Intake List within catchments as in the Figure 2.2

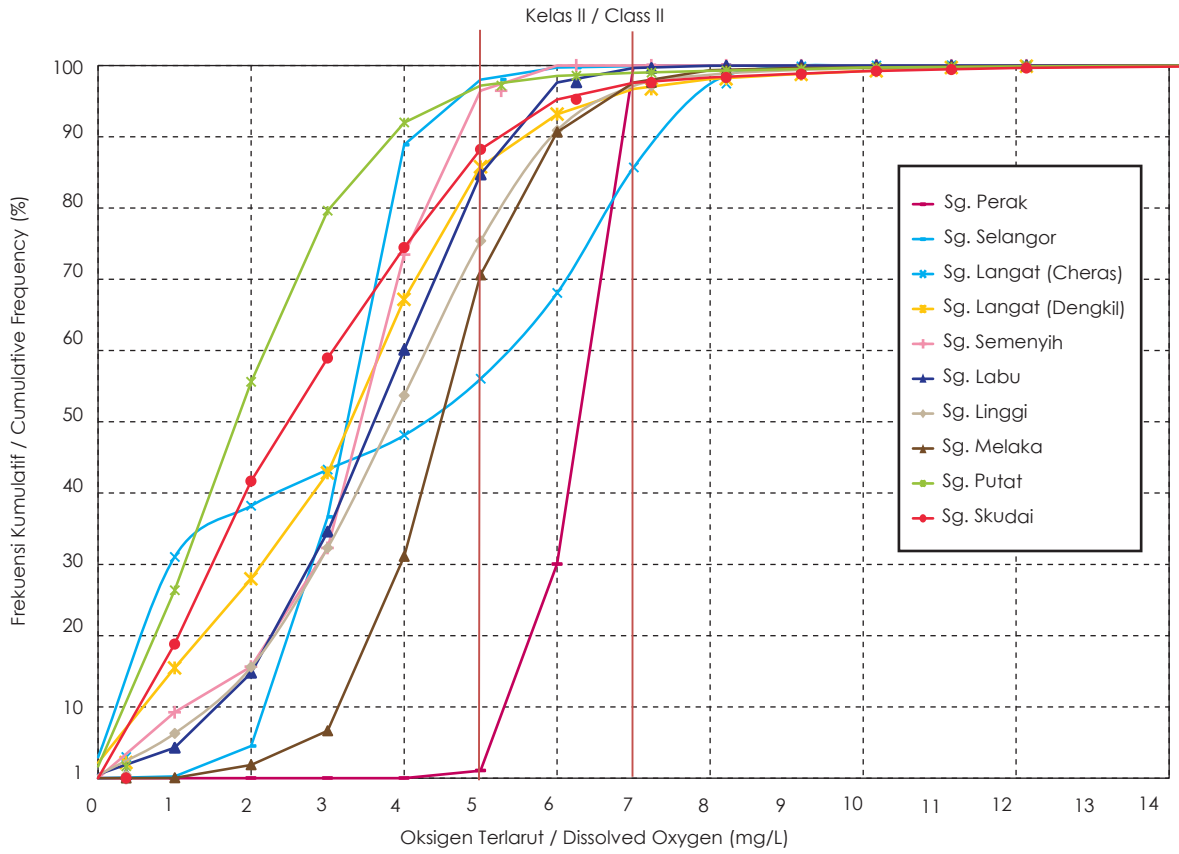
NEGERI / STATE	SUNGAI / RIVER	SKIM PERBEKALAN / SUPPLY SCHEME
SELANGOR	SUNGAI SELANGOR	SSP 2, BUKIT BADONG
	SUNGAI SELANGOR	RANTAU PANJANG
	SUNGAI BATANG KALI	BATANG KALI
	SUNGAI SELANGOR	RASA
	SUNGAI SELANGOR	SSP 3, BUKIT BADONG
	SUNGAI RANGKAP	SUNGAI RANGKAP
	SUNGAI KUBU	KUALA KUBU BHARU
	SUNGAI LABU	SUNGAI LABU
	SUNGAI TENGI	SUNGAI TENGI
	SUNGAI DARAH	SUNGAI BUAYA
	EMPANGAN BATU	SUNGAI BATU
	SUNGAI LABU	SALAK TINGGI

Jadual 2.5 Senarai Takat Pengambilan Air dalam Kawasan Tadahan seperti dalam Rajah 2.2
 Table 2.5 Water Intake List within catchments as in the Figure 2.2

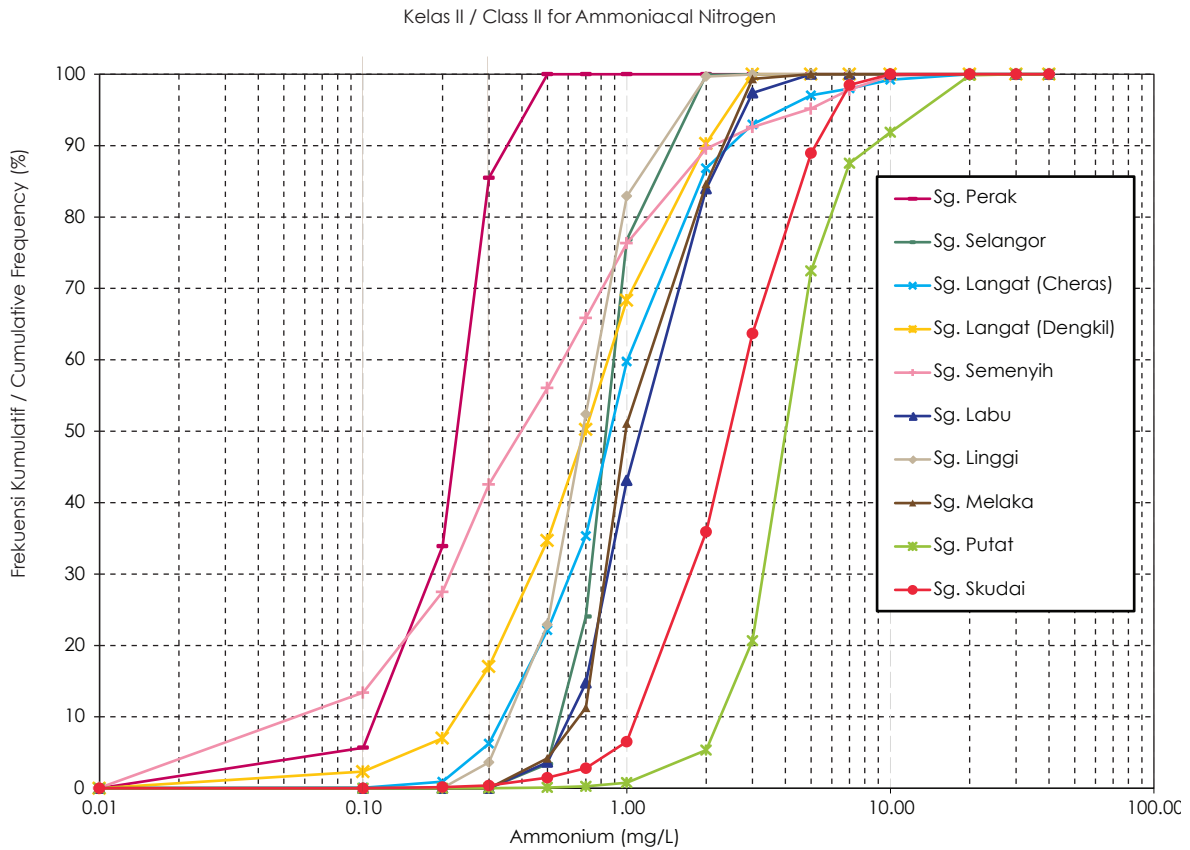
NEGERI / STATE	SUNGAI / RIVER	SKIM PERBEKALAN / SUPPLY SCHEME
N. SEMBILAN	SG BATANG PENAR	PANTAI
	SG. NGOI-NGOI	NGOI-NGOI
	SG MAHANG	MAHANG
	SG BATANG PENAR	SUNGAI TERIP
	EMPANGAN SG. TERIP	TERIP
	SG. LINGGI	SG. LINGGI
JOHOR	SG. SKUDAI	JOHOR BAHRU
MELAKA	SG. MELAKA	JASIN, MELAKA TENGAH DAN ALOR GAJAH
	EMPANGAN DURIAN TUNGGAL	MELAKA TENGAH, ALOR GAJAH DAN JASIN
	SG. MELAKA (BUNDED STORAGE)	MELAKA TENGAH, ALOR GAJAH DAN JASIN
	SG. KESANG	JASIN DAN MERLIMAU
	SG. MUAR	MELAKA TENGAH, ALOR GAJAH DAN JASIN
	SG. MELAKA	JASIN, MELAKA TENGAH DAN ALOR GAJAH
	EMPANGAN DURIAN TUNGGAL	MELAKA TENGAH, ALOR GAJAH DAN JASIN
	SG. MELAKA (BUNDED STORAGE)	MELAKA TENGAH, ALOR GAJAH DAN JASIN
	SG. KESANG	JASIN DAN MERLIMAU
	SG. MUAR	MELAKA TENGAH, ALOR GAJAH DAN JASIN
PERAK	SG. PERAK (DALAM KAWASAN TADAHAN LPA KG. GAJAH)	KOTA LAMA KIRI
	SG. GUAR	MANONG
	SG. PERAK (DALAM KAWASAN TADAHAN LPA KG. GAJAH)	TELUK KEPAYANG
	SG. PERAK (DALAM KAWASAN TADAHAN LPA KG. GAJAH)	KAMPUNG PALOH
	SG. PERAK (DALAM KAWASAN TADAHAN LPA KG. GAJAH)	BB SERI ISKANDAR
	SG. PERAK	KAMPUNG GAJAH

Ammonium adalah satu bentuk ammonia yang telah terion. Pengukuran ammonium memberi petunjuk kepada potensi kehadiran pencemar ammonia atau ammonia nitrogen dalam air sungai apabila pH dan suhu air berubah. Sebanyak 79.8% daripada bacaan ammonium yang direkodkan di Sg. Perak adalah dalam Kelas II berdasarkan julat ammonia nitrogen diikuti dengan Sg. Semenyih (29.2%), Sg. Langat (Dengkil) (14.7%), Sg. Langat (Cheras) (6.2%), Sg. Linggi (3.6%), dan Sg. Skudai (0.4%), manakala tiada bacaan ammonium yang direkodkan di Sg. Selangor, Sg. Labu, Sg. Melaka, dan Sg. Putat berada dalam Kelas tersebut (**Rajah 2.4**).

The ammonium is an ionized form of ammonia. The measurement of ammonium indicates the potential to form ammonia or ammoniacal nitrogen pollutants in rivers when pH and temperature changes. It is about 79.8% of the ammonium levels recorded at Sg. Perak were within Class II limit based on ammoniacal nitrogen followed by Sg. Semenyih (29.2%), Sg. Langat (Dengkil) (14.7%), Sg. Langat (Cheras) (6.2%), Sg. Linggi (3.6%), dan Sg. Skudai (0.4%). Meanwhile, no ammonium recorded at Sg. Selangor, Sg. Labu, Sg. Melaka, and Sg. Putat were within the Class II limits (**Figure 2.4**).



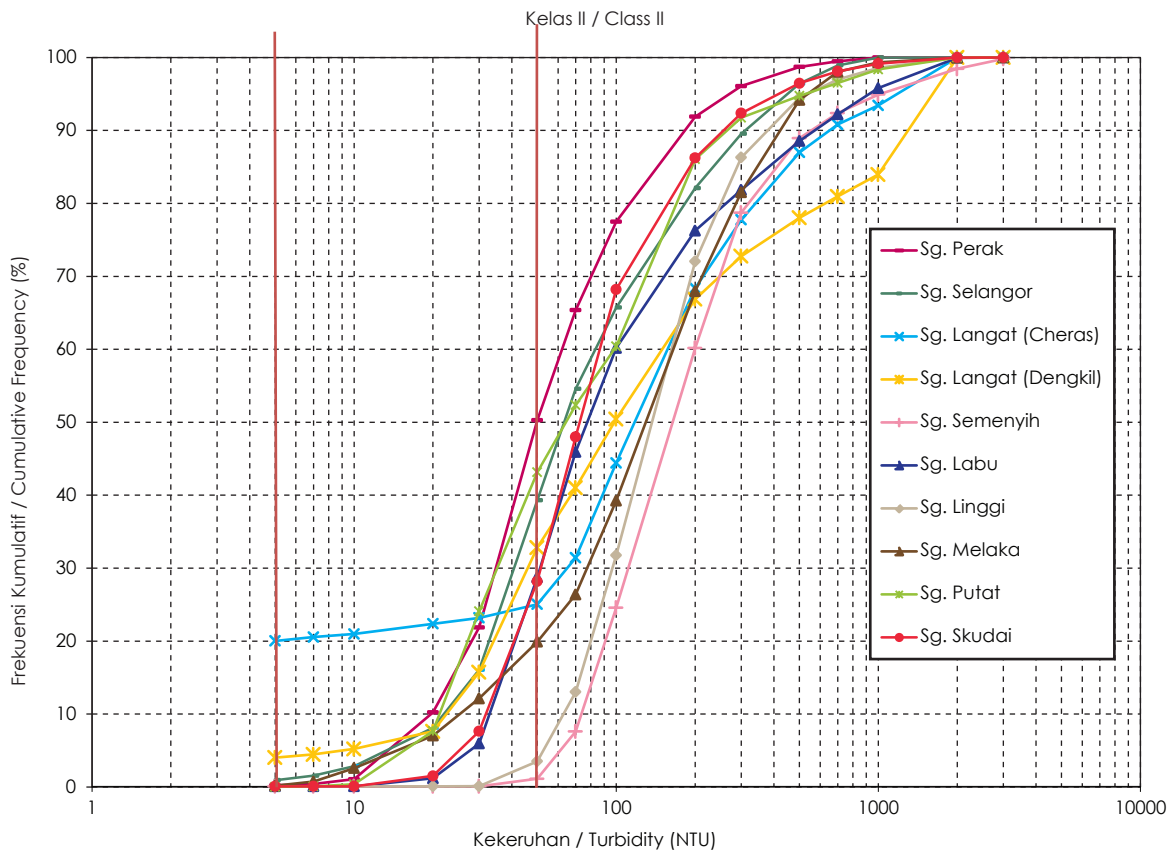
Rajah 2.3 Perbandingan Frekuensi Kumulatif bagi 10 Stesen-stesen CWQM untuk Oksigen Terlarut, 2016
 Figure 2.3 Comparison of Cumulative Frequency for 10 CWQM Stations for Dissolved Oxygen, 2016



Rajah 2.4 Perbandingan Frekuensi Kumulatif bagi 13 Stesen-stesen CWQM untuk Ammonium, 2016
 Figure 2.4 Comparison of Cumulative Frequency for 13 CWQM Stations for Ammonium Concentration, 2016

Kekeruhan digunakan sebagai penunjuk kehadiran pepejal terampai di dalam sungai. Sebanyak 50.1% daripada keseluruhan data kekeruhan yang direkodkan di stesen automatik Sg. Perak adalah berada dalam julat Kelas II diikuti Sg. Putat (43.2%), Sg. Selangor (38.4%), Sg. Langat (Dengkil) (28.8%), Sg. Labu (28.7%), Sg. Skudai (28.1%), Sg. Melaka (19.8%), Sg. Langat (Cheras) (5.1%), Sg. Linggi (3.5%), manakala hanya 1.1% daripada bacaan kekeruhan di Sg. Semenyih berada dalam julat tersebut (Rajah 2.5).

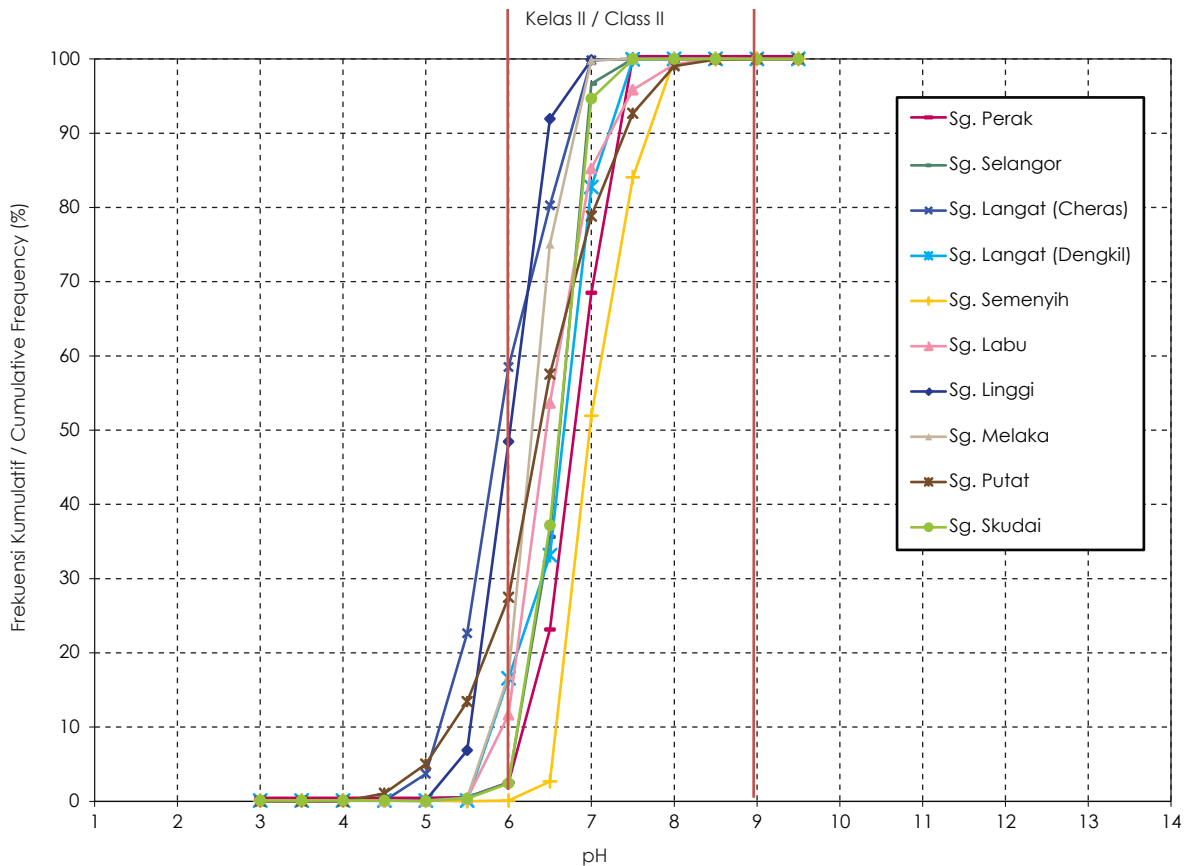
Turbidity is used to indicate the presence of suspended solids in a river. Of all data recorded at automatic river water quality monitoring stations, 50.1% of turbidity data for Sg. Perak were within the Class II followed by Sg. Putat (43.2%), Sg. Selangor (38.4%), Sg. Langat (Dengkil) (28.8%), Sg. Labu (28.7%), Sg. Skudai (28.1%), Sg. Melaka (19.8%), Sg. Langat (Cheras) (5.1%), Sg. Linggi (3.5%). Meanwhile, only 1.1% of the turbidity recorded at Sg. Semenyih were within the Class II limit (Figure 2.5).



Rajah 2.5 Perbandingan Frekuensi Kumulatif bagi 10 Stesen-stesen CWQM untuk Kekeruhan, 2016
 Figure 2.5 Comparison of Cumulative Frequency for 10 CWQM Stations for Turbidity, 2016

pH adalah ukuran bagi keasidan dan kealkalian mengikut skala pH. Sebanyak 99.9% daripada bacaan pH yang direkodkan di stesen Sg. Semenyih adalah berada dalam julat Kelas II diikuti oleh Sg. Perak (97.9%), Sg. Skudai (97.6%), Sg. Selangor (97.5%), Sg. Labu (88.4%), Sg. Langat (Dengkil) (83.5%), Sg. Melaka (83.1%), Sg. Putat (72.6%), Sg. Linggi (51.6%), Sg. Langat (Cheras) (41.5%) (**Rajah 2.6**).

pH is a measurement of acidity and alkalinity based on pH scale. Of all data recorded at automatic river water quality monitoring stations, 99.9% of pH data for Sg. Semenyih were within Class II followed by Sg. Perak (97.9%), Sg. Skudai (97.6%), Sg. Selangor (97.5%), Sg. Labu (88.4%), Sg. Langat (Dengkil) (83.5%), Sg. Melaka (83.1%), Sg. Putat (72.6%), Sg. Linggi (51.6%), Sg. Langat (Cheras) (41.5%) (**Figure 2.6**).



Rajah 2.6 Perbandingan Frekuensi Kumulatif bagi 10 Stesen-stesen CWQM untuk pH, 2016
 Figure 2.6 Comparison of Cumulative Frequency for 10 CWQM Stations for pH, 2016

TREN PENCEMARAN AIR SUNGAI

Kualiti air sungai yang ditentukan dari segi IKA telah menunjukkan penurunan pada tahun 2016. Peratus bilangan sungai yang dikategorikan sebagai bersih telah menurun kepada 47% pada tahun 2016 berbanding 58% berbanding tahun sebelumnya. Peratus bilangan sungai yang dikategorikan sebagai tercemar telah meningkat daripada 7% kepada 10% pada tahun 2016. Trend ini adalah ditunjukkan oleh **Rajah 2.1**.

Berdasarkan sub-indeks BOD, bilangan sungai yang tercemar dari segi sub-indeks BOD telah meningkat daripada 349 pada tahun 2015 kepada 404 sungai pada tahun 2016. (**Rajah 2.7**). Kemerosotan kualiti air sungai dari segi BOD ini adalah disebabkan oleh pelepasan bahan buangan yang bersifat organik daripada pelbagai punca seperti air sisa industri, domestik serta aktiviti komersil.

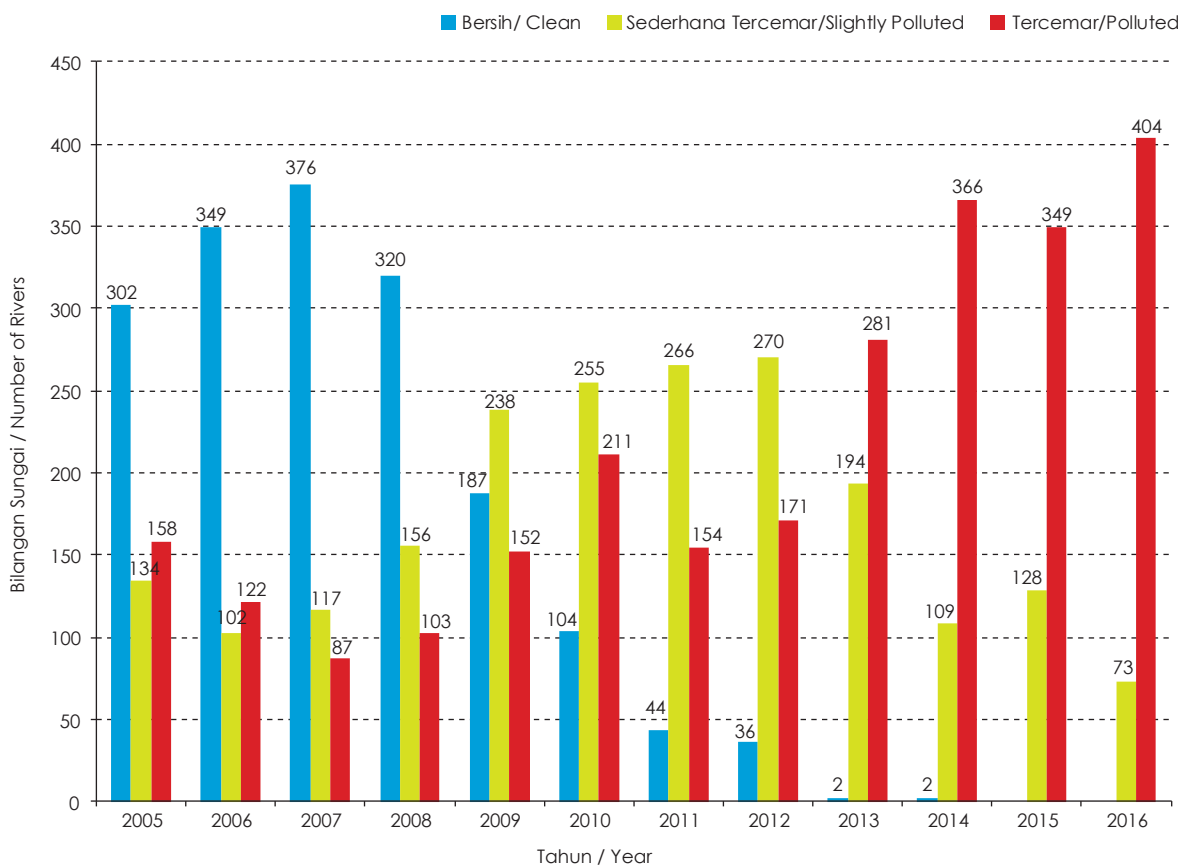
Dari segi sub-indeks AN pula, bilangan sungai bersih telah menurun daripada 139 pada tahun 2015 kepada 115 pada tahun 2016 (**Rajah 2.8**). Bilangan sungai yang tercemar dari segi sub-indeks AN telah meningkat daripada 136 pada tahun 2015 kepada 149 sungai pada tahun 2016. Kemerosotan kualiti air sungai yang disebabkan oleh AN boleh dikaitkan dengan pelepasan air sisa kumbahan manusia dan haiwan yang tidak diolah dan diolah ke dalam air sungai secara berterusan.

TREND IN RIVER WATER POLLUTION

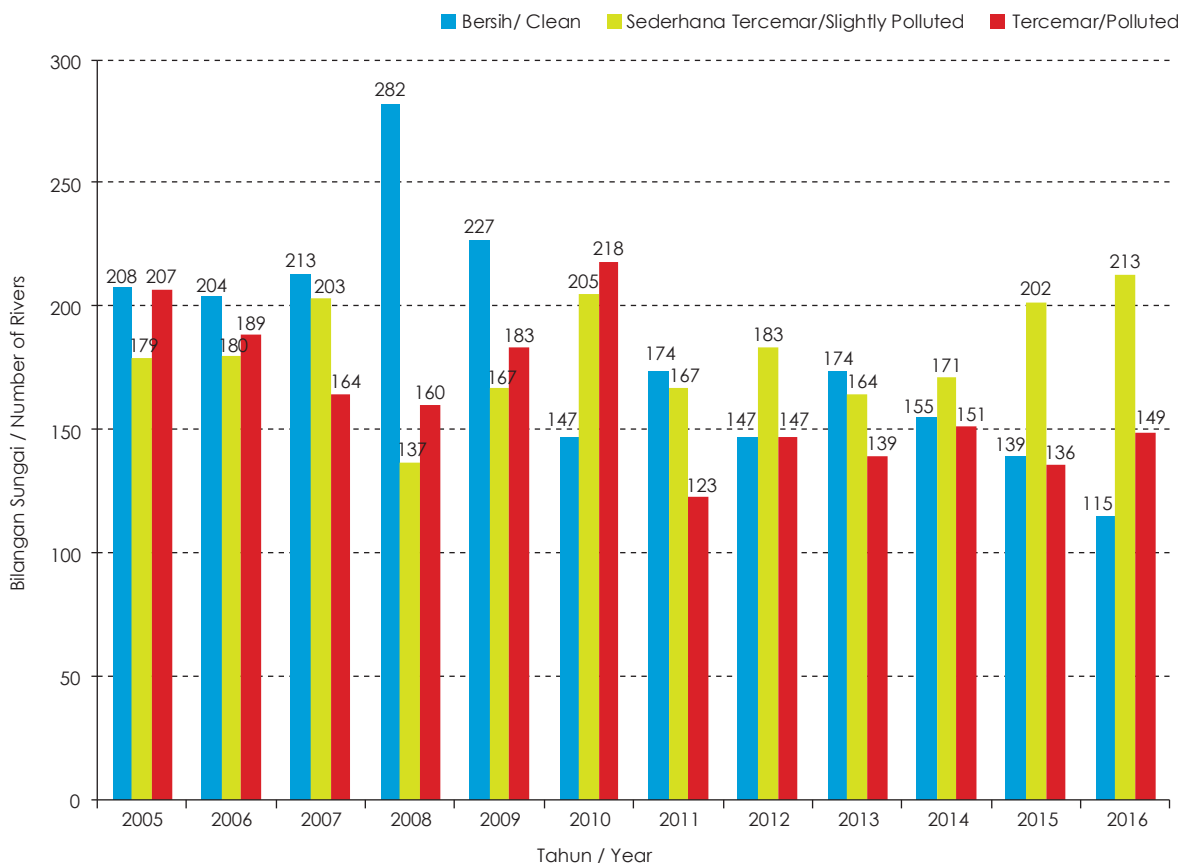
The river water quality in terms of WQI had shown a decrease in 2016. The percentage of clean rivers has decreased to 47% in 2016 compared to the 58% in the previous year. The percentage of polluted river has increased from 7% to 10% in 2016. These trends are shown in **Figure 2.1**.

In terms of BOD sub-index, The number of polluted rivers in terms of BOD sub-index has increased from 349 in 2015 to 404 rivers in 2016 (**Figure 2.7**). The deteriorations of river water quality in terms of BOD, is due to the discharge of organic pollutants including wastewater from industrial, domestic and commercial activities.

In term of AN sub-index, the number of clean rivers has decreased from 139 in 2015 to 115 rivers in 2016 (**Figure 2.8**). The number of polluted rivers in terms of AN has increased from 136 in 2015 to 149 rivers in 2016. The deteriorations of river water quality caused by AN can be associated with the continuous discharge of treated and untreated sewage from human and animals into the rivers.



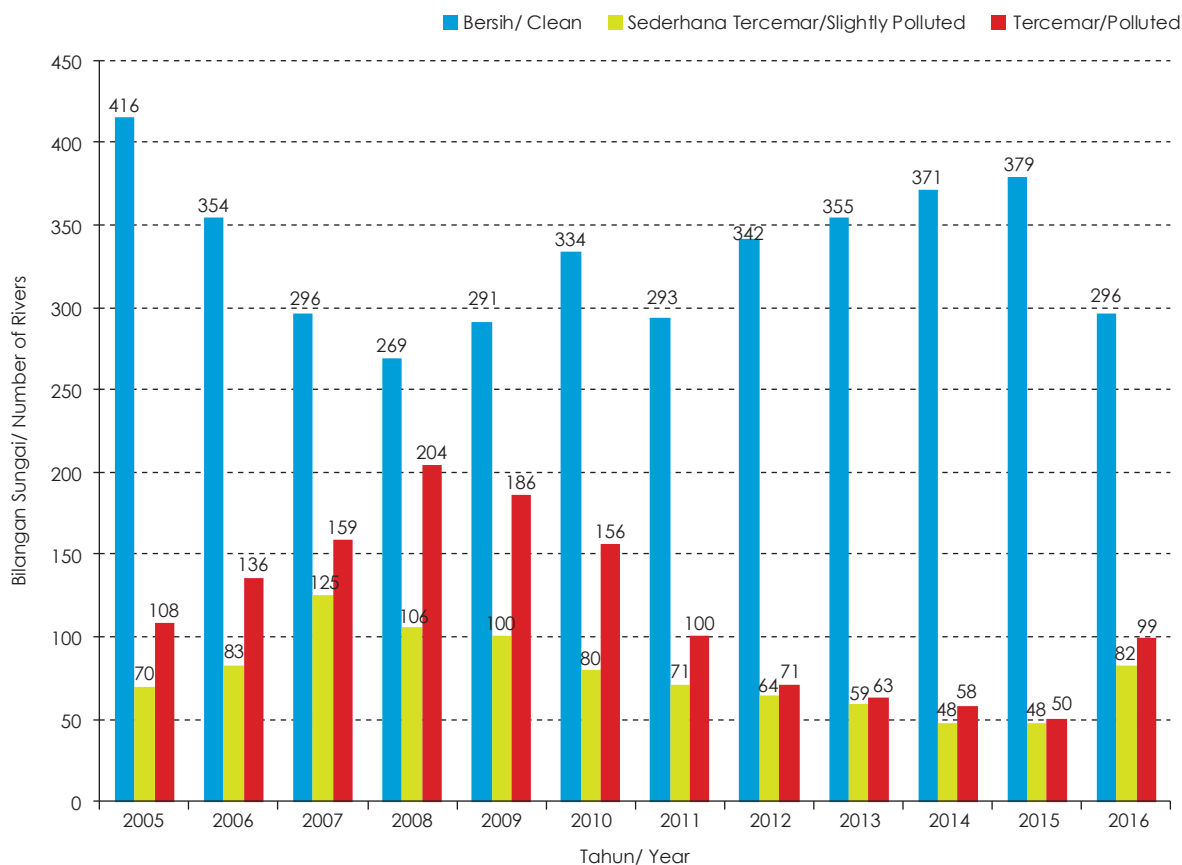
Rajah 2.7 Malaysia : Tren Kualiti Air Sungai Berdasarkan Sub-Indeks BOD (2005 - 2016)
 Figure 2.7 Malaysia : River Water Quality Trend Based on BOD Sub-Index (2005 - 2016)



Rajah 2.8 Malaysia: Tren Kualiti Air Sungai Berdasarkan Sub-Indeks AN (2005 - 2016)
 Figure 2.8 Malaysia: River Water Quality Trend Based on AN Sub-Index (2005 - 2016)

Dari segi sub-indeks SS pula, bilangan sungai yang dikategorikan bersih telah menurun daripada 379 pada tahun 2015 kepada 296 pada tahun 2016 (**Rajah 2.9**). Bilangan sungai yang dikategorikan sebagai tercemar dari segi sub-indeks SS pula telah meningkat kepada 99 berbanding 50 sungai pada tahun lepas. Kemerosotan kualiti air sungai dari segi pepejal terampai tersebut boleh disebabkan oleh ketidakcekapan kawalan ke atas aktiviti kerja tanah dan pembukaan tanah di kawasan-kawasan tertentu.

In term of SS sub-index, the number of clean rivers has decreased from 379 in 2015 to 296 in 2016 (**Figure 2.9**). The number of polluted rivers in terms of SS sub-index has increased to 99 compared to 50 rivers in the previous year. The deteriorations in river water quality due to the suspended solids pollution can be attributed by inefficient control against improper earthworks and land clearing activities in certain areas.



Rajah 2.9 Malaysia: Tren Kualiti Air Sungai Berdasarkan Sub-Indeks SS (2005- 2016)
 Figure 2.9 Malaysia: River Water Quality Trend Based on SS Sub-Index (2005-2016)

LOGAM BERAT DALAM SUNGAI

Analisis kandungan beberapa jenis logam berat dalam air sungai telah dilakukan ke atas raksa (Hg), arsenik (As), kadmium (Cd), kromium (Cr), plumbum (Pb), dan zink (Zn). Pada tahun 2016 kesemua sampel air sungai telah menunjukkan kandungan logam Cd, Pb, dan Zn pada tahap Kelas II. Sebanyak 99.96% daripada sampel air sungai yang diuji telah menunjukkan kandungan Cr dalam Kelas II, diikuti dengan Hg (99.33%) dan As (98.90%).

KUALITI AIR SUNGAI DI HULU MUKA SAUK

Pada tahun 2016, 43 (78%) daripada 55 stesen pengawasan kualiti air di hulu muka sauk telah menunjukkan kualiti air bersih sementara 12 (22%) stesen dikategorikan sebagai sederhana tercemar. Berdasarkan IKA juga, empat (7%) stesen telah dikategorikan sebagai kelas I dan 48 (87%) adalah Kelas II manakala tiga (6%) adalah Kelas III. **Jadual 2.6** menunjukkan status kualiti air di stesen hulu muka sauk terpilih berdasarkan IKA.

HEAVY METALS IN RIVERS

Heavy metals were analysed for mercury (Hg), arsenic (As), cadmium (Cd), chromium (Cr), plumbum (Pb), and zinc (Zn). In 2016, all of the water samples have shown that the concentration of Cd, Pb, and Zn were within Class II limit. About 99.96% from water samples have shown that the concentrations of Cr were within Class II limit followed by Hg (99.33%) dan As (98.90%).

RIVER WATER QUALITY UPSTREAM WATER INTAKES

In 2016, 43 (78%) from 55 monitoring stations upstream of water intakes have shown clean water quality while 12 (22%) stations were categorized as slightly polluted. Based on overall WQI, four (7%) stations were categorized as Class I, 48 (87%) were Class II while three (6%) were Class III. **Table 2.6** shows the water quality of the selected water intake stations based on WQI.

Jadual 2.6 Malaysia: Status Kualiti Air di Hulu Muka Sauk, 2016
Table 2.6 Malaysia: Water Quality Status of Upstream Water Intakes, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	STESEN ID/ ID STESEN	MUKA SAUK/ WATER INTAKE	KUALITI AIR, 2015/ WATER QUALITY 2015			KUALITI AIR, 2016/ WATER QUALITY 2016		
					IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
PERLIS	PERLIS	TERUSAN MADA	2PS13	LOJI RAWATAN AIR ARAU FASA IV	86	B/C	II	83	B/C	II
			2PS14	LOJI RAWATAN AIR TTPC, SG. BARU	85	B/C	II	84	B/C	II
KEDAH (LANGKAWI)	MELAKA	SG. MELAKA	2LG05	ULU MELAKA	87	B/C	II	83	B/C	II
		SG. SAGA	2LG06	PADANG SAGA	82	B/C	II	80	ST/SP	II
KEDAH	KEDAH	SG. AHNING	2KD11	PADANG SANAI	91	B/C	II	83	B/C	II
		SG. PADANG TERAP	2KD12	KUALA NERANG	90	B/C	II	90	B/C	II
		SG. TEMIN	2KD10	CHANGLOON	85	B/C	II	80	ST/SP	II
	MUDA	SG. MUDA	2MD16	JENERI	84	B/C	II	84	B/C	II
			2MD17	JENIANG	89	B/C	II	85	B/C	II
			2MD18	BUKIT SELAMBAU	86	B/C	II	86	B/C	II
			2MD20	PINANG TUNGGAL	87	B/C	II	80	ST/SP	II
	SG. NAMI	2MD21	NAMI	88	B/C	II	88	B/C	II	
SG. SEDIM	2MD19	BIKAN	83	B/C	II	86	B/C	II		
P.PINANG	PINANG	SG. SATU	2PG12	BATU FERINGGI	94	B/C	I	91	B/C	II
PERAK	BERNAM	SG. GELINTING	1BM15	LOJI RAWATAN AIR ULU SLIM	92	B/C	II	90	B/C	II
		SG. TROLAK	1BM14	LOJI RAWATAN AIR TROLAK TIMUR	92	B/C	II	91	B/C	II
	KURAU	SG. AIR HITAM	2KU07	LOJI RAWATAN AIR JELAI	92	B/C	II	92	B/C	II
	PERAK	SG. MANONG	2PK62	LOJI RAWATAN AIR MANONG	92	B/C	II	93	B/C	I
		SG. SAUK	2PK61	LOJI RAWATAN AIR SAUK	94	B/C	I	95	B/C	I
		SG. TESONG	2PK64	LOJI RAWATAN AIR SG. KLAH	92	B/C	II	93	B/C	I
		SG. WOH	2PK63	LOJI RAWATAN AIR KUALA WOH	92	B/C	II	91	B/C	II
SEPETANG	SG. BATU TEGOH	2SP18	LOJI RAWATAN AIR BUKIT LARUT	91	B/C	II	90	B/C	II	
SELANGOR	KLANG	SG. GOMBAK	1K53	LOJI RAWATAN AIR GOMBAK	90	B/C	II	93	B/C	I
	LANGAT	SG. BATANG LABU	1L26	LOJI RAWATAN AIR SALAK TINGGI	78	ST/SP	II	68	ST/SP	III
		SG. SEMENYIH	1L09	LOJI RAWATAN AIR SEMENYIH	73	ST/SP	III	73	ST/SP	III
MELAKA	KESANG	SG. CHIN- CHIN	1KA08	MUKA SAUK LOJI RAWATAN AIR CHIN- CHIN	84	B/C	II	79	ST/SP	II
JOHOR	BATU PAHAT	SG. SEMBERONG DAM	3BP27	SEMBERONG DAM	79	ST/SP	II	83	B/C	II
	BENUT	SG. MACHAP DAM	3BN10	MACHAP DAM	87	B/C	II	87	B/C	II
	ENDAU	SG. KAHANG	3ED38	JALAN FELDA KAHANG TIMUR, KLUANG	91	B/C	II	82	B/C	II
	MUAR	SG. JELAI	1MN23	LOJI RAWATAN AIR DANGI	86	B/C	II	82	B/C	II
		SG. JEMENTAH	3MR39	LOJI RAWATAN AIR JEMENTAH	93	B/C	I	90	B/C	II
		SG. MUAR	3MR38	LOJI RAWATAN AIR GOMBANG	77	ST/SP	II	74	ST/SP	III
PULAI	SG. PULAI DAM	3PU04	PULAI DAM	91	B/C	II	84	B/C	II	

Jadual 2.6 Malaysia: Status Kualiti Air di Hulu Muka Sauk, 2016
Table 2.6 Malaysia: Water Quality Status of Upstream Water Intakes, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	STESEN ID/ ID STESEN	MUKA SAUK/ WATER INTAKE	KUALITI AIR, 2015/ WATER QUALITY 2015			KUALITI AIR, 2016/ WATER QUALITY 2016		
					IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS	IKA/ WQI	KATEGORI/ CATEGORY	KELAS/ CLASS
PAHANG	BERTAM	SG. BERTAM	2CH15	LOJI RAWATAN AIR HABU	91	B/C	II	90	B/C	II
		SG. TERLA	2CH14	LOJI RAWATAN AIR KUALA TERLA	89	B/C	II	85	B/C	II
		SG. ULONG	2CH16	BRINCHANG DAM	90	B/C	II	92	B/C	II
	PAHANG	SG. GAPOI	4PH95	LOJI RAWATAN AIR GAPOI	90	B/C	II	91	B/C	II
		SG. JEMPOL	4PH96	LOJI AIR SG JERIK	87	B/C	II	88	B/C	II
			4PH97	LOJI AIR JENGA 3	85	B/C	II	87	B/C	II
		SG. MENTIGA	4PH98	LOJI AIR CHINI	80	ST/SP	II	80	ST/SP	II
SG. TRIANG	4PH93	LOJI RAWATAN AIR SG. TRIANG	86	B/C	II	79	ST/SP	II		
TERENGGANU	TERENGGANU	SG. TERENGGANU	4TE14	LOJI AIR SERADA	88	B/C	II	85	B/C	II
KELANTAN	GOLOK	SG. JEDUK	4GL10	SYARIKAT AIR KELANTAN	86	B/C	II	80	ST/SP	II
	KELANTAN	SG. CHIKU	4KE66	FELDA CIKU 2	86	B/C	II	89	B/C	II
		SG. KELANTAN	4KE68	LOJI AIR KELAR, PASIR MAS	87	B/C	II	81	B/C	II
		SG. PEHI	4KE67	LOJI AIR PAHI	86	B/C	II	82	B/C	II
SABAH	PADAS	SG. PADAS	72PD04	WATER INTAKE JABATAN AIR BEAUFORT	77	ST/SP	II	83	B/C	II
	PAPAR	SG. PAPAR	75PP04	SEKOLAH KEBANGSAAN MANDALIPAU	89	B/C	II	90	B/C	II
			75PP05	WATER INTAKE KOGOPON	89	B/C	II	92	B/C	II
SARAWAK	KERIAN	SG. SELALANG	55SG01	SELALANG WATER INTAKE	92	B/C	II	88	B/C	II
	MUKAH	SG. MUKAH	58MH05	MUKAH WATER INTAKE	75	ST/SP	III	80	ST/SP	II
	RAJANG	SG. DARO	56DR01	DARO WATER INTAKE	71	ST/SP	III	82	B/C	II
		SG. JEMORENG	56JG01	JEMORENG WATER INTAKE	71	ST/SP	III	84	B/C	II
		SG. PAKAN	56PN01	PAKAN WATER INTAKE	90	B/C	II	81	B/C	II
		SG. PILA PARIT	56PL01	IGAN WATER INTAKE	81	B/C	II	80	ST/SP	II

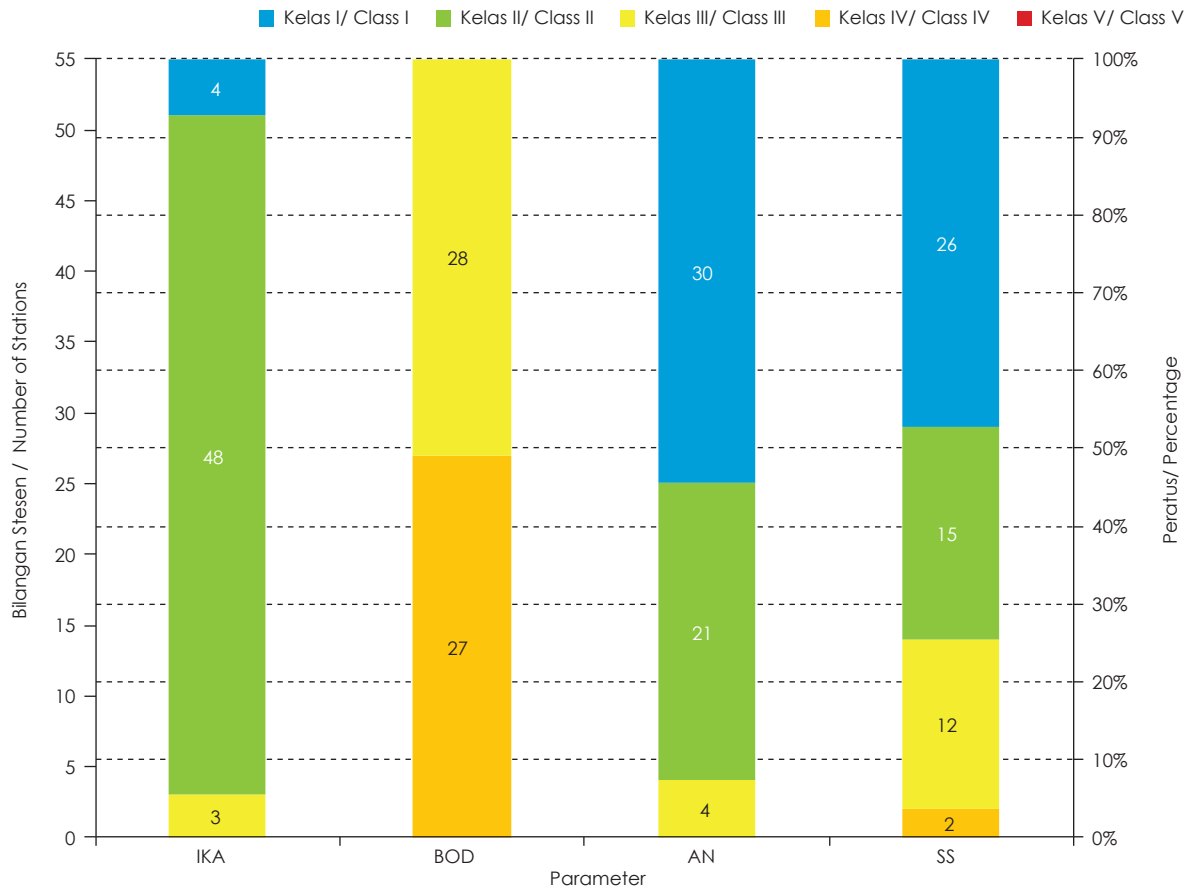
Nota / Note: B / C : Bersih / Clean ST/SP: Sederhana tercemar / Slightly polluted T/P : Tercemar / Polluted

Dari segi BOD, 28 stesen menunjukkan kualiti air pada Kelas III, dan 27 stesen adalah Kelas IV. Berdasarkan AN pula, sebanyak 30 stesen menunjukkan kualiti air Kelas I, 21 Kelas II, dan empat stesen Kelas III sementara dari segi SS, 26 stesen telah dikategorikan sebagai Kelas I, 15 stesen Kelas II, 12 stesen Kelas III dan dua stesen Kelas IV.

Rajah 2.10 menunjukkan peratusan stesen hulu muka sauik berdasarkan kelas kualiti air dan parameter utama. **Jadual 2.7, Jadual 2.8 dan Jadual 2.9** menunjukkan kualiti air sungai di stesen di hulu muka sauik masing-masing berdasarkan sub- indeks BOD, AN dan SS.

In terms of BOD, 28 station have shown Class III water quality, and 27 as Class IV. In terms of AN, 30 stations showed water quality of Class I, 21 as Class II and four station as Class IV. Meanwhile in terms of SS, 26 stations were categorized as Class I, 15 as Class II, 12 as Class III and two stations as Class IV.

Figure 2.10 shows the percentage of water quality upstream of intake stations in term of classes based on main pollutant parameters. **Table 2.7, Table 2.8 and Table 2.9** show the water quality of stations upstream of water intake points based on BOD, AN and SS sub-indexes respectively.



Rajah 2.10 Kualiti Air Sungai di Stesen di Hulu Muka Sauk, 2016
 Figure 2.10 River Water Quality at Stations Upstream of Water Intakes, 2016



Jadual 2.7 Malaysia: Status Kualiti Air di Hulu Muka Sauk Berdasarkan Sub-Indeks BOD, 2016
 Table 2.7 Malaysia: Water Quality Status of Upstream Water Intakes Based on BOD Sub-Index, 2016

NEGERI / STATE	LEMBANGAN SUNGAI / RIVER BASIN	SUNGAI / RIVER	STESEN ID/ ID STESEN	MUKA SAUK / WATER INTAKE	KUALITI AIR, 2015 / WATER QUALITY 2015			KUALITI AIR, 2016 / WATER QUALITY 2016		
					SUB- INDEKS BOD / BOD SUB- INDEX	KATEGORI / CATEGORY	KELAS / CLASS	SUB- INDEKS BOD / BOD SUB- INDEX	KATEGORI / CATEGORY	KELAS / CLASS
PERLIS	PERLIS	SG. TERUSAN MADA	2PS13	LOJI RAWATAN AIR ARAU FASA IV	79	T/P	III	74	T/P	IV
			2PS14	LOJI RAWATAN AIR TTPC, SG. BARU	82	ST/SP	III	77	T/P	IV
KEDAH (LANGKAWI)	MELAKA	SG. MELAKA	2LG05	ULU MELAKA	79	T/P	III	76	T/P	IV
		SG. SAGA	2LG06	PADANG SAGA	73	T/P	IV	76	T/P	IV
KEDAH	KEDAH	SG. AHNING	2KD11	PADANG SANAI	86	ST/SP	III	67	T/P	IV
		SG. PADANG TERAP	2KD12	KUALA NERANG	84	ST/SP	III	85	ST/SP	III
		SG. TEMIN	2KD10	CHANGLOON	82	ST/SP	III	78	T/P	III
	MUDA	SG. MUDA	2MD16	JENERI	81	ST/SP	III	75	T/P	IV
			2MD17	JENIANG	84	ST/SP	III	76	T/P	IV
		2MD18	BUKIT SELAMBAU	80	ST/SP	III	76	T/P	IV	
		2MD20	PINANG TUNGGAL	81	ST/SP	III	69	T/P	IV	
	SG. NAMI	2MD21	NAMI	79	T/P	III	80	ST/SP	III	
SG. SEDIM	2MD19	BIKAN	73	T/P	IV	80	ST/SP	III		
P.PINANG	PINANG	SG. SATU	2PG12	BATU FERINGGI	88	ST/SP	II	76	T/P	IV
PERAK	BERNAM	SG. GELINTING	1BM15	LOJI RAWATAN AIR ULU SLIM	83	ST/SP	III	84	ST/SP	III
		SG. TROLAK	1BM14	LOJI RAWATAN AIR TROLAK TIMUR	84	ST/SP	III	83	ST/SP	III
	KURAU	SG. AIR HITAM	2KU07	LOJI RAWATAN AIR JELAI	80	ST/SP	III	84	ST/SP	III
	PERAK	SG. MANONG	2PK62	LOJI RAWATAN AIR MANONG	83	ST/SP	III	86	ST/SP	III
		SG. SAUK	2PK61	LOJI RAWATAN AIR SAUK	87	ST/SP	III	88	ST/SP	III
		SG. TESONG	2PK64	LOJI RAWATAN AIR SG. KLAH	83	ST/SP	III	84	ST/SP	III
		SG. WOH	2PK63	LOJI RAWATAN AIR KUALA WOH	87	ST/SP	III	79	T/P	III
	SEPETANG	SG. BATU TEGOH	2SP18	LOJI RAWATAN AIR BUKIT LARUT	83	ST/SP	III	75	T/P	IV
SELANGOR	KLANG	SG. GOMBAK	1K53	LOJI RAWATAN AIR GOMBAK	77	T/P	III	83	ST/SP	III
	LANGAT	SG. BATANG LABU	1L26	LOJI RAWATAN AIR SALAK TINGGI	75	T/P	IV	67	T/P	IV
		SG. SEMENYIH	1L09	LOJI RAWATAN AIR SEMENYIH	76	T/P	IV	71	T/P	IV
MELAKA	KESANG	SG. CHIN-CHIN	1KA08	MUKA SAUK LOJI RAWATAN AIR CHIN-CHIN	74	T/P	IV	76	T/P	IV
JOHOR	BATU PAHAT	SG. SEMBERONG DAM	3BP27	SEMBERONG DAM	56	T/P	IV	68	T/P	IV
	BENUT	SG. MACHAP DAM	3BN10	MACHAP DAM	79	T/P	III	78	T/P	III
	ENDAU	SG. KAHANG	3ED38	JALAN FELDA KAHANG TIMUR, KLUANG	85	ST/SP	III	74	T/P	IV
	MUAR	SG. JELAI	1MN23	LOJI RAWATAN AIR DANGI	81	ST/SP	III	78	T/P	III
		SG. JEMENTAH	3MR39	LOJI RAWATAN AIR JEMENTAH	85	ST/SP	III	80	ST/SP	III
		SG. MUAR	3MR38	LOJI RAWATAN AIR GOMBANG	80	ST/SP	III	66	T/P	IV
PULAI	SG. PULAI DAM	3PU04	PULAI DAM	81	ST/SP	III	71	T/P	IV	

Jadual 2.7 Malaysia: Status Kualiti Air di Hulu Muka Sauk Berdasarkan Sub-Indeks BOD, 2016
 Table 2.7 Malaysia: Water Quality Status of Upstream Water Intakes Based on BOD Sub-Index, 2016

NEGERI / STATE	LEMBANGAN SUNGAI / RIVER BASIN	SUNGAI / RIVER	STESEN ID / ID STESEN	MUKA SAUK / WATER INTAKE	KUALITI AIR, 2015 / WATER QUALITY 2015			KUALITI AIR, 2016 / WATER QUALITY 2016		
					SUB-INDEKS BOD / BOD SUB-INDEX	KATEGORI / CATEGORY	KELAS / CLASS	SUB-INDEKS BOD / BOD SUB-INDEX	KATEGORI / CATEGORY	KELAS / CLASS
PAHANG	BERTAM	SG. BERTAM	2CH15	LOJI RAWATAN AIR HABU	77	T/P	IV	75	T/P	IV
		SG. TERLA	2CH14	LOJI RAWATAN AIR KUALA TERLA	77	T/P	III	70	T/P	IV
		SG. ULONG	2CH16	BRINCHANG DAM	75	T/P	IV	84	ST/SP	III
	PAHANG	SG. GAPOI	4PH95	MUKA SAUK LOJI RAWATAN AIR GAPOI	79	T/P	III	82	ST/SP	III
		SG. JEMPOL	4PH96	LOJI AIR SG JERIK	75	T/P	IV	80	ST/SP	III
			4PH97	LOJI AIR JENGA 3	72	T/P	IV	79	T/P	III
		SG. MENTIGA	4PH98	LOJI AIR CHINI	75	T/P	IV	77	T/P	III
SG. TRIANG	4PH93	LOJI RAWATAN AIR SG. TRIANG	85	ST/SP	III	69	T/P	IV		
TERENGGANU	TERENGGANU	SG. TERENGGANU	4TE14	LOJI AIR SERADA	82	ST/SP	III	82	ST/SP	III
KELANTAN	GOLOK	SG. JEDUK	4GL10	SYARIKAT AIR KELANTAN	84	ST/SP	III	75	T/P	IV
	KELANTAN	SG. CHIKU	4KE66	FELDA CIKU 2	81	ST/SP	III	80	ST/SP	III
		SG. KELANTAN	4KE68	LOJI AIR KELAR, PASIR MAS	86	ST/SP	III	81	ST/SP	III
		SG. PEHI	4KE67	LOJI AIR PAHI	73	T/P	IV	68	T/P	IV
SABAH	PADAS	SG. PADAS	72PD04	WATER INTAKE JABATAN AIR BEAUFORT	62	T/P	IV	71	T/P	IV
	PAPAR	SG. PAPAR	75PP04	SEKOLAH KEBANGSAAN MANDALIPAU	84	ST/SP	III	82	ST/SP	III
			75PP05	WATER INTAKE KOGOPON	84	ST/SP	III	84	ST/SP	III
SARAWAK	KERIAN	SG. SELALANG	55SG01	SELALANG WATER INTAKE	87	ST/SP	III	81	ST/SP	III
	MUKAH	SG. MUKAH	58MH05	MUKAH WATER INTAKE	63	T/P	IV	74	T/P	IV
	RAJANG	SG. DARO	56DR01	DARO WATER INTAKE	61	T/P	IV	76	T/P	IV
		SG. JEMORENG	56JG01	JEMORENG WATER INTAKE	63	T/P	IV	82	ST/SP	III
		SG. PAKAN	56PN01	PAKAN WATER INTAKE	85	ST/SP	III	80	ST/SP	III
		SG. PILA PARIT	56PL01	IGAN WATER INTAKE	78	T/P	III	71	T/P	IV

Nota / Note: B / C : Bersih / Clean ST/SP: Sederhana tercemar / Slightly polluted T/P : Tercemar / Polluted

Jadual 2.8 Malaysia: Status Kualiti Air di Hulu Muka Sauk Berdasarkan Sub-Indeks AN, 2016
Table 2.8 Malaysia: Water Quality Status of Upstream Water Intakes Based on AN Sub-Index, 2016

NEGERI / STATE	LEMBANGAN SUNGAI / RIVER BASIN	SUNGAI / RIVER	STESEN ID / ID STESEN	MUKA SAUK / WATER INTAKE	KUALITI AIR, 2015 / WATER QUALITY 2015			KUALITI AIR, 2016 / WATER QUALITY 2016		
					SUB-INDEKS AN / AN SUB-INDEX	KATEGORI / CATEGORY	KELAS / CLASS	SUB-INDEKS AN / AN SUB-INDEX	KATEGORI / CATEGORY	KELAS / CLASS
PERLIS	PERLIS	SG. TERUSAN MADA	2PS13	LOJI RAWATAN AIR ARAU FASA IV	85	ST/SP	II	93	B/C	I
			2PS14	LOJI RAWATAN AIR TTPC, SG. BARU	91	ST/SP	I	95	B/C	I
KEDAH (LANGKAWI)	MELAKA	SG. MELAKA	2LG05	ULU MELAKA	99	B/C	I	85	ST/SP	II
		SG. SAGA	2LG06	PADANG SAGA	96	B/C	I	83	ST/SP	II
KEDAH	KEDAH	SG. AHNING	2KD11	PADANG SANAI	99	B/C	I	94	B/C	I
		SG. PADANG TERAP	2KD12	KUALA NERANG	93	B/C	I	82	ST/SP	II
		SG. TEMIN	2KD10	CHANGLOON	98	B/C	I	65	T/P	III
	MUDA	SG. MUDA	2MD16	JENERI	95	B/C	I	88	ST/SP	II
			2MD17	JENIANG	97	B/C	I	80	ST/SP	II
			2MD18	BUKIT SELAMBAU	87	ST/SP	II	95	B/C	I
			2MD20	PINANG TUNGGAL	99	B/C	I	67	T/P	III
			2MD21	NAMI	99	B/C	I	95	B/C	I
2MD19	BIKAN	99	B/C	I	93	B/C	I			
P.PINANG	PINANG	SG. SATU	2PG12	BATU FERINGGI	49	T/P	IV	96	B/C	I
PERAK	BERNAM	SG. GELINTING	1BM15	LOJI RAWATAN AIR ULU SLIM	81	ST/SP	II	97	B/C	I
		SG. TROLAK	1BM14	LOJI RAWATAN AIR TROLAK TIMUR	95	B/C	I	92	B/C	I
	KURAU	SG. AIR HITAM	2KU07	LOJI RAWATAN AIR JELAI	95	B/C	I	90	ST/SP	II
	PERAK	SG. MANONG	2PK62	LOJI RAWATAN AIR MANONG	97	B/C	I	99	B/C	I
		SG. SAUK	2PK61	LOJI RAWATAN AIR SAUK	72	ST/SP	II	99	B/C	I
		SG. TESONG	2PK64	LOJI RAWATAN AIR SG. KLAH	84	ST/SP	II	97	B/C	I
		SG. WOH	2PK63	LOJI RAWATAN AIR KUALA WOH	86	ST/SP	II	98	B/C	I
	SEPETANG	SG. BATU TEGOH	2SP18	LOJI RAWATAN AIR BUKIT LARUT	89	ST/SP	II	96	B/C	I
SELANGOR	KLANG	SG. GOMBAK	1K53	LOJI RAWATAN AIR GOMBAK	86	ST/SP	II	98	B/C	I
	LANGAT	SG. BATANG LABU	1L26	LOJI RAWATAN AIR SALAK TINGGI	78	ST/SP	II	54	T/P	III
		SG. SEMENYIH	1L09	LOJI RAWATAN AIR SEMENYIH	74	ST/SP	II	72	ST/SP	II
MELAKA	KESANG	SG. CHIN-CHIN	1KA08	MUKA SAUK LOJI RAWATAN AIR CHIN-CHIN	97	B/C	I	82	ST/SP	II
JOHOR	BATU PAHAT	SG. SEMBERONG DAM	3BP27	SEMBERONG DAM	80	ST/SP	II	96	B/C	I
	BENUT	SG. MACHAP DAM	3BN10	MACHAP DAM	98	B/C	I	88	ST/SP	II
	ENDAU	SG. KAHANG	3ED38	JALAN FELDA KAHANG TIMUR, KLUANG	100	B/C	I	87	ST/SP	II
	MUAR	SG. JELAI	1MN23	LOJI RAWATAN AIR DANGI	81	ST/SP	II	92	B/C	I
		SG. JEMENTAH	3MR39	LOJI RAWATAN AIR JEMENTAH	99	B/C	I	96	B/C	I
		SG. MUAR	3MR38	LOJI RAWATAN AIR GOMBANG	99	B/C	I	86	ST/SP	II
PULAI	SG. PULAI DAM	3PU04	PULAI DAM	99	B/C	I	68	T/P	III	

Jadual 2.8 Malaysia: Status Kualiti Air di Hulu Muka Sauk Berdasarkan Sub-Indeks AN, 2016
 Table 2.8 Malaysia: Water Quality Status of Upstream Water Intakes Based on AN Sub-Index, 2016

NEGERI / STATE	LEMBANGAN SUNGAI / RIVER BASIN	SUNGAI / RIVER	STESEN ID / ID STESEN	MUKA SAUK / WATER INTAKE	KUALITI AIR, 2015 / WATER QUALITY 2015			KUALITI AIR, 2016 / WATER QUALITY 2016			
					SUB-INDEKS AN / AN SUB-INDEX	KATEGORI / CATEGORY	KELAS / CLASS	SUB-INDEKS AN / AN SUB-INDEX	KATEGORI / CATEGORY	KELAS / CLASS	
PAHANG	BERTAM	SG. BERTAM	2CH15	LOJI RAWATAN AIR HABU	95	B/C	I	99	B/C	I	
		SG. TERLA	2CH14	LOJI RAWATAN AIR KUALA TERLA	84	ST/SP	II	97	B/C	I	
		SG. ULONG	2CH16	BRINCHANG DAM	97	B/C	I	98	B/C	I	
	PAHANG	PAHANG	SG. GAPOI	4PH95	MUKA SAUK LOJI RAWATAN AIR GAPOI	90	ST/SP	II	90	ST/SP	II
			SG. JEMPOL	4PH96	LOJI AIR SG JERIK	94	B/C	I	94	B/C	I
				4PH97	LOJI AIR JENGA 3	89	ST/SP	II	97	B/C	I
			SG. MENTIGA	4PH98	LOJI AIR CHINI	97	B/C	I	90	ST/SP	II
	SG. TRIANG	4PH93	LOJI RAWATAN AIR SG. TRIANG	99	B/C	I	97	B/C	I		
TERENGGANU	TERENGGANU	SG. TERENGGANU	4TE14	LOJI AIR SERADA	97	B/C	I	84	ST/SP	II	
KELANTAN	GOLOK	SG. JEDUK	4GL10	SYARIKAT AIR KELANTAN	75	ST/SP	II	92	B/C	I	
	KELANTAN	SG. CHIKU	4KE66	FELDA CIKU 2	94	B/C	I	98	B/C	I	
		SG. KELANTAN	4KE68	LOJI AIR KELAR, PASIR MAS	81	ST/SP	II	79	ST/SP	II	
		SG. PEHI	4KE67	LOJI AIR PAHI	98	B/C	I	98	B/C	I	
SABAH	PADAS	SG. PADAS	72PD04	WATER INTAKE JABATAN AIR BEAUFORT	71	ST/SP	II	82	ST/SP	II	
	PAPAR	SG. PAPAR	75PP04	SEKOLAH KEBANGSAAN MANDALIPAU	100	B/C	I	95	B/C	I	
			75PP05	WATER INTAKE KOGOPON	85	ST/SP	II	97	B/C	I	
SARAWAK	KERIAN	SG. SELALANG	55SG01	SELALANG WATER INTAKE	85	ST/SP	II	95	B/C	I	
	MUKAH	SG. MUKAH	58MH05	MUKAH WATER INTAKE	87	ST/SP	II	87	ST/SP	II	
	RAJANG	SG. DARO	56DR01	DARO WATER INTAKE	86	ST/SP	II	79	ST/SP	II	
		SG. JEMORENG	56JG01	JEMORENG WATER INTAKE	82	ST/SP	II	81	ST/SP	II	
		SG. PAKAN	56PN01	PAKAN WATER INTAKE	89	ST/SP	II	85	ST/SP	II	
		SG. PILA PARIT	56PL01	IGAN WATER INTAKE	100	B/C	I	82	ST/SP	II	

Nota / Note: B / C : Bersih / Clean ST/SP: Sederhana tercemar / Slightly polluted T/P : Tercemar / Polluted

Jadual 2.9 Malaysia: Status Kualiti Air di Hulu Muka Sauk Berdasarkan Sub-Indeks SS, 2016
Table 2.9 Malaysia: Water Quality Status of Upstream Water Intakes Based on SS Sub-Index, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	STESEN ID/ ID STESEN	MUKA SAUK/ WATER INTAKE	KUALITI AIR, 2015/ WATER QUALITY 2015			KUALITI AIR, 2016/ WATER QUALITY 2016		
					SUB- INDEKS SS/ SS SUB- INDEX	KATEGORI/ CATEGORY	KELAS/ CLASS	SUB- INDEKS SS/ SS SUB- INDEX	KATEGORI/ CATEGORY	KELAS/ CLASS
PERLIS	PERLIS	SG. TERUSAN MADA	2PS13	LOJI RAWATAN AIR ARAU FASA IV	89	B/C	I	75	ST/SP	II
			2PS14	LOJI RAWATAN AIR TTPC, SG. BARU	97	B/C	I	79	B/C	II
KEDAH (LANGKAWI)	MELAKA	SG. MELAKA	2LG05	ULU MELAKA	98	B/C	I	72	ST/SP	II
		SG. SAGA	2LG06	PADANG SAGA	97	B/C	I	71	ST/SP	III
KEDAH	KEDAH	SG. AHNING	2KD11	PADANG SANAI	77	B/C	II	73	ST/SP	II
		SG. PADANG TERAP	2KD12	KUALA NERANG	75	ST/SP	II	82	B/C	II
		SG. TEMIN	2KD10	CHANGLOON	73	ST/SP	II	71	ST/SP	III
	MUDA	SG. MUDA	2MD16	JENERI	99	B/C	I	68	T/P	III
			2MD17	JENIANG	97	B/C	I	81	B/C	II
			2MD18	BUKIT SELAMBAU	96	B/C	I	72	ST/SP	III
			2MD20	PINANG TUNGGAL	93	B/C	I	75	ST/SP	II
			2MD21	NAMI	96	B/C	I	77	B/C	II
2MD19	BIKAN	98	B/C	I	69	T/P	III			
P.PINANG	PINANG	SG. SATU	2PG12	BATU FERINGGI	88	B/C	I	94	B/C	I
PERAK	BERNAM	SG. GELINTING	1BM15	LOJI RAWATAN AIR ULU SLIM	80	B/C	II	80	B/C	II
		SG. TROLAK	1BM14	LOJI RAWATAN AIR TROLAK TIMUR	80	B/C	II	90	B/C	I
	KURAU	SG. AIR HITAM	2KU07	LOJI RAWATAN AIR JELAI	98	B/C	I	95	B/C	I
	PERAK	SG. MANONG	2PK62	LOJI RAWATAN AIR MANONG	95	B/C	I	93	B/C	I
			2PK61	LOJI RAWATAN AIR SAUK	60	T/P	III	95	B/C	I
			2PK64	LOJI RAWATAN AIR SG. KLAH	87	B/C	I	97	B/C	I
			2PK63	LOJI RAWATAN AIR KUALA WOH	83	B/C	II	95	B/C	I
	SEPETANG	SG. BATU TEGOH	2SP18	LOJI RAWATAN AIR BUKIT LARUT	78	B/C	II	95	B/C	I
SELANGOR	KLANG	SG. GOMBAK	1K53	LOJI RAWATAN AIR GOMBAK	93	B/C	I	95	B/C	I
	LANGAT	SG. BATANG LABU	1L26	LOJI RAWATAN AIR SALAK TINGGI	87	B/C	I	62	T/P	III
		SG. SEMENYIH	1L09	LOJI RAWATAN AIR SEMENYIH	79	B/C	II	53	T/P	IV
MELAKA	KESANG	SG. CHIN- CHIN	1KA08	MUKA SAUK LOJI RAWATAN AIR CHIN-CHIN	80	B/C	II	61	T/P	III
JOHOR	BATU PAHAT	SG. SEMBERONG DAM	3BP27	SEMBERONG DAM	67	T/P	III	90	B/C	I
	BENUT	SG. MACHAP DAM	3BN10	MACHAP DAM	96	B/C	I	92	B/C	I
	ENDAU	SG. KAHANG	3ED38	JALAN FELDA KAHANG TIMUR, KLUANG	98	B/C	I	69	T/P	III
	MUAR	SG. JELAI	1MN23	LOJI RAWATAN AIR DANGI	82	B/C	II	59	T/P	III
			3MR39	LOJI RAWATAN AIR JEMENTAH	96	B/C	I	93	B/C	I
			3MR38	LOJI RAWATAN AIR GOMBANG	84	B/C	I	81	B/C	II
PULAI	SG. PULAI DAM	3PU04	PULAI DAM	88	B/C	I	94	B/C	I	

Jadual 2.9 Malaysia: Status Kualiti Air di Hulu Muka Sauk Berdasarkan Sub-Indeks SS, 2016
Table 2.9 Malaysia: Water Quality Status of Upstream Water Intakes Based on SS Sub-Index, 2016

NEGERI/ STATE	LEMBANGAN SUNGAI/ RIVER BASIN	SUNGAI/ RIVER	STESEN ID/ ID STESEN	MUKA SAUK/ WATER INTAKE	KUALITI AIR, 2015/ WATER QUALITY 2015			KUALITI AIR, 2016/ WATER QUALITY 2016			
					SUB- INDEKS SS/ SS SUB- INDEX	KATEGORI/ CATEGORY	KELAS/ CLASS	SUB- INDEKS SS/ SS SUB- INDEX	KATEGORI/ CATEGORY	KELAS/ CLASS	
PAHANG	BERTAM	SG. BERTAM	2CH15	LOJI RAWATAN AIR HABU	78	B/C	II	94	B/C	I	
		SG. TERLA	2CH14	LOJI RAWATAN AIR KUALA TERLA	62	T/P	III	75	ST/SP	II	
		SG. ULONG	2CH16	BRINCHANG DAM	65	T/P	III	97	B/C	I	
	PAHANG	PAHANG	SG. GAPOI	4PH95	MUKA SAUK LOJI RAWATAN AIR GAPOI	83	B/C	II	97	B/C	I
			SG. JEMPOL	4PH96	LOJI AIR SG JERIK	84	B/C	II	92	B/C	I
				4PH97	LOJI AIR JENGA 3	87	B/C	I	90	B/C	I
			SG. MENTIGA	4PH98	LOJI AIR CHINI	67	T/P	III	84	B/C	I
	SG. TRIANG	4PH93	LOJI RAWATAN AIR SG. TRIANG	69	T/P	III	61	T/P	III		
TERENGGANU	TERENGGANU	SG. TERENGGANU	4TE14	LOJI AIR SERADA	85	B/C	I	86	B/C	I	
KELANTAN	GOLOK	SG. JEDUK	4GL10	SYARIKAT AIR KELANTAN	96	B/C	I	81	B/C	II	
	KELANTAN	SG. CHIKU	4KE66	FELDA CIKU 2	92	B/C	I	87	B/C	I	
		SG. KELANTAN	4KE68	LOJI AIR KELAR, PASIR MAS	89	B/C	I	62	T/P	III	
		SG. PEHI	4KE67	LOJI AIR PAHI	88	B/C	I	77	B/C	II	
SABAH	PADAS	SG. PADAS	72PD04	WATER INTAKE JABATAN AIR BEAUFORT	88	B/C	I	42	T/P	IV	
	PAPAR	SG. PAPAR	75PP04	SEKOLAH KEBANGSAAN MANDALIPAU	81	B/C	II	86	B/C	I	
			75PP05	WATER INTAKE KOGOPON	88	B/C	I	89	B/C	I	
SARAWAK	KERIAN	SG. SELALANG	55SG01	SELALANG WATER INTAKE	57	T/P	III	94	B/C	I	
	MUKAH	SG. MUKAH	58MH05	MUKAH WATER INTAKE	90	B/C	I	81	B/C	II	
	RAJANG	RAJANG	SG. DARO	56DR01	DARO WATER INTAKE	86	B/C	I	85	B/C	I
			SG. JEMORENG	56JG01	JEMORENG WATER INTAKE	87	B/C	I	84	B/C	I
			SG. PAKAN	56PN01	PAKAN WATER INTAKE	89	B/C	I	82	B/C	II
			SG. PILA PARIT	56PL01	IGAN WATER INTAKE	92	B/C	I	71	ST/SP	III

Nota / Note: B / C : Bersih / Clean ST/SP: Sederhana tercemar / Slightly polluted T/P : Tercemar / Polluted