



**REPUBLIC OF CROATIA  
MINISTRY OF ENVIRONMENTAL PROTECTION, PHYSICAL  
PLANNING AND CONSTRUCTION**

## SEA BATHING WATER QUALITY IN THE TERRITORY OF THE REPUBLIC OF CROATIA IN 2006







## THE SEA - CRYSTAL CLEAR AND CONTROLLED CLEAN

### INTRODUCTION

The Mediterranean Sea and its coastal areas are exposed to serious pressures caused by human activities on land and at sea which cause continuous pollution of the marine environment. Sea ports, shipyards, thermal power plants, cement factories and other sources of pollution, through their uncontrolled discharges into the sea, endanger marine ecosystems and space as a whole, and lower the economic value of the respective areas.

Within a wider context of the Mediterranean, the Adriatic Sea is still relatively clean. The Croatian side of the Adriatic (sea, coastal area and islands) is of an outstanding importance for the Republic of Croatia because of its exceptional geographic and biological diversity. The coastline of the Republic of Croatia is very indented, and comprises 1185 islands, islets and cliffs. It is 5835 km long, out of which 1777 km make the mainland coastline. There are 1.427.008 inhabitants living in 7 counties on the Croatian side of the Adriatic coast. Quick population growth, interconnectedness of spatial, biological, social, cultural, economic and other processes in the coastal and island area have stimulated the beginning of coordinated monitoring and research of the sources of pollution of the Adriatic Sea.

### SEA WATER QUALITY MONITORING PROGRAMME ON BEACHES

One of the sea monitoring programmes is the Monitoring of Sea Water Quality on Beaches. It was introduced in 1989, among the first in the Mediterranean.

The sampling criteria, testing methods and assessment of sea water quality on beaches were defined by the Environmental Protection Act (Official Gazette of the Republic of Croatia No. 82/94 and 128/99) and Regulation on Bathing Water Quality Standards (Official Gazette No. 33/96). This Regulation is based on Council Directive 76/160/EEC concerning the quality of bathing water, Official Journal of the EEC No. L281/47-52, Guidelines for coastal recreational waters in the Mediterranean of the Mediterranean Action Plan of the United Nations Environment Programme (UNEP/MAP), and the criteria of the World Health Organisation (WHO).

The Republic of Croatia is obliged by the new EU Directive on bathing water (2006/7/EU) to align its national regulations to the new Directive criteria.

The bathing water quality testing programme on Adriatic beaches in the Republic of Croatia is financed from county budgets. The Regulation is implemented by licensed county laboratories by sampling and analysing of sea water used for bathing and recreation, and by informing the public. The Ministry of Environmental Protection, Physical Planning and Construction is responsible for this Programme's coordination, integration and data evaluation, as well as for informing the public.



Microbiological parameter assessment in laboratory

## AIMS:

- Protection of bathers' health and public health education;
- Beach management, with the aim of preserving the beaches' natural resources for sustainable use;
- Pollution source identification, existing waste water disposal operation, and sewerage system construction monitoring;
- Public information dissemination via national and international media, newsletters, county institutes and Ministry websites;

According to their type, sea beaches are categorised into regulated and natural ones. A regulated beach is an on-shore space that is physically connected to the sea and equipped with sanitary facilities, showers and changing cubicles, fenced from the sea and accessible to all under same conditions. A natural beach is an unregulated on-shore space in direct contact with the sea and accessible to the public. Around 850-870 beaches are tested every year.

In accordance with the Regulation on Bathing Water Quality Standards, the monitoring of sea water quality on beaches is implemented from May 1 to the end of the bathing season, which in these parts lasts until the end of September. Sea water samples are taken at beaches every 15 days, 10 times during the bathing season (12 times for beaches participating or planning to participate in the Blue Flag project).

During sample collection, the basic meteorological conditions are observed and a visual inspection of sea water is performed: its colour, transparency, visible floating waste and visible suspended waste matter. The sea water temperature and pH-value are established at the sampling point, whereas microbiological parameters are established in the laboratory (total coliforms – TC, faecal coliforms – FC, faecal streptococci – FS).

The assessment is carried out by comparing the identified microbiological parameters to the respective limit values indicated in the Regulation and is expressed in terms of “conforming or non-conforming”.

Sea water at beaches is deemed to conform to the prescribed standard if the values of the bacteriological parameters do not exceed the limit values laid down in the Regulation, whereas sea water at beaches is deemed not to conform to the prescribed standard if more than 20% of the analysed samples exceed the limit values listed in Table I.

Bacteriological parameters	number/100 ml
total coliforms TC	500 (in 80% of samples)
	1000 (in 20% of samples)
faecal coliforms FC	100 (in 80% of samples)
	200 (in 20% of samples)
faecal streptococci FS	100 (in 80% of samples)
	200 (in 20% of samples)

Table I. Limit values of bacteriological parameters from the Regulation



Based on the experiences gained in testing sea water sanitary quality at beaches over a number of years, internal criteria for the assessment of sea water (Table II) were introduced for the classification of sea water into four types marked by four colours: high quality sea (blue), good bathing quality sea (green), moderate bathing quality sea (yellow) and sea not suitable for bathing (red). It should be stressed that the internal criteria applied to high quality sea and good bathing quality sea meet the recommended criteria for total coliforms from the EC Directive (76/160/EEC), which are 20 times more stringent than the mandatory criteria from the same Directive.

SEA WATER SANITARY QUALITY CRITERIA	TC (No./100mL)	FC (No./100mL)	FS (No./100mL)
≤ 10	Blue	Blue	Blue
11-100	Blue	Green	Green
101-200	Green	Yellow	Yellow
201-500	Green	Red	Red
501-1000	Yellow	Red	Red
>1000	Red	Red	Red

Table II. Internal criteria for sanitary quality of sea water

## SEA WATER QUALITY ON CROATIAN BEACHES IN 2006

In 2006, 863 sampling points/beaches were monitored in Croatia: 203 beaches in the County of Istria, 232 beaches in the County of Primorje-Gorski Kotar, 45 beaches in the County of Lika-Senj, 85 beaches in the County of Zadar, 71 beaches in the County of Šibenik-Knin, 139 beaches in the County of Split-Dalmatia, and 88 beaches in the County of Dubrovnik-Neretva. There is a constant increase in the number of sampling points on the beaches of the Croatian Adriatic.

In 2006, the samples exceeding the limit values laid down in the Regulation (Diagram I) accounted for 1.06%, which is 8 samples or 7.77% less than in the previous year. Of all the samples conforming to the Regulation standards 72.97% were rated as high quality sea, 25.39% good bathing quality sea and 1.33% as moderate bathing quality sea.

Looking at the final ratings of beaches it is observed that out of 863 sampling points, 215 were rated as high quality sea, 630 as good bathing quality sea, 16 as moderate bathing quality sea and 2 as sea not suitable for bathing.

**In the County of Istria** out of a total of 203 sampling points, 4 were rated as high quality sea, 198 as good bathing quality sea and 1 as moderate bathing quality sea. Taking into account individual evaluations of the samples during the monitoring season, only 0.78% of samples exceeded the limit values laid down by the Regulation. Out of the samples conforming to the Regulation standards, 68.82% were rated as high quality sea, 30.44% as good bathing quality sea and 0.74% as moderate bathing quality sea.





In the **County of Primorje-Gorski Kotar** testing was carried out at 232 sampling points, out of which 106 points were rated as high quality sea, 118 as good bathing quality sea, 7 as moderate bathing quality sea and 1 as sea not suitable for bathing. Looking at individual evaluations of the samples, 0.42% of the samples exceeded the limit values laid down by the Regulation. Out of the samples conforming to the Regulation standards, 83.75% were rated as high quality sea, 13.79% as good bathing quality sea and 1.64% as moderate bathing quality sea.

In the **County of Lika-Senj** testing was carried out at 45 sampling points. At 41 sampling points the sea was rated as high quality sea and at 4 as good bathing quality sea. None of the samples taken during the monitoring season exceeded the limit values laid down by the Regulation. Taking into account individual evaluations of samples conforming to the Regulation standards, 87.05% were rated as high quality sea and 12.95% as good bathing quality sea.

In the **County of Zadar** testing was carried out at 85 sampling points, out of which 44 were rated as high quality sea, 39 as good bathing quality sea and 2 as moderate bathing quality sea. Only 0.34% of samples exceeded the limit values laid down by the Regulation. Taking into account individual evaluations of samples conforming to the Regulation standards, 85.76% were rated as high quality sea and 13.88% good bathing quality sea.

In the **County of Šibenik-Knin** testing was carried out at 71 sampling points, out of which 4 were rated as high quality sea and 67 as good bathing quality sea. During the monitoring season 2.23% of samples exceeded the limit values laid down by the Regulation. Taking into account individual evaluations of samples conforming to the Regulation standards, 65.49% were rated as high quality sea, 32.25% as good bathing quality sea and 2.25% as moderate bathing quality sea.

TOTAL NUMBER OF SAMPLES WITH NUMBER OF SAMPLES EXCEEDING LIMIT VALUES FROM REGULATION IN 2006

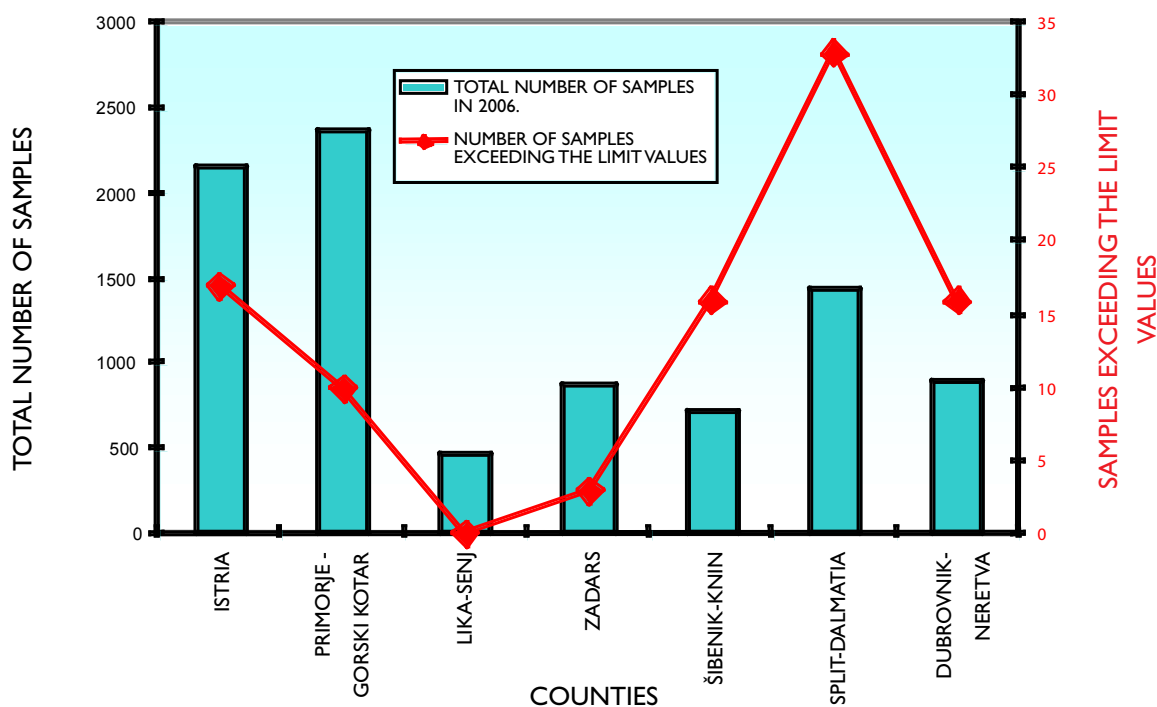


Diagram I. Total number of samples taken in the Adriatic counties in 2006 with indicated numbers of samples exceeding the limit values laid down by the Regulation



In the **County of Split-Dalmatia** testing was carried out at 139 sampling points, out of which 134 were rated as good bathing quality sea and 5 as moderate bathing quality sea. During the bathing season 2.29% of samples exceeded the limit values laid down by the Regulation. Taking into account individual evaluations of the samples conforming to the Regulation standards, 50.72% were rated as high quality sea, 46.98% as good bathing quality sea and 2.01% as moderate bathing quality sea.

In the **County of Dubrovnik-Neretva** testing was carried at 88 sampling points, out of which 16 were rated as high quality sea, 70 as good bathing quality sea, 1 as moderate bathing quality sea and 1 as sea not suitable for bathing. Taking into account individual evaluations of the samples, only 1.8% of samples exceeded the limit values laid down by the Regulation. Out of samples conforming to the Regulation standards, 70.31% were rated as high quality sea, 27.87% as good bathing quality sea and 1.14% as moderate bathing quality sea.

The County of Lika-Senj, due to the specific geomorphologic features of its area and a lack of large urban centres, has the highest proportion of beaches with high quality sea. All other counties have the highest proportion of good bathing quality beaches, which shows that in the Croatian part of the Adriatic the sea is, given the very strict national criteria, of very high quality for bathing. Only 1.85% of sampling points were rated as moderate bathing quality and 0.23% as sea unsuitable for bathing. During the 2006 season a board prohibiting bathing was put up on the Park Hotel beach in the County of Primorje-Gorski Kotar, and on the New town beach in Ploče in the County of Dubrovnik-Neretva.

COUNTY	Number of sampling points in 2006	RATINGS BASED ON INTERNAL CRITERIA							
		I	%	II	%	III	%	IV	%
ISTRIA	203	4	1,97%	198	97,54%	1	0,49%	0	0,00%
PRIMORJE-GORSKI KOTAR	232	106	45,69%	118	50,86%	7	3,02%	1	0,43%
LIKA-SENJ	45	41	91,11%	4	8,89%	0	0,00%	0	0,00%
ZADAR	85	44	51,76%	39	45,88%	2	2,35%	0	0,00%
ŠIBENIK-KNIN	71	4	5,63%	67	94,37%	0	0,00%	0	0,00%
SPLIT-DALMATIA	139	0	0,00%	134	96,40%	5	3,60%	0	0,00%
DUBROVNIK-NERETVA	88	16	18,18%	70	79,55%	1	1,14%	1	1,14%
TOTAL	863	215	24,91%	630	73,00%	16	1,85%	2	0,23%

Table III. Final sea water quality ratings at sampling points on beaches of the Croatian Adriatic in 2006, based on internal criteria



## COASTLINE PRESSURES ANALYSIS IN 2006

Taking into account the coastal pressures (total number of the night's accommodation during the tourist season/the length of the coast) and the basic parameter of sea pollution on beaches – microbiological load, the conclusion can be drawn that, regardless of the increase in total pressures during the bathing season the number of samples exceeding the limit values in the last monitoring period is decreasing (Table IV). This is a result of a systematic construction of new sewerage systems and waste water treatment systems on the Adriatic coast within the framework of the Adriatic Municipal Water Pollution Control Project.

COUNTY	2002		2003		2004		2005		2006	
	Total number of samples	Number of samples exceeding limit values	Total number of samples	Number of samples exceeding limit values	Total number of samples	Number of samples exceeding limit values	Total number of samples	Number of samples exceeding limit values	Total number of samples	Number of samples exceeding limit values
ISTARSKA	1857	0	2100	53	2157	19	2162	0	2169	17
PRIMORSKO-GORANSKA	2202	156	2269	51	2311	72	2421	36	2382	10
LIČKO-SENJSKA	424	0	460	0	464	0	464	0	474	0
ZADARSKA	610	8	728	0	740	0	818	4	881	3
ŠIBENSKO-KNINSKA	680	13	779	11	774	31	738	15	717	16
SPLITSKO-DALMATINSKA	1150	31	1290	14	1342	39	1372	24	1443	33
DUBROVAČKO-NERETVANSKA	818	31	843	44	866	22	870	24	890	16
UKUPNO	7741	239	8469	173	8654	183	8845	103	8956	95

Table IV.A five-year overview of the number of samples and samples exceeding limit values prescribed by the Regulation





The number of sampling points in certain counties (and the number of samples), as well as the total number of points along the Croatian coast reflect continuous growth. The highest density of sampling points in relation to the length of the coast is found in the County of Istria, and the least density of sampling points is found in the County of Dubrovnik-Neretva and the County of Zadar. The highest coastal pressures (total number of night's accommodation during the tourist season/the length of the coast) are found in Counties of Split-Dalmatia and Istria, and the least are found in Counties of Dubrovnik-Neretva and Zadar. The highest density of sampling points has been achieved in the County of Primorje-Gorski Kotar and the smallest in the County of Zadar (Diagram II). This can be explained by the facts that the latter has the most indented coast and the most uninhabited islands which are not being sampled. With regard to faecal pollution, a higher load is observed in bathing water on the beaches on the mainland than on the islands (Table V), which can be explained by a higher level of urbanisation.

Only inhabited islands where the sea bathing water quality monitoring programme is implemented were taken into account. On uninhabited parts of the islands, the monitoring of sea bathing water quality is not performed and the sea is regarded as clean.

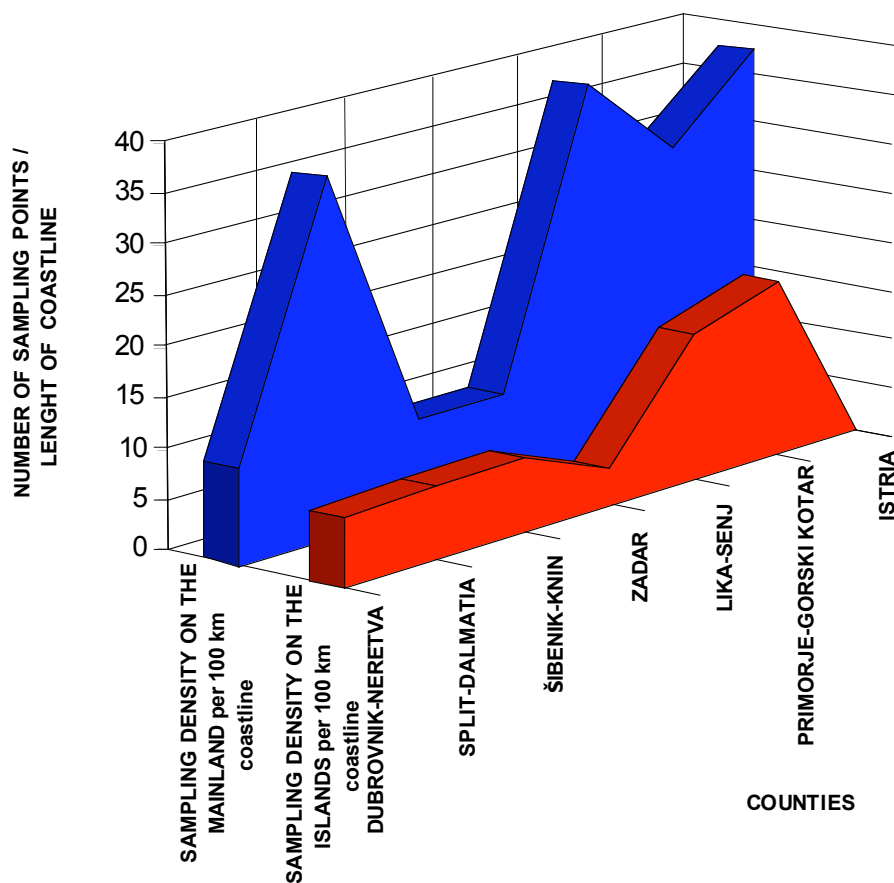
COUNTY	LENGTH OF THE COAST/km		NUMBER OF INHABITANTS (according to the 2001 census)		NUMBER OF SAMPLING POINTS IN 2006		NUMBER OF SAMPLES EXCEEDING THE LIMIT VALUES	
	MAINLAND	ISLANDS /inhabited	MAINLAND	ISLANDS	MAINLAND	ISLANDS	MAINLAND	ISLANDS
ISTRIA	539	0	206.343	1	203	0	17	0
PRIMORJE-GORSKI KOTAR	356,8	708,2	266.365	39.140	106	126	10	0
LIKA-SENJ	65,4	134,6	45.279	8.398	25	20	0	0
ZADAR	641,1	658,9	147.878	14.167	59	26	3	0
ŠIBENIK-KNIN	619,1	186,9	107.044	5.847	57	14	13	3
SPLIT-DALMATIA	255,1	645,9	428.750	34.926	91	48	27	6
DUBROVNIK-NERETVA	636,5	387,5	103.743	19.127	61	27	16	0
TOTAL	3113,0	2722,0	1.305.402	121.606	602	261	86	9

Table V. 2006 overview of geographical features of the counties with indicated number of samples and samples exceeding the limit values prescribed by the Regulation





**DENSITY OF SAMPLING POINTS  
per 100 km of coastline**

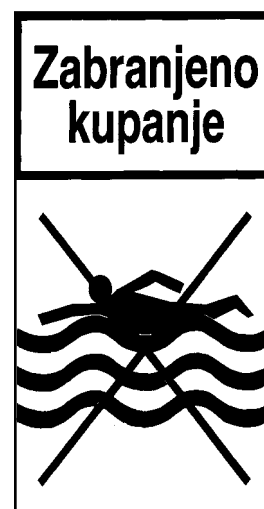


## ENVIRONMENTAL INSPECTION

Implementation of the Regulation on Bathing Water Quality Standards (Official Gazette No. 33/96) is under the competence of the Directorate for Inspection of the Ministry of Environmental Protection, Physical Planning and Protection.

During the last year, the environmental inspection intervened on the basis of the obtained sea bathing water quality results in the areas of Rijeka, Ploče, Poreč and Kaštela.

Namely, in line with the above mentioned Regulation, at beaches where the sea water quality does not conform to the requirements, environmental inspectors issue a ban on bathing if two or more consecutive samples exceed the limit values by more than 100%. The inspectors place a board banning bathing and order remediation of pollution sources.





## THE BLUE FLAG

The Blue Flag for beaches and marinas is an international environmental programme for sea and coastal zone protection, whose aim is sustainable management of the sea and coastal zone. The Blue Flag is awarded to beaches and marinas as recognition, symbol of quality and environmental protection standards, and it often represents a stimulus to tourists when choosing their destination or beach.

The International Blue Flag is an environmental programme for sea and coastal zone protection launched and run by the Foundation for Environmental Education (FEE), which was established at the Council of Europe in 1981. The Blue Flag has been awarded in Europe since 1988. Currently around 30 European and around 10 countries outside of Europe for which tourism is one of their strategic aims are participating in the programme. Up till now more than 3000 Blue Flags have been raised, out of which over 2500 on beaches and over 600 in marinas. The Blue Flag is a recognition awarded for one season only, and the application has to be renewed every year. The national coordinator and programme manager in the Republic of Croatia is the Nature Friends Movement "Our Beautiful Homeland". Croatia has been participating in the programme since 1998 and the first and only Blue Flag that year was awarded to Marina Punat on the island of Krk.

To be awarded the Blue Flag, a beach or marina has to meet a series of requirements divided into four groups: water quality, environmental education and information, environmental management and services.

In 2006 the International Blue Flag Jury decided to award 115 Blue Flags for the respective year to the Republic of Croatia.

The sea beaches awarded the international Blue Flag for 2006 are:

### UMAG

- «Skiper» beach
- «Kanegra» beach
- «Savudrija» beach
- «Polynesia» beach
- «Katoro» beach
- «Aurora» hotel beach
- «Laguna – Stella Maris» beach
- «Punta» beach
- «Kanova» beach

### NOVIGRAD

- «Mareda» car camp beach
- «Sirena» car camp beach
- «Maestral» hotel beach

### POREČ

- «Ulika» Naturist Centre beach
- «Laguna Materada» hotel beach
- Bellevue apartment hotel beach
- «Galijot» hotel beach
- «Parentium» hotel beach
- «PC Lotosi» hotel beach
- «Delfin» hotel beach
- «Zelena laguna» car camp beach
- «Bijela uvala» car camp beach
- «Donji Špadići - Materada» beach

- «Donji Špadići» beach
- «Gradsko kupalište Poreč» town beach
- «Valeta Lanterna» car camp beach
- «Crnika Lanterna» beach
- «Galeb Solaris» car camp beach
- «Borik» beach
- «Oliva» beach
- «Brulo» beach
- Istra car camp beach, Vrsar
- Funtana
- «Vala» beach, Vrsar

### ROVINJ

- «Valkanela» car camp beach, Vrsar
- «Belvedere» tourist apartments beach, Vrsar
- «Porto Sole» car camp beach, Vrsar
- «Koversada» Naturist centre beach, Vrsar
- Sv. Andrija «Crveni otok» beach, Rovinj
- «Zabavni centar» tourist village
- «Villas Rubin» beach, Rovinj
- «Polari» car camp beach, Rovinj
- «Amarin» tourist village beach,

- Rovinj
- «Veštar» car camp beach, Rovinj
- «Bival» beach

### PULA

- «Ambrela» beach
- «Brioni» beach
- «Histria» beach

### LABIN

- «Maslinica» beach

### RABAC

- «Lanterna» beach
- «St. Andrea» beach
- «Girandella» beach

### OPATIJA

- «Ičići» beach

### OMIŠALJ

- «Pesja» Omišalj beach
- «Jadran Njivice» beach

### MALINSKA

- Rupa» beach





#### KRK

“Porporela - Ježevac” beach, Krk  
“Dražica” beach, Krk  
«Dunat» beach  
“Camping Ježevac” beach, Krk  
“Politin” naturist car camp beach, Krk

#### BAŠKA

“Vela plaža” Baška

#### CRES

“Kovačine” car camp beach

#### MALI LOŠINJ

“Veli žal – Sunčana uvala” beach, Mali Lošinj  
“Punta” beach, Veli Lošinj

#### RAB

“Rajska plaža - Črnika” beach, Lopar  
“Suha Punta - Karolina” beach, Rab

#### CRIKVENICA

“Omorika” beach, Dramalj  
“Gradsko kupalište” town beach, Crikvenica  
“Balustrada” beach, Crikvenica  
“Varaždin” hotel beach, Selce

#### SELCE

«Rokan» beach, Selce  
“Poli mora” beach, Selce

#### NOVI VINODOLSKI

Main town beach “Lišanj”, Novi Vinodolski

#### NOVALJA

“Trinčel” beach  
“Straško” car camp beach  
“Zrće” beach  
«Mala Mandra» beach

#### PAG.

«Šimuni» car camp beach  
“Prosika” beach, Pag

#### POVLJANA

«Dubrovnik» beach

#### ZADAR

“Zaton” tourist village beach  
“Borik” beach, Zadar

#### PREKO

«Jaz» beach

#### BIOGRAD NA MORU

“Dražica” beach

#### ŠIBENIK

“Bijela plaža” beach

#### SPLIT

Medena Apartments beach  
“Bačvice” beach, Split  
“Split” hotel beach

#### BRELA

“Stomarica” beach  
“Punta Rata” beach, Brela  
“Berulia” beach

#### BAŠKA VODA

«Južna plaža» beach

#### MAKARSKA

«Donja luka» beach

#### TUČEPI

«Slatina» beach

#### SLANO

“Osmine” hotel beach

#### DUBROVNIK

“Dubrovnik - President” hotel beach  
“Neptun” hotel beach

#### CAVTAT

“Croatia” hotel beach – north

More information on the Blue Flag project can be found at: [www.lijepa-nasa.hr](http://www.lijepa-nasa.hr)

## BARE – PROPOSAL FOR EVALUATION AND BEACH MANAGEMENT IN CROATIA

The BARE (Bathing Area Registration and Evaluation) technique proposes a new system of beach evaluation in which each beach is placed in one of the five possible categories: *remote* (so-called “wild”, harder to access beaches), *rural* (beaches outside settlements), *village* (in smaller settlements), *urban* (in cities) and *resort* (beaches within tourist complexes).

Each beach is evaluated according to five main criteria: safety, water quality, recreational and sanitary beach facilities, coastal scenery and litter. Not all evaluation criteria are applied to all types of beaches; namely, *rural* and *remote* beaches are evaluated on the basis of water quality, coastal scenery and litter criteria, whereas all other types of beaches have to fulfil all criteria. Taking into account the beach type and the named criteria, the beach is evaluated on a scale of 1-5 stars.

BARE is a relatively new technique which has been applied in the wider Euro- Mediterranean area since 2001. In 2003, Association for Nature, Environment and Sustainable Development SUNCE (Split) has conducted the first beach survey in Croatia using the BARE technique. During 2004, the Priority Action Programme Regional Activity Centre (PAP/RAC) in Split conducted, as a part of its integrated coastal management programme, in several Mediterranean countries, among others in Croatia, Malta, Tunisia, Turkey and Spain, a beach survey using the BARE technique. As a part of the Croatian survey, beaches in



the Counties of Split-Dalmatia and Dubrovnik-Neretva were evaluated, in cooperation with the SUNCE Association. PAP/RAC is just starting with the development of Guidelines for implementation of BARE evaluation system, which would be used in the whole of the Mediterranean.

During 2005 and 2006 the SUNCE Association (Split), financially supported by funds from the European Union (CARDS 2003 programme), has carried out the first systematic evaluation of Croatian beaches by using an integrated approach to analysis and beach evaluation. A total of 240 beaches along the Croatian coast were evaluated. The main aim of such a project is to introduce the users and beach managers in Croatia to methods of classification and evaluation of bathing areas and beaches which will enable their sustainable use and management.

## CONCLUSIONS

- **The results of sea water quality testing at beaches during 2006 are indicative of high sea water quality on beaches in the Republic of Croatia, since 98.94% of samples comply with the stringent criteria laid down by the Regulation on Bathing Water Quality Standards.**
- Testing of sanitary quality of sea water and publishing of its results is primarily aimed at protecting bathers' health along with public health education, ensuring thereby the public's right to make an informed choice of the bathing and recreational sites.
- The coastal sea of the mainland is much more exposed to faecal pollution loads from waste-waters than the coastal sea adjacent to the islands. The testing of sea water quality conducted near the islands encompassed only the sea in front of urbanised areas, where the impact of waste-waters is to be expected. The remaining part of the islands shore was not monitored and is deemed to be clean.
- Test results are used for tourism promotion.
- The highest pressure in the coastal area, taking into account the number of inhabitants in the coastal area, the total number of night's accommodations during the season and the length of the coast was recorded in the Counties of Istria, Split-Dalmatia and Primorje-Gorski Kotar, and the lowest in the County of Dubrovnik-Neretva.
- Pursuant to the new EU Directive on bathing water quality (2006/7/EU), and in order to align the criteria, the Republic of Croatia will adopt a new regulation on sea beach water quality.

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# COUNTY OF PRIMORJE-GORSKI KOTAR

Blue	High quality sea
Green	Good bathing quality sea
Yellow	Moderate bathing quality sea
Red	Sea not suitable for bathing

Map labels include: Matulji, Kastav, Viškovo, Čavle, RJEČINA, Lokve, Ravna Gora, Mrkopalj, Fužine, Bakar, Kostrena, Lovran, Medveja, Kraljeвица, Jadranovo, Omišalj, DUBRAČINA, Crikvenica, Bribir, Novi Vinodolski, Njivice, Klimno, Dobrinj, Malinska, Vrbnik, Krk, Punat, Baška, Senj, Brinje, Cres, Martinšćica, ZEČA, SV. GRGUR, Lopar, Rab, GOLI OTOK, Jurjevo, Lukovo, Jablanac Zavrtnica, Nerezine, OSOR, LOŠINJ, Mali Lošinj, Stará Novalja, Novalja, Karlobag, Šimuni, Pag, ILOVIK, MAUN, and BRESTOVA.







# COUNTY OF ZADAR

- High quality sea
- Good bathing quality sea
- Moderate bathing quality sea
- Sea not suitable for bathing

Mali Lošinj

ILOVIK

PREMUDA

SILBA

OLIB

MAUN

Šimuni

Pag

PAG

ŠKARDA

IST

MOLAT

Brugulje

SESTRUNJ

ZVERNAC

Božava

RIVANJ

JUGLJAN

DUGI OTOK

RAVA

IŽ

Kukljica

Sukošan

Bibinje

Zadar

Diklo

Petrčane

Zaton

Privlaka

Nin

VIR

Vir

Povljane

Devčić Draga

Barić Draga

Starigrad

Ražanac

Posedarje

Novigrad

Jasenice

ZRMANJA

Gračac

Benkovac

Polača

Zemunik Donji

Galovac

Škabrnja

Sveti Filip i Jakov

Biograd na moru

Pakoštane

Tkon

Nevidane

Pašman

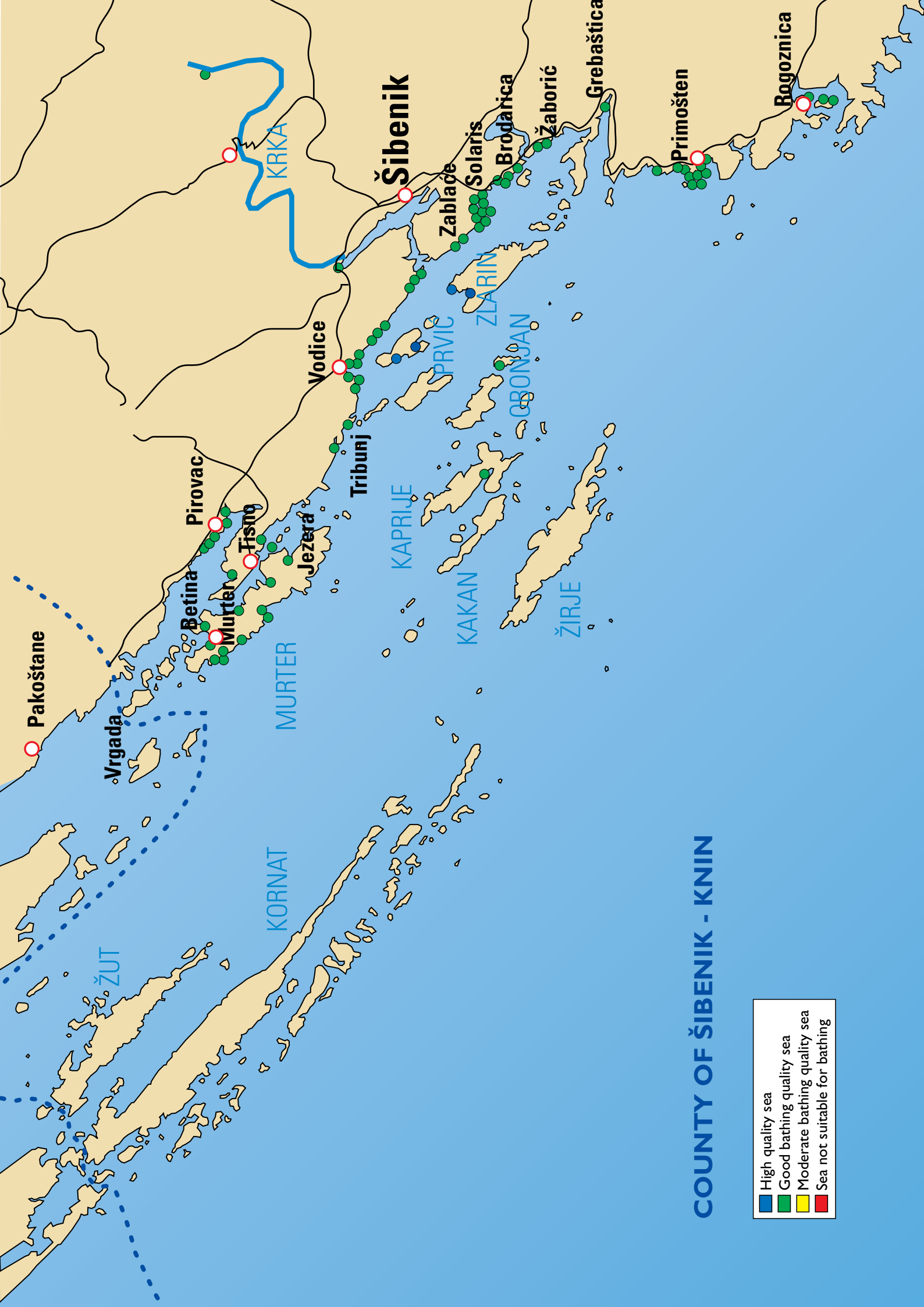
PAŠMAN

Sali

Vrgada

ŽUT

Stankovci



## COUNTY OF ŠIBENIK - KNIN

Blue square	High quality sea
Green square	Good bathing quality sea
Yellow square	Moderate bathing quality sea
Red square	Sea not suitable for bathing





# COUNTY OF SPLIT - DALMATIA

- High quality sea
- Good bathing quality sea
- Moderate bathing quality sea
- Sea not suitable for bathing





# COUNTY OF DUBROVNIK - NERETVA

Blue square	High quality sea
Green square	Good bathing quality sea
Yellow square	Moderate bathing quality sea
Red square	Sea not suitable for bathing



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