# Model of Drug Abuse Prevention in Swampland

Abdul Rahman[1*], Amin Rejo[2], Dadang Hikmah Purnama[3], Mada Apriandi Zuhir[4].

[1] Ph.D student of Post Graduate Faculty of Enviromental Sciences, Sriwijaya University, Indonesia, rahman790927@gmail.com

[2] Senior Lecture in Enviromental Sciences, Post Graduate Faculty of Enviromental Sciences, Sriwijaya University, Indonesia, aminrejo@unsri.ac.id

[3] Senior Lecture in Enviromental Sciences, Post Graduate Faculty of Enviromental Sciences, Sriwijaya University, Indonesia, dadanghikmahpurnama@unsri.ac.id

[4] Senior Lecture in Enviromental Sciences, Post Graduate Faculty of Enviromental Sciences, Sriwijaya University, Indonesia, madaapriandizuhir@fh.unsri.ac.id

[*]Corresponding Author: rahman790927@gmail.com[1]

**Abstract:** In Indonesia, swamplands are spread across several regions, one of which is Palembang City, which has the highest level of drug abuse cases among districts/cities in South Sumatra Province. In order to tackle this problem, a special approach is needed that takes into account the geographical and socio-economic conditions in swamplands. This study aims to analyze drug abuse prevention programs in Palembang City and develop an effective drug abuse prevention model in particular swamplands. This research used qualitative methods with triangulation techniques to gain an in-depth and comprehensive understanding of the drug abuse program in Palembang City's swamplands. Informants in this study included three groups: drug abusers, stakeholders, and the community. A drug abuse prevention model in swampland must take into account the unique conditions of the area, such as limited accessibility and possibly low levels of community welfare. Effective approaches include improving access to education and health services, economic empowerment through local programs, and active community involvement in prevention efforts. In addition, these strategies need to be tailored to the demographic and socioeconomic characteristics of the local population to ensure the success and sustainability of prevention programs.

**Keyword:** Prevention Model, Drug Abuse, Swampland, Policy, Education, Economic Empowerment

## INTRODUCTION

Swampland has unique characteristics that include areas that are periodically flooded and difficult to access. This uniqueness provides its own challenges in various aspects, including drug abuse control and prevention. Remote areas and low accessibility often provide an opening for illegal activities such as drug abuse and trafficking. The lack of

monitoring in these areas allows these activities to go undetected for long periods of time (Small et al., 2006).

In 2018-2022 (Figure 1), South Sumatra Province was the region in Indonesia with the second highest rate of drug abuse cases after East Java Province, with an annual average of 1,592 cases. Palembang City, the capital of South Sumatra Province, has the highest rate of drug abuse cases among districts/cities in South Sumatra Province, with an annual average of 305 cases.
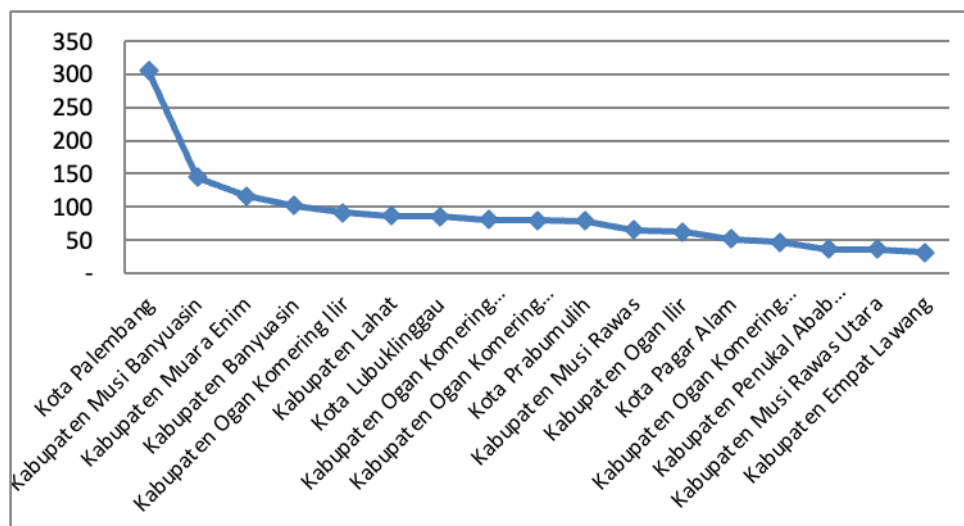


Source: Processed from South Sumatra Regional Police, 2022

**Figure 1. Average Cases of Narcotics Abuse by Regency / City in South Sumatra Province 2018-2022**

In Indonesia, swamp land is spread in several regions, one of which is Palembang City. In terms of hydrological conditions, Palembang city is divided by the Musi River (Hidayat, Fatoni, et al., 2022). One of the prominent geographical characteristics of Palembang is the presence of extensive swampland around the region. This swampland covers a large part of the lowlands that are waterlogged seasonally or permanently. The existence of this swampland not only affects the land use and infrastructure of the city, but also brings its own challenges in terms of environmental and social management.

Palembang City has a close relationship with swampland as part of its urban and peripheral areas consist of this land. Swampland in Palembang is used for various purposes, such as fisheries and settlements. However, the inaccessible and often waterlogged condition of swampland makes surveillance and law enforcement more challenging. This makes swampland a potential site for illegal activities such as drug abuse and trafficking.

These areas often have minimal infrastructure and inadequate security controls. This provides opportunities for drug networks to take advantage of the challenging geography to avoid detection by law enforcement officials. In addition, limited health and education facilities in these areas contribute to low public awareness of the dangers of drugs.

Drug abuse in swampland has a very detrimental impact, both in terms of public health and social stability (Singer, 2008). Public health is threatened by the spread of diseases associated with the use of unsterilized needles and increased rates of drug dependence. In addition, these illegal activities also undermine the social and economic fabric of local communities, which in turn exacerbates poverty and hinders regional development (Glei & Weinstein, 2019). Especially in Palembang City, poverty is still a concern so that poverty alleviation is one of the goals of the sustainable development agenda (Hidayat, Yuliana, et al., 2022).

Tackling this problem requires a special approach that takes into account the geographical and socio-economic conditions of swamplands. The drug abuse prevention model should be designed comprehensively by involving various parties, including the government, communities, and non-governmental organizations. This integrative approach is expected to create a safer environment and support sustainable drug eradication efforts.

This study aims to analyse drug abuse prevention programs in Palembang City and develop an effective drug abuse prevention model in swamp areas in particular. By understanding the special characteristics of swamp areas and involving local communities in the prevention process, the model is expected to reduce the prevalence of drug abuse and improve the quality of life of people in the area.

## METHOD

This research uses qualitative methods with triangulation techniques to gain an in-depth and comprehensive understanding of the drug abuse program in the swamplands of Palembang City. The qualitative approach was chosen because it allows researchers to explore social phenomena in their original context and gain rich insights from the perspectives of informants.

Triangulation techniques were used to ensure the accuracy and validity of the data collected. In the context of this study, triangulation involves using multiple data sources, data collection techniques and perspectives to confirm the findings. This was done to reduce bias and increase confidence in the research results.

The informants in this study included three main groups:

1. Drug Traffickers: This group consists of individuals who are directly involved in drug abuse in Palembang's swamplands. Information from them is needed to understand the factors that lead them to become drug abusers as users or dealers.
2. Stakeholders: This group includes law enforcement officials and local government officials involved in drug prevention efforts. Insights from stakeholders help in understanding the policies, challenges, and efforts that have been made in addressing this issue.
3. Community: This group consists of people who live in the Palembang swampland. Community perspectives were needed to identify the social and health impacts of drug abuse, as well as their level of awareness and participation in prevention efforts.

Data was collected through open-ended interviews with informants. Open-ended interviews allow researchers to ask flexible and in-depth questions, allowing informants to express their experiences and views freely. This approach helps in eliciting rich and nuanced information from multiple perspectives. The interviews were conducted in compliance with research ethics, including obtaining informants' consent, maintaining confidentiality, and respecting their privacy. Data obtained from the interviews were then thematically analyzed to identify relationships relevant to drug abuse in Palembang's swamplands.

## RESULTS AND DISCUSSION

### Policy Foundation and Implementation of Drug Abuse Prevention Program in Palembang City

Data collection in this study was conducted through interviews with informants regarding the drug abuse prevention program in Palembang City, including the policy foundation and its implementation. The policy foundation of the drug abuse prevention program carried out by the Palembang City Government and its partners refers to Law Number on Narcotics, Decree of the Mayor of Palembang on the Establishment of an Integrated Team for the Prevention of Eradication of Abuse and Illicit Trafficking of Narcotics and Narcotics Precursors of Palembang City, Decree of the Mayor on the

Determination of Clean Villages from Drugs of Palembang City, and Decree of Gandus Sub-district of Palembang City on the Establishment of Clean Villages from Narcotics, Psychotropic Substances, and Other Addictive Materials.

The drug abuse prevention program in Palembang City is run through various strategies and collaboration between the government, police, BNNP, and the community. The main focus of this program is to provide education about the dangers of narcotics, increase legal awareness, and correct misinformation related to narcotics. These efforts are realized through integrated socialization, counseling, and campaigns at various levels of society. Although many efforts have been made, the implementation of this program still requires improvement in several aspects. Measurable monitoring and evaluation needs to be conducted to ensure the effectiveness of the program, and the collection of feedback from participants to understand the extent to which the information is received. Broader community involvement, including parents, community leaders, and religious leaders, needs to be strengthened, as well as active participation from all levels of society, especially groups at risk of drug abuse. Education should cover not only the dangers of drugs and their legal and health impacts, but also customary and religious values.

The implementation of drug abuse prevention programs through the provision of employment in Palembang City is a strategic step, because many drug offenders come from difficult economic backgrounds and low education levels. The government also supports entrepreneurship by providing capital assistance, ease of business licenses, credit, and tax breaks. Collaboration between the government and companies to create jobs, as well as skills training by the government, aims to provide a legitimate and stable alternative income, thereby reducing economic dependence on the drug trade. Despite these efforts, there are still several aspects that need to be improved in the implementation of this program. There is a need for intensive community empowerment programs for vulnerable groups such as school dropouts, poor communities in swampy areas, and areas with high levels of drug abuse. The government has allocated funds for infrastructure investment, including school construction (Hidayat et al., 2024). In addition, the development of a measurable monitoring and evaluation system is needed to assess the effectiveness of training and employment programs in reducing drug abuse.

Drug abuse prevention efforts are a priority for various agencies and communities, with various initiatives launched to create a drug-free environment. The Provincial National Narcotics Agency (BNNP) has provided a complaint service for the community to report suspected drug abuse without worrying about becoming involved in the network. As a concrete step, several sub-districts have established clean drug villages, where anti-drug volunteers work together to create a positive and drug-free social environment. Environmental factors play an important role in drug addiction and recovery (Razali et al., 2023). In addition, sub-district offices are widely conducting public socialization and education, hoping that people will become more aware of the dangers of drugs and be able to protect their family environment.

However, although various initiatives have been taken in Palembang City, there are still aspects that need to be improved, especially those related to the social environment. Community empowerment programs for groups vulnerable to the influence of drugs need to be strengthened. The selection of anti-narcotics ambassadors from at-risk communities or ex-drug users is intended to monitor them and create an accepting environment for them. Peer education activities can increase knowledge and prevent drug abuse (Nurmala et al., 2021). Stronger cross-sector collaboration, involving more actors such as community organizations, religious institutions, and youth groups, can expand the scope of prevention programs. In-depth education and counseling on the dangers of drugs should also be focused on social environments such as peer groups, schools, and local communities (Butt et al., 2011).

Supervision in the social environment is lacking and needs to be improved. Although coordination with the police and the establishment of siskamling are in place, supervision of places vulnerable to drug abuse such as social gatherings needs to be strengthened. Close collaboration between local government, police and communities in monitoring drug-related activities could be an effective strategy.

Amidst the challenges faced in tackling drug abuse, the implementation of prevention programs does not seem to have been fully implemented, especially in terms of supervision. The lack of effective supervision is a major obstacle to prevention efforts. Without adequate supervision, illegal activities such as drug smuggling and abuse can go undetected, increasing the risk to local communities and complicating wider prevention efforts. Addressing this issue requires improved coordination between relevant parties, such as law enforcement agencies, local governments, and local communities. In addition, investments in surveillance technology such as surveillance cameras or early warning sensors can help monitor activities in swamp areas more effectively. By improving surveillance and coordination between parties, it is hoped that the implementation of drug abuse prevention programs in swamplands can be more effective and have a positive impact on community security and welfare. The issue of drug abuse in swamp areas can be further complicated by the possibility of smuggling through waterways, highlighting the need for stricter surveillance and more holistic prevention strategies.

According to informants from the community, they live in neighbourhoods where drug prevention socialisation is regularly conducted and they are actively involved in these activities. They have a good understanding of the different types of drugs, their ill effects, and the associated legal risks. These informants are aware of drug avoidance and are committed to staying away from any form of abuse. In contrast, answers from other informants described a different situation. Many of them reported that drug prevention socialization is rarely or never conducted in their neighbourhoods. Their education level is generally low, and knowledge about drugs is very limited. Some of them even think of drugs as vitamins or doping to increase stamina and relieve fatigue.

The main factors driving their involvement in drug abuse are economic and social pressures, such as pressing economic needs, the influence of friends or family, and the lack of employment alternatives. This difference shows that effective socialization and proper education about drugs are very influential in preventing drug abuse. An environment that is proactive in providing drug information and prevention tends to produce individuals with a high awareness of the dangers of drugs, while a lack of socialization and education increases the risk of drug abuse and dependence. Expansion and equity of socialisation programs could be key in reducing drug abuse in the community.

**Model of Drug Abuse Prevention in Swampland**

Based on the analysis, the role of stakeholders includes the existence of a policy foundation for the prevention of drug abuse in Palembang City. Implementation of the drug abuse prevention program through increasing knowledge is carried out by socializing the dangers of narcotics but socialization is still less effective. Implementation of drug abuse prevention through the provision of employment has not been focused specifically on people who live in areas with high levels of drug abuse. Implementation of drug abuse prevention in swampland has not yet been supervised and intervened by the authorities. Then, the socialization carried out by stakeholders to the community has not been evenly distributed.

From the results of the analysis, the prevention model of drug abuse in the swamplands of Palembang City that can be formulated from this research is based on increasing knowledge, socio-demographics, and the social environment in the swamplands. Prevention

does not only refer to specific factors related to drug abuse, but also includes the involvement and active role of various stakeholders, as well as the application of relevant theories.

Prevention of drug abuse in swampland requires several components, namely policy, knowledge, socio-demography, and geography. First, stakeholders in this context include local government, law enforcement officials, educational institutions, community organizations, and the private sector. They must commit to working together to prevent drug abuse through coordinated and sustainable initiatives. This commitment includes allocating resources, implementing educational programs, and supporting policies that support drug prevention.

Secondly, drug education should not only include knowledge about the dangers of drugs, legal and health impacts, but should also take into account customary and religious values. This integration is to provide a more comprehensive and relevant understanding for the community. Having an in-depth understanding of drugs can help a person make wiser decisions regarding their use, as with this knowledge they will be more aware of the health and legal risks associated with drug abuse, so the desire to try or use them will be reduced (Lee et al., 2024).

Drug counselling can be done by linking drug abuse with violations of cultural norms and values respected by local communities (Alamsyah et al., 2024). Outreach should show that drugs go against traditions that prioritize health, togetherness, and family honor. Involving traditional leaders and community leaders in this education because they are respected and have great influence, so the anti-drug message is more easily accepted. In addition, counseling can also be linked to the moral and ethical teachings of religions that teach keeping the body and mind healthy. Many religions prohibit the use of destructive substances, so quoting scriptures or religious texts can reinforce the message. Conducting counseling at religious events such as pengajian, mass, or other gatherings will make the anti-drug message more familiar and accepted by the community.

Third, intensive community empowerment programs for vulnerable groups such as teenage school dropouts, poor communities in swamplands, and areas with high levels of drug abuse, need to be designed holistically and sustainably. These programs should focus on improving economic welfare, education, and social and psychological support, with coaching in entrepreneurial skills and small business management to help people start independent businesses. This could include handicraft making, fish or plant farming, and other locally relevant skills, in a community setting, so that these skills can become their economic icon (Yuliana et al., 2021). Water hyacinth, while often considered a nuisance plant, has the potential to improve the economy of communities, especially in swamplands. Programs could include training in water hyacinth processing into value-added products such as handicrafts, papermaking or biogas production. In addition, other potentials from swamplands, such as river mussels (mussels) and river snails (gondang), can be processed into economically valuable local foods typical of the Musi river area, such as shredded or chips (Erlyn et al., 2023).

Fourth, improving the positive social environment can be done by selecting volunteers and anti-narcotics ambassadors through various means, such as through competency-based selection, experience, and motivation to spread the anti-narcotics message. Volunteers and ambassadors can play an active role in the anti-narcotics campaign by providing information, counseling, and advocacy to the community about the dangers of drugs. Selecting volunteers from drug-free communities and ambassadors from ex-drug users is an effective approach to strengthen the campaign, as well as supervising ex-users to prevent them from getting back into drugs. Psychological counseling is also necessary, as drug users often need professional help to overcome dependency and psychological problems. This counseling can be done by psychologists or trained counselors, either individually or in groups. In addition,

infrastructure development for sports and arts can support anti-narcotics campaigns by creating an environment that encourages healthy and positive lifestyles. This could be in the form of sports fields, arts and cultural facilities, city parks, or community activity centers that provide positive alternatives for people, especially young people, to avoid drugs.

Fifth, surveillance or patrols in water areas, including river transportation, are a step in maintaining security and preventing drug abuse. Police or authorities can conduct regular patrols in water areas, including rivers, using specialized patrol boats or ships to monitor activities and identify potential illegal activities such as drug abuse. Technology such as surveillance cameras or advanced sensors can be installed along the river to monitor activities in real-time and detect suspicious or illegal activities. Authorities can also work with local communities living around the river to provide information on suspicious activities through informant programs or anonymous complaints. In addition, authorities can provide counseling and education to communities about the dangers of drug trafficking through community meetings, seminars, or public campaigns to raise awareness about the risks associated with drug trafficking.

## DISCUSSION

The drug abuse prevention model in this study is different from previous studies because it presents swampland. Swamplands have not been the focus of drug abuse prevention efforts. Swamp areas are often located in remote and inaccessible locations, with minimal supervision and intervention from authorities, making them potential locations for illegal activities. Improved surveillance practices of drug-involved individuals and interventions to reduce drug use (Wooditch et al., 2013). The lack of attention from authorities makes swamp areas vulnerable to drug abuse as there is no strong prevention program in place. In addition, the dense and hard-to-reach nature of swamp areas makes them ideal for hiding illegal activities, including drug abuse. Communities in swamp areas are often socially isolated, increasing the risk of drug abuse.

The use of technology and digital media, such as more effective online campaigns and the development of mobile applications, should be optimized. Integration of drug-related materials into the school curriculum as well as specialized training for teachers are steps for continuing education. In addition, increased special programs for vulnerable groups, counseling services, and psychological support are needed. Cooperation with the private sector and non-profit organizations can provide additional resources, while the development of creative and interactive educational materials will attract attention and facilitate understanding.

The drug abuse prevention model includes several aspects, one of which is education and intervention in schools. The model shows that poor school performance is a strong predictor of future drug abuse. Prevention strategies should include efforts to prevent drug exposure in school environments and peer groups, as well as special education strategies for children at risk of academic failure. Prevention efforts should also involve the wider community, including educational institutions, government, and non-governmental organizations, to create an enabling environment for drug abuse prevention (Gauffin et al., 2013). Preventive measures that can be taken to reduce the rate of drug addiction among young people are parents, schools, government, and other social groups should work together to educate young people about the negative consequences of drug consumption (Ahmed et al., 2022).

Drug abuse prevention models may include factors such as socioeconomic status and education level (Spooner & Hetherington, 2014). This approach identifies the relationship between levels of education and socioeconomic status with levels of drug abuse. Prevention efforts can focus on improving access to education, economic empowerment, and improving

social welfare to reduce these risk factors. Good education can improve the quality of human life (Erlyn et al., 2022).

Factors such as age, gender, and other demographic characteristics may serve as predictors of drug abuse (Veronica et al., 2018). Prevention can be tailored to target more vulnerable groups, such as adolescents, by understanding the associated social and demographic dynamics (İsmail et al., 2023). Inappropriate social behavior, inadequate assertiveness, and ineffective communication are factors associated with adolescent substance abuse tendencies (Amini Pozveh & Saleh, 2020). Criminal behavior is also closely linked to drug abuse, so prevention efforts may include rehabilitation, social reintegration, and individual empowerment programs to reduce drug-related criminal behavior (Nichter et al., 2004). Social and environmental pressures are the most common external factors that cause rehabilitated individuals to re-abuse drugs (Raharni et al., 2022).

More effective preventive measures should be designed to address the threat of drug abuse. One approach is to enhance cross-sector and cross-agency cooperation, including strengthening cooperation between the police, maritime security agencies and other relevant government agencies. The use of advanced technologies such as radar and aerial patrols should also be considered to improve surveillance of smuggling activities. In addition, active community involvement in prevention efforts is also urgently needed. Outreach campaigns and training to local communities on how to recognize and report suspicious activities can help increase awareness and participation in keeping their areas safe.

Preventing drug abuse is not just the responsibility of one sector, but requires cross-sectoral cooperation and a deep understanding of the local context to achieve more effective results. This holistic approach strengthens community responses to the problem of drug abuse. In light of these findings, an effective drug abuse prevention model should include a holistic approach involving education, family intervention, and community engagement to reduce the risk of drug abuse in the community.

The model provides recommendations such as youth empowerment through skills acquisition, adequate training and coaching, enlightenment campaigns, and the fight for good governance in society. It shows that a holistic and integrated approach is needed to prevent drug abuse and address issues related to poverty and criminal behavior among youth (Rhodes et al., 2003). The implication of this model is that the prevention of drug abuse and the handling of poverty and criminal behavior among youth must be done in an integrated and holistic manner. This suggests that efforts to prevent drug abuse not only involve law enforcement and the elimination of drug supply, but also involve efforts to improve the social and economic welfare of the community, particularly among youth. There needs to be cooperation between the government, the community, and non-governmental organizations in addressing this issue. In addition, this study also shows that drug abuse prevention should start from education and empowerment of youth to avoid drug use and criminal behavior.

## CONCLUSION

Models of drug abuse prevention in swamplands should be designed with the unique conditions of the area in mind, such as limited accessibility and possibly low levels of community welfare. Educational programs that focus on the dangers of drugs and their prevention need to be adapted to local culture and language, so that they are easily understood and accepted by the community Economic empowerment through local programs is also needed in this prevention model. Active community involvement in prevention efforts, such as forming youth groups, community leaders, and customary institutions to conduct socialization and supervision, can increase the effectiveness of prevention programs. In addition, prevention strategies need to be tailored to the demographic and socioeconomic

characteristics of the local population, ensuring that interventions are relevant and well-received by the community, and sustainable in the long term.

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