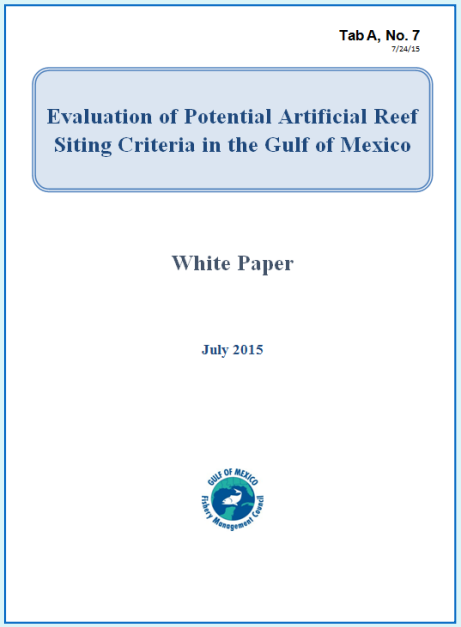
Evaluation of Potential Artificial Reef Siting Criteria in the Gulf of Mexico

Introduction

- Problem
  - Removal of petroleum platforms
  - Permitting requirements prevent ‘remain in place’ after decommissioning
- Purpose
  - Evaluate criteria to identify appropriate locations for decommissioned platforms
- Opportunity
  - May increase number of structures converted to reefs
  - Promote sustainable fish populations and fishing opportunities

Purpose of white paper

- Identify criteria that affect reef siting
- Develop a straw-man process to demonstrate ‘proof-of-concept’
- Provide description of process and results to stakeholders and managers for review, revision, and improvement
- Initial goals refined with recommendations from joint artificial reefs/shrimp AP
- Broad goals
  - Balance industry, stakeholder, management objectives
  - No loss of trawlable area
  - Increased reef fish habitat and fishing opportunities


Tab A, No. 7
7/24/15

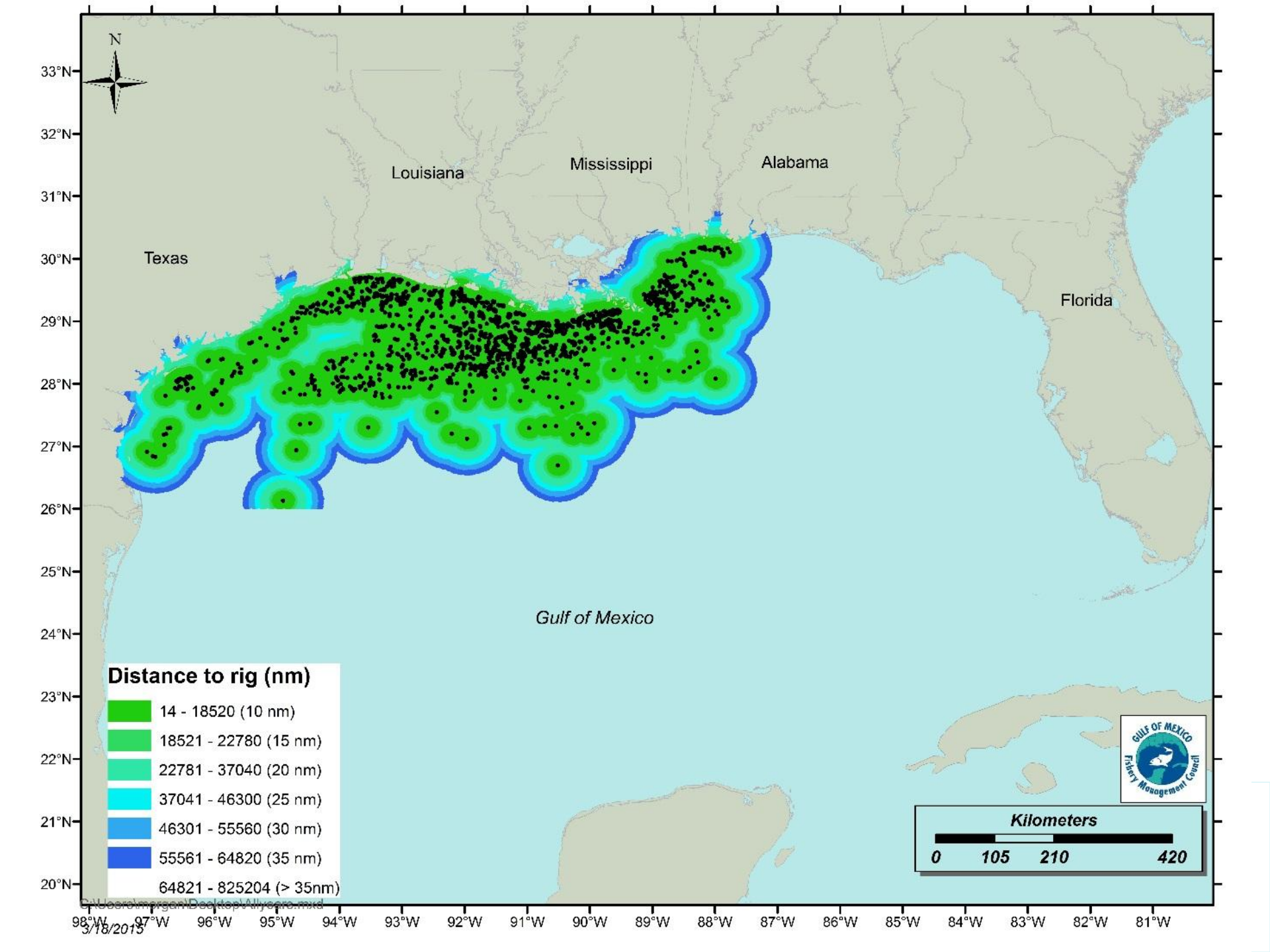
Evaluation of Potential Artificial Reef Siting Criteria in the Gulf of Mexico

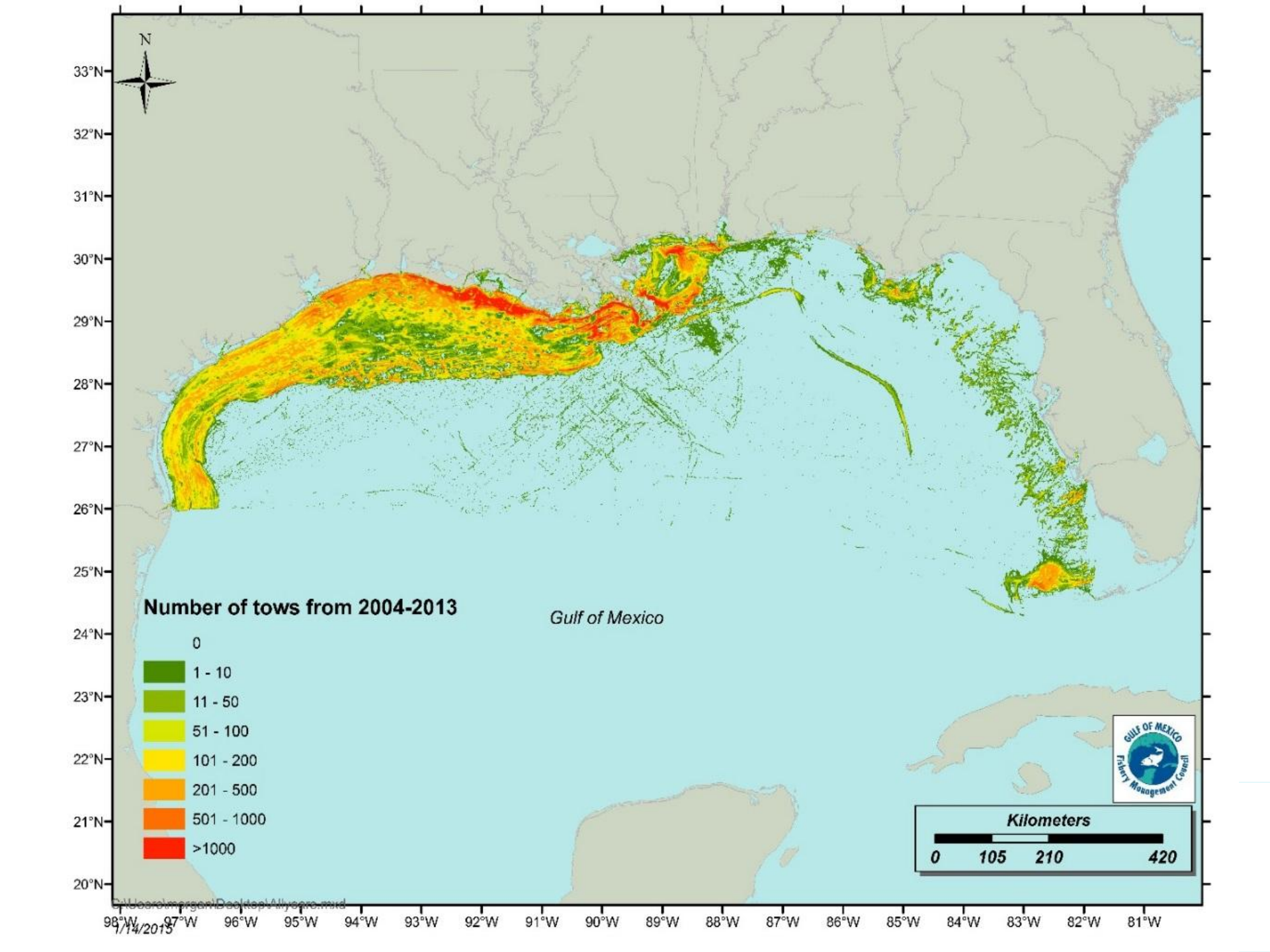
White Paper

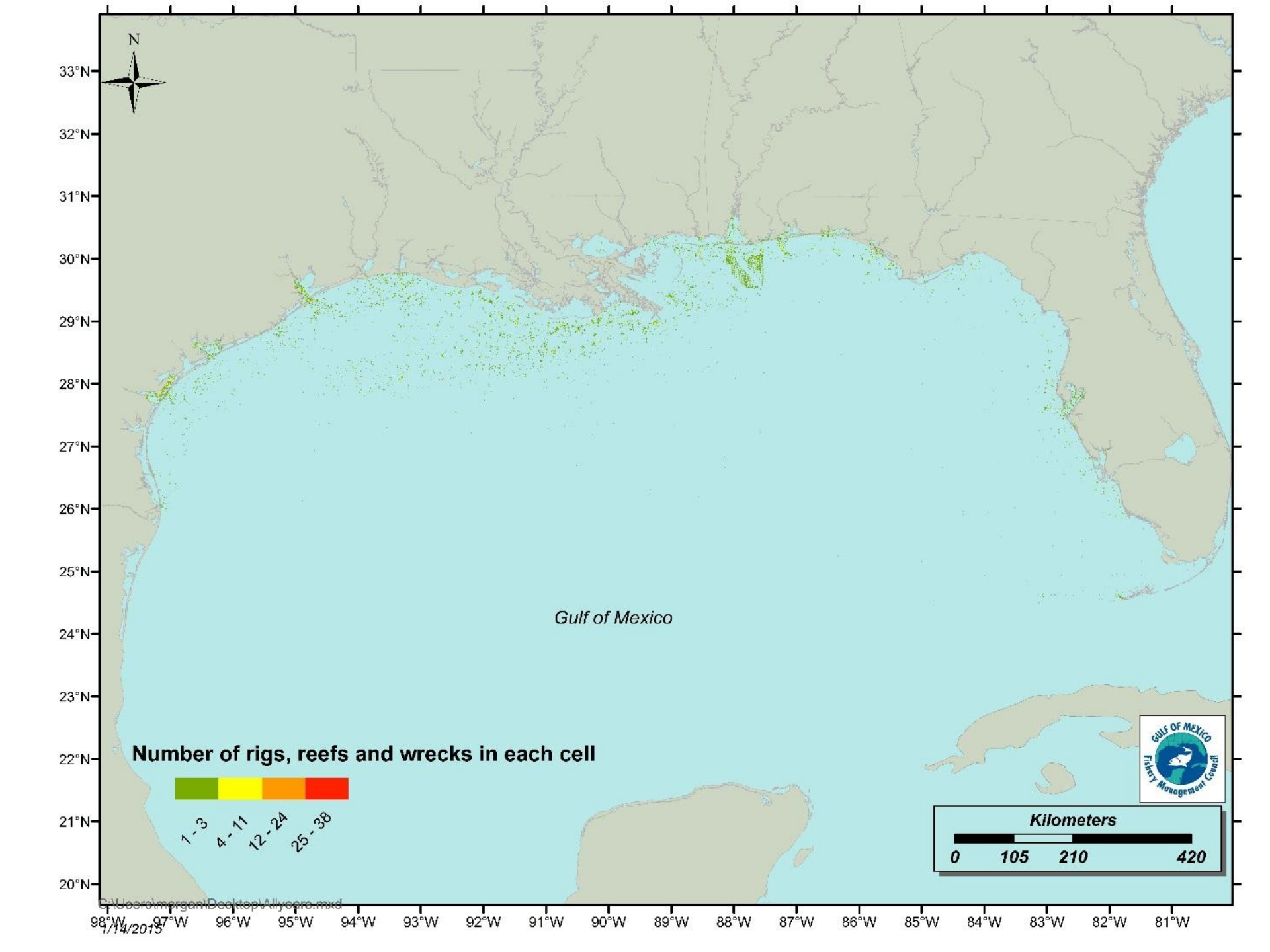
July 2015

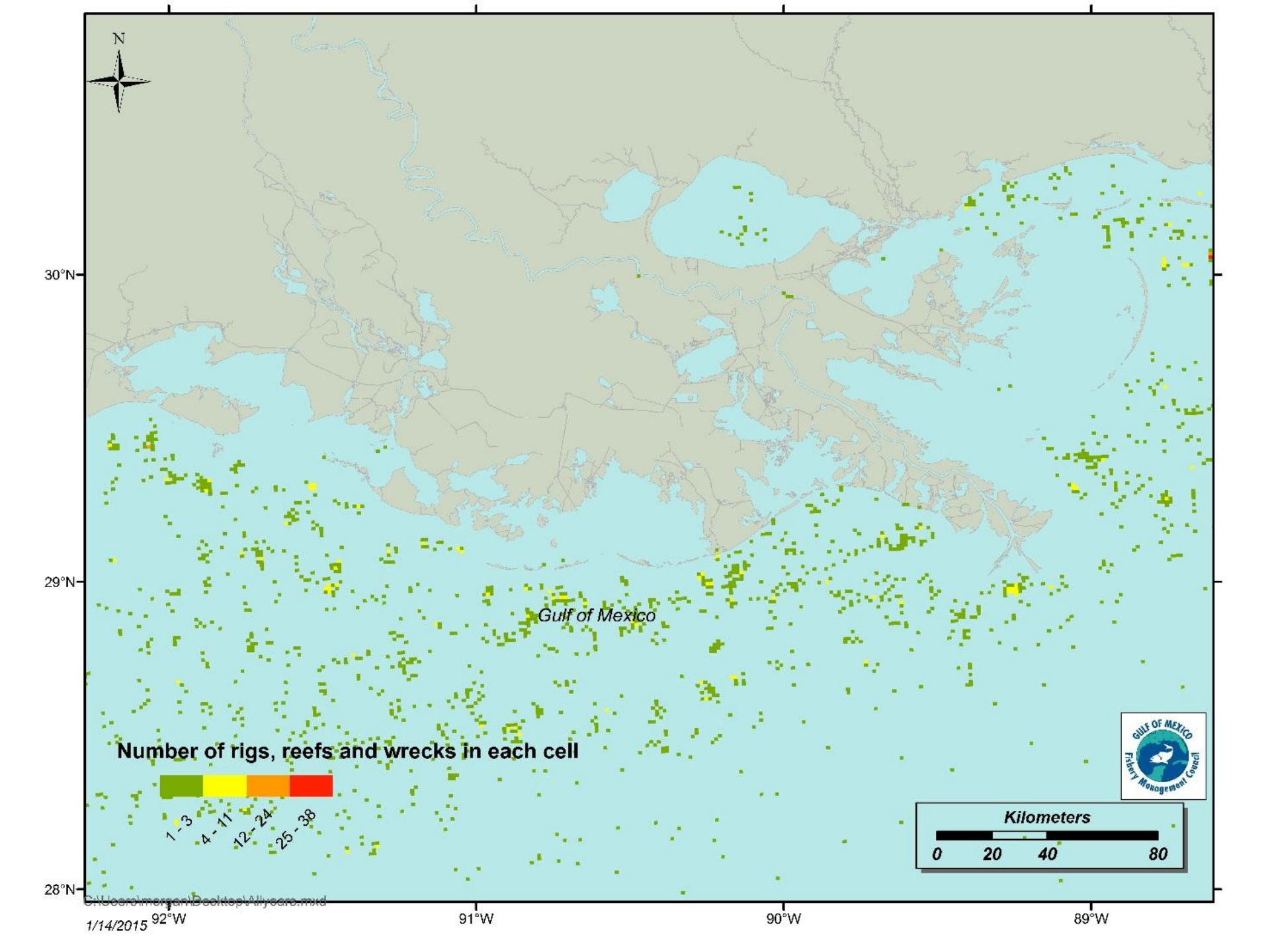
Description of the data

- Depth
- Distance to reefing location
- Distance to shore
- Existing structures
- Distance to shore (weighted by human population)
- Shrimp effort

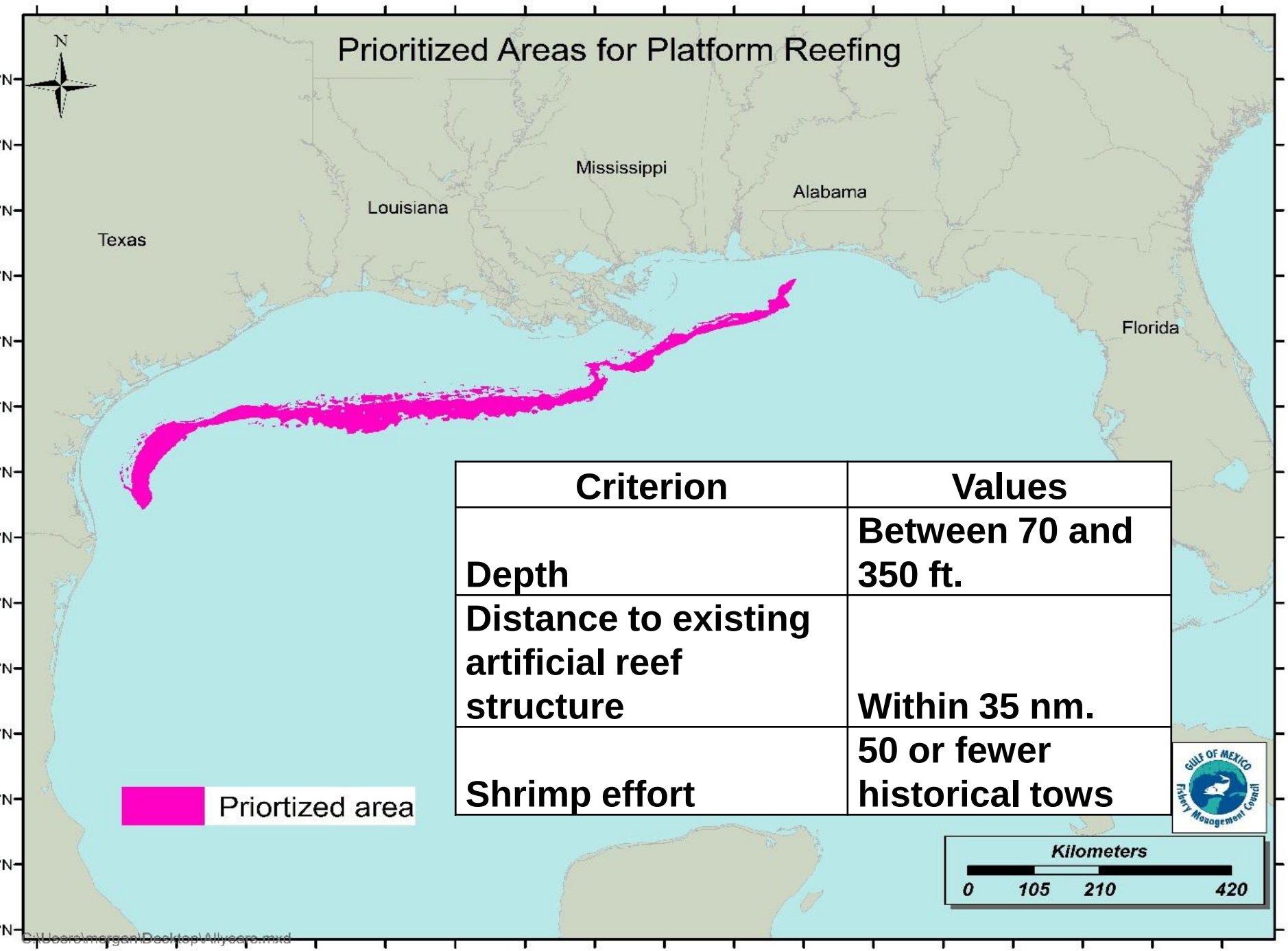

N
Louisiana
Mississippi
Alabama
Texas
Florida
Gulf of Mexico
Distance to rig (nm)
14 - 18520 (10 nm)
18521 - 22780 (15 nm)
22781 - 37040 (20 nm)
37041 - 46300 (25 nm)
46301 - 55560 (30 nm)
55561 - 64820 (35 nm)
64821 - 825204 (> 35nm)
Kilometers
0 105 210 420
GULF OF MEXICO Fishery Management Council
33°N
32°N
31°N
30°N
29°N
28°N
27°N
26°N
25°N
24°N
23°N
22°N
21°N
20°N
98°W
97°W
96°W
95°W
94°W
93°W
92°W
91°W
90°W
89°W
88°W
87°W
86°W
85°W
84°W
83°W
82°W
81°W
3/18/2015


N
33°N
32°N
31°N
30°N
29°N
28°N
27°N
26°N
25°N
24°N
23°N
22°N
21°N
20°N
98°W
97°W
96°W
95°W
94°W
93°W
92°W
91°W
90°W
89°W
88°W
87°W
86°W
85°W
84°W
83°W
82°W
81°W
Number of tows from 2004-2013
0
1 - 10
11 - 50
51 - 100
101 - 200
201 - 500
501 - 1000
>1000
Gulf of Mexico
GULF OF MEXICO Fishery Management Council
Kilometers
0 105 210 420
1/14/2015


N
33°N
32°N
31°N
30°N
29°N
28°N
27°N
26°N
25°N
24°N
23°N
22°N
21°N
20°N
98°W
97°W
96°W
95°W
94°W
93°W
92°W
91°W
90°W
89°W
88°W
87°W
86°W
85°W
84°W
83°W
82°W
81°W
Gulf of Mexico
Number of rigs, reefs and wrecks in each cell
1 - 3
4 - 11
12 - 24
25 - 38
Kilometers
0
105
210
420
GULF OF MEXICO
Fishery Management Council
C:\Users\morgan\Desktop\Allyears.mxd
1/14/2015


N
30°N
29°N
28°N
92°W
91°W
90°W
89°W
Gulf of Mexico
Number of rigs, reefs and wrecks in each cell
1 - 3
4 - 11
12 - 24
25 - 38
Kilometers
0
20
40
80
GULF OF MEXICO
Fishery Management Council
C:\Users\morgan\Desktop\Allyears.mxd
1/14/2015

Prioritized Areas for Platform Reefing



Criterion	Values
Depth	Between 70 and 350 ft.
Distance to existing artificial reef structure	Within 35 nm.
Shrimp effort	50 or fewer historical tows

Summary

- AP identified critical metrics affecting reef siting
- “Mapping problem”
- Process developed to identify a zone with:
  - ‘minimal shrimping effort’
  - As close as possible to existing structures
  - Within appropriated depths e.g., 70 – 350 ft.
- Example of a process rather than a result
- Variables and weights could be added, reduced, or modified as desirable to accommodate specific policy objectives