

KINGDOM OF MOROCCO
NATIONAL AGENCY FOR AQUACULTURE DEVELOPMENT

CALL FOR EXPRESSION OF INTEREST

**MARINE AQUACULTURE DEVELOPMENT PROJECT IN
ED DAKHLA OUED ED DAHAB REGION**

(Downloadable document on: https://www.anda.gov.ma/en/AMI_DAKHLA)

SUMMARY

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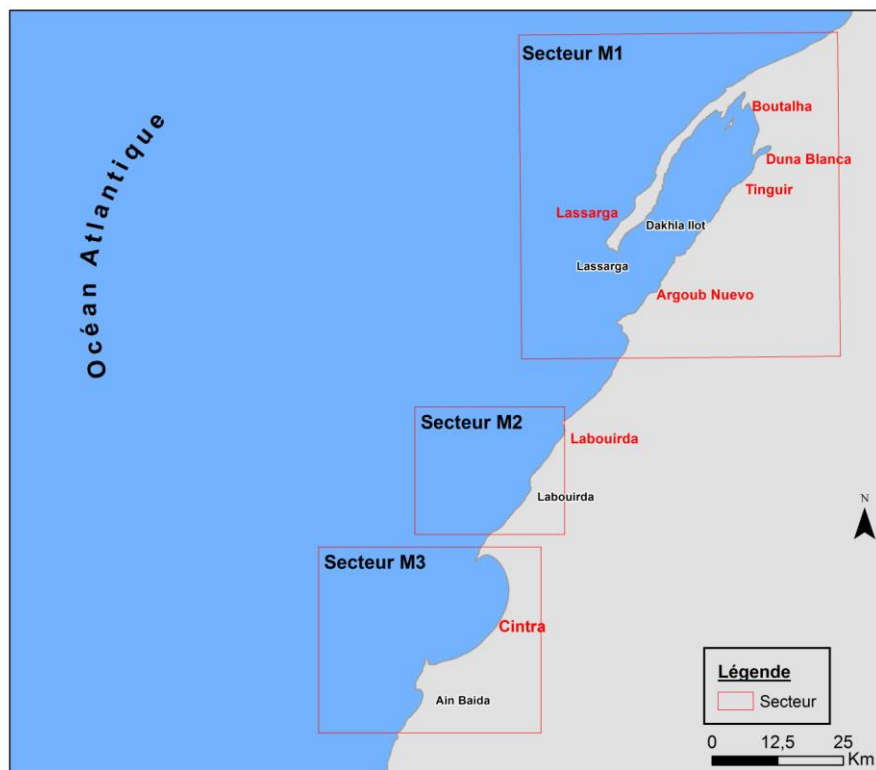
ANNEXS

- SELECTION RULES -

1. Purpose

The purpose of this Call for Expression of Interest (CEI) focuses on the development of aquaculture activity in the area between bays of Oued Eddahab and Cintra (including bays).

In order to facilitate the implementation of the marine aquaculture development plan and to better guide potential investors in accordance with their project's size, target species and farming techniques, the study area is divided into 3 homogeneous areas / sectors with similar environmental and socio-economic conditions, namely M1 area (Dakhla Bay), M2 area (intermediate area) and the M3 area (Cintra Bay).



Location of areas M1, M2 and M3

2. Production units offered by this Call of Expression of Interest

878 production units offered by this Call of Expression of Interest are located as follow:

Zone M1 – Dakhla bay (520 units) :

- 86 production units, of 2 ha each for oyster farming;
- 12 production units, of 20 ha each for oyster farming;
- 41 production units, of 2 ha each, for clams farming or other species with similar characteristics;
- 272 production units, of 2 ha each, for abalone farming or other species with similar characteristics;
- 106 production units, of 2 ha each for seaweed farming;
- 01 production unit of 20 ha for oyster farming;
- 01 production unit of 40 ha for oyster farming;
- 01 production unit of 120 ha for clams farming.

Zone M2 - intermediate area between Dakhla Bay and Cintra Bay (115 units):

- 60 production units, of 20 ha each for mussel farming;
- 55 production units, of 20 ha each for seaweed farming.

Zone M3 - Cintra bay (243 units):

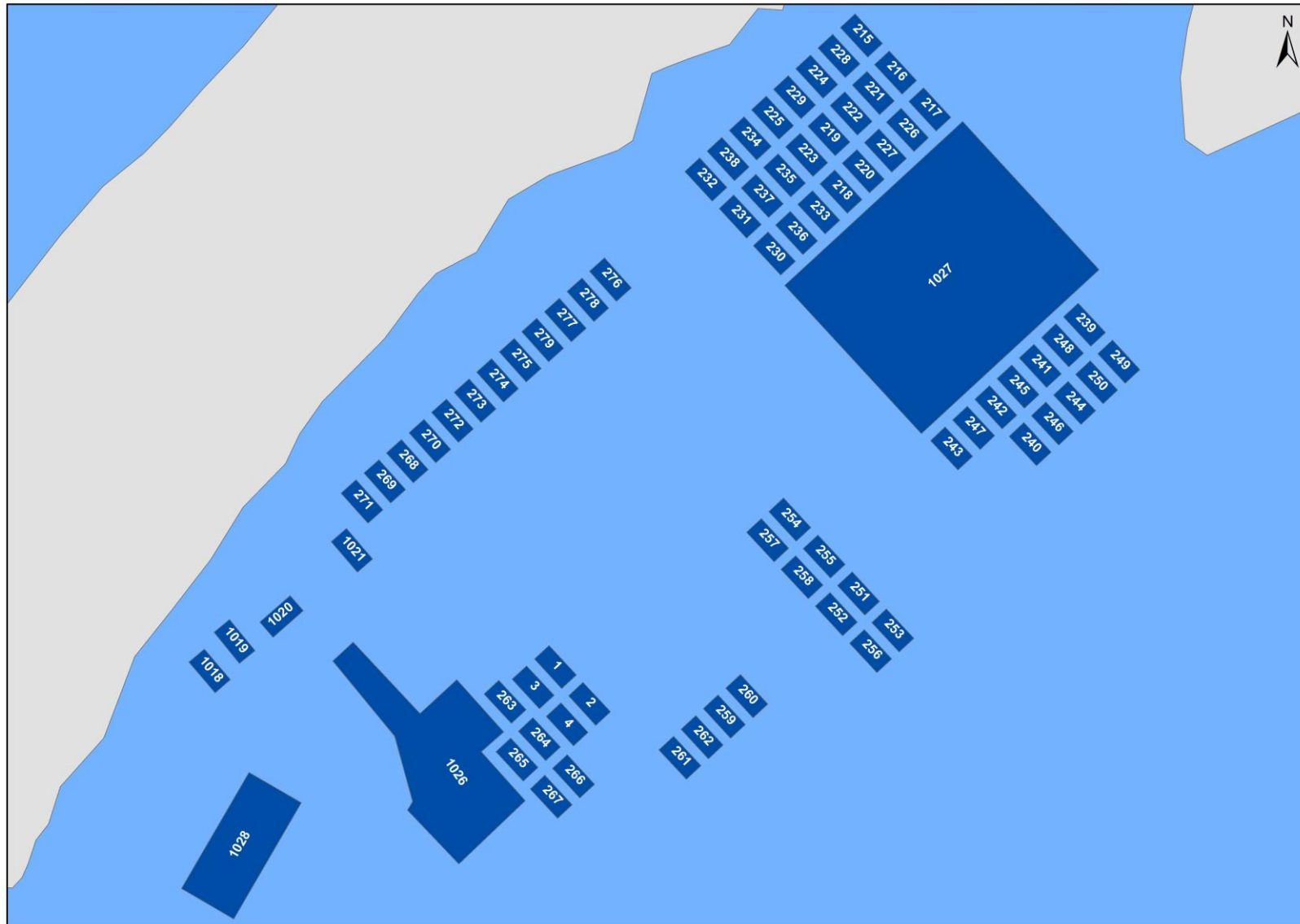
- 113 production units, of 2 ha each, for shellfish farming;
- 56 production units, of 20 ha each for shellfish farming;
- 54 production units, of 20 ha each for seaweed farming;
- 20 production units, of 20 hectares each, for fish farming.

Important:

Shellfish production units require sanitary ranking before marketing of any product. This operation will be assumed by competent public administration.

Selected applicants of exploitation of production units are required to identify, if needed, inland areas sheltering other projects components (storage, processing ...) and obtain all necessary licenses.

2.1 Zone M1 – Dakhla bay:



Location of production units in Boutalha

Table n°1 Geographical coordinates of production units in Boutalha

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectares)
1	1M1Pa	437455	586062,9	Clams	2
2	2M1Pa	437624,2	585880,4	Clams	2
3	3M1Pa	437344,6	585962	Clams	2
4	4M1Pa	437513,7	585778,4	Clams	2
215	215M1Pa	438973,8	589193,5	Clams	2
216	216M1Pa	439143,8	589010,2	Clams	2
217	217M1Pa	439313,8	588826,9	Clams	2
218	218M1Pa	438872,6	588419,2	Clams	2
219	219M1Pa	438812,7	588704,6	Clams	2
220	220M1Pa	438982,6	588521,3	Clams	2
221	221M1Pa	439032,8	588908,8	Clams	2
222	222M1Pa	438922,9	588806,8	Clams	2
223	223M1Pa	438702,7	588602,6	Clams	2
224	224M1Pa	438752,8	588990,1	Clams	2
225	225M1Pa	438532,7	588785,9	Clams	2
226	226M1Pa	439202,8	588725,5	Clams	2
227	227M1Pa	439092,8	588623,4	Clams	2
228	228M1Pa	438862,8	589092,1	Clams	2
229	229M1Pa	438642,7	588887,9	Clams	2
230	230M1Pa	438542,2	588112,8	Clams	2
231	231M1Pa	438372,2	588296,1	Clams	2
232	232M1Pa	438202,2	588479,4	Clams	2
233	233M1Pa	438762,4	588317	Clams	2
234	234M1Pa	438422,4	588683,6	Clams	2
235	235M1Pa	438592,4	588500,3	Clams	2
236	236M1Pa	438652,2	588214,8	Clams	2
237	237M1Pa	438482,2	588398,1	Clams	2
238	238M1Pa	438312,2	588581,4	Clams	2
239	239M1Pa	440081,2	587759,8	Clams	2
240	240M1Pa	439811,5	587167,6	Clams	2
241	241M1Pa	439861,3	587555,3	Clams	2
242	242M1Pa	439641,3	587350,7	Clams	2
243	243M1Pa	439421,4	587146,3	Clams	2
244	244M1Pa	440031,6	587372,2	Clams	2
245	245M1Pa	439751,2	587452,9	Clams	2
246	246M1Pa	439921,4	587269,8	Clams	2
247	247M1Pa	439531,3	587248,4	Clams	2

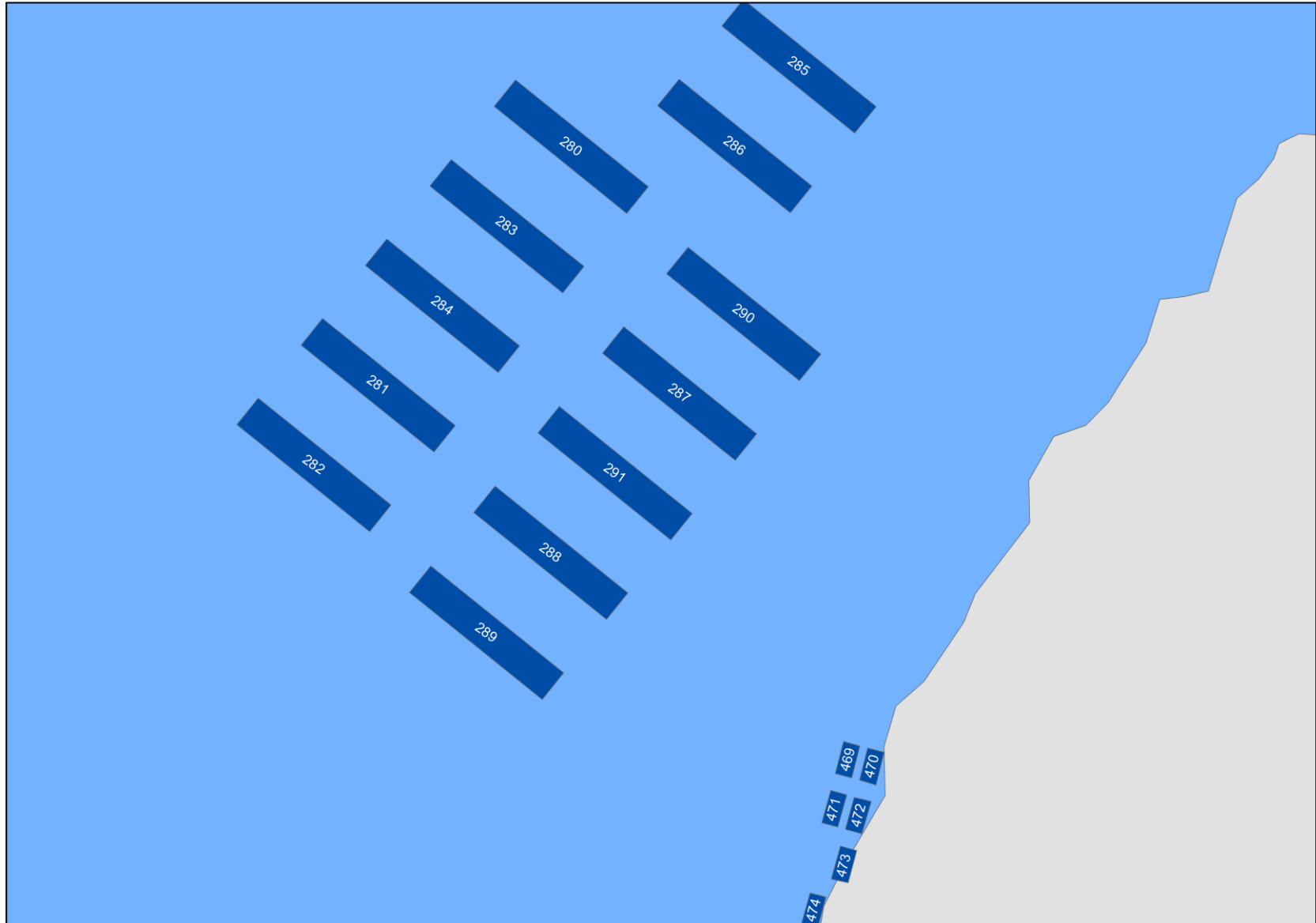
248	248M1Pa	439971,4	587657,6	Clams	2
249	249M1Pa	440251,4	587576,7	Clams	2
250	250M1Pa	440141,6	587474,5	Clams	2
251	251M1Hu	438959,3	586427,3	Oyster	2
252	252M1Hu	438849,3	586325	Oyster	2
253	253M1Hu	439129,6	586244,1	Oyster	2
254	254M1Hu	438618,9	586793,5	Oyster	2
255	255M1Hu	438789,1	586610,4	Oyster	2
256	256M1Hu	439019,6	586141,7	Oyster	2
257	257M1Hu	438508,9	586691,2	Oyster	2
258	258M1Hu	438679	586508	Oyster	2
259	259M1Hu	438293,7	585817	Oyster	2
260	260M1Hu	438404,7	585918,4	Oyster	2
261	261M1Hu	438073,5	585612,8	Oyster	2
262	262M1Hu	438183,7	585715	Oyster	2
263	263M1Hu	437205,5	585889,9	Oyster	2
264	264M1Hu	437375,5	585705,3	Oyster	2
265	265M1Hu	437264,5	585603,8	Oyster	2
266	266M1Hu	437545,4	585520,5	Oyster	2
267	267M1Hu	437434,5	585419,1	Oyster	2
268	268M1Hu	436720,6	587083,1	Oyster	2
269	269M1Hu	436608,8	586983,1	Oyster	2
270	270M1Hu	436832,5	587183,3	Oyster	2
271	271M1Hu	436496	586883,7	Oyster	2
272	272M1Hu	436944,1	587283,8	Oyster	2
273	273M1Hu	437056,8	587383,2	Oyster	2
274	274M1Hu	437168,6	587483,3	Oyster	2
275	275M1Hu	437280,6	587583,5	Oyster	2
276	276M1Hu	437728,6	587983,7	Oyster	2
277	277M1Hu	437504,8	587783,5	Oyster	2
278	278M1Hu	437616,6	587883,5	Oyster	2
279	279M1Hu	437392,1	587684	Oyster	2
1018	1018M1Hu	435739,9	586043,4	Oyster	2
1019	1019M1Hu	435862,8	586189,7	Oyster	2
1020	1020M1Hu	436096,2	586313,6	Oyster	2
1021	1021M1Pa	436445,6	586641,3	Clams	2
1026	1026M1Hu	436886,4	585614,8	Oyster	40
1027	1027M1Pa	439373,7	587993,6	Clams	120
1028	1028M1Hu	435897,1	585177,1	Oyster	20



Figure n°2 : Location of production units in Duna Blanca

Table n°2 Geographical coordinates of production units in Duna Blanca

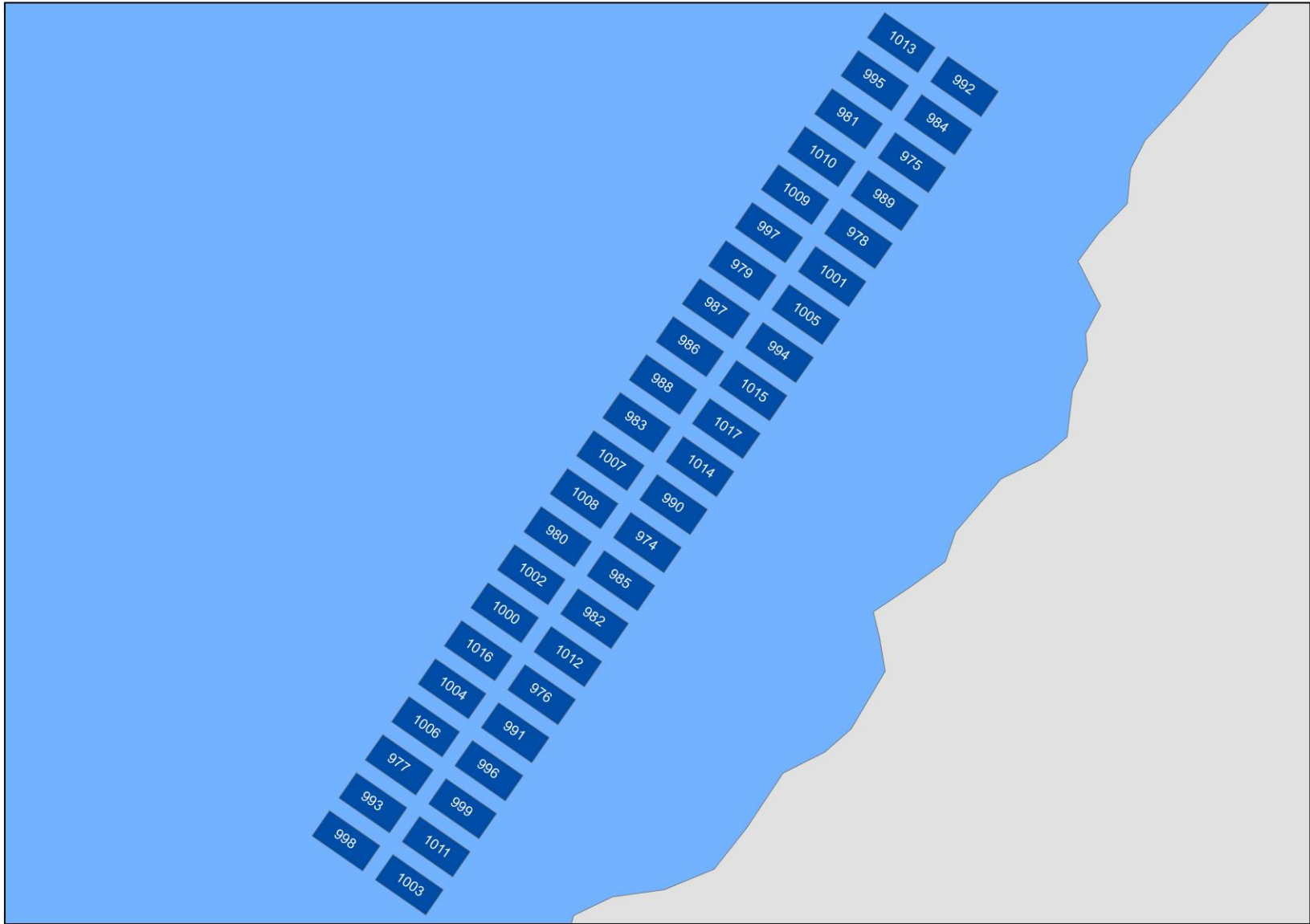
Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectares)
1022	1022M1Hu	447280,7	581018,7	Oyster	2
1023	1023M1Hu	447469,6	581179,5	Oyster	2
1024	1024M1Hu	443883,5	576270,2	Oyster	2
1025	1025M1Hu	444105,2	576376,3	Oyster	2



Location of production units in Harjat Amira

Table n°3 Geographical coordinates of production units in Harjat Amira

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
280	280M1Hu	438626,7	575591,8	Oyster	20
281	281M1Hu	437495,7	574190,9	Oyster	20
282	282M1Hu	437119,1	573723,8	Oyster	20
283	283M1Hu	438250,1	575124,8	Oyster	20
284	284M1Hu	437872,3	574658	Oyster	20
285	285M1Hu	439962,1	576063,1	Oyster	20
286	286M1Hu	439585,4	575595,9	Oyster	20
287	287M1Hu	439261,7	574142,5	Oyster	20
288	288M1Hu	438507,2	573207,8	Oyster	20
289	289M1Hu	438130,4	572738,6	Oyster	20
290	290M1Hu	439638,3	574609,6	Oyster	20
291	291M1Hu	438883,8	573675	Oyster	20
469	469M1Hu	440247,3	571993,1	Oyster	2
470	470M1Hu	440389,3	571954	Oyster	2
471	471M1Hu	440169	571705	Oyster	2
472	472M1Hu	440309,4	571666,3	Oyster	2
473	473M1Hu	440226,2	571377,1	Oyster	2
474	474M1Hu	440047,9	571104,3	Oyster	2

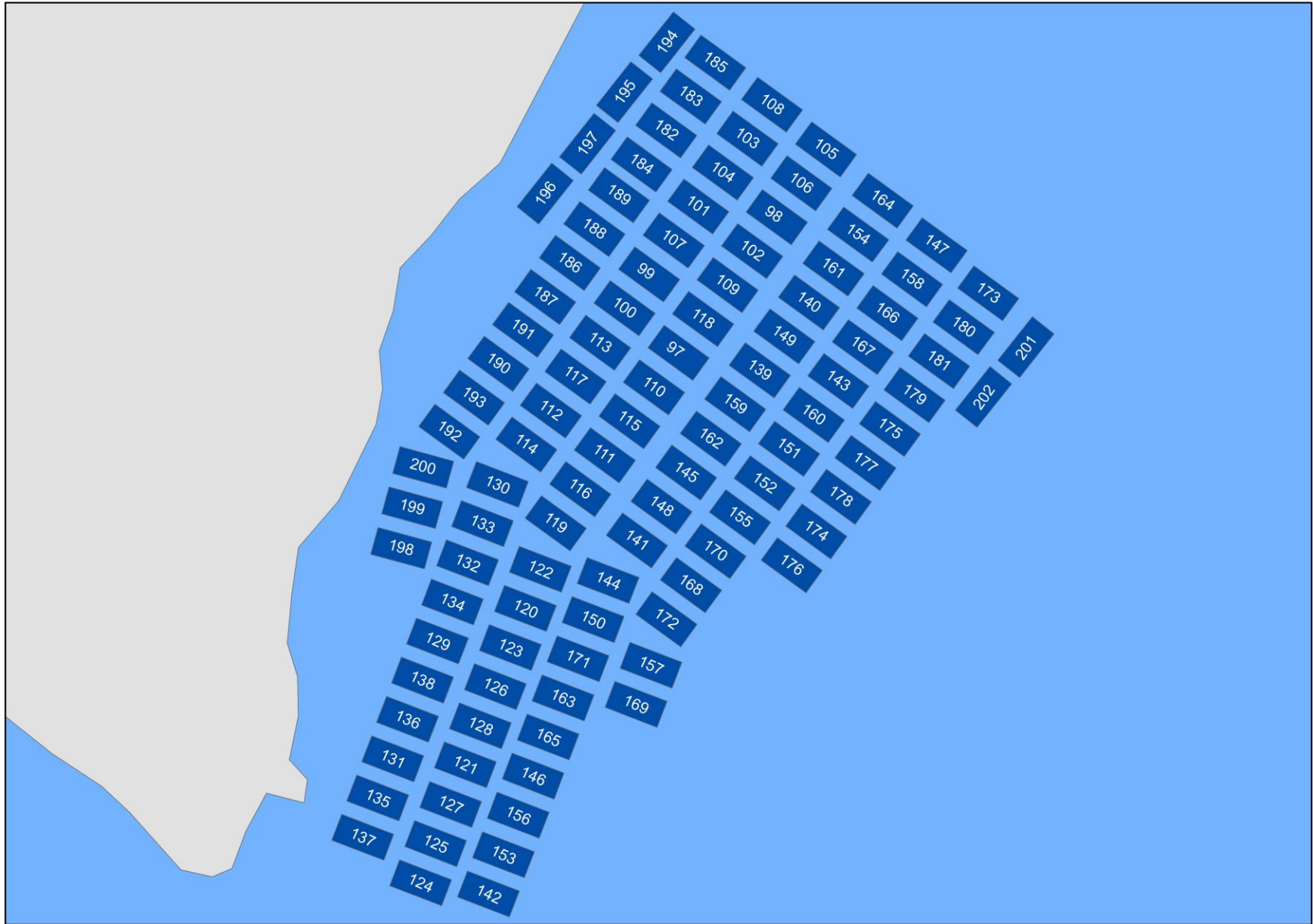


Location of units production in old Argoube

Table n°4 Geographical coordinates of production units in old Argoube

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
974	974M1Hu	434236,6571	564900,5552	Oyster	2
975	975M1Hu	435095,9423	566134,0359	Oyster	2
976	976M1Hu	433893,0787	564406,6391	Oyster	2
977	977M1Hu	433430,8491	564178,7662	Oyster	2
978	978M1Hu	434922,6362	565887,7002	Oyster	2
979	979M1Hu	434546,1207	565783,4411	Oyster	2
980	980M1Hu	433945,5265	564919,4334	Oyster	2
981	981M1Hu	434890,5257	566276,528	Oyster	2
982	982M1Hu	434065,3352	564653,4775	Oyster	2
983	983M1Hu	434202,2482	565290,0099	Oyster	2
984	984M1Hu	435181,5502	566257,4997	Oyster	2
985	985M1Hu	434150,9431	564776,9413	Oyster	2
986	986M1Hu	434374,7988	565536,3635	Oyster	2
987	987M1Hu	434460,4067	565659,8273	Oyster	2
988	988M1Hu	434287,8304	565413,086	Oyster	2
989	989M1Hu	435008,1272	566010,9877	Oyster	2
990	990M1Hu	434322,1481	565023,8426	Oyster	2
991	991M1Hu	433807,4708	564283,1753	Oyster	2
992	992M1Hu	435267,2641	566381,1135	Oyster	2
993	993M1Hu	433345,2413	564055,3024	Oyster	2
994	994M1Hu	434665,8233	565517,3351	Oyster	2
995	995M1Hu	434976,1336	566399,9918	Oyster	2
996	996M1Hu	433721,9797	564159,8879	Oyster	2
997	997M1Hu	434631,6117	565906,7286	Oyster	2
998	998M1Hu	433258,0807	563931,9433	Oyster	2
999	999M1Hu	433636,2658	564036,2741	Oyster	2
1000	1000M1Hu	433773,1531	564672,4187	Oyster	2
1001	1001M1Hu	434837,0283	565764,2364	Oyster	2
1002	1002M1Hu	433859,9186	564795,9696	Oyster	2
1003	1003M1Hu	433463,4974	563789,4512	Oyster	2
1004	1004M1Hu	433602,0541	564425,6675	Oyster	2
1005	1005M1Hu	434751,5373	565640,949	Oyster	2
1006	1006M1Hu	433516,5631	564302,3801	Oyster	2
1007	1007M1Hu	434116,7315	565166,3347	Oyster	2
1008	1008M1Hu	434031,2405	565043,0473	Oyster	2

1009	1009M1Hu	434717,2017	566030,211	Oyster	2
1010	1010M1Hu	434802,7106	566153,4798	Oyster	2
1011	1011M1Hu	433550,6579	563912,8103	Oyster	2
1012	1012M1Hu	433978,5697	564529,9266	Oyster	2
1013	1013M1Hu	435061,8475	566523,6057	Oyster	2
1014	1014M1Hu	434407,756	565147,3064	Oyster	2
1015	1015M1Hu	434580,2154	565393,8713	Oyster	2
1016	1016M1Hu	433687,5242	564549,2244	Oyster	2
1017	1017M1Hu	434493,247	565270,5938	Oyster	2



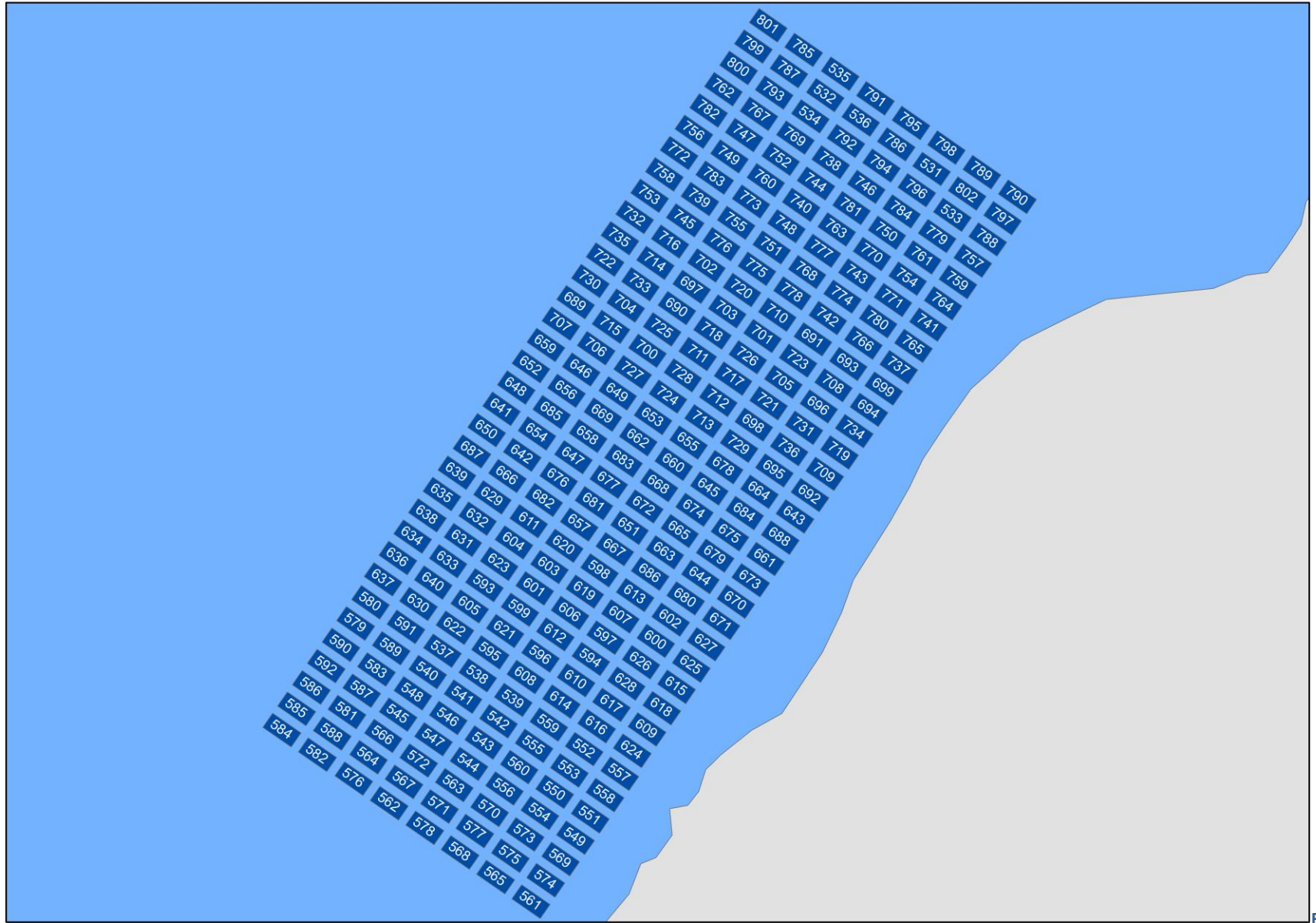
Location of units production in Lassarga

Table n°5 Geographical coordinates of production units in Lassarga

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
97	97M1AI	422494,3	565026,5	Seaweed	2
98	98M1AI	422846,9	565512,8	Seaweed	2
99	99M1AI	422389	565307,9	Seaweed	2
100	100M1AI	422300,9	565186,5	Seaweed	2
101	101M1AI	422565,2	565551	Seaweed	2
102	102M1AI	422758,6	565391,1	Seaweed	2
103	103M1AI	422741,7	565794,5	Seaweed	2
104	104M1AI	422653,5	565672,8	Seaweed	2
105	105M1AI	423023,2	565755,9	Seaweed	2
106	106M1AI	422935,1	565634,5	Seaweed	2
107	107M1AI	422477,2	565429,6	Seaweed	2
108	108M1AI	422829,8	565915,9	Seaweed	2
109	109M1AI	422670,6	565269,6	Seaweed	2
110	110M1AI	422406,6	564902,9	Seaweed	2
111	111M1AI	422230,1	564659,5	Seaweed	2
112	112M1AI	422036,7	564819,5	Seaweed	2
113	113M1AI	422213,2	565062,9	Seaweed	2
114	114M1AI	421948,6	564698	Seaweed	2
115	115M1AI	422318,4	564781,3	Seaweed	2
116	116M1AI	422142	564538	Seaweed	2
117	117M1AI	422125	564941,3	Seaweed	2
118	118M1AI	422582,6	565148	Seaweed	2
119	119M1AI	422054,2	564415,7	Seaweed	2
120	120M1AI	421945	564110,5	Seaweed	2
121	121M1AI	421729,8	563549,7	Seaweed	2
122	122M1AI	421998,8	564250,8	Seaweed	2
123	123M1AI	421891,1	563970,1	Seaweed	2
124	124M1AI	421569,3	563126,9	Seaweed	2
125	125M1AI	421623,1	563267,4	Seaweed	2
126	126M1AI	421837,3	563830	Seaweed	2
127	127M1AI	421676,9	563407,7	Seaweed	2
128	128M1AI	421783,7	563689,8	Seaweed	2
129	129M1AI	421629,7	563993,6	Seaweed	2
130	130M1AI	421844,9	564554,5	Seaweed	2
131	131M1AI	421469,3	563571,3	Seaweed	2
132	132M1AI	421737,3	564274,2	Seaweed	2

133	133M1AI	421791,2	564414,4	Seaweed	2
134	134M1AI	421683,5	564133,7	Seaweed	2
135	135M1AI	421415,5	563431	Seaweed	2
136	136M1AI	421522,2	563713,3	Seaweed	2
137	137M1AI	421361,6	563290,5	Seaweed	2
138	138M1AI	421575,9	563853,4	Seaweed	2
139	139M1AI	422785,8	564964	Seaweed	2
140	140M1AI	422962,1	565207,1	Seaweed	2
141	141M1AI	422345,5	564354,1	Seaweed	2
142	142M1AI	421812,4	563087	Seaweed	2
143	143M1AI	423067,4	564925,6	Seaweed	2
144	144M1AI	422241,8	564210,5	Seaweed	2
145	145M1AI	422521,9	564597,3	Seaweed	2
146	146M1AI	421972,8	563509,4	Seaweed	2
147	147M1AI	423420,1	565412	Seaweed	2
148	148M1AI	422433,6	564475,5	Seaweed	2
149	149M1AI	422874	565085,6	Seaweed	2
150	150M1AI	422188	564070,5	Seaweed	2
151	151M1AI	422891,2	564682,5	Seaweed	2
152	152M1AI	422803,5	564559	Seaweed	2
153	153M1AI	421866,2	563227,3	Seaweed	2
154	154M1AI	423138,6	565450,5	Seaweed	2
155	155M1AI	422715,3	564437,3	Seaweed	2
156	156M1AI	421919	563369,3	Seaweed	2
157	157M1AI	422395,6	563906,9	Seaweed	2
158	158M1AI	423332	565290,5	Seaweed	2
159	159M1AI	422697,8	564842,5	Seaweed	2
160	160M1AI	422979,5	564804	Seaweed	2
161	161M1AI	423050,4	565328,9	Seaweed	2
162	162M1AI	422610,1	564718,9	Seaweed	2
163	163M1AI	422080,3	563789,7	Seaweed	2
164	164M1AI	423226,7	565572	Seaweed	2
165	165M1AI	422026,6	563649,7	Seaweed	2
166	166M1AI	423243,8	565168,9	Seaweed	2
167	167M1AI	423155,5	565047,1	Seaweed	2
168	168M1AI	422538,9	564194,1	Seaweed	2
169	169M1AI	422341,8	563766,6	Seaweed	2
170	170M1AI	422627	564315,5	Seaweed	2
171	171M1AI	422134,2	563930,2	Seaweed	2
172	172M1AI	422451	564071,7	Seaweed	2
173	173M1AI	423605,3	565240	Seaweed	2

174	174M1AI	422988,7	564387	Seaweed	2
175	175M1AI	423252,6	564753,7	Seaweed	2
176	176M1AI	422900,5	564265,3	Seaweed	2
177	177M1AI	423164,7	564632	Seaweed	2
178	178M1AI	423076,4	564510,6	Seaweed	2
179	179M1AI	423340,7	564875,1	Seaweed	2
180	180M1AI	423517,2	565118,5	Seaweed	2
181	181M1AI	423429	564996,9	Seaweed	2
182	182M1AI	422450,1	565823,7	Seaweed	2
183	183M1AI	422538,2	565945,4	Seaweed	2
184	184M1AI	422361,8	565701,9	Seaweed	2
185	185M1AI	422626,3	566066,8	Seaweed	2
186	186M1AI	422104,5	565348,7	Seaweed	2
187	187M1AI	422016,2	565226,9	Seaweed	2
188	188M1AI	422192,7	565470,3	Seaweed	2
189	189M1AI	422280,8	565591,8	Seaweed	2
190	190M1AI	421848,7	564987,5	Seaweed	2
191	191M1AI	421936,8	565108,9	Seaweed	2
192	192M1AI	421672,3	564744,1	Seaweed	2
193	193M1AI	421760,6	564865,8	Seaweed	2
194	194M1AI	422452,8	566139,7	Seaweed	2
195	195M1AI	422300,6	565961,1	Seaweed	2
196	196M1AI	422016,2	565597,3	Seaweed	2
197	197M1AI	422168,4	565775,9	Seaweed	2
198	198M1AI	421499,8	564326,5	Seaweed	2
199	199M1AI	421539,3	564471,5	Seaweed	2
200	200M1AI	421578,7	564616,2	Seaweed	2
201	201M1AI	423740,7	565046,9	Seaweed	2
202	202M1AI	423588,5	564868,3	Seaweed	2



Location of units production in new Argoube

Fif

Table n°6 Geographical coordinates of production units in new Argoube

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
531	531M1Or	426351,1	556219,5	Abalone	2
532	532M1Or	425734,8	556647,1	Abalone	2
533	533M1Or	426470,9	555953,6	Abalone	2
534	534M1Or	425649,2	556523,7	Abalone	2
535	535M1Or	425820,5	556770,7	Abalone	2
536	536M1Or	425940,2	556504,6	Abalone	2
537	537M1Or	423516,2	553428,9	Abalone	2
538	538M1Or	423721,6	553286,4	Abalone	2
539	539M1Or	423927	553144	Abalone	2
540	540M1Or	423430,7	553305,7	Abalone	2
541	541M1Or	423636,1	553163,2	Abalone	2
542	542M1Or	423841,5	553020,7	Abalone	2
543	543M1Or	423755,9	552897,2	Abalone	2
544	544M1Or	423670,4	552773,9	Abalone	2
545	545M1Or	423259,6	553058,9	Abalone	2
546	546M1Or	423550,5	553039,7	Abalone	2
547	547M1Or	423465	552916,4	Abalone	2
548	548M1Or	423345,1	553182,2	Abalone	2
549	549M1Or	424286,7	552346,3	Abalone	2
550	550M1Or	424166,8	552612,1	Abalone	2
551	551M1Or	424372,2	552469,6	Abalone	2
552	552M1Or	424337,9	552858,9	Abalone	2
553	553M1Or	424252,3	552735,5	Abalone	2
554	554M1Or	424081,3	552488,8	Abalone	2
555	555M1Or	424047	552878,1	Abalone	2
556	556M1Or	423875,9	552631,3	Abalone	2
557	557M1Or	424543,3	552716,4	Abalone	2
558	558M1Or	424457,8	552593,1	Abalone	2
559	559M1Or	424132,5	553001,4	Abalone	2
560	560M1Or	423961,4	552754,6	Abalone	2
561	561M1Or	424029,9	551976	Abalone	2
562	562M1Or	423208,2	552546	Abalone	2
563	563M1Or	423584,7	552650,3	Abalone	2
564	564M1Or	423088,2	552811,8	Abalone	2
565	565M1Or	423824,5	552118,5	Abalone	2

566	566M1Or	423173,9	552935,3	Abalone	2
567	567M1Or	423293,7	552669,3	Abalone	2
568	568M1Or	423619,1	552261	Abalone	2
569	569M1Or	424201	552222,7	Abalone	2
570	570M1Or	423790,2	552507,7	Abalone	2
571	571M1Or	423499,1	552526,8	Abalone	2
572	572M1Or	423379,3	552792,8	Abalone	2
573	573M1Or	423995,6	552365,2	Abalone	2
574	574M1Or	424115,4	552099,3	Abalone	2
575	575M1Or	423910	552241,8	Abalone	2
576	576M1Or	423002,8	552688,5	Abalone	2
577	577M1Or	423704,6	552384,3	Abalone	2
578	578M1Or	423413,6	552403,6	Abalone	2
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580	580M1Or	423100	553709,5	Abalone	2
581	581M1Or	422963,1	553073,3	Abalone	2
582	582M1Or	422792	552826,6	Abalone	2
583	583M1Or	423134,4	553320,2	Abalone	2
584	584M1Or	422586,6	552969,1	Abalone	2
585	585M1Or	422672,1	553092,4	Abalone	2
586	586M1Or	422757,7	553215,8	Abalone	2
587	587M1Or	423048,9	553196,9	Abalone	2
588	588M1Or	422877,5	552949,9	Abalone	2
589	589M1Or	423220	553443,7	Abalone	2
590	590M1Or	422928,9	553462,7	Abalone	2
591	591M1Or	423305,5	553567	Abalone	2
592	592M1Or	422843,4	553339,4	Abalone	2
593	593M1Or	423760,1	553809	Abalone	2
594	594M1Or	424376,5	553381,5	Abalone	2
595	595M1Or	423794,2	553419,5	Abalone	2
596	596M1Or	424085,3	553400,4	Abalone	2
597	597M1Or	424462	553504,7	Abalone	2
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600	600M1Or	424752,8	553486,4	Abalone	2
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602	602M1Or	424838,5	553609	Abalone	2
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607	607M1Or	424547,6	553628,2	Abalone	2
608	608M1Or	423999,6	553277	Abalone	2
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611	611M1Or	424016,7	554179,1	Abalone	2
612	612M1Or	424171	553524	Abalone	2
613	613M1Or	424633,1	553751,5	Abalone	2
614	614M1Or	424205,1	553134,4	Abalone	2
615	615M1Or	424872,8	553219,8	Abalone	2
616	616M1Or	424410,6	552991,9	Abalone	2
617	617M1Or	424496,2	553115,4	Abalone	2
618	618M1Or	424787,3	553096,5	Abalone	2
619	619M1Or	424342,1	553770,8	Abalone	2
620	620M1Or	424222,1	554036,6	Abalone	2
621	621M1Or	423879,8	553542,9	Abalone	2
622	622M1Or	423588,8	553562	Abalone	2
623	623M1Or	423845,6	553932,3	Abalone	2
624	624M1Or	424616	552849,4	Abalone	2
625	625M1Or	424958,4	553343,2	Abalone	2
626	626M1Or	424667,4	553362,3	Abalone	2
627	627M1Or	425043,9	553466,5	Abalone	2
628	628M1Or	424581,9	553239	Abalone	2
629	629M1Or	423806	554317,1	Abalone	2
630	630M1Or	423378,1	553700	Abalone	2
631	631M1Or	423634,9	554070,4	Abalone	2
632	632M1Or	423720,5	554193,8	Abalone	2
633	633M1Or	423549,4	553947,1	Abalone	2
634	634M1Or	423344	554089,6	Abalone	2
635	635M1Or	423514,2	554336,4	Abalone	2
636	636M1Or	423258,3	553965,9	Abalone	2
637	637M1Or	423172,7	553842,5	Abalone	2
638	638M1Or	423429,5	554212,8	Abalone	2
639	639M1Or	423600,6	554459,6	Abalone	2
640	640M1Or	423463,7	553823,5	Abalone	2
641	641M1Or	423859,1	554830	Abalone	2
642	642M1Or	423978,8	554563,9	Abalone	2
643	643M1Or	425559	554207	Abalone	2
644	644M1Or	425011,2	553855,8	Abalone	2
645	645M1Or	425062,6	554368,7	Abalone	2
646	646M1Or	424321,1	555057,6	Abalone	2
647	647M1Or	424275,2	554549,5	Abalone	2

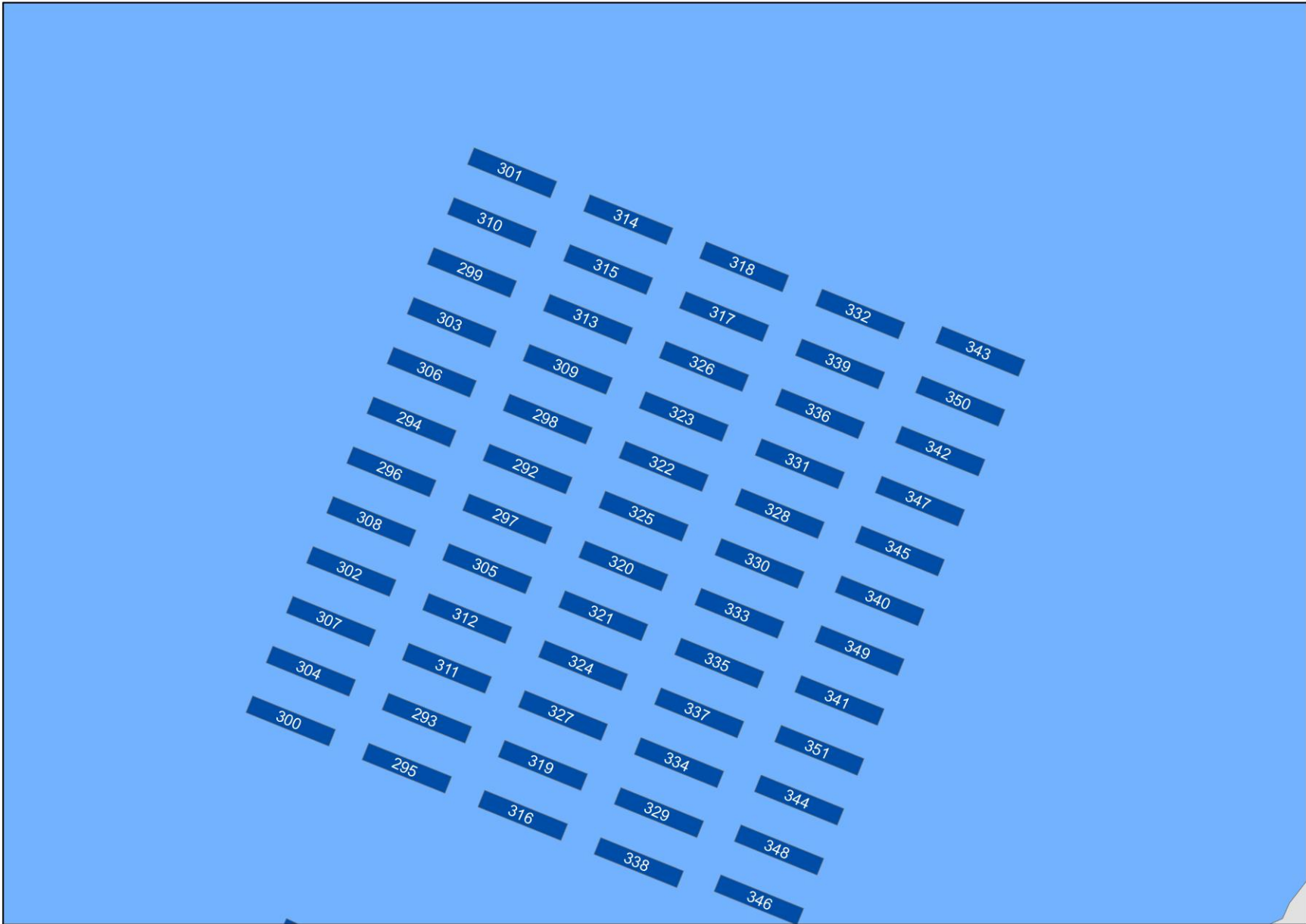
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651	651M1Or	424600,3	554140,9	Abalone	2
652	652M1Or	424029,8	555077	Abalone	2
653	653M1Or	424737,2	554777	Abalone	2
654	654M1Or	424064,5	554687,5	Abalone	2
655	655M1Or	424942,6	554634,6	Abalone	2
656	656M1Or	424235,6	554934,3	Abalone	2
657	657M1Or	424309,3	554159,9	Abalone	2
658	658M1Or	424360,7	554672,8	Abalone	2
659	659M1Or	424115,7	555200,1	Abalone	2
660	660M1Or	424857,1	554511,3	Abalone	2
661	661M1Or	425387,9	553960,2	Abalone	2
662	662M1Or	424651,7	554653,8	Abalone	2
663	663M1Or	424805,8	553998,3	Abalone	2
664	664M1Or	425353,5	554349,5	Abalone	2
665	665M1Or	424891,5	554121,9	Abalone	2
666	666M1Or	423893,2	554440,5	Abalone	2
667	667M1Or	424514,7	554017,4	Abalone	2
668	668M1Or	424771,5	554387,8	Abalone	2
669	669M1Or	424446,3	554796,3	Abalone	2
670	670M1Or	425216,7	553713,3	Abalone	2
671	671M1Or	425131,1	553589,9	Abalone	2
672	672M1Or	424686	554264,5	Abalone	2
673	673M1Or	425302,4	553836,9	Abalone	2
674	674M1Or	424977	554245,2	Abalone	2
675	675M1Or	425182,4	554102,7	Abalone	2
676	676M1Or	424189,5	554425,9	Abalone	2
677	677M1Or	424480,6	554407	Abalone	2
678	678M1Or	425148,1	554492	Abalone	2
679	679M1Or	425097	553979,4	Abalone	2
680	680M1Or	424925,6	553732,4	Abalone	2
681	681M1Or	424394,9	554283,4	Abalone	2
682	682M1Or	424103,9	554302,4	Abalone	2
683	683M1Or	424566,1	554530,3	Abalone	2
684	684M1Or	425267,9	554226,3	Abalone	2
685	685M1Or	424150	554810,8	Abalone	2
686	686M1Or	424720,2	553874,9	Abalone	2
687	687M1Or	423687,8	554583	Abalone	2
688	688M1Or	425473,5	554083,7	Abalone	2

689	689M1Or	424288	555447,1	Abalone	2
690	690M1Or	424875,4	555413,5	Abalone	2
691	691M1Or	425662,8	555232,6	Abalone	2
692	692M1Or	425645,7	554330,5	Abalone	2
693	693M1Or	425868,2	555090,1	Abalone	2
694	694M1Or	425988,2	554824,4	Abalone	2
695	695M1Or	425440,3	554473	Abalone	2
696	696M1Or	425697,1	554843,4	Abalone	2
697	697M1Or	424961	555536,9	Abalone	2
698	698M1Or	425320,5	554739	Abalone	2
699	699M1Or	426073,6	554947,7	Abalone	2
700	700M1Or	424704,2	555166,6	Abalone	2
701	701M1Or	425371,8	555251,9	Abalone	2
702	702M1Or	425046,5	555660,2	Abalone	2
703	703M1Or	425166,4	555394,4	Abalone	2
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707	707M1Or	424202,4	555323,6	Abalone	2
708	708M1Or	425782,6	554967,1	Abalone	2
709	709M1Or	425731,3	554454	Abalone	2
710	710M1Or	425457,3	555375,2	Abalone	2
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712	712M1Or	425115	554881,6	Abalone	2
713	713M1Or	425029,4	554758,1	Abalone	2
714	714M1Or	424750,3	555675	Abalone	2
715	715M1Or	424493,5	555304,6	Abalone	2
716	716M1Or	424835,8	555798,2	Abalone	2
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719	719M1Or	425817,1	554577,6	Abalone	2
720	720M1Or	425251,9	555517,7	Abalone	2
721	721M1Or	425406,2	554862,6	Abalone	2
722	722M1Or	424459,3	555694	Abalone	2
723	723M1Or	425577,3	555109,4	Abalone	2
724	724M1Or	424824	554900,6	Abalone	2
725	725M1Or	424789,9	555290,2	Abalone	2
726	726M1Or	425286,2	555128,5	Abalone	2
727	727M1Or	424618,6	555043,1	Abalone	2
728	728M1Or	424909,6	555024,1	Abalone	2
729	729M1Or	425234,9	554615,5	Abalone	2

730	730M1Or	424373,8	555570,7	Abalone	2
731	731M1Or	425611,6	554720,1	Abalone	2
732	732M1Or	424630,4	555940,7	Abalone	2
733	733M1Or	424664,7	555551,5	Abalone	2
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735	735M1Or	424544,6	555817,9	Abalone	2
736	736M1Or	425525,9	554596,5	Abalone	2
737	737M1Or	426160,6	555070,9	Abalone	2
738	738M1Or	425766,8	556258,1	Abalone	2
739	739M1Or	425008,3	556045	Abalone	2
740	740M1Or	425595,7	556011,4	Abalone	2
741	741M1Or	426331,9	555318	Abalone	2
742	742M1Or	425749,8	555355,9	Abalone	2
743	743M1Or	425921,1	555603	Abalone	2
744	744M1Or	425681,3	556134,8	Abalone	2
745	745M1Or	424922,7	555921,5	Abalone	2
746	746M1Or	425972,2	556115,6	Abalone	2
747	747M1Or	425265,2	556415,4	Abalone	2
748	748M1Or	425510,2	555888,1	Abalone	2
749	749M1Or	425179,5	556291,9	Abalone	2
750	750M1Or	426092,2	555849,7	Abalone	2
751	751M1Or	425424,5	555764,5	Abalone	2
752	752M1Or	425475,9	556277,3	Abalone	2
753	753M1Or	424717,3	556064	Abalone	2
754	754M1Or	426212	555583,8	Abalone	2
755	755M1Or	425219,1	555907	Abalone	2
756	756M1Or	424974,1	556434,4	Abalone	2
757	757M1Or	426588,5	555688	Abalone	2
758	758M1Or	424802,9	556187,5	Abalone	2
759	759M1Or	426503	555564,8	Abalone	2
760	760M1Or	425390,3	556153,9	Abalone	2
761	761M1Or	426297,6	555707,3	Abalone	2
762	762M1Or	425145,2	556681,1	Abalone	2
763	763M1Or	425801,1	555868,9	Abalone	2
764	764M1Or	426417,4	555441,3	Abalone	2
765	765M1Or	426246,2	555194,4	Abalone	2
766	766M1Or	425955,2	555213,4	Abalone	2
767	767M1Or	425350,6	556538,6	Abalone	2
768	768M1Or	425629,9	555622	Abalone	2
769	769M1Or	425561,4	556400,6	Abalone	2
770	770M1Or	426006,6	555726,3	Abalone	2

771	771M1Or	426126,5	555460,5	Abalone	2
772	772M1Or	424888,6	556311,1	Abalone	2
773	773M1Or	425304,8	556030,6	Abalone	2
774	774M1Or	425835,4	555479,4	Abalone	2
775	775M1Or	425338,9	555641	Abalone	2
776	776M1Or	425133,4	555783,5	Abalone	2
777	777M1Or	425715,6	555745,6	Abalone	2
778	778M1Or	425544,3	555498,5	Abalone	2
779	779M1Or	426383,1	555830,5	Abalone	2
780	780M1Or	426040,8	555336,9	Abalone	2
781	781M1Or	425886,7	555992,3	Abalone	2
782	782M1Or	425059,5	556558,1	Abalone	2
783	783M1Or	425094,1	556168,6	Abalone	2
784	784M1Or	426177,7	555973	Abalone	2
785	785M1Or	425609,8	556908,8	Abalone	2
786	786M1Or	426145,6	556362,1	Abalone	2
787	787M1Or	425524,1	556785,2	Abalone	2
788	788M1Or	426676,3	555811,1	Abalone	2
789	789M1Or	426642,2	556200,7	Abalone	2
790	790M1Or	426847,7	556058,2	Abalone	2
791	791M1Or	426025,9	556628,2	Abalone	2
792	792M1Or	425854,6	556381,2	Abalone	2
793	793M1Or	425438,5	556661,7	Abalone	2
794	794M1Or	426060	556238,7	Abalone	2
795	795M1Or	426231,3	556485,7	Abalone	2
796	796M1Or	426265,5	556096,1	Abalone	2
797	797M1Or	426761,9	555934,6	Abalone	2
798	798M1Or	426436,8	556343,2	Abalone	2
799	799M1Or	425318,7	556927,6	Abalone	2
800	800M1Or	425233	556804,2	Abalone	2
801	801M1Or	425404,4	557051,3	Abalone	2
802	802M1Or	426556,5	556077,1	Abalone	2

2.2 Area M2 - Intermediate area between Dakhla Bay and Cintra Bay :

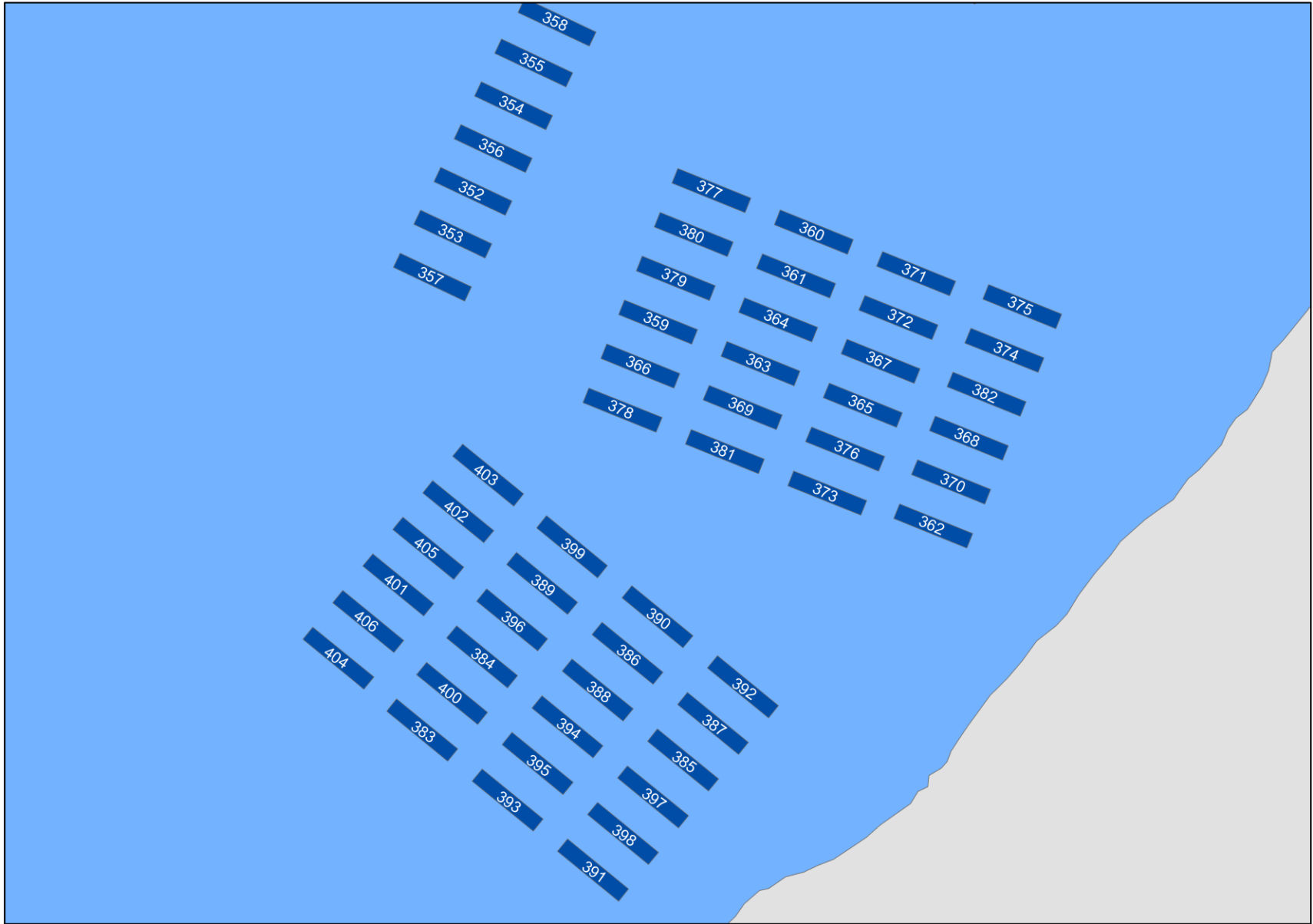


Location of production units in Labourda 1

Table n°7 Geographical coordinates of production units in Labouirda 1

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
292	292M2Mo	396655,5	526101	Mussel	20
293	293M2Mo	395528	523319,1	Mussel	20
294	294M2Mo	395356,8	526625,4	Mussel	20
295	295M2Mo	395303,4	522760,8	Mussel	20
296	296M2Mo	395131,7	526069	Mussel	20
297	297M2Mo	396429,2	525544,7	Mussel	20
298	298M2Mo	396880,6	526657,1	Mussel	20
299	299M2Mo	396033,2	528294	Mussel	20
300	300M2Mo	394005,2	523288	Mussel	20
301	301M2Mo	396483,3	529406,4	Mussel	20
302	302M2Mo	394681,6	524956,6	Mussel	20
303	303M2Mo	395806,9	527737,8	Mussel	20
304	304M2Mo	394230,3	523844,2	Mussel	20
305	305M2Mo	396204,2	524988,5	Mussel	20
306	306M2Mo	395581,8	527181,6	Mussel	20
307	307M2Mo	394455,3	524400,4	Mussel	20
308	308M2Mo	394906,7	525512,8	Mussel	20
309	309M2Mo	397105,6	527213,3	Mussel	20
310	310M2Mo	396258,3	528850,2	Mussel	20
311	311M2Mo	395753	523875,3	Mussel	20
312	312M2Mo	395979,2	524432,3	Mussel	20
313	313M2Mo	397331,7	527772,6	Mussel	20
314	314M2Mo	397781,7	528885,1	Mussel	20
315	315M2Mo	397556,7	528328,8	Mussel	20
316	316M2Mo	396602,2	522233,9	Mussel	20
317	317M2Mo	398855,5	527802	Mussel	20
318	318M2Mo	399080,5	528358,2	Mussel	20
319	319M2Mo	396826,8	522792,2	Mussel	20
320	320M2Mo	397728	525017,9	Mussel	20
321	321M2Mo	397502,9	524461,7	Mussel	20
322	322M2Mo	398179,3	526130,3	Mussel	20
323	323M2Mo	398404,4	526686,5	Mussel	20
324	324M2Mo	397277,9	523905,5	Mussel	20
325	325M2Mo	397954,3	525574,1	Mussel	20
326	326M2Mo	398630,4	527245,8	Mussel	20
327	327M2Mo	397051,8	523348,5	Mussel	20
328	328M2Mo	399477,7	525603,1	Mussel	20

329	329M2Mo	398125,1	522265	Mussel	20
330	330M2Mo	399252,6	525046,9	Mussel	20
331	331M2Mo	399702,7	526159,3	Mussel	20
332	332M2Mo	400378,8	527831	Mussel	20
333	333M2Mo	399026,3	524490,7	Mussel	20
334	334M2Mo	398350,1	522821,3	Mussel	20
335	335M2Mo	398801,3	523934,5	Mussel	20
336	336M2Mo	399928,8	526718,6	Mussel	20
337	337M2Mo	398576,3	523378,3	Mussel	20
338	338M2Mo	397900,5	521706,7	Mussel	20
339	339M2Mo	400153,8	527274,8	Mussel	20
340	340M2Mo	400597,7	524629,6	Mussel	20
341	341M2Mo	400146,4	523517,1	Mussel	20
342	342M2Mo	401273,9	526301,2	Mussel	20
343	343M2Mo	401724	527413,6	Mussel	20
344	344M2Mo	399695,2	522403,9	Mussel	20
345	345M2Mo	400822,8	525185,7	Mussel	20
346	346M2Mo	399245,6	521289,4	Mussel	20
347	347M2Mo	401047,8	525741,9	Mussel	20
348	348M2Mo	399470,2	521847,7	Mussel	20
349	349M2Mo	400371,4	524073,3	Mussel	20
350	350M2Mo	401498,9	526857,4	Mussel	20
351	351M2Mo	399921,4	522960,9	Mussel	20



Location of production units in Labourda 2

Table n°8 Geographic coordinates of production units in Labouirda 2

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
352	352M2AI	393300,6	518633,5	Seaweed	20
353	353M2AI	393044,3	518091	Seaweed	20
354	354M2AI	393814,6	519718,5	Seaweed	20
355	355M2AI	394070,9	520260,9	Seaweed	20
356	356M2AI	393557	519176	Seaweed	20
357	357M2AI	392786,7	517545,5	Seaweed	20
358	358M2AI	394366,2	520778,7	Seaweed	20
359	359M2AI	395648,4	516974,1	Seaweed	20
360	360M2AI	397623,5	518115,8	Seaweed	20
361	361M2AI	397398,5	517559,7	Seaweed	20
362	362M2AI	399139,5	514387,1	Seaweed	20
363	363M2AI	396947,1	516447,2	Seaweed	20
364	364M2AI	397172,2	517003,4	Seaweed	20
365	365M2AI	398245,5	515920	Seaweed	20
366	366M2AI	395423,4	516417,9	Seaweed	20
367	367M2AI	398470,5	516476,2	Seaweed	20
368	368M2AI	399590,6	515502,7	Seaweed	20
369	369M2AI	396722,1	515891	Seaweed	20
370	370M2AI	399365,6	514946,5	Seaweed	20
371	371M2AI	398921,9	517588,6	Seaweed	20
372	372M2AI	398696,8	517032,5	Seaweed	20
373	373M2AI	397794,4	514804,5	Seaweed	20
374	374M2AI	400041,9	516615,2	Seaweed	20
375	375M2AI	400267	517171,3	Seaweed	20
376	376M2AI	398020,4	515363,8	Seaweed	20
377	377M2AI	396324,8	518642,7	Seaweed	20
378	378M2AI	395197,3	515858,5	Seaweed	20
379	379M2AI	395873,4	517530,3	Seaweed	20
380	380M2AI	396099,7	518086,6	Seaweed	20
381	381M2AI	396496,1	515331,7	Seaweed	20
382	382M2AI	399815,6	516058,9	Seaweed	20
383	383M2AI	392655,8	511799,6	Seaweed	20
384	384M2AI	393415,4	512728,5	Seaweed	20
385	385M2AI	395965	511419,1	Seaweed	20
386	386M2AI	395261,1	512772	Seaweed	20
387	387M2AI	396344,8	511883,6	Seaweed	20
388	388M2AI	394881,3	512307,5	Seaweed	20

389	389M2AI	394176,9	513660,2	Seaweed	20
390	390M2AI	395640,9	513236,5	Seaweed	20
391	391M2AI	394823,7	510023,1	Seaweed	20
392	392M2AI	396724,6	512348,1	Seaweed	20
393	393M2AI	393740	510911,5	Seaweed	20
394	394M2AI	394499,6	511840,3	Seaweed	20
395	395M2AI	394119,8	511375,9	Seaweed	20
396	396M2AI	393797,1	513195,7	Seaweed	20
397	397M2AI	395583,3	510951,9	Seaweed	20
398	398M2AI	395203,5	510487,5	Seaweed	20
399	399M2AI	394556,7	514124,7	Seaweed	20
400	400M2AI	393035,6	512264	Seaweed	20
401	401M2AI	392352,3	513640,6	Seaweed	20
402	402M2AI	393113,1	514569,2	Seaweed	20
403	403M2AI	393492,9	515033,7	Seaweed	20
404	404M2AI	391592,7	512711,7	Seaweed	20
405	405M2AI	392733,3	514104,8	Seaweed	20
406	406M2AI	391972,5	513176,1	Seaweed	20

2. 3 Zone M3 – Cintra bay :

Table n°9 Geographic coordinates of production units North of Cintra

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
803	803M3Co	396360,1	504089,4	Shellfish	2
804	804M3Co	396124,4	504276,7	Shellfish	2
805	805M3Co	396547,6	504582,2	Shellfish	2
806	806M3Co	397609,6	503742,8	Shellfish	2
807	807M3Co	396075,7	504953,9	Shellfish	2
808	808M3Co	398044,4	503080,6	Shellfish	2
809	809M3Co	396714,2	503810,5	Shellfish	2
810	810M3Co	396746,9	504105,3	Shellfish	2
811	811M3Co	396478,1	503996,4	Shellfish	2
812	812M3Co	394669,1	504129,4	Shellfish	2
813	813M3Co	394978,6	504522,2	Shellfish	2
814	814M3Co	396596,3	503903,3	Shellfish	2
815	815M3Co	395969,7	504080,3	Shellfish	2
816	816M3Co	395674,6	504931,1	Shellfish	2
817	817M3Co	395096,7	504429,2	Shellfish	2
818	818M3Co	396193,8	504860,8	Shellfish	2
819	819M3Co	396087,5	503987,5	Shellfish	2
820	820M3Co	397727,5	503650	Shellfish	2
821	821M3Co	394941,9	504232,8	Shellfish	2
822	822M3Co	395133,4	504718,6	Shellfish	2
823	823M3Co	397808,6	503267,9	Shellfish	2
824	824M3Co	394823,8	504325,7	Shellfish	2
825	825M3Co	396901,6	504301,6	Shellfish	2
826	826M3Co	398199,1	503277	Shellfish	2
827	827M3Co	394860,8	504615	Shellfish	2
828	828M3Co	397100,6	503826,6	Shellfish	2
829	829M3Co	396628,7	504198,3	Shellfish	2
830	830M3Co	396392,9	504385,8	Shellfish	2
831	831M3Co	397019,5	504208,8	Shellfish	2
832	832M3Co	394551,2	504222,2	Shellfish	2
833	833M3Co	396311,7	504768	Shellfish	2
834	834M3Co	396510,7	504291,3	Shellfish	2
835	835M3Co	395288,1	504914,9	Shellfish	2
836	836M3Co	396157	504571,6	Shellfish	2
837	837M3Co	397845,9	503557,3	Shellfish	2
838	838M3Co	396864,8	504012,4	Shellfish	2
839	839M3Co	397373,4	503928,9	Shellfish	2

840	840M3Co	395214,5	504336,4	Shellfish	2
841	841M3Co	394433,1	504315,3	Shellfish	2
842	842M3Co	395369,3	504532,8	Shellfish	2
843	843M3Co	396039,1	504664,4	Shellfish	2
844	844M3Co	395615,6	504359,2	Shellfish	2
845	845M3Co	396006,4	504369,7	Shellfish	2
846	846M3Co	395921	504757,5	Shellfish	2
847	847M3Co	395033,3	503863	Shellfish	2
848	848M3Co	395059,7	504139,9	Shellfish	2
849	849M3Co	395696,9	503976,9	Shellfish	2
850	850M3Co	396242,3	504183,9	Shellfish	2
851	851M3Co	397137,7	504116,2	Shellfish	2
852	852M3Co	395579,1	504069,8	Shellfish	2
853	853M3Co	397963,4	503464,2	Shellfish	2
854	854M3Co	396665,4	504487,7	Shellfish	2
855	855M3Co	395957,6	505046,8	Shellfish	2
856	856M3Co	396783,4	504394,7	Shellfish	2
857	857M3Co	396205,4	503893	Shellfish	2
858	858M3Co	394278,3	504118,9	Shellfish	2
859	859M3Co	395802,9	504850,4	Shellfish	2
860	860M3Co	396982,8	503919,5	Shellfish	2
861	861M3Co	395524	504729,1	Shellfish	2
862	862M3Co	395460,9	504162,8	Shellfish	2
863	863M3Co	395888,5	504462,5	Shellfish	2
864	864M3Co	395652,3	504648,5	Shellfish	2
865	865M3Co	394706	504418,6	Shellfish	2
866	866M3Co	394787,1	504036,5	Shellfish	2
867	867M3Co	397926,4	503173,6	Shellfish	2
868	868M3Co	397690,8	503360,7	Shellfish	2
869	869M3Co	394905	503943,6	Shellfish	2
870	870M3Co	395770,4	504555,6	Shellfish	2
871	871M3Co	397255,4	504023	Shellfish	2
872	872M3Co	396275	504478,6	Shellfish	2
873	873M3Co	395497,6	504452,2	Shellfish	2
874	874M3Co	395406,1	504822	Shellfish	2
875	875M3Co	395733,8	504266,1	Shellfish	2
876	876M3Co	395188,1	504059,3	Shellfish	2
877	877M3Co	397491,4	503835,9	Shellfish	2
878	878M3Co	395251,4	504625,6	Shellfish	2
879	879M3Co	398081,1	503369,9	Shellfish	2
880	880M3Co	395342,9	504255,8	Shellfish	2

881	881M3Co	395851,7	504173,3	Shellfish	2
882	882M3Co	396349,1	505057,8	Shellfish	2
883	883M3Co	398354,4	503473,9	Shellfish	2
884	884M3Co	397764,9	503939,8	Shellfish	2
885	885M3Co	398236,4	503566,9	Shellfish	2
886	886M3Co	396585,7	504872,1	Shellfish	2
887	887M3Co	397565,4	504416,4	Shellfish	2
888	888M3Co	398001	503754,1	Shellfish	2
889	889M3Co	397447,5	504509,2	Shellfish	2
890	890M3Co	396938,7	504591,7	Shellfish	2
891	891M3Co	397882,8	503847	Shellfish	2
892	892M3Co	396820,7	504684,6	Shellfish	2
893	893M3Co	396430,3	504675,6	Shellfish	2
894	894M3Co	397056,9	504498,6	Shellfish	2
895	895M3Co	397646,7	504032,9	Shellfish	2
896	896M3Co	397683,4	504322,2	Shellfish	2
897	897M3Co	398118,7	503661,2	Shellfish	2
898	898M3Co	397919,6	504136,2	Shellfish	2
899	899M3Co	396467	504964,9	Shellfish	2
900	900M3Co	397211,6	504695	Shellfish	2
901	901M3Co	397528,7	504125,9	Shellfish	2
902	902M3Co	396702,9	504779,1	Shellfish	2
903	903M3Co	397329,5	504602,1	Shellfish	2
904	904M3Co	397801,5	504229,3	Shellfish	2
905	905M3Co	397292,9	504313	Shellfish	2
906	906M3Co	397174,8	504405,8	Shellfish	2
907	907M3Co	397410,7	504220	Shellfish	2
908	908M3Co	395856,4	502716	Shellfish	2

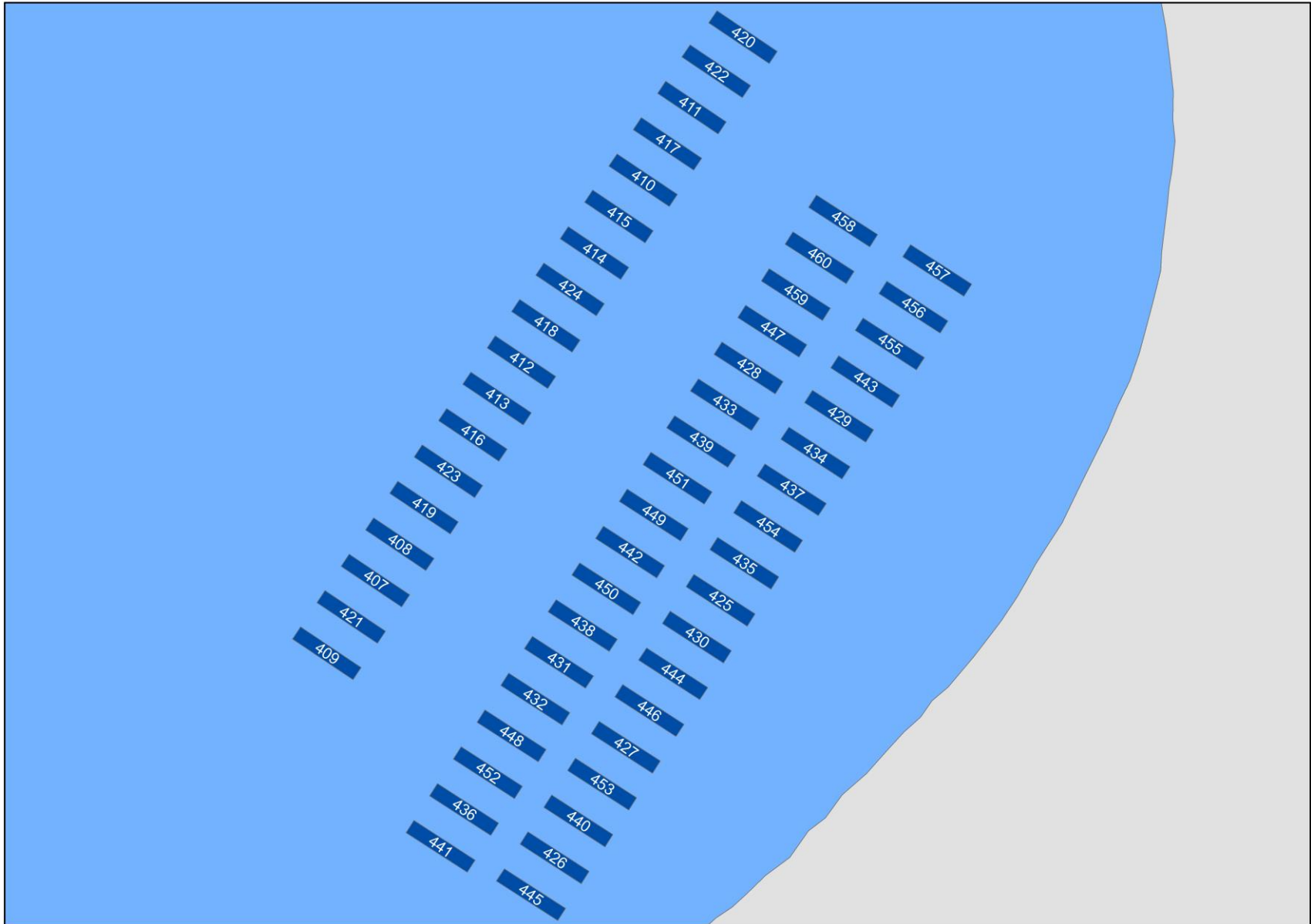
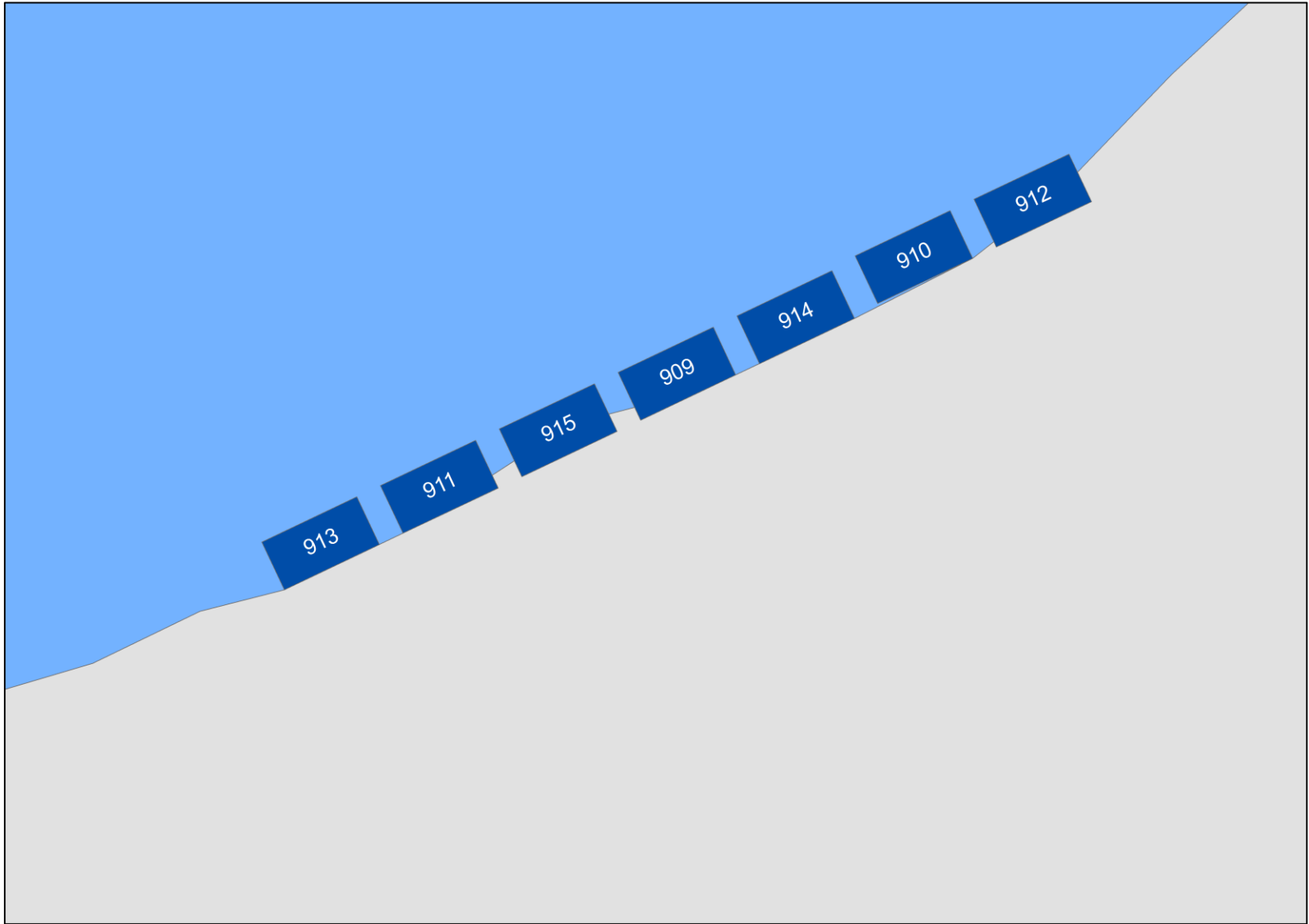


Table n°10 Geographic coordinates of units production in center of Cintra

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
407	407M3AI	389187,4	492439,9	Seaweed	20
408	408M3AI	389520,4	492939	Seaweed	20
409	409M3AI	388519,2	491443,2	Seaweed	20
410	410M3AI	392865,3	497928,2	Seaweed	20
411	411M3AI	393534,7	498924,8	Seaweed	20
412	412M3AI	391192	495433,7	Seaweed	20
413	413M3AI	390857,9	494935,3	Seaweed	20
414	414M3AI	392195,5	496928,6	Seaweed	20
415	415M3AI	392531,2	497429,8	Seaweed	20
416	416M3AI	390523,9	494436,9	Seaweed	20
417	417M3AI	393199,4	498426,6	Seaweed	20
418	418M3AI	391527,4	495931,9	Seaweed	20
419	419M3AI	389854,5	493439,5	Seaweed	20
420	420M3AI	394237,7	499891,3	Seaweed	20
421	421M3AI	388853,3	491941,5	Seaweed	20
422	422M3AI	393868,8	499423,1	Seaweed	20
423	423M3AI	390188,5	493937,9	Seaweed	20
424	424M3AI	391861,4	496430,2	Seaweed	20
425	425M3AI	393928,2	492168,8	Seaweed	20
426	426M3AI	391649,1	488639	Seaweed	20
427	427M3AI	392626	490152,2	Seaweed	20
428	428M3AI	394314	495354,4	Seaweed	20
429	429M3AI	395557,2	494692,5	Seaweed	20
430	430M3AI	393603	491664,6	Seaweed	20
431	431M3AI	391708,1	491318,3	Seaweed	20
432	432M3AI	391382,9	490814,1	Seaweed	20
433	433M3AI	393988,8	494850,2	Seaweed	20
434	434M3AI	395231,9	494188,4	Seaweed	20
435	435M3AI	394255	492675,9	Seaweed	20
436	436M3AI	390406	489300,8	Seaweed	20
437	437M3AI	394905,4	493684,3	Seaweed	20
438	438M3AI	392034,6	491822,3	Seaweed	20
439	439M3AI	393662,3	494346,2	Seaweed	20
440	440M3AI	391974,3	489143,2	Seaweed	20
441	441M3AI	390080,8	488794,5	Seaweed	20
442	442M3AI	392685	492830,7	Seaweed	20

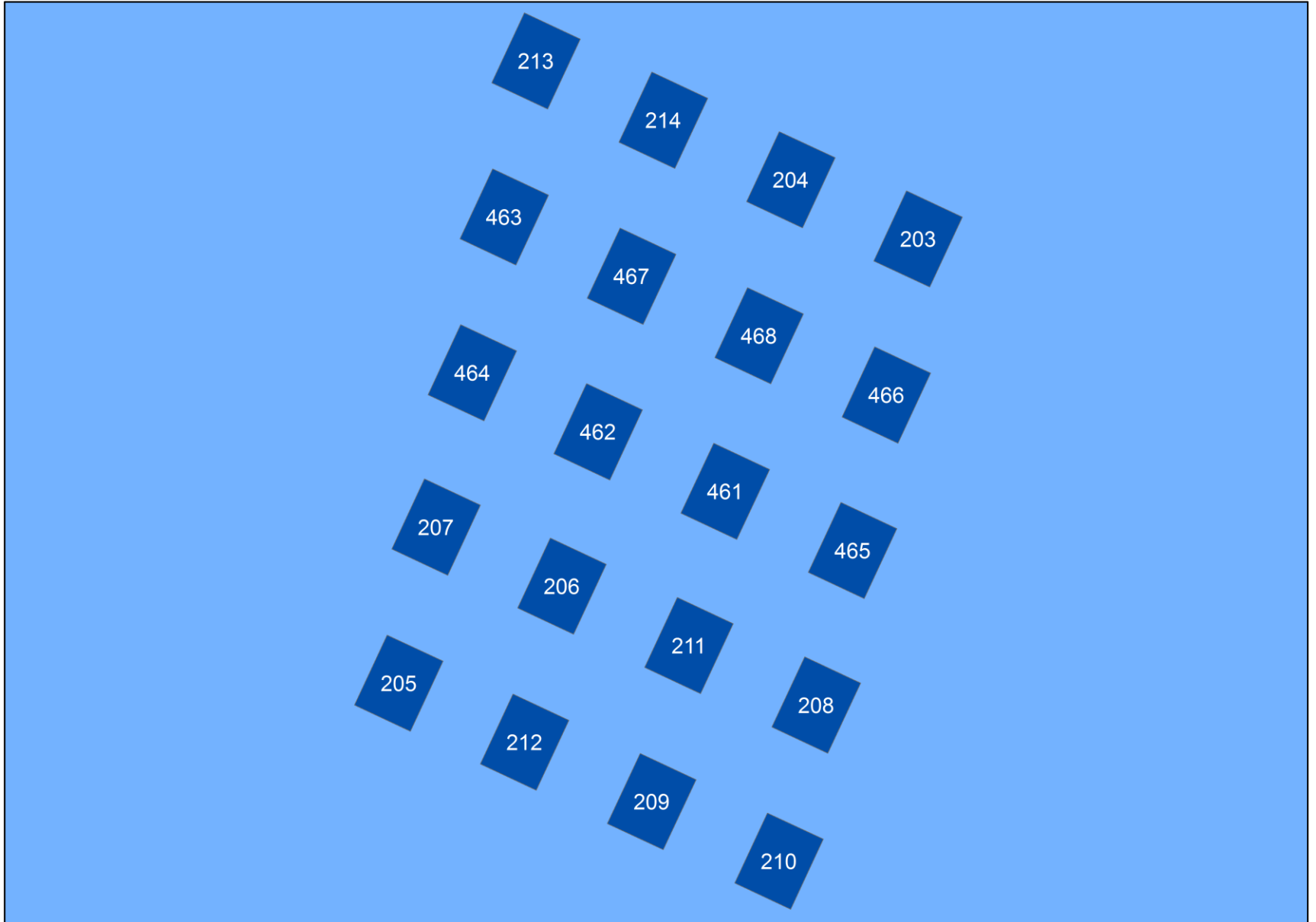
443	443M3Al	395917,7	495167,1	Seaweed	20
444	444M3Al	393277,7	491160,5	Seaweed	20
445	445M3Al	391323,9	488132,6	Seaweed	20
446	446M3Al	392951,2	490656,4	Seaweed	20
447	447M3Al	394639,3	495858,6	Seaweed	20
448	448M3Al	391057,6	490309,9	Seaweed	20
449	449M3Al	393011,8	493337,8	Seaweed	20
450	450M3Al	392359,8	492326,5	Seaweed	20
451	451M3Al	393337,1	493842	Seaweed	20
452	452M3Al	390731,2	489805,1	Seaweed	20
453	453M3Al	392300,8	489648	Seaweed	20
454	454M3Al	394580,2	493180,1	Seaweed	20
455	455M3Al	396253,6	495682,7	Seaweed	20
456	456M3Al	396578,8	496186,9	Seaweed	20
457	457M3Al	396904	496691,1	Seaweed	20
458	458M3Al	395613,2	497368,9	Seaweed	20
459	459M3Al	394962,7	496360,5	Seaweed	20
460	460M3Al	395287,9	496864,7	Seaweed	20



Location of production units in South of Cintra

Table n°11 Geographic coordinates of units production in South of Cintra

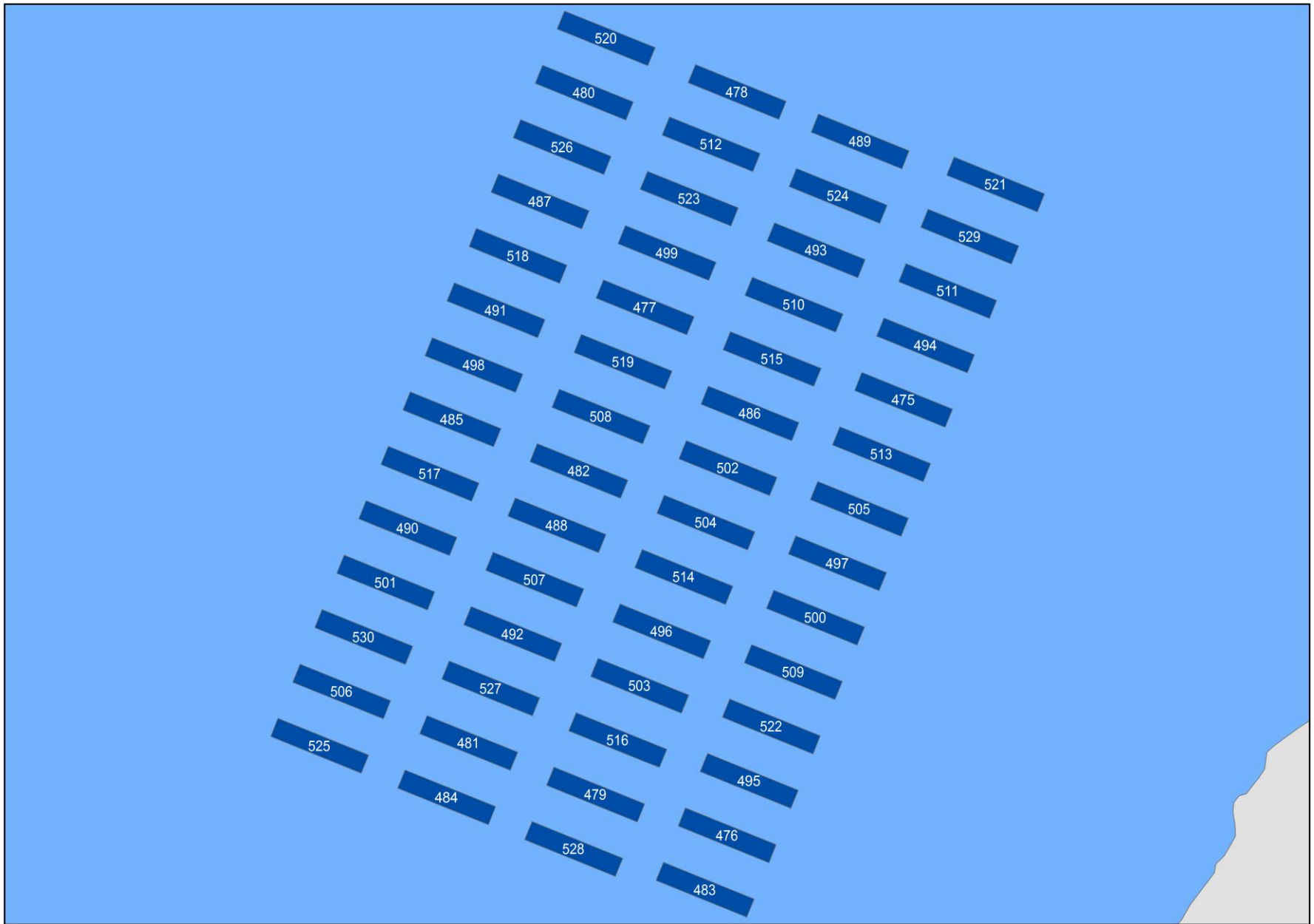
Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
909	909M3Co	392233,0771	486641,5248	Shellfish	2
910	910M3Co	392683,5928	486862,6446	Shellfish	2
911	911M3Co	391781,2123	486427,1861	Shellfish	2
912	912M3Co	392909,4631	486969,8015	Shellfish	2
913	913M3Co	391555,342	486320,0292	Shellfish	2
914	914M3Co	392458,9474	486748,6817	Shellfish	2
915	915M3Co	392007,2068	486534,3679	Shellfish	2



Location of production units in North of Ain Baida

Table n°12 Geographic coordinates of units production in North of Ain Baida

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
203	203M3Do	373129,2	488656,6	Fish	20
204	204M3Do	372304,1	489040	Fish	20
205	205M3Do	369762,3	485784,6	Fish	20
206	206M3Do	370819,4	486412	Fish	20
207	207M3Do	370004	486793,5	Fish	20
208	208M3Do	372468,8	485642,6	Fish	20
209	209M3Do	371402	485018,5	Fish	20
210	210M3Do	372227,1	484633,7	Fish	20
211	211M3Do	371643,7	486027,4	Fish	20
212	212M3Do	370577,7	485403,1	Fish	20
213	213M3Do	370651,5	489807,8	Fish	20
214	214M3Do	371477,3	489424,6	Fish	20
461	461M3Do	371878,9	487025,2	Fish	20
462	462M3Do	371054,6	487409,8	Fish	20
463	463M3Do	370445,7	488798,8	Fish	20
464	464M3Do	370239,2	487791,3	Fish	20
465	465M3Do	372704,7	486642	Fish	20
466	466M3Do	372923,4	487647,5	Fish	20
467	467M3Do	371271,5	488415,6	Fish	20
468	468M3Do	372098,3	488031	Fish	20



Location of production units in South of Ain Baida

Table n°13 Geographic coordinates of units production in South of Ain Baida

Number	Unit production identifier	X_Center	Y_Center	Target species	Area (hectars)
475	475M3Mo	377061,3	477763,2	Mussel	20
476	476M3Mo	375257,6	473309,7	Mussel	20
477	477M3Mo	374417,9	478707,8	Mussel	20
478	478M3Mo	375359,6	480910,1	Mussel	20
479	479M3Mo	373912,5	473727	Mussel	20
480	480M3Mo	373795,5	480903,2	Mussel	20
481	481M3Mo	372614,2	474254,2	Mussel	20
482	482M3Mo	373741,8	477036	Mussel	20
483	483M3Mo	375032,6	472753,5	Mussel	20
484	484M3Mo	372389,2	473698	Mussel	20
485	485M3Mo	372443	477562,9	Mussel	20
486	486M3Mo	375491,2	477624,4	Mussel	20
487	487M3Mo	373344,2	479790,8	Mussel	20
488	488M3Mo	373516,7	476479,9	Mussel	20
489	489M3Mo	376617,7	480405,4	Mussel	20
490	490M3Mo	371991,6	476450,5	Mussel	20
491	491M3Mo	372894,1	478678,4	Mussel	20
492	492M3Mo	373065,4	475367,4	Mussel	20
493	493M3Mo	376167,6	479293	Mussel	20
494	494M3Mo	377286,4	478319,4	Mussel	20
495	495M3Mo	375483,8	473866,7	Mussel	20
496	496M3Mo	374588,7	475396,4	Mussel	20
497	497M3Mo	376385,2	476091,5	Mussel	20
498	498M3Mo	372668	478119,1	Mussel	20
499	499M3Mo	374642,9	479264	Mussel	20
500	500M3Mo	376160,2	475535,4	Mussel	20
501	501M3Mo	371766,6	475894,3	Mussel	20
502	502M3Mo	375265,1	477065	Mussel	20
503	503M3Mo	374363,7	474840,2	Mussel	20
504	504M3Mo	375040,1	476508,8	Mussel	20
505	505M3Mo	376610,3	476647,7	Mussel	20
506	506M3Mo	371315,4	474781,1	Mussel	20
507	507M3Mo	373290,4	475923,6	Mussel	20
508	508M3Mo	373966,8	477592,2	Mussel	20
509	509M3Mo	375933,8	474979,1	Mussel	20

510	510M3Mo	375941,3	478736,8	Mussel	20
511	511M3Mo	377512,7	478875,7	Mussel	20
512	512M3Mo	375094,3	480376,4	Mussel	20
513	513M3Mo	376836,3	477207	Mussel	20
514	514M3Mo	374815	475952,7	Mussel	20
515	515M3Mo	375716,2	478180,6	Mussel	20
516	516M3Mo	374138,7	474284	Mussel	20
517	517M3Mo	372217,9	477006,8	Mussel	20
518	518M3Mo	373119,1	479234,6	Mussel	20
519	519M3Mo	374192,8	478151,6	Mussel	20
520	520M3Mo	374020,6	481459,4	Mussel	20
521	521M3Mo	378003	479965,6	Mussel	20
522	522M3Mo	375708,8	474422,9	Mussel	20
523	523M3Mo	374869,2	479820,2	Mussel	20
524	524M3Mo	376392,6	479849,2	Mussel	20
525	525M3Mo	371090,4	474224,9	Mussel	20
526	526M3Mo	373570,5	480347,1	Mussel	20
527	527M3Mo	372840,3	474811,2	Mussel	20
528	528M3Mo	373687,5	473170,8	Mussel	20
529	529M3Mo	377737,7	479431,8	Mussel	20
530	530M3Mo	371541,6	475338,1	Mussel	20

3. Definitions

Finfish farming refers to farming of finfish varieties in partially or completely enclosed areas or in the open sea according to species of interest and breeding technique (ponds in concrete or plastic, fish-traps or giant floating cages, etc.).

Shellfish farming refers to cultivation of shellfish. The most common shellfish species farmed are, for example:

- oysters
- mussels
- clams
- cockles
- Abalone.

Seaweed farming is a term used for cultivation of seaweed for industrial or food consumption purposes.

4. Selection process

The selection process will take place in a single phase where all projects submitted will be assessed according to a set of allocation criteria defined below in accordance with fixing terms and conditions of aquaculture operations (appendix 3).

Selected applicants will then be required to fulfill licensing and administrative procedure required prior to beginning operations.

5. Deadlines

All applications must be submitted in a timeframe of 5 months starting from the CEI launching date.

When the deadline expired, all submissions will be reviewed by a selection committee. Then all selected candidates will be notified three (03) months, as a maximum, after the deadline expiration.

The Table below summarizes the main stages of this call of expression of interest (CEI):

Key dates	
Launch of the CEI	November 23th, 2015
Deadline for submission	April 22th, 2016
Deadline for selection of applicant	July 22th, 2016

6. CEI submitting rules amendment

When necessary, ANDA may apply some modifications on the present CEI documents without altering in any case its object. These modifications will be communicated to all bidders in a reasonable delay.

7. Submission rules

7-1 Capacity of bidders

Bids for the present CEI are accepted from natural or legal persons of Moroccan and/or foreign law:

- Singly,
- As a group,
- As a cooperative

The following are not acceptable as bidders to this Expression of Interest:

- Natural persons in compulsory liquidation ;
- Corporate bodies in receivership, unless specifically authorized by a competent legal authority.

7-2 Constitution of a group or company for the purpose of completing the project

Members of same group shall be jointly and severally liable and must name a sole agent to represent their group during all steps of this call of expression of interest.

Natural persons and groups accepted following this selection procedure should form a company under Moroccan law for the purpose of completing the project. It is understood that these persons and companies forming the group must hold the majority of shares in the newly constituted company.

Selected foreigners companies should form a company under Moroccan law for the purpose of completing their project

7-3 Components of submission

Bidders are requested to comply with the criteria of this Call for Expression of Interest by means of a selection dossier.

Bidders submitting an incomplete selection dossier will have their application rejected. An 'Incomplete selection dossier' refers to a submission lacking one of the two (2) main components of a selection dossier as defined below:

- **Part 1: Administrative dossier**
- **Part 2: Technical dossier.**

The participation application and the bidder's presentation must comply with the prescribed formats in the Appendices. Part 2 must be prepared directly by the bidder (no prescribed format). The bidder may supply any other documents he considers useful for the completion of the information required for the selection dossier.

Part 1 - Administrative dossier

This dossier must include:

i- Application form (Appendix 4)

A letter formalizing the bidder's application for participation in the Call for Expression of Interest. The application must be accompanied by documents proving the powers granted:

- To the person acting in the name of the bidder in the case of a single company or in the case of a cooperative;
- To each person acting the name of companies submitting as part of a group.

In the case of a group, the application to participate should be signed either jointly by all members of the group or by its sole agent acting in the name of companies of the group.

ii-Legal existence

Including :

For companies :

- Copy of founding document (business status);
- Copy of the minutes of the general constitutive assembly of the company;
- Copy of the statement of incorporation to the Company Registry (dated less than 03 months) ;
- Legal representative justification documents.

Bidders not operating in Morocco must furnish the equivalent of all documents mentioned above issued by relevant authorities or organizations in their country of origin. All documents must be translated to French or Arabic by a sworn translator.

For cooperatives:

- Legalised copy of the minutes of the constitutive assembly of the cooperative and the last general assembly;
- Legalised copy of cooperative's publication in a legal newspaper announcement ;
- Legalised copy of the cooperative status;
- Legalised copy of board members list.

For natural persons :

- Legalized copy of National Identity Card (C.I.N) or passports for foreigners;
- Sworn statement (see specimen in Appendix 5).

For groups :

- Copy of the agreement or contract binding the members of the group, specifying details of the contribution of each partner ;
- For each company in the group, the same documents as needed for companies above,
- Delegation of the powers authority signed by each authorised sole agent according to the model in Appendix.

iii-Selection rules document

Bidders have to submit Selection rules document and Bill of specifications initialized in every page and signed on the last page.

It should be mentioned here that bidders submitting an incomplete administrative dossier will be asked by the dossier examining committee to produce the missing documents within 10 working days. Failing this deadline, non-presentation of the aforesaid documents will be considered justification for rejecting the application.

Part 2 – Technical dossier

i-General presentation of the bidder

The objective of this part is to present **general characteristics of the bidder**, i.e.:

(a) size of the company (staff and turnover), (b) activity and organizational structure of the company (c) any relevant experience in its branch of activity (d) its marketing network (e) financial position (situation with commitments, balance sheet, income statements, auditor's statement, comfort letter), where appropriate.

The bidder should add a note to his form giving other information about any documents attesting to his activity (catalogues, brochures, CDs, etc.).

The bidder must prove its project financing capacity by submitting supporting documents, including proof of financial capacity for projects whose estimated investment exceeds two million dirhams and following model in Appendix.

Where the bidder is a group, this part must be written by each of the natural persons or corporate bodies composing it.

ii- Description of target project

Objective of this part is to describe the bidder's target project as described below:

a- Selection space (production units)

Given size of areas identified by aquaculture development plan and their vocations, bidders are invited to present for their projects at least three proposals of farms sites using identifiers of production units presented in the tables (1-13) and specifying their order of priority in the "Application form in the call for expression of interest for development of marine aquaculture project in Dakhla Oued Eddahab" (see Appendix).

b-Technical plan

Farming

- Definition of species to be farmed ;
- Exhaustive description of farming techniques to be used ;
- Size and configuration of the project;
- Ground plan to scale of installations for the farm, that integrate all mains components of the project;
- Description of the planned production schedule integrating: expected yield, space and time required for the installations offshore and the dates of production.

Human resources

- Details of staff required to create and operate the project (level of education and training, origin, Resumes).

c- Economic plan

Business plan over 5 years containing following non-exhaustive list:

- Breakdown of total investment: development, acquisition of various equipment, construction of the premises and need of working capital;
- Projected production cost of different species produced by the project depending on the size and form of marketing.
- Projecting sales and identifying potential markets for commercialization of production;
- Provisional operating budget over a period of 5 years;
- Project implementation Schedule.

d- Environmental plan

The bidder must submit a note that brings out expected impacts of the project will have on the environment (landscape, natural environment, water, air, soil, water, fauna, flora) and on society and mitigation measures it intends to implement.

7-4 Submission of selection dossier

Confidentiality clause

ANDA promises not to divulge any information it may acquire from the selection dossier. Although, if the project is selected a copy of selection dossier will be transmitted to all concerned administrations by this project.

Bid language

The preselection dossier must be submitted in French or Arabic languages.

Bid format

The selection dossier must be a fully-printed document. Any document in manuscript will be rejected.

Delivery of selection dossier

The selection dossier must be placed in a sealed and signed envelope. On this envelope must be marked 'Selection dossier for Expression Call of Interest for the Development of Aquaculture in d'Ed Dakhla Oued Ed Dahab Region'.

It must be deposited against receipt in ten (10) copies and in electronic form, at least, by **April 22th 2016 at 16h30 Moroccan time.**

A l'Attention de :

Agence Nationale Pour le développement de l'Aquaculture

4^{ème} étage du bâtiment "les patios" sis à l'intersection de

l'Avenue ANNAKHIL et Avenue MEHDI BEN BARKA

-HAY RIAD- RABAT

Tél : (+212) +212 538 099 700– Fax : +212 538 099 770

10- Evaluation of bids

10-1 Method of evaluating bidders

Bidders will be evaluated on quality and coherence of proposed project.

10-2 Grading of bids

Based on detailed criteria below, selection dossiers will be graded over 100 points. Criteria and marks described below:

Criteria	Score max	Sub-criteria	Score max
Technical mastery	24	Farming techniques description	6
		Size and configuration of the project compatible with production objectives and zootechnical standards	7
		Planned production schedule	3
		Qualified staff: education and training, experience)	4
		Degree of project integration	4
Economic viability	25	Investment and operating expenses	5
		Forecasted financials/Profit and loss account	5
		Project profitability	10
		Commercial outlet	5
Project impact	11	Socio-economic impact	6
		Environnemental impact	5
Capacity of bidder	40	Financial capacity	30
		Technical competence and experience	10

10-3 Description of grading criteria

i- Technical mastery

Would be most appreciated projects:

- Proposing detailed technical design ;
- Considering to use modern farming structures and adapted to area environment;
- Presenting mastery of production plan;
- Having Size and configuration of different parts of the project compatible with production objectives and zootechnical standards;

- Proposing to hire qualified staff: level of training and accumulated experience in the field of aquaculture would be of major assistance to the success of the project. Therefore, a team with successful experience in this field would receive a higher grade.
- Considering setting up upstream and downstream structures (shellfish purification unit; product packaging unit). Project involving mutual components with others projects will be favored, in order to optimize space and add-value tools; an integrated approach is a guarantee that the project will be successful and gives it a positive impact as well.

ii- Economic viability

Would be most appreciated projects:

- Having detailed economic analysis ;
- Having detailed list of investment and operating expenses, which should be compatible with technical design;
- Presenting forecasted financials and profit and loss account;
- Presenting cost-effectiveness analysis (business-case) argued with pertinent indicators;
- Mastering trade opportunities.

iii- Project impacts

Projects will be assessed through:

- Socio-economic impact: jobs created and economic benefits in the region;
- Environmental impact: analysis of positive and negative expected impacts of project will have on environment and society, as well as foreseen mitigation measures. Will be fostered projects that respect environment and create highly positive socio-economic impact.

iv- Capacity of bidders

Bidders will be assessed through:

- Direct and indirect references: will be more appreciated candidates with experiences in aquaculture or in productive sectors.
- Financial capacity: It will be assess financial capacity to fund project through examination of financial proofs, business plan and funding plan.

11- Requests for clarification

Clarifications concerning selection procedure may be requested in writing to:

ANDA
Service de l'appui aux investisseurs
Adresse mail: amidakhla@anda.gov.ma

Modifications, additions or clarifications which may be made to the selection procedure will be notified in writing to all candidates who have downloaded the Call for expression of interest.

- APPENDICES -

Annex 1

Location of Call of expression of interest zones



Annex 2

BRIEFING NOTE

i. GENERAL BACKGROUND

Since September 2009, Morocco has a new strategy of development and competitiveness of the fisheries sector. Developed in accordance with strategic directions of His Majesty King Mohammed VI, HALIEUTIS is aimed to upgrading and modernization of value chain of the fisheries sector and improving its competitiveness and performance.

As one of the 16 major projects of HALIEUTIS strategy, aquaculture is positioned at the sustainability axis as a privileged sector and brought to be a driver of growth and job creation for the fisheries sector.

Indeed, the development of aquaculture contributes in preserving national fishery resources and food security in response to growing demand regarding animal proteins of marine origin.

The Halieutis plan that identified the development of aquaculture as a growth driver of the fishery sector made one of its 16 projects the creation of National Agency for the Development of Aquaculture (ANDA). This agency, established by Law No. 52-09 establishing it (promulgated by Dahir No. 1-10-201 of 18 February 2011), has as main tasks the promotion and development of the aquaculture sector in Morocco by means of:

- implementation of the national plan for developing aquaculture and assessing its effectiveness ;
- participation in the application of government aquaculture policy ;
- proposing specific action plans that apply the directives of the national plan for fisheries;
- promoting aquaculture and development of trade in both domestic and foreign markets.

One of the priority actions of the ANDA was identification of suitable areas for aquaculture development. These areas include the coastal strip between Dakhla Bay and the Cintra Bay, in the Dakhla Oued Eddahab region.

ii. PRESENTATION OF MANAGEMENT PLAN FOR DEVELOPMENT OF AQUACULTURE IN DAKHLA OUED EDDAHAB REGION

I- Issues and objectives

The sustained and sustainable development of Moroccan aquaculture is closely linked to development of an integrated strategy through a concerted effort among partners involved directly or indirectly by access to water and land resources.

It is in this sense that ANDA has adopted an approach based on achieving aquaculture management and development plans at potential areas identified for development of national aquaculture.

These plans aim to organize coexistence of aquaculture with other existing activities in order to propose a plan of potential spaces in harmony with needs and requirements of it.

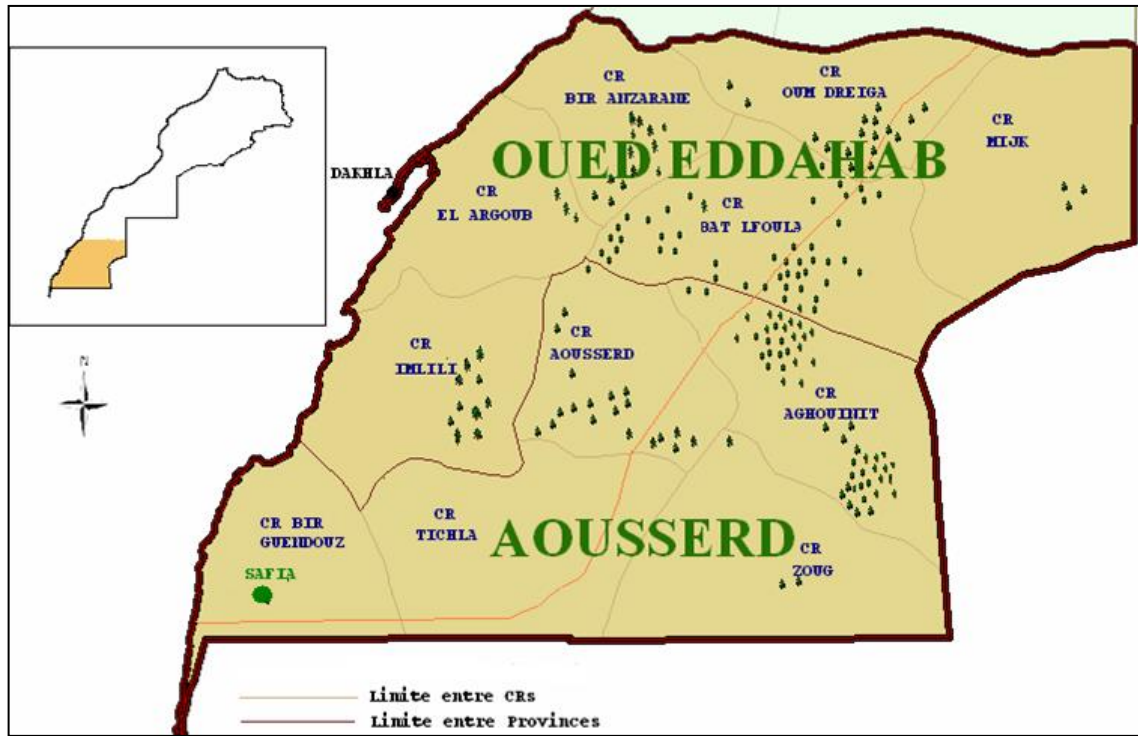
Several regions were identified as potential to set-up aquaculture projects, among it the area between the north of the Dakhla bay and south of the Cintra bay. ANDA realize a management plan to develop aquaculture in this area.

Objectives of this plan are:

- Implementation of an integrated coastal zone planning;
- Harmonious development of aquaculture activities, taking into account local capacities and specificities;
- Responsible resource management;
- Increasing contribution of aquaculture to the economy of the region.

II- Perimeter

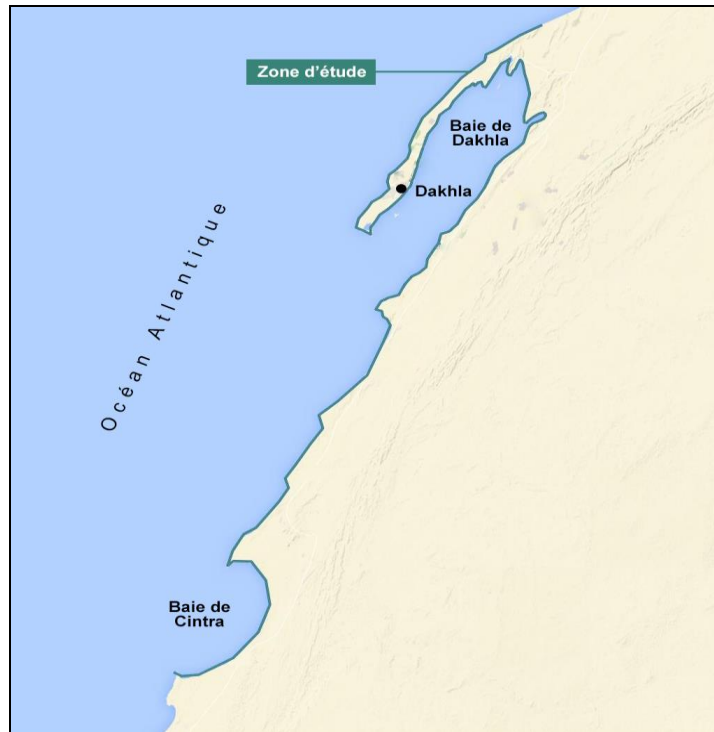
Dakhla Oued Eddahab region is limited in North by Laâyoune-Sakia El Hamra Region, in South and East by Mauritania and to the west by Atlantic Ocean. This region is composed of 13 towns which two are urban. It has a coastline of 667 km and an area of 142,865 km² representing 20% of the country area.



Location of Dakhla Oued Eddahab Region

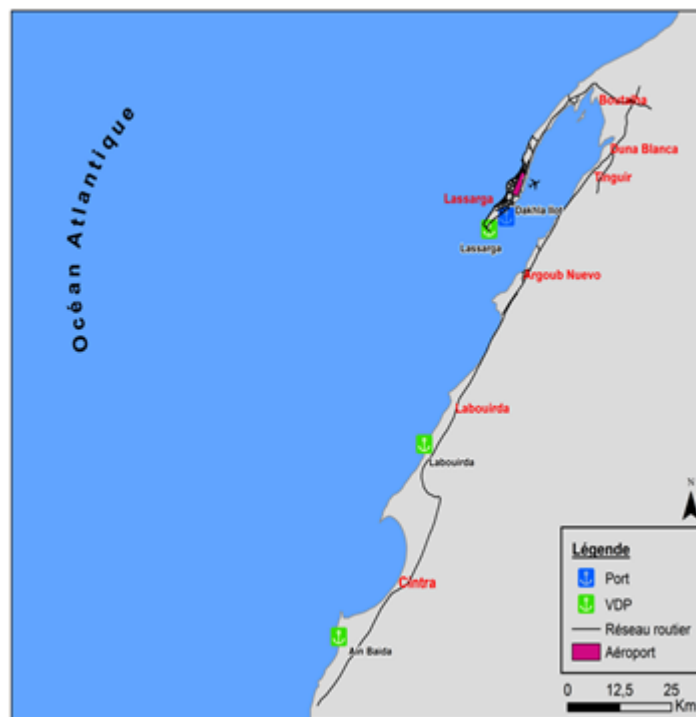
Source : CCIS of Dakhla Oued Eddahab Region

The area which is the subject of this call for expressions of interest is located on the maritime and coastal strip between the north of the Dakhla bay ($23^{\circ} 53'18,06''N$ $15^{\circ} 46'15,15'' O$) and south of the Cintra bay ($22^{\circ} 54'21,26''N$, $16^{\circ} 17'16,50''O$). Extending over a length of 225 km of the province of Oued Ed-Dahab, it is in jurisdiction of Al Argoub and Imlili communities and municipality of Dakhla.



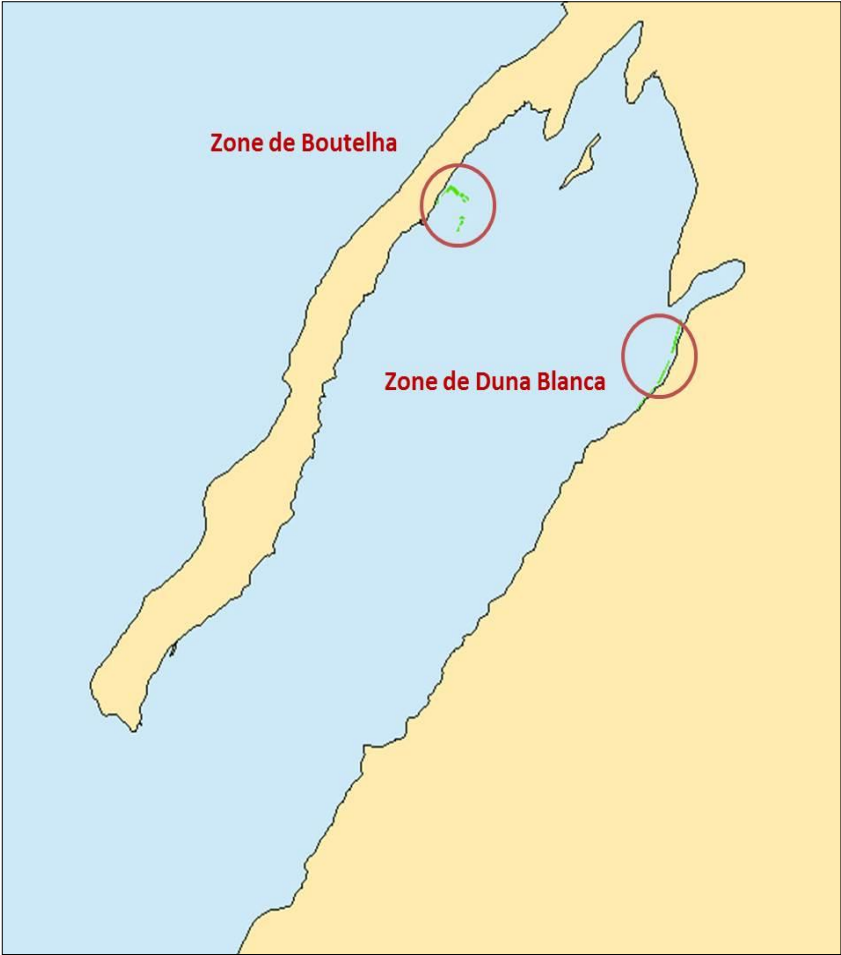
Limitations of the study area

This area includes following facilities: two harbors, three fishing villages, two hospitals, an international airport, two industrial zones and almost 3369 km of roads.



Location of port infrastructure, airport and road in the region

As activities and the economic potential, the area has significant marine fishery resources, tourism potential, intensive agriculture and camelid husbandry activity. The area is identified as having big potential to host aquaculture activities. Currently, aquaculture is limited to shellfish farming (mainly oyster farming) and located primarily on the Dakhla bay, specifically in the sites of Boutalha and Duna Blanca. There are also fishing activity in this area of wild mussels, clams and periwinkle.



Location of active aquaculture farms in the Region

III- IDENTIFYING CRITERIA FOR AREAS OF AQUACULTURE ACTIVITY

Criterion used to select suitable sites for aquaculture concerned principally:

Physical factors influencing the natural environment, excluding living being;

- Physico-chemical factor : temperature and salinity
- Topography and geomorphology of the coastline
- Bathymetry
- Substratum
- Winds and waves
- Currents and tidal range
- Hydrodynamic inside baies
- Suspended matter

Biological factors affecting humans and their behaviour;

- Bacterial contamination
- Predators and parasites
- Primary production
- Toxicalgae

Anthropic factors, including everything connected with the presence of Man.

- Port installations and road networks
- Fishing activities
- Tourism activities
- Existing aquaculture activities

The delimitation of favorable sites to aquaculture considered also:

- The extension of the city;
- Sensitive areas;
- Accessibility (Cliff ...);
- Logistic support infrastructure;
- The technical characteristics of aquaculture projects (size, appropriate farming techniques, type of facility for farming, species ...

IV- Principles governing exploitation of spaces allocated to aquaculture activity

Exploitation of areas identified and planned for aquaculture activity in Dakhla Oued Eddahab Region will be realized through this call for expressions of interest.

This call for expressions of interest will select the best aquaculture projects eligible to use production units (maritime areas) for establishment and operation of aquaculture farms.

Under this Call for Expression of Interest production units will be awarded and operated:

- for finfish farming;
- for seaweed farming ;
- for shellfish farming.

It should be noted that access to marine areas will be awarded within the boundaries of the identified spaces, and in accordance with the development plan for projects showing an interest in innovation and integration and having an important socio-economic impact on the region concerned

Those accepted to participate in this Expression of Interest are natural persons and corporate bodies with an interest in investing in the aquaculture sector, and may present themselves singly, in groups or as cooperatives.

The Call for Expression of Interest will take place in a single phase ending with the selection of the best projects from those submitted in accordance with the rules of selection, and within the limits of the number of production units available.

Annexe 3

Technical description of management plan for aquaculture development in Dakhla Oued Eddahab Region

1- CLIMATIC CONDITIONS

Dakhla Oued Eddahab region is located in geographical subdivision of South Atlantic Morocco and is characterized by a considerable influence of ocean and desert. Effects of upwelling phenomenon on the coast, ocean current of Canary Islands and maritime trade winds and proximity of Sahara Desert give the area environmental and geographical characteristics that determine its development potential.

Peri-arid Saharan climate, with a refreshing influence of ocean on coast, has following characteristics:

- A semiarid temperate climate under effects of cold ocean current of Canaries with large thermal differences between day and night. On coastal areas, average temperatures are around 20°C. The average minimum temperatures range between 8 and 19°C and maximum temperatures between 23 and 28 ° C.
- Thanks to effects of maritime trade winds, climate is milder and thermal intervals and droughts are reduced.
- The rains are insufficient, with less than 50 mm/ year, and large variations from one year to another.
- An annual average humidity ranges between 74 and 90% on the coast, which can decrease up to 20% during periods of Chergui wind (December, January, February and March).

1.1. Air temperature

On the coast, average temperatures are relatively mild; they oscillate between 18 and 23.2 ° C. The hottest period is from July to October and the cool period from December to February. The average minimum temperatures range between 8.2 and 19 ° C and maximum temperatures between 22 and 41.8 ° C. Through the influence of the ocean, very important on the coast, thermal intervals are quite low and are significantly reduced. This influence is slightly offset to the east: the summer heat is not excessive and winter temperatures are quite high; no frost has never been detected. The temperature range is close to 13.3 ° C between the months of October and January.

Average Monthly Temperature (°C) in Dakhla from 01/01/2004 to 31/12/2013

Month	Average Monthly Temperature (°C)
January	18.0
February	17.9
March	19.0
April	19.1
May	19.7
Jun	20.9
July	21.7
Août	22.7
September	23.2
October	22.5
November	21.0
December	18.9

Average insolation per year is 3240 hours (corresponding to 324 days, almost 11 months a year, with 10 hours of sunshine per day).

1.2. Wind

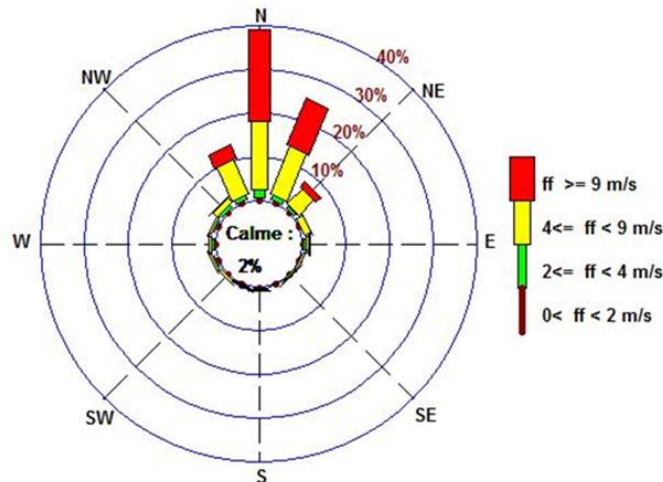
At ground level, Dakhla Oued Eddahab region is subject to prevailing trade winds to northerly northeast (20°), a moderate rate of 2 to 5 m/s and a frequency of 73% even if they can get to be strong. There is also a North component of 20% of cases, with a slightly higher speed of 5 to 8 m / s.

At the coast, frequency and intensity of winds has shaped the acacia trees on a strip of one hundred kilometers. The trees recover their normal position as when we move inward. There are also other winds in the region, including the Chergui, a hot dry wind of Saharan origin.

Specifically, northern sector of the study area which corresponds to Dakhla Bay is characterized by frequent and steady wind, with 81 days of wind in excess of 20 km/h per year. The prevailing winds are continental trade winds from NE that can be associated to ocean trade winds NO, loaded with humidity and cooler. East winds locally in winter. From the Sahara, these dry, hot winds occur when the trade winds are almost nil.

Winds are of medium strength, close to the speed that usually is 25 to 30 km / h. Each year winds above 60 km / h were recorded between 120 and 160 days. The summer period, from June to August is the windiest. Average speed stronger winds oscillating between 72 and 75 km / h.

Winds Rose in Dakhla from 01/01/2004 to 12/31/2013 (Source : MarocMétéo) °



**Distribution of wind depending on its direction and intensity
From 01/01/2004 to 12/31/2013**

Direction] 0 ; 2 [[2 ; 4 [[5 ; 8 [>= 9	Total	Total (%)
N	203	927	7 958	10 764	19 852	39,0
NNE	99	598	5 877	5 904	12 478	24,5
NE	53	477	2 582	744	3 856	7,6
ENE	30	269	735	39	1 073	2,1
E	45	293	456	35	829	1,6
ESE	29	120	222	19	390	0,8
SE	33	111	101	10	255	0,5
SSE	28	85	48	6	167	0,3
S	24	157	192	14	387	0,8
SSW	33	109	176	23	341	0,7
SW	34	159	289	12	494	1,0
WSW	43	237	277	16	573	1,1
W	40	334	341	15	730	1,4
WNW	29	264	269	14	576	1,1
NW	28	334	854	60	1 276	2,5
NNW	46	484	4 375	1 651	6 556	12,9
Total	797	4 958	24 752	19 326	49 833	98,0

Source : Maroc Météo

Maximum Average Monthly Force of the Wind (m / s) in Dakhla from 01/01/2004 to 12/31/2014

Month	Average maximum power of wind (m/s)
January	17
February	18
March	19
April	18
May	19
Jun	19
July	20
Août	20
September	19
October	18
November	16
December	17

Source : Maroc Météo

1.3.- Precipitation and evaporation

Distribution of rains all the year round is very irregular; according to available data of MeteoMaroc corresponding to the weather station in Dakhla, in the last 10 years an average of 30.3 mm was recorded. This average is not significant because it is characterized by an absolute lack of regularity. The analysis of seasonal and monthly variations shows that the rainiest months match those in the fall or late summer. These rains are from polar front and tropical anticyclone.

Monthly mean total precipitation (mm³) in Dakhla from 01/01/2004 to 12/31/2014

Month	Monthly mean total precipitation (mm ³)
January	3,1
February	2,6
March	1,3
April	3,1
May	2,4
Jun	0,6
July	0,1
Août	2,4
September	6,3
October	4,4
November	0,5
December	3,6

Source : Maroc Météo

Annual average of total evaporation in the historical series of the last 10 years is meanwhile to 671 mm³ per year. The following data are collected monthly averages during this period.

Average Monthly Total Evaporation in Dakhla from 01/01/2004 to 12/31/2014

Month	Average Monthly Total Evaporation (mm ³)
January	60
February	55
March	58
April	54
May	59
Jun	55
July	65
Août	55
September	59
October	50
November	50
December	53

Source : Maroc Météo

Cloudiness corresponding to the decimal fraction of the sky covered by clouds is quite high and exceeds 5/10 per year with a maximum of 6 to 7 in the coast. It decreases quickly toward east.

Relative humidity of air all the year is around 72,9%. This humid atmosphere affects frequency and abundance of dew. For example, in the city of Dakhla is recorded dew 33 days per year.

Instead, invasion of maritime air causes appearance of fog on the coast quite frequently, moving towards the interior of the continent before disappearing.

1.4.- Storms

Storms are weather phenomena that are characterized by coexistence of two or more air masses at different temperatures which causes instability with rain, winds, lightning, thunder and sometimes hail, among other phenomena weather. So the scientific point of view is defined as the storm cloud capable of producing an audible thunder, storms are generally referred as violent atmospheric phenomena that are associated with rain, frost, hail, electricity, snow or strong winds on the surface of the earth.

This type of phenomenon is not significant in this region in terms of the strict definition of storms, because it is not accompanied by thunder. The wind associated with atmospheric phenomenon is significant, however.

In this sense, in recent years, about 30 stormy days were recorded in the meteorological station in Dakhla, a figure that is neither significant nor important for the activity under study. Following data are collected by MeteoMaroc provided for this parameter.

Number of days with thunderstorms in Dakhla from 01/01/2004 to 12/31/2014

Month	Number of days with thunderstorms in Dakhla (days)
January	2
February	0
March	2
April	1
May	3
Jun	1
July	1
Août	6
September	9
October	3
November	0
December	2

Source : Maroc Météo

2-GEOMORPHOLOGY OF THE AREA

In geomorphological level, the region and the study area are characterized by gentle slopes formed by plains, plateaus and sebkhas, saline deposits depressions caused by river erosion. Dakhla Bay in the north, Cintra bay in the south and coastline dotted with cliffs, beaches, plains and dune systems in the intermediate zone between the two berries are the most important geographical features, which also characterize seabed in coastal areas.

Zone M1- Dakhla Bay

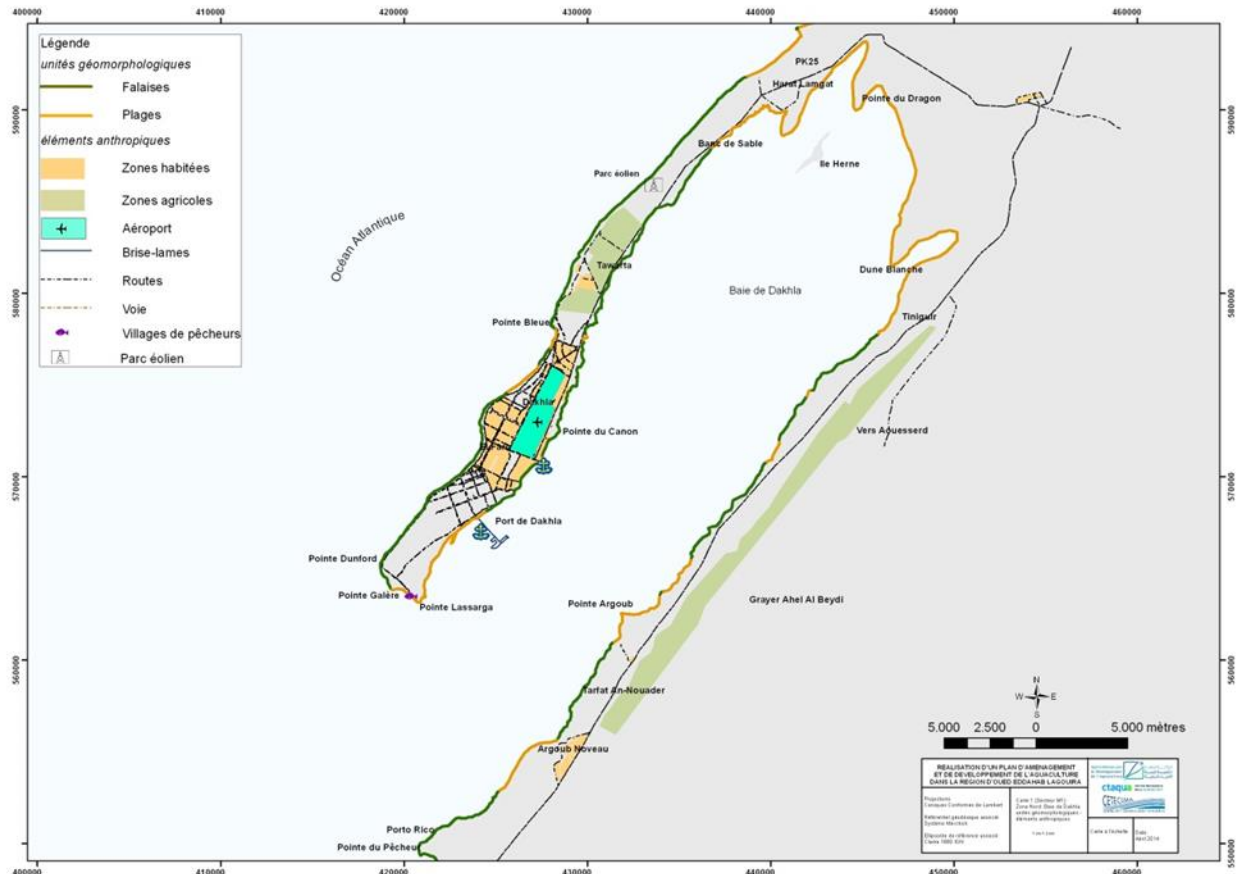
The peninsula of Dakhla, which occupies an area of over 40 km long and 2 to 4.5 km wide, breaks the monotony of the Atlantic coast of the coastal strip. It is bounded by a narrow strip of dunes, with an average height of 5 meters, which protects the bay of heavy seas.

Like the rest of the region, the peninsula of Dakhla is characterized geomorphologically by the domination of a coastline reg dotted with endorheic basins. This is a narrow basin eroded and trained locally by wind erosion, which presents a topographic slope to the east by the superposition of the mosaic sandstone and sand dunes to the west. The region's coastal cliffs plunge into the Atlantic Ocean at an altitude ranging from 2-17 m, while the Bay coast only reached 5 m. These differences between the elevation and topographic slope of the mosaic are the result of differences between power and thickness of different geological layers and the presence or absence of consolidated dunes, little widespread.

Unlike elevations on the slopes of coastal cliffs in the area, the central part of the peninsula has no significant elevation changes, with the exception of some small depressions of 1 to 2 m deep, located in Tawarta 7 km north of Dakhla, and in Zorra, 25 km north of Dakhla.

The Atlantic coast of the peninsula is exposed to heavy seas, ocean waves and drifting to the coast, characterized by the cliffs of the coast dotted with beaches such as Jorf Lahmam. On the side of the bay, small cliffs are limestone outcrops on Miocene sands.

Representation of geomorphological sections of the Zone M1 – Dakhla Bay



All along the inner side, there are peaks and projections on the bay. Only the tip of the Lasarga, at the south-eastern end of the peninsula has a large sandy area of 3 km², almost level with the sea.

Dakhla peninsula is connected to the coastal plain of Aguerguer through a system conformed by a sandy isthmus and coastal sebkhas, arid supralittorales areas in sedimentary deposits, formed mainly by carbonate- evaporites and some siliciclastics, which occupies the lower part of a high salinity depression on the arid shores. Therefore include:

- A sebkha of 3 km², connected to the Atlantic Ocean through a dune of 5 m in width and 2 m in height.
- A rocky massif at an altitude of 40m on its top, a local residue of the coastal plateau of Aguerguer. Isla del Dragón (Dragon Island) is an extension of this rocky massif, accessible on foot at low tide. Seen from the side it looks like a crocodile; that's why it was so named.

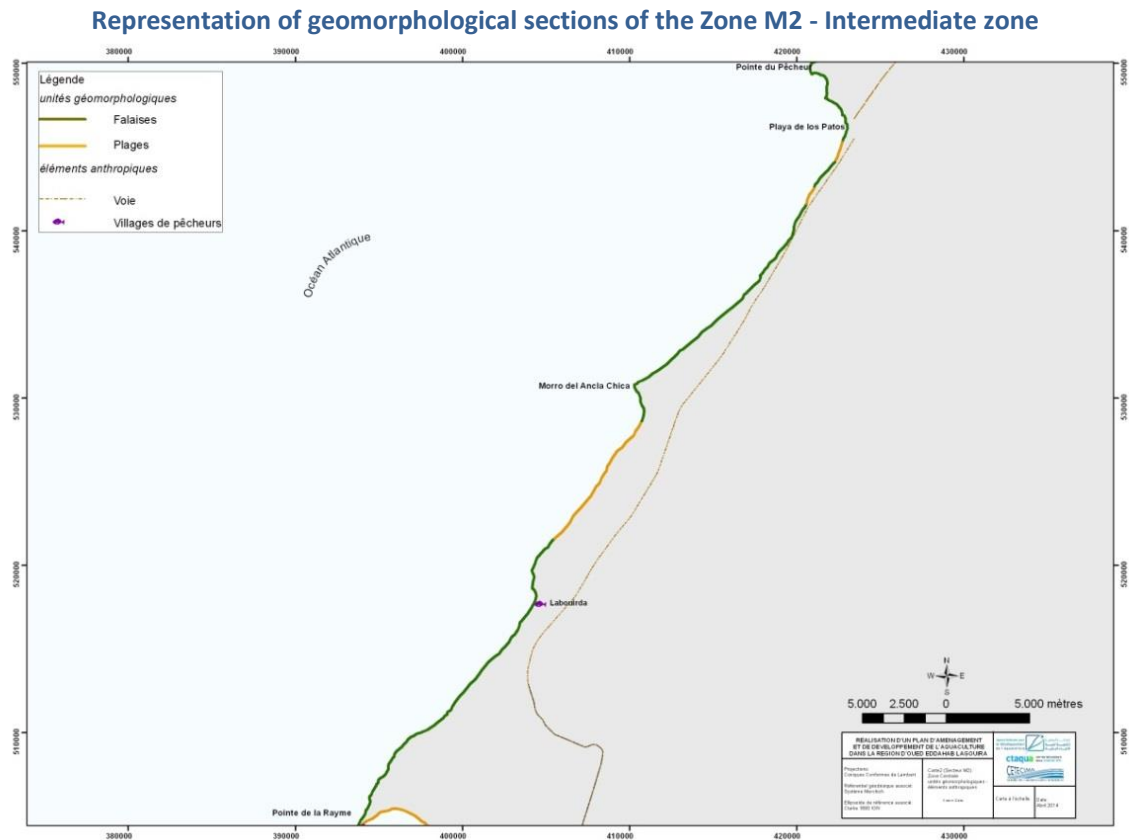
- A second depression, occupied by a sebkha and low-rise sandbar extends along 3 km.

Zone M2 - Intermediate zone

This rocky desert is limited on its Atlantic side by cliffs of 30 to 50 meters high which is constantly crashing waves and on which falls Aguerguer. This coastal plain extends along 600 km of coastline and other less abrupt geomorphological accidents, such as the Bay of Cintra. However, there are sandy coves that form the cliffs, as Koudiat, Puerto Rico, Labouirda, Ain Beida and Lamhiriz. These ranges arise sheltered from waves, protected by rocky headlands that form small bays: Cape Barbas, Punta Negra, Cap Ras Tiskin Cap "Punte Trevor," among others.

Clay limestone reefs usually form in the caps; the coves are protected from prevailing winds of NE and waves NO.

Coastal dune systems and rocky headlands which are derived from differential erosion take turns along the coast in the area between the coast line and cliffs of Aguerguer. This geomorphological conformation is determined by a decline in fault in conjunction with the marine and wind erosion.

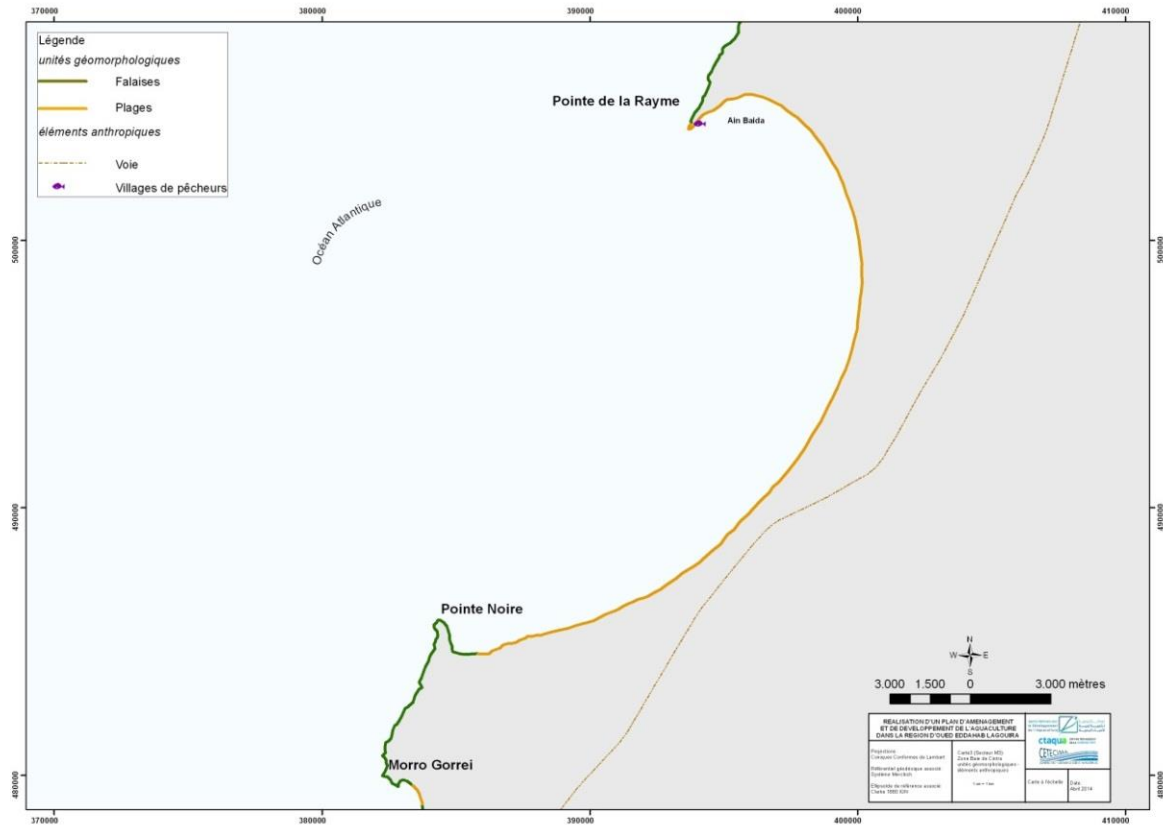


Zone M3 – Cintra bay

The Cintra bay is a cove which is 29 nautical miles from Punta del Pescador, the southern end of the Lagouira bay. This is a rather open bay, of a sandy character, which contains many low-rise dunes, limited by Punta de las Raimas north and Punta Negra south. She is very influenced by the hydrodynamic conditions in the region.

The north end, Punta de las Raimas is a flood sandy peninsula of 2 miles extension to the southwest, ending on sandy rocks and a reef. In turn, the southern end, Punta Negra, is crowned by a sandy hill also surrounded by reefs that extend about 2 miles to the northeast.

Representation of geomorphological sections of Zone M3- Cintra Bay



3- PHYSICAL AND CHEMICAL CHARACTERISTICS OF WATER

3.1. Water temperature

Therefore temperature variations have biological effects that influence growth and reproduction. Pathological problems may occur that interfere with other values and other relevant parameters. All animals having commercial importance in aquaculture are cold-blooded animals. So they depend more on the temperature; the temperature oscillations are directly related to the reproduction and metabolic processes of those animals.

In this sense, there are differences between species of molluscs, crustaceans and fish for their tolerance to high temperatures. The largest allowable limits are wide, although smaller depending on the species, the time of year, physiological status and development. It is therefore very important to establish the permissible limits tolerated with maximums and minimums for each species as well as the heat increases tolerated. Each species has an optimum temperature which has a direct influence on the metabolic activity

which is linked to the oxygen consumption. The reproduction process of most species requires an increase of the concrete temperature. This process has the strictest limit of variation.

Historical data

Temperature distribution in the bay has an oscillation subject to the seasons and the dynamics of the tides. Temperature allows the study of mixtures of water bodies and determines value of saturation of dissolved gases, in particular oxygen.

In this sense, the characterization of the monthly mean water temperatures in the Dakhla bay it shows the following: in the south of the bay, in the area between Lassarga and port, on the one hand and the other main channel, a minimum of 17 ° C in March and a maximum of 19 °C upward in July. This oscillation is due to the thermal front observed in March and present between the port Hoja Lalméra, which shows the separation into two zones, a top-down and another bottom, the temperatures vary between 22 and 19 ° C respectively.

Decrease in depth and dynamics weakening lead to the establishment of a longitudinal gradient across the axis of the bay and another transverse gradient descending E-O at the entrance of the bay, between the centers of Lassarga and Al Argoub.

At the edge of the bay, the evolution of the body of water depends on the topography and morphology of the direction of coastline. The average water temperature of the banks is around 24 °C.

Punctual data:

Hereinafter are shown the water temperature values recorded in situ by use of a multi-parameter sensor. The water temperature fluctuated between 15 °C and 19 °C throughout the study area, according to data recording made during the campaign in February 2014. The average recorded value for this parameter for the entire area was 17.14 °C.

The temperature throughout the water column profiles made very homogeneous. The variations in temperature between the surface and the seabed did not exceed 0.2 °C. The largest thermal amplitude was observed at points located in the outer area of the bay of Dakhla, zone M1. The difference in vertical could reach 0.9 °C.

Zone M1 – Dakhla bay

The points located in the Dakhla bay have the lowest temperature values. This is a consequence of their location, further north or environmental conditions of sample collection days. The rank of temperatures recorded in the Dakhla bay is 1.5 °C between 17.5 and 19 °C.

Zone M2 – Intermediate zone

The points obtained in the area between Puerto Rico and north of the Cintra bay showed values between 16.5 and 18 °C. In addition, the points had average values between the two baies. The temperature of the area included in this study is lower north and upper south.

Zone M3 – Cintra bay

The points in the Cintra Bay are those who presented the highest temperatures. The bay is very shallow and a sheltered zone, less exposed to the swell and local currents, which promotes increase of the water temperature. The rank of temperatures recorded in the Cintra bay is 1.4 °C and from 16 and 17.4 °C.

3.2. Salinity

Salinity represents proportion of salt dissolved in the sea water. It is measured in per thousand (‰) or grams per kilogram (PSU). This is an important physical gradient to characterize organic flow and identify masses of water of different origins and their evolution.

The salinity of the surface waters of the bay on the continental shelf varies at most between a minimum of 36 psu (36.2 in winter and 36.4 ‰ in summer) and a maximum of 39 psu recorded declining. Regardless of the season, salinities are organized according to an increasing gradient of the ocean to the bottom bay (bay any).

In addition, there is a transverse gradient between the eastern part (desalination) and west portion (sursalement); this gradient can be explained as follows:

- Above the bay, the depth is low. Therefore, the thin layer of water is heated and, therefore, increasing salinity;
- Downstream, the area is deeper and under the direct influence of Atlantic waters. Thus occurs a dilution of water and a decrease in the salinity.

Distribution of salinity clarifies dynamism of waters in the bay. The ocean water enters the bay mainly by middle region of basin, which corresponds to the channel area.

At the forefront of Al Argoub, water input motions are moving eastwards and in particular towards the eastern part of the basin. The movements are amortized after Hoja Lalmera and from this point the salt gradient away, salinity of the medium increases and it becomes uniform throughout the northern area.

At the western part, the hypersaline waters fluent along the west bank, before he rounded the northern basin by a large rotation. They eventually reach the city of Dakhla with a maximum salinity of 40 psu.

This vast rotating water in the bottom of the bay explains the presence of a different salinity of water lens (37-38 psu) in the center of the basin.

Ponctuel data

Salinity is the weight in grams, vacuum, solid material obtained from 1 kg of sea water after evaporation and heating to 480 ° C to constant weight. The salinity in the marine environment is normally quite constant parameter. It may nevertheless suffer from oscillations in specific areas and seasons. Normal value in sea water is 35 g / kg, i.e. 35 parts per thousand. This relationship is empirically established from many experiments (Maurin, 1994).

Generally, farming species are euryhaline species, i.e. they can withstand considerable fluctuations in salinity. However, sudden changes can negatively affect them. In general we can say that the salinity influences on diet and consequently on the growth of organisms. Depending on the species, there are optimum ranges for their culture and survival. The sudden change in salinity values is usually more harmful than a point limit. So there are freshwater species which may be high in salted water, if the operation occurs by means of gradual and very controlled change of salinity and suitable technique.

Analysis of the coefficient of variation of salinity in the environment takes account of the proportion between the different values for this variable. Thus, it is possible to establish an approximate calculation of the fluctuations which occur in these values.

Mean values obtained in the study area appear stable: the minimum corresponds to 36 psu and the maximum to 39 psu, with a decreasing gradient between the ocean and the bay. So it seems that maintenance of stability and the lack of decline in values are considered valid for marine aquaculture.

3.3. Dissolved Oxygen

The dissolved oxygen content plays an important role in biological phenomena of aquatic ecosystems.

The dissolved oxygen concentration varies with a determined number of physical, chemical and biological properties:

- winds, currents, temperatures;
- process of photo-oxidation, chemical oxidation reactions;
- importance of phytoplankton populations, phytobenthic populations, bacterial respiration and degradation of organic matter, etc.

This section presents the values of oxygen dissolved in seawater which have been registered in situ with a multiparametric probe. The results of the dissolved oxygen are shown below in mg / l.

These values correspond to measurements made during the campaign in February 2014. In general, for the whole study area, dissolved oxygen was between 89% and 115% (between 6.82 mg / L and 8.66 mg / l), and the mean value of this parameter was 97.48% (7.59 mg / l).

Zone M1 – Dakhla bay

The waters of the Oued Eddahab Bay are well oxygenated whatever the season, both at the surface and depth (5 to 9 mg / l):

- On the high seas, strong saturation values of dissolved oxygen are present on the surface in the middle of the bay, with a maximum located between the tip and Hoja Lalmera Al Argoub.
- Surface water have a distinct gradient from the south descending to the north and the ocean waters are the most oxygenated.
- Bottom water saturation values reach 150% in some locations, such as the region of Al Argoub and low sandy coast between the island of Herne and Boutalha.

The distribution of oxygen saturation in the bottom waters and surface highlight the increased saturation until the middle of the bay, and then decreased to the coast.

The waters along the west bank have higher oxygen levels. This confirms the movement of water within the bay evidenced by the distribution of the salinity. Indeed, the bottom waters of the bay were enriched of oxygen throughout their circulation. In the vast areas between tides, colonized by cyanobacteria mats, well-oxygenated waters flow towards the ocean all along the western shore.

This is also good oxygenation due to the strong currents of the southern part of the bay where strong interaction with the ocean take place, as well as winds that constantly agitate the surface of surface water.

In all sampling points in the area M1, Dakhla bay, we recorded the dissolved oxygen profiles in depth. These profiles are presented below:

Regarding saturation and dissolved oxygen concentration, the points located in the Dakhla bay generally have the following distribution: the innermost area and the northernmost Dakhla bay has the lowest oxygen dissolved values, ranging from 86 to 100% and from 6.9 to 7.8 mg / l, the southern area of the Dakhla bay has intermediate values ranging from 94 to 107% and from 7.3 to 8.4 mg / l, and the outer area of the bay, i.e. the points Q and R, has profiles which decrease appreciably increases with depth, the surface values are close to 95% or 7, 3 mg / l and towards values approaching 90% or 7 mg / l.

Zone M3 – Cintra bay

Between Puerto Rico and north of the Cintra bay, oxygen saturation is between 97 and 108% and the concentration between 7.3 and 8.6 mg / l. The highest values correspond to point B, the farther from the coast. This is normal and corresponds to the assumption that more the temperature is low and more the salinity is low, the more the dissolved oxygen concentration is high.

As well as temperature and salinity, dissolved oxygen has a greater homogeneity throughout the water column for the profiles realized. The variations between the surface and the seabed will not generally exceed 10% and 0.4 mg / l.

It should be noted that a variable distribution of dissolved oxygen having minima usually indicates the presence of outcrop and in surface water, the dissolved oxygen concentration tends to be in equilibrium with atmospheric oxygen and varies between 1.0 mg / l and 8.5 mg / l. Also, be aware that an excess of oxygen in the water can be just as harmful as its absence, even if the maximum concentration can occasionally be exceeded, as this leads to a supersaturated state in areas with low temperatures or areas characterized by intense photosynthetic activity.

3.4. Chlorophyll A

Chlorophyll A is found in the algae, as well as in all organisms that perform photosynthesis. This green pigment is an indicator of primary productivity because it is the nutritional component of phytoplankton, the main nutritional resource for marine and fisheries.

A chlorophyll A concentration reflects the abundance of primary producers and thus provides a measure of phytoplankton biomass. Its value is used as an index of the health of the natural marine system, but also as an estimator of phytoplankton biomass, which is very strongly linked to the production of bivalve mollusks.

This section presents the values obtained with a multiparametric probe used in determining the chlorophyll setting using an optical sensor, which measures the fluorescence radiated by the sample at all times.

The average value of chlorophyll A obtained for the study area was 4.5 µg / l and maximum values can reach 13.1 µg / l.

Zone M1 – Dakhla bay

Chlorophyll A samples taken from Dakhla Bay present in trend the following distribution: the innermost area and the northernmost Dakhla bay has very fluctuating values between 0 and 5 µg / l (these fluctuations tend to reduce surface and increase slightly with depth, but are present in all profiles), the southern area of the Dakhla bay has intermediate values between 5 and 10 µg / l and the outer area of the Bay, i.e. the points Q and R, has profiles ranging from 1 to 10 µg / l.

Between Puerto Rico and north of the Cintra bay, chlorophyll A recorded values vary between 0 and 12 µg / l. Again the highest values are observed correspond to point B farthest from the coast, and point with the lowest temperature, it is sometimes linked to an outcrop.

Zone M3 – Cintra bay

In the Cintra bay, with the exception of point known as Cintra, all sampling points are found in the intertidal zone. Chlorophyll A records are ad hoc and do not exhibit depth profiles.

At points in the Cintra bay, chlorophyll A concentrations are within the same ranges of values than those obtained in the M1 and M2 areas, respectively in the Dakhla bay in the intermediate zone. These values range from 0 to 9.3 µg / l.

3.5. Turbidity (Suspended Solids)

Zone M1 – Dakhla bay

The turbidity profiles obtained in the Dakhla bay present in trend the next distribution. In the outer zone, surface values located around 5 NTU, and then increases as one approaches the bottom. Samples located south of the Dakhla bay have values which also tend toward 5 NTU surface and increase with depth to about 10 NTU at the bottom.

Zone M2 – Intermediate zone

Between Puerto Rico and north of the Cintra bay, turbidity values recorded vary between 0 and 10 NTU, point B with the lowest turbidity due to its remoteness from the coast.

Zone M3 – Cintra bay

Values tend in general between 5 and 10 NTU. Generally, the coast exhibits elevated levels of turbidity. This is common in shallow, sandy areas with a significant swell. Between the water transparency and turbidity

measurements, there are relationships to establish approximations such as: a transparency of 25 to 35 cm corresponding to a turbidity of about 25 NTU, a transparency of more than 60 cm corresponds to a turbidity of about 10 NTU and a transparency of about 5 cm corresponding to a turbidity of 200 to 300 NTU.

3.6. Nutrients

Molecular nitrogen is not very soluble in water. Its solubility is equal to almost half of the solubility of oxygen. The amount of fixed nitrogen in the form of nitrates to the ocean surface by the action of light energy was estimated to 175 kg per square kilometer per year. Well oxygenated water generally contains only traces of nitrites and ammonium salts. It is rare to find in the sea excess of nitrates, except in places with high organic pollution.

For ammonia, the values obtained in the study area ranged from 0.011 mg / l and 0.110 mg / l. Their average is 0.028 mg / l.

The concentrations of nitrites are relatively homogeneous throughout the area. This gave a maximum value of 0.026 mg / l and a minimum value of 0.001 mg / l. The average value of this parameter is 0.01 mg / l.

For phosphates setting the minimum value obtained in the study area is 0.006 mg / L and the maximum value of 0.082 mg / l. The resulting average of all the calculated values amounted to 0.209 mg / l.

Most samples throughout the study area showed nitrate concentrations beneath the equipment detection limit used in the laboratory. This is the case of all the samples corresponding to the areas M2 (intermediate zone) and M3 (Cintra Bay). Among the values located above the detection limit, the maximum recorded value reached 0.460 mg / l.

Zone M1 – Dakhla bay

For ammonium, the values obtained in the area M1 vary between 0.011 mg / l and 0.11 mg / l. Their average is 0.026 mg / l. The values were fairly uniform and the only point for which was obtained slightly higher values to others was the point i. It was also observed that the bottom values recorded were slightly higher than those obtained on the surface.

The maximum value of the nitrite concentration obtained after analysis of samples taken in February 2014 reached 0.026 mg / l. The average value is 0.012 mg / l and the minimum of 0.001 mg / l. The highest values were obtained at the point R (average value of 0.026 mg / L for the three replicas taken at this point), located in the outer region of the bay, and point b (average value of 0.024 mg / l for the sample surface) located within the bay. On the other hand, the lowest values were obtained in the outer region of the bay.

Although we do not observe significant differences in the behavior of this parameter along the study area in the Dakhla bay, there was obtained slightly higher values than in the remaining region.

For phosphates parameter values have a maximum of 0.082 mg / l, a minimum of 0.001 mg / l and an average of 0.027 mg / l. On the other hand, the lowest values correspond to the mouth of the Dakhla bay. In general, it was also observed that, for the same point, the bottom values were generally lower than those recorded in surface.

In Dakhla Bay (area M1), unlike other areas, the samples do not all have nitrate concentrations located under the detection limit. Samples from the outer region of the opening and those taken at the mouth of the bay have values ranging between 0.22 mg / L and 0.46 mg / l.

Zone M2 – Intermediate zone

In the area M2, intermediate area, were recorded ammonium in concentrations of between 0.011 mg / l and 0.110 mg / l. The values obtained are fairly homogeneous throughout the area. We identified only a small peak of this value at point F (surface sample). The average values obtained amounted to 0.033 mg / l.

The maximum value recorded in the area M2 for the parameter nitrite reached 0.013 mg / l and corresponds to the surface of sample at point D. The mean value for the six points is 0.008 mg / l and the minimum of 0.002 mg / l.

For phosphates parameter, the values obtained have a maximum of 0.06 mg / l, a minimum of 0.006 mg / l and an average of 0.029 mg / l. The setting values are higher at the points E, D and F (surface sample), while the lowest correspond to the south of the area M2, the points A (surface sample) and B (surface sample and bottom sample).

Zone M3 – baie de Cintra

For ammonium parameter, it was recorded in the area M3 (zone of Cintra) values ranging between 0.013 mg / l and 0.056 mg / l. The mean value obtained for the total sample amounts to 0.025 mg / l.

The values are fairly distributed heterogeneously along Cintra bay; it was not possible to establish a relationship between the values recorded for the parameter ammonium and its geographic distribution.

Thus, the highest values were obtained at the site of Ain al Bayda and f and N points in the surface samples (0.056 mg / l, 0.035 mg / l and 0.035 mg / l respectively). The lowest values correspond to the surface samples taken at points X and d (0.013 mg / l and 0.014 mg / l).

In the area M3, Cintra bay, the maximum value for the parameter nitrite reached 0.020 mg / l, and corresponds to point referred to as Cintra, located within the bay. At this point, both the surface sample e as the sample from the bottom presents the highest concentrations of nitrates in the area.

Nevertheless, the lowest value was recorded on the site of Ayn al Bayda, located outside of the bay. At this point, the nitrite concentration is 0.001 mg / l. After this point, the points that have given the lowest concentrations of nitrates are N and P, both located in the Cintra bay, its ends (0.003 mg / l and 0.004 mg / l, respectively)

The average value of the estimated nitrite concentration for the whole area M3 is 0.010 mg / l.

For phosphates parameter, values have a maximum of 0,065 mg / l, a minimum of 0.01 mg / l and an average of 0.03 mg / l. In the northern area of Cintra are the points whose parameter values of phosphates are highest, particularly e and N points (surface sample). The lowest values correspond to the center and south of the Cintra bay, specifically the points P and d (surface sample).

As in the case of the area M2, nitrate concentrations were below the detection limit.

4- Oceanographic Conditions

Moroccan Atlantic coast is under the influence of coastal upwelling (English term for the rise of deep cold waters rich in nutrients to the surface of the ocean). When these waters are brought to the surface, nutrients feed phytoplankton which also uses the dissolved carbon dioxide for photosynthesis.

The entire coast of Dakhla to Cabo Verde is subject to the influence of the phenomenon of upwelling. This outcrop is generated by the NE trade winds that push westward surface water (the theoretical direction of the surface current is 45° in relation to the direction of the wind deflected to the right in the northern hemisphere). The vacuum created on the surface layer will create a compensation current bottom to the lower surface at the coast cooler and richer in nutrients.

4.1. Bathymetry

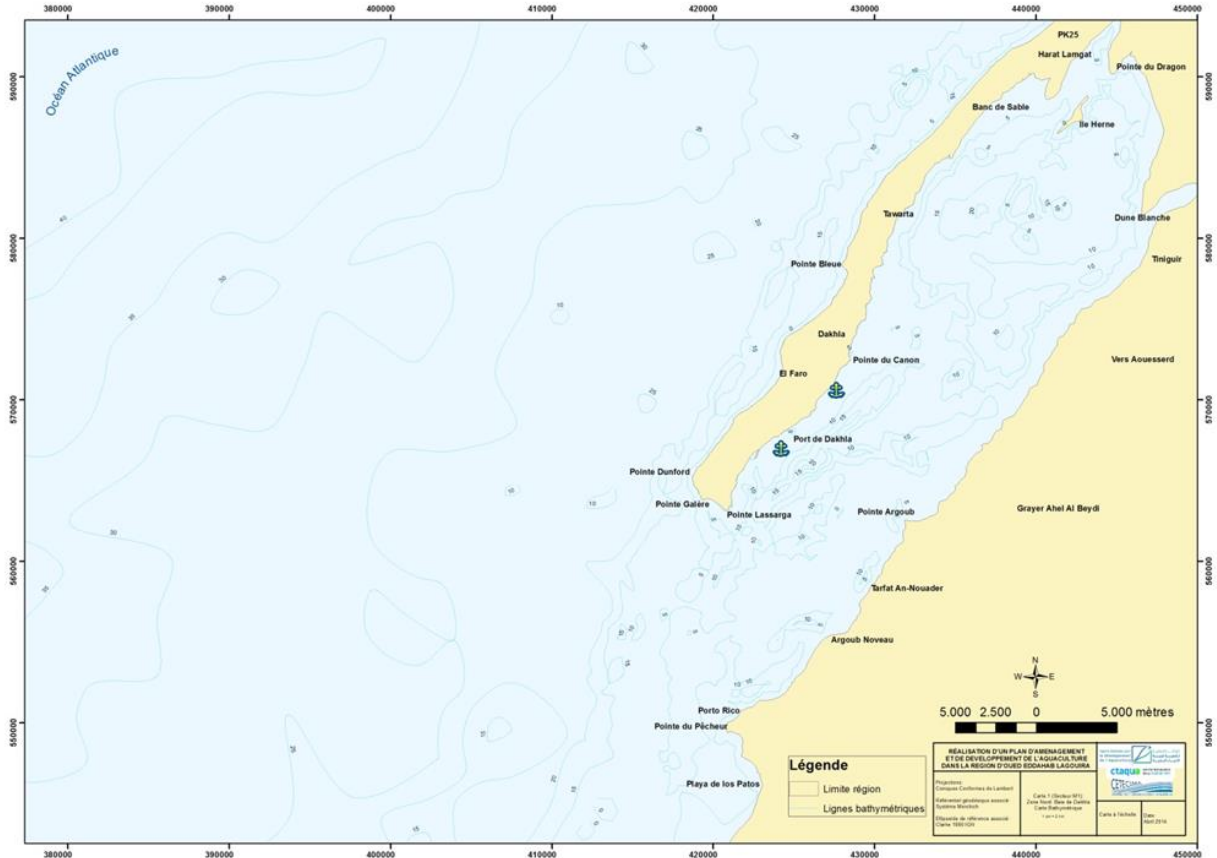
Zone M1 – Dakhla bay

Bathymetry of the bay is low, it varies between 0 and 20 m. The greatest depths are located at the port access channel and in the area included between Boutalha and Hoja Lalmera.

The bathymetry of the Oued Eddahab Bay consists of two main areas that should be distinguished:

- The southern part of the bay (southwest area) contains a set of channels that follow the general direction of the bay.
- The northern part of the bay (northeastern region) is a space having a fairly regular morphology. Bathymetry regularly increases the shores toward the center of the bay.

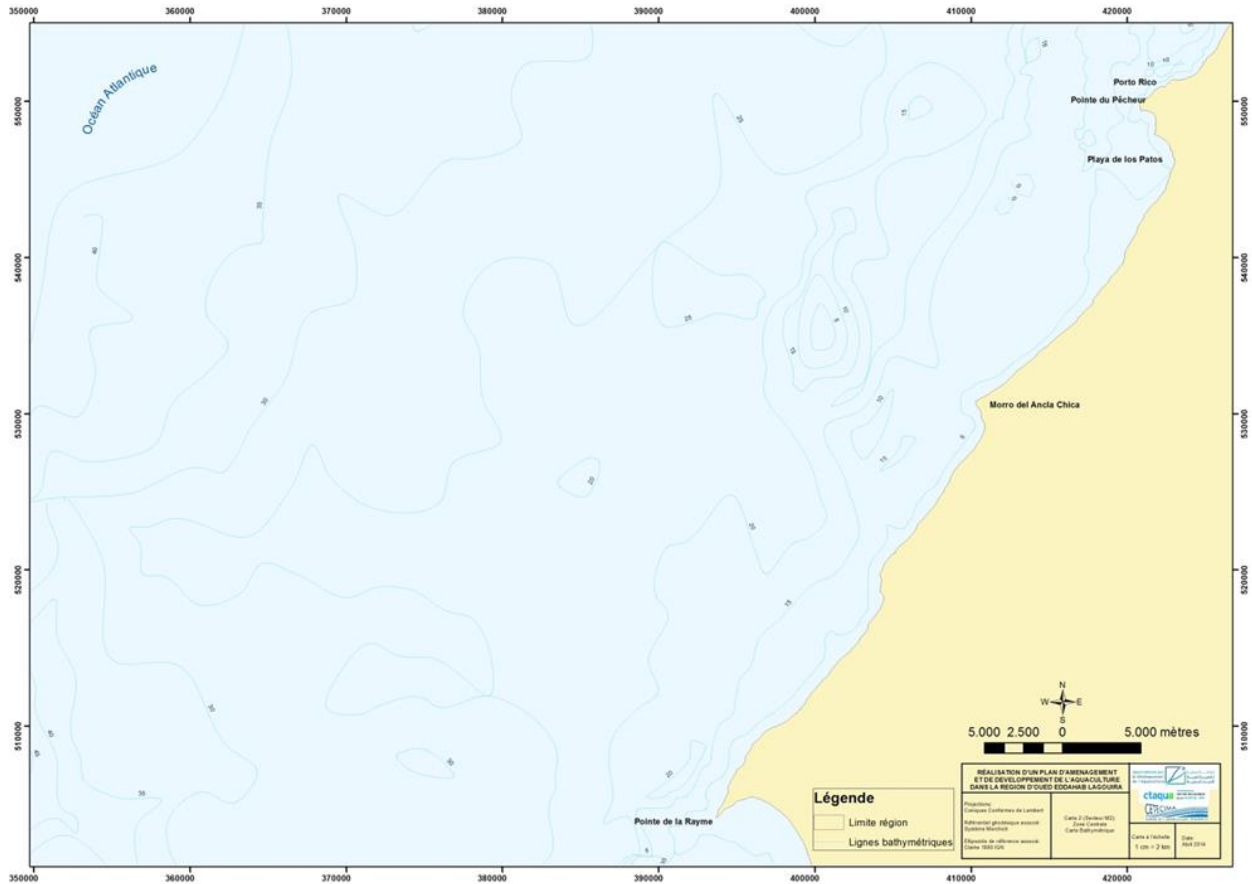
Bathymetry of Dakhla bay



Zone M2 – Intermediate zone

The bathymetry of the intermediate zone between the two bays is characterized as follows: Southbound after Punta del Pescador, the platform is shrinking. Its levels reach 10 meters and shorten in the horizontal, with minimum values from 0.5 km only in high sea, height of Morro Ancla Chica.

Bathymetry of intermediate zone

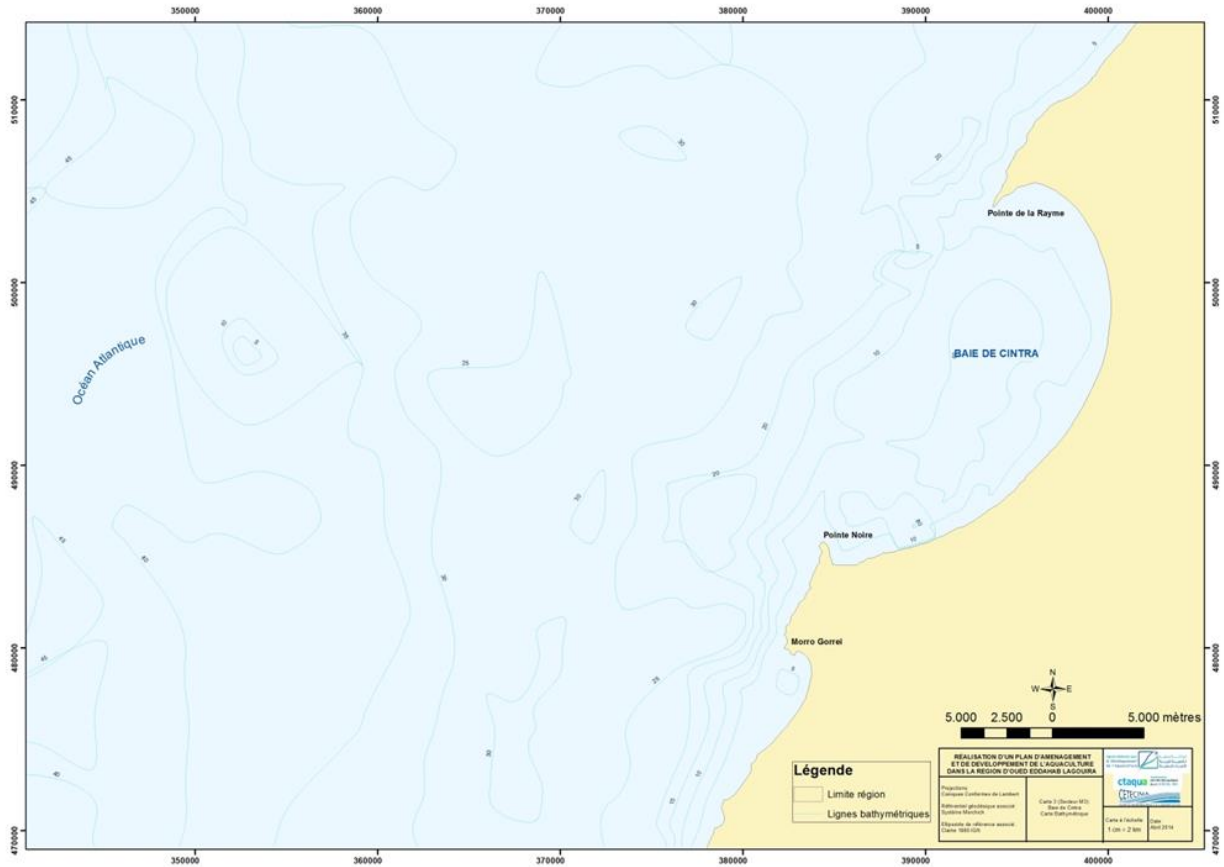


Zone M3 – Baie of Cintra

The area of the Cintra bay has different features concerning the bathymetry:

- A wide platform under 6 meters deep on the coast zone of the northern arc and the area near Punta de Las Raimas runs along the entrance to the bay from the sea by drawing a line to Punta Negra, the extreme south of the bay, which is almost more than half of the distance. Therefore, there are two channels of navigation and access to the bay only in the south zone and the second to the north.
- Average depth of the central part of the bay is 10 meters.

Bathymetry of Cintra bay



Source : Instituto Hidrográfico Español.

4.2. Swell

The swell has the same characteristics as the wind: regularity throughout all seasons. These are waves of local or distant origin of moderate amplitude. The dominant direction of the swell in long fall within the N350 to N040 sector (over 70% of the swell).

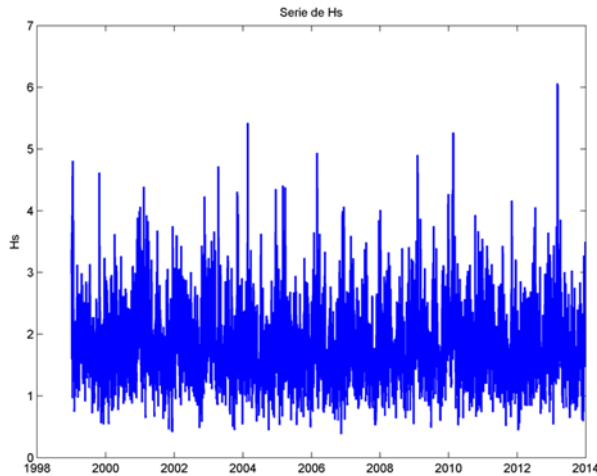
Wave propagates towards the coast. During the propagation, the waves are distorted because of the effect of the bottom. The swell is the primary phenomenon responsible for the evolution of the coastline; therefore it is important to identify these changes. For this, numerical models called "vague plan" are being executed.

This section collects the study of waves in the indefinite depths features of the area between the Dakhla bay and south of the Cintra bay.

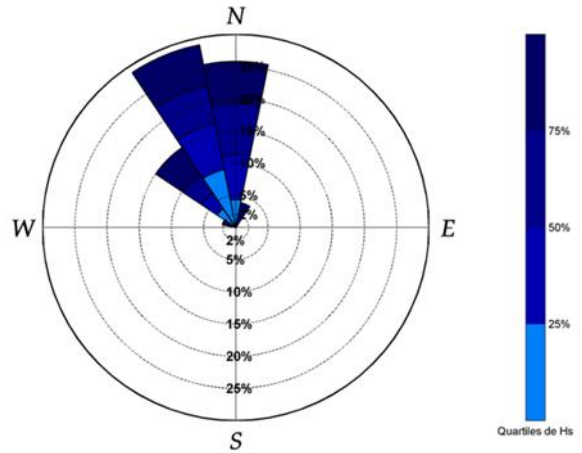
This study includes the characterization of the average system of the swell (defined by the static distribution of various sea states) and the characterization of extreme events, which occur infrequently during the year, but because of their magnitude and their consequences are important, because they can cause structural damage and long-term changes on the line of the coast.

The study focuses on the analysis of the data set schedules 15 years (1999-2013) swell acquired by the Instituto de Hidráulica de Cantabria (Cantabria Institute of Hydraulics, hereinafter IH Cantabria), of Spain. We detail later series data used in detail.

Time series of significant wave height in undefined deep water



Significant wave height in undefined deep water



Source : IH Cantabria.

Tableau : Basic statistics of the significant wave height in undefined deep water

direcciones(°)	prob.direccion	Hs _{50%}	Hs _{90%}	Hs _{99%}	Hs ₁₂
N	0.2577	1.7397	2.4615	3.1254	3.4944
NNE	0.0391	1.7741	2.5620	3.1937	3.6732
NE	0.0028	1.4600	1.8700	2.0600	2.0998
ENE	0.0007	1.2500	1.8140	2.0018	2.0100
E	0.0001	1.0700	1.1160	1.1200	1.1200
ESE	0.0001	1.1300	1.1500	1.1500	1.1500
SE	0.0000	1.4800	1.6500	1.6500	1.6500
SSE	0.0000	1.3300	1.3300	1.3300	1.3300
S	0.0000	1.3200	1.3200	1.3200	1.3200
SSW	0.0000	1.3200	1.3200	1.3200	1.3200
SW	0.0001	1.9000	1.9690	1.9700	1.9700
WSW	0.0003	1.4400	2.5120	2.9300	2.9300
W	0.0020	1.3600	3.0150	4.7530	4.8800
WNW	0.0211	1.9855	3.2289	5.1870	5.4219
NW	0.1493	1.7969	2.9159	4.0382	4.9355
NNW	0.2891	1.5698	2.5095	3.5513	4.4969

Source : IH Cantabria.

Figures above that refer to the significant wave height offer the following series of results:

The distribution function of the significant wave height shows that quartile of 75% corresponds to a height of 2 meters. The probability that a wave has a height lower or equal to 2 m is 0.75 or, in other words, the frequency of occurrence corresponds to 75%.

The frequency histogram shows that: most of the recorded data is in a row of significant wave heights between 1.2 and 2.1 meters. All heights exceed 6.5% of the frequency of occurrence, corresponding on the whole to more than 50%.

The time series includes three events that exceed 5 meters wave height, an event which exceeds 6 meters significant wave height.

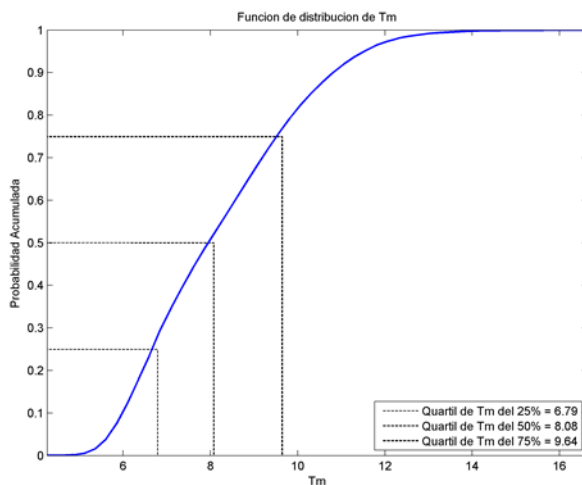
The swell rose shows that the swells from the north-northwest and north are those presenting a higher frequency. Of these, those in the north-north-west are those that represent more than 25%.

Table of basic statistics digitally demonstrates what we mentioned above. The probability of frequency of the north-north-west direction is 28.9% and HS12 of 4.49 meters. The probability of frequency of the north direction is 25% and HS12 of 3.49 meters, while the frequency of the northwest is 15% and HS12 4.9 meters.

Average wave period in deep water

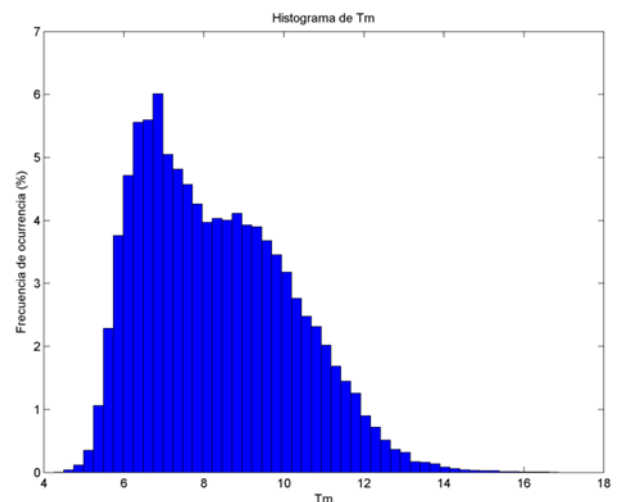
As for the characterization of the significant wave height, we described the average wave period from Figures extracted with Carol program. The figures are presented below:

Distribution function of the average wave period in the undefined deep

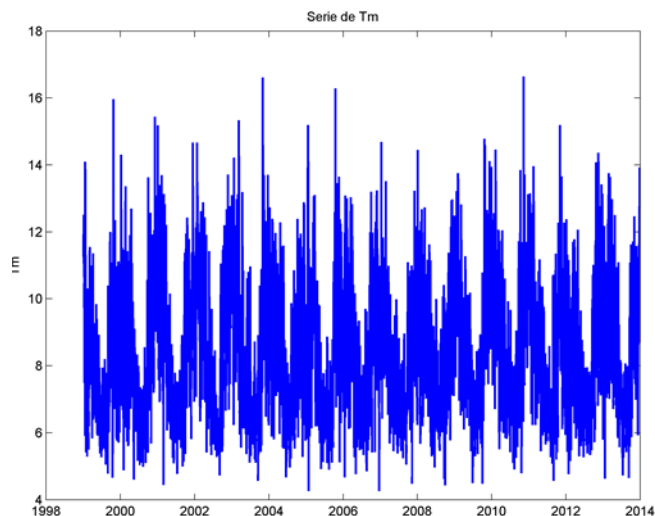


waters

Histogram of the average wave period in the undefined deep waters



Time series of the average wave period in the undefined deep waters



Source : IH Cantabria.

Basic statistics of the average wave period in the undefined deep waters

direcciones(°)	prob.direccion	Tm _{50%}	Tm _{90%}	Tm _{99%}	Tm ₁₂
N	0.2577	6.6100	7.8800	9.1400	9.9508
NNE	0.0391	6.3100	7.2500	8.0500	8.7738
NE	0.0028	6.3200	6.8700	7.4278	7.6978
ENE	0.0007	5.8100	6.8000	8.6401	8.8000
E	0.0001	6.3100	7.9780	8.0500	8.0500
ESE	0.0001	6.3300	7.0040	7.0600	7.0600
SE	0.0000	6.9200	7.6200	7.6200	7.6200
SSE	0.0000	7.9700	7.9700	7.9700	7.9700
S	0.0000	8.1000	8.1000	8.1000	8.1000
SSW	0.0000	8.2600	8.2600	8.2600	8.2600
SW	0.0001	7.3700	7.6410	8.4300	8.4300
WSW	0.0003	8.0200	8.2700	8.6200	8.6200
W	0.0020	8.5950	10.5900	11.7290	11.8000
WNW	0.0211	9.9000	11.5800	13.2780	13.9271
NW	0.1493	10.2800	12.0900	13.8900	15.2022
NNW	0.2891	9.2500	11.3800	13.3400	14.6884

Source : IH Cantabria.

Figures and tables above relate to the average wave period, collect the following results:

The distribution function of the average period demonstrates that the quartile of 75% corresponds to a period of 9.64 seconds. The probability that a wave is therefore less than or equal to 9.64 seconds period is 0.75 or, in other words, the frequency of occurrence is 75%.

The frequency histogram shows that: most of the data recorded on the wave period are in a row between 6 and 12 seconds. All these heights exceed 3% of the frequency of occurrence, corresponding on the whole to nearly 70%. Roughly half of the probability of occurrence is in the rank between 6 and 10 seconds.

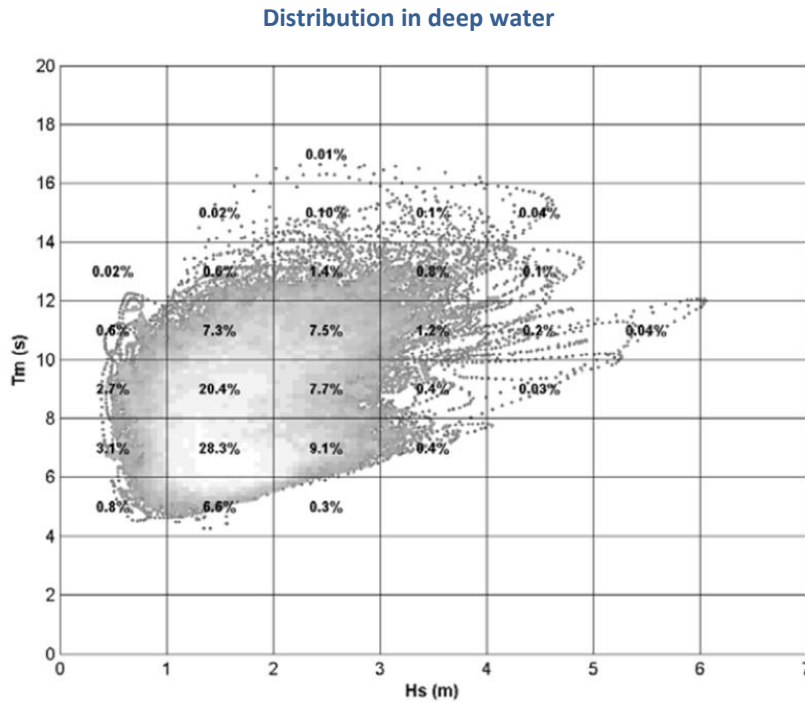
The time series includes 21 events that exceed 14 seconds swell period, including 3 events beyond the 16 seconds period.

The statistics table on the south-southwesterly direction frequency probability of 28.9% and of a TM12 14.6 seconds. The frequency of the north direction is 25% with a TM12 of 9.95 seconds and a northwesterly direction at a frequency of 15% and a Tm12 of 15.2 seconds.

Distribution of wave height (Hs) and average period (Tm)

To assess the state of the sea, you have to find the correlation between wave height and average period associated with this height. We must therefore establish the representation of the joint distribution of two variables.

Figure below shows the joint distribution of the significant wave height and mean period..



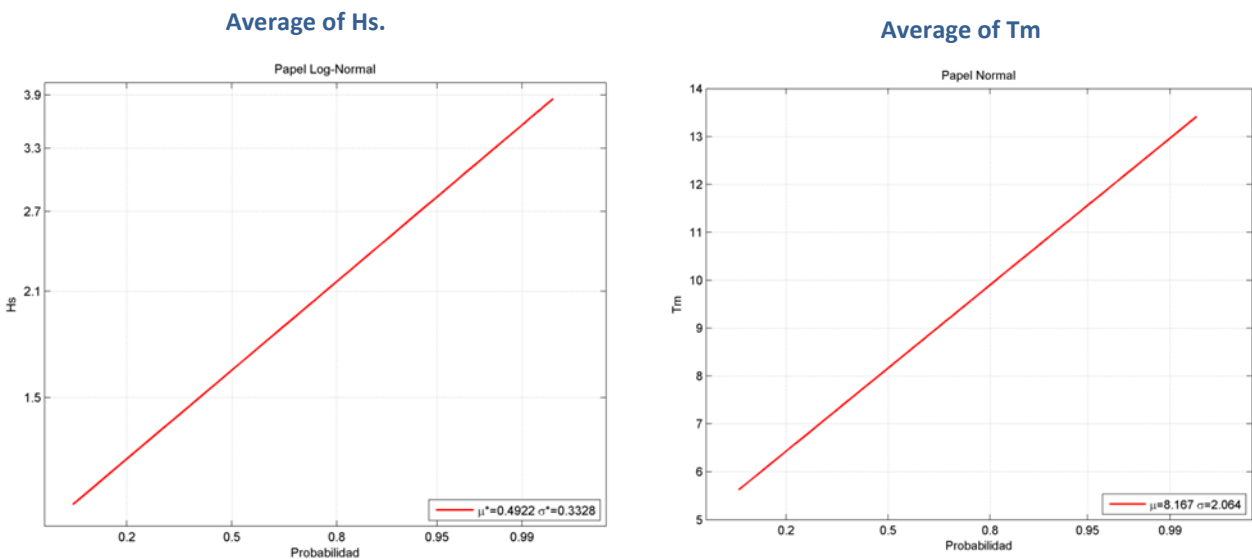
Source : IH Cantabria.

Medium system

Any characterization of waves described so far is part of the study on the systems of the swell.

The average system is the statistical distribution of the value of a maritime setting for a specified period. The average system of the waves is associated with the fulfillment of the criteria of the study of sediment transport.

Figures below represent the long term distribution to the significant wave height and the average period, respectively.



(Source : IH Cantabria).

4.3. Tides

In the region of Dakhla, the tide is semi-diurnal and its average level is + 1.30 m above chart datum. The table below shows the levels of the tides in the bay:

	Équinoxe (m)		Average of spring tide (m)	Average of neap tide (m)
	Spring	Autumn		
High tide	+ 2.40	+2.60	+2.30	+1.70
Low tide	-0.20	+0.20	+0.30	+0.90

4.4. Sedimentary Dynamics

The hydrosedimentary regime in the Oued Eddahab-Lagouira region is generally characterized by a wind transit to direction NNE-SSO (with a dimension of about 160 m³ / year) and a littoral drift to direction NS by about 400 000 to 500 000 m³ / year. There has been a significant erosion of the coast with boulders and a

landslide of sedimentary materials cliffs and a decline of the coastline. The sediment regime can nevertheless vary based on location, especially inside the bays.

The coastline of the study area is substantially straight; the dynamic effects are not accentuated, with the exception of the result of human activities of Human Development (port and coastal defense works) or because of the particular geomorphology of the coast, with special attention in the Dakhla bay and Cintra bay.

On the beaches, the most important effects resulting from the accumulation of water and sediments derived from the combined action of wind and waves in areas relevant to deposits.

Zone M1 – Dakhla bay

- Littoral drift caused by waves oriented N-S with values from 10,000 to 20,000 m³ / year.
- Sediment movements due to currents that cause deposits of 13 000 m³ / year in the harbor.
- Locally largest wind flows.
- Dynamic effects due to winds, currents and longshore drift strongly depend on the geomorphology of the coast. The effects are accentuated at the bottom of the bay and minimized to the caps

Zone M2 – Intermediate zone

No specific features for the overall conditions of the area.

Zone M3 – Cintra bay

- Punta Glab (north): O-E coastline drift.
- Punta Negra (south): sedimentary movements mainly on the coastal platform.

4.5. Currents

An almost continuous current southwest direction, which runs through the Moroccan coast from Tarfaya, is present in the region. In addition, the almost constant action of the trade winds induces a current that acts like the upwelling outcrop. The currents of the coast induced by wave action have a south parallel to the coast direction. More specifically, in the Dakhla bay currents are alternatives and oriented in the longitudinal direction of the bay (along the canal), ie to the NE in ascending tide and to the SO at low tide, with speeds ranging between 0.5 and 1.5 m / s.

The main trends observed in the study area are tidal currents, high seas and low seas. The high sea current follows the direction is in the passage and the north-eastern direction in the channel to the northeast. The low water flow follows the west in the passage and the south-west direction in the channel.

Sailing directions, however, indicate a maximum speed of 2.5 knots in la Sarga and 4.5 knots in the main channel when high tides. It is possible that the prolonged high winds causing major surface currents.

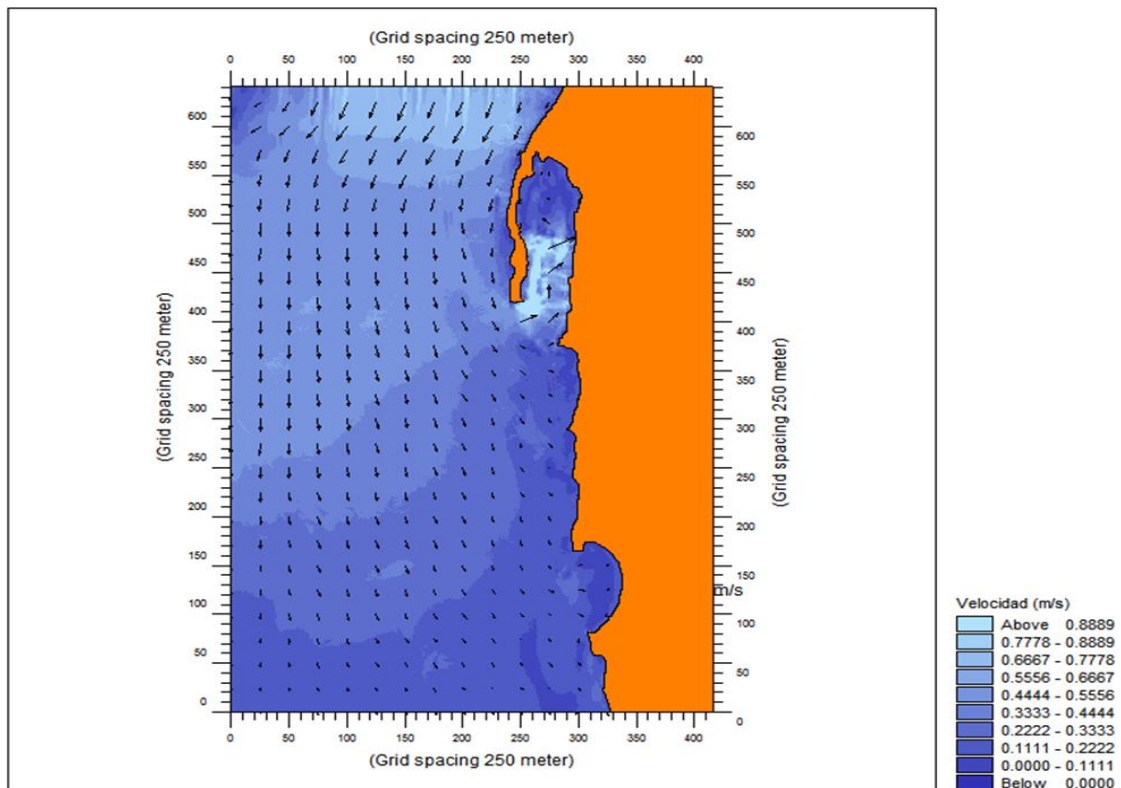
The results obtained with digital simulations MIKE 3 model for the currents in the study area coincide with those observed during different days of the campaign.

According to simulations, the currents of this region move predominantly from north to south in almost all the study area, due to the great influence of the predominant wind regime (trade winds) and the direction of the incident swell. The current can go from south to north only within the Cintra bay, at certain times of the tide, and mainly in the area closest to the entrance of the bay. We also find the direction of south-north current in the northern area of the Cintra bay; there forms a vortex in the opposite direction to clockwise.

Regarding the currents intensities, the less coastal areas showed homogeneity in the whole area, with uniform values throughout the coast. The current intensity is quite changeable in each of the coastal areas, due to their topography which includes bays, headlands and submerged sandbanks. The most common sheltered areas are Dakhla Bay and north of the Cintra bay.

The most intense current areas are three in number: they are located between the southern tip of the Cintra bay and Ain al Bayda at the forefront of la Sarga, at the entrance to the Dakhla bay in the area of the navigation channel for access to maritime and military port of the bay.

Exemple of a current map in study area



Annex 3

BILL OF SPECIFICATIONS
FOR IMPLEMENTATION OF
THE CALL FOR EXPRESSION OF INTEREST
N° AMI/DAKHLA1/11/15
CONCERNING EXPLOITATION OF PRODUCTION UNIT(S)
N°

Whereas under the terms of procedure of the Call for Expression of Interest (CEI) n° AMI/DAKHLA1/11/15, opportunity is offered to private sector, both domestic and foreign, to invest in aquaculture projects in Dakhla Oued Eddahab Region through exploitation of 878 productions units intended for the cultivation of shellfish, finfish and seaweed.

Article 1: Object of bill of specification

These specifications sets the conditions for issuance of offshore production units, subject of geographic coordinates described in the CEI, located in the Dakhla Oued Eddahab Region.

Article 2: Obligations of assignee

The assignee hereby declares under these specifications have known location of his project and agrees to:

- Confirm and bear at his charge the technical and economic feasibility of its project with the production (s) unit (s) selected;
- Undertake the administrative steps necessary to carry out the project submitted under this Call for Expression of Interest, upon notification of his selection;
- Carry out the project in accordance with the technical dossier submitted under the Call for Expression of Interest and this in a period not exceeding 24 months, except in cases of force majeure, from the date of signature of these Specifications;
- Exploit by himself the production unit (s) subject of this Call for expressions of interest in accordance with the convention of creation and operation of aquaculture farms under current regulations;
- Respect the regulations in force.

It is understood that the beneficiary may, under penalty of cancellation, transfer, partially or fully, the agreement issued by the administration regarding the allocation of the production unit (s) in question.

Article 3 : Agreement in principle

On conclusion of selection process of the Call for Expression of Interest, an agreement in principle will be delivered to the assignee so that the necessary administrative procedures can begin with the appropriate authorities for carrying out his project.

It remains understood that the agreement in principle may in no way be construed as an agreement to set-up the project in the selected production units.

Article 4 : Investor support

In order for the assignee to advance with his project, ANDA services will take necessary measures to:

- Guide him and offer all available data and information ;
- Assist him in accomplishing administrative processus needed to obtain from the appropriate authorities the notices, documents or certificates required to establish the aquaculture farm ;
- Follow up implementation of the project in accordance with the technical dossier submitted for the Call for Expression of Interest.

Article 5 : Permitting to operate aquaculture farm

Following administrative procedures required by the legislation in force, Marine Fisheries Department issues the operating license of the production units subject of the CEI on a 10-year renewable term and in accordance with Decree No. 2-08-562 of 13th of Hija 1429 (December 12th 2008) laying down the conditions and modalities of issue and renewal of authorizations for establishment of aquaculture farm.

In addition to the maritime areas, the Department, in accordance with its missions, issues other authorizations necessary for the implementation of the project.

Article 6: Assignee failures

In case of failure of the assignee from its obligations under Article 2 of these specifications or in case of pronouncement of redress or judicial liquidation, it will be proceeded with full right to the cancellation of the agreement in principle for award of the production units.

Article 7 : Dispute resolution

Any dispute arising from the interpretation and execution of these specifications could be resolved by an arbitrator appointed by the Department of Maritime Fisheries and acting amicably as conciliator.

The parties would thus be bound by these conclusions.

Tout litige découlant de l'interprétation et de l'exécution du présent cahier de charges pourraient être résolu par un arbitre désigné par le Département de la Pêche Maritime et agissant en amiable compositeur.

Les parties seraient alors tenues par ces conclusions.

Done in, on.....

The Assignee
"Read and approved"
Authenticated signature

Annex 4

Application to participate in the call for expressions of interest for development of marine aquaculture project in Dakhla Oued Eddahab region

1- Date of deposit and reference of the CEI participation application

Date ¹	
Reference ¹	

(1) Reserved to Administration.

2- Identity of applicant

1-a Natural person		
	Name	
	First name	
	ID number	
	Adress	
1-b Corporate body		
	Corporate name:	
	Type of company: :	
	Company address:	

3- Site chosen for the aquaculture farm:

Chosen zones :		
Zone M1 <input type="checkbox"/>	Zone M2 <input type="checkbox"/>	Zone M3 <input type="checkbox"/>

Production unit(s) identifier(s):
--

<i>Preference rank</i> ²	<i>Production unit(s) identifier(s):</i>	<i>Observations (optional)</i> ³
1		
2		
3		

(2) : Rank requested *production unit(s) by preference rank*.

(3) : Example : explain raison of preference.

4- Marine species to be farmed

Common name	Scientific name	Origin

I swear that:

- The information given in the selection dossier of the Call for expression of interest is accurate.
- I am neither in compulsory liquidation nor in receivership.

I certify on my honor the accuracy of the above information

Date:

Signature of applicant

(Legalized)

Annexe 5

Sworn statement (natural persons)

I, the undersigned :.....(first name, surname, nationality, Moroccan ID card number, residence card number, passport number, etc.), acting in my own name and on my own behalf,

Address of chosen domicile :.....(1)

CNSS membership n°.....(1)

Company registry (City) :..... n°.....(1)

Patente (trading licence) N°(1)

Fiscal identification no.(1)

Hereby swear that :

1 I have not in litigation with the Moroccan state, particularly concerning rental of state- or community-owned property ;

2 I promise to take out insurance to cover risks arising from my professional conduct.

3 I promise when selected to form myself into a company under Moroccan law in accordance with the prescriptions of this Call for Expression of Interest.

I certify the accuracy of the information contained in this sworn statement.

I acknowledge having noted the penalties applicable under Article 27 of decree n° 2-98-482 for an inaccurate sworn statement.

Signed at on

Signature and seal of the candidate

(1) These items are not applicable to candidates who are not merchants.

Annex 6

Group proxy statement

We, the undersigned,

Mr.....(surname and first name, nationality, CIN (Moroccan ID) number, residence card number, passport number

Acting as

On behalf of the company (A).....(Legal name) capitalized atDh

Company name.....

Company registry number

Head office

Mr.....(surname and first name, nationality, CIN (Moroccan ID) number, residence card number, passport number

Acting as

On behalf of the company (A).....(Legal name) capitalized atDh

Company name.....

Company registry number

Head office

Mr.....(surname and first name, nationality, CIN (Moroccan ID) number, residence card number, passport number

Acting as

On behalf of the company (A).....(Legal name) capitalized at..... Dh

Company name.....

Company registry number

Head office

By virtue of the powers conferred on us jointly to participate in this Call for Expression of Interest,

Hereby appoint as our representative with ANDA Mr.

Signed at, **on**.....

Signatures and company seals

Annex 7

Certification of financial standing

Certification n°:.....

We, the undersigned, [complete references of a top-ranking financial institution] legally represented by :
..... acting by virtue of powers conferred by,

hereby certify that :

[complete reference of the applicant] represented by a

Present, after reviewing of his offer and in view of his/her relation with our institution, a sufficient financial capacity allows him to realize an aquaculture project in a total area of located in object of his/her participation to call of expression of interest n° AMI/DAKHLA1/11/15 – Development of marine aquaculture project in Dakhla Oued Eddahab region launched by National Agency for Aquaculture Development.

This certificate has been issued to interested person at his/her request, exclusively for participation to cited call of expression of interest.

Done in On

Annex 8

SUMMARY OF INLAND LOGISTIC MODELS TO SUPPORT AQUACULTURE FARMS

With the aim to meet need of aquaculture activity in terms of land areas that will be dedicated to the related activities and to comply with the guidelines of the urban charter, the aquaculture plan is also interested in designing different architectural models of land servitude units. These models were developed based on the characteristics and nature of the sites encountered in the region concerned by the aquaculture plan.

To overcome the constraints of the availability of space at the nearness of the sea areas and provide an adequate solution to meet the needs of the business, it is necessary to perform the following spatial arrangements:

1) Rationalization: Separation on two parties



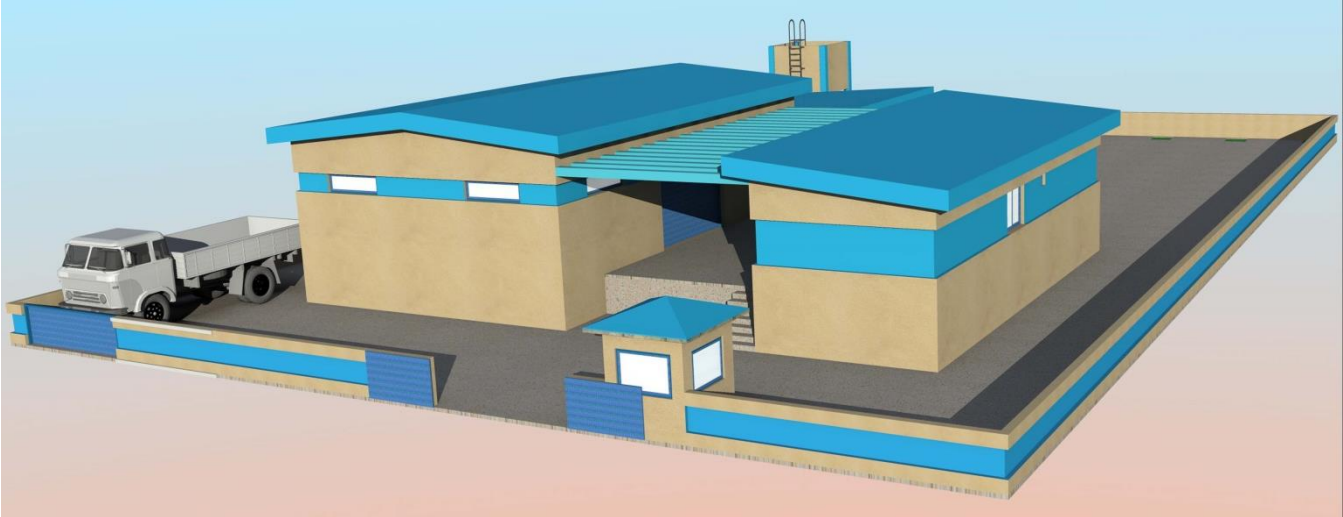
A part called 'Operative Support Unit' (UAO) located close to the sea which will be dedicated to direct operations on the product that requires permanent work (washing, sorting, grading ...). This part is usually located at the Maritime Public Domain (DPM), hence the need to design it in a specific way, while respecting the standards for buildings at maritime public domain;

The second part called 'Services and logistics Unit' (USL) is usually localized in the second plane at the private domain of the State (DPE), it can be built in hard, however, its design should be adapted to the maritime landscape. It will be dedicated, among other to equipment storage, equipment maintenance, possible staff housing, sanitary, cold storage room...

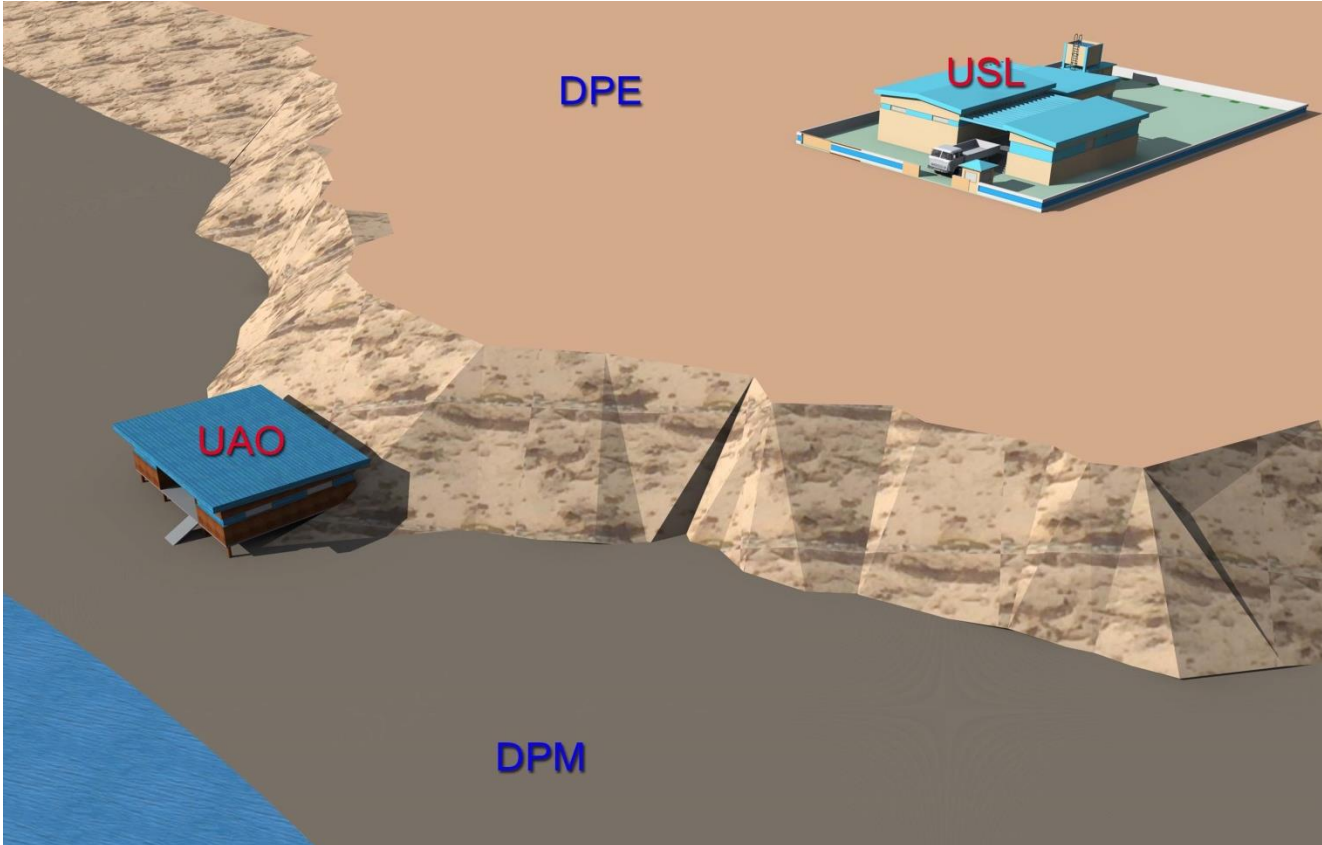
There may be cases where the USL of the land base is also located at the Maritime Public Domain, in which case the construction will be in accordance with current standards regarding the occupation of this area. (Using lightweight materials).

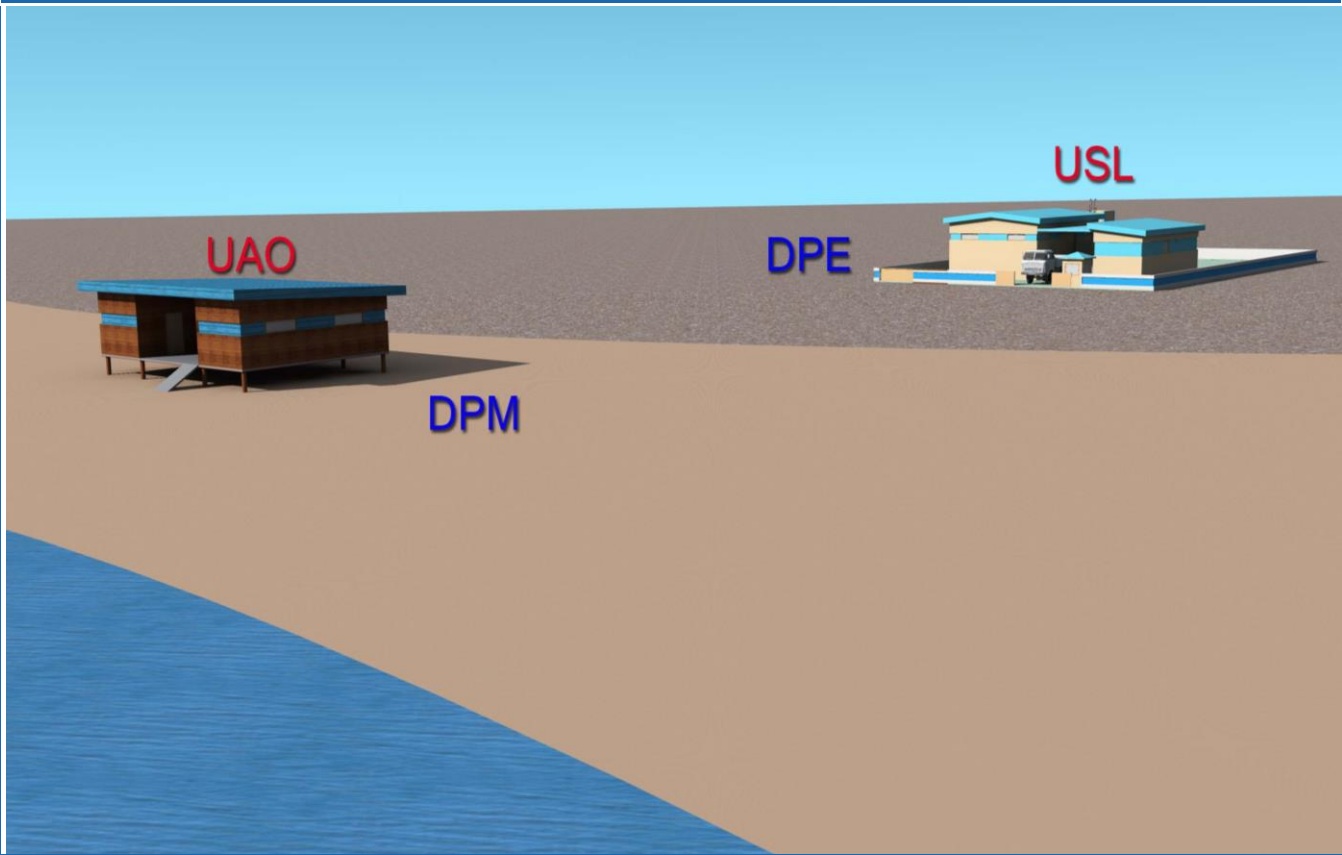
2) Optimization of spaces dedicated to related activities: :

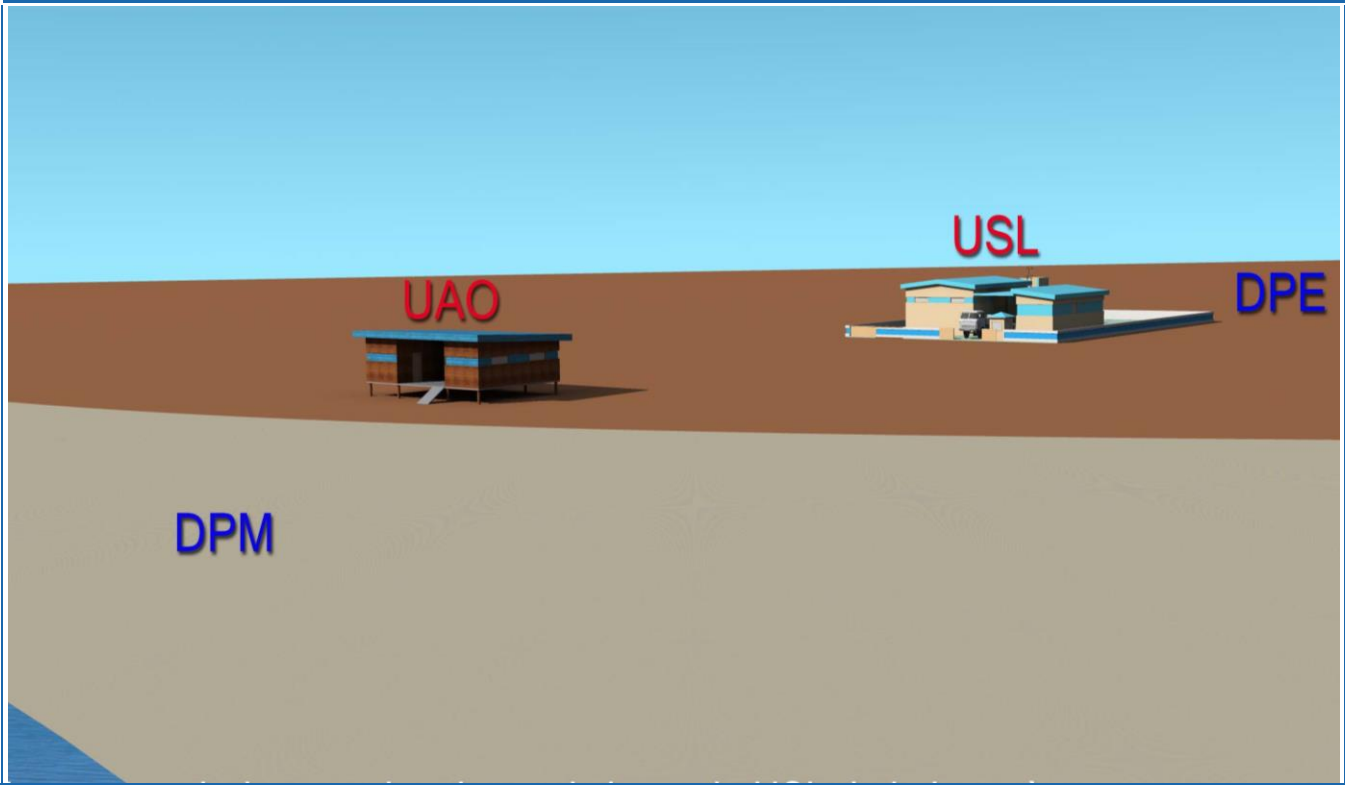
It is important to reduce the infrastructure and superstructures facilities, hence the importance to share some structures such as access roads to gear, repair workshops, connection to the sewage system, drinking water and electricity, Generator...

Units type	Model on stilts in sandy land	Model on a rock base
<p>” Operative Support Unit” (OSU) - Using wood with sandy and bleu colors</p>		
<p>” Services and logistics Unit” (SLU) - Building using concrete, woods. Sandy and bleu Colors</p>		

General view depending of sites nature

Site nature	3D view
Rock depression site	 <p>The 3D view shows a rugged, rocky terrain with a blue body of water in the foreground. Three buildings are visible: a small blue-roofed structure labeled 'UAO' on the left, a larger blue-roofed structure labeled 'DPE' in the middle, and a complex of buildings labeled 'USL' on the right. The terrain is brown and rocky, with a blue sky above.</p>

Nature du site	Vue 3D
<p>Sebkhas site 'flood-prone area'</p>	 <p>A 3D perspective rendering of a coastal site. The foreground shows a blue body of water on the left and a brown, sandy terrain on the right. In the middle ground, there are four distinct structures or areas labeled with red and blue text: 'UAO' (a small wooden structure with a blue roof), 'DPE' (a larger, more complex structure with a blue roof), 'DPM' (a small structure or area), and 'USL' (a large, multi-part structure with a blue roof). The background is a clear blue sky.</p>

Site nature	3D view
Sandy beaches site	 <p>A 3D perspective rendering of a site on a sandy beach. The scene is divided into three horizontal layers: a blue sky at the top, a brown ground surface in the middle, and a greyish-brown subsoil layer at the bottom. On the ground surface, there are two buildings. The first building, on the left, is a small, single-story structure with a blue roof and brown walls, labeled 'UAO' in red text above it. The second building, on the right, is a larger, more complex structure with a blue roof and brown walls, labeled 'USL' in red text above it. To the right of the larger building, the letters 'DPE' are written in blue. In the subsoil layer, the letters 'DPM' are written in blue. The bottom-left corner of the image shows a small patch of blue water.</p>