

# A TALE OF GOTONG ROYONG (MUTUAL ASSISTANCE) AND HOUSEHOLD'S PARTICIPATIONS for Communal Activities in Contemporary Indonesia 2012-2014

**Aris Rusyiana**

rusyiana@bps.go.id  
Statistics Indonesia (BPS)

**Aan Heriyana**

aheriyana@bps.go.id  
Statistics Indonesia (BPS)

## ABSTRACT

This paper examines inequality of households' participation in collective and joint activities Indonesia. And, this paper also investigates the role of people's collective and joint activities, related to norms-related localism, in cross-provinces study in Indonesia nowadays and in which provinces, people's collective activities and joint activities are relatively highest among all provinces. Data comes from the National Social Economics Survey 2012 and 2014 and Village Potential Census (Podes) in 2011 and 2014 which consists of household participations' as collective activity and the information of how many villages mostly prone to natural disasters. Drawing Podes 2011 and Podes 2014, these preliminary finding indicates that Indonesia still has varied density of localism cross-provinces in this contemporary communication sciences issue and globalization era. The specific terms of localism promote collective activity which includes mutual assistance (gotong royong). Descriptive statistical records mutual assistance (Gotong Royong) increases in Indonesia in 2014 (90.93 %) among villages cross-provinces from (88.80%) villages that still held it in 2011. Likewise, results from SUSENAS's descriptive statistics also shows that communal activities in helping people from natural disasters are varied among provinces, as well as in public interest, religious activities and social activities. In another case, results of Pearson Bivariate Correlation show that the natural disasters occurrence associate with the percentage of households which often and always participate in helping natural disaster victims. These preliminary findings indicate the improved phenomena of density of kindness in order to communicate empathy among people, especially during existence of natural disasters. Despites insignificant intercorrelation between two variables (density of communal services and occurrence of natural disasters), these preliminary findings indicate strengths of the value of mutual aid/mutual assistance/gotong royong in the contemporary of Indonesia. Although the finding shows no significant association between post natural disasters and density of communal activities, these preliminary findings indicate that communal activities may associate with the kindness among people in order to show their mutual self-help in all conditions, not only when natural disasters strikes cross-Indonesian provinces.

*Keywords: communication sciences, sociology, localism, gotong royong, communal activities, households' participation*

## INTRODUCTION

In the perspective of communication sciences and sociology, mostly developing countries still has collective activity social norms as local wisdom (see Fujiie and Kikuchi 2005; Cohen and Kennedy, 2012). According to Fujiie and Kikuchi (2005), two Asian developing countries has locally collective activity social norms: Indonesia and Philippine. This local wisdom, which is well-known by the term "gotong royong" social norms, encourages people and or households to help each others in communal activities in social, religious,

natural disaster mitigation, cleaning the canal, building public facilities, raising funds for natural disaster victims, and etc. In another case, Cohen and Kennedy (2012) argues that the concept of localism offers a suitable explaining of collective activity as one of sub headings of communities. The behavior of communities that act on a relatively small scale which covers all movements based on family, kinship, ethnicity, and subnational sentiments. As a developing country which lies in archipelago, Indonesia has many different names for the value of Gotong Royong among different provinces, such as

Meuseuraya (Aceh) (Hadi, 2016), Sakai Sembayan (Lampung) (Amaliah *et al.*, 2018), Sabilulungan (West Java) (Nadapdap *et al.*, 2016), Gugur Gunung or Soyo (East Java) (Dasgupta and Beard, 2007), Ngayah (Bali) (Norken *et al.*, 2017), Kayuh Baimbai (South Kalimantan) (Yuliani and Suryadi, 2017), Huyula (Gorontalo) (Hanafi and Naholo, 2019), Mapalus (Minahasan) (Surtijono *et al.*, 2019), Nosidondo/Sintuvu (Central Sulawesi) (Ratu *et al.*, 2019), Masohi (Mollucas) (Siwalette, 2018).

Some existing literatures still show ongoing debates whether gotong royong give positive impact and negative impact in the context of recent Indonesia and globalization (see Sujarwoto *et al.*, 2018; Mardiasmo & Barnes, 2015; Norhatan, 2014; Sihombing, 2015). First, according to Sujarwoto *et al.* (2018), Gotong Royong benefits individual happiness and Life Satisfaction. Likewise, Norhatan (2014) argues that gotong royong alleviate poverty. Second, Mardiasmo & Barnes (2015) argues that gotong royong norms like two edge-swords impact in the context of disaster risk management in Indonesia. Firstly, Gotong Royong promotes positive impact in the context for ensuring empathy and feeling of harmony in resilencing of disaster risk. Gotong Royong provides high level of stewardship in protecting and re-building a community which they identify as theirs after natural disasters in particular in rural villages, such as earth quakes, tsunami, and etc. On the contrary, according to Mardiasmo & Barnes (2015), gotong royong conflicts with Accountability, Transparency, Efficiency, Stakeholder-Participation, and Regulatory Compliance in “modern centralized response to disaster management”. In another case, Dokhi *et al.* (2015) argues that collective activity positively influences knowledge of disaster preparedness.

Third, Sihombing (2013) argues that Indonesian people still hold some values such as mutual assistance, religiosity, hospitality, and harmony among new values: democracy, religious fanaticism, and individualism. In addition, Kurniawan (2017) considered providing added value to the local communities in restricting themselves from any corrupt behavior and in maintaining togetherness so that development activities within the community can run well. Forth, Tulus (2012) describes gotong royong in Mentawai Island as togetherness so that “when people work together, building a house for instance, many riddles are told, to cheer up people up so that they do not find the

work too heavy and long.”

In the context of disaster risk and communication science nexus and disaster risk and conflict resolution nexus literatures, few researchers argue the intercorrelation of two said variables respectively (see Alexander, 2014; Gaillard *et al.*, 2008). Alexander (2014) argues that social media emerges the actual and potential use of in emergency, disaster and crisis situations with two contrasting sides. First, in the emergencies field, social media (blogs, messaging, sites such as Facebook, wikis and so on) are used in seven different ways: listening to public debate, monitoring situations, extending emergency response and management, crowd-sourcing and collaborative development, creating social cohesion, furthering causes (including charitable donation) and enhancing research. However, according to Alexander (2014), appreciation of the positive side of social media is balanced by their potential for negative developments, such as disseminating rumors, undermining authority and promoting terrorist acts. In another case, in their study in Aceh, Gaillard *et al.* (2008) argues that the disaster had a deep influence and be as a powerful catalyst in diplomatic talks on the peace talks between GAM and the Indonesian government and on the eventual implementation of the peace agreement reached.

Yet, there are no statistical evidences to support argument how households participate in gotong royong's activities in Indonesia nowadays. Several scholars define the gotong royong social norms as gotong royong (Koentjaraningrat, 1961), community self-help (Rao, 2005), community works (Kawagoe, *et.al.*, 1992), mutual aid, and mutual assistance (Bowen, 1986). Based on his field socio anthropological study in Central Java Provinces, Koentjaraningrat (1961) categorises Gotong Royong into two types, namely spontaneous help and mutual assistance. Spontaneous help occurs generally in collective activities in agriculture, house building, celebrations, public works and in the event of disaster or death. Mutual assistance, however, is usually based on the principle of individual reciprocity, whether it is on the initiative of the citizens, or imposed as an expression of mutual cooperation. Another scholar, Bowen, adopt the explanation of Garnaut and McCawley (1980) which argues that Gotong Royong as a set of key Indonesian terms by koperasi (cooperatives; constitutionally the basis of the economy); musyawarah (consensus; technically

the basis for legislative decision making); and, underlying all the others, gotong royong (mutual assistance). Each of these terms has to do with the obligations of the individual toward the community, the propriety of power, and the relation of state authority to traditional social and political structures. Likewise, Rao (2005) claimed that Indonesia emphasized collective action by the poor that resulted in a form of regressive taxation, enforced by the ideology of swadaya gotong royong (community self-help) that was both internalized and coercively enforced. Kawagoe, et. al (1992) mention that community work refers to typical activities which fall into this category, i.e.: economic activities. In another case, Bowen (1986) argues that the idea of “mutual assistance” (gotong royong) in Indonesia related to the characteristics of village society. In Indonesia, at least since independence in 1945, the idea of social interaction as collective, consensual, and cooperative has been the ideological basis for debates about the nature of society.

Regarding the important of gotong royong as Indonesian’s norm of collective action and its relevancy to the topic of communication science and globalization, we propose this paper in pursuing any statistical evidences of trend of mutual self-help and households participation in Indonesia nowadays. Likewise, this paper would elaborate how is the household participation’s rate in several collective activities and joint activities in Indonesia 2012 and 2014. Moreover, this paper uses quantitative method with descriptive statistic approach to examine intercorrelation between communal services and disaster risk at cross provinces in Indonesia in the span period of 2011-2014. Unit of analyses are provinces in Indonesia. The data resources are cited from the National Social Economics Survey (SUSENAS) (2012 and 2014) and the village potency census (2011 and 2014) of Central Board of Statistics (BPS).

## RESEARCH METHOD

### Unit of Analyses

In this paper, we also utilized two unit of analyses, i.e.: villages which suffers natural disaster, and households which participate in communal services related to religious, social, helping in natural disaster victims, and public interests. This two unit of analyses are tabulated by 33 provinces of Indonesia, e.g.: Aceh, North Sumatera, Jakarta, Yogyakarta, Central Java, Bali, Papua, etc.

## Data and variables

In this paper, we utilize two archival official statistics data from Indonesia Statistics, which is called the National Social Economics Survey (SUSENAS) 2012 and 2014 and The Village Potency Census (Podes) 2011 and 2014. We utilize two datasets to examine the descriptive statistics by which the percentage of households and or village which usually participate to collective and joint actions across provinces in Indonesia.

SUSENAS is a National Social Economics Survey conducted by the Central Board of Statistics (BPS). It has been fielded since 1993 to collect social data from households across all districts in Indonesia. The annual sample size was 200.000 households in 1993 and in 2014 it covers 300.000 households or closed to 1.2 million individuals (BPS, 2014). The survey contains a modul questionnaire, which collects informations related to the fields of collective action in social, religious, public interest, and to help the natural disaster's victims. This information is necessary to answer several question, such as: how many percentage of households involve in collective and joint actions. This study gets benefits from SUSENAS of characteristics of households and their respons to collective and joint activities, such as religious activity, social activity, communal services in public interests, and joint activity in helping natural disaster’s victims.

This survey also uses Podes (Village Potency Census) 2011 and 2014. The Podes is a longstanding tradition of collecting data at the lowest administrative tiers of local government. Podes consist of more than 7,200 villages (desa) and urban neighborhoods (kelurahan) across all 465 districts in Indonesia. The Indonesia Central Board of Statics Indonesia (Badan Pusat Statistik) conducts the first Podes in 1980 and then BPS runs this village potency census in every three since 1983. Detailed information is gathered on a range of characteristics- public infrastructures to village finance. BPS’ enumerators gathered information from kepala desa (rural village heads), lurah (urban neighborhood heads), or the vice rural village heads and the secretary of village heads. Since 2011, Podes included questions to measure the density natural disasters and the activity of collective action within village. In this study, we use Podes 2011 and Podes 2014 to examine the trend the activity of collective and joint actions.

**Method**

This study used a quantitative method. Babbie (2013) constituted that quantitative method emphasized objective measurements and the statistical, mathematical, or numerical analysis of data collected and using computational techniques. Quantitative method focused on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. Labaree (2009) argues that quantitative research deals in numbers, logic, and an objective stance. Quantitative research also focuses on numeric and unchanging data and detailed, as well as convergent reasoning rather than divergent reasoning.

This study examines the descriptive statistics to elaborate percentage of villages which experiences in natural disaster as well as the percentage of households which participate in collective and joint activities cross-provinces in Indonesia. This descriptive statistics are associated to the density of how strong or weak the collective and joint activity portraying gotong royong (community self-help, mutual aid, mutual assistance, and community work) in the mostly prone natural disaster in cross-provinces in Indonesia.

Since this study using descriptive statistics, we also examine intercorrelation among Natural Disasters Risk (Number of Villages with natural disasters) and The Percentage of Households which often and always participating in communal services of natural disasters resilient using Pearson's Bivariate Statistics in order to reveal magnitude of correlation and significance of its correlations.

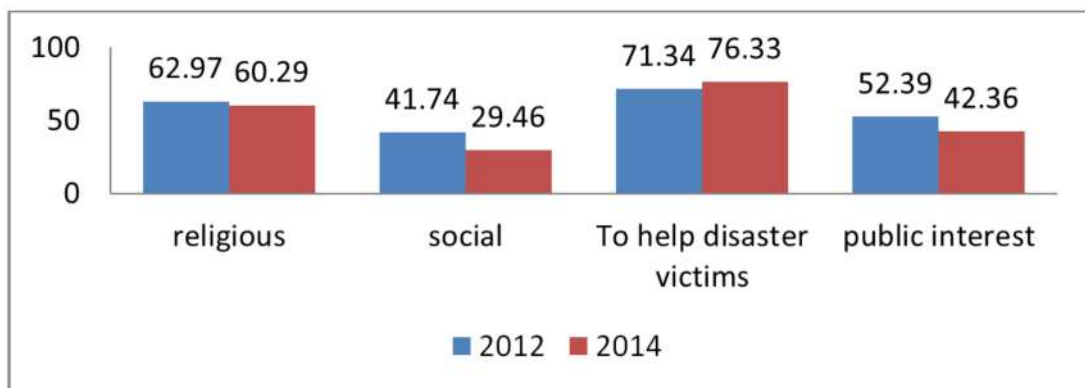
**RESULTS AND FINDINGS**

This section displays the result of the data analysis. The first sub section describes the result of a descriptive analysis using some summary-tables and data visualization with graphs. The later describes the results of bivariate correlation which expose associations between communal activities and density of natural disaster across the areas in Indonesia.

**Statistical Descriptive Analysis**

In general, the habit of 'gotong royong' is still nurtured in society of Indonesia. Based on Village Potency Census/Potensi Desa (Podes) which was held by Central Board of Statistic (Podes) in 2014, We calculate that 90.93 percent of villages in Indonesia held 'gotong royong' for communal service and public interests. Compared with 2011, the percentage of village which still held 'gotong royong' are increasing, in 2011, only 88.80 percent of villages that still held it.

The success of various collective activities depends on the active participation of community. In SUSENAS 2014, the participation rate to engage in various activities carried out in the neighbors is divided into social activities and joint activities. Social activity is a form of collective action undertaken by individuals or groups in order to maximize their utility (Burt 1982; Ruiz 1998). In this case, social activities can be divided into (1) religious activities, such as: moslem recitation, religious celebrations, and (2) social activities, such as 'arisan (rotating-credit associations)', sports, arts. Whereas, joint activities are the formation of horizontal participation initiated by the member of society in performing activity for public interests and helping others, includes in helping victims of natural disasters.

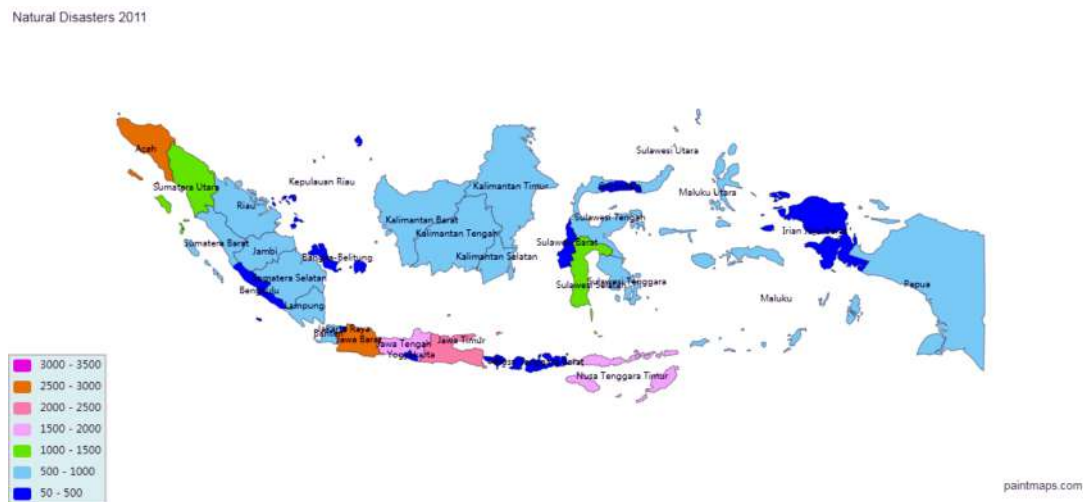


**Figure 1. Percentage of Households who often/always participate in collective action in the neighborhood by the type of activity, 2012 and 2014.**

Source: Central Board of Statistic, 2012&2014.

Most of Indonesian households often participated various collective and joint actions in the villages. However, the participation level differs among type of activities. Percentage of households who often and always participated in joint activities to help disaster victims was around 71,34 percent (2012) and 76,33 percent (2014) (please see Figure 1). Figure 1 displays the summary statistics for joint activities in helping disaster victims was the highest percentage than participation of households in among others collective and joint actions. In addition, participation in this activity also had the lowest variation with differences between the highest and the lowest percentage was around 13.35 percent. Compared with 2012, The percentage of households who often and always participate in collective and joint actions in 2014 respectively for religious activity, social activity, and public interest was decreasing. Whereas, the percentage of households who often and always participate to help disaster victims was increasing.

In the span period of 2011 and 2014, Indonesia experiences several natural disasters. Regarding to the Podes datasets year 2011 and 2014, mostly village in Indonesia suffered several disasters from period 2011 to 2014 (Figure 2). Mostly villages in every province in Indonesia in 2011 and in 2014 experienced natural disasters from said period, which ranges from landslides, flood, earth quake, tsunami, rising sea level, typhoon, volcano eruption, forest fire, and land droughts. For instance, in 2011, there was 5 (five) mostly prone to natural disaster provinces with total number of villages within those provinces which suffered natural disasters successively, such as West Java (2.806), Aceh (2.762), East Java (2.072), Central Java (1.935), and East Southeast Nusa (1.750). Figure (2) geographically provides an overview of a thematic map of Number of Villages with natural disasters by Provinces in 2011. Figure 2 displays the 5 (five) mostly prone to natural disasters provinces by red (3000-3500 number of villages) and orange colour (2500-3000 number of villages). While the rest 5 (five) provinces with less number of villages with natural disasters in 2011 are with blue colors for Bangka Belitung Islands (50), Riau Islands (104), Jakarta (122), Bali (151) and North Kalimantan (173). The number at brackets indicates the sum of villages at the provinces with natural disaster occurrences in 2011.



**Figure 2. Map of Geographical Distributions of The Number of Villages with Natural**

While in 2014, Aceh (3.821), West Java (3.364), Central Java (2.791), East Java (2.418), and North Sumatera (2.011) are 5 (five) mostly prone to natural disaster provinces with total number of villages within those provinces which suffered natural disasters respectively (Figure 3). Figure (3) presents an overviewing map of density of villages with Natural Disasters by Provinces in 2014. Geographically, there are 5 (five) mostly prone to natural disasters provinces by red (3000-3500 number of villages) and orange colour (2500-3000 number of villages), i.e.: Aceh, North Sumatera, West Java, Central Java, and East Java. While the rest 5 (five) groups of province with less number of villages with natural disasters in 2014 seems as like as groups in year 2011 excepts Bali. Bangka Belitung Islands (97), Riau Islands (157), Jakarta (157), North Kalimantan (184), and West Papua (201) are 5 (five) provinces with blue colours (50-500 number of villages within provinces). The number at brackets indicates the sum of villages at the provinces with natural disaster occurrences in 2014.



**Figure 3. Map of Geographical Distributions of The Number of Villages with Natural Disasters by Provinces 2014.**

Source: Central Board of Statistic, PODES 2014, we draw natural disaster map using [www.paintmaps.com](http://www.paintmaps.com)

Every provinces has unique pattern in social actions, such follows (see Table 2). Firstly, in 2012, Yogyakarta (81.59%), North Sulawesi (80.91%), Bengkulu (79.94%), Central Java (79.64%), and Central Sulawesi (79.51%) are the top 5 (five) provinces with relatively high percentages of households which often and always in helping disaster victims among by their participations among citizens' joint actions. In this case, in Central Java Provinces, households which participate in helping victims of natural disaster associates with mostly prone-provinces to natural disasters, which is in this provinces 80 households among 100 households show how empathy they are towards natural disaster victims in this areas and in near surrounding provinces.

In addition, in 2014, West South Nusa (87,38%), Central Java (85,15%), East South Nusa (84,87%), Jambi (84,66%), and Central Sulawesi (84, 48%) are top 5 (five) provinces with relatively high percentages of households which often and always in helping disaster victims among by their participations among citizens' joint actions. In this case, households which participate in helping victims of natural disaster associates with mostly prone-provinces to natural disasters, Central Java, still shows the high density of natural disasters-high percentage of households communal service nexus which is in this provinces 85 households in Central Java Provinces among 100 households provides their ways in communicating and involving their daily empathy in order to bring up their kindness to all impacted-natural disasters people at large and in near surrounding provinces.

Secondly, Provinces which quite homogenous in religions demonstrate the 5 (five) high density of households involvement in religious collective activity in 2011, such as in North Sulawesi (80.80%), East South Nusa (79.38%), Bali (76.37%), Maluku (74.26%) and Jambi (74.13%). In 2014, East South Nusa (78,94%), North Sulawesi (77,31%), Jambi (74,77%), Bali (73,54%), and Maluku (72,28%) are the 5 (five) top percentage of households involvement in religious collective activity in 2014.

Thirdly, in 2011, Yogyakarta (72,61%), North Sulawesi (59,77%), Central Java (58,56%), Jambi (53,73%), and East South Nusa (51,45%) are the top of 5 (five) high percentage of households who often and always participate in social collective activities among neighborhoods. While in 2014, Yogyakarta (69,4%), Central Java (47, 16%), Jambi (43,23%), North Sulawesi (41,78%), and East Java (36,6%) performs the top of 5 (five) high percentage of households who often and always participate in social collective activities among neighborhoods.

**Table 2. Percentage of households who often or always participate in collective and joint actions in the Neighborhoods by Provinces, 2011-2014**

Provinces	Religious		Social		To help Disaster Victim		Public interest	
	2012	2014	2012	2014	2012	2014	2012	2014
Aceh	73.31	65.72	37.07	19.98	78.67	82.62	52.05	44.31
North Sumatera	64.98	68.28	37.20	20.72	66.47	74.28	37.92	27.17
West Sumatera	55.2	53.42	35.31	23.01	72.73	77.03	50.64	36.93
Riau	67.97	62.84	49.94	32.88	73.39	72.12	55.05	41.48
Jambi	74.13	74.77	53.73	43.23	75.73	84.66	75.73	55.78
South Sumatera	50.08	49.92	35.79	25.72	73.98	77.16	73.98	38.62
Bengkulu	58.52	53.65	47.71	28.17	79.94	82.22	79.94	42.75
Lampung	53.23	63.86	35.23	22.35	75.71	82.89	75.71	50.23
Bangka								
Belitung Islands	41.12	40.4	29.21	16.16	66.50	72.76	66.50	25.86
Riau Islands	53.11	44.46	36.89	24.23	61.62	53	61.62	33.32
Jakarta	44.22	38.18	36.01	20.15	57.72	56.43	57.72	31.11
West Java	55.93	55.67	28.33	19.65	62.97	68.54	62.97	36.35
Central Java	68.94	66.62	58.56	47.16	79.64	85.15	63.92	55.51
Yogyakarta	70.60	67.28	72.61	69.4	81.59	82.99	69.06	71.44
East Java	67.86	64.81	50.25	36.6	75.44	82.98	52.91	42.78
Banten	59.29	55.52	32.06	18.9	66.81	66.5	48.62	32.36
Bali	76.37	73.54	43.38	29.74	74.19	69.23	65.54	51.6
West								
South Nusa	62.96	68.83	24.65	18.9	75.22	87.38	55.75	45.57
East South Nusa	79.38	78.94	51.45	31.71	78.22	84.87	68.31	62.59
West Kalimantan	55.96	52.99	42.84	25.18	68.91	75.85	54.01	40.88
Central Kalimantan	63.09	63.84	40.44	30.83	66.27	72.99	48.20	36.03
South Kalimantan	60.15	60.75	43.93	30.64	66.48	74.05	42.07	31.4
East Kalimantan	56.91	50.83	38.49	26.43	61.92	66.42	44.12	36.42
North Sulawesi	80.80	77.31	59.77	41.78	80.91	82.2	66.20	55.16
Central Sulawesi	66.91	60.74	38.70	23.73	79.51	84.48	69.49	53.47
South Sulawesi	49.90	46.75	31.55	21.22	70.15	78.57	47.36	33.3
Southeast Sulawesi	53.36	46.68	38.85	26.28	73.42	81.35	58.95	43.01
Gorontalo	60.26	55.42	34.60	30.07	76.25	79.21	51.80	41.97
West Sulawesi	53.95	57.6	33.56	21.81	77.34	81.22	57.43	42.93
Maluku	74.26	72.28	35.03	23.21	77.57	77.63	68.34	56.57
North Maluku	69.35	57.24	47.83	20.33	74.23	80.45	70.11	59.34
West Papua	70.62	58.93	35.95	17.59	66.54	69.05	59.89	41.39
Papua	64.54	68.25	34.22	23.39	67.95	64.69	56.29	41.74
Indonesia	62.97		41.74		71.34		52.39	

Source: Central Board of Statistics, 2012, 2014

Calculated by author from SUSENAS dataset use STATA ver 11 and tabulate by MS EXCEL

t

Moreover, in 2011, Bengkulu (79.94%), Jambi (75.73%), Lampung (75.71%), South Sumatera (73.98%), and North Maluku (70.11%) are the top of 5 (five) high percentage of households who often and always participate in joint activity: support public interest among neighborhoods. While in 2014, Yogyakarta (71.44%), East South Nusa (62.59%), North Maluku (59.34%), Maluku (56.57%), and Jambi (55.78%) are the top of 5 (five) high percentage of households who often and always participate in joint activity: support public interest among neighborhoods.

**Pearson Bivariate Correlation**

In this section, the intercorrelation between natural disasters risk and percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces are analyzed using Pearson Bivariate Correlation. Based on the dataset of PODES 2011 and 2014 with SUSENAS 2012 and 2014, the main output of Pearson Bivariate Correlation respectively are provided in Table 3 and Table 4. Table 3 provides intercorrelation of natural disasters 2011 and percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2012. And, Table 4 displays intercorrelation among the two variables of natural disasters 2014 and percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2014

With the p-values as critical area near zero (0.05), this means that 2 (two) variables existing in the model are statistically significantly correlated if the p value less than 0.05 and are not statistically significantly correlated if p values greater than 0.05. The positive value of Pearson Bivariate Correlation means that 2 (two) variables existing in the model are positively associated. And, the negative value of Pearson Bivariate Correlation means negative association between two variables.

This empirical evidence shows that Pearson Bivariate Correlation shows 14.61 % which indicates percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2012 associate with total number of villages with natural disasters in 2011 (Table 3), however its positive association is not significant (p value (0,41)) > 0.05).

**Table 3. Correlation of natural disasters 2011 and percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2012**

	naturaldisaster2011	tohelpdisastervictim2012
naturaldisaster2011	1	
tohelpdisastervictim2012	0.1461	1
p-value	0.4171	

Source: Central Board of Statistics, 2012, 2014 Calculated by authors from SUSENAS 2012, Podes dataset 2011, 2014 use STATA ver 11 and tabulated by MS EXCEL

Table 4 displays intercorrelation among the two variables: natural disasters 2014 and percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2014. Pearson Bivariate Correlation presents 27.41 % which means percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2014 associate with total number of villages with natural disasters in 2011, however its positive association is not significant (p value (0,12)) > 0.05).

**Table 4. Correlation of natural disasters 2014 and percentage households who often or always participate in collective and joint actions in the Neighborhoods by Provinces 2014**

	naturaldisaster2014	tohelpdisastervictim2014
naturaldisaster2014	1	
tohelpdisastervictim2014	0.2741	1
p-value	0.1227	

Source: Central Board of Statistics, 2012, 2014. Calculated by author from SUSENAS 2012, Podes dataset 2011, 2014 use STATA ver 11 and tabulated by MS EXCEL

**DISCUSSIONS**

The question of gotong royong in Indonesian society today whether the gotong royong in Indonesia decreases or increases in the span period of 2011-2014 comes up with the significance of natural disasters



occurrence in this said period. In the broad sense, the question of what the nexus of communal services of households and the density of natural disasters with in provinces has long been of interest to social scientists in developing countries, too. However, yet, few researchers have rarely explored in the context of Indonesia with comprehensive geographical coverage and simultaneously long period of census dataset.

Using the condition of communal services during natural disasters period in Indonesia (2011-2014), We examine simultaneously the trend and geographical distributions of natural disasters and communal services in Indonesia. Drawing The Podes 2011 and 2014 descriptive statistical records that communal services/mutual aid/gotong royong in Indonesia increases Descriptive statistical records mutual assistance (Gotong Royong) increases in Indonesia in 2014 (90.93 %) among villages cross-provinces from (88.80%) villages that still held it in 2011. Natural disasters still break in rural areas of Indonesian which major density of natural disasters occurred (in 2011) such as in Aceh, West Java, Central Java, East Java, and East South Nusa North. And, Natural Disasters strikes mostly villages within provinces Aceh, North Sumatera, West Java, Central Java, and East Java in 2014. Rural villages at those said provinces experience natural disasters range from landslides, flood, earth quake, tsunami, rising sea level, typhoon, volcano eruption, forest fire, and land droughts in the span period of 2011 and 2014.

Following that trends and distributions, we come up with explorative study with descriptive statistical analysis about the association of communal services density among households and the series of natural disasters event cross Indonesian provinces. The main results show that the natural disasters occurrence associate with improving of density of kindness in order to communicate empathy among people, especially during existence of natural disasters. Despites insignificant intercorrelation between two variables (density of communal services and occurrence of natural disasters), these preliminary findings indicate strengths of the value of mutual aid/mutual assistance/gotong royong in the contemporary of Indonesia. Although the finding shows no significant association between post natural disasters and density of communal activities, these preliminary findings indicate that communal activities may associate with the kindness among

people in order to show their mutual self-help in all conditions, not only when natural disasters strikes cross-Indonesian provinces.

## CONCLUDING REMARK

Gotong royong as Indonesian's norm and value of collective action is still relevant to the topic of globalization and communication sciences. The statistical evidence shows that the percentage of households participation in Indonesia nowadays are mostly high degree. It indicates that mostly in cross-provinces of Indonesia, gotong royong is still popular and promising too. Likewise, this study shows the varied of the household participation's rate in several collective activities in Indonesia in 2012 and in 2014. These communal activities varied in series of events regarded to religious activity, social activity, public interest, as well as helping the natural disaster's activity. Moreover, this paper contributes in Sociology and Communication Sciences literatures in providing different perspective about communal activities and mutual assistance among people in a provinces and natural disasters mostly prone provinces nexus.

This study provides statistical evidence both of natural disasters occurrence and communal activities/mutual assistance/mutual aid/gotong royong in the context of Indonesia nowadays (2011-2014). Furthermore, this study has several important contributions on the literature of Gotong Royong and natural disaster policy in Indonesia which conducted with quantitative approach are very rare (for example see Dokhi *et al*, 2017). First, in the perspective of a statistician and by operationalizing comprehensive numerical evidences, this study highlights that natural disasters show higher intensity in several areas include Aceh, North Sumatera, East Java, Central Java, East Java, and East South Nusa in 2011 and 2014. Since Villagers in these provinces vulnerable towards natural disasters incident, the percentage of households which often and always participate in helping natural disaster's victims remains promising. Drawing Pearson Bivariate Correlation, the finding shows the preliminary findings indicate that communal activities may associate with the kindness among people in order to show their mutual self-help in all conditions, not only when natural disasters strike cross-Indonesian provinces.

Second, Gotong Royong may benefit and work through better outcomes such as in respectively study on improving the quality of

individual happiness and life satisfaction, poverty reduction, (for example see Sujarwoto and Tampubolon 2015; Norhatan, 2014). In this study, we also found that through the strength of gotong royong communal values could improve outcomes in natural disasters resilient in Indonesia. This finding consistent to Dokhi *et al* (2017) that communal activities support Disasters since its preparedness and these communal activities enrich our national social capital, we find that communal activities positively associated with the percentage of households which often and always participate in communal activities, in particular after natural disaster strikes.

Despite some fruitful findings, this study has several limitations, such follows. First, Since We conduct our paper with only macro-level explanation and explorative study, our paper with quantitative method probably may inadequate in elaborating communal activities and value of Gotong Royong (mutual assistance), revealing geographical distributions, and disclosing the unique form of Gotong Royong related to diversity and disparity among Indonesian Archipelago. One reason of this weakness refers to the basic assumption that dynamics of communal activities in Indonesia ranged from a period of time's reasons, determinants, and places. To deepening understanding of macro-level studies, this study fulfills for this limitation by further readings some previous publications, documents, and other relevant materials about the communal activities related to Gotong Royong lesson learned in every

subject of community rural development in Indonesia.

Second, the measures of percentage in descriptive approach is not a robust statistic. Future study must utilize the more robust finding by using statistical models rather than descriptive statistics. These descriptive statistics is exploratory research in surface not deeply in a deep understanding of comprehensive exploratory research in sociology and communication sciences field.

Third, future studies must be conducted in longer range of time period availability and mixed by some field research (Quantitative and Qualitative Mixed Method) to examine the empirical evidences in high densely collective communal activities in several provinces. While quantitative approach could be done by extended the recent research of Dokhi *et al* (2017) by examining SUSENAS Module Datasets of 2014 and SUSENAS Module Datasets of 2011, future scholars may follow method of Koentjaraningrat (1961) with multiple case studies for qualitative approach. Furthermore, several control variables should be involved in order to get robust model in sociology and communication science survey, such as indicators of globalization, access to media/social media, charity and solidarity campaign, social capital, daily crimes, and etc., as well as indicators in measuring localism, i.e.: index of ethnic heterogeneity, index of geographical difficulties, and etc.

---

## MAIN REFERENCES

- Amaliah, D., Sariyatun, S., & Musaddad, A. A.** (2018). "Values of Piil Pesenggiri: Morality, Religiosity, Solidarity, and Tolerance". *International Journal of Multicultural and Multireligious Understanding*, 5(5), 179-184
- Alexander, D. E.** (2014). "Social Media in Disaster Risk Reduction and Crisis Management". *Science and engineering ethics*, 20(3), 717-733
- Babbie, E.** (2013). *The Basics of Social Research*. Cengage Learning
- BPS.** (2012). *Statistik Modal Sosial 2012*. Jakarta Indonesia: BPS
- BPS.** (2014). *Statistik Modal Sosial 2014*. Jakarta Indonesia: BPS
- Bowen, J. R.** (1986). "On the Political Construction of Tradition: Gotong Royong in Indonesia". *The Journal of Asian Studies*, 45(03), 545-561
- Burt, R. S.** (1982). *Toward a Structural Theory of Action: Network Models of Social Structure, Perception, and Action*. New York ; London: Academic Press
- Cohen, R., & Kennedy, P.** (2012). *Global Sociology*. New York: Palgrave Macmillan. P(506) Sihombing, S. O. (2013). "Identifying Changing in Indonesian Values and Its Impact to Indonesian Consumer Behavior". *The Internet Journal of Language, Culture and Society*, 36

- Dasgupta, A., & Beard, V. A. (2007). "Community Driven Development, Collective Action and Elite Capture in Indonesia". *Development and Change*, 38(2), 229-249
- Dokhi, M., Siagian, T. H., Utomo, A. P., & Rumanitha, E. (2017). "Social Capital and Disaster Preparedness in Indonesia: A Quantitative Assessment Through Binary Logistic Regression". In *Disaster Risk Reduction in Indonesia* (pp. 589-608). Springer, Cham
- Fujiie, M., Hayami, Y., & Kikuchi, M. (2005). "The Conditions of Collective Action for Local Commons Management: The Case of Irrigation in the Philippines". *Agricultural Economics*, 33(2), 179-189
- Garnaut, R. G., & McCawley, P. (1980). *Indonesia: Dualism, Growth and Poverty*. Canberra: Australian National University, Research School of Pacific Studies
- Hadi, A. (2016). "Aceh in History: Preserving Traditions and Embracing Modernity". *MIQOT: Jurnal Ilmu-ilmu Keislaman*, 37(2)
- Hanafi, H., & Noholo, S. (2019). "Institutional Model and Financial Management of Karawo Artist Based on Local Wisdom Values of Gorontalo Society". In *6th International Conference on Community Development (ICCD 2019)*. Atlantis Press.com
- Kawagoe, T., Ohkama, K., & Bagyo, A. S. (1992). "Collective Actions and Rural Organizations in a Peasant Economy in Indonesia". *The Developing Economies*, 30(3), 215-235
- Koentjaraningrat (1961). *Some Social-Anthropological Observations on Gotong Royong Practices in Two Villages of Central Java*. Cornell University: Department of Far Eastern Studies, Southeast Asia Program, Modern Indonesia Project. Translated by Holt, C.
- Kurniawan, R. (2017). "Exploring The Cultural Values of 'Saemaul Undong' and 'Gotong Royong' as The Development of an Anti-Corruption Culture: Socio-Economic Studies in East Asia and Southeast Asia". *Asia Pacific Fraud Journal*, 3(2), 319-327
- Labaree, R. V. (2009). *Research Guides: Organizing Your Social Sciences Research Paper: 10*. Proofreading Your Paper
- Mardiasmo, D., & Barnes, P. H. (2015). "Community Response to Disasters in Indonesia: Gotong Royong; a Double Edged-Sword". In *Proceedings of the 9th Annual International Conference of the International Institute for Infrastructure Renewal and Reconstruction* (pp. 301-307). Queensland University of Technology
- Nadapdap, N. Y., Alamanda, D. T., Prabowo, F. S., & Ayuningtyas, H. G. (2016). "Measuring The Effectiveness of Government Communication on Bandung Smart City (The Study On@ Ridwankamil Twitter Account during The Period of 16 September 2013 to 31 July 2015)". *IOSR Journal of Humanities And Social Science (IOSR-JHSS)*, 21(4), 72-79
- Norken, I. N., Suputra, I. K., Arsana, I. G. N. K., & Ngurah, I. G. (2017). "Institutional and Regulatory Roles in Maintaining Sustainability of Subak as a World Cultural Heritage in Bali". *Asian Agri-History*, 21(4), 245-254.
- Rao, V. (2005). "Symbolic Public Goods and The Coordination of Collective Action: A Comparison of Local Development in India and Indonesia". *World Bank Policy Research Working Paper*, (3685)
- Ratu, B., Misnah, M., & Amirullah, M. (2019). "Peace Education Based on Local Wisdom Nosarara Nosabatutu". *JOMSIGN: Journal of Multicultural Studies in Guidance and Counseling*, 3(2), 519-531
- Siwalette, J. D. (2018). "Transformation of Production Organization of Dusung based Nutmeg Plantation (Case Study of Industrial and Farmers' Partnership in Hila Village, Moluccas Province)". *Advances in Social Sciences Research Journal*, 5(3)
- Sujarwoto, S., Tampubolon, G., & Pierewan, A. C. (2018). "Individual and Contextual Factors of Happiness and Life Satisfaction in a Low Middle Income Country". *Applied Research in Quality of Life*, 13(4), 927-945
- Surtijono, S., Tinangon, R., Leke, J. R., Sompie, F. N., Poli, Z., & Siahaan, R. (2019, October). "The Development of Rural Poultry Farming Program to Kampong Chicken Farmers of Treman Village North Sulawesi". In *IOP Conference Series: Earth and Environmental Science* (Vol. 334, No. 1, p. 012006). IOP Publishing
- Tulius, J. (2012). "Stranded People; Mythical narratives about the First Inhabitants of Mentawai Islands". *Wacana*, 14(2), 215-240
- Yuliani, H., & Suryadi, K. (2017). "Local Wisdom Values as The Foundation of Civic Disposition in The Ethnic Community of Banjar". *Al-Mabsut: Jurnal Studi Islam dan Sosial*, 11(2), 18-35

