

Our Scope



Project funded by the
EUROPEAN UNION



ENPI
CBCMED
CROSS-BORDER COOPERATION
IN THE MEDITERRANEAN



Project Partners

Leading Partner



αρχή λιμενικών υπηρεσιών
cyprus ports authority

Partner 1



Partner 2



University of Cyprus
Chromatography Center

Partner 3



Partner 4



Partner 5



Partner 6



Partner 7



RAOP-MED project aims to offer a holistic study on the risks associated with offshore platforms in SE Mediterranean and hence with the exploitation and exploration of the continental shelf and seabed, that includes prevention, early detection and control of the oil spill, reorganization and redistribution of the resources available for efficient and accurate combat of the oil spill at the early stages and, furthermore, to raise awareness of the possible consequences of such an incident in financial, environmental and social level.

Strategic Approach and Tangible Impact

The overall strategy of RAOP-MED workplan can be seen through: Identification of High Risk Areas, Probability and Oil Spill Evaluation, Sensitivity Mapping, Impact Damage Assessment, Redistribution of Resources and Contingency Planning.

The added value of RAOP MED project is that it will create tangible impact at Technical, Social and Policy Level by:

- Re-drafting of Emergency Contingency Planning on Oil Spills
- Dissemination of results and raising awareness among Stakeholders (Institutional and Operational stakeholders , General public, Oil and Maritime companies etc)
- Re-distribution of oil response equipment
- Increasing the awareness for the risks to the marine environment related to seabed exploitation

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Statement about the Programme: "The 2007-2013 ENPI CBC Mediterranean Sea Basin Programme is a multilateral Cross-Border Cooperation initiative funded by the European Neighbourhood and Partnership Instrument (ENPI). The Programme objective is to promote the sustainable and harmonious cooperation process at the Mediterranean Basin level by dealing with the common challenges and enhancing its endogenous potential. It finances cooperation projects as a contribution to the economic, social, environmental and cultural development of the Mediterranean region. The following 14 countries participate in the Programme: Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestinian Authority, Portugal, Spain, Syria, Tunisia. The Joint Managing Authority (JMA) is the Autonomous Region of Sardinia (Italy). Official Programme languages are Arabic, English and French (www.enpicbcmmed.eu)."

Disclaimer: "This publication has been produced with the financial assistance of the European Union under the ENPI CBC Mediterranean Sea Basin Programme. The contents of this document are the sole responsibility of the Cyprus Port Authority and can under no circumstances be regarded as reflecting the position of the European Union or of the Programme's management structures."

יום עיון בנושא
ניתוח סיכונים לדליפת
נפט במזרח הים התיכון
27 אוקטובר 2015
חקר ימים ואגמים לישראל,
תל שקמונה, חיפה

RAOP-MED Project

Risk Assessment Analysis on Offshore
Platforms in South East Mediterranean



Project funded by the
EUROPEAN UNION

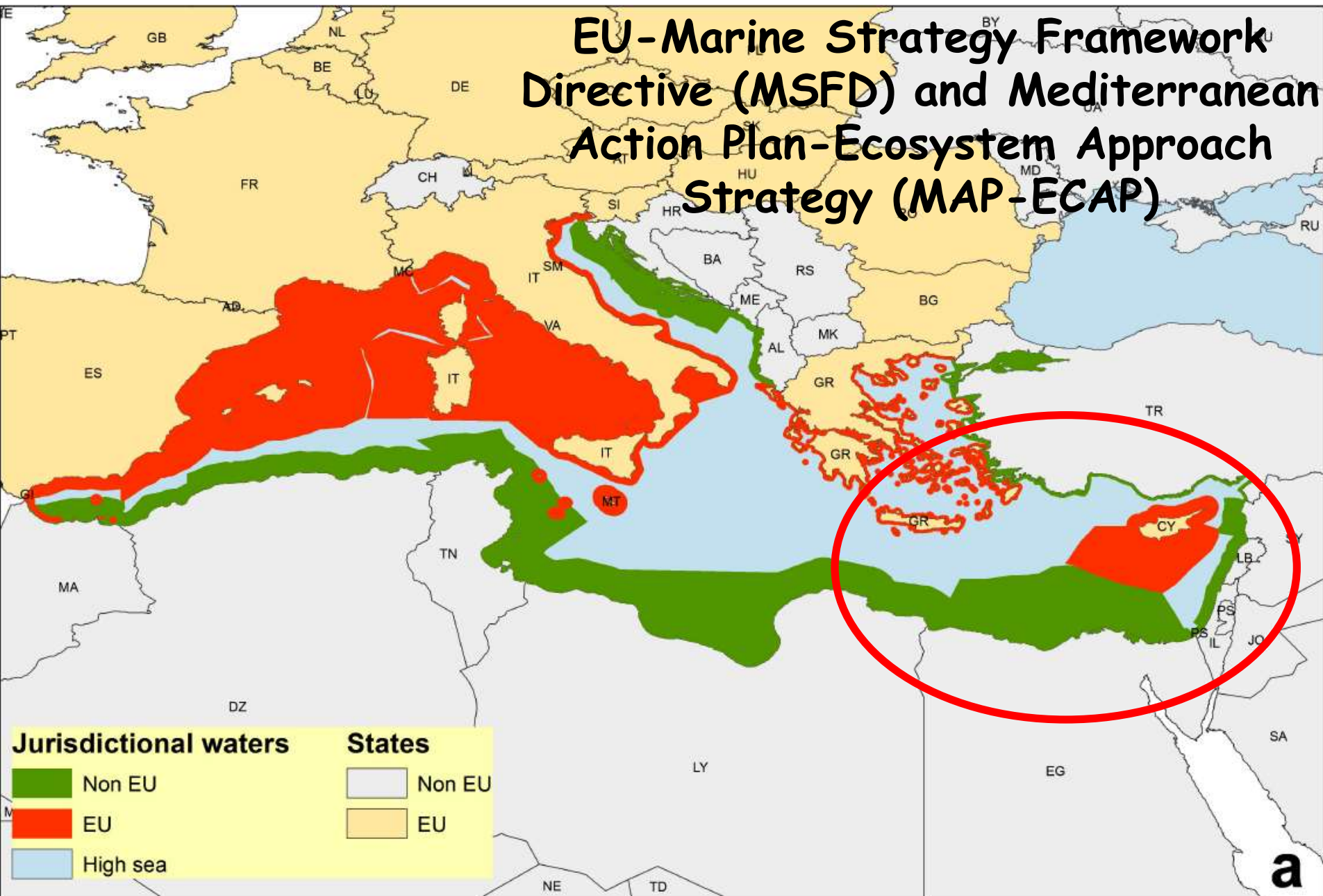


ENPI
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IN THE MEDITERRANEAN

Table 3. Comparison between EU-Marine Strategy Framework Directive (MSFD) and Mediterranean Action Plan-Ecosystem Approach Strategy (MAP-ECAP) vision, strategic goals, and ecological objectives already defined. With the exception of MAP-ECAP Objective 8 they are almost identical

EU-MSFD	MAP-ECAP
	VISION
Good Environmental Status (GEnS)	A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations
	STRATEGIC GOALS
(i) to protect more effectively the marine environment across Europe;	(i) to protect, allow recovery and, where practicable, restore the structure and function of marine and coastal ecosystems thus also protecting biodiversity, to achieve and maintain good ecological status and allow for their sustainable use;
(ii) to achieve Good Environmental Status of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend;	(ii) to reduce pollution in the marine and coastal environment so as to minimize impacts on and risks to human and/or ecosystem health and/or uses of the sea and the coasts;
(iii) to constitute the vital environmental component of the Union's future maritime policy, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment.	(iii) to prevent, reduce, and manage the vulnerability of the sea and the coasts to risk induced by human activities and natural events (UNEP-MAP 2008)
DESCRIPTOR / OBJECTIVES	ECOLOGICAL OBJECTIVES
1. Biological diversity is maintained. The quality and occurrence of habitats and the distribution conditions	1. Biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic, and climatic conditions.
2. Nonindigenous species introduced by human activities are at levels that do not adversely alter the ecosystems	2. Nonindigenous species introduced by human activities are at levels that do not adversely alter the ecosystem.
3. Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.	3. Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
4. All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.	4. Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and related viability.
5. Human-induced eutrophication is minimized, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms, and oxygen deficiency in bottom waters.	5. Human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms, and oxygen deficiency in bottom waters.
6. Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.	6. Sea-floor integrity is maintained, especially in priority benthic habitats.
7. Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.	7. Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.
8. Concentrations of contaminants are at levels not giving rise to pollution effects.	8. The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.
9. Contaminants in fish and other seafood for human consumption levels established by community legislation or other relevant standards.	9. Contaminants cause no significant impact on coastal and marine ecosystems and human health.
10. Properties and quantities of marine litter do not cause harm to the coastal and marine environment.	10. Marine and coastal litter does not adversely affect coastal and marine environments.
11. Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.	11. Noise from human activities causes no significant impact on marine and coastal ecosystems.

EU-Marine Strategy Framework Directive (MSFD) and Mediterranean Action Plan-Ecosystem Approach Strategy (MAP-ECAP)



a

The Levantine basin - Most Sensitive System

Natural

- Most Extreme S, T, Chl, Nut
- LIW formation
- Long term changes (S,T,O₂,Nut)
- Changes in circulation intensity

Anthropogenic

- Change in Nile floods and Damming
- Suez Canal, shipping
- Marine Infrastructures
- Climate change
- Pollution
- Fishing

Characteristics

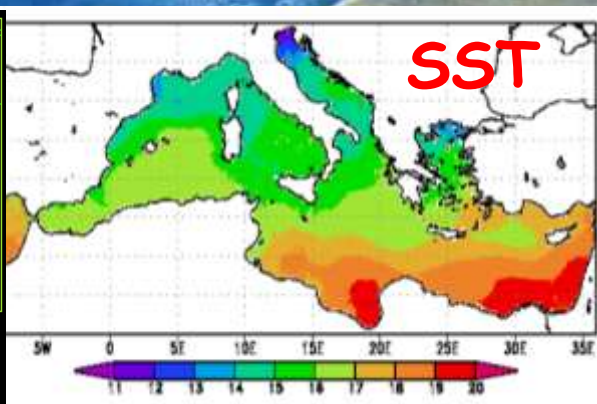
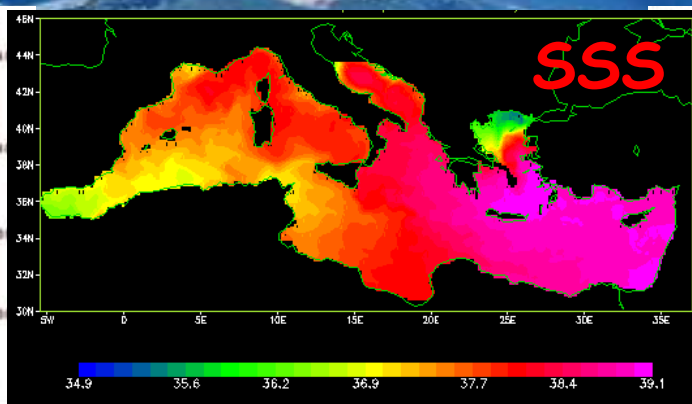
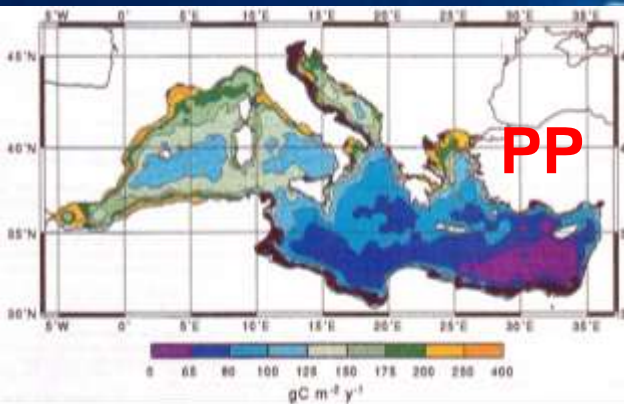
Stressors

Levantine Basin

Israel EEZ

Nile Delta

Suez Canal

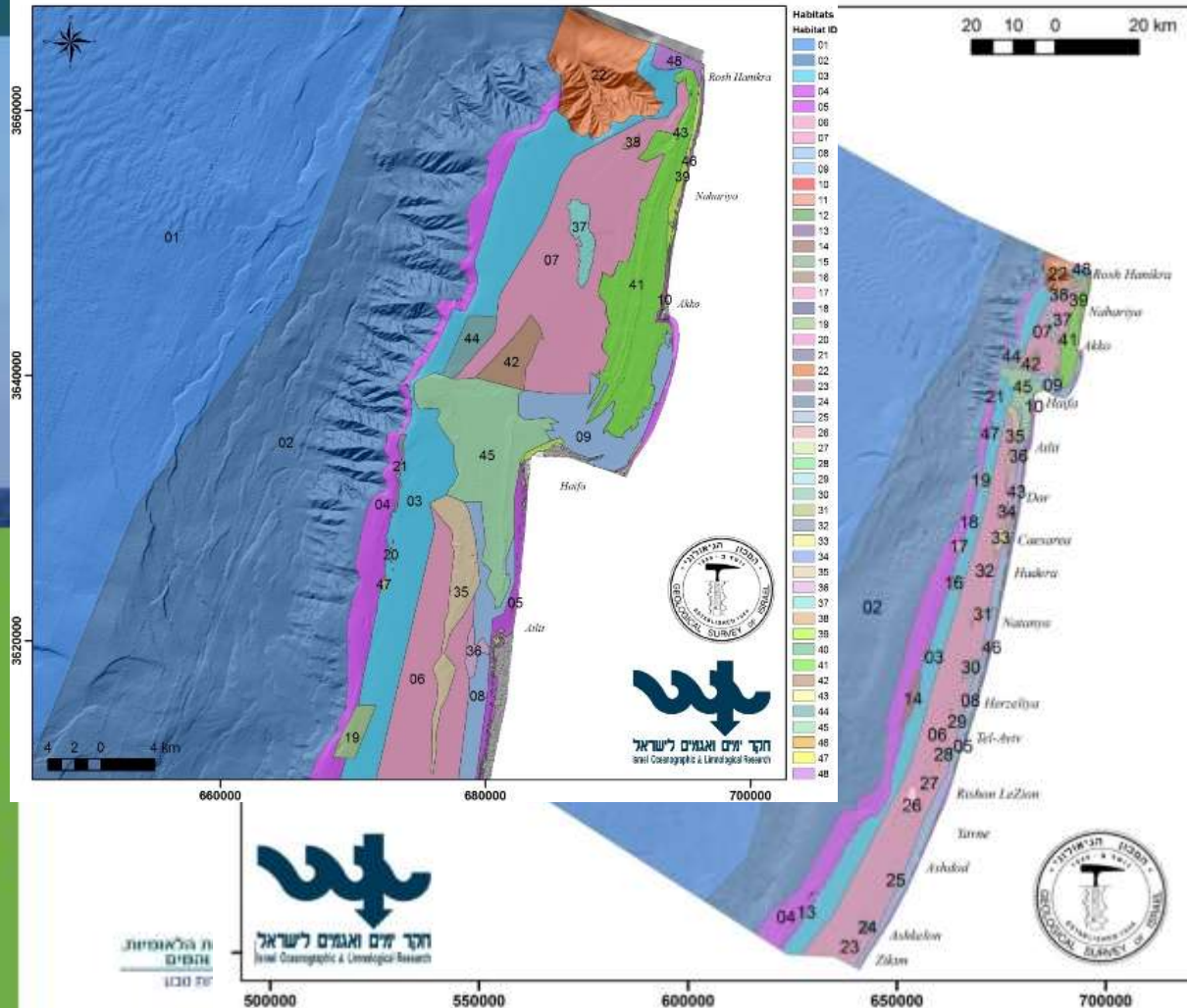


סקר אסטרטגי סביבתי לחיפוש ולהפקה של נפט ושל גז טבעי בים - חלק ג'



איסוף וניתוח מידע סביבתי קיים, מיפוי בתי גידול והצעה למדדים לפגיעות אקולוגית בהקשר לפעילות הנדסית של חיפוש והפקת נפט וגז טבעי במרחב הימי של ישראל בים התיכון

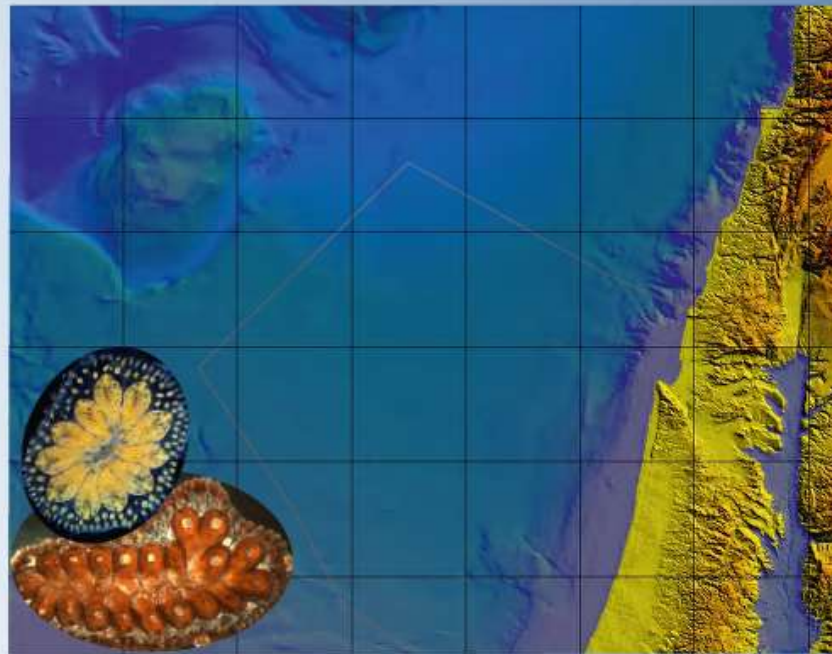
דוח חקר ימים ואגמים לישראל (חיא"ל) IOLR Report H20/2015
דוח מכון גיאולוגי GSI/11/2015



תכנית הניטור הלאומית של ישראל בים התיכון

דו"ח מדעי ל- 2013/14

- ניטור שינויי אקלים
- ניטור איכות מימי חופין
- ניטור מגוון ביולוגי



התכנית ממומנת ע"י המשרד להגנת הסביבה
ומשרד התשתיות הלאומיות, האנרגיה והמים



חקר ימים ואגמים לישראל

דו"ח חיא"ל H21/2015



• פציפיות הניטור
הלאומי 1978-2015

• התאמה לאמנות
ויצרים

• הרחקה

תכנית ניטור לאומית

מטרות

1. הערכת מצב הסביבה הימית בים התיכון של ישראל ויצירת בסיס מדעי ארוך טווח לקבלת החלטות בהקשר להגנה על הסביבה הימית, ובכלל זה אכיפת ההוראות של החקיקה הלאומית בעניין מניעת זיהום הים, שמירה על המערכת האקולוגית, יישום האמנות הבינלאומיות הרלוונטיות, ותמיכה בקבלת החלטות על שימור, ניצול בר קיימא וניהול הסביבה הימית של ישראל ומשאביה.

2. שיפור הידע הקיים על הסביבה החופית והימית בישראל בראיה אסטרטגית של מתן מענה למקבלי ההחלטות בנושאים הקשורים בניצולם לצורך פיתוח תשתיות לאומיות תוך הקפדה על ניצול בר-קיימא ושמירת הסביבה הימית

3. ריכוז, תיעוד, שמירה והפצת נתונים על הסביבה הימית של ישראל באמצעות "מרכז המידע הימי הלאומי" כדי להפיק מהנתונים מידע שימושי. הפעלת המרכז באה לענות על הדרישה הגוברת במדינה לנתונים ומידע לצרכי תכנון, תפעול ובקרה של שימושים בסביבה הימית.

4. יצירת בסיס מדעי וכלים אופרטיביים לצורך תמיכה בתהליכי קבלת החלטות בזמן אמת באירועי קיצון כדוגמת זיהומים או אירועי צונאמי.

New National Research Vessel of IOLR

ספינת הדגל של מחקר הים בישראל



ספינת הדגל לטיפול וניהול
תקרית זיהום ים ע"י היחידה
הארצית להגנת הסביבה הימית



Crew capacity: 14 (26)
Endurance at sea 14 days
One engine and two jets
Max. Displacement: 528 ton
LOA: 38.55
Breath: 9.2 m
Built: 1990

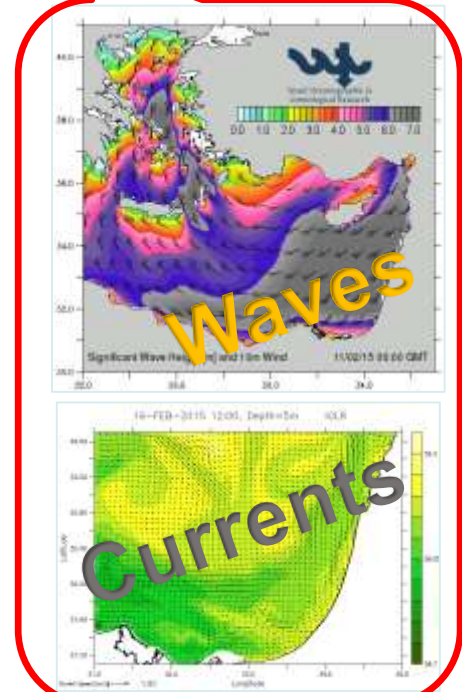
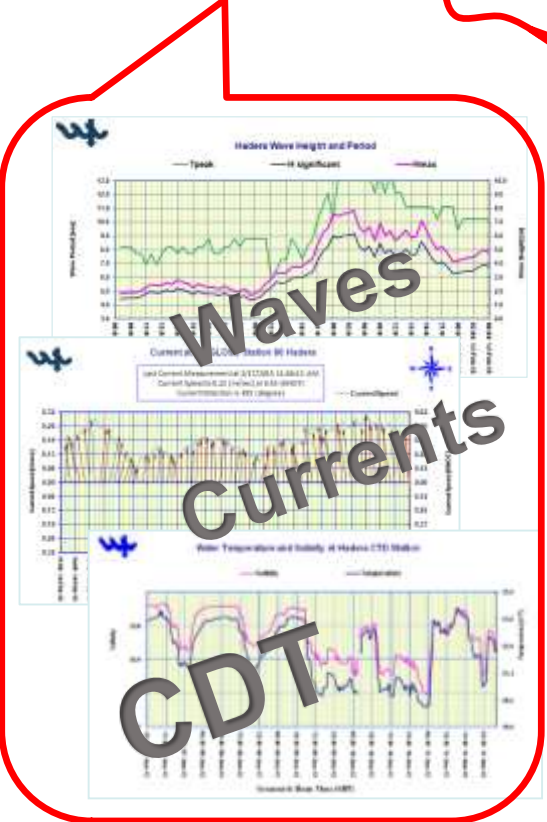
הפעלת מרכז מידע ימי לאומי אריכות, תיעוד והכנה של נתונים ומידע על הסביבה הימית של ישראל



Israel Marine Data Center

ISRAMAR

IOLR Near Real Time Forecast Historical Data Ongoing Projects Downloads Links ISRAMAR Home



Near Real Time Data; Forecasts;
Historical Databases ; Ongoing Projects

מערכת לחיזוי התפשטות כתמי שמן (MEDSLIK)

<http://isramar.ocean.org.il/isramar2009/medslik>

- מערכת אוטומטית המאפשרת הפקת תחזיות לפי דרישה.
- המערכת משתמשת בתחזיות רוח, טמפ' מי ים, זרמי ים וגלים.
- הפלט מוצג אונליין וניתן להורדה עבור שימוש בתוכנות GIS



Enter Oil Spill information

Oil spill forecast in the Eastern Mediterranean

- Description
- Spill information
- Oil spill trajectory
- Download model output

longitude: 34° 00.00' E
 latitude: 32° 58.03' N
 time of spill: 2012/05/10 08:07 GMT
 oil type: Arabian Heavy
 amount: 500 Tons
 Instantaneous
 Duration: _____ hours
 Rate: _____ Tons/hour



Oil spill trajectory forecast for 10-May-2012 08:07 - 14-May-2012 08:07

Oil spill forecast in the Eastern Mediterranean

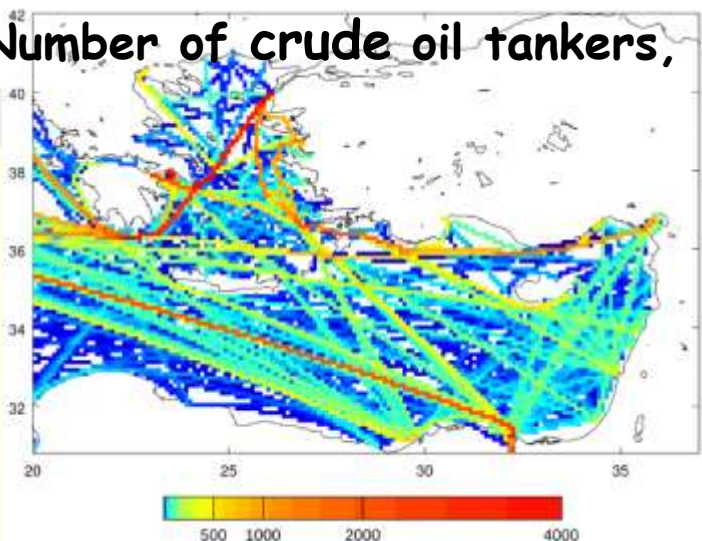
- Description
- Spill information
- Oil spill trajectory
- Download model output

medslik, Welcome to the Oil Spill Forecast Tool

Haifa
Hefa

Data: SID, NOAA, U.S. Navy, NGA, GEBCO
 © 2012 ORIC, ME
 © 2012 Google
 US Dept of State Geographer

Number of crude oil tankers, 2013



Show	Date/Time	Location of maximal oil spill concentration	Total Tons	Spill area, m ²	
		Latitude	Longitude		
<input checked="" type="checkbox"/>	10/May/2012 08:07	32°58'28"	34°01'4"	515.294	320000
<input checked="" type="checkbox"/>	10/May/2012 20:07	32°58'28"	34°43'0"	1023.047	3560000
<input checked="" type="checkbox"/>	11/May/2012 08:07	32°58'49"	34°17'43"	1086.18	9940000
<input checked="" type="checkbox"/>	11/May/2012 20:07	32°58'24"	34°11'33"	1085.341	12120000
<input checked="" type="checkbox"/>	12/May/2012 08:07	32°48'18"	34°13'23"	1085.083	16280000
<input checked="" type="checkbox"/>	12/May/2012 20:07	32°48'9"	34°18'24"	1085.644	19140000
<input checked="" type="checkbox"/>	13/May/2012 08:07	32°28'32"	34°21'9"	1085.673	20820000
<input checked="" type="checkbox"/>	13/May/2012 20:07	32°40'23"	34°28'48"	1047.978	23860000
<input checked="" type="checkbox"/>	14/May/2012 08:07	32°48'9"	34°21'48"	1084.755	24070000

בראיה אסטרטגית

- קידום החלטת המשלח על תכנית ניטור לאומית; קיימות הצעות פרטניות לצורך בהרחבת פעילות הניטור בתחומים שונים
- קידום החלטת המשלח לתכנון מרכזי מידע ימי לאומי בחיא"ל. הסדרת מדיניות לאומית מחייבת להעברת מידע לאיגוד המידע הימי הלאומי והנאמנו המלאה.
- איסוף נתונים בעזרת מצרכות מתקדמות ותשתיות קיימות;
- קידום יכולת חיזוי (forecasting) בעזרת מודלים והיצרכות לאיכוף חירום
- צורך בקיום "פנרון ארסוני" לצורך למן רב של מידע, שיטות, בקרה שוטפת; שמירת הקניין הרוחני בידי המשלח