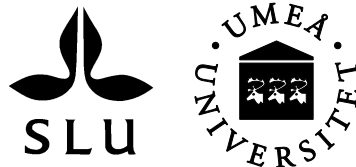


(Temporary?) decoupling of *bad* subsidies as an alternative to support Mexican fishers during the COVID-19 pandemic

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Abstract:

As of April 21, 2020, the Mexican Federal administration has committed a one-time transfer of MXP 7,200 (USD 374) to 193,200 fishers to support them during the COVID-19 pandemic. This amount affords a 4-member rural household's basic basket of goods during a month and a half. Fishers, however, most likely will need support for a longer period. In this document, we suggest that a decoupling of *bad* fisheries subsidies represents an alternative to efficiently redirect public funds towards relief support. If, for instance, only fuel subsidies were going to be decoupled, the one-time transfer committed by Federal authorities can be increased to afford a basic basket of goods during two additional weeks. Alternatively, the decoupled subsidy can reach 79,178 additional fishers. We highlight that a decoupling policy addresses suggestions made by international institutions to face economic impacts from COVID-19 without deviating from Sustainable Development Goals. This recommendation is particularly relevant for developing economies as sustainability is a criterion when accessing loans from international institutions. While this document focuses on the Mexican case, its insights are relevant for developing countries that are searching for alternatives to support their populations in facing COVID-19.

JEL Classification: Q22, Q28,

Keywords: COVID-19; Decoupling Fisheries Subsidies; SDG 14.6; Mexico.

1. Introduction

The COVID-19 pandemic has hit supply chains across all economic sectors. According to the European Commission, fisheries is among the sectors most immediately impacted --which compromises not only livelihoods of coastal communities but also food security in general (European Commission, 2020). Due to physical distancing and other measures implemented to contain COVID-19, demand for seafood has plummeted worldwide --from export to retailers or local consumption (Reiley, 2020).

According to Rodríguez (2020), losses of the Mexican fisheries sector during Lenten 2020 reached 70% of the domestic sales values (MXP 15,500M; 2018 USD 805.7M). The sector's informality makes fishers particularly vulnerable. Most fishers in Mexico are hired daily or weekly via verbal contracts, with no access to health and social security services (SAGARPA-IICA, 2019). Moreover, experts on gender inequality in the sector warn that the COVID-19 outbreak will affect women to a worse degree than men because women more likely work in low-revenue jobs (e.g. women globally represent 80-90% of the processing workforce and a high number of seafood traders, workers that will be most affected). This situation will ultimately deepen gender inequalities in the sector (Holmyard, 2020).

As of April 21, 2020, the Mexican federal administration has committed to support fishers via a one-time transfer of MXP 7,200 (USD 374). This number results from dividing MXP 1,391.7M (USD 72M) that the government has labelled to transfer to 193,200 fishers (CONAPESCA, 2020a). This amount affords a 4-member rural household's basic basket of goods during a month and a half (CONEVAL, 2020).

Fishers, and other sectors' workers, will likely need support for a longer period. The duration of the lockdown period depends on a number of factors but recent studies suggest that intermittent lockdowns may be required worldwide during the two years ahead (Kissler et al., 2020). Under optimistic scenarios, some analysts suggest that a gradual return to activities could start in November, 2020 (Levy, 2020), while a wishful projection places access to the vaccination in early 2021 (Thanh et al., 2020).

Thus it is necessary and urgent to search for additional funds to support fishers. In this document, we suggest that resources committed by the federal administration can be complemented with resources that can become available through a decoupling of *bad* fisheries subsidies. *Bad* fisheries subsidies are harmful to the environment and biodiversity in the sense that they imply incentives to overfishing and/or overcapitalization. By implementing a classification framework proposed by Sumaila et al. (2010), we identify bad subsidies in the Mexican fisheries sector and estimate how much they amount. Then, we estimate the amount that can be transferred to fishers under three decoupling scenarios. For instance, if only fuel subsidies were going to be decoupled, the one-time transfer committed by Federal authorities can afford a basic basket of good during two additional

weeks. Alternatively, the decoupled subsidy can reach 79,178 additional fishers. Importantly, this decoupling exercise has been possible thanks to the availability of data gathered through efforts of the civil society and the improvements in transparency laws achieved in Mexico in recent years (Leal-Cota et al., 2020).

While a decoupling of fisheries subsidies may be recommendable as a long term strategy to achieve sustainable development, it can also be thought as a temporary policy to be in place as long as society fights the economic effects from COVID-19. As a temporary measure, a decoupling policy is in line with recommendations highlighting that measures such as physical distancing will more likely succeed if formal and informal workers receive compensations for their forgone income (Levy, 2020; López-Calva, 2020). Also, decoupling subsidies represents an alternative to efficiently redirect resources to provide relief, not necessarily stimulus, and in this way, avoid higher economic costs (IADB, 2020). In addition, a decoupling of bad fisheries subsidies addresses recommendations to come back from the post-coronavirus recession without deviating from Sustainable Development Goals (CEPAL, 2020; IADB, 2020; UN, 2020a). This balance will be particularly relevant for developing economies in a post-coronavirus world as sustainability is a criterion when accessing loans from international institutions (IDB, 2020).

The rest of this document is organized as follows. Section 2 describes the classification framework used to identify the potential effects of fisheries subsidies. Section 3 presents the classification and quantification of fisheries subsidies in Mexico from 2011 to 2018. Section 4 reports our decoupling scenarios. Section 5 discusses the implications from a decoupling policy.

2. Classification framework

Sumaila et al. (2010) provide a set of criteria to categorize subsidies to fisheries as 1) *beneficial*, 2) *capacity-enhancing*, and 3) *ambiguous*. As summarized in Table 1, *beneficial subsidies* are those that contribute to restore or increase fisheries stocks through actions that allow the conservation of populations -e.g., control and surveillance measures, management programs, as well as research and technological development. *Capacity-enhancing subsidies* refer to programs that increase profits by enhancing overcapacity and overfishing -e.g., transfers for capital inputs, public investments in infrastructure that reduce costs or improve revenues, price maintenance, and market access. Capacity-enhancing subsidies deter investment on natural capital. Subsidies classified as *ambiguous* are those whose effects' direction is uncertain and usually context-specific --e.g., fisher assistance programs, vessel buyback programs, and rural fisher community development programs.

This classification offers a guide for the potential effects of fisheries subsidies based on their design with an important caveat. As both authors and specialists pointed out, the actual impact of

the subsidies will vary on the fisheries' status, their management, and the ability of the State to enforce regulations, (Sumaila et al., 2010; Cisneros-Montemayor et al., 2016; OECD, 2017).

Indeed, the actual impacts can be altered based on those variables. However, classifying the subsidies based on their design becomes relevant due to the lack of information on the subsidies effects in a global context of fisheries fully or over-exploited, and poor management results. In the absence of better evidence, this guide allows us to apply the *Precautionary Principle* in uncertainty scenarios. At the same time, it brings us closer to the application of the *Total Cost Allocation Principle*, as well as the *Responsibility Principle*, named by Costanza et al. (1998), among the fundamental principles to achieve sustainable governance of the oceans.

3. Fisheries subsidies in Mexico

This section presents a synthesis of the data under analysis, and the classification of fishing subsidies in Mexico during the period 2011-2018. The period responds to the availability of complete and reliable public official information. The classification and subsequent decoupling exercises have been possible thanks to the availability of data gathered through efforts of the civil society that has taken advantage of the Mexican Transparency Law. Details on the data gathering, and description of the dataset can be found in Leal-Cota et al. (2020) and Leal-Cota and Martinez-Cruz (2020). The data is available at <https://pescandodatos.org/subsidios-pesqueros>.

According to Figure 1, from 2011 to 2018 subsidies represented 72% of the public spending, far exceeding the public investment in the sector (6%), or the aggregate amount of the remaining fisheries policies (22%). A similar pattern is observed in the Mexican agricultural sector --it allocated an average of 83% of the budget to subsidies during the same period (Leal-Cota and Martinez-Cruz, 2020).

Using the framework proposed by Sumaila et al. (2010), we categorize fisheries subsidies from 2011 to 2018 and quantify their amounts. Twelve different types of subsidies were identified. Seven types were granted from 2011 to 2018: Fuels subsidies, Fleet modernization, Infrastructure and studies, Fisheries management, Inspection and surveillance, Productive Chains, and Vessel buyback effort. The remaining five were introduced as a result of subsidy reform, granted from 2014 to 2018: Aquaculture development, Propesca (or Bienpesca)¹, Promotion of consumption,

¹ Named as Bienpesca from 2019, this subsidy provides a transfer of \$7,200 MXN to coastal or inland fisheries, the crew of larger vessels, and workers in aquaculture units, whose activities are temporarily suspended by the action of closure or are affected by a contingency declared by the authority.

Transformation and commercialization, and Capacity strengthening. The subsidies were divided in 14 different subtypes that were classified as summarized in Table 2.²

Figure 2 illustrates the resources granted by subsidies category from 2011 to 2018, and their share with respect to total subsidies. The left y-axis expresses the amount of resources allocated by each category in 2018 millions of USD. The right y-axis reports the percentage of resources allocated by category. Focusing on capacity-enhancing or bad subsidies, we can observe a pattern of decrease in the absolute value of around two-thirds, while in terms of its relative size, the category went from above 84% in the first three years to 52% in 2018. The relative reduction of bad subsidies was mainly absorbed by the increase in the *ambiguous* category, which represented between 5 and 8% in the first three years, reaching a quarter of the distribution by 2018. The resources allocated to this category went from USD 10M in 2011 to USD 26M in 2018. Finally the *beneficial* category has remained stable throughout the period, with amounts ranging from USD 7M to USD 9M, and average relative participation of 8%.

4. Decoupling exercises

Tables 3 and 4 report calculations for three decoupling exercises. Scenario 1 is the most conservative in the sense that it assumes the decoupling of only fuel subsidies. Scenario 2 assumes the decoupling of fuel subsidies and subsidies to fleet modernization. Scenario 3 assumes that all bad subsidies are decoupled. Under all three scenarios, we assume the government budget allocated in 2018 the corresponding subsidy.

The first column in Table 3 reports the scenario. The second column reports the decoupled amount in MXN, based on the 2018 budget --no adjustment has been informed, so we believe that it is a reasonable assumption. The third column reports the decoupled amount as 2018 USD. The fourth column indicates the percentage of this amount regarding funds committed by the Federal administration. The fifth column includes the amount of the direct transfer allowed by each scenario, assuming that decoupled subsidies are added to one-time transfers committed by the Federal administration to 193,200 beneficiaries. The sixth column reports the number of weeks that this transfer supports a basic basket of goods for a 4-member rural household.

Table 4 includes the first three columns of table 3. The fourth column reports the additional fishers receiving a MXP 7,200 one-time transfer, assuming that decoupled subsidies are allocated to beneficiaries not reached by the present Federal administration's scheme. The fifth column

² Most types identified coincided with the subcategories typified by Sumaila et al. (2010) as part of the subsidies used worldwide. The exception refers to those granted for aquaculture since the framework classification does not include them. Those subsidies were included in the ambiguous group considering there was no systematic empirical or theoretical evidence on its expected effects on fisheries. See details in Leal-Cota and Martinez-Cruz (2020).

presents the monthly expenses of a 4-member rural household's monthly basic basket of goods that can be covered by each scenario.

As reported in Tables 3 and 4, under Scenario 1, the policy of decoupled de fuel subsidies, can provide an extra 29.6 MDD (MXP 570M), incrementing the recovery budget by 41%. This scenario covers 79,178 extra transfers at the rate of 374 DLLS (\$7,200 MXN), or granting 528 DLLS (\$10,154 MXN), the equivalent of 2.17 months of basic basket of good for a 4-member rural household to each of the 193,200 fishers that the federal government has committed to support.

Scenario 2 includes the decoupling of the two main harmful subsidies: fuel subsidy and fleet modernization. As reported in Tables 3 and 4, under these assumptions, the policy can provide an extra 33.8 MDD (MXP 650M), incrementing the recovery budget by 47%. This scenario translates into 90,310 extra transfers at the rate of 374 DLLS (\$7,200 MXN), or granting 549 DLLS (\$10,569 MXN) the equivalent of 2.26 months of basic basket of good for a 4-member rural household to each of the 193,200 fishers that the federal government has committed to support.

Scenario 3 includes decoupling of all of the bad subsidies. As reported in Tables 3 and 4, under these assumptions, the policy can provide an extra 37.6 MDD (MXP 650M), incrementing the recovery budget by 52%. This translates into 100,684 extra transfers at the rate of 374 DLLS (\$7,200 MXN), or granting 569 DLLS (\$10,956 MXN) the equivalent of 2.34 months of basic basket of good for a 4-member rural household to each to each of the 193,200 fishers that the federal government has committed to support.

5. Discussion

In Mexico, official lockdown measures to contain COVID-19 were implemented on March 24th, 2020 (SSA, 2020a; DOF, 2020), and are expected to continue at least until May 30th (SSA, 2020b). These measures have impacted economic activities during Lent and Easter which represent the high season for domestic sales and consumption of seafood in Mexico (CONAPESCA, 2017). Losses during Lenten 2020 reached 70% of the domestic sales values (MXP 15,500M) according to Rodríguez (2020). As the sector is heavily linked to world trade, it faces the restrictions imposed on mobility around the world. Even though research for vaccine development has taken extraordinary speed and scale, the most optimistic scenario predicts its availability until the beginning of 2021 (Thanh et al., 2020). Therefore, it is reasonable to expect the slowdown in international trade to continue and, consequently, the effects will extend to October and November, when around 40% of the volume of the main export fisheries occurs (e.g., shrimp, lobster, and octopus) (CONAPESCA, 2018).

The decoupling scenarios presented in this document have different degrees of feasibility and potential benefits besides complementing the Federal Administration's response to COVID-19. Decoupling fuel subsidies represents a potential higher return for each decoupled dollar since it only involves changes in the operation of one subsidy scheme. Decoupling fuel subsidies has been widely discussed due to their harmful effects on fisheries, but also due to their low efficiency --as they increase less than 10 cents of fishers' income for each dollar spent (Cisneros-Montemayor et al., 2020; Martini & Innes, 2018). In this context, the decoupling of fuel subsidies would deliver a triple-dividend --lowering incentives to overcapacity and overfishing, delivering relief during COVID-19, and improving spending efficiency. As long as fishers can be effectively communicated that the decoupling of the subsidy will have a more significant impact on their income, it can be expected to be welcomed by fishers and the general population. Decoupling the fleet modernization subsidy adds MXP 80M (2018 USD 4M) to the decoupled amount. The fleet modernization subsidy implies an investment made by the beneficiaries, but the possibility of investing during COVID-19 is limited. Decoupling this subsidy also contributes to the objective of reducing overcapacity and overfishing. A good acceptance can be expected, given that liquidity is needed during COVID-19. Decoupling all bad subsidies, however, represents a significant challenge since it adds only MXP 74.6M (2018 USD 3.8M) to the previous scenario but involves many more subsidies --subsidies of infrastructure and studies, promotion of consumption, productive chains, and transformation and commercialization.

A decoupling exercise requires careful and participatory design (Cisneros-Montemayor et al., 2020). However, the emergency unleashed by COVID-19 demands immediate government actions that can be guided by expert analysis. Following Levy (2020), here we have suggested a decoupling strategy that prioritizes transferring cash to people. In particular, priority can be given to those groups of vulnerable workers, such as fishers hired on a weekly basis or women. Regarding the latter group, it can be pointed out that of the 14 thousand women employed in fishing, 69% do not receive a fixed remuneration (López-Ercilla & López-Sagástegui, 2018). Additionally, a factor that is triggering alerts about women's vulnerability is the increase in the incidence of domestic violence as the COVID-19 emergency unfolds (ONU Mujeres, 2020). Consequently, a decoupling policy should keep in mind guidelines to be a gender-equitable response (UN, 2020b).

Alternative strategies are also possible. For instance, as the federal administration has stated that its priority is to support small and medium enterprises (SMEs), the decoupled subsidies can also reach the around 20,000 SMEs³ in the fisheries sector. Also, as suggested by Avila et al. (2020), fishers may be encouraged to use these transfers to transition to alternative livelihoods.

While the focus of this document is on the fisheries sector, there is space to redesign public policies and redirect public funds in other sectors. For instance, the Mexican agricultural sector can also benefit from decoupling subsidies to electricity consumption --calculations may need to be updated

³ Considering that they represent 80% of the economic units (CONAPESCA, 2020b; Naranjo, 2012).

but Avila et al. (2005) have already carried out decoupling calculations. Also, Martinez-Cruz and Nuñez (2020) have suggested that the current administration's flagship training program could redirect jobless people towards the energy renewable sector which has an enormous untapped potential in Mexico.

We want to highlight that the decision of decoupling fisheries subsidies does not need to be implemented permanently. This policy can last as long as needed to face the current pandemic. If permanently implemented, it would not imply an enhancement of sustainability in the long run necessarily --as it is not obvious how fishers may use the resources in the long run. We can see this decoupling exercise a step to achieving SDG target 14.6 because it would reduce the amount allocated to bad subsidies. Later on, once the crisis has passed, policy makers may want to decide whether this decoupling is a first step towards developing cost-effective and sustainable policies that include clear goals based on the needs of fishing communities (Cisneros-Montemayor et al., 2020).

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Tables and Figures

Table 1. Classification of fisheries subsidies framework

Classification	Capacity-enhancing	Ambiguous	Beneficial
Description	Increase fishing capacity and therefore the risk of overfishing	Subsidies whose effects are less clear and depend more on their implementation context	Subsidies that contribute to restore or increase the natural capital of the fishery stocks
Examples	<ul style="list-style-type: none">● Fuel subsidies● Boat construction, renewal and modernization programs	<ul style="list-style-type: none">● Fisher assistance programs● Vessel buyback programs● Rural fishers' community development programs	<ul style="list-style-type: none">● Fisheries management programs and services● Fishery research and development● Marine Protected Areas

Adopted from Sumaila et al., (2010).

Table 2. Classification of Mexican fisheries subsidies

Capacity- enhancing	Ambiguous	Beneficial
<ul style="list-style-type: none">● Fuel subsidies*● Fleet modernization**● Infrastructure and studies● Promotion of consumption● Productive Chains● Transformation and commercialization*	<ul style="list-style-type: none">● Aquaculture development● Propesca or Bienpesca● Capacity strengthening● Vessel buyback effort● Aquaculture subsidies for Fuel and Transformation and commercialization*	<ul style="list-style-type: none">● Fisheries management● Inspection and surveillance● Location of small vessels**

Notes: * The types of Fuels and Transformation and commercialization, exclude subsidies for aquaculture activities, which are included in the ambiguous category.

** The subsidy for Fleet modernization excludes the category of location of small vessels, due to it's considered a beneficial subsidy.

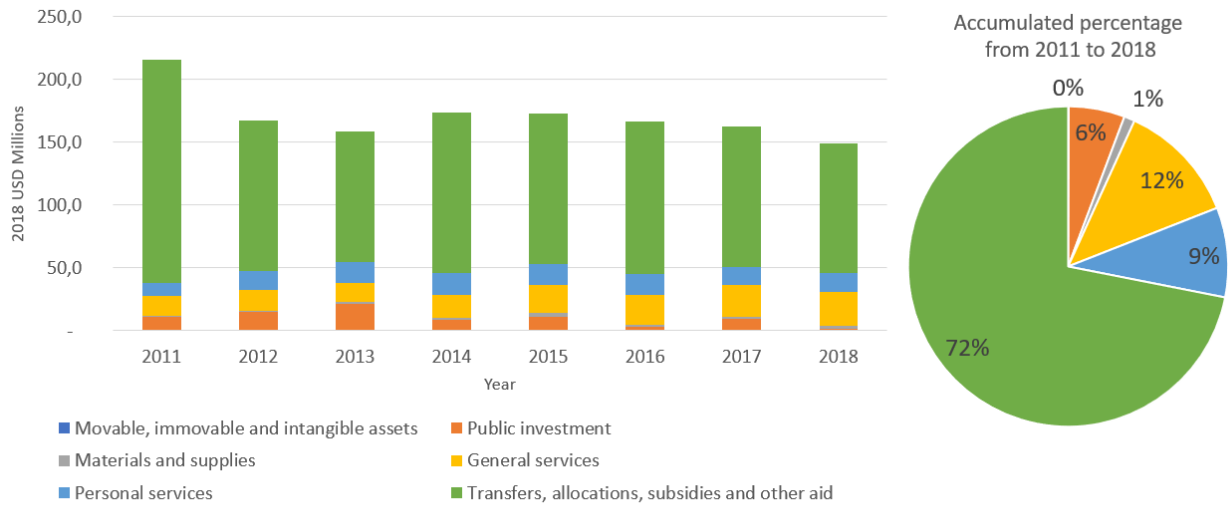
Table 3. Decoupling scenarios, assuming that decoupled subsidies are added to one-time transfer committed by the Federal administration to 193,200 beneficiaries

Decoupling scenarios	Decoupled amount (MXP)	Decoupled amount (2018 USD)	As % of funds committed by Federal administration (MXP 1,391.7M, as of April 21, 2020)	Additional direct transfer (MXP) to 193,200 beneficiaries	Weeks of basic basket of good for a 4-member rural household
Scenario 1: Fuels subsidies	570.0M	29.6M	41%	2,951	2.7
Scenario 2: Fuels subsidies + Fleet modernization	650.2M	33.8M	47%	3,366	3.1
Scenario 3: All bad subsidies	724.9M	37.7M	52%	3,752	3.4

Table 4. Decoupling scenarios, assuming that decoupled subsidies are (I) allocated via a one-time transfer of MXP 7,200 to beneficiaries not reached by the Federal administration's transfer; and (II) divided by MXP 4,679 which is the price of a 4-member rural household's monthly basic basket of goods.

Decoupling scenarios	Decoupled amount (MXP)	Decoupled amount (2018 USD)	Additional fishers receiving MXP 7,200 (I)	Number of 4-member rural household's monthly basic basket of goods (II)
Scenario 1: Fuels subsidies	570.0M	29.6M	79,178	121,824
Scenario 2: Fuels subsidies + Fleet modernization	650.2M	33.8M	90,310	138,951
Scenario 3: All bad subsidies	724.9M	37.7M	100,684	154,913

Figure 1. Budget spent by CONAPESCA



Data from SHCP (2019)

Figure 2. Evolution of Mexican fisheries subsidies (2011-2018)



Data from Leal-Cota (2020)