



## “NGEREMIS” TRADITION IN A PROSPECTIVE TOURISM OBJECTS FOR ECONOMY RESOURCE UPON TIN MINING EXPLORATION MITIGATION IN BELITUNG

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### Info Artikel :

Diterima : 10 Oktober 2021

Disetujui : 14 Oktober 2021

Dipublikasikan : 25 November 2021

### ABSTRACT

*Mengutip isi Human Development Report (HDR) pertama pada tahun 1990, pembangunan manusia adalah sebuah proses untuk meningkatkan pilihan yang dimiliki manusia. Dari sekian banyak pilihan tersebut, yang paling penting adalah panjang umur dan sehat, berpendidikan, dan memiliki akses ke sumber daya yang dibutuhkan untuk menjalani kehidupan yang layak. Sumber daya manusia merupakan modal utama bagi pembangunan. Indeks Pembangunan Manusia (IPM) mengukur pencapaian pembangunan manusia berdasarkan sejumlah komponen dasar kualitas hidup. Sebagai ukuran kualitas hidup, IPM dibangun melalui pendekatan dasar tiga dimensi. Dimensi ini mencakup umur panjang dan kesehatan; pengetahuan, dan kehidupan yang layak. Ketiga dimensi tersebut memiliki arti yang sangat luas karena berkaitan dengan banyak faktor. Untuk mengukur dimensi kesehatan digunakan angka harapan hidup saat lahir. Selanjutnya, untuk mengukur dimensi pengetahuan, digunakan kombinasi indikator angka melek huruf dan rata-rata lama sekolah. Sedangkan untuk mengukur dimensi kehidupan layak, indikator daya beli masyarakat digunakan untuk sejumlah kebutuhan pokok dilihat dari rata-rata jumlah pengeluaran per kapita sebagai pendekatan pendapatan yang merepresentasikan capaian pembangunan untuk kehidupan yang layak. Indikator-indikator tersebut sebagai modal untuk mengembangkan berbagai sektor pembangunan, termasuk sektor pariwisata. Sektor pariwisata merupakan sumber ekonomi pengganti setelah masa keemasan pertambangan timah berlalu beberapa tahun lalu. Kemiskinan adalah suatu keadaan ketidakmampuan untuk memenuhi kebutuhan dasar seperti pangan, sandang, papan, pendidikan dan kesehatan. Kemiskinan dapat disebabkan oleh kelangkaan kebutuhan dasar, atau sulitnya mengakses pendidikan dan pekerjaan. Kemiskinan adalah masalah global. Beberapa orang memahami istilah ini secara subyektif dan komparatif, sementara yang lain*

### Kata kunci :

**Indeks HRD, pembangunan, sektor pariwisata, pertambangan timah, kemiskinan**

*melihatnya dari sudut pandang moral dan evaluatif, dan yang lain lagi memahaminya dari sudut pandang ilmiah yang mapan, dll.*

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#### **ABSTRACT**

*Quoting the contents of the first Human Development Report (HDR) in 1990, human development is a process to increase the choices that humans have. Among these many choices, the most important are to live long and healthy, to be educated, and to have access to the resources needed to live a decent life. Human resource is as a primary capital for development. The Human Development Index (HDI) measures the achievement of human development based on a number of basic components of quality of life. As a measure of quality of life, HDI is built through a basic three-dimensional approach. These dimensions include longevity and health; knowledge, and a decent life. These three dimensions have a very broad meaning because they are related to many factors. To measure the health dimension, life expectancy at birth is used. Furthermore, to measure the knowledge dimension, a combination of literacy rate indicators and average years of schooling is used. As for measuring the dimensions of decent living, indicators of people's purchasing power are used for a number of basic needs seen from the average amount of per capita expenditure as an income approach that represents development achievements for a decent life. Those indicators were as the capital to develop in many development sectors, including tourism sector. The tourism sector is as replacement economic resource after tin mining era golden age pass few years ago. Poverty is a state of inability to meet basic needs such as food, clothing, shelter, education and health. Poverty can be caused by the scarcity of basic necessities, or the difficulty of accessing education and employment. Poverty is a global problem. Some people understand this term subjectively and comparatively, while others see it from a moral and evaluative point of view, and still others understand it from an established scientific point of view, etc.*

**Keywords :**  
*HRD index,  
development,  
tourism sector,  
tin mining,  
poverty*

#### **INTRODUCTION**

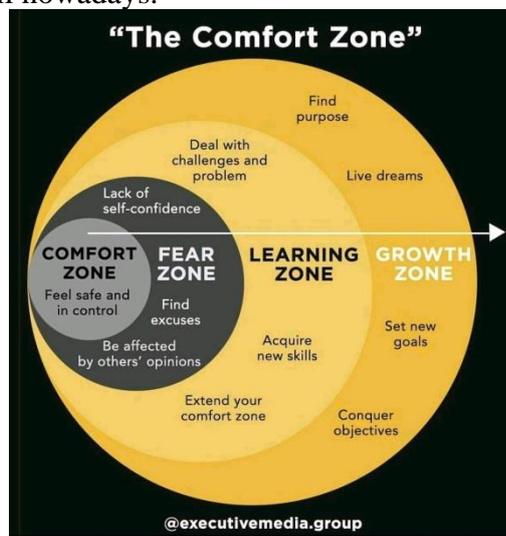
The tin mining exploration mitigation is resulted million people jobless with uncertain economic for the daily standard family living cost in Belitung which give birth to more severe disasters (environmental damages, livelihood income, unproductive lands) in whole Belitung island. It has become a concerning issue about awaken Human Resource upon their land potency among various environmental damages as well as economic and political decision where the developed nations have been able to continue proper livelihood, reinvent economic sources and build the community's awareness. All these related to protect the impact of such destructive environmental damage especially ex-tin mining exploration areas. In fact, the livelihood groups in Belitung in developing and also underdeveloped province is facing a more vulnerable living system. "A livelihood system is sustainable if it can cope with and recover from stress and shocks, embellish its capabilities and assets, and ensure sustainable livelihood opportunities for the next generation" (Chambers & Conway, 1992).

Moreover, sustainable economy resources for livelihoods become secured when households of every human have income, property, life and also health as well. Therefore, the reinvent of sustainable economic resources for livelihood may be enhanced by introduce, describe, promote, implementation control some of strategies. The ex-tin mining environmental livelihood pattern in Belitung depends on the available resources and potency, and also depends on awaken awareness of human resource upon their environmental potential at each area they has. The available potential natural resources

that community has is different type, such as they have; ex-exploration tin mining spot with big hole, ex-exploration tin mining with wide dried land, ex-exploration tin mining with unproductive land, the land with nice beaches, the land able as an agro plants such white pepper, etc.

Some crucial questions have brought the idea of this paper which is how the people live and having work for fulfil the standard living cost at the ex-exploration tin mining, while the economic sources (tin mining exploration activity) had been mitigated since 2016 by the local government? How they consider their main resources could be reinvent for their sustainable economic resources? How to awaken the people awareness to do something upon their environment potential?

During the tin mining exploration golden age, the people never known that the tin mining era will end up. The people majority have good property. They daily working hour around 3 up to 4 hours per days, and they able to fulfil the basic needed for family. They made digging at surrounding their living houses. They not only have many opportunities, but also the natural resources pampered them as if they lived in the comfort zone at that time. The available natural resources and their livelihood securities in the tin mining area probably pamper because of easy to get money by digging the tin mining/tin sand surround their house, and they did it only around three or four hour per day. Then they deliver the tin-sand to the tin-brokerage to get money upon their digging result. So they could to fulfil the family standard needed for a day on that day, and for tomorrow, they would do the same activity. Day by day since long time ago, majority people did the same activities for tin mining exploration digging. This activity's chain continued from generation to generation till nowadays.



**Figure 1. The Comfort Zone**

This paper would have efficacious for assessing the sustainable economic source livelihood alternative in ex-tin mining exploration areas considering various dimensions and criteria of each spot. The denouement of the paper would be helpful to reinvent the sustainable economic resource for livelihood as an effective tool, and development strategies will be appeared by this paper. This paper's aim is to assess, and reinvent the sustainable of economic and productive sources upon livelihood approaching for ensuring community resilience because of tin mining exploration mitigation in Belitung.

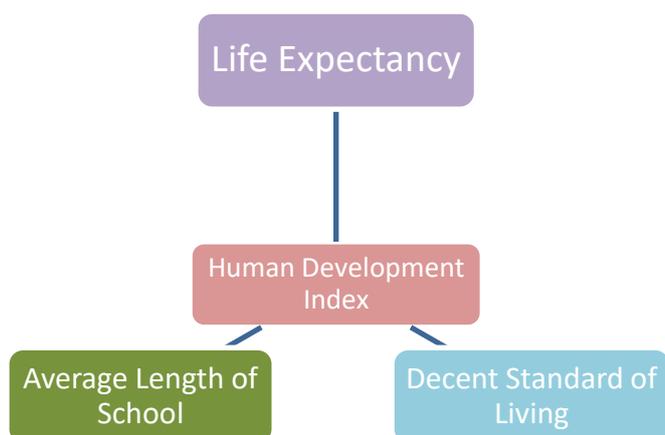
## LITERATURE

### **The Human Development Index (HDI)**

The Human Resource as the prime and important factor to derive many tangible and intangible benefits from environment, as well as the tin mining exploration. Tin mining provided essential components for social and economic development in Belitung. As the Human Resource to become sustainable intensify, the paper review to Human Resource as the ‘machine operator’ in various activities. “People are seen as a key resource in search for increased productivity, efficiency, and competitive advantage (Fenwick, 2007).

The Human Development Index (HDI) explains how the population can access development outcome in terms of income, health, education and so on. The Human Development Index (HDI) is formed by 3 (three) basic dimensions, namely a long and healthy life, knowledge, and a decent standard of living. The Human Development Index is an important indicator to measure success in efforts to build the quality of human life (community/population). The Human Development Index (HDI) can determine the ranking or level of development of a region/country. For Indonesia the Human Development Index (HDI) is strategic data because apart from being a measure of government performance. The Development Index is also used as one of the allocators for determining the General Allocation Fund (DAU). The research method uses a mix method. The author argues that “mixed methods provide sustainable academics with more opportunities for pragmatic transformative research for societal change, and increasing research reliability in relation to social desirability bias, stakeholder comparisons and transdisciplinarity (Pereira-Moliner et al., 2015).

The quantitative method uses secondary data obtained from the Statistics Indonesia (BPS) (BPS Pemprov Babel, 2021). The population in this study is the Regency/City in Belitung in 2010-2020. The analytical tools used include the f test, t test, normality test, multicollinearity test, heteroscedasticity test, autocorrelation test of linear regression analysis, coefficient of determination R squared. While the qualitative method uses in-depth interviews with the community using the local language, periodic participatory observation, and continuous, as well as open-ended questionnaires to 30 respondents in each of the studied villages. In this study, the authors examine 9 (nine) villages that have similar homogeneity, namely; areas that are equally environmentally damaged due to tin mining excavations, which are very massive and uncontrolled. The nine villages are located in the Belitung Regency area. The human development index (HDI) was introduced by the United Nations Development Program (UNDP) in 1990, and is published regularly in the annual Human Development Report (HDR). This human development index is an important indicator to measure success in efforts to build the quality of human life (community/population). HDI can determine the ranking or level of development of a region/country. The Indonesian state uses the HDI as strategic data that can be used as a measure of government performance, also this HDI data can be used as one of the allocators for determining the General Allocation Fund (DAU). The human development index is a benchmark for the welfare rate in a region or country seen from three dimensions, namely:



**Figure 2. Human Development Index Dimensions**

The Life Expectancy Indicator measures Health, the Average Years of Schooling indicator measures the education of the community/population, and the Decent Living Standards indicator measures the standard of living or welfare of the community/resident. These three indicators influence each other, it is further emphasized that “On manifest indicators of positive adaptation at individual levels of analysis has been supplemented by growing consideration of multilevel definitions of competence. For example, with respect to individual adaptation, contemporary notions of competence include indicators of positive internal adaptation such as health, well-being, happiness, or a cohesive sense of self, along with external indices of competence, such as work or school achievement, quality of relationships, and law-abiding conduct (Brody et al., 2013; Luthar, 2006; Yates & Grey, 2012).

The Human Development Index (HDI) explains how the population can use the results of development in obtaining income, health, education and everything else, the Human Development Index (HDI) is an important indicator to measure success in efforts to build the quality of human life (Samrita 2017). “The true transformation in human development, ranging from individual community members to broader systems of policy and governance (Aber, Brown, Jones, Berg, & Torrente, 2011). Whole human development requires policies from the government that are in favor of human needs themselves. Of course, human development is in the process of experiencing various obstacles, such as: political crimes that can affect the process of sustainable human development itself, “political violence may influence human development in multiple ways; It may traumatize the whole community, harm parents or parenting, destroy health-care systems and homes, disrupt educational and occupational activities, and in many additional ways to generate stress, erode resources, and stymie protective processes in development (Barber, 2009). Poverty is a complex problem that is influenced by various interrelated factors, including the level of community income, health, education, unemployment, location, geographic gender, and the environment. Poverty occurs because the ability of the community of economic actors is not the same, so there are people who cannot participate in the development process or enjoy the development process. To measure poverty, BPS uses the concept of the ability to meet basic needs (basic needs approach). With this approach, poverty is seen as an economic inability to

meet basic food and non-food needs as measured from the expenditure side. So the poor are people who have an average monthly per capita expenditure below the poverty line. In general, poverty is a person's inability to meet basic needs in every aspect of life. Poverty is identified as a low lifestyle, meaning that the condition in which the life of the population is characterized by a complete lack of basic needs. According to Mubyarto (2004) that poverty is described as a lack of income to meet basic life needs or minimum life needed namely clothing, food, housing, education and health.

### **The Tin Mining Zone**

The tin mining zone in Belitung is assigned as an area of tin natural resource system that ensures interaction among mainland, ocean, conventional tin digger, tin brokerage, local government, central government with all the various of tin exploration activities. Moreover the Belitung tin mining is considered as a region where livelihood are interlinked with the tin mining natural resource system of mainland, ocean, beach for tourism, boating, fishing, and other resource exploitation, and recreational use of beach. Therefore, proper management of ex tin mining exploration area can ensure to reinvent the economic potential, awaken the awareness of the people to search for the suitable sustain economic resource for family, and maintain ex-tin mining exploration area as the new economic resource. Thus, the assessment of sustainable new of economic livelihood resource analysis may appraise some better decision.

### **Literature Review**

Ryo Kohsaka, Yuta Uchiyama in their paper “Motivation, strategy and challenges of conserving urban biodiversity in local contexts: Cases of 12 municipalities in Ishikawa, Japan” (Kohsaka & Uchiyama, 2017), captured the status, trends, and relationships in biodiversity and urbanization. They examined development of city by using the indicator of City Biodiversity Index (CBI) to measure trends in urban contexts in there spheres: biodiversity, ecosystems, and governance. Their paper focused in ‘green’ encompasses social and economic aspects to measure the sustainability of a city. The indicators can be used to visualize trends and translate scientific assessments into policy. The aim of this paper is to identify the practical and scientific challenges in conservation of biodiversity in medium to small cities based on a questionnaire survey. Their survey shown the certain terms were difficult to understand conceptually, particularly “ecosystem services”. The method to evaluate biodiversity and ecosystem services has not yet been established. They found technical difficulties and complicated administrative and financial issues, included human resources issues. The result of paper is recommended activities were discussed.

Atcharee Chantamool, Sastra Laoakka, and Kosit Phaengsoi. “Traditional festivals: Development of tourism routes for linking cultural heritage sources in the catchment watershed of Mekong River Basin in Thailand” (Chantamool, Laoakka, & Phaengsoi, 2015). Their paper investigated about the developing tourism routes for linking cultural heritage souces on the traditional festival by local, centering and celebratingof communities and traditions in the Northeast traditional festivals region in Maekong River Basin as catchment watershed.. The celebrations offered belonging to religious, social, and geographical groups, cultural also. Collection data approached to survey, interviews, observations, and focus group discussions with a sample of 85 people who consisted of the key, casual, and general informant groups in Nakhon Phanom, Mukdahan, Amnat Charoen, and Yasothon Provinces. The conclusion of the paper is the

event helps to develop the image of the countryside and also as supporting various tourist pilot schemes; backing traditional popular festivals, traditional games, folk events. Beside those this event also increase the region's appeal and encouraging the tourists to prolong stays.

Gaetano Grilli, Emmanouil Tyllianakis, Tiziana Luisetti, Silvia Ferrini in their paper "Prospective tourist preferences for sustainable tourism development in Small Island Developing States" (Grilli, Tyllianakis, Luisetti, Ferrini, & Turner, 2021). The paper presented a choice experiment and latent factor analysis to disentangle relevant aspects of sustainable tourism in Small Island Developing States for potential visitors. To recognized the potential contribution of tourism to economic growth and employment generation in Small Island Developing State (SIDS). As a strategy to promote more sustainable tourism development, moreover increased financial aid to support country-to-country. The main objective of this paper is to fill the gap in the literature and measure the latent factors and willingness-to-pay (WTP) for sustainable tourism development in SIDS by prospective tourists, with focus on coastal and marine ecosystems in Fiji. The methods of paper use such survey to design upon accommodate attitudinal and behavioral questions. The method reveals part of respondent preferences, can determine the marginal willingness to pay for different aspects of tourism options. In the survey questionnaire respondents were presented with 17 attitudinal and behavioral Likert-type statement aimed at describing three latent factors: Eco-tourism attitudes, Pro-environmental private behavior, and Environmental beliefs. The empirical result of paper is improve understanding of western residents preferences about sustainable development and sustainable tourism projects in remote destinations.

Michael Ungar with paper "The Social Ecology of Resilience: Addressing Contextual and Cultural Ambiguity of a Nascent Construct" (Ungar, 2011). The paper argued that, because resilience occurs even when risk factors are plentiful, greater emphasis needs to be placed on the role social and physical ecologies play in positive developmental outcomes when individuals encounter significant amounts of stress. Four principles are presented as the basis for ecological interpretations of the resilience construct: decentrality, complexity, atypicality, and cultural relativity. The four principles inform that the definition of resilience emphasizes the environmental antecedents of positive growth. The frameworks can guide future theory development, research. The paper focus ecological risk factors are likely less important than individual characteristics when there are fewer structural barriers for a child to navigate. Individual factors may influence the environment. The result is studying resilience as evidence to help the explanation of processes that lead children's positive development when facing significant amounts of adversity. The four principles –decentrality, complexity, atypicality, and cultural relativity is broaden conceptualization of positive development under stress, and it was offered as a starting point for future investigations.

M. Augusta Hermida, Mateo Neira, Natashs Cabrera-Jara, Pablo Osorio in their paper "Resilience in Latin American cities: behavior vs space quality in the riverbanks of the Tomebamba River" (Hermida, Neira, Cabrera-Jara, & Osorio, 2017) examined that design and city planning should integrate the treatment of rivers and riverbanks as main elements of the green network and the resilience of cities. The generation of urban biodiversity and also public have to understand their potential as green corridors, know the type of activities and behavior on the riverbanks, that their identities created by themselves. The proposed methodology aims to generate a spatially explicit empirical basis about the behavior of the population in different areas of Tomebamba River in

Cuenca-Ecuador, based on systematic observation, behavior mapping using mobile data collection and spatial analysis techniques, seeking for correlations with the connectivity, quality and the physical characteristics of the riverbanks. The results show differences in the spaces men and women use, and the type of activities for each group. This empirical evidence explicit recommended what the way should be provided, such knowledge base is needed for urban designers and policy-makers, in Latin American contexts.

Wookhyun An, Silverio Alarcon in “How Can Rural Tourism Be Sustainable? A Systematic Review” (An & Alarcón, 2020), conveyed the investigation review articles associated with sustainable rural tourism found on the Web of Science database over a 10-year span from 2009 to 2019. They selected 76 articles consisted concept of sustainable rural tourism. They were listed in comprehensive table; revealing the research purpose, topics, detailed topics, research methods, and data source of the articles. They found many papers on sustainable rural tourism were written from holistic sustainability perfective without being biased towards any one of the environmental, economic, and social aspects. The paper confirmed that efforts to understand sustainable rural tourism from the customer perspective have been increased since customer loyalty is considered important for sustainability. The paper could expanded and deepened the knowledge and understanding related topics and raise awareness of a new research direction.

Barbara Neumann, Konrad Ott, Richard Kenchington in “Strong sustainability in coastal areas: a conceptual interpretation of SDG 14” (Neumann, Ott, & Kenchington, 2017), They observed that Human derive many tangible and intangible benefits from coastal areas, providing essential components for social and economic development especially of less developed coastal states and island states. At the same time, growing human and environmental pressures in coastal areas have significant impacts on coastal systems, needs urgent attention. This paper argue that having strong sustainability concept by addressing protection, conservation, and management of coastal ecosystems and resources. They adopted the Agenda 2030 “three-pillar-model” (economic, social, and environmental dimensions). This paper use SDG 14 (Sustainable Development Goal) analysis for underlying sustainability concept, such decisive arguments for strong sustainability, and provided recommendations for coastal governance and for the process ahead.

Mariya Stankova, Ivanka Vassenska in paper “Raising Cultural Awareness of Local Traditions Through Festival Tourism” (Stankova & Vassenska, 2015) stated that festival and local special events are used as key elements within regional development strategies. It could contribute to economic development. The people should provide opportunities for tourism promotion, commercial outcomes and increased inward investment in host regions. The paper wrote that the approach of cultural profiles is implemented as a tool to raise the awareness for local traditions. Based on survey among organizers of festival, local entrepreneurs participating in festival and tourists visiting them, the degree of authenticity of local traditions in South Bulgaria was estimated. The main purpose is identification and establishment of opportunities for sustainable economic. The result of this study is tourists are more and more looking for true experiences for meeting and getting to know other people and other cultures. To have the constant desire to improve the cultural awareness form of local traditions and festival tourism is a suitable approach to achieve the goal, such flows and inward investment.

Jose Maria Martin, Jose Antonio Salinas Fernandez, Jose Antonio Rodriguez Martin, and Maria del Sol Ostos Rey in paper “Analysis of Tourism Seasonality As A Factor Limiting The Sustainable Development of Rural Areas” (Martín Martín, Salinas

Fernandez, Rodriguez Martin, & Ostos Rey, 2020) analyzed that sustainable development strategies in rural areas have relied on tourism as a tool for economic growth and job creation. The aim of paper is to analyze whether rural destinations suffer from higher levels of seasonality as compared with those of beach and urban tourism. The analysis is applied to Andalusia, a region in Southern Spain. The methodological innovation and contribution is to measure seasonality intensity by means of a DP2 synthetic-indicator that gathers information derived from various facets of seasonality. The conclusion is seasonality in rural tourism should not be evaluated generally, since each destination has specific conditions that determine stability. Thus rural destinations will not suffer from the problems associated with high seasonality, and this methodology should be applied to regions with different characteristics.

## METHODS

This study aims to find alternative economic resources for the Belitung people who used to rely heavily on tin mining. Tin mining has indeed been the first and main economic source for the Belitung people since centuries ago, so that other sectors, such as plantations, marine products, and forestry are neglected. Until the time of the implementation of the mitigation for excavation, the community seemed to be hit, especially in terms of fulfillment to daily needs of their families, which were not sufficient. It can be seen from statistical data from the Central Statistics Agency for the Provincial Government of the Bangka-Belitung Islands that poverty status increases every year, due to high unemployment.

The author decided to take an active part in meeting people in 9 villages directly to talk in the local language, in depth about their daily lives, especially since the implementation of tin mining mitigation. Talk about how things were before, and after there was mitigation upon tin mining exploration. Talk about the possibility of looking for alternative economic sources other than tin, such as from the marine, forestry, plantation sectors. The discussion comes to the marine sector, where most of Belitung is indeed a marine area, so that the resources of the sector are very abundant. Call it one of the activities of 'ngeremis', which is an activity to find and collect a kind of sea shells. These sea shells are often found when the sea water recedes. The 'ngeremis' activity is carried out by both adults and children, and is carried out around the lagoon/shallow sea when the sea water recedes. Even this 'ngeremis' activity has become a tourist event for children and families. They can play water and sand to their hilarity, during looking for and collecting sea shells. The sea shells that found, and collected in a bucket. Usually the results of the collected sea shells can reach 20 kg in number or even more. These sea shells are processed with mixed ingredients, and other spices, so that they become delicious and protein-rich clam crackers, and are worth selling. This 'ngeremis' activity the author did, participated in joining the Buluh Tumbang community. We did it at Tanjung Pendam beach, about 15 km from Tanjung Pandan, the capital city of Belitung.

To find out information of the low tide or high tide, there is important obtained through observations in the water table. If the water table shows numbers from 0.5 to 0.9, it means that the lagoon is suitable for 'ngeremis'. if the number in the table shows more than 1.1, it means that the sea water has started to rise, and it is no longer feasible to 'ngeremis', because it is dangerous, especially if the sea waves come suddenly. Several stages were carried out by the author to find alternatives as an economic source for the people of Belitung. The result; 'ngeremis' activities are very worthy of sale for tourists,

only need the proper and interesting package attractive attractions, and are professionally managed by a team who understands tourism matters.



**Figure 3. Data Collection Process**

## RESULT AND DISCUSSION

### From Comfort Zone HR to Reinvent Economy Resource

Over four centuries ago the tin mining was as eminent economy income for major of the Belitung people, but since 2016 the local government issued the regulation upon tin mining exploration mitigation till now. Consequently, majority of people should have to seek another economy resource alternative. Meanwhile due to since April 16, 2021 the status of Belitung region as Global Geopark decided by Unesco. This status has shown that the tourism sector could bring various effects on for people to think, and create the ideas, such as exploration all heritages activities that contains the tourism values to become marketable as tourism performances. One of heritage cultural activity is 'ngeremis'.

'Ngeremis' was the ancient activity for majority Belitung people who their region were most archipelago. Belitung region abundant shore, and beaches as natural resources. The people accustomed with water activity, namely 'ngeremis'. 'ngeremis' was an activity that seek such sea shell around the beach and able to eat or could be processed as typical food ingredients, we call sea shell chips. Sea shell chips product such having economic potency if produce and maintain in mass production. The author ever joined in once with the people did 'ngeremis' activity. 'ngeremis' is true heritage water activity tradition in Belitung. Once, author has having intents communication with an old man (Ki Abdullah 83 years old) and an old lady (Nek Harma 79 years old). Both could gave

the accurate answers related ‘ngeremis’ matters. Based on Nek Harna, she captured sea shell (‘ngeremis’) since childhood. She did it in Tanjung Tikar. She informed that the sea shell that captured would be as side dish, and the boiled water of sea shell could be as medicine for yellow disease, and she sold it per one tin milk size.

Not far different with the argument of Nek Harma, Kek Abdullah, 83 years old, also informed that he did ‘ngeremis’ since childhood also. He did ‘ngeremis’ at Air Saga in the afternoon whenever the water subsided. The information from both indicated that ‘ngeremis’ activity was the ancient and original heritage activity in Belitung.

So the author observed ‘Ngeremis’ activity has few steps starting well preparation till field activity. (i) First people would examine the water table. Water table was as below figure;

In Water table figured the region in; Tanjung Pandan, month/ year; March/2021, time; G.M.T.+07.00. For example: look at the Water table below:

Table 1. Water Table March

30. TANJUNGPANDAN		MARETMARCH 2021																								WaktuTime : G.M.T.+07.00						
05°44'39.27"S 102°38'07.77"E		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.1	1.1	1.2	1.3	1.3	1							
2	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.7	1.6	1.4	1.3	1.1	1.0	0.9	0.9	1.0	1.1	1.2	1.3	2							
3	1.4	1.6	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.0	2.0	1.9	1.8	1.6	1.4	1.2	1.0	0.8	0.7	0.7	0.8	0.9	1.0	1.2	3							
4	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.3	2.2	2.1	2.0	1.8	1.6	1.4	1.1	0.9	0.7	0.6	0.5	0.5	0.6	0.8	1.0	4							
5	1.2	1.5	1.7	1.9	2.1	2.3	2.4	2.5	2.5	2.4	2.3	2.2	1.9	1.7	1.4	1.2	0.9	0.7	0.5	0.4	0.4	0.4	0.6	0.8	5							
6	1.0	1.3	1.6	1.9	2.1	2.3	2.5	2.6	2.6	2.6	2.5	2.3	2.1	1.9	1.6	1.3	1.0	0.7	0.5	0.3	0.3	0.3	0.4	0.5	6							
7	0.8	1.1	1.4	1.7	2.0	2.3	2.5	2.6	2.7	2.8	2.7	2.5	2.3	2.0	1.7	1.4	1.1	0.8	0.6	0.4	0.3	0.2	0.3	0.4	7							
8	0.6	0.8	1.1	1.5	1.8	2.1	2.4	2.6	2.7	2.8	2.8	2.6	2.4	2.2	1.9	1.6	1.3	1.0	0.7	0.5	0.3	0.3	0.3	0.3	8							
9	0.5	0.7	0.9	1.3	1.6	2.0	2.2	2.5	2.7	2.8	2.8	2.7	2.5	2.3	2.0	1.7	1.4	1.2	0.9	0.7	0.5	0.4	0.3	0.4	9							
10	0.4	0.6	0.8	1.1	1.4	1.7	2.1	2.3	2.5	2.7	2.7	2.7	2.6	2.4	2.1	1.8	1.6	1.3	1.1	0.9	0.7	0.5	0.5	10								
11	0.5	0.6	0.7	1.0	1.2	1.5	1.8	2.1	2.3	2.5	2.6	2.6	2.5	2.3	2.1	1.9	1.6	1.4	1.2	1.0	0.9	0.7	0.7	0.6	11							
12	0.7	0.7	0.8	0.9	1.2	1.4	1.7	1.9	2.1	2.3	2.4	2.4	2.4	2.2	2.1	1.9	1.6	1.5	1.3	1.2	1.0	0.9	0.9	0.8	12							
13	0.9	0.9	1.0	1.0	1.2	1.4	1.6	1.8	2.0	2.1	2.2	2.2	2.2	2.1	1.9	1.8	1.6	1.4	1.3	1.2	1.1	1.1	1.0	1.0	13							
14	1.1	1.1	1.2	1.2	1.3	1.4	1.6	1.7	1.9	2.0	2.0	2.0	2.0	1.9	1.8	1.6	1.4	1.3	1.2	1.2	1.1	1.2	1.2	1.4	14							
15	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.2	1.3	15							
16	1.4	1.5	1.6	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.5	1.4	1.2	1.1	1.0	0.9	0.9	0.9	1.0	1.2	1.3	16							
17	1.4	1.6	1.7	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	1.8	1.7	1.5	1.3	1.1	0.9	0.8	0.7	0.7	0.7	0.9	1.0	1.2	17							
18	1.4	1.6	1.8	2.0	2.1	2.2	2.3	2.3	2.3	2.2	2.1	1.9	1.7	1.5	1.2	1.0	0.8	0.6	0.5	0.5	0.5	0.7	0.8	1.0	18							
19	1.3	1.5	1.8	2.0	2.2	2.4	2.5	2.5	2.5	2.4	2.3	2.1	1.9	1.6	1.3	1.0	0.7	0.5	0.4	0.3	0.4	0.5	0.6	0.8	19							
20	1.1	1.4	1.7	2.0	2.2	2.4	2.6	2.7	2.7	2.6	2.5	2.3	2.0	1.7	1.4	1.1	0.8	0.5	0.4	0.3	0.2	0.3	0.4	0.6	20							
21	0.9	1.2	1.5	1.8	2.1	2.4	2.6	2.7	2.8	2.8	2.7	2.5	2.2	1.9	1.6	1.3	0.9	0.6	0.4	0.2	0.2	0.2	0.3	0.5	21							
22	0.7	1.0	1.3	1.7	2.0	2.2	2.5	2.7	2.8	2.8	2.8	2.6	2.4	2.1	1.8	1.5	1.1	0.8	0.5	0.3	0.2	0.2	0.3	0.4	22							
23	0.6	0.8	1.1	1.5	1.8	2.1	2.3	2.5	2.7	2.8	2.8	2.7	2.5	2.2	1.9	1.6	1.3	1.0	0.7	0.5	0.3	0.3	0.3	0.4	23							
24	0.5	0.7	1.0	1.3	1.6	1.9	2.2	2.4	2.5	2.7	2.7	2.6	2.5	2.3	2.0	1.8	1.5	1.2	0.9	0.7	0.5	0.4	0.4	0.5	24							
25	0.5	0.7	0.9	1.1	1.4	1.7	2.0	2.2	2.4	2.5	2.5	2.5	2.4	2.3	2.0	1.8	1.6	1.4	1.1	0.9	0.8	0.6	0.6	0.6	25							
26	0.7	0.8	0.9	1.1	1.3	1.6	1.8	2.0	2.2	2.3	2.3	2.4	2.3	2.2	2.0	1.8	1.6	1.4	1.3	1.1	1.0	0.9	0.8	0.8	26							
27	0.9	0.9	1.0	1.1	1.3	1.5	1.7	1.9	2.0	2.1	2.2	2.2	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.1	1.0	1.0	27							
28	1.1	1.1	1.2	1.3	1.4	1.5	1.7	1.8	1.9	2.0	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	28							
29	1.3	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.0	1.1	1.1	1.2	1.3	1.4	29							
30	1.5	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.0	2.0	1.9	1.8	1.6	1.5	1.3	1.1	1.0	0.9	0.8	0.9	1.0	1.1	1.2	1.4	30							
31	1.5	1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.0	1.9	1.8	1.6	1.4	1.2	1.0	0.8	0.7	0.6	0.7	0.8	0.9	1.1	1.3	31							

Table 2. Water Table December

DESEMBER/DECEMBER 2021																											
J	T	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	J	T
1	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.1	1.1	1.2	1.3	1.3	1	1	
2	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.7	1.6	1.4	1.3	1.1	1.0	0.9	0.9	1.0	1.1	1.2	1.3	2	2	
3	1.4	1.6	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.0	2.0	1.9	1.8	1.6	1.4	1.2	1.0	0.8	0.7	0.7	0.8	0.9	1.0	1.2	3	3	
4	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.3	2.2	2.1	2.0	1.8	1.6	1.4	1.1	0.9	0.7	0.6	0.5	0.5	0.6	0.8	1.0	4	4	
5	1.2	1.5	1.7	1.9	2.1	2.3	2.4	2.5	2.5	2.4	2.3	2.2	1.9	1.7	1.4	1.2	0.9	0.7	0.5	0.4	0.4	0.4	0.6	0.8	5	5	
6	1.0	1.3	1.6	1.9	2.1	2.3	2.5	2.6	2.6	2.6	2.5	2.3	2.1	1.9	1.6	1.3	1.0	0.7	0.5	0.3	0.3	0.3	0.4	0.5	6	6	
7	0.8	1.1	1.4	1.7	2.0	2.3	2.5	2.6	2.7	2.8	2.7	2.5	2.3	2.0	1.7	1.4	1.1	0.8	0.6	0.4	0.3	0.2	0.3	0.4	7	7	
8	0.6	0.8	1.1	1.5	1.8	2.1	2.4	2.6	2.7	2.8	2.8	2.6	2.4	2.2	1.9	1.6	1.3	1.0	0.7	0.5	0.3	0.3	0.3	0.3	8	8	
9	0.5	0.7	0.9	1.3	1.6	2.0	2.2	2.5	2.7	2.8	2.8	2.7	2.5	2.3	2.0	1.7	1.4	1.2	0.9	0.7	0.5	0.4	0.3	0.4	9	9	
10	0.4	0.6	0.8	1.1	1.4	1.7	2.1	2.3	2.5	2.7	2.7	2.7	2.6	2.4	2.1	1.8	1.6	1.3	1.1	0.9	0.7	0.5	0.5	10	10		
11	0.5	0.6	0.7	1.0	1.2	1.5	1.8	2.1	2.3	2.5	2.6	2.6	2.5	2.3	2.1	1.9	1.6	1.4	1.2	1.0	0.9	0.7	0.7	0.6	11	11	
12	0.7	0.7	0.8	0.9	1.2	1.4	1.7	1.9	2.1	2.3	2.4	2.4	2.4	2.2	2.1	1.9	1.6	1.5	1.3	1.2	1.0	0.9	0.9	0.8	12	12	
13	0.9	0.9	1.0	1.0	1.2	1.4	1.6	1.8	2.0	2.1	2.2	2.2	2.2	2.1	1.9	1.8	1.6	1.4	1.3	1.2	1.1	1.1	1.0	1.0	13	13	
14	1.1	1.1	1.2	1.2	1.3	1.4	1.6	1.7	1.9	2.0	2.0	2.0	2.0	1.9	1.8	1.6	1.4	1.3	1.2	1.2	1.1	1.2	1.2	1.4	14	14	
15	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.2	1.3	15	15	
16	1.4	1.5	1.6	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.5	1.4	1.2	1.1	1.0	0.9	0.9	0.9	1.0	1.2	1.3	16	16	
17	1.4	1.6	1.7	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	1.8	1.7	1.5	1.3	1.1	0.9	0.8	0.7	0.7	0.7	0.9	1.0	1.2	17	17	
18	1.4	1.6	1.8	2.0	2.1	2.2	2.3	2.3	2.3	2.2	2.1	1.9	1.7	1.5	1.2	1.0	0.8	0.6	0.5	0.5	0.5	0.7	0.8	1.0	18	18	
19	1.3	1.5	1.8	2.0	2.2	2.4	2.5	2.5	2.5	2.4	2.3	2.1	1.9	1.6	1.3	1.0	0.7	0.5	0.4	0.3	0.4	0.5	0.6	0.8	19	19	
20	1.1	1.4	1.7	2.0	2.2	2.4	2.6	2.7	2.7	2.6	2.5	2.3	2.0	1.7	1.4	1.1	0.8	0.5	0.4	0.3	0.2	0.3	0.4	0.6	20	20	
21	0.9	1.2	1.5	1.8	2.1	2.4	2.6	2.7	2.8	2.8	2.7	2.5	2.2	1.9	1.6	1.3	0.9	0.6	0.4	0.2	0.2	0.2	0.3	0.5	21	21	
22	0.7	1.0	1.3	1.7	2.0	2.2	2.5	2.7	2.8	2.8	2.8	2.6	2.4	2.													

**J = 1 o'clock, or 2 o'clock, 3 o'clock, and so on till 24 o'clock.**

**T = March 1<sup>st</sup>, or March 2<sup>nd</sup>, or March 3<sup>rd</sup>, and so on till the end of**

**March.**

If the figure written 1.2, or 1.4, or 1.7, or 1.9, or 2.0 above, means the water still high, and could not able to go to the beach to do 'Ngeremis', but if in figure written 0.7, or 0.8 or 0.9 or below, means the water subsided and it was the time to do 'Ngeremis'. Based on the water table was the appropriate time doing 'ngeremis' were on;

- **March 6<sup>th</sup> on 16 o'clock, the water was 0.9 till 17.00 o'clock, or till 18.00 o'clock.**

- **December 7<sup>th</sup> on 1 o'clock, the water was 0.8 till 2 o'clock.**

(ii) Arranged the transportation from home to the beach, land transportation by bike or car, and from beach to lagoon by boat. The 'ngeremis' spots are:

- a) Tanjung Pendam (the most crowded spot for 'ngeremis')
- b) Air Saga
- c) Pantai Bebuta
- d) Sungai Samak
- e) Pantai Batu Itam



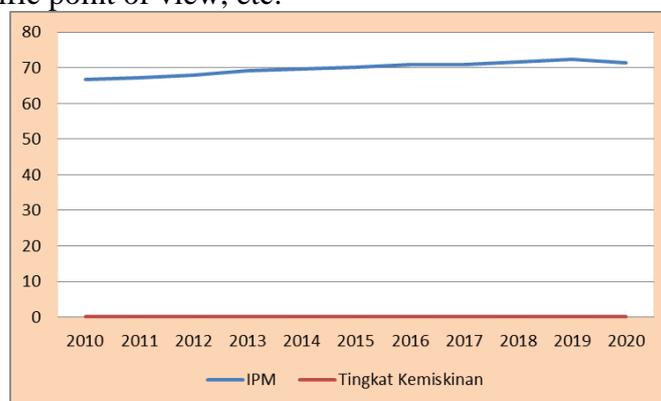
**Figure 4. 'Ngeremis' activity at Tanjung Pendam Lagoon, Belitung**

People who want to 'ngeremis' prepare themselves with appropriate clothes to get wet in the lagoon. They also brought a change of clothes, brought food, buckets, sacks, nets, hats. They also brought their relatives, from children to adults. They happily go together. Along the way they chatted with each other, laughed cheerfully, until they arrived at the beach. Here they sat on simple wooden benches waiting for the boat to take them to the lagoon. Wait around half an hour. The boat fare is 10,000 rupiah/ person. Generally the boats carry about 20 people. Arriving at the lagoon they began to act to explore around the spot. Each carried a medium-sized bucket, held in his left hand, barefoot and down into the water. Starting to scatter with a downward view, the water level at that time was ankle-deep. Shells will be found on the sidelines of the sand, and usually looks like a green tail. Actually it's not a clam's tail. It's a seaweed that sticks to the back of the clam. Here the eye must be observant, so that the shells are not missed. Each shell that is obtained is included and collected in a bucket that has been brought. The shells obtained and collected can reach up to tens of kilograms in weight. Therefore, usually the transport boat will carry out transportation from the lagoon to the shore twice back and forth, because if the transport boat loads its passengers with additional shells that have been collected, it will pose a risk of overloading the boat, and can cause the boat to sink due to overload.

(iii) 'Ngeremis' becomes a tourist facility for families. Traveling has the connotation of a luxurious activity, because it takes a certain amount of funds to reach

tourist destinations, food costs, transportation costs, and other unexpected costs. Based on statistical measurements of the socio-economic status of the Belitung people, the majority of people are classified as poor, especially when the moratorium on tin mining was imposed, and this created a very high wave of unemployment. So to do family recreation, it becomes a difficult thing to fulfill. However, the 'ngeremis' activity is relatively inexpensive except for the boat fare, and the amount is very light. Food can also be brought from home. Children can play water and sand to their heart's hilarity. They can also participate in looking for cockles, and collect in their own buckets. The 'ngeremis' activity can be a cheap recreational arena, very affordable, and beneficial for families

Statistically, poverty is a state of inability to meet basic needs such as food, clothing, shelter, education and health. Poverty can be caused by the scarcity of basic necessities, or the difficulty of accessing education and employment. Poverty is a global problem. Some people understand this term subjectively and comparatively, while others see it from a moral and evaluative point of view, and still others understand it from an established scientific point of view, etc.



**Figure 5. Poverty Rate**

**Table 3. Human Development Index**

No	Year	HDI	Poverty
1	2010	66,79	0,25
2	2011	67,17	0,13
3	2012	67,87	0,12
4	2013	69,27	0,12
5	2014	69,56	0,24
6	2015	70,29	0,23
7	2016	70,81	0,15
8	2017	70,93	0,23
9	2018	71,7	0,08
10	2019	72,46	0,11
11	2020	71,51	0,16

According to the table above, the number of Human Development Index increases every year, and the number of poverty severity index decreases. It is considered that the Human Development Index affects the Poverty Severity Index. In other words, the Human Development Index has succeeded in reducing the increase in regional poverty. Therefore, the authors conducted research on the Human Development Index affecting the poverty level. Based on the results of calculations with Eviews, the results are as follows:

**Table 4. HDI with Eviews**

Dependent Variable: IPM				
Method: Least Squares				
Date: 09/24/21 Time: 14:25				
Sample: 2010 2020				
Included observations: 11				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7119.948	151.4068	47.0253	0
JK	-7.89718	8.716889	-0.905963	0.3886
R-squared	0.083575	Mean dependent var		6994.455
Adjusted R-squared	-0.01825	S.D. dependent var		200.9076
S.E. of regression	202.7326	Akaike info criterion		13.62462
Sum squared resid	369904.7	Schwarz criterion		13.69696
Log likelihood	-72.9354	Hannan-Quinn criter.		13.57902
F-statistic	0.820768	Durbin-Watson stat		0.239347
Prob(F-statistic)	0.388566			

### Regression Model

Based on the output eviews above, the following analysis can be generated: The resulting regression model is  $HDI \text{ (Human Development Index)} = 7119.94785882 - 7.89717647059 * JK +$  which can be interpreted that the Poverty variable has a positive and insignificant effect (Prob value = 0.3886 > 0.05). Based on the table above, it can be concluded that the level of poverty reduction has an effect of 0.0835 rounded up to 8.35%.

The rest are figures that HDI n level has a positive effect because a high index value on a person cannot guarantee that a person is far from the poverty level. This is due to the existence of subsidized assistance from the government; in the fields of education and health. The subsidized assistance from the government affects a person's index value. So someone who has a good level of education and health is not necessarily able to live properly. With a good level of education, no one has yet got a decent job, this is a factor causing the increase in the unemployment rate, and resulting in an increasing poverty rate.

The F-Test Hypothesis is as follows  $H_0$  : Model Not Suitable,  $H_1$  : Suitable Model. With a significant level of 0.05%. Based on the output of the Eviews above, it can be seen that Prob.F (statistical) is 0.388566, which is Prob.F static 0.388566 > 0.05, thus it can be concluded that the model is not suitable.

The t-test hypothesis is as follows,  $H_0: \beta_1 = 0$  (The increase in the Human Development Index is not significant to the reduction in the poverty rate),  $H_1: \beta_1 \neq 0$  (Significant increase in Human Development Index to poverty reduction). Based on the output of the Eviews above, it can be seen that the Prob. Variable X is 0.005 which is smaller than the significant level of 0.05, it can be concluded that reject  $H_0$ .

Based on the output of Eviews 1.1, the R-squared value is 0.083575 rounded up to 8.35%. Thus it can be concluded that the reduction in the poverty rate only affects the HDI as much as 8.35%.

### Classical Assumption Test

Based on the output of Eviews Probability  $0.631887 > 0.05$ , it can be concluded that the residuals are normally distributed or the assumption of normality is met.

The linearity assumption is fulfilled because the probability of the F-statistic =  $0.917 > 0.05$ . So it can be assumed that the independent variable is linear with the dependent variable fulfilled.

The Prob.Chi-Square (2) = 0.0266 , which is smaller than 0.05. Thus it can be concluded that there are symptoms of autocorrelation in the data. Due to the presence of autocorrelation symptoms, the Breusch-Godfrey Test was carried out, with the following results, Prob.F Chi Square 0.9882 is greater than 0.05. Where there is no autocorrelation.

The Prob.F value is  $0.9721 > 0.05$ . Thus, it can be concluded that there are no symptoms of heteroscedasticity or the assumption of homogeneity of variance is fulfilled.

According to the table above, the number of Human Development Index increases every year, and the number of poverty severity index decreases. It is considered that the Human Development Index affects the Poverty Severity Index. In other words, the Human Development Index has succeeded in reducing the increase in regional poverty. Therefore, the authors conducted research on the Human Development Index affecting the poverty level. Based on the results of calculations with Eviews, the results are as follows:

**Table 5. HDI with Eviews**

Dependent Variable: IPM				
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Sample: 2010				
2020				
Included observations: 11				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7119.948	151.4068	47.0253	0
JK	-7.89718	8.716889	-0.905963	0.3886
R-squared	0.083575	Mean dependent var		6994.455
Adjusted R-squared	-0.01825	S.D. dependent var		200.9076
S.E. of regression	202.7326	Akaike info criterion		13.62462
Sum squared resid	369904.7	Schwarz criterion		13.69696
Log likelihood	-72.9354	Hannan-Quinn criter.		13.57902
F-statistic	0.820768	Durbin-Watson stat		0.239347
Prob(F-statistic)	0.388566			

(iv) The results of 'ngeremis' can be a source of additional income. Sea shell obtained from the 'ngeremis' activity can be processed into clam crackers. These processed products can be marketed, and become special snacks with a unique taste; tasty and rich in protein. The process of processing cockle into clam crackers goes through

several stages. Below are the stages of processing clam crackers; ranging from raw materials to ready-to-eat as a snack.



Cutting into small pieces, dried by sun power



Fried with vegetable oil



Snack ready to marketing



Raw Material



Boiled-Raw



Ingredients; flour, rice, egg, garlic, salt, sugar



Mixing all by mixer



Dough shape



Boiled the dough

To answer the objective of this paper study 1 (To know and to reinvent the economic sustainable for livelihood in ex-tin mining exploration area in Belitung), first record and examine other economic sources except tin mining. Thus, it was found that Belitung has abundant marine resources, quite diverse forestry sources, land sources that can be managed as garden fields, sources of ex-tin-excavated lakes that are widely scattered throughout Belitung. The next step is sorting from all these alternative sources, which sectors can be explored and worked on as soon as possible according to the current situation and condition of Belitung. Since Belitung on April 15, 2021 has received recognition from UNESCO as an attractive, exotic, and rare geopark area, the Belitung people should be aware of the direction of development of human development and the environment, which looks towards the tourism sector. The tourism sector certainly requires various tourist destinations, for example; marine tourism, nature tourism, religious tourism, cultural tourism, culinary tourism, agro tourism, art tourism, and other tours supported by natural conditions and the people. Objective 2 (To assess of economic sustainable resources for livelihood in resilience community). To choose the alternatives economic source after the golden age of tin mining era, this paper study looks to the past, where the golden age of tin mining production ruled Belitung, so that all people were lulled by condition, drifted into a comfortable lifestyle that looked comfortable, and tended to look like they didn't have to work hard. , it is enough to dig for tin around the house for about three hours, the family's needs for that day can be fulfilled, as well as for the following days. This happened from generation to generation until 2016, when the tin mining moratorium was enforced. Since then the economic life of the Belitung people is very low, and poverty occurs every year, due to the loss of their main source of livelihood. For this reason, an appropriate alternative source of livelihood is needed and is able to meet the basic daily needs of the family.

Result Observers, carrying out 'ngeremis' activities directly together with the Belitung community resulted in the following reasoning results;

1. The 'ngeremis' activity is feasible and capable as an alternative source of daily livelihood for the local community, because the natural carrying capacity provides for the 'ngeremis' activity. The results of 'ngeremis' can be processed into snacks that are rich in protein and can be sold in the market, and can become a family financial income.
2. The 'ngeremis' activity is very feasible to be packaged into an activity that can be offered to the tourism sector, as part of marine tourism, and by selling 'ngeremis' ticket payment. 'Ngeremis' is a unique and interesting tradition, so that this activity can attract tourists to do and feel the sensation of 'ngeremis' ' with wet feet, descending to the shore in calf-high pools of sea, and small waves. The attraction of 'ngeremis' can be a 'memorable' activity for tourists.
3. If the 'ngeremis' activity has been packaged into a unique and paid attraction for tourists who come to visit, it is certain that the 'ngeremis' activity can be an alternative source of income for the community.
4. The tradition of 'ngeremis' is preserved and is not easily extinct, as long as the sea and beaches are still available there. Because 'ngeremis' activity have been carried out decades ago, until now.

## CONCLUSIONS

The tradition of 'ngeremis' is capable and worth selling for the development of the tourism sector in Belitung. This 'ngeremis' activity is unique, interesting, sensational,

exhilarating, and memorable. What is needed is; The packaging process is professional, organized, neat, and aggressive marketing to attract tourists to do the 'ngeremis' tradition and paying. The economic impact of this 'ngeremis' attraction is; land transportation activities from where tourists stay to the beach where 'ngeremis' will be awakened. The marine transportation, such boats from beach to lagoon is intended to be lively, because many tourists will be transported from the beach to the lagoon. Boats that carry tourists can also be designed in beautiful and attractive designs, which are typical of Belitung, for example. The results of the collection of sea shells from this 'ngeremis' activity can be offered to tourists, how they want to be processed, and of course paid. During the 'ngeremis' attraction, it can be captured in the form of making a memorable video, and stored in an attractive cd or storage container. This 'ngeremis' tradition can be a sustainable income as long as there are seas and beaches for the people of Belitung.

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