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**The 19<sup>th</sup> Tri-University  
International Joint Seminar and Symposium**  
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**Proceeding**

# **Role of Asia in Communities and Sustainable Development**



# **Proceeding**

**The 19<sup>th</sup> Tri-University**

**International Joint Seminar and Symposium 2012**

**Role of Asia  
in Community & Sustainable Development**



**Directorate of Collaboration and International Programs**

**Bogor Agricultural University (IPB)**

**Bogor, 22-25 October 2012**

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Proceeding of The 19<sup>th</sup> Tri-University  
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## **PREFACE**

Praise be to God Almighty for enabling us to publish the proceeding of 19<sup>th</sup> Tri-University – International Joint Seminar and Symposium which has been conducted on 22-25 October 2012 at Kampus IPB Darmaga, Bogor.

The theme of the conference was focused on the Role of Asia in the Community & Sustainable Development. Papers presented in the conference were divided into five categories, Tetralema (Food, Population, Energy & Environment) plus Ecology. There were 98 papers presented orally by students and lecturers

We would like to express our gratitude to all speakers who have contributed their papers try to be published in this proceeding. Thank you to IPB and all parties who have sponsored this event. To all members of steering and organizing committee who have contributed to the success of the event we would like to express our sincere appreciation.

We also would like to apologize to all of participants if in conducting this event there are some shortcomings that cause the participants feel not comfortable. We hope that this proceeding contribute to the establishment of science and technology in food, population, energy, environment & ecology in Asia.

Bogor, October 2012  
The Chairman of the Organizing Committee,  
Desrial

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# CONTENT

Editorial Board .....	ii
Preface .....	iii
Steering Committee .....	iv
Organizing Committee .....	iv
Table of Content .....	v
List of Plenary Papers .....	vi
List of Oral Presentation Papers:	
- Theme A: Food .....	vii
- Theme B: Population .....	viii
- Theme C: Energy .....	ix
- Theme D: Environment .....	xi
- Theme E: Ecology .....	xiii

## List of Plenary Papers

<b>Paper Number</b>	<b>Name/University</b>	<b>Paper Title</b>	<b>Page</b>
P-1	<b>Nobutaka Ito</b> Chiangmai University	Taking changes for globalization	1-8
P-3	<b>Purwiyatno Hariyadi</b> Bogor Agricultural University (IPB)	Local based food security: Toward Food Sovereignty	9-13
P-4	<b>Hiroshi Ehara</b> Mie University	Potency of sago palm, underutilized resource for strengthening food security	14-21

Oral Presentation Papers

**THEME A-FOOD**

<b>Paper Number</b>	<b>Name/University</b>	<b>Paper Title</b>	<b>Page</b>
A-01	<b>Wang Zhenbin</b> Jiangsu University	The Advanced of Ultrasound Application in Food Processing	1
A-02	<b>Kento Nakamura</b> Mie University	Development of an Evaluating Strawberry Arrangement System	2-3
A-03	<b>Asami Hirota</b> Ibaraki University	The hanging basket simulator using augmented reality	4-6
A-04	<b>Asep Andi</b> Bogor Agricultural University (IPB)	MATRIX, A New Device for “Opak Singkong” Production	7-10
A-05	<b>Mitsuo Makino</b> Mie University	Development of Driving Route Detection Algorithm For Automatic Vehicle Navigation	11-12
A-06	<b>Kazuya Miyawaki</b> Ibaraki University	Developing the "Smart Garden" using a sensor network	13-16
A-07	<b>Ibnu Malkan Bakhrol Ilmi</b> Bogor Agricultural University (IPB)	Formulation of Noodles Made from Ganyong ( <i>Canna edulis</i> Kerr) with the Addition of Red Palm Oil as Food Source Containing Carbohydrate and Pro-vitamin A	17-20
A-08	<b>Ary Kristianto</b> Bogor Agricultural University (IPB)	The Optimization Process of Making Velvet Bean ( <i>Mucunapruriens</i> L) Protein Concentrate by using Liquozyme Supra® Alpha-Amylase Enzyme	21-23
A-09	<b>Sun Ling</b> Jiangsu University	Extraction of protein and polysaccharide from <i>Porphyra yezoensis</i>	24-28
A-10	<b>Acep Usman Abdullah</b> Bogor Agricultural University (IPB)	<i>Bombyx mori</i> Silkworm Pupae Protein Isolate : An Alternative Fortificant for High Protein Powdered Milk	29-33
A-11	<b>Zhou Yuanyuan</b> Jiangsu University	Current Situation and Countermeasures of Food Security in Jiangsu Province	34-37
A-12	<b>Arisa Nishio</b> Mie University	Cross-cultural Understanding through Food Education Efficacy of Food Education as a First Step to Understand Other Cultures	38-40
A-13	<b>Sumpun Chaitep</b> Chiangrai Rajabhat University	Selected case study in Thailand, annual fish-rice production model	41
A-14	<b>Takuma Fujii</b> Mie University	Effect of Application of NaCl and KCl on Growth and Quality of ‘Mie-nabana	42-45
A-15	<b>Faradila Danasworo Putri</b> Bogor Agricultural University (IPB)	Yield Evaluation of New Genotypes to Develop High Yielding Chili Pepper ( <i>Capsicum annuum</i> L.) Variety in Indonesia	46-49



## THEME B-POPULATION

<b>Paper Number</b>	<b>Name/University</b>	<b>Paper Title</b>	<b>Page</b>
B-01	<b>Phawis Thammason</b> Chiang Mai University	Efficient Intersection Management by Real-Time Vision-based Object Counter	1-4
B-02	<b>Azka Lathifa Zahratu Azra</b> Bogor Agricultural University (IPB)	"TRIPLEM": A Multifunction Dining Table for The Minimalist Kitchen	5-7
B-03	<b>Piamnatda Guntawong</b> Chiang Mai University	Population, InHOME: Incremental and Online Visual Intelligence System for the Advanced Interactive Home	8-11
B-04	<b>Siriporn Thongjaeng</b> Chiang Mai University	Structural Design Criteria of Shipping Container as Housing The Approach to Sustainable Society	12-15
B-05	<b>Dika Supyandi</b> Padjadjaran University	Ensuring Farmer Inclusion Works in Practice (A Study of Inclusive Agribusiness Models in Several Areas of West Java)	16
B-06	<b>Smith Chutina</b> Chiang Mai University	GDP : another Viewpoint	17-20
B-07	<b>Eris Astari Putra</b> Bogor Agricultural University (IPB)	"The Ballad of Rebin": An Entertaining Movie to Criticize Students' Littering Habits	21-23
B-08	<b>Huang Jing</b> Guang Xi University	Elementary introduction on scientific and cultural qualities of the population and sustainable development	24
B-09	<b>Mochamad Sobich Maimun</b> Bogor Agricultural University (IPB)	Effectiveness of Wayang Golek " Bang Tagor" As a Food Education Media for Elementary School Children	25-28
B-10	<b>Siripa Pattayagorn</b> Chiang Mai University	Potentials of NFC technology in mobile smart shopping	29-32
B-11	<b>Hong Xinlu</b> Guang Xi University	Analysis of Asia Women's Current Status— Gender Equality in Education	33-36
B-12	<b>Sittha Rodtook</b> Chiang Mai University	Improvement of Prosthesis foot rigid keel for better use	37-40
B-13	<b>Huang Joy</b> Guang Xi University	Vegetarian life can help mitigate famine and pollution	41-43
B-14	<b>Zhu Meilin</b> Mie University	The Importance of Non-native Teachers from the Perspective of an Education Gap	44-46
B-15	<b>Urana Nisoong</b> Chiang Mai University	A Recipe Recommendation Application	47-50
B-16	<b>Shoko Izumi</b> Mie University	One Case Study of a Female Stroke Patient Assistance in Patients with Disability Acceptance	51-53
B-17	<b>Nicharee Techatanarut</b> Chiang Mai University	Picture Transfer Using Receiver Location Application	54-57

## THEME C-ENERGY

Paper Number	Name/University	Paper Title	Page
C-01	<b>Liu Jiajia</b> Jiangsu University	Exploring real option theory in Chinese coal-fired electricity system with the CCS and its Applications	1-4
C-02	<b>Boonyang Krittasampan</b> Chiangrai Rajabhat University	Study of heat energy value of biomass charcoal from wasted local material	5-8
C-03	<b>Wang Ping</b> Jiangsu University	Large eddy simulation of turbulent lean premixed combustion	9-17
C-05	<b>Wang Peng</b> Jiangsu University	Vehicle sensors enhance the performance of hybrid electric vehicle	18-22
C-06	<b>Yutaka Jin</b> Mie University	Sequential Condition Diagnosis Method for Structure Faults of Rotating Machinery Using Rough Sets and Fuzzy Neural Network	23-25
C-08	<b>Zhao Kai</b> Jiangsu University, China	Analysis on carbon reduction after applying solar water heaters and its prospect in China	26-29
C-09	<b>Suthinee Juangjandee</b> Chiang Mai University	Energy, Green energy strategies in Thailand	30-32
C-11	<b>Supakit Kathong</b> Chiangrai Rajabhat University	Promoting project to use of biomass stove to reduce liquefied petroleum gas in Nan Province	33-36
C-13	<b>Ninggar Pramita Sari</b> Bogor Agricultural University (IPB)	Performance Of Hybrid GHE Solar Dryer (Combined With Biomass) for "Fish- Bone Crackers" Drying	37-39
C-14	<b>Nongluk Homsroi</b> Chiangrai Rajabhat University	Comparative study on Do-It-Yourself Solar Dryers	40-43
C-15	<b>Bhekhti Ayu Hidayati</b> Bogor Agricultural University (IPB)	Labor Energy Analysis on Nutmeg-Mace Separator Machine	44-46
C-16	<b>Hu Bin</b> Jiangsu University	Feasibility analysis and prospects of dual purpose sprinkler irrigation and drip irrigation units	47-50
C-17	<b>Ju Longyu</b> Jiangsu University	Analysis on power performance and energy consumption of electric vehicle with different powertrain system	51-54
C-18	<b>Xu Xiaoling</b> Jiangsu University	Synthesis of a magnetic nano-material and its performance	55-58
C-19	<b>Tomoya Kamiyama</b> Mie University	Gel Polymer Electrolytes Including Ionic Liquids for Lithium Ion Secondary Batteries	59-61
C-20	<b>Cai Jie</b> Jiangsu University	Surface Modification of Pure Zirconium by High Current Pulsed Electron Beam	62-65
C-21	<b>Li Meng</b> Jiangsu University	Research on properties of aluminum made automobile engine cylinder body	66-70
C-22	<b>Tepporn Satsue</b> Suranaree University of Technology	Hydrocarbon	71-73
C-23	<b>Liu Shuaishuai</b> Jiangsu University	Synthesis and Enhanced Photocatalytic Activity of TiO <sub>2</sub> Hollow Sphere	74-77
C-24	<b>Nichakorn Pungpoonpon</b> Chiangrai Rajabhat University	Nanocatalysts for transesterification of vegetable oils for the production improvement of biodiesel	78-80

C-26	<b>Apichai Sawsit</b> Suranaree University of Technology	Microbial production of Acetone-Butanol- Ethanol (ABE) from cassava starch in Batch Operation	81-84
------	--	---	-------

## THEME D-ENVIRONMENT

Paper Number	Name/University	Paper Title	Page
D-01	<b>Resa Denasta Syarif</b> Bogor Agricultural University (IPB)	Cleaner Production in Crumb Rubber Industry as The Solution of Minimizing Water Pollution and Consumption	1-4
D-02	<b>Maytawadee Sangproo</b> Suranaree University of Technology	Improved D-(-)-Lactate Production by Generatically Modified <i>Klebsiella oxytoca</i>	5-7
D-03	<b>Achmad Solikhin</b> Bogor Agricultural University (IPB)	Bio-adhesive from Kraft Pulping Black Liquor of Mangium Wood	8-10
D-04	<b>Takeo Sakon</b> Mie University	Characterization of an unknown functional module in <i>Paenibacillus xylaniclasticus</i>	11-13
D-05	<b>Fery Nurdin Ferdiyan</b> Bogor Agricultural University (IPB)	Alternative Utilization of Rattan Bark Fiber as Bio-Nano Reinforced Plastic (Composite) and Possible Applications for Automotive Components	14-17
D-06	Liu Xinxin Guang Xi University	Economy Benefit and Feasibility of Recycling Paper	18-22
D-07	<b>Timpika Ranron</b> Chiangrai Rajabhat University	Smog haze problems and obstacles in Chiangrai Province of Thailand	23-26
D-08	<b>Haruka Suzuki</b> Mie University	An Influence of the Kuroshio-current in Atmospheric Circulation	27-29
D-09	<b>Pimchanok Phuengphumkaew</b> Chiang Mai University	Feasibility Study of Fire Breaks Implementation in Northern Thailand	30-32
D-10	<b>Masayasu Koda</b> Mie University	Prediction of Heavy Snowfall from Stratospheric Sudden Warming (SSW)	33-36
D-11	<b>Hang Thi Dao</b> The University of Adelaide, Australia	Are sea level rise scenarios plausible? Projecting sea level rise impact on land use in Ca Mau Peninsula, Vietnam	37-41
D-12	<b>Wang Zhan</b> Jiangsu University	PM2.5 as culprit in hazy weather exacerbates bronchial asthma in children	42-44
D-13	<b>Huang Jiuru</b> Jiangsu University	Environmental economics, innovation in science and technology and green consumption culture	45-48
D-14	<b>Zaqlul Iqbal</b> Bogor Agricultural University (IPB)	Eco Recycled Incinerator For Medical Waste Disposal	49-51
D-15	<b>Wang Weinan</b> Jiangsu University	Impact of medicine producing and waste drug processing on the environment	52-55
D-16	<b>Wu Run Run</b> Jiangsu University	A review of the process in and application of surface molecular imprinting technique in environmental and food analysis	56-59
D-17	<b>Chen Zhiyin</b> Guang Xi University	The meaning significance of reducing the meat products transportation process and manufacturing process for low carbon life	60-62
D-18	<b>Tasuku Hamasaki</b> Mie University	Improved Estimation of Areal Ground Heat Flux from Surface Soil Temperature	63-65
D-19	<b>Nikki Hebenstreit</b> The University of Adelaide	Driving climate change action in developing countries: Defining the link between climate change action and community understanding, using Thailand as a case study	66-69
D-20	<b>Nur Farah Dinah Muhamad/Tuan Syaripah</b>	Sustainable Agriculture Practices in Oil Palm Plantation of Malaysia	70-71

	<b>Najihah Tuan Mohd Razali</b> Universiti Putra Malaysia		
D-21	<b>Ana Judith Giraldo</b> The University of Adelaide, Australia	Spatial grouping and temporal trends in otolith chemistry of a temperate estuarine fish	72-77
D-22	<b>Dina Silvia Dewi</b> Bogor Agricultural University (IPB)	Reproductive Aspects of Catfish (Pangasius hypophthalmus) Maintained in Two Different Environments	78-81
D-23	<b>Hosoka Matsuda</b> Mie University	An Environmental Issue Revealed by the Population of Japanese Red-crowned Cranes	82-85
D-24	<b>Raden Rahardito</b> Bogor Agricultural University (IPB)	The Utilization Of Expired Powdered Milk As A Fortification Material In Animal Manure Production	86-89

**THEME E-ECOLOGY**

<b>Paper Number</b>	<b>Name/University</b>	<b>Paper Title</b>	<b>Page</b>
E-01	<b>Ade Ayu Dewayani</b> Bogor Agricultural University (IPB)	Ecotourism Based on Species as a World Heritage Ecology in Cendrawasih Bay, Kwatisore Ocean, Nabire - Papua	1-2
E-02	<b>Shogo Kakisaka</b> Mie University	A Socio-Economic Approach to the Global Ecological System	3-4
E-03	<b>Liang Peixin</b> Guang Xi University	Sustainable Development of Guangxi's Ecotourism and Development Strategies	5-8
E-04	<b>Nadine Adrianna Sugianto</b> Bogor Agricultural University (IPB)	Endangered Primate of Indonesia. How application of embryology can support their existence ?	9-14
E-05	<b>Zhao Zejun</b> Guang Xi University	The thinking of inland river environment management and development using the construction of water by Naning as an example	15-18
E-06	<b>Song Yu</b> Jiangsu University	Development plan of green economy in Zhenjiang-From the perspective of local industrial structure and the ecological environment characteristics	19-22
E-07	<b>Abdullah Azzam Mahmud</b> Bogor Agricultural University (IPB)	"Mushmus" a Doll as Commercial, Educative and Edible Green Souvenir	23-25
E-08	<b>Zhang Xiling</b> Jiangsu University	Quantitative analysis on influence factors of ecological deficit and its dynamic prediction research—A case study of Jiangsu Province	26-30
E-09	<b>Hijjaz Sutriadi</b> Bogor Agricultural University (IPB)	Classifying Coverage Area in Sumbawa Regency with Unsupervised Classification Method Using Landsat Remote Sensing Imagery	31

B-02

## “TRIPLEM”: A Multifunction Dining Table for The Minimalist Kitchen

Azka Lathifa Zahratu Azra<sup>1</sup>, Lilis Heryati<sup>2</sup>, Isna Nurlela Nasution<sup>2</sup>, Nur Khoiriyah<sup>2</sup>,  
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**Abstract** Nowadays, the reduction of land housing makes most of Indonesian people have a minimalist house. In addition, the use of minimalist home and kitchen become more popular. Minimalist kitchen equipment is using minimalist equipment size which can comply the needs in the kitchen, so it also takes a multifunction equipments. TRIPLEM is a multifunctional table that answers all the problems. TRIPLEM has two types. As a dining table, TRIPLEM-A also has a range of facilities including the kitchen sink complete with boxes of laundry soap, while TRIPLEM-B has stove, storage facilities and a place dispensing food. Both types have a plate and glass racks, storage racks, and bins. TRIPLEM design begins with the collection of data about the standard size of a dining table and minimalist kitchen, the general standard of kitchen and the price of some kitchen equipment. Based on the results of people acceptance questionnaire, TRIPLEM is a practical, unique and in accordance with the minimalist kitchen. TRIPLEM patent applications have been made for the originality design. Product segmentation of this table is the middle class and above. After marketed, the table is expected to provide many benefits and simplify kitchen work.

**Key words:** TRIPLEM, design, dining table

### 1. Introduction

Increasing population in Indonesia leads to high demand for housing. Currently most of the public housing and apartments built with minimal size models<sup>[1]</sup>. Lifestyle with high activity are required to move quickly and practically makes people prefer to build a kitchen with a minimalist design concept<sup>[2]</sup>.

However, the kitchen usually becomes room that overlooked the layout and aesthetics. In fact, a good kitchen should have a good flow circulation, adequate supplies, as well as a structured layout in every part of the kitchen<sup>[3]</sup>. Therefore, it takes innovative design to procurement of multifunction devices that can change the condition becomes more effective, efficient and functional without losing the high aesthetic value<sup>[4]</sup>. This includes the design of innovative dining table that is multifunctional kitchen equipment such as a dining table, dish rack, sink, stove and cabinets and furniture can be arranged neatly.

### 2. Methods

#### 2.1 Data collection and analysis

Data collected includes trends in housing minimalist, minimalist house user, and carpenter and home furnishings in the Bogor.

The collected data were used as the basis of consideration in making requirement specification analysis house owners minimalist to the equipment of a multifunctional kitchen table.

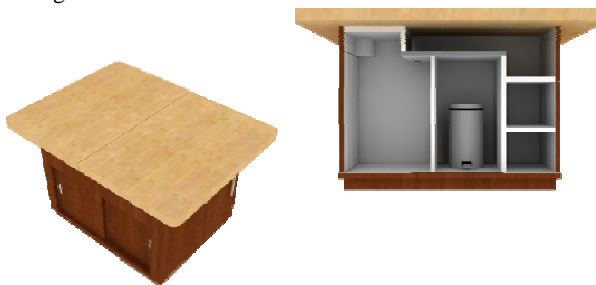
#### 2.2 Synthesis and preparation of product concept

Synthesis can help in making the concept products overcome limited kitchen space in a minimalist house. In establishing the concept of product needed a reliable supporting data and consulting with experts to assist in the formulation of the product design concept that could benefit the target communities.

#### 2.3 Design

The product which was designed called TRIPLEM.

TRIPLEM is derived from TRIPLE-M in Bahasa Indonesia “Meja Makan Multifungsi”, which also means the multifunctional dining table. TRIPLEM is designed through the manufacturing phase of two-dimensional design using Auto CAD software and three-dimensional design using Google Sketchup Pro software. The whole of the design is intended so the design can be informed more clearly. Table size used is 120 cm at long side table, 90 cm at wide side (both sides used) and the height of table is 70 cm (Figure 2). It is in compliance with the international standard size dining table sizes in Time Saver Standards for Interior Design<sup>[5]</sup>.



#### 2.4 Survey of raw materials

At this stage conducted a survey of raw materials to be used in the production of TRIPLEM. According to the market survey, the basic material suitable for the manufacture of TRIPLEM are multiplex wood, because multiplex wood is strong, lightweight and easy to use and economical cost. TRIPLEM that will be created should also be waterproof, so the timber must be covered with water-resistant coatings. Other raw materials needed are a table and window sliding door hinges and cabinet door handles, seat table legs, bolts, elbow cradle shelves, sink 1 hole, taps, spiral pipes and PVC and waste water droplets box.

### 2.5 The production of TRIPLEM

Production of TRIPLEM kitchen set in cooperation with the small enterprise "Murah Mandiri". During the production process, there were various adjustment of the design and the raw materials in order to create a high quality product with a high market value for the society of minimalist housing.

### 2.6 Product demonstration

Once the product is completed, the demonstration of the product was held 3 times to the 25 housewives in Bogor. The demonstration is done by introducing multifunctional TRIPLEM as a dining table and explain the advantages of the table. Then respondents were asked for giving feedback through questionnaire which was given during the demonstration.

### 2.7 Product improvement

Feedback from respondents led to the design of another types of TRIPLEM which further named TRIPLEM-B in addition to the preliminary design (TRIPLEM-A) which has been accepted by the respondent. The production of TRIPLEM-B was done in collaboration with a small enterprise of kitchen set "Archimedia". The material used is wood coated taco multiplex, for the food storage box is coated by waterproof melamine and HPL layer which is resistance from overheat at the stove area

### 2.8 Product trial

The trial performed of TRIPLEM-B was carried out. The trial results showed that TRIPLEM table-B is efficiently used for cooking and serving food.

## 3. Result and Discussion

The first product produced was TRIPLEM-A with excellence as a dining table, a sink, a place for temporary storage of dirty dishes, soap box, rack plates and glasses were fitted box aluminum drip of water or other dishes that have been washed. Aluminum box can be opened for disposing water. TRIPLEM also has a storage box for a spoon, fork, knife, rag and fitted furniture cabinets, storage shelves, and cabinets for storage of organic and inorganic trash (Figure 2). Multiplex wood is painted by Duko coated that is waterproof and easily cleaned when dirty, the top coated with HPL which is also waterproof.



Figure 3 describes the feedback received from respondents after the product demonstration of TRIPLEM-A.

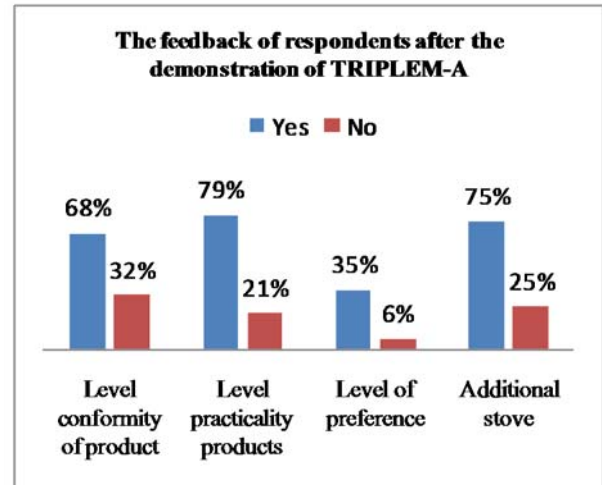


Fig 3. The feedback of respondents after the demonstration of TRIPLEM-A

As shown at Figure 3, about 68% of respondents agreed that TRIPLEM-A is suitable for minimalist kitchen due to some advantages that all-in-one and does not require much space. In addition, about 79% of respondents stated that TRIPLEM is practical in facilitating their activity in the kitchen. The design of TRIPLEM-A was accepted as a simple but unique, creative and innovative product. Nevertheless, about 59% of respondents stated the need for design improvements. About 75% of respondents wanted of using stove instead of sink. Therefore, TRIPLEM-B was created with space for cooker and space for gas tube (Figure 4). TRIPLEM-B has an advantage because it can be placed in different rooms and even outdoors.

The trial of TRIPLEM-B was conducted with a cooking demonstration and eating on the table.

In order to maintain the sustainability production of both TRIPLEM A and B, they have been registered for patents through the Kantor Hak Kekayaan Intelektual (HAKI) in IPB. Currently, patent applications are in the process of the examination.



Figure 4. TRIPLEM -B



Marketing strategy has been developed to determine the segmentation and target markets as well as positioning of products (Figure 5).

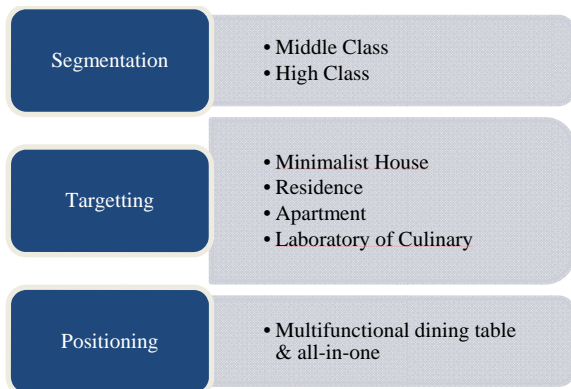


Fig 5. Product marketing strategy

Furthermore, strategy of marketing mix (4P) has been developed, which include; product, promotion, place and price:

- (a) Product, TRIPLEM A and B are suitable for minimalist kitchen with the size of 3x4 meters (Figure 6). Improved quality TRIPLEM A and B have been made with a scientific approach to increase its resistance to water, termites, and heat;

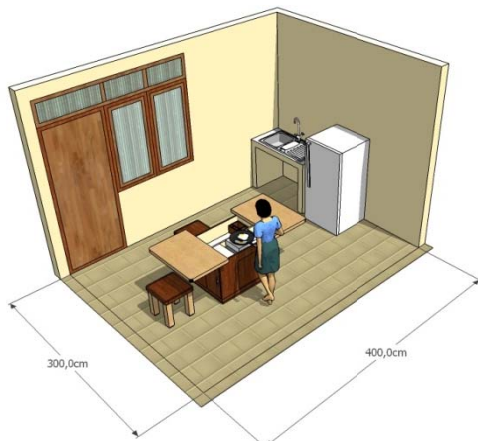


Fig 6. TRIPLEM in a minimalist kitchen

- (b) Promotion, promotion has been done through e-mail, social networking (facebook, twitter), as well as creating blog and websites;
- (c) Place, distribution of products has been done through cooperation with furniture stores, home shopping and company of kitchen set;
- (d) Price, based on the results of a survey of consumers and market, the initial price for TRIPLEM type A is Rp 3,000,000 and TRIPLEM type B is Rp 2,750,000. This

price is much cheaper compared to purchasing similar kitchen appliances that are used separately.

#### 4. Conclusion

TRIPLEM is a multifunctional table that are innovative, efficient and "all in one", so that suitable for minimalist kitchen. The price of TRIPLEM is quite economical for the upper middle class. It has a broad marketing scope such as housing, minimalist house, apartment, culinary labs and many other markets segmentation which could be later developed. This is because, the simple and unique design of TRIPLEM can attract many consumers.

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