DEFINITION AND CONCEPT

METHODOLOGYC PROCESS

DEFINITION AND CONCEPT

SUITABLE ZONES: LOCATION FOR MARINE AQUACULTURE DEVELOPMENT 2010

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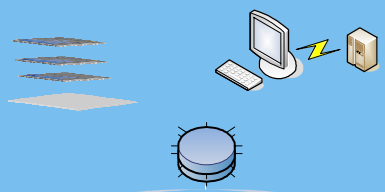
DEFINITION AND CONCEPT

DEFINITION AND CONCEPT

GIS : integrated system for working with **spatial information**

Thematic Cartography + Relational Database



Acuicultura_Zonas_Idoneas.gdb

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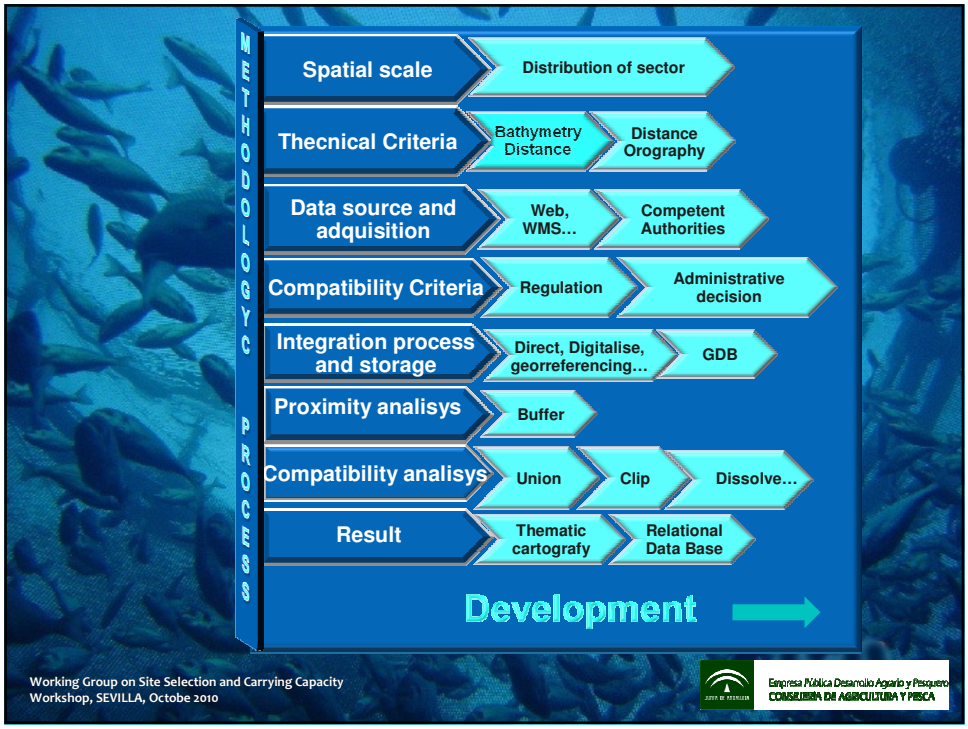
METHODOLOGYC PROCESS
Spatial scale
Distribution of sector
Thecnical Criteria
Bathymetry Distance
Distance Orography
Data source and adquisition
Web, WMS...
Competent Authorities
Compatibility Criteria
Regulation
Administrative decision
Integration process and storage
Direct, Digitalise, georreferencing...
GDB
Proximity analisys
Buffer
Compatibility analisys
Union
Clip
Dissolve...
Result
Thematic cartografy
Relational Data Base
Development
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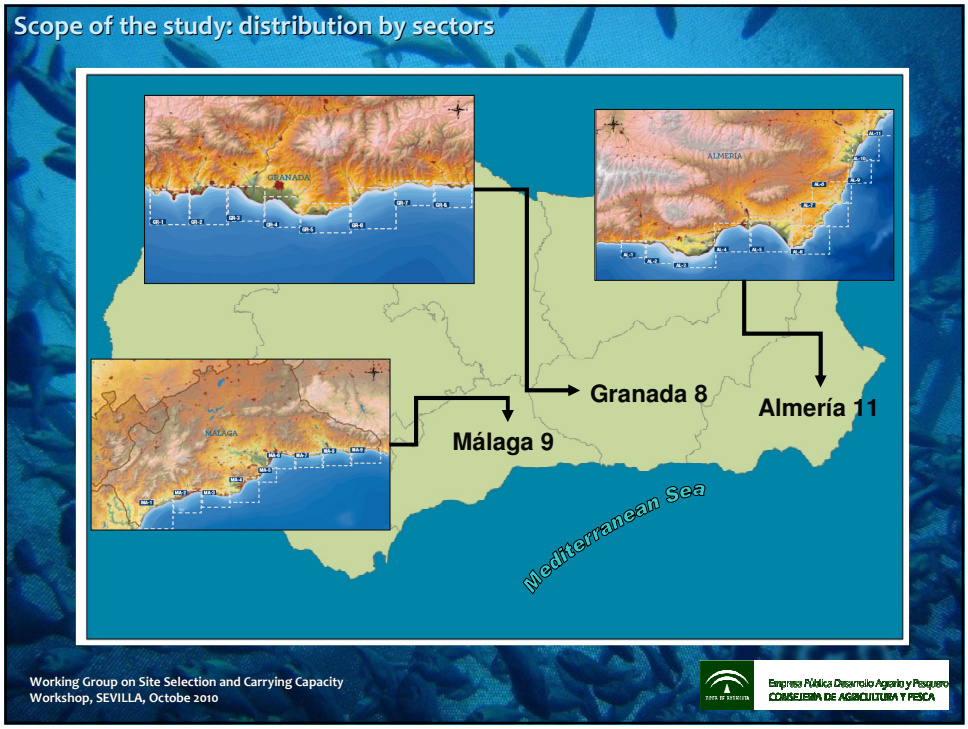
Scope of the study: distribution by sectors
GRANADA
ALMERÍA
MÁLAGA
Granada 8
Almería 11
Málaga 9
Mediterranean Sea
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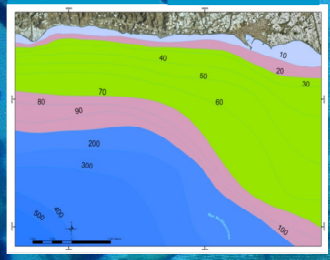
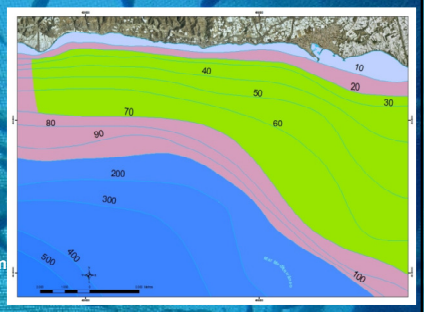
Assignation of technical criteria

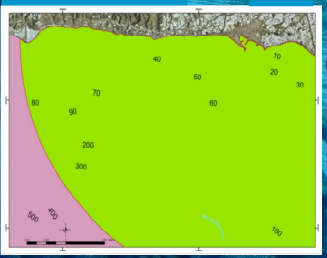
Depth: 10 m – 100 m



- RAB : 20 m - 70 m.
- RLB: 10 m - 20 m / 70 m 100 m.



Distance to Base Port 6 mn



- RAD: D< de 6 mn
- RLD: D> 6 mn

Distance to coast : 500 m
Orography: 20 m

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Source and Acquisition of Vectoral Data / Compatibility Criteria

Proyección: Universal Transversal Mercator (UTM)
Reference System, Datum: European Datum 1950

Regulation or Supplied Authorities Request official communication)

Spatial Componet

INFORMATION

?

Alphanumeric component

Attributes of PORN_Barbate

OBJECTID	Shape *	Id	Zona	Tipo	Zonacion	Criterio	Shape_Length	Shape_Area
7	Polygon	7	A	Zonas de Reserva	Exluyente		2401,269275	395700,714946
8	Polygon	8	A	Zonas de Reserva	Exluyente	3	1389,411496	121072,114429
9	Polygon	9	A	Zonas de Reserva	Exluyente	3	939,480241	29876,826518
10	Polygon	10	A	Zonas de Reserva	Exluyente	3	1345,060695	52819,333251
11	Polygon	11	A	Zonas de Reserva	Exluyente	3	2673,744723	233626,412914
14	Polygon	14	A	Zonas de Reserva	Exluyente	3	11997,264099	2884285,875099
1	Polygon	1	B1	Zonas de Regulación Especial	Exluyente	3	2787,862205	191750,73481
2	Polygon	2	B1	Zonas de Regulación Especial	Exluyente	3	10038,477065	2091892,755996
12	Polygon	12	B1	Zonas de Regulación Especial	Exluyente	3	26145,653354	20994410,838819
13	Polygon	13	B2	Zonas de Regulación Especial	Exluyente	3	15743,069589	9234576,08926
5	Polygon	5	B3	Zonas de Regulación Especial	Limitación	2	45897,767298	10417207,934633
6	Polygon	6	B3	Zonas de Regulación Especial	Limitación	2	3212,006318	587517,741309
3	Polygon	3	C	Zonas de Regulación Común	Idónea	1	15895,927239	3198327,397335
4	Polygon	4	C	Zonas de Regulación Común	Idónea	1	3419,917316	572796,140264

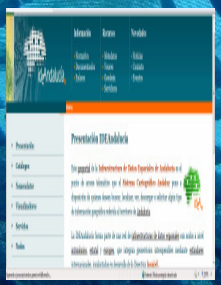
Where

Web page for downloads

REDIAM / IDEandalucia

Supplied Authorities Application: Official communication

Other: : Google Earth, Visores WMS...



How

Formato Compatible

Shp, mdb, excel, CAD...

Texts

Representation

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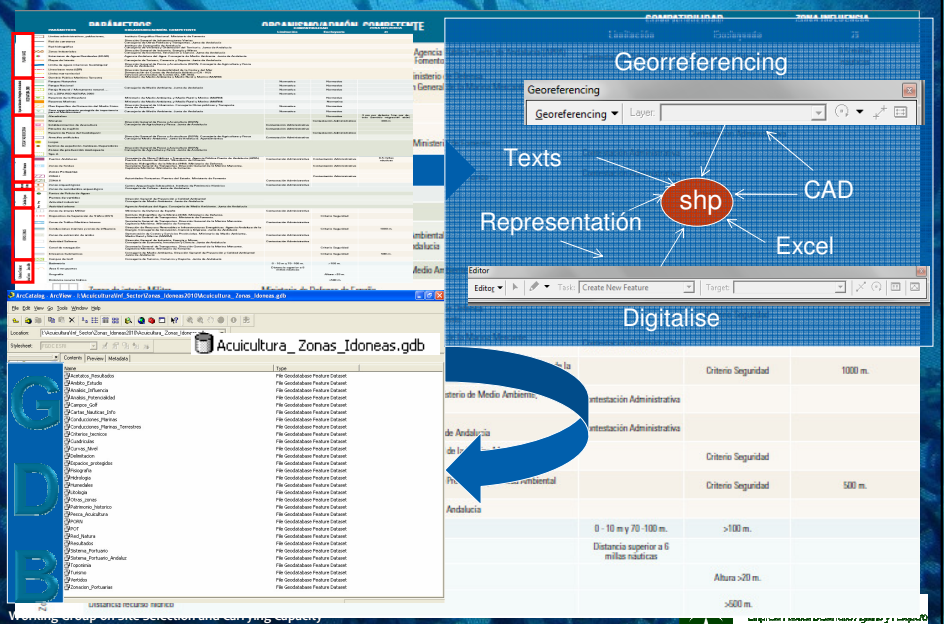
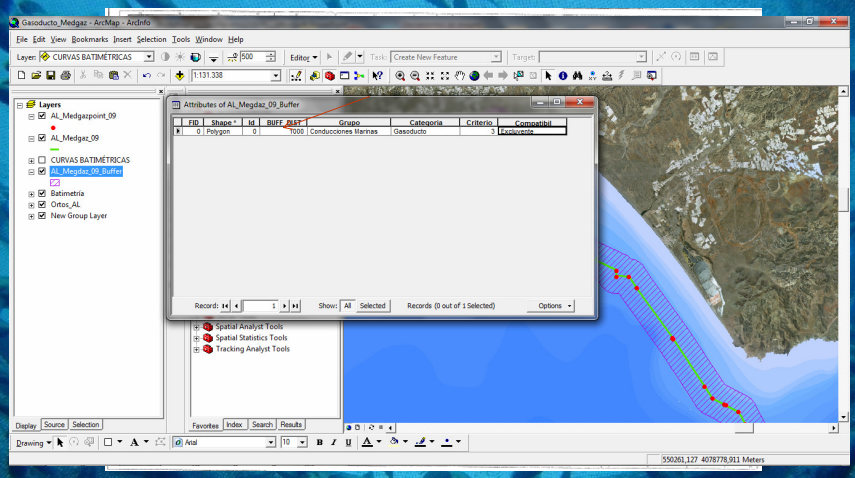
Integration Process: information storage



Spatial analysis: Influence or proximity



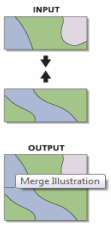
Spatial Analyst: Compatibility

Attributes of PORN_Barbate

OBJECTID	Shape *	Id	Zona	Tipo	Zonacion	Criterio	Shape_Length	Shape_Area
7	Polygon	7	A	Zonas de Reserva	Exluyente	3	2401,369275	305700,714946
8	Polygon	8	A	Zonas de Reserva	Exluyente	3	1369,411496	121072,114429
9	Polygon	9	A	Zonas de Reserva	Exluyente	3	939,480241	29876,826516
10	Polygon	10	A	Zonas de Reserva	Exluyente	3	1345,060695	52819,333251
11	Polygon	11	A	Zonas de Reserva	Exluyente	3	2673,744723	233626,412914
14	Polygon	14	A	Zonas de Reserva	Exluyente	3	11997,354056	2084295,676096
1	Polygon	1	B1	Zonas de Regulación Especial	Exluyente	3	2787,862205	191750,73481
2	Polygon	2	B1	Zonas de Regulación Especial	Exluyente	3	10038,477065	2091892,755586
12	Polygon	12	B1	Zonas de Regulación Especial	Exluyente	3	26145,653354	20994410,638819
13	Polygon	13	B2	Zonas de Regulación Especial	Exluyente	3	6743,068589	9234576,08926
5	Polygon	5	B3	Zonas de Regulación Especial	Limitación	2	46897,767298	10417207,834633
6	Polygon	6	B3	Zonas de Regulación Especial	Limitación	2	3212,006318	567517,741309
3	Polygon	3	C	Zonas de Regulación Común	Idónea	1	15965,927238	3198327,387335
4	Polygon	4	C	Zonas de Regulación Común	Idónea	1	3411,917316	572756,140264

Merge

Combines input features from multiple input sources (of the same data type) into a single, new, output feature class. The input data sources may be point, line, or polygon feature classes or tables.

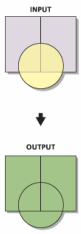


Clip

Extracts input features that overlay the clip features.

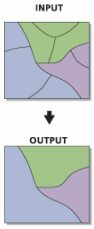
Union

Computes a geometric intersection of the Input Features. All features will be written to the Output Feature Class with the attributes from the Input Features, which it overlaps



Dissolve

Aggregates features based on specified attributes.



Apt: 1
Limited: 2
Excluded: 3
Limited_Pred: 4
Apt_Pred:5

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Example of spatial analysis

Attributes of Result

FID	Shape *	Id	Criterio	Compatibil	Shape_Area
0	Polygon ZM	0	1	Apta	722311490,526
1	Polygon ZM	0	3	Excluyente	1253310874,47
2	Polygon ZM	0	4	Limitante Pred	90281984,7306
3	Polygon ZM	0	2	Limitante	5853180478,08
4	Polygon ZM	0	5	Apta Pred	64866,365216

Record: 0 | Show: All | Selected | Records (0 out of 5 Selected) | Options

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Results: examples

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CONSIDERATIONS

- **GIS** in the localisation of aquaculture zones is:
- A tool for planning, managing and regulating the activity.
- A mechanism for coordinating and controlling spatial information.
- **Aquaculture planning** → it is important and essential for the orderly development of the sector.
- The **selection and management of suitable zones** → a good planning tool but it must be complemented with other sectoral actions (regulations, R&D&I, etc.).

jcmacias@dap.es

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