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# CERTIFICATE OF ACHIEVEMENT

*Ruby Chrissandy*

FOR THE CONTRIBUTION AS:

**PRESENTER**

PAPER TITLE:

Visual Communication The Lake Toba Fisherman Hero's Movement

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Assoc. Prof. Ir. Jap Tji Beng, MMSI, M.Psi, Ph.D., P.E., M.ASCE.  
Head of Research and Community Engagement Institute



Dr. Miharni Tjokrosaputro, S.E., M.M.  
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## PARALLEL SESSION 2: SESSION SCHEDULE

**Room** : ICEBSH 3  
**Topic** : Design  
**Moderator** : Anny Valentina, S.Sn., M.Ds.

Schedule	ID	Paper Title	Author(s)	Institution(s)
14.40 - 14.47	054	The Concept of Future Luxury on The Interior Display Area at BMW Astra Serpong Showroom	Imelda Angelaine, Adi Ismanto, Kris Wardhana	Universitas Tarumanagara
14.47 - 14.54	055	Implementation Of The 'Oriental Beach Experience' Concept in Swissotel Jakarta Pik Avenue Interior Design	Willy Bahdian Putra, Adi Ismanto, Kris Wardhana	Universitas Tarumanagara
14.54 - 15.01	056	The Role of Technology Application in The Interior Design at Museum Zoologi Bogor	Pricillia, Adi Ismanto, Kris Wardhana	Universitas Tarumanagara
15.01 - 15.08	057	The Application of Betawi Batik Design Elements in The Interior of The Lobby Hotel Mercure Tanah Abang	Angeline, Adi Ismanto, Kris Wardhana	Universitas Tarumanagara
15.08 - 15.15	058	Implementation Concept Back to The Nature in Diversity of The Mammal Room at Museum Zoologi Bogor	Angela Audy Dharmawan, Fivanda, Muhammad Taufiq	Universitas Tarumanagara
15.15 - 15.22	059	Application Of Balinese Contemporary Concept in The Interior of The Westin Resort & Spa Hotel in Ubud	Shanabel Claudia, Fivanda, Muhammad Taufiq	Universitas Tarumanagara
15.22 - 15.29	060	The Application of Sustainable Materials Concept in Interior Design of Harris & Conventions Malang	Winnie Tara, Fivanda, Muhammad Taufiq	Universitas Tarumanagara
15.29 - 15.36	070	The Influence of Yogyakarta Culture on Pendekar Samudra Digital Board Game for Trash Reduce Among Young Family Tourists	Adellia Jane Pingkiany, Anny Valentina, Ruby Chrissandy	Universitas Tarumanagara
15.36 - 15.43	071	Communication Strategy Concept for Health Campaign by using On-Ground Activity and an Augmented Reality Experience	Luvia Lius, Anny Valentina, Ruby Chrissandy	Universitas Tarumanagara
15.43 - 15.50	072	User Interface Design for Mobile Apps to Prevent And Handle Home Accidents For Young Families	Dinda, Anny Valentina, Ruby Chrissandy	Universitas Tarumanagara
15.50 - 15.55		Q&A Session		

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Jl. Letjen S. Parman No. 1, Jakarta Barat 11440  
P: 021 - 5695 8744 (Humas)  
E: humas@untar.ac.id



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## PARALLEL SESSION 2: SESSION SCHEDULE

**Room** : ICEBSH 4  
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Schedule	ID	Paper Title	Author(s)	Institution(s)
14.40 - 14.47	105	Psychosomatic Design Campaign for Adolescents Aged 17-21 Years	Devina Clearesta Chow, Kurnia Setiawan, Sinta Paramita	Universitas Tarumanagara
14.47 - 14.54	106	Designing the Historical Story of Sabeni the Legendary Betawi Swordsman through WebComic Media	Kenny Irvandy, Kurnia Setiawan, Sinta Paramita	Universitas Tarumanagara
14.54 - 15.01	107	A Visual Identity Redesign Of Bird Park With Natural And Modern Concept	William, Kurnia Setiawan, Sinta Paramita	Universitas Tarumanagara
15.01 - 15.08	110	The Use Of Social Media For Umkms In The Kubu Raya Regency	Ruby Chrissandy, Celine Elysia, Meysia Dewi Aurellia, Amelia Natassya, Arya Dharmayanto, Kevin Matthew	Universitas Tarumanagara
15.08 - 15.15	111	The Importance Of Umkm Product Photography In The Kubu Raya Regency – Pontianak	Ferdy Tanumihardjo, Celine Elysia, Meysia Dewi Aurellia, Amelia Natassya, Arya Dharmayanto, Kevin Matthew	Universitas Tarumanagara
15.15 - 15.22	112	The Social Campaign Design To Support A Sustainable Lifestyle Using Social Media	Rianisa Halim, Kurnia Setiawan, Sinta Paramita	Universitas Tarumanagara
15.22 - 15.29	114	"Pop Modern" Interior Concept At Lpka Bandung's Social Rehabilitation Facilities (The Social Rehabilitation Center for Juveniles at LPKA Bandung's Interior Design)	Jap Elizabeth Tanata, Mariana, Eddy Supriyatna Marizar	Universitas Tarumanagara
15.29 - 15.36	115	Application of Interactive Technology in the Interior of the Jakarta Aquarium	Viona Clarissa, Mariana, Eddy Supriyatna Marizar	Universitas Tarumanagara
15.36 - 15.43	117	Application of Futuristic Concept to Bandung Geological Museum	Irvan Surya, Mariana, Eddy Supriyatna Marizar	Universitas Tarumanagara
15.43 - 15.50	118	Application of Selected Interior Material for Martha Tilaar Salon's Day Spa Receptionist in New Normal Era	Stephanie Peribadi, Maitri Widya Mutiara, Sri Fariyanti Pane	Universitas Tarumanagara
15.50 - 15.55		Q&A Session		

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## VISUAL COMMUNICATION THE LAKE TOBA FISHERMAN HERO'S MOVEMENT

Jocelyn Laura<sup>1</sup>, Ruby Chrissandy<sup>2</sup>, Anny Valentina<sup>3</sup>

<sup>1</sup> Faculty of Art and Design, Universitas Tarumanagara, Jakarta, Indonesia  
*Email: jocelynlaura3004@gmail.com*

<sup>2</sup> Faculty of Art and Design, Universitas Tarumanagara, Jakarta, Indonesia\*  
*Email: rubyc@fsrd.untar.ac.id*

<sup>3</sup> Faculty of Art and Design, Universitas Tarumanagara, Jakarta, Indonesia  
*Email: annyv@fsrd.untar.ac.id*

\*Corresponding Author

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### ABSTRAK

Indonesia merupakan negara maritim yang memiliki wilayah perairan yang sangat luas. Tidak hanya lautan, banyak pulau atau daerah yang memiliki beberapa sumber air, danau atau sungai yang sering disebut sebagai sumber air tawar. Hal ini menyebabkan banyak masyarakat Indonesia yang berprofesi sebagai nelayan air tawar. Namun ekosistem di air tawar perlu dibenahi karena Invasive Foreign Species memberikan dampak negatif berupa perubahan ketersediaan sumber daya ikan, kerusakan dan terganggunya ekosistem perairan di kawasan seperti Danau Toba. Untuk itu penelitian ini bertujuan untuk memberikan komunikasi visual berupa media kampanye Gerakan Pahlawan Nelayan Air Tawar Ekosistem di Danau Toba. Metode yang digunakan dalam penelitian ini adalah metode Design Council. Metode ini digunakan dengan menempuh tahapan First Step, Research, Planning, Communication, dan Implementation. Dalam menentukan strategi komunikasi, tujuan inisiatif Gerakan Pahlawan Nelayan Air Tawar Ekosistem dengan nelayan air tawar berusia 32-55 tahun adalah meningkatkan kepedulian nelayan terhadap ancaman ekosistem air tawar dari ikan invasif. Dengan menunjukkan pengalaman mereka dalam kerugian ekonomi akibat ikan invasif. Dengan target audiens ini, komunikasi visual dalam proses adopsi AIDA dianggap tepat agar pesan edukasi tentang ikan invasif selama proses komunikasi berjalan lancar dan tujuan akhir dari proses adopsi yaitu tindakan dapat menunjukkan hasil yang diinginkan dan memuaskan. Hasil dari perancangan ini adalah kampanye yang secara aktif mengajak khalayak sasaran untuk mengenal dan mewaspadai dampak negatif yang ditimbulkan oleh spesies ikan invasif di perairan tawar di Indonesia dengan memberikan informasi dan edukasi tentang spesies ikan invasif. Media dalam kampanye ini difokuskan pada media cetak..

**Kata Kunci:** Komunikasi, Edukasi, Ikan Invasif, Nelayan Air Tawar, Media Kampanye

### ABSTRACT

Indonesia is a maritime country that has a very wide water area. Not only the oceans, but there are many islands or areas that have several sources of water, lakes or rivers which are often referred to as sources of fresh water. This causes many Indonesian people to work as freshwater fishermen. But ecosystems in fresh water need to be addressed because Invasive Foreign Species have a negative impact in the form of changes in the availability of fish resources, damage, and disruption of aquatic ecosystems in areas such as Lake Toba. For this reason, the purpose of this research is to provide a visual communication in the form of a media campaign for the Ecosystem Freshwater Fishermen Hero's Movement in Lake Toba. The method used in this study is the Design Council method. This method is used by taking the First Steps, Research, Planning, Communication, and Implementation stages. In determining the communication strategy, the aim of the Ecosystem Freshwater Fishermen Hero's Movement initiative with freshwater fishermen aged 32-55 years is raising fishermen's concern about freshwater ecosystem threats invasive fish, by show their experience in economic losses due to invasive fish. With this target audience, the visual communication in the AIDA adoption process is considered appropriate so that educational messages about invasive fish during the communication process run smoothly and ultimate goal of the adoption process, namely action can show the desired and satisfying results. The result of this design is a campaign that actively invites target audiences to recognize and be aware of the negative impacts caused by invasive fish species in fresh waters in Indonesia by providing information and education about invasive fish species. The media in this campaign is focused on print media.

**Keywords:** Communication, Education, Invasive Fish, Freshwater Fisherman , Media Campaign

## 1. INTRODUCTION

Apart from being a maritime country, Indonesia is also known as a “Marine Mega Diversity” country. Indonesian as approximately 8500 or 45% of the number of fish species in the world. somehow, 1,300 fish species place Indonesia in 2nd position as a country with the most freshwater fish species in the world [1]. This allowed Indonesia having great potential in marine and fishery products. Indonesia has several waters great potential, such as lakes. One of the lakes that has a great tourist attraction is Lake Toba.

Lake Toba has an area of 1,145 square kilometers which makes Lake Toba the largest lake in Southeast Asia [2]. With Indonesia's wealth of biodiversity, efforts to conserve and protect ecosystems are urgently needed in order to maintain ecosystem stability, germplasm or genetic sources and food sources for the people of Indonesia. Potential as an object of the tourism economic industry which can be used as a source of foreign exchange income [3].

One of the factors that threatens the stability of the ecosystem is caused by the introduction of invasive alien species. Invasive Alien Species / SAI are species that are not native to the place, broadly affecting the habitat they invade [4]. Disturbance from the presence of SAI leave a negative impact, changes in the existence of fish resources [5]. A decrease in diversity / biodiversity loss [6], reduce even the loss of endemic fish with high economic value. Decreased genetic quality through inbreeding with endemic fish and other invasive fish causes loss of original genes and change behaviour [7]. A clear example brought from SAI (Invasive Foreign Species) in Indonesian waters is the invasive ‘red devil’ fish that can be found in the water of Lake Toba. This fish causes the endemic fish species of Lake Toba, such as the Batak fish, have an endangered status, while the Pora-pora fish experiences a population decline [8]. The red devil fish is considered to be the most destructive among other invasive fishes species, because is the most aggressive nature, adaptation and has the fastest growth. Not only does it have an impact on ecological losses, SAI (Invasive Alien Species) also brings losses to socio-economic impacts that directly affect the income of fishermen in fresh water. Invasive Foreign Species are spread by the public intentionally or unintentionally due to the low level of knowledge, awareness, and community responsibility in preserving ecosystems and habitats for endemic fish populations [9]. In addition, law enforcement regarding the prohibition of invasive fish has also not been optimally enforced [10].

Based on these problems, this educational campaign is expected to be able to help freshwater fishermen solve the problem of invasive fish and restore sources of economic production by increasing awareness to protect, preserve, and save the aquatic ecosystem of Lake Toba.

## 2. RESEARCH METHOD

The research method used is the Design Council by the United Kingdom. That method is based on the book “A Designer's Research Manual: succeed in design by knowing your clients and what they really need” [11].



Figure 1 research methods

Source: Vicosky O'Grady, Jenifer (2006) A Designer's Research Manual United States

Based on [Figure 1], there are 5 main stages. The first step includes selecting the topic of the problem, identifying the problem, and determining the formulation of the problem. Second, research is carried out through problem research on target audiences through literature/literature studies, marketing, and visual exploration. Third, planning the found research results to be processed into clear information and its characteristics to understand it much easier. The final stage, implementation, is carried out by starting to determine the output media of each stage of the adoption process of the selected communication journey.

As seen on Figure 1, the research method used in collecting data is a qualitative method, namely literature study through books, literature, and online media to obtain a structured and reliable theoretical study as in the journal "Invasive Impact of Red Devil Fish on Fish Diversity in Mainland Public Waters in Indonesia" by Chairulwan Umar, Endi Setiadi Kartamihardja and Aisyah. [12]. The second is through an interview conducted with a fish expert named Amin Supit who is also an active member of the IKAPRI (Kediri Fish Predator) community.

### Sub-Section

The title of the sub-section is written in Times New Roman 12 pt, bold, in sentence case model (The capital letter is only applied in the beginning of each sentence). The title of sub-section is written without providing the sub-section number.

## 3. RESULTS AND DISCUSSIONS

Each In running the Ecosystem Hero Movement campaign, researchers used a simulation of the AIDA adoption process (Attention, Interest, Desire, Action).



Source: design by author (2022)

Figure 2

### 1. Attention (Awareness)



The attention phase is used to attract the attention of the target audience by disseminating information on the dangers and threats posed by invasive fish species by showing the situations and conditions that occur when fresh water bodies are filled with invasive fish.

## 2. Interests

The interest phase is used to continue the interest of the target audience by presenting the solutions and benefits that fishermen can get if they are interested in solving the problem of invasive fish in fresh water bodies.

## 3. Desire

In the desire phase, the target audience begins to find out more through the socialization held, the interactive media used to link campaign messages regarding saving the ecosystem from the threat of invasive fish, and the benefits obtained. The ultimate goal is that the target audience can be moved to want to participate in the Ecosystem Hero Movement campaign.

## 4. Action

The target audience agrees to participate in and carry out the Ecosystem Hero Movement campaign activity by catching as many invasive fish during the specified time and handing them over to the posts provided. Besides that, the target audience can also report illegal activities in freshwater bodies to the authorities.

### 3.2. Visual Concept

Based on the results of researcher interviews with informants, Amin Supit said that freshwater bodies which are invaded by predatory fish were difficult to overcome; given the characteristics of predatory fish which have no competitors, aggressive nature and fast reproduction. The problem of invasive fish in waters still could be overcome with commitment, care, and public awareness of the dangers of invasive fish to freshwater ecosystems inhabited by local/endemic fish.

The target audience for the Ecosystem Hero Movement campaign are men and women aged 32-55 years with SES C. Having the psychographics of working as freshwater fishermen, are highly dedicated, and work hard. Besides that, the habits must owned are, having concerns about ecosystem damage, experiencing a decrease in income, and caring about freshwater ecosystems.

In finding strategic ideas and creative concepts, a brainstorming activity was carried out by observing the collected data on invasive fish problems and analyzing the target audience through literature study. The results are then decided to determine creative strategies and concepts.

The creative strategy used is the AIDA adoption process approach and customer as a 'hero communication' approach. The chosen strategy makes the target audience as heroes/saviors who have a very influential role in the campaign. In the approach process, efforts are needed to attract the attention of the customer appropriately. The first step that can be done is to share as much information as possible around the environment. Furthermore, customers who have the same

mission as the objectives of this campaign are to participate in fighting invasive fish without coercion. Customers who carry out campaign activities for the Ecosystem Hero Movement are real heroes.

After that, the Big Idea that was raised was "Heroes of Archipelago Freshwater Aquatic Ecosystems". In November 2019, Maritime Affairs and Fisheries Minister Edhy Prabowo said, "Fishermen are the simplest definition of a hero's existence. Fishermen often sacrifice for the wider community in order to fulfill the need for protein through fish. Fishermen is humans that live from nature. In meeting the needs, living things need one another. In this case, fishermen need native fish to fulfill their daily needs. In order for native fish to exist and not become extinct, fishermen need to preserve and protect the ecosystem from unwanted threats, namely the spread of invasive fish species.

The Ecosystem Hero Movement campaign was created with the main message to be conveyed, that is to save the aquatic ecosystem around you from the threat of invasive fish species. The problem of invasive fish that has harmed freshwater fishermen so far needs to be addressed with the concern of fishermen in preserving freshwater bodies. Actions to protect and preserve native freshwater ecosystems can increase economic, social, ecological, cultural values and avoid the threat of extinction of Indonesian endemic freshwater fish.

By protecting freshwater ecosystems from invasive fish, we can guarantee the quality and diversity of native fish resources and the welfare of fishermen. A sense of love for the motherland, and solidarity among fishermen that is formed because they have tried to protect and preserve freshwater aquatic ecosystems so that their populations are maintained and can be preserved for generations.



Figure 3  
Source: design by author (2022)

Based on [Figure 2], the symbol logo concept used for the "Ecosystem Hero Movement" campaign is a blend of several visuals put together to match the theme. The letter "P" from the word hero; in human form, and robes describes the shape of a hero. In the color concept, it uses a "water wave" design which symbolizes a freshwater aquatic ecosystem. In addition, there are 2 main colors used. First, red which symbolizes courage and strength like a hero. Secondly, blue represents the color of the sea which represents a healthy freshwater aquatic ecosystem.



With the chosen big idea being the Heroes of the Tawar Nusantara Water Ecosystem, the visual that will be used is fishermen as heroes who are present in the midst of problems, namely invasive fish that have filled the fresh waters of Lake Toba.



Figure 4

Source: design by author (2022)

Based on [Figure 5], in making a visual design, there are red and blue colors that will be used as the main colors.



Figure 5

Source: design by author (2022)

The color was chosen by the researcher according to the Ecosystem Hero theme.

Based on [Figure 6], a selection of typography that matches the theme is also required. Researchers use headlines with a bold style combined with bodycopy a minimal and simple style.



Figure 6  
Source: design by author (2022)

In addition, there is a mandate; namely to not use visual elements that give a luxurious element/impression. The use of the layout is in the picture window layout. This visual will be dominated by pictures/photos up close.

### 3.3. Media Communication

In carrying out social campaigns, the media will be required to convey the contents/messages of the campaign. The right media strategy will have a big impact and be very influential on the campaigns that are designed. The selection of effective and efficient print media output that can reach fishermen, the target audience, for the campaign through AIDA's communication strategy with the following scenario:

At the attention stage, fresh water fishermen will distribute A5 sized brochures as seen on [Figure 7] by officers/workers of the RI KKP service. Here every fisherman will be given information that the RI KKP already has a solution for fishermen who feel a loss or a negative impact from the presence of invasive fish in the waters where they catch fish. Further information can be obtained when they visit the RI KKP service.



Figure 7 Brochure  
Source: design by author (2022)

In the interest stage, the fishermen that comes to the RI KKP service will be greeted with banners and printed media with aim to maintain interest and convince fishermen that this

campaign has been well prepared. Inside the official building, there is rollup banners, TV displays showing short advertising videos which had been prepared by the RI KKP, and brochures as seen on [Figure 8] that indicate that a socialization would be held to explain campaign activities. The posters that have been prepared and explanation on the socialization that will be held will have various interesting and useful activities.



Figure 8 Brochure  
Source: design by author (2022)

Based on [Figure 9], video ads advertising media that will be seen by the target audience when they come to the KKP office. Video ads will contain original footage of freshwater fishermen who feel the damage to the ecosystem when their catch contains invasive fish, namely the red devil fish. After that, education was provided to the public regarding reporting illegal acts to the BKIPM KKP RI through the number listed or reporting to the local KKP office. At the end, a solution was given to the affected target audience to take part in the socialization "Ecosystem Saving from Invasive Fish Threats". This banner media is in the Interest strategy stage in the AIDA adoption process to maintain the interest of the target audience and follow the next stage.



Figure 9 Brochure  
Source: design by author (2022)

As seen on [Figure 10], advertising media banner with a size of 300x60 cm will be installed on the side of the road, close to the location of the freshwater bodies of Lake Toba, the location of the KKP office. The purpose of installing these banners is to increase confidence in the campaign activities that will be carried out and to expand the dissemination of information about the campaign, because during the trip the audience will continue to pass by the banners. This banner media is at the Interest strategy stage in the AIDA adoption process to maintain the interest of the target audience.



Figure 10 Pennant  
Source: design by author (2022)

As seen on [Figure 11], advertising media banner with a size of 200x80 cm has a function similar to that of a rollup banner. The only difference is the location of the advertisement. This banner is planned to be placed around the location of the KKP office. that people who are walking towards the service office can see the banner at a glance during trip. This banner media is at the Interest strategy stage in the AIDA adoption process to maintain the interest of the target audience.



Figure 11 Banner  
Source: design by author (2022)

As seen on [Figure 12], rollup advertising media banner with a size of 60x160 cm will be used to show the target audience proof that the campaign activities held to help fishermen with invasive fish problems are properly implemented and increase the confidence of the target audience to participate and be part of the campaign. The visual also includes the tagline from the campaign “Care Fishermen, Restore Ecosystems”.



Figure 12 Banner  
Source: design by author (2022)

The desire stage is when the fishermen have decided to take part in socialization activities. As explained in the interest stage, a socialization that would have a series of activities such as education on the types of invasive and dangerous fish that exist in Indonesia, reporting if you find an irresponsible person, board game simulation "Ecosystem Saving from Invasive Fish Threats", and an explanation about the Ecosystem Heroes Movement campaign.

Based on [Figure 13], a board game was chosen to be an interactive media in the socialization activity "Ecosystem Saving from Invasive Fish Threats". The game simulation "Saving the Lake Toba Ecosystem" will be carried out at the end of the socialization activity as an educational activity with the aim of creating a fun but still useful atmosphere increase interaction between the target audience and the KKP. The board game with a size of 80x50 cm have a visual appearance of the fresh waters of Lake Toba with Samosir Island in the middle as a place to put game cards. The waters be filled with 3 types of invasive fish, such as red devil fish, pomfret fish and broom fish. There a 1 port that will be used as the starting location of the game. The benefits obtained after the completion of this game, are increasing the knowledge of freshwater fishermen who play because this game will test fishermen's understanding during educational explanations. This board game media is at the Desire strategy stage in the AIDA adoption process; when the target audience decides to take part in the socialization activity.



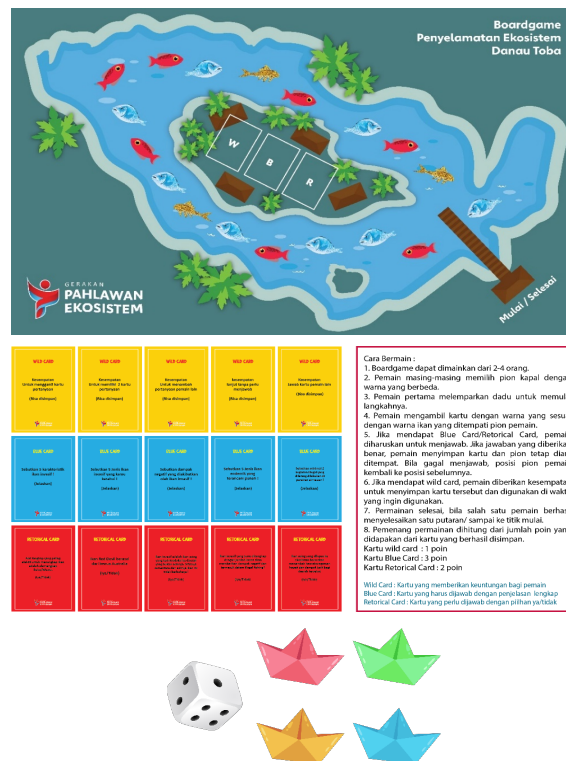


Figure 13 Board Game  
Source: design by author (2022)

Based on [Figure 14], the final stage of the action, fishermen will activate the Ecosystem Hero Movement campaign. The fishermen will catch invasive fish and submit them to the Fish Submission Post prepared by the Indonesian KKP. The Invasive Fish is then accepted by the command post team and will later be properly process. Every fisherman who submits invasive fish catches for every visit, provided that he has a KUSUKA card (Marine and Fisheries Business Actor Card), and submits invasive fish catches on a regular basis will receive a prize in the form of repainting their boat. In addition, every 1 kg of invasive fish submitted will be valued at local fish prices in the area.



Figure 14 Board Game  
Source: design by author (2022)

The Ecosystem Heroes Movement campaign will be held for 28 days from 1 February – 28 February 2023, with the media schedule as seen on [Figure 15]:



Jadwal	Februari																											
	1							2							3							4						
Media	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Poster																												
Banner																												
Umbul-Umbul																												
Video Ads																												
Kampanye Sosialisasi																												
Posko Penyerahan Ikan																												

Figure 15 Media Schedule  
Source: design by author (2022)

Based on [Figure 16], apart from the main media that have been mentioned, media merchandise used as a supporting medium will be given to target audiences who have participated in socialization activities which are at the desire strategy stage in the AIDA adoption process, as a form of KKP's appreciation for fishermen who have taken the time to participate in socialization activities. There are 3 types of supporting media namely, pins measuring 5.8 cm, thermos bottles, and t-shirts which all have the visual logo of the Ecosystem Hero Movement with the color tones used, which include blue, red and white.



Figure 16 Merchandise  
Source: design by author (2022)

#### 4. CONCLUSIONS AND SUGGESTIONS

Problems of red devil fish that invades the fresh waters of Lake Toba poses a threat to the existence of endemic fish live in the same habitat. The threat of extinction of Batak fish and pora-pora fish and damage to aquatic ecosystems reduce the income of freshwater fishermen and threaten loss of livelihoods. Realizing this problem, this campaign is expected to be a solution to save the freshwater ecosystems of Lake Toba. Increasing fishermen's concern can improve freshwater ecosystems from all threats.

Through the Ecosystem Hero Movement campaign, there are several processes that need to be passed, namely by choosing AIDA's adoption theory as a communication concept. Determining the media and scheduling also be researched so that every stage of AIDA can be carried out smoothly and efficiently. For example, determining the big idea of ecosystem heroes and the use of Batak regional languages that can provides interest and easier understanding in accordance with the target audience. After the completion of this campaign, catching invasive fish can become a habit and motivation for every fisherman to keep protect the ecosystem. This continuous action will certainly have an impact on the preservation of native freshwater ecosystems; to increase economic, social, ecological, cultural values and to avoid the threat of extinction of Indonesian endemic freshwater fish. Furthermore, if this campaign is implemented

properly, fishermen who experience the problem of decreased income due to this will be resolved because biodiversity return to stability.

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