# OBJETIVOS DE DESARROLLO SOSTENIBLE

**2 HAMBRE CERO**

# UPC se une a Alicorp, Mi Banco, Cargill y Juguete Pendiente para promover los emprendimientos de las ollas comunes

En un esfuerzo conjunto por fomentar el espíritu emprendedor y contribuir a la sostenibilidad de las ollas comunes, la Universidad Peruana de Ciencias Aplicadas (UPC), Alicorp, Mi Banco, Cargill y Juguete Pendiente se unieron en el programa "Ollas que Desarrollan". Esta iniciativa tuvo como objetivo brindar capacitación y apoyo a las líderes de las ollas comunes de distintos lugares de Lima Norte, Lima Este y Callao, ayudándolas a establecer emprendimientos complementarios que generen ingresos adicionales y fortalezcan la autonomía de sus comunidades.

Se trabajó con 110 líderes representantes de 55 ollas comunes. Se les brindó capacitación y mentoría en diferentes áreas clave como: ventas, propuesta de valor, conocimiento del cliente, finanzas y contabilidad. La Facultad de Negocios de la UPC desempeñó un papel fundamental en el programa, liderando los módulos de ventas, propuesta de valor y conocimiento del cliente. Asimismo, Mi Banco brindó capacitaciones especia-



lizadas en finanzas y contabilidad, mientras que Cargill proporcionó el capital semilla a los emprendimientos con mayor potencial de desarrollo. La selección de los proyectos más prometedores estuvo a cargo de Juguete Pendiente. Se consideraron criterios como la constancia, participación, viabilidad y desempeño de las líderes de las ollas comunes.

# Nutrición en Comunidad

Durante el semestre 2023-1, los alumnos de la carrera de Nutrición y Dietética de la UPC desarrollaron el proyecto "Nutrición en Comunidad" en los Centros de Atención Residencial (CAR) Divino Jesús y San Miguel de Arcángel del INABIF, en la guardería de Barranco: Cristina Carrera de Lértora, entre otros centros de cuidado infantil.

Esta actividad tuvo como objetivo realizar un diagnóstico nutricional y situacional en la población objetivo para brindarles atención nutricional, pautas y recomendaciones para el Personal de Atención Permanente (PAP) respecto a la dieta equilibrada que deben recibir los niños.
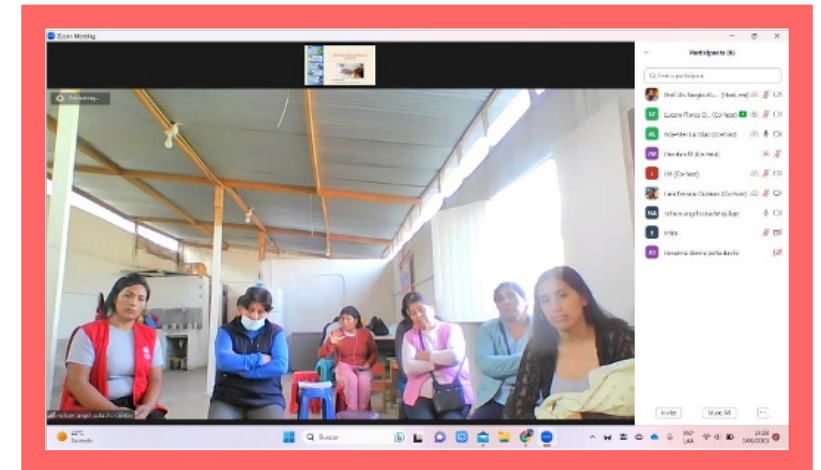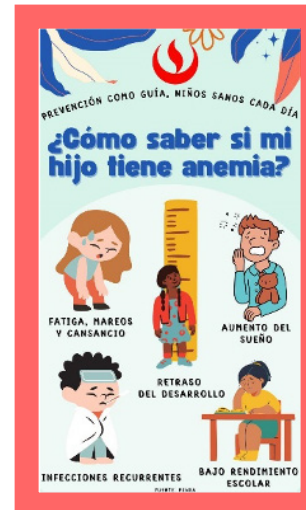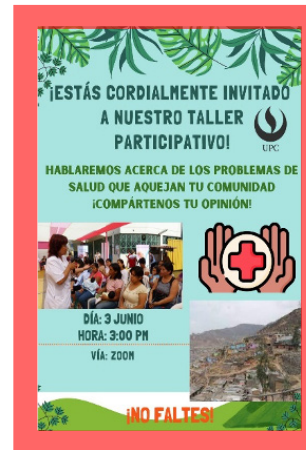
# Campañas de prevención y control de la anemia infantil

Durante el año 2023, los alumnos de la carrera de Medicina de la UPC desarrollaron diferentes actividades que tuvieron como objetivo principal combatir la anemia infantil y la malnutrición. Estas tuvieron lugar en el AA.HH. La Rinconada y la Institución Educativa 7212-627, ubicados en el distrito de San Juan de Miraflores; además del Centro Materno Infantil San Genaro, Guardería Solidaria, PRONOEI N° 9 y la Institución Educativa Inicial 570 Integración, ubicados en el distrito de Chorrillos.

Se realizaron proyectos de intervención dirigidos a los padres a través de charlas, talleres y demostraciones de preparación de alimentos ricos en hierro y el correcto lavado de manos. Finalmente, se aplicó el pre y post test a los participantes con el propósito de difundir las causas y así disminuir la prevalencia, propiciando el crecimiento y desarrollo cognitivo adecuado en la población infantil de las comunidades intervenidas.

# Campañas de Prevención de sobrepeso y obesidad





Durante el año 2023, los alumnos de la carrera de Medicina de la UPC desarrollaron actividades que tuvieron como objetivo contribuir con la disminución de la mortalidad causada por la obesidad en adultos de 30 a 60 años de las comunidades del AA.HH. Pacífico de Villa y la Olla Común "Cerro de Pasco", ubicados en el distrito de Chorrillos.

Se realizaron talleres participativos donde se analizó el valor nutricional del menú ofrecido en la Olla Común "Cerro de Pasco" y en el AA.HH. Pacífico de Villa. Se calculó el índice de masa corporal, el perímetro abdominal y otros riesgos de los usuarios de las ollas comunes.

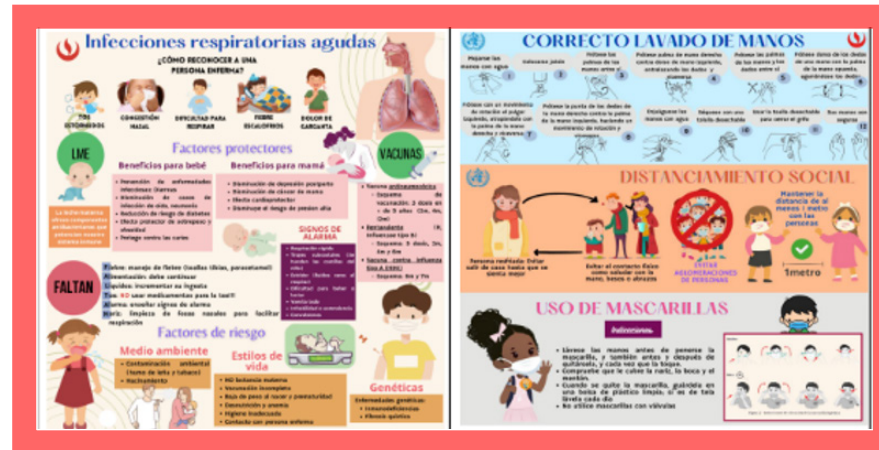Una vez analizado el problema y las alternativas de solución, se brindaron charlas informativas sobre la prevención de la obesidad y la diabetes. Asimismo, se desarrollaron actividades demostrativas sobre cómo debería ser el plato ideal. Finalmente, se brindó una charla educativa sobre alimentación saludable y se desarrolló un taller de actividad física.

# Disminuir la prevalencia de complicaciones por infecciones respiratorias agudas en niños menores de 5 años

Durante el año 2023, los alumnos de la carrera de Medicina de la UPC desarrollaron esta actividad que tuvo como objetivo disminuir la prevalencia de complicaciones por infecciones respiratorias agudas en niños menores de cinco años en el AA.HH. Pacífico de Villa, ubicado en el distrito de Chorrillos. Esto se desarrolló mediante la difusión de conocimientos de prácticas saludables en la comunidad.

Una vez identificado el problema, se realizó la intervención desarrollando talleres sobre lactancia materna, inmunizaciones, demostración de loncheras nutritivas, sesiones demostrativas del lavado correcto de manos y el uso apropiado de las mascarillas.

# Concurso de Proyectos de Desarrollo Turístico de la Ciudad al Campo- (3 Edición)

La Facultad de Administración en Hotelería y Turismo de la UPC y StartUPC, en alianza con el Instituto Iberoamericano de Turismo Rural (IBEROATUR), convocaron a estudiantes de las carreras de turismo, hotelería, gastronomía o afines de universidades públicas y privadas a la 3ra Edición del Concurso de Proyectos de Desarrollo Turístico de la Ciudad al Campo, que se realizó en modalidad virtual el 22 y el 23 de noviembre.

Se seleccionaron proyectos que tuvieron como característica principal el proponer nuevas alternativas de empleo e ingresos que permitan diversificar las actividades agrícolas y agroindustriales de los pobladores rurales, demostrando a través de los proyectos beneficios para los propietarios de los emprendimientos y para los pobladores rurales dedicados al agro.



El objetivo de esta competencia fue fomentar proyectos que impulsen el flujo turístico hacia áreas con un gran potencial y en desarrollo, con un enfoque especial en el turismo rural como: el agroturismo, enoturismo, gastro turismo y otras categorías relacionadas.

# Campaña "Nutrición en Comunidad"

Entre marzo y agosto de 2023, se realizó la campaña "Nutrición en Comunidad" en el Centro Universitario de Salud (CUS) del campus Villa de la UPC, con el objetivo de brindar atención integral enfocada en nutrición y dirigida para la comunidad de Chorrillos y distritos aledaños.

Se brindó consejería a los pacientes respecto a la práctica de los hábitos alimenticios adecuados y se realizó la evaluación de peso, talla y dosaje de hemoglobina, y glucosa para todas las edades.



EVALUACIÓN Y ORIENTACIÓN NUTRICIONAL GRATUITA*

Incluye dosaje de hemoglobina y glucosa para todas las edades

del 13 al 23 de marzo

*Capacidad limitada
*Consultar restricciones
*Exámen de glucosa se realizará de 8 a.m. a 9 a.m.

Escríbenos al **941 060 119**

# UPC y Juguete Pendiente realizaron el diagnóstico de las ollas comunes inscritas en el programa "Ollas que desarrollan"

En junio de 2023, la carrera de Comunicación e Imagen Empresarial de la UPC participó en conjunto con el grupo voluntario "Imagina Voluntario", de la organización Juguete Pendiente, en la realización de un diagnóstico sobre la situación de más de 50 ollas comunes que se inscribieron en el programa "Ollas que desarrollan", gestionado por Alicorp y la UPC.

Este diagnóstico, que se realizó en los distritos de Villa el Salvador, Pachacámac, Villa María del Triunfo, San Juan de Lurigancho, Ancón, Santa Rosa y Ventanilla, se dio para conocer las necesidades y limitaciones que afrontan estas organizaciones para operar en sus zonas.





El objetivo de la actividad fue permitir que el grupo "Imagina Voluntario" conociera diferentes realidades socioeconómicas y construya con su trabajo el cambio que necesitan para crecer y mejorar.

# UPC se une a la lucha contra la anemia a través de la Campaña Anemia Cero

En el marco de su compromiso en la lucha contra la anemia, la Universidad Peruana de Ciencias Aplicadas (UPC) realizó en el 2023 la "Campaña Anemia Cero" en alianza con la ONG Peruanos por Peruanos. Esta iniciativa, en su primera etapa, tuvo como objetivo detectar y prevenir la anemia en hijos de colaboradores de las instituciones UPC, UPN, Cibertec y Laureate, en edades comprendidas entre 0 y 3 años.

Durante los meses de julio y noviembre, los colaboradores tuvieron la oportunidad de llevar a sus hijos a las instalaciones de UPC para una evaluación gratuita de detección de anemia. Adicionalmente, se brindó consejería especializada en nutrición para promover una alimentación adecuada y prevenir futuros casos de anemia.

# COVID-19 and Food Insecurity in Latin America and the Caribbean

**Authors:** Hernández-Vásquez, A., Visconti-Lopez, F.J., Chacón-Torrico, H., Azañedo, D.

**Abstract:** The objective was to determine the prevalence of household food insecurity (FI) in Latin America and the Caribbean (LAC) during the COVID-19 pandemic. Secondary analysis was performed using the waves 1 to 3 of the 2020 COVID-19 High Frequency Phone Surveys in 13 LAC countries. The countries with the highest FI in the first wave were Honduras (60.3%), Peru (58.1%) and Ecuador (57.9%). Likewise, the countries with the greatest differences in the prevalence of FI between the first and last waves in percentage points (PP) were Peru (−29), Guatemala (−27.7) and Bolivia (−21.8). LAC countries face a great burden of FI.

# Demand management process assessment in food supply chains: an empirical study in coffee supply chains from Peru

**Authors:** Flores, R., Lazaro, E., Ramos, E., Coles, P.S.

**Abstract:** High demand management uncertainty and price volatility, food spoilage and other wastes affect operational performance across the food supply chain. The demand management process of the food supply chain can drive improved sourcing and demand fulfilment, minimising the effects of demand variability and meet customer demand. This research creates an evaluation tool based on a literature review of the main processes of demand management in the supply chain. This study evaluates aspects of three principal Peruvian production centres. Data was obtained from farmers, cooperatives, associations, suppliers, intermediaries, and exporters. The results show none of them has yet managed to cover all relevant aspects of demand management, that is, there are still strategic and operational areas in need of further development. Furthermore, with input of experts, we provide a greater understanding of the coffee industry, and other agribusiness sectors of other emerging market economies.

# Green lean method to identify ecological waste in a nectar factory

**Authors:** Erquínigo, A.B., Porras, J.O., Saavedra, H.Q., Chamorro, P.C., Alva, R.M., Carhuapuma, P.V.

**Abstract:** Nowadays, the waste of resources has become one of the biggest problems for industries, due to the serious environmental, social and economic consequences it generates. Therefore, to ensure a production based on sustainable processes, it's essential to have a responsible management of resources, being the first step one of the most important ones, the identification. Thus, the present research work aims to develop and implement a method based on the integration of Green and Lean methodologies to systematically identify ecological waste, taking as a case study a nectar factory in Lima - Peru. Through the implementation of tools such as Environmental Value Stream Mapping, Process Mapping or Failure Mode and Effects Analysis, it was found that the company generated a waste of 1584 litres of water and 38.5 kg of conditioned fruit every month. The identification of green waste is vital, as it is the first link in a long chain that contributes directly to improving the company's efficiency, profitability and reputation, as well as protecting the environment and promoting sustainable development.

# Prevalence and socioeconomic determinants of food insecurity among Venezuelan migrant and refugee urban households in Peru

**Authors:** Hernández-Vásquez, A., Vargas-Fernández, R., Visconti-Lopez, F.J., Aparco, J.P.

**Abstract:** Introduction: Food insecurity (FI) is a public health problem affecting many regions of the world. In Venezuela, the political, social and economic situation experienced since 2010 has caused a mass migration of its population to other countries, including Peru, which, in turn, may have limited access to and availability of food leading to a high nutritional burden in this population. The objective of this study was to determine the prevalence and analyze the determinants of FI in the households of Venezuelan immigrants in Peru.

Methods: A cross-sectional study was conducted using the "Encuesta Dirigida a la Población Venezolana que Reside en el País" (ENPOVE 2022). The dependent variable was moderate-severe FI (yes/no), which was constructed from an eight-item Food Insecurity Experience Scale (FIES) to measure FI at the household level. Poisson log generalized linear regression models were fitted to assess the association between the independent variables and FI. In addition, the reliability of the FIES as a tool for measuring food insecurity in the target population was determined.

Results: A total of 3,491 households with Venezuelan migrants and refugees were included in the analysis. We found that 39.0% of Venezuelan immigrant households in Peru experienced moderate-severe FI. The determinants of FI included socio-demographic characteristics of the household head, and economic and geographical characteristics of the

# Prevalence and socioeconomic determinants of food insecurity among Venezuelan migrant and refugee urban households in Peru

household. Regarding the FIES, we found that the inclusion of 7 of the 8 items had adequate internal consistency and its items assessed the same latent range.

**Discussion:** This study highlights the need to identify determinants associated with FI to design strategies that mitigate the consequences of health crises and strengthen regional food systems, making them more sustainable. Although several studies have evaluated the prevalence of FI in Venezuelan migrant populations in other countries, this study is the first to evaluate the determinants of FI in Venezuelan immigrant households in Peru.

# Food Insecurity and Mental Health among Venezuelan Migrants and Refugees Living in Peru: Secondary Data Analysis of a Cross-Sectional Survey

**Authors:** Hernández-Vásquez, A., Visconti-Lopez, F.J., Rojas-Cueva, A.C., Grendas, L.N., Azañedo, D.

**Abstract:** The objective of this study was to analyze the association between food insecurity and mental health in Venezuelan migrants and refugees residing in Peru using data from the Survey Directed at the Venezuelan Population Residing in the Country (ENPOVE) conducted in 2022. The analysis included 7739 Venezuelan adults. The presence of mental health problems was self-reported, and household food insecurity was measured using the Food Insecurity Experience Scale. The study found that 4 out of 10 participants lived in households with moderate to severe food insecurity, and around 10% reported experiencing some mental health problem in the last month. The study identified a positive association between living in households with moderate to severe food insecurity and having some mental health problem compared to living in households without food insecurity. The findings suggest that food insecurity is a common problem among the Venezuelan migrant population residing in Peru, and measures are required to address this problem and mitigate its consequences on mental health and other health problems. The study highlights the need for international organizations to provide assistance and support to these populations and ensure adequate and sustainable follow-up of food insecurity at the national level. It is also necessary to implement early detection tests for mental health problems in the migrant population, especially in individuals exposed to food insecurity. This study provides relevant evidence for addressing public health in the Venezuelan migrant population residing in Peru.

# Trends in stunting according to regions of Peru and sex: Period 2007-2018

**Authors:** Aparco, Juan Pablo; Morales-Cahuancama, Bladimir; Alvis Chirinos, Katherine; Solis, Gilmer

**Abstract:** Introduction: Stunting shows a downward trend in Peru; however, this behavior is not homogeneous between regions or sex. Objective: To determine the trend of stunting according to political region and sex in Peru during the period 2007-2018. Materials and methods: An observational analytical study was carried out using the databases of the Encuesta Demográfica y de Salud Familiar (ENDES) between the years 2007 to 2018. Regions were ranked according to their relative difference in DCI reduction. The Chi Square Trend test was used to identify significant differences between the years for each region; In addition, the ratio between girls and boys with stunting by region and year was assessed, applying Pearson's Chi-Square test for difference in proportions. Results: At the national level, the DCI was reduced by 17 percentage points, this reduction was significant in 22 of 24 regions. The regions with high performance in DCI reduction were Tacna, Cusco and Madre de Dios, while La Libertad, Cajamarca and Loreto appeared with low performance. In addition, there was a higher frequency of DCI in boys than in girls and in rural areas than in urban areas in most regions, especially in the mountains. Conclusions: During the study period, the stunting was significantly reduced, this change was heterogeneous, showing regions with high and low performance in the reduction. In addition, a greater involvement of the stunting was observed in men under 5 years of age. It is necessary to evaluate the local factors that prevent a high performance in the reduction of stunting.

**Keywords:** Child Malnutrition; Health Surveys; Gender and Health; Child; Trends.

# Socio-demographic, migratory and health-related determinants of food insecurity among Venezuelan migrants in Peru

**Authors:** Ali Al-Kassab-Córdova, David Villarreal-Zegarra, Guido Bendezu-Quispe, Pamela Robles-Valcárcel, Percy Herrera-Añazco, Vicente A Benites-Zapata

**Abstract:**

**Objective:** To evaluate the factors associated with food insecurity (FI) among Venezuelan migrants residing in Peru. Secondarily, to evaluate the psychometric properties of the Food Insecurity Experience Scale (FIES).

**Design:** A cross-sectional study based on secondary data analysis of the 2022 Venezuelan Population Residing in Peru Survey (ENPOVE-2022, from the Spanish acronym) was conducted. FI was measured with the FIES, whose properties were tested using the Rasch model. Multinomial logistic regression was performed to estimate relative prevalence ratios with their corresponding 95 % confidence intervals.

**Setting:** This survey was conducted in February and March 2022 in the eight cities most populated by Venezuelan migrants and refugees in Peru.

**Participants:** Venezuelan migrants and refugees over the age of 18 years living in Peru.

**Results:** A total of 7727 participants were included. Rasch reliability was adequate (0·73). The prevalence of mild, moderate and severe FI was 36·71 %, 31·14 % and 10·48 %, respectively. Being aged 25-34 and 35-44 years, unemployed, uninsured, having no formal education or secondary, illegal status, living in a dwelling with 2-4 and more than 4 people,

# Socio-demographic, migratory and health-related determinants of food insecurity among Venezuelan migrants in Peru

presenting one or more than one chronic disease, residing in Peru for 0-6 months and perceived discrimination were associated with a higher probability of moderate FI. Furthermore, having secondary education, being unemployed, uninsured, never married, illegal, residing in Tumbes, presenting one or more than one chronic disease and perceived discrimination were significantly associated with severe FI.

**Conclusion:** Four out of ten Venezuelan migrants residing in Peru presented moderate to severe FI. The FIES showed adequate psychometric properties. Differences in the socio-demographic, health and migratory factors associated with FI levels were found. Inter-sectoral and multi-sectoral interventions are needed and should be focused on addressing the determinants of FI.

# A design and analysis of an autonomous ground vehicle to automate the process of transplanting rice

**Authors:** Roel Caballero, Ricardo Palma and Leonardo Vinces.

**Abstract:** Precision agriculture brought with it the implementation of new digital technologies, mainly autonomous vehicles, satellite images, IoT and artificial intelligence, to provide economic, productive, and environmental benefits in the agricultural field. However, the main applications are focused on data management and monitoring of crop fields, so agricultural processes such as planting and harvesting are not yet fully automated. A clear example of this occurs in the cultivation of rice, which despite being one of the most important agricultural products in the world, the manual production method continues to predominate in developing countries. This work presents a design of an autonomous terrestrial vehicle capable of carrying out the rice transplantation process, having as its main characteristics its ability to move in the field of cultivation at a speed of 0.75m/s, transport a payload of up to 20kg and possess an autonomy of 1 hour. Which translates into an effective field capacity (EFC) of 0.21 ha/h, an operational equivalence of 7 workers/hour and an increase in the productivity of the transplant process of 200% with respect to the manual process. It seeks to provide farmers in developing countries with an affordable option, supported by numerical simulations, with which they can obtain the benefits of precision agriculture in the process of transplanting rice. In such a way, that the manual production of rice and its disadvantages such as low productivity, the physical consequences for the farmers and the limitations against expensive machinery are replaced by the automation proposal.

# Digital transformation as a contributor of efficiency and resilience in the agri-food supply chain: A literature review

**Authors:** Claudio Jesús Cabrera Borjas, Nicole Magnolia Chuque Pacheco, Sabrina Beatriz Tutaya Gálvez, Alvaro Mariano Mejia Mendivil, Delia Mercedes Cerna Huarachi and Julio Ricardo Moscoso Cuaresma

**Abstract:** The main aim of this research is to determine the effects of digital transformation as a factor contributing to efficiency and resilience in the supply chain agri-food value chain as well as, to analyze the main technological trends for the companies of this sector. The methodology employed is a literature review of 31 papers from the Scopus and Science Direct databases. The results show that digitalization brought many benefits, but also challenges. The different ways in which this technology has contributed have been analyzed.

# Can public credit programs improve artisanal fisher performance? The case of FONDEPES a credit program

**Authors:** Lourdes Alvarez a, Gregory Arcaya, Francisco Cueto, Renato de la Torre

**Abstract:** In this study, we show the effects of the FONDEPES credit program - a government public credit program focused only on artisanal fishers – on profits, associativity, fish landing centers (DPA), sales destinations, and employment. We take advantage of the program's selection mechanism and the National Artisanal Maritime Census data 2012 to apply a Propensity Score Matching (PSM) methodology. The results show that receiving the credit from the program improves the profits, associativity, and sales destination. Additionally, the results are robust under different matching types, covariate balance, inverse-probability-weighted (IPW), and non observable tests. Overall, the evidence found in this analysis suggests that the FONDEPES credit program can help artisanal fishers improve their performance. However, there are differences between the outcomes of fishermen and ship-owners, the latter being the largest. It is recommended to focus on the group of fishermen by government entities to provide training and assistance in administrative issues to leap productivity to become a ship-owner. Exploring other credit products that replace the dependence on financing from intermediaries is recommended in ship-owners' cases.