

Chapter 9

RISK MANAGEMENT IN TURKISH INDUSTRIAL FISHERY; PROBLEMS AND RECOMMENDATIONS

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AN OVERVIEW ON FISHING OCCUPATIONAL HEALTH AND SAFETY

Over 58 million people are engaged in the primary sector of capture fisheries and aquaculture. Of these, approximately 37 percent are engaged full time, 23 percent part-time, and the remainder either occasional fishers or of unspecified status. Over 15 million are working full-time on board fishing vessels (ILO, 2018). Fisheries include special circumstances that make itself special in comparison to other sectors. One of these, very common around the world, is that of not paying fishers a set wage but instead paying them based on a share of the catch. While this has certain advantages for the fisher, the system may lead to very long working hours, a tendency to remain at sea during bad weather (which would otherwise motivate fishers to return home) and thus greater risks and more accidents. Accidents and injuries are very often during operations with risky catches or under rough weather conditions (Windle et al., 2008). Therefore fishing is acknowledged to be the most dangerous and risky occupation in many parts of the world. Capture fisheries have amongst the highest occupational fatality rates in the World (ILO, 2018). While fishing is inherently dangerous, the actual levels and types of occupational health and safety (OHS) risks vary across fisheries and over time, and the most common risk factors are environmental, social, economic, cultural, and regulatory factors (Windle et al., 2008). Fishing occupational fatalities and injuries occur at rates much higher than the national averages for all occupational fatalities and injuries, regardless of the level of industrialization (Petursdottir et al., 2001). Therefore the concept of risk management becomes very important in the capture fisheries sector.

Risk evaluation involves the determination of a quantitative or qualitative value for the risk. Quantitative risk evaluation requires calculations of the two components of the risk: the probability that the risk will occur, and the severity of the

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aspiration to family with concerns about the future (can be named as a psychological risk factor) generally result in occupational diseases, which are generally very hard to treat.

At this point, the model on risks and their functions suggested by Sethi (2010) can be taken as a base for the Turkish fishing industry. Consequently, risk sources can clearly classified into three main bodies as “biological resource”, “Management agencies”, and “Fishermen, fishing communities, fishing industry”. Afterwards, the function of the each class should be noticed such as “habitat provision” under the title of biological resource, “regulation and allocation of harvest” in management agencies and “personal injury, equipment failure” within the title of fishermen, fishing communities, fishing industry and finally all potential risks must be given in order to conduct MCDM by using suitable risk assessment methods.

This study addressed the concept of risk management in fisheries, which was not previously mentioned in the Turkish fishery sector. Extensive researches and national projects are needed in order to create a risk management plan for Turkish industrial fishery.

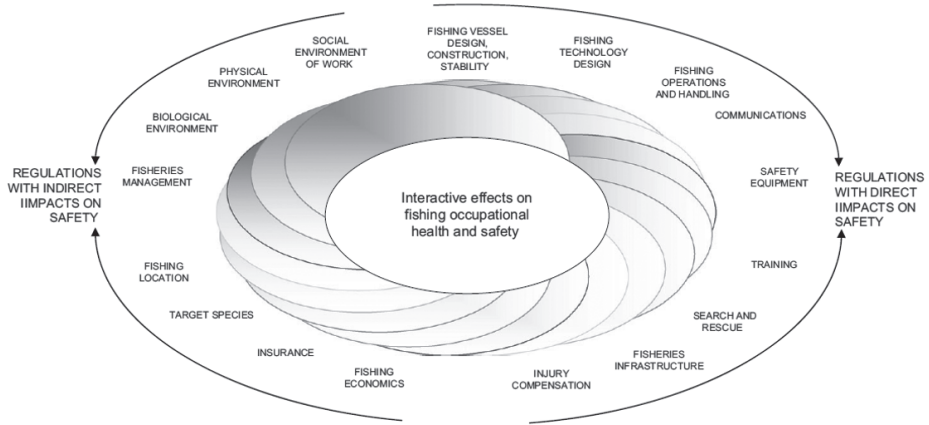


Figure 1. Classification of risk sources in fishing OHS from a conceptual perspective with possible interactive effects (Windle et al., 2008).

REFERENCES

- Anonymus (2013). 28741 Sayılı, T.C. Çalışma ve Sosyal Güvenlik Bakanlığı'ndan. Balıkçı Gemilerinde Yapılan Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik. 20 Ağustos 2013. (16/05/2019 tarihinde <http://www.resmigazete.gov.tr/eskiler/2013/08/20130820-2.htm> adresinden ulaşılmıştır).

- Ayeko M. (2002). Causes and contributing factors—analysis of accidents involving fishing vessels in Canada. In: Lincoln JM, Hudson DS, Conway GA, Pescatore R, editors. *Proceedings of the international fishing industry safety and health conference*. Cincinnati, OH: National Institute for Occupational Health. (pp. 197–210).
- Ben-Yami M (2000). *Risks and dangers in small-scale fisheries: an overview*. International Labour Organization.
- BSI - British Standard Institutions (2007). Occupational health and safety management systems – Requirements, BS OHSAS 1800.
- Cochrane, K.L. (2002). *A fishery manager's guidebook. Management measures and their application*. FAO Fisheries Technical Paper No. 424. Rome, FAO.
- Crutchfield, J.A. (1973) Economic and political objectives in fishery management. *Transactions of the American Fisheries Society* 102, 481–491.
- Doğanyılmaz Özbilgin, Y. & Tok, V. (2017). Investigation of Mersin bay trawl fishermen's safety at sea awareness. *Ege Journal of Fisheries and Aquatic Sciences*, 34 (2), 139-144. DOI: 10.12714/egejfas.2017.34.2.04.
- Haimes, Y.Y. (1998) *Risk Modeling, Assessment, and Management*. New York, Wiley.
- Harwood, J. (2000) Risk assessment and decision analysis in conservation. *Biological Conservation* 95, 219–226.
- Havold, J.I. (2010). Safety culture aboard fishing vessels. *Safety Science*, 48, 1054–1061.
- Herath, G. & Prato, T. (2006) *Using Multi-Criteria Decision Analysis in Natural Resource Management*. Burlington, Ashgate Publishing.
- ILO (2018). *Fisheries*. (03.05.2019 tarihinde <http://www.ilo.org/global/industriesand-sectors/shipping-ports-fisheries-inland-waterways/fisheries/lang--en/index.htm> adresinden ulaşılmıştır).
- Kaplan, I.M.& Kite-Powell, H.I. (2000). Safety at sea and fisheries management: fishermen's attitudes and the need for co-management. *Marine Policy*, 24, 493-497.
- Petursdottir, G., Hannibalsson, O. & Turner, J.M.M. (2001). *Safety at sea as an integral part of fisheries management*. FAO Fisheries Circular No.966. Rome, FAO.
- Pfeiffer, L. & Gratz, T. 2016. The effect of rights-based fisheries management on risk taking and fishing safety. *Proceedings of the National Academy of Sciences*, 113 (10), 2615-2620. DOI: 10.1073/pnas.1509456113.
- Sethi, S.A. (2010). *Risk management for fisheries*. *Fish and Fisheries*, 11, 341-365.
- Soykan, O. (2018). Occupational risk factors of commercial fishing in Turkey. *MARFRESH 2018 First International Marine & Freshwater Sciences Symposium*, 18-20 October 2018. Antalya, TURKEY, (pp. 196-199).
- Soykan, O. (2016). A General Evaluation On Occupational Health And Safety in Trawlers Operating in the Aegean Sea, Turkey. *2nd International Congress on Applied Ichthyology & Aquatic Environment*. 10 – 12 November 2016. Messolonghi, Greece, (pp. 333-337).
- Tantoğlu, G. (2016). *Balıkçı gemilerinde yapılan çalışmaların iş sağlığı ve güvenliği yönünden değerlendirilmesi*. T.C. Çalışma ve Sosyal Güvenlik Bakanlığı İş Sağlığı ve Güvenliği Genel Müdürlüğü İş sağlığı ve güvenliği uzmanlık tezi, Ankara, 140 pp.
- Thomas T.K., Lincoln J.M., Husberg B.J. & Conway G.A. (2001). Is it safe on deck? Fatal and non-fatal workplace injuries among Alaskan commercial fishermen. *American Journal of Industrial Medicine*, 40 (6), 693–702.
- TÜİK (Türkiye İstatistik Kurumu). (2019). *Su Ürünleri İstatistikleri 2018*, Ankara.
- Ulukan, U. (2016). Balıklar, Tekneler ve Tayfalar: Türkiye'de Balıkçılık Sektöründe Çalışma ve Yaşam Koşulları, *Çalışma ve Toplum*, 1, 115-142.
- Windle M., Neis, B., Bornstein, S., Binkley, M. & Navarro, P. (2008). Fishing occupational health and safety: A comparison of regulatory regimes and safety outcomes in six countries. *Marine Policy* 32 (4),701–710.