

DEVELOPMENT OF HERBAL MEDICINE CENTER THROUGH CONSERVATION OF FAMILY MEDICINAL PLANTS (TOGA) IN NGELOSARI, SRIMULYO, PIYUNGAN BANTUL

Chatrien Mutia Andesyana

Biology Study Program, Faculty of Biotechnology, Duta Wacana
Christian University Yogyakarta, Indonesia

Email: chatrien.andesyana@students.ukdw.ac.id

ABSTRACT

Medicinal plants make an interesting diversity and natural wealth, and until now the condition of these plants still grows wild in forest and rural areas. This study aims to describe the development of TOGA park so that it can become a center for herbal medicine for the community and describe. The results of the TOGA park SWOT analysis can improve the community's economy accompanied by increasing public health. This research was conducted in Ngelosari Hamlet, Srimulyo Village, Piyungan District, Bantul Regency, DIY. The data collection method used questionnaire interviews and direct observation, then the data analysis technique used SWOT analysis. The results showed that the development of the Toga park in improving the economy and public health was carried out by providing counseling, introducing existing local potentials to the community, providing training to the community and forming small business groups. The results of the SWOT analysis explain that the people of Ngelosari Hamlet have high strengths and opportunities in developing a Toga park to improve the economy and public health by minimizing their weaknesses and being ready to face threats.

KEYWORDS: *Conservation, Development, Toga Park, Economics, Health*

1 INTRODUCTION

Currently, public knowledge about medicinal plants needs to be improved so that people can understand the potential and how to process medicinal plants into herbal medicinal products. Due to the weakening economy of the community and the increasing prices of various drugs, people have to think extra hard to maximize plants that have benefits as medicines. Therefore we need a program that is able to develop public knowledge so that they are able to take advantage of medicinal plants in the surrounding environment. In addition, socialization is also needed to integrate various training activities and management of medicinal plants which can later be sold to improve the community's economy, besides that it can be useful for maintaining public health (Paramith, 2018).

Medicinal plants and traditional medicines since ancient times have played an important role in maintaining health, maintaining stamina and treating diseases. Therefore, medicinal plants and traditional medicines have been firmly rooted in the lives of some people to this day. The current protracted economic crisis, changes in lifestyle including eating habits, cause many diseases and make health an expensive item. The high price of modern medicines causes the level of public health to decline which in turn will affect aspects of the welfare of the general public and will have a negative impact on the resilience and performance of the nation (Raina, et al (2011). The weak purchasing power of the people and the soaring prices of modern medicines have forced the public and the government to seek ways to overcome this dire situation by turning back to nature like developed countries which have widely used modern medicines lately. This shows an indication of preferring drugs from natural ingredients to synthetic drugs (Suciati, 2004).

One of the contributing factors is that the use of medicines from natural ingredients is relatively safer than the use of synthetic drugs. This trend has spread to many countries around the world and is known as the "new green wave" or the "back to nature lifestyle" trend . Until now, the potential for the diversity of wild plants in the forest as well as in rural and community villages that are useful for medicine is still largely ignored and has not been exploited and has not been developed for medicinal ingredients and even has the potential to become an economic commodity. This is partly due to the low level of knowledge and technology owned by the community. The government has long launched the Plants or Family Medicine Garden (TOGA) program, to maintain family health that is cheap and independent, but along the way, it is increasingly being forgotten. So this problem needs to be addressed through a TOGA conservation revitalization activity (Agus, et al 2011).

Family medicinal plants or TOGA is a medicinal plant that is owned by every community, because it can usually be found around the home environment. TOGA is a planting area located around the community's home environment for cultivating plants, especially plants that have medicinal properties. TOGA can serve as the first handler in overcoming a disease suffered by the community such as dizziness, diarrhea, or even to increase immunity, especially the current pandemic. Efforts that can be made to improve the TOGA Park among the community is to develop the TOGA Park. The development of TOGA Park is carried out with an evaluation of wealth plant drug which already there is in Park TOGA which then can be used as a source of health and one of the community's economic resources through the skills possessed from the training that has been given. Not only can it improve health, the development of the TOGA park can also help improve the economy of the surrounding community by making a home industry for herbal medicine, food derived from TOGA, and other processed products.

The existence of TOGA makes it easier for people to get sources of medicines to cure diseases quickly and accurately. The development of commercial types of medicinal plants used as ingredients or medicinal raw materials can also be developed to improve the economy and public health. Based on the description of the background, the researchers were interested in conducting a research entitled "Development of Herbal

Medicine Centers Through Conservation of Family Medicinal Plants (TOGA) in Ngelosari Hamlet, Srimulyo , Piyungan Bantul ".

2 MATERIALS AND METHODS

The tools and materials used in this study include interview guides, cameras, recording devices, questionnaires to the Toga plant. For more details can be seen in Table 3.1 below:

Table 3. 1 Tools, Materials, and Research Objects

Tools and materials	Object
Interview guide	Plant community owned drugs around house they
Camera	Communities who are respondents
<i>Tape recorder</i>	Communities who are respondents
Interview Questionnaire	The community that becomes respondent
TOGA Plants	Medicinal plants owned by the community around house they

Method of collecting data

The method of data collection was carried out using direct observation, questionnaires and interviews. Observations were made to determine the diversity of medicinal plants, their use by the community and the process of making the TOGA garden. Questionnaires and interviews were used simultaneously to gather information related to the economic benefits, health and community expectations for the development of a healthy TOGA Ngupoyo park .

3 RESULTS AND DISCUSSION

A. Conservation of Medicinal Plants Through TOGA Park Development

Based on observations and identifications, it was found 64 species with 13 species of *Zingiberaceae* family, 1 species of *Menispermaceae*, 3 species of *Acanthaceae* , 1 species of *Rubiaceae* , 3 species of *Phyllanthaceae* , 1 species of *Sonchaceae*, 5 species of *Euphorbiaceae*, 3 species of *Rutaceae* . , *Asteraceae* as many as 6 species , *Apocynaceae* as many as 11 species , *Poaceae* 1 species , *Thymelaeaceae* 1 species , *Lamiaceae* 3 species , *Piperaceae* 3 species , *Pandanaceae* 2 species , *Mackinlayaceae* 1 species , *Fabaceae* 4 species , *Asphodelaceae* 1 species , *Moringaceae* 1 species , *Araceae* 11 species , *Punicaceae* 1 species , *Umbellifers* 1 species ,

Araliaceae 1 species , Marantaceae 1 species , Acoraceae 1 species , Myrtaceae 1 species , Oleaceae 2 species , Oxalidaceae 1 species .

B. The Effect of TOGA Park Development on Economy and Health

Based on interviews and analysis of questionnaire data, it is known that the majority of the people of Ngelosari hamlet are familiar with medicinal plants (96.9%), and use medicinal plants to maintain family health (99.5%). Only a small part of the residents are not familiar with and use medicinal plants (3.1%). The results of the questionnaire data obtained can be seen in the following table:

Table B. Research Results of TOGA Park Development on Economic Activities and Public Health

No	Parameter	Percentage of Respondents	
1	Knowledge of Medicinal Plants		
	People know the types	96.9%	3.1%
	The community has the benefits of medicinal plants for maintaining family health	99.5%	0.5%
	People plant medicinal plants in their yard	96.1%	3.9%
2	Reasons not to use the medicine garden		
	Not used to using TOGA	5.8%	94.2%
	Trouble making TOGA potions	8.2%	91.8%
	It's normal if you get sick go straight to the health center	23.2%	76.8%
	TOGA reaction is slower than medical drugs	37.2%	62.8%
3	Sources of Information on Medicinal Plants		
	Hereditary	90.8%	9.2%
	Health workers	58%	42%
	Electronic Media	44.9%	55.1%
	Friend	61.8%	38.2%
	Other	0.48%	99.52%
4	TOGA Efficacy with Chemical Drugs		
	Same Benefits	50.7%	49.3%
	Not the Same Efficacy	47.8%	52.2%
5	TOGA Park Development		
	Agree	99.5%	0.5%

C. Income Evaluation of the TOGA Park Development Program December 2021 - May 2022 Seroja Program

Month	Income Per/Day	Income/Month
December	Rp. 90. 000	Rp. 750,000 _
January	Rp. 100. 000	Rp. 900.000 _
February	Rp. 100 000	Rp. 900 000

March	Rp. 150,000 _	Rp. 1,300,000 _
April	Rp. 150,000 _	Rp. 1.3 00 000
May	Rp. 300,000 _	Rp. 1. 500,000 _

Based on table in on there is an increase in income from the *Seroja making program* in the development of the TOGA park from September 2022 to May 2022. The community's income per day is around Rp . 80,000 – Rp. 300,000 with an income per/month that people get around Rp. 500,000 – Rp. 1,500,000.

From the income results, it can be seen that the development of the TOGA park can provide job opportunities to the community in addition to developing community skills in producing herbal concoctions that have been there for generations. Improving the economy and public health can be fulfilled if the community is able to understand the concepts, skills and potentials that exist in TOGA.

D. TOGA Park-Based Herbal Medicine Center Development Program Strategy

Development is a form of long-term activity required in the education and training process. Development as a way to improve and increase knowledge in the decision-making process (Mifta, 2005). While the strategy is a long-term planning that is structured to lead to the achievement of certain goals and objectives. The TOGA Park development program strategy needs to be carried out in order to improve the health and economy of the community.

To carry out a strategy for developing the TOGA Park center, it can be done with a SWOT analysis consisting of *Strengths* (strengths), *Weaknesses* (weaknesses), *Opportunities* (opportunities) and *Threats* (threats) which aim to maximize and opportunities but are able to minimize weaknesses and threats.

In accordance with the explanation, then the steps strategically based on the results of the analysis must conducted in improving the sustainable development of the TOGA park, namely by conducting regular training. Coordination between communities and stakeholders continues to be improved. As well as evaluation of the results carried out appropriately, in order to improve the development of TOGA Park.

4 CONCLUSION

Based on the results of the study, the conclusions that can be put forward in this study are:

1. The results of the study found 64 species of medicinal plants that grow both in the TOGA garden and the community's yard.
2. The majority of people have known (96.9%) and used medicinal plants for maintaining family health (99.5%). The development of the TOGA garden is useful as a medicinal plant preparation for the treatment of diseases and maintaining public health, conservation, education and improving the community's economy.
3. The development of TOGA garden-based treatment can be done through promotion, product marketing, increasing human resources in supervision, facilities and infrastructure To use support activity TOGA Park development.

REFERENCES

- Bentley R, editor. (2010). Medicinal plants. London: Domville-Fife Press. p. 23–46.
- Chacko SM, Thambi PT, Kuttan R, Nishigaki I. (2010). Beneficial effects of green tea: a literaturereview. Chin Med. 5:13.
- Chen SL, Yao H, Han JP, Liu C, Song JY, Shi LC, Zhu YJ, Ma XY, Gao T, Pang XH, Luo K, LiY, Li XW, Jia XC, Lin YL, Leon C, (2010). Validation of the ITS2 region as a novel DNAbarcode for identifying medicinal plant species. PLoS ONE. 5:e8613.
- Cole IB, Saxena PK, Murch SJ. (2007). Medicinal biotechnology in the genus scutellaria. In VitroCell Dev Plant. 43:318–27.
- Cunningham, A.B. (2000). Applied ethno botany. People, wild plant Use and conservation. London: Earthscan. 300: 7-12
- Hani, Handoko. (2014). Manajemen Personalia & Sumberdaya Manusia. Yogyakarta: BPFE-Yogyakarta.
- Hamilton AC. (2004). Medicinal plants, conservation and livelihoods. Biodivers Conserv. 13:1477–517.
- Hamilton AC. (2008). Medicinal plants in conservation and development: case studies and lessons learned. In: Kala CP, editor. Medicinal plants in conser- vation and development.Salisbury: Plantlife International Publisher. p. 1–43.
- Hermanita. (2013). Perekonomian Indonesia. Yogyakarta : Press Yogyakarta
- Heywood VH, Iriondo JM. (2003). Plant conservation: old problems, new perspec- tives. Biol Conserv. 113:321–35.
- Larsen HO, Olsen CS. (2007). Unsustainable collection and unfair trade? uncover- ing and assessingassumptions regarding Central Himalayan medicinal plant conservation. Biodivers Conserv. 16:1679–97.
- Mertz, O., H. Munk Ravnborg, G. Lövei, I. Nielsen. and C. Konijnendijk. (2007). Ecosystem services and biodiversity in developing countries. Biodiversity and Conservation, 16: 2729-2737
- Mifta, Thoha. (2005). Manajemen Kepegawaian di Indonesia. Jakarta: Kencana.
- Mubyarto. (1997). Ekonomi Rakyat. Program IDT dan Demokrasi Ekonomi Indonesia. Yogyakarta: Aditya Media
- Paramita, M. (2018). Peningkatan Ekonomi Masyarakat Melalui Pemanfaatan Sumber Daya Lokal". Jurnal Media Pengabdian Kepada Masyarakat 4(1) April 2018.
- Pimm S, Russell G, Gittleman J, Brooks T, (1995). The future of biodiversity. Sci- ence. 269:347.
- Raina R, Chand R, Sharma YP. (2011). Conservation strategies of some important medicinal plants. Int J Med Aromat Plant. 1:342–7.
- Ross IA, editor. (2005). Medicinal plants of the world (volume 3): chemical con- stituents, traditional and modern medicinal uses. New Jersey: Humana Press Inc. p. 110–32.
- Santoso, S.O. (1989). Penggunaan Obat Tradisional secara Rasional. Jakarta. Cermin kedokteran.

- Savitri, E.S. (2008). *Rahasia Tumbuhan Berhasiat Obat Perspektif Al-Qur'an*. Malang: UIN- Press.
- Soelaeman, M. Munandar. (1998). *Ilmu Sosial Dasar: Teori dan Konsep Ilmu Sosial* Bandung: Refika Aditama.
- Suciati, R. (2004). *Perencanaan Program Konservasi Tumbuhan Obat di Taman Hutan Kampus Leuwikopo Kampus IPB Darmaga*. Skripsi. Konservasi Sumberdaya Hutan IPB: Bogor
- Suwanto. (2016). *Manajemen SDM Dalam Organisasi Publik dan Bisnis*. Bandung: Alfabeta.
- WHO. (2005). *National policy on traditional medicine and regulation of herbal medicines: Report of a WHO global survey*. World Health Organization, Geneva, Switzerland.
- Zein, U. (2005). *Pemanfaatan Tumbuhan Obat dalam Upaya Pemeliharaan Kesehatan*. Sumatra Utara: Fakultas Kedokteran.
- Zerabruk S, Yirga G. (2012). Traditional knowledge of medicinal plants in Ginde-beret district, Western Ethiopia. *S Afr J Bot*.78:165-9.