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Evaluation of the impact of unemployment insurance on the socioeconomic conditions of small-scale fishers

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Summary

The Unemployment Insurance for Small-scale Fishers programme, or “Seguro-Defeso”, is related to one of the fisheries management measures in Brazil, namely the closed fishing season or “Defeso”, which seeks to ensure the conservation of exploited stocks and the sustainability of fishing by restricting the permitted fishing period for certain species. The Seguro-Defeso is intended for small-scale fishers who are impacted by the closed season. It amounts to a minimum wage that is paid as financial compensation during the months of the closed fishing season. For the first time since the benefit was introduced 30 years ago, a study conducted by the Food and Agriculture Organization of the United Nations (FAO), in partnership with the International Policy Centre for Inclusive Growth (IPC-IG), evaluated the socioeconomic impacts of this social protection programme on small-scale fishers and their families.¹



¹ This evaluation is the result of an agreement between FAO and the IPC-IG. The design of the evaluation benefitted from other items produced under this agreement, including a review of the legal framework of Seguro-Defeso, secondary literature, and an analysis of descriptive data from the Unemployment Insurance Management Database from the Ministry of Economy (BGSD) and the Unified Registry of Social Programs of the Federal Government of Brazil. The IPC-IG team included Diana Sawyer and Fabio Veras Soares (coordinators), José Silva, Tamara Santos, Marília Rocha, Luca Lazzarini, Carolina Bloch, Mariana Hoffmann, Laura Botega, Victor Tarifa Lopes, Karen Pereira, Ana Hermeto and Marina Oliveira. The FAO team included Daniela Kalikoski (coordinator), Mariaeleonora Dandrea, Ervin Prifti, Nicholas Sitko, Fortuna Derrico and Daniella SalazarHerrera. Finally, the work benefitted from comments by Fabio Hazin (in memoriam), Ana Silvino, José Augusto Aragão, Sérgio Matos and Danielle Viana. The research teams would like to thank the Social Information Center (NINSOC) of the Instituto de Pesquisa Econômica Aplicada for making it possible to build the database for evaluation by linking the BGSD database with socioeconomic information from the Unified Registry.

Background



A closed season is one of the measures applied by Brazil's National Policy for Sustainable Development of Fisheries and Aquaculture (Brazil, 2009, Art. 3, IV) to control fishing activities. It aims to ensure the sustainable use of fishery resources, while also considering the economic and social impacts of the measure on the livelihoods of communities dependent on fishing. Closed seasons are defined by species and by coastal zone or hydrographic basin and can sometimes involve regulation by more than one Brazilian state. The legal instruments that regulate the closed season should be evaluated periodically to ensure their effectiveness in managing the species targeted by the policy. However, the legal instruments relating to the closed season are outdated, and the lack of statistics on fishing is a major obstacle to the evaluation of the closed season policy itself, and its effectiveness in managing the target species.

The Seguro-Defeso, therefore, is a programme that combines environmental and social objectives, thus playing a complementary role to the closed season. By compensating fishers for the loss of income derived from fishing during the closed season, the programme aims to prevent overfishing during periods of reproduction and/or recruitment of fish stocks, and provide the financial means for small-scale fishers to survive, while respecting the fishing closures. Because of its design, the Seguro-Defeso is logically and legally intertwined with the regulation of the closed season.

The Unemployment Insurance for Small-scale Fishers, popularly known as “Seguro-Defeso”, is a benefit directed at professional small-scale fishers. It aims to provide financial compensation for the loss of income during the period in which fishing activity is prohibited. Seguro-Defeso is conceived as an integral part of the Unemployment Insurance Program – a pillar programme of the Brazilian social protection system – because the fishers’ situation during the closed season is analogous to involuntary unemployment, i.e. for reasons beyond his or her control, the fisher is unable to work and support himself or herself through alternative sources (Campos and Chavez, 2014). For each month of the closed season, up to a maximum of five months per year, the fisher is entitled to receive an amount equivalent to the minimum wage.

This policy brief presents the main findings of an impact assessment of the Seguro-Defeso unemployment insurance on the socioeconomic conditions of its beneficiaries and members of beneficiaries’ households. The impact assessment was conducted by the IPC-IG in partnership with FAO. Although it is not one of its main goals, it is expected that the Seguro-Defeso benefit provided to fishers during the closed fishing season will provide them with a stable financial situation and, consequently, prevent them from adopting measures that could compromise the well-being of their families in the short and long term. Negative coping strategies might include (i) allowing underage children to work and supplement the family income, thus helping to maintain or improve socioeconomic indicators of the small-scale fishers’ families; or (ii) practicing illegal fishing during the closed season, thereby compromising the sustainability of resources such that there is no benefit of the closed season for the conservation of fishery resources. The FAO/IPC-IG socioeconomic impact evaluation also analysed subjects such as the educational level of children and whether they attend school; the participation in the labour market of the adult members of the families; and the condition of the homes in which they live. The study did not aim to analyse whether the beneficiaries of the unemployment insurance meet the conditions determined by the legislation to gain access to the benefit, i.e. to what extent possible inclusion errors might

occur. The databases used for the analysis pertain to the actual beneficiaries of the payments. An analysis of errors of inclusion or exclusion relating to access to the benefit would require a deeper investigation of the beneficiaries, with the collection of specific data for this purpose.

Future studies may also consider an analysis of the effectiveness of the fisheries policies, closed seasons and the Seguro-Defeso for the preservation of species and fishing activity, and the need to review and update the closed seasons in Brazil. The lack of statistics on fishing activity is one of the main impediments to such an analysis, as shown by the studies conducted by FAO in partnership with the Secretariat of Aquaculture and Fisheries and the Apolônio Salles Foundation for Educational Development on the closed seasons applied to continental fisheries in the northeast region of Brazil.

Implementation of the unemployment insurance

The Seguro-Defeso is managed by a large number of legal instruments that regulate both the fishing activity and the unemployment insurance programme. Thus, the unemployment insurance is related to issues such as the definition, classification and registration of small-scale fishers, and the definition of the “specially insured” within the social security system. Consequently, the number of insured people can be affected by changes in the regulation and governance of fishing activity, as well as revisions of the Unemployment Insurance Programme and the financing of social security itself.

Following recent changes to the institutional responsibilities contained in the National Policy for Sustainable Development of Fishing Activity, through Law no. 13844 of 18 June 2019, it is up to the Ministry of Agriculture, Livestock and Supply (MAPA) to regulate the fishing and aquaculture policy, including the management of the closed seasons. The inspection of fishing, especially during the closed seasons, is the responsibility of the Ministry of Environment (MMA), through the Brazilian Institute of Environment and Renewable Natural Resources and other environmental inspection agencies that form part of the National Environment System – Sisnama.

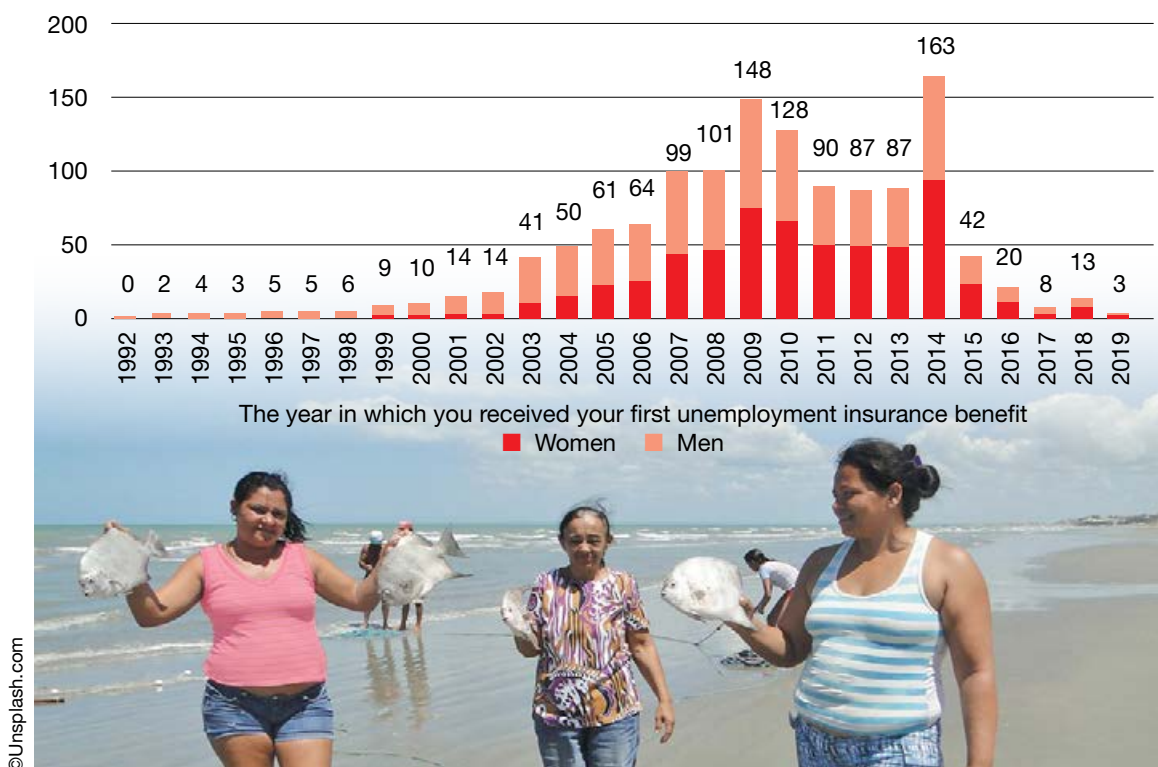
The institutions involved in the implementation of the Seguro-Defeso include:

- MAPA is responsible for the management of the General Registry of Fishing Activities (RGP). Small-scale fishers must be recorded in the RGP to legally undertake fishing activities and to receive the Seguro-Defeso unemployment benefit.
- The National Institute of Social Security (INSS) is responsible for receiving and processing applications for unemployment insurance and for the qualification of the beneficiaries.
- The Workers’ Support Fund is, among other purposes, intended to finance the Unemployment Insurance Program (including Seguro-Defeso). The fund is managed by the Deliberative Council of the Workers’ Support Fund, a tripartite institution composed of representatives of workers, employers and the government, which acts as the fund’s manager.
- The Special Secretary of Social Security and Labour of the BGSD, is responsible for the inspection and coordination of the social security sector (including unemployment insurance), while the Federal Savings Bank is responsible for the payment of the benefits. The sectoral legislation (social security and fishing), as well as the regulatory framework of the unemployment benefit, has been subject to numerous changes over time, including the definition of criteria to access the Seguro-Defeso benefit.

Since the introduction of the current regulatory framework (Law no. 10779/2003), the legislation has been changed several times, resulting in an increase or decrease in the number of

beneficiaries.² Figure 1 shows the total number of beneficiaries according to the year in which the beneficiary received the first installment of the unemployment insurance. Note that there are significant changes in the number of beneficiaries in some years. These are associated with changes in legislation. For example, in 2003, when the regulatory framework was promulgated (Law no. 10779/2003), the total number of new beneficiaries was more than double the previous year, and in 2009, when the General Law of Fisheries (Law no. 11959/2009) was introduced, there was an increase of almost 50 percent in the number of new beneficiaries.

Figure 1. Total unemployment insurance beneficiaries by year of first benefit and gender (in thousands), 1992 to 2019



Source: Authors' own elaboration based on data from BGSD (1992 to 2019).

Changes in the criteria for small-scale fishers affected by the closed season to gain access to the Seguro-Defeso benefit, together with changes that occurred in the regulatory framework, provide an example of the complexity of the implementation of the Seguro-Defeso programme. From a social security point of view, small-scale fishers can be identified as compulsorily insured under the General Regime of Social Security (RGPS) within the category of “specially insured”. Small-scale fishers are defined by laws no. 8212/91 (Art. 12, paragraph VII, letter B) and 8213/91 (Art. 11, paragraph VII, letter B) as those who, individually or in a domestic system, with the possible help of unpaid third parties, count on fishing as their main profession or main means of subsistence.

In 2009, law no. 11959/2009 was enacted, serving as a general legal framework for the fishing sector under the National Policy for Sustainable Development of Aquaculture and Fishing. This law did not change the regulatory framework of unemployment insurance, but broadened the

² Law no. 10779/2003 was amended by Law no. 13134 of 16 June 2015; and by decrees No. 8424 and No. 8425 of 31 March 2015, and no. 8967 of 23 January 2017.

concept of small-scale fishing to include fish workers, those involved in making and repairing fishing gear and small boats, and in the processing of small-scale fishing products. This concept is used by the Ministry of Fisheries and Aquaculture for the RGP, and as seen in Figure 1, it has had an impact on the number of beneficiaries of the Seguro-Defeso.

CODEFAT Resolution 657/2010 determined that, for the purpose of the unemployment insurance benefit, the definition of small-scale fishing was intended to cover exclusively the capture of species for commercial purposes and species protected by the closed seasons, thus excluding those fishers involved in non-commercial activities, as well those as in pre- and post-capture activities. However, the fishers and fish workers excluded by CODEFAT Resolution 657/2010 are categorized as small-scale fishers by the RGP. The most recent Decree 8967/2017 states the need to consider alternative forms of management and sustainable use of fishery resources through a joint effort of MAPA and MMA. In addition, it determined that the unemployment insurance would not be released in instances where there are alternatives to fishing during the period of the closed season. It also determined that the Executive could make the payment of the Seguro-Defeso benefit conditional on the participation in training courses of at least 160 hours of initial and continuing professional qualification. These measures have already resulted in a significant reduction in the number of new beneficiaries, as can be seen in Figure 1.

Since 2019, the profile of a beneficiary of the Seguro-Defeso unemployment insurance includes all professional small-scale fishers whose livelihood depends on fishing, more specifically:

- The beneficiary must have been a professional fisher for at least one year prior to receiving the benefit, which means the fishing must be of a professional nature and geared towards commercialization. The fisher must have been registered in the RGP for at least one year.
- The fishing must be done without boats or with small boats.³
- The work regime must be autonomous or within a family economy, with its own means of production or a partnership contract. No employment relationship is allowed.

Other requirements are:

- Beneficiaries must hold Brazilian nationality or be a permanent resident.
- Beneficiaries must have paid the social security contribution, which implies the condition of “specially insured” of the INSS.
- The fisher must not be a beneficiary of other income transfers or of the continuous benefit of social assistance or of social security, except for accident-aid, aid extended to the family of a beneficiary who is jailed, or death pension. In the case of the *Bolsa Família* Program, the payment of this welfare benefit is suspended for the period in which the insured receives the Seguro-Defeso benefit.

The multifaceted nature of unemployment insurance requires the involvement of a complex network of institutions and programmes and this results in a high degree of legal complexity for the beneficiaries. Added to which, there have been changes in the criteria for accessing the benefit. Consequently it is clear that beneficiaries cannot be treated as a homogeneous group when evaluating the Seguro-Defeso programme, and the evaluation strategy adopted by FAO/IPC-IG researchers needed to take this heterogeneity into account.

³ According to Art.10, § 1, I, of Law no. 11959/09, small vessels are characterized as those with gross tonnage (GT) equal to or less than 20 GT.

The impact assessment of the Seguro-Defeso insurance

Methodology and results

Both the review of the literature on unemployment insurance and the analysis of the legal framework point to the severe limitation of statistics relating to fisheries and fishers. Such statistics are essential to inform decision-making on fisheries management measures, including the regulation of fishing seasons, and of the RGP. The Office of the Comptroller General evaluated the RGP in 2016 and highlighted its ineffectiveness due to the unreliability of the information on fishers, the lack of oversight by competent bodies, and the absence of penalties for submitting false information.⁴

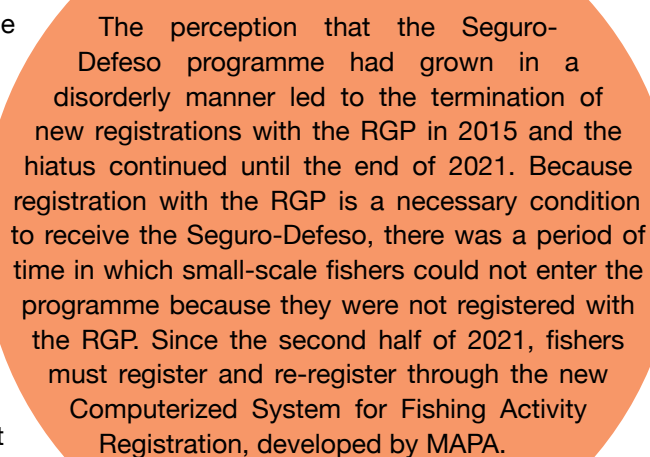
In the view of several public agents, these administrative shortcomings can lead to inclusion errors that are believed to be significant. This is because of the self-declaratory nature of some of the eligibility conditions.

The literature review found that although many studies documented the characteristics and context of the Seguro-Defeso programme, none of them conducted a classic impact analysis with the aim of identifying a causal relationship between access to unemployment insurance and the socioeconomic conditions of the beneficiary and his or her family.

To overcome the lack of data on fishers, the impact evaluation was based on a database created by merging administrative data on beneficiaries from the Unemployment Insurance Management Database of the BGSD, and the Unified Registry for Social Programs of the Federal Government.⁵ The BGSD provides information about the unemployment insurance benefit – such as applications and benefit payment dates – while the Unified Registry contains information about the socioeconomic status of the families that are the target of social programmes.⁶

The linking of the Unemployment Insurance Management Database with the Unified Registry for Social Programs allowed for an unprecedented analysis of the profile of beneficiaries found in the two registries. The comparison between beneficiaries who were linked to the Unified Registry and those who were not indicates there is no marked difference in the characteristics analysed.

The final database used in the study contains information on the socioeconomic characteristics of the beneficiaries and the unemployment insurance benefit received by them. The statistical analysis of the main characteristics observed in the Unified Registry database revealed:



The perception that the Seguro-Defeso programme had grown in a disorderly manner led to the termination of new registrations with the RGP in 2015 and the hiatus continued until the end of 2021. Because registration with the RGP is a necessary condition to receive the Seguro-Defeso, there was a period of time in which small-scale fishers could not enter the programme because they were not registered with the RGP. Since the second half of 2021, fishers must register and re-register through the new Computerized System for Fishing Activity Registration, developed by MAPA.

⁴ The Secretary of Fisheries and Aquaculture is currently reforming the RGP.

⁵ The Unified Registry is a registry of families that are the target of social programmes. It seeks to incorporate those families with monthly incomes of up to three times the minimum wage.

⁶ After linking the BGSD and Unified Registry databases, we obtained a sample that represents 51 percent of the beneficiaries of the unemployment insurance present in the Unified Registry. Importantly, by restricting the database to the most recent period (2016 to 2018), it was possible to link 95.5 percent of the beneficiaries of the unemployment insurance in the BGSD database with those in the Unified Registry.

- 90 percent are non-white and more than 70 percent are heads of households.
- 60 percent are women.
- Only 4 percent of the beneficiaries identify themselves as Indigenous or *Quilombolas*.
- About 90 percent of the beneficiaries are located in the northeast and northern regions. There is a concentration of beneficiaries in the states of Pará and Maranhão (50 percent), followed by Bahia and Amazonas (20 percent) and other states in the northeast (20 percent).
- 50 percent of the beneficiaries are over 40 years old and about one third of them are between 30 and 39 years old.
- Of the beneficiaries for which there was information on their level of education, about 65 percent have not completed elementary school (i.e. they have up to nine years of schooling).
- Approximately 50 percent of the beneficiaries reported no employment relationship. Of those who declared an occupation, 90 percent are self-employed or temporary workers in rural areas.
- Per capita family income: 86 percent of the total number of beneficiaries earn a quarter of the minimum wage, and only 6 percent earn more than half of the minimum wage.

The analytical procedures utilized in the impact evaluation considered the complexity created by the changes in the eligibility rules of the unemployment insurance. The methodologies used are based on the comparison between beneficiaries according to the time of exposure to the programme (i.e. the number of years that the household received the benefit) and the year that the beneficiary was included in the programme. Thus, the methodology accommodated the differences in the definition of the criteria for selecting beneficiaries of the Seguro-Defeso based on changes in the legislation.⁷

The methodology used in the evaluation made it possible to assess how access to and the permanence of the unemployment insurance affected the socioeconomic conditions of the beneficiaries (those registered with both the BGDS and the Unified Registry). The socioeconomic conditions analysed can be divided into three dimensions: (1) education and work of children and young adults; (2) employment status of the working-age population; and (3) housing characteristics.

The results indicate that the programme has a statistically significant impact on all three dimensions and for several of the indicators within each dimension. Specifically, in relation to early childhood education, it is noted that households with longer exposure time, or which entered the programme earlier, have higher school enrollment rates and a lower proportion of children and adolescents working outside the home.⁸

With respect to the labour market indicators for working-age household members, it is worth noting that all households present relatively low levels for all indicators in this dimension. The participation rate of adult members in the labour force presents a reduction with the intensity of the treatment, that is, the longer the exposure time, the lower the levels predicted for this indicator.

We conclude that the greater the exposure to the programme's benefits, the higher the percentage of children enrolled in school and the lower the percentage of youth out of school or out of work. The results also indicate that adult family members of beneficiaries avoid the need to seek alternative employment. With regard to housing quality, the results show the effects tend to be medium-term and are more prominent in the components related to improvements in household flooring and sanitary conditions (FAO & IPC-IG, 2022 [forthcoming]).

⁷ Five treatment groups were used: 1991 to 2002, 2003 to 2008, 2009, 2010 to 2014, and 2015 to 2018. For more details on the methodology see FAO & IPC-IG, 2022 (forthcoming).

⁸ It is worth noting that the level of incidence of child labour is low in this population. The proportion of young adults (18 to 26 years old) who are studying or working increases with exposure to the programme in the medium term – between 2 and 6 years of exposure.

Conclusions and recommendations

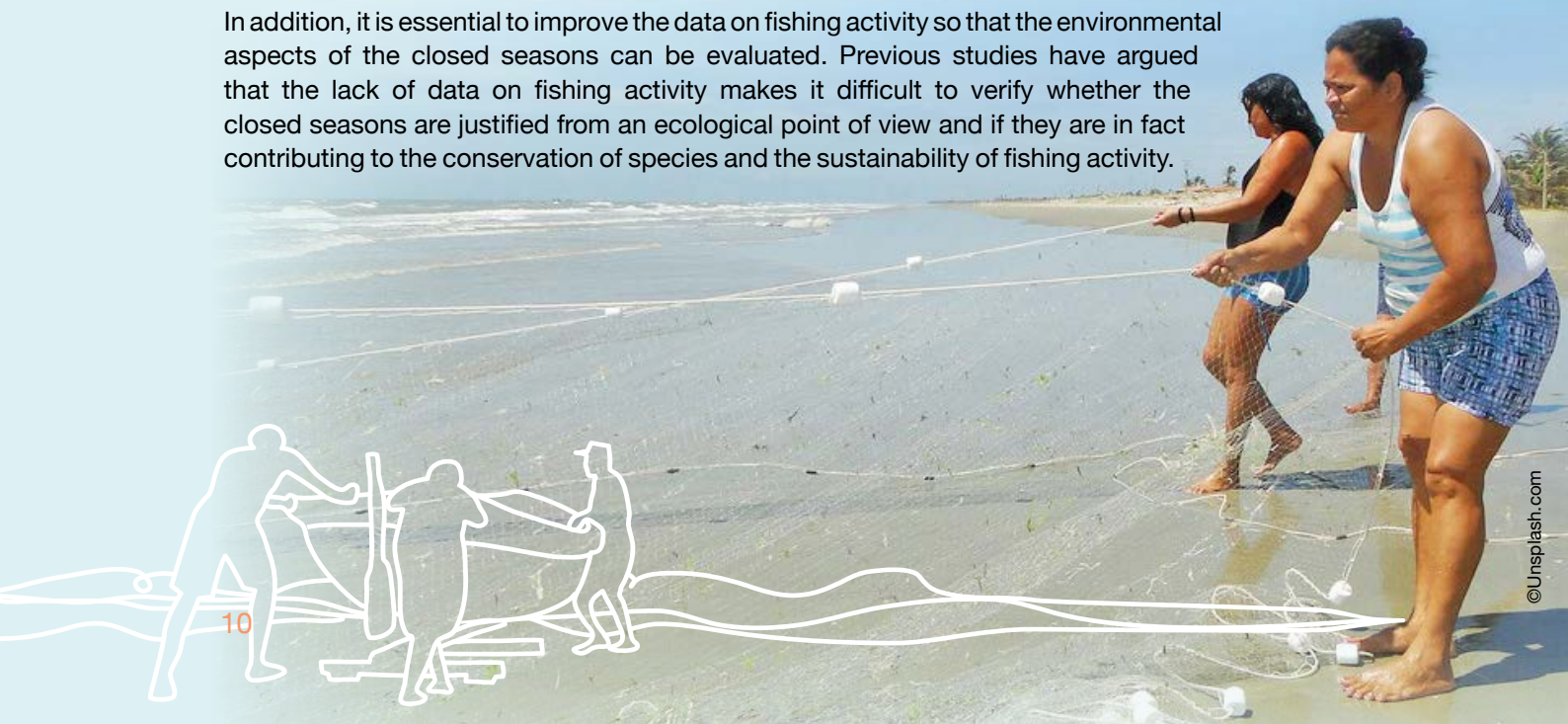
In addition to the important findings on socioeconomic outcomes for the families of the beneficiaries of the unemployment insurance, the study highlights the potential of the administrative records to support programme evaluations through the successful linking of the two databases – those of the BGSD and the Unified Registry for Social Programs of the Federal Government. This may be seen as a starting point for linking the BGSD database with other socioeconomic databases. Another alternative is to improve the existing database – mainly the RGP. Registration with the RGP is a prerequisite for participating in the Seguro-Defeso programme, but the database contains incomplete and inconsistent socioeconomic data. Making socioeconomic information mandatory for registration with the RGP registry could solve some of these problems.

Although it is not possible to assess whether the beneficiaries analysed in the evaluation meet all the eligibility criteria for the unemployment insurance (especially if during the unemployment period they did not engage in fishing activity), the results show the importance of the benefit for the socioeconomic well-being of these families. They also show that the beneficiaries have no alternative income, according to the Unified Registry, and most are in the lowest income bracket.

In the context of a possible review of the unemployment insurance programme and/or the closed seasons, it is recommended that potentially negative impacts on the income of this population, that lives in a vulnerable situation, should be taken into account. The identification of ineligible fishing families via the Unified Registry would allow for targeted social assistance and productive inclusion actions, including those involving economic alternatives to fishing or related activities during the closed season. Thus, it is recommended to monitor and evaluate the socioeconomic situation of families with members who may lose the status of beneficiaries of unemployment insurance, particularly subsistence fishers who are not eligible for the programme or who, despite being involved in small-scale fishing activities, do not catch the species protected by the closed season.

The data available for this evaluation did not allow inferences to be made about governance issues, such as control of demand for, and access to, unemployment insurance. Nor did the data allow inferences to be made about supposedly undesirable effects or adverse incentives, e.g. reworking of the fishing activity, with precarious working conditions; people entering the fishing activity because of the existence of the benefit and thereby contributing to overfishing; and the use of unemployment insurance for electoral purposes, etc. The collection of qualitative data and the observation and continuous evaluation of the programme, in addition to improving administrative databases such as the RGP, are some essential measures that would allow a broader analysis of the impacts of the Seguro-Defeso unemployment insurance.

In addition, it is essential to improve the data on fishing activity so that the environmental aspects of the closed seasons can be evaluated. Previous studies have argued that the lack of data on fishing activity makes it difficult to verify whether the closed seasons are justified from an ecological point of view and if they are in fact contributing to the conservation of species and the sustainability of fishing activity.





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