**Summary of the REGULATORY IMPACT ANALYSIS** **(Manifestacion de impacto regulatorio - MIR) of the Agreement to temporarily ban commercial fishing using gillnets and/or long lines operated from small vessels in the north of the Gulf of California.**

**Background**

The vaquita (*Phocoena sinus*) is one of the six porpoise species in the world. It is endemic species of Mexico and inhabits the Gulf of California (Mexico). It has a highly restricted distribution range. The vaquita population has been in decline for many years and recent studies estimate there are less than 100 vaquitas left, which are declining at a rate of 18.5% per year (Fig 1). The International Committee for the Recovery of the Vaquita (CIRVA) recommends that emergency regulations be implemented.



Figure 1. Variation in population size of the vaquita. The percentages represent the decline rates (from the 5th Report of CIRVA).

**Description of the alternatives and cost and benefits estimates**

This section highlights that if no regulation is issued the decline of the vaquita will continue, given that previous and current regulations were not sufficient to warrant a population recovery, and that in fact, the rate of decline increased. It is also highlighted that although voluntary schemes are important to strengthen community participation, the relevant authority is not empowered to implement penalties for breaching the agreement.

**Economic incentives**

Implementing economic incentives are not considered viable as a management measure, given the complexity of integrating the interests of each permit holders. Additionally, this measure may lead to breaching the agreement if the incentive is not provided anymore.

Thus, the best option is to ban the use of gillnets and long lines, as it will contribute to the recovery of the vaquita population in the medium and long term.

**Costs**

The affected individuals are those holding permits and licences for gillnets and long lines in the exclusion area (Northeast of the Gulf of California). Based on catch data from 2009 to 2012 in Golfo de Santa Clara, Sonora and San Felipe, in Baja California, a total income of 451,659,045.3 Mexican pesos ($) was estimated. Whereas in San Felipe BC the ban will be of a 100%, it will be of only 70% in Santa Clara and Sonora, thus the economic impact will be less in these areas. Therefore, given the current production data and the unreported fishing, an estimated loss of $424,951,300 pesos is anticipated (see table 1).

Table 1: Economic and production loss due to the implementation of the regulation. From SEMARNAT (Dec 2014)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Locality | Fisheries | Price | Reported fishing (kg) | Unreported fishing (kg) | Production value (pesos) |
| San Felipe | Shrimp | $ 240 | 371,000 | 51,050 | $ 98,229,000 |
| Finfish | $ 18 | 3,286,000 | 940,150 | $ 76,070,700 |
| Shark | $ 16 | 132,000 | 52,800 | $ 2,956,800 |
| **SUB-TOTAL** |  | **3,789,000** | **1,044,000** | **$ 177,256,500** |
| Golfo de Santa Clara | Shrimp | $ 240 | 650,000 | 51,050 | $ 165,189,000 |
| Finfish | $ 18 | 3,674,000 | 899,700 | $ 82,326,600 |
| Shark | $ 16 | 8,000 | 3,200 | $ 179,200 |
| **SUB-TOTAL** |  | **4,332,000** | **953,950** | **$ 247,694,800** |
| **TOTAL** | 8,121,000 | 1,997,950 | **$ 424,951,300** |

**Benefits**

The individuals that are going to benefit from this agreement are those holding permits and licences for gillnets and long lines in the exclusion area (Northeast of the Gulf of California). SEMARNAT and CONAPESCA estimated the cost of the compensation to permits and licences holders in 100% of the economic loss that is $424,950,600. Additionally, a budget of $28,210,000 will be given to individuals in the production chain that will be affected by this regulation. Lastly, an extra $540,699,880 will be destined to a Community monitoring programme to engage the impacted sector in common activities of inspection and monitoring (Table 2). The monitoring programme will include 35 trips a year per vessel (considering 806 vessels), with a cost of $1000 per trip.

Table 2. Estimation of the compensation due to the finishing ban. From SEMARNAT (Dec 2014)

|  |  |
| --- | --- |
| **Programme component** | **Compensation** |
| Fisheries production value | $ 424,950,600 |
| Production chain | $ 28,210,000 |
| Monitoring | $ 87,539,280 |
| **Total** | **$ 540,699,880** |

Therefore, the economic impact for permits and licences holders, as well as the production chain will be mitigated through the economic compensation that the Federal Government will provide. In turn, whereas the current scheme would lead to the vaquita becoming extinct by 2018 at an 18% annual decline (CIRVA, 2014), the implementation of this regulation would lead to a 4% annual increase (see Table 3).

Table 3. Comparison of the current scenario and the proposed regulation in terms of costs and benefits.

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| **Costs** | **2015** | **2016** | **2017** | **2018** |
| Economic loss for fisheries | $424,951,300 | $424,951,300 | $424,951,300 | $424,951,300 |
| Vaquita decline¹ | 17.46 | 3.14 | 0.57 | 0.00 |
| **Benefits** |
| Compensation | $424,950,600 | $424,950,600 | $424,950,600 | $424,950,600 |
| Vaquita population increase² | 38.80 | 54.32 | 60.53 | 63.01 |

¹ CIRVA estimated a vaquita annual mortality rate of 18%, with the most recent total estimate of 97 individuals.

² The "Vaquita Project final report" estimates that the implementation of the measures presented in the present agreement will lead to a 4% annual increase in the vaquita population.

The vaquita does not have a market value and there are no studies or estimates to date of the economic value of this species. Therefore, the increase in the population is not included in the economic benefits of the implementation of this agreement. However, inaction could lead to major economic impact through the confiscation of fisheries in the Gulf of California, or even at a national level.

SEMARAT, the Navy Secretariat and CONAPESCA through the General Directorate of Inspection and Monitoring will be responsible for the monitoring and compliance enforcement in the area, and INAPESCA, as well as other research institutions will carry out the trips to conduct vaquita population size estimates.