

**Six Monthly Report  
1 January – 31 July 2018  
Strengthened Indonesian Resilience:  
Reducing Risk from Disasters  
(StIRRRD)**

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**GNS Science International Consultancy Report 2018#4**



***Strengthened Indonesian Resilience:  
Reducing Risk from Disasters  
(StIRRRD)***



Universitas Gadjah Mada,  
GNS Science International,  
Ministry of Foreign Affairs and Trade (MFAT)  
New Zealand Aid Programme



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### **BIBLIOGRAPHIC REFERENCE**

Daly M, Glassey PG, Fathani TF, Riches S, Ediningtyas F, Wilopo W. 2018. Six Monthly Report 1 January – 30 June 2018. Lower Hutt (NZ): GNS Science. 79p. (GNS Science International Consultancy Report 2018/04).

# Six Monthly Progress Report: 1 January 2018–30 June 2018

## Strengthened Indonesian Resilience: Reducing Risk from Disasters (StIRRRD)

### Summary

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#### Activity information

<b>Activity Title</b>	Strengthened Indonesian Resilience: Reducing Risk from Disasters (StIRRRD)
<b>Goal</b>	Reduced losses from disasters
<b>Intended outcomes</b>	Disaster resilience strengthened and risks reduced
<b>Long-term</b>	
<b>Medium-term</b>	<ul style="list-style-type: none"><li>• Effective DRR<sup>1</sup> activities – improved practice</li><li>• DRR strengthening model applied to other districts</li><li>• Strengthened DRR planning and implementation by Local Government</li><li>• Improved community DRR practice</li></ul>
<b>Short-term</b>	<ul style="list-style-type: none"><li>• Increased stakeholder awareness and buy-in of DRR approach</li><li>• Local government staff have skills and knowledge to support DRR</li><li>• DRR Action Plans finalised</li><li>• Expert knowledge and skills applied to support DRR</li><li>• Improved community awareness of hazards and risks</li></ul>

#### Contract or grant information

<b>Start and end dates</b>	19 September 2014–30 September 2019
<b>Total cost</b>	\$7.266M
<b>Reporting period</b>	1 January 2018 – 30 June 2018

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<sup>1</sup> DRR = Disaster Risk Reduction

## Progress report preparation

<b>Prepared by</b>	Michele Daly, Teuku Faisal Fathani, Sylvia Riches, Fransisca Ediningtyas, Wahyu Wilopo.
<b>Reviewed by</b>	Geoff Kilgour and Ben Payne
<b>Date of Report</b>	30 June 2018
<b>Report Number</b>	GNS Science International Consultancy Report 2018/04

## Executive Summary

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The StIRRRD Activity continues to make good progress. It has received a positive mid-term review by Donna Leigh-Holden (affiliation) some 18 months out from the end of the Activity, which states:

*“The StiRRRD partnership is a valuable and innovative initiative that fills a current gap in the DRR sector in Indonesia and delivers strong reputational, institutional and technical benefits to MFAT, GNS Science, UGM and their downstream Gol partners. StIRRRD has been well implemented and planned outputs have been delivered to a high standard. Indeed, the uptake of training and mentoring support has exceeded initial plans and expectations. In a relatively short time, the partnership has delivered significant outcomes including the establishment of UGM Gama Ina-TEK as a Centre of Excellence for DRR, contribution to the development of the first ever ISO Standards for DRR in Indonesia (flood, landslide and tsunami) and the adoption of the Tsunami Blue Line Evacuation Programme in West Sumatra and Bengkulu. Significantly StIRRRD has demonstrated the importance of a multi-sectoral, multi-stakeholder approach to DRR and created linkages across line Ministries and subnational agencies and has contributed to building capacity of DRR actors at the national and subnational level.”*

The review recommends a number of enhancements to the programme for the remaining 18 months and potentially beyond, should the Activity continue. The most notable of these suggestions centres around increasing the emphasis on women in a development context. The review recommends gender specific skillsets be brought into the team (and/or training provided) to help make the most of information already collected and therefore better inform district coaching strategies. Changes to the Results Framework are also recommended to provide better indicators for the way the programme is assessed. Some of the current indicators are cumbersome to measure, some can't be attributed to StIRRRD interventions and some of StIRRRD's results and achievements aren't captured by the current set of indicators. The team are currently working with the Ministry of Foreign Affairs and Trade (MFAT) to determine which recommendations can be accommodated within the remaining term of the Activity.

The total actual spend to date is \$6.216 M against a planned budget of \$6.389M. Overall the budget is 3% underspent to the end of June 2018. This compares to an underspend of 7% at the end of December 2017. Activity has increased significantly in Output 1 (Toolkit) and Output 10 (Community Projects). Additional unbudgeted tasks such as the Mid-Term Review and the March visit by an Indonesian delegation to New Zealand have also contributed to the extra expenditure in this quarter.

The extra costs associated with the Mid-Term Review and other proposed tasks are the subject of a Variation currently under discussion with MFAT. The Variation is also intended to address a 6 month extension to the completion date of the Activity to accommodate revised delivery dates for tasks during the last 12 months. These include the Final Workshop and Community Project 3, as well as deployment of the Local-Government Self Assessment Tool (LG-SAT) which will provide a measure of the changed DRR capacity of local government in the districts. The Variation is also intended to accommodate an additional task requested by Bappenas, which is to help develop a method to determine where investment is best directed across the government sector to reduce Indonesia's risk index. The estimated additional funds requested are of the order of \$260k, which represents an additional 3.5% of the contract value.

Highlights during this reporting period include the significant progress made with two of the community projects: *Seismometers in Schools* and *Tsunami Awareness and Preparedness*. The March visit by a delegation comprising representatives from BNPB, BMKG, UGM and Padang City was also a highlight. Relationships with these organisations were further developed during the visit and there is considerable potential for further engagement and collaboration.

The focus for the next six months will be on delivering the community projects, developing the Activity Toolkit, and strengthening the StIRRRD district network. A focus for the remainder of the Activity will be on ensuring support from GoI partners remains high to help ensure sustainability.

This report summarises the services delivered over the reporting period (collated from the monthly reports), and reports on progress against the costed workplan (budget), delivery of outputs, and timeline. Impacts in each of the StIRRRD districts are summarised in Appendix C. Key learnings, highlights and issues are discussed.

# Summary of Services for the Reporting Period January – June 2018

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*Note: Output and sub-output numbers below correspond to those in the costed workplan (Version 9.7). More information on the services can be found in the monthly reports. District and StIRRRD impacts are listed in Appendix C. Abbreviations and acronyms used throughout the report can be found in Appendix F.*

## **Output 0: Project Management**

(0.1) Team leadership and management is an important component of an Activity this size and complexity. With a large team split between Indonesia and New Zealand, considerable effort is required to ensure the team is functioning effectively and efficiently. A number of different team meetings are held including:

- Separate Project Team Meetings: Each of the GNS Science and UGM<sup>2</sup> teams hold regular project meetings (approximately fortnightly) to discuss progress and monitor risks etc. Province coordinator meetings are generally held once or twice a month.
- Joint UGM-GNS Project Team Meetings: A joint UGM-GNS Science Project team meeting was held on 5 June 2018. The main agenda items discussed were:
  - Community Projects (Tsunami Awareness and Seismometers in Schools),
  - Progress with the Toolkit,
  - Mid-Term Review.
- Director's Meetings (involving Daly, Fathani, Wilopo, Ediningtyas and Riches) are held approximately monthly, and were held this reporting period on 2 February, 22 March (Wellington), 15 May. These meetings discussed:

### *2 February 2018*

- The upcoming visit to New Zealand in March by UGM and BNPB staff – logistics, invitation letters required, objectives for the visit, itinerary etc.
- MoU's/Lol's required to be developed for the visit for a signing ceremony.
  - GNS Science with UGM; GNS Science with BMKG; GNS Science with LIPI; Wellington City with Padang City.
- Six-monthly report to end December 2017 and Results Framework – outstanding information required to finalise the report.
- The Mid-term Review and preparations for this, including arrangements UGM were making for visits to the 3 districts (Padang, Pesisir Selatan and Sumbawa) and Jakarta meetings with stakeholders.
- Budgets and programme timeline – some deliverables are starting to fall behind schedule. The Review was taking up quite a bit of time and budget.

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<sup>2</sup> UGM = Gadjah Mada University

22 March 2018 (in Wellington)

- The Mid-Term Review and debrief of meetings and workshops held by GNS Science and UGM teams with reviewer Donna Leigh-Holden. Common themes emerging from discussions were held (community projects; District Secretary involvement; evaluation; BPBD capacity building vs community development etc.)
- Community projects and debrief of recent visits. Troubleshooting a number of challenges experienced on the ground. Discussion on Community Project 3 (in Sumbawa).
- Urban Disaster Resilience conference in Palu in November – the need to advertise the conference widely to get good participation and submit a number of abstracts from the team.
- Budget challenges to support additional activities such as the DRR Awareness week in Medan. GNS Science signalled it will be unlikely to be able to attend based on remaining budget unless additional support was provided by MFAT.
- Internal re-organisation within BNPB and the National Disaster Response Framework project. UGM advised there were difficulties with implementation, however these could potentially be resolved through the restructuring within BNPB and staff being replaced or rotated.

15 May 2018

- Community projects – various issues, challenges, logistics etc.
  - Budget and Timeline – additional budgetary items being costed for the LoV (see below), revised timeline and upcoming visits.
  - The Mid-Term Review and agreed response to recommendations and other aspects of the consultant's draft report.
- StIRRDRD Province Coordinator skype meetings were held on:
    - *Eastern Provinces:*  
18 January, 15 February, 23 February, 28 February, 28 March. Meetings focussed on the *Seismometers in Schools* Community Project and related activities, including the International Conference on Urban Disaster Resilience in Palu in November, district updates in relation to Action Plan implementation and district coaching strategies. The scope and tentative plans for Community Project 3 in NTB were also discussed during these meetings.
    - *Western Provinces:*  
23 January, 31 January, 21 March, 6 June, 22 June, 29 June. These meetings focussed on the *Tsunami Awareness and Preparedness* Community Project. Coaching strategies for Agam and Pesisir Selatan were also discussed due to concern about the limited response to UGM's efforts to make contact with the new staff. An extra visit to these districts is scheduled for October. Ongoing positive progress in Seluma and Bengkulu was noted.

(0.1) The programme's risk register is regularly updated and programme risks are a standing item on GNS Science's and the UGM-GNS Science project team meetings. A copy of the latest risk register is contained in Appendix F.

(0.1) Mid-Term Review. The team's input to and response to the review has been a major focus for this reporting period. A number of workshops and meetings were held by both GNS Science and UGM both prior to the review and on receipt of the draft. The GNS Science workshop resulted in a summary being made available to Donna Leigh-Holden (reviewer) as background information. The formal assessment part of the Review was held in Indonesia between 5 and 13 February 2018. This involved principally the UGM StIRRRD team who accompanied Donna on visits to three districts (Padang, Pesisir Selatan and Seluma) as well as to Jakarta for meetings with stakeholders (e.g. BNPB, Bappenas, BMKG) (Figure 1). UGM put a substantial amount of effort into organising the visits and meetings. GNS Science team members Michele Daly and Phil Glassey met with Donna via skype on 19 February to discuss preliminary findings and help clarify matters raised. Donna has subsequently met via phone/skype with most of the other GNS Science team members individually over February and into March, and there has been email follow-up. Donna has also sent UGM some information on tools that could be used to help with the remainder of the project.

The draft review document was received by the StIRRRD project team from MFAT in early April. GNS Science and UGM held separate meetings to consider a response to the report and its recommendations. A combined response was sent to MFAT on 30 May 2018. Overall, the StIRRRD team found the report positive, helpful and well balanced, except in a few places as noted in the report, which included the following areas of concern:

- Views about the community projects;
- Perceived lack of analysis of conditions preventing uptake; and
- The extent to which the Activity had engaged with executive members of local government.
- Gender and vulnerability issues.

The final report was presented by the reviewer Donna Leigh-Holden to MFAT on Monday 2 July. Also present were GNS Science staff, Michele Daly, Richard Woods, Hannah Brackley, Sylvia Riches and Susie Paisley. While feedback was generally positive regarding progress and the report's content, discussions at the time focused on the implementation of the community projects and concerns about the extent to which gender and vulnerability issues have been managed to date. The general consensus was that more emphasis was needed on this aspect for the remaining term of the Activity. Further discussions will need to be held with MFAT to decide how the recommendations are managed going forward.





**Figure 1:** Mid-Term Review Meetings. Top left) with UNRAM, Top right) with Sumbawa BPBD, Middle left) with Padang BPBD, Middle right) with Lilik Kurniawan from BNPB, Bottom left) with Bappenas, Bottom right) with Kemendesra. (Photo credits: UGM)

(0.1)(0.3)(3.2) Memorandum of Understandings (MoUs) and Letters of Intent (LoI). Relationships between Indonesia and New Zealand have continued to expand and strengthen as a result of StIRRRD. Four MoUs were initiated over the November 2017 to February 2018 period, but were accelerated so that they could be signed during the March 2018 New Zealand Visit as discussed below. The MoU between Padang City and Wellington City became an LoI (agreement to work towards signing an MoU) due to process issues and timeframe complexities. For similar reasons, the proposed MOU between GNS Science and BMKG was also realigned as a temporary LoI, and both MoUs will be developed within the next 6 months. The MoU that was signed in March was a renewal of an existing MoU between GNS Science and UGM. The fourth MoU (GNS Science with the Indonesian Institute of Sciences (LIPI)) still needs to progress to signing stage. The LIPI team were unable to come to New Zealand for the signing and so the MoU was not prioritised at that time. The new target for signing this MoU is mid-August (desk to desk signing) followed by a meeting to discuss giving effect to the MoU on 18 September 2018 in Jakarta.

(0.1) Indonesian Delegation visit to New Zealand (March 2018) as part of the 60<sup>th</sup> Anniversary of Diplomatic Relations between New Zealand and Indonesia. This unscheduled and unbudgeted visit was a key focus for the StIRRRD team across February and March 2018, this was time consuming but beneficial. Initially, the StIRRRD team sought to bring two UGM team members (Faisal Fathani and Wahyu Wilopo) and two BNPB team members (Lilik Kurniawan and Mohd Robi Amri) to New Zealand from Sydney where they were attending an ISO meeting associated with UGM's Early Landslide Warning System. The meetings hosted in Wellington would revolve around StIRRRD project management matters, future StIRRRD concepts (StIRRRD 3), and relationship building and networking opportunities for the BNPB staff. As the Sydney meeting coincided with the President's visit to New Zealand, the delegation from Indonesia grew to 14 people, comprising BNPB, UGM, BMKG and a delegation from Padang City. The visit became an important parallel and complimentary set of meetings to those of the President's delegation, requiring coordination with MFAT and the Indonesian Embassy. Key components of the visit included:

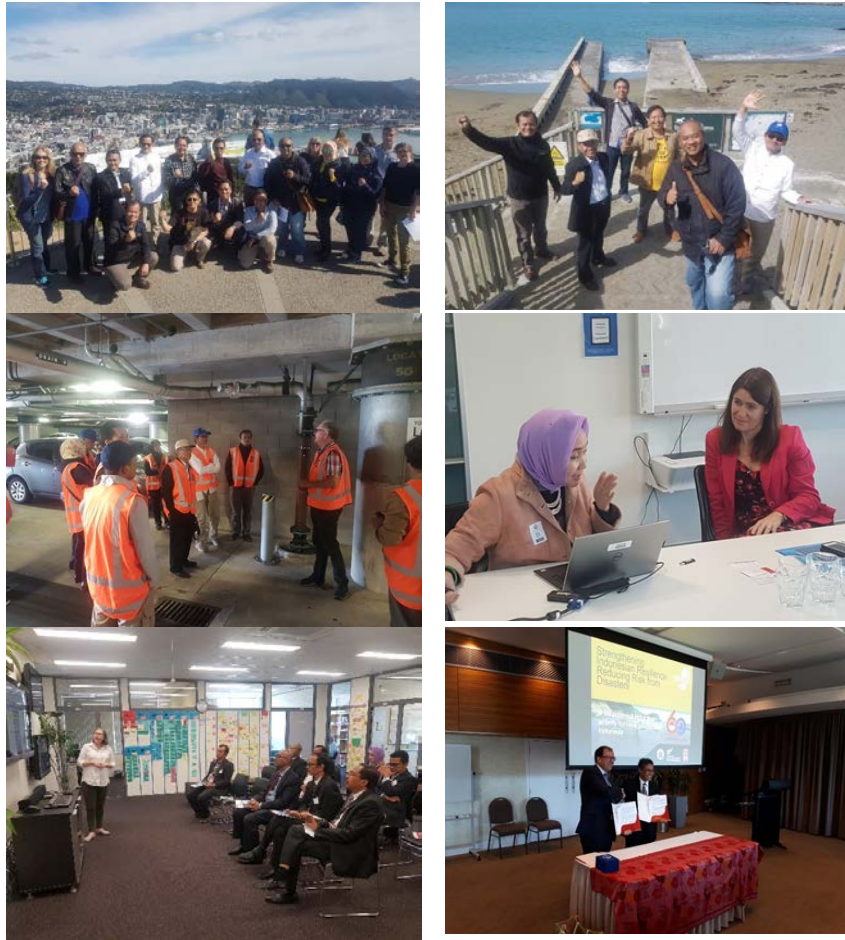
- A Technical Workshop on Urban Disaster Resilience (focused on Wellington and Padang), followed by a small networking reception (organised in partnership with Wellington City Council),
- An MoU signing ceremony for MoUs between GNS and UGM, GNS and BMKG and between Wellington City and Padang City (Figure 2),
- A Fieldtrip around Wellington to illustrate resilience projects in action (Figure 2),
- Technical meetings at GNS aimed at giving effect to the MoUs just signed,
- A meeting for senior members of the Indonesian delegation with the Director of Civil Defence Emergency Management (Ministry level agency) (Figure 2),
- Discussion about the Indonesian Government's needs and alignment of potential future projects with GoI Strategy and priorities,
- A StIRRRD Director's meeting.

While the original concept for the meeting was able to be absorbed within StIRRRD and GNS budgets, the resulting larger event was not. MFAT agreed to support the majority of costs associated with the visit with the exception of GNS staff time and direct staff costs (airfares, accommodation etc). These were met out of a combination of StIRRRD and GNS overhead budgets.

The visit was a success and met most of it's objectives including showcasing New Zealand disaster risk management expertise and scientific innovation to five prominent Indonesian organisations, being part of a larger suite of events for the 60<sup>th</sup> Anniversary celebrations in 2018 and aligning MFAT's strategic objective number 3: Asia Pacific, linking Indonesian organisations and people to New Zealand.

However, there were some disappointing aspects to the visit:

- The Technical Workshop was not well supported by MFAT staff or the wider New Zealand DRM community. This was primarily due to competing events associated with the President's visit, but also the relatively short notice given for the workshop.
- The delegation was not able to be supported by the Indonesian Embassy, who were similarly stretched with the President's main delegation.
- The media coverage of the visit, including that of the President's visit was disappointing. There was a missed opportunity here to promote Indonesia and the New Zealand Government's range of activities (including StIRRRD) in support of the diplomatic relationship.
- The Head of BNPB, Willem Rampangilei, pulled out of the visit at the last minute which was disappointing. A high level meeting had been arranged for Mr. Rampangilei with his equivalent here in New Zealand, the Director of the Ministry of Civil Defence and Emergency Management (MCDEM).



**Figure 2:** New Zealand Visit – March 2018. Top left) the delegation on the top of Mt Victoria, Wellington, Top right) BNPB and UGM staff at Island Bay after discussions about coastal erosion and tsunami awareness, Middle left) Wellington Hospital carpark looking at Base Isolation technology, Middle right) Prof. Dwikorita Karnawati, Head of BMKG, discussing tsunami early warning systems with Sarah Stuart-Black, Head of MCDEM, Bottom left) presentation on Geohazards monitoring (GeoNet) given by Natalie Balfour to the delegation, Bottom right) Chief Executive of GNS Science with the Rektor of UGM at the MoU signing. Below center participants from Indonesia and New Zealand at the Technical Workshop held at Te Papa.



(0.1) Letter of Variation (LoV) to contract. Another focus for the reporting period has been an LoV which is currently being prepared to address some changes to scope, changes to the delivery dates of some tasks, and to request an overall extension to the contract end date. This is discussed further under *Review of Progress to Date* (refer to the next section).

(0.2) AGG Meetings: there have been no AGG meetings held in the first six months of the year. One is scheduled for September 2018.

(0.3) Jakarta Liaison. There were no visits to Jakarta during the reporting period. However a number of Jakarta based organisations were in New Zealand in March. StIRRRD team members (GNS and UGM) were able to meet with senior staff from BNPB (Wisnu Widjaja, Lilik Kurniawan, Eko Budiman, Mohd Robi Amri, Said Faisal and Rosita Agustina), and BMKG (Dwikorita Karnawati and Anni Arumsari Fitriany).

(0.4) Communications Plan. There was a lot of media activity this reporting period, due to the two community projects currently underway. An overview of social media metrics can be found in Table 1.

- There were two website blogs added to the website and corresponding Facebook posts made:
  - Tsunami Awareness and Preparedness Community Project:  
<https://stirrrd.org/2018/03/05/initiating-tsunami-awareness-community-engagement-rawa-indah-seluma/>
  - Seismometers in Schools Community Project:  
<https://stirrrd.org/2018/03/10/seismometer-in-schools-pilot-launched-in-central-sulawesi/>
  - The media interest in the *Seismometer in Schools* project was very high and this was reflected by high engagement across social media (Twitter) with BNPB, the New Zealand embassy in Jakarta and the University of Tadulako regularly liking and retweeting @StIRRRD tweets throughout the pilot deployment. Globally, organisations such as the Raspberry Shake Seismometer network (based in Panama), Australian SIS project, the IRIS earthquake programme (based in Washington) and the British Geological Survey seismology project were also very engaged by commenting, liking and retweeting posts the entire week in Palu. In total, over 35,100 people viewed StIRRRD tweets during March.
  - There was also a lot of twitter activity associated with the *Tsunami Awareness and Preparedness* project visit, including by the New Zealand Embassy (Figure 3).
  - Newspaper articles (Figure 3): There was extensive media coverage of the *Seismometers in Schools* Community Project. Examples include the following:
    - <http://www.kailipost.com/2018/03/ancaman-palu-koro-dalam-konteks-sekolah.html>
    - <https://paluekspres.fajar.co.id/deteksi-getaran-palu-koro-terpantau-7-seismometer/>

- <https://paluekspres.fajar.co.id/program-seismometer-di-sekolah-ajarkan-tentang-gemp>
- Videos:
  - Video footage was collected in the schools during the installation of the seismometers for the Seismometers in Schools project. Interviews were conducted with UGM and LIPI representatives on the project team. This has been compiled into a video and added to the StIRRRD website. <https://StIRRRD.org/videos>, and also at <https://www.youtube.com>
  - A video was also created by one of the students at the first school visited. This was posted online within a day of the visit and gives a good account of the activities of the day. <https://www.facebook.com/StIRRRD/videos/743028745890519/>
  - A Seluma BPBD staff member created an 8 minute video summarising the visit to Rawa Indah for the Tsunami Awareness and Preparedness project, and this has been posted on Youtube. <https://www.youtube.com/watch?v=Xv4Zn5-WX6c>.

**Table 1** StIRRRD Social Media Metrics January 2018 – June 2018

<b>Facebook</b> impressions from page posts	Jan – June 2018: 4,298 July – Dec 2017: 5,648 This equates to a 24% <u>decrease</u> in total <b>Facebook</b> reach over the last period.
<b>Facebook</b> Page likes:	Jan – June 2018: 198 July – Dec 2017: 197 This equates to an 0.5% <u>increase</u> in total <b>Facebook</b> likes over the last period.
Total number of <b>Twitter</b> impressions from tweets:	Jan – June 2018: 49,321 July – Dec 2017: 48,985 This equates to a 0.7% <u>increase</u> in total <b>Twitter</b> reach over the last period.
Total number of <b>Website</b> visits:	Jan – June 2018: 1,231 July – Dec 2017: 1,059 This equates to a 16% <u>increase</u> in total <b>Website</b> visits over the last period.

*Note: The decrease in Facebook reach continues due to the way Facebook are implementing reach algorithms in the hope people will pay to boost pages.*



Figure 3: Examples of some of the media coverage of the Community Projects.

**Output 1: Activity Toolkit**

The development of the Toolkit continues. The team is busy working on the content, and drafting the proposed structure. A workshop was held in Lower Hutt for all GNS Science project team members to finalise the drafting of the Toolkit, and work is now continuing on the next stage. Modifications need to be made based on workshop feedback and then sent to UGM for input and translation. A further workshop is planned for Yogyakarta with the UGM team in September.

**Output 2: Risk Redution Network**

No activity for the reporting period.

**Output 3: Coaching and Mentoring Support**

(3.2) Table 2 contains a summary of contacts UGM made with the districts during the reporting period and a brief description of topics covered. Contact was made by phone, email and via the *WhatsApp* smartphone app.

**Table 1** The UGM Team has been in communication (phone, email, WhatsApp smartphone App) with the Head and staff of BPBDs of the following districts and associated Universities (UNAND, UNIB, UNRAM UNTAD)<sup>3</sup> on the dates given below regarding the activities shown.

District	Month					
	Jan-18	Feb-18	March-28	April-18	May-18	June-18
Agam	17, 21, 24	9	-	16, 17, 28	3, 31	5
Bengkulu	5, 10, 22, 23	1, 11, 13, 19	10, 22	9, 15	18	14
Donggala	20, 22, 24, 29	14, 28	1, 2, 3, 4, 7	9	3, 7, 24, 31	5
Mataram	9, 22, 26, 28	7, 8	15	15, 25	5	20, 25, 29
Morowali	20	19	15, 23	9, 16, 21	7, 24	29
Pesisir Selatan	16, 18, 19, 21, 24	9, 13	-	26	3, 31	15
Seluma	11, 15, 16, 25	10, 12, 13, 16	6, 7, 27	16, 17, 18, 19	15, 18	5, 7, 21, 29
Sumbawa	9, 18, 22, 23, 27, 30	8, 9	15, 22	15, 25	4	20, 29
	BPBD budget.	Seismometers in School Community Project	Seismometers in School Community Project	Seismometers in School Community Project	Seismometers in School Community Project	Follow up of SIS program
	<i>Seismometers in School Community Project.</i>	Preparation for international seminar at UNTAD.	Preparation for international seminar at UNTAD.	Action Plan progress.	Action Plan progress.	Action Plan progress
	Mid-term review Preparation for review visit with UNRAM, scheduled for February.	Action Plan progress.	Action Plan progress.	Flood contingency plan.	Preparation for international seminar at UNTAD	DRR Activities
	DRR Programs for 2018	StIRRRD Mid-term review	StIRRRD Mid-term review	Tsunami Awareness and Preparedness Community Project, prepare for second visit	DRR activities	information on the International Conference on Natural Disaster and Risk Management hosted by Politeknik Medan in

<sup>3</sup> UNAND (Andalas University), UNIB (Bengkulu University), UNRAM (Mataram University), UNTAD (Tadulako University)



District	Month					
	Jan-18	Feb-18	March-28	April-18	May-18	June-18
						Lombok on 6-9 December 2018;
	Report on DRR activities in 2017.	Books on community based DRR, Destna and Sea School.	Flood contingency plan	Update on BPBD activities	Disaster dissemination at schools, installation of evacuation signs in 10 primary schools and junior high schools.	Update on Sumbawa Community Project
	Disaster occurrence – Bengkulu, flooding and a small tornado.	Update of disaster occurrence in Bengkulu, the dissemination of earthquake and Tsunami in SD 83 and 77.	Update of disaster occurrence in Bengkulu	Met with KWBS ((Kelompok wartawan siaga bencana/disaster preparedness journalist group) & BPBD re updates on DRR activities	Flood contingency plan	Seluma – BPBD Agam Establishment of 2 safe schools and 2 disaster resilient villages
	<i>Tsunami Awareness and Preparedness</i> Community Project.	Joint activity with US Army on DRR book.	Joint activity with US Army on DRR book.	Preparation of BPBD Agam for Disaster Preparedness day (26 April)	<i>Tsunami Awareness and Preparedness</i> Community Project, follow up to second visit	BPBD Agam Weather anomaly due to “unexpected” heavy rainfall in Sumatra.
		<i>Tsunami Awareness and Preparedness</i> Community Project	<i>Tsunami Awareness and Preparedness</i> Community Project follow up to visit		Consulted BPBD Pesisir Selatan on their budget allocation for DRR	
	Staff Updates (retirements and new appointments)	Update of BPBD activities			ASB conducted simulation at the Nagari; dissemination of disaster through leaflet);	
					BPBD Agam preparation for led Mubarak holiday particularly at disaster prone areas and updates on marapi volcano	

### (3.2) Soft Launch – New Zealand-Padang Relationship

On the 9<sup>th</sup> February, the New Zealand Ambassador (Trevor Matheson) visited Padang to help cement the relationship between Padang and Wellington City (Figure 4). A soft launch of the 60<sup>th</sup> Anniversary of diplomatic relations between New Zealand and Indonesia was undertaken. This helped to pave the way for the delegation from Padang City's visit to Wellington in March. Some examples of media coverage of the event are as follows:

- o <https://youtu.be/vf-sFO8Lv0>
- o [www.nusantaranews.net/2018/02/dubes-new-zealand-bantu-retrofit.html?m=1](http://www.nusantaranews.net/2018/02/dubes-new-zealand-bantu-retrofit.html?m=1)



**Figure 4:** Soft launch: left) a hongi between the Mayor of Padang and the New Zealand Ambassador and right) Medi Herlianto from BNPB, The New Zealand Ambassador, Fauzan and Hakam from UNAND, and staff from PMI, BASARNAS, and BPBD

### (3.2) Urban Disaster Resilience Conference in Palu, November 2018

StIRRRD is supporting an international conference in November convened by UNTAD (Tadulako University) as part of its commitment to strengthening capability at UNTAD. "Urban Resilience to Disasters" is the first international conference organised by the university (<http://fatek.untad.ac.id/icudr/>). Members of the StIRRRD team are on the organising committee and are also keynote speakers. The conference ties in well with the StIRRRD approach to establishing risk modelling capability at the university. The conference also provides an opportunity to highlight the *Seismometers in Schools* community project.

Nine abstracts have been submitted and accepted for the Palu conference in November 2018. The StIRRRD team sought to ensure that a range of multi-disciplinary, multi-team abstracts and contributions were submitted in order to support the conference and to showcase some of the projects StIRRRD are involved in. Table 2 lists the titles of the abstracts submitted.

**Table 2** StIRRRD abstracts submitted and accepted for ICUDR2018 (International Conference on Urban Disaster Resilience).

1	Authors: Esti Anantasari, Agung Setianto, Michele Daly, Richard Woods																		
	Title: School Assessment for Increasing Disaster Awareness and Preparedness																		
	Number: 89																		
2	Authors: Richard Woods, Michele Daly, Agung Setianto, Esti Anantasari, Richard Johnson																		
	Title: Increasing seismic hazard and risk awareness in Palu, Central Sulawesi: Seismometers in Schools Pilot Programme																		
	Number: 54																		
3	Authors: Michele Daly, David Brunndon																		
	Title: The Value of Lifelines Groups in Reducing Infrastructure Vulnerability																		
	Number: 35																		
4	Authors: Edi Hasymi, Geoff Kilgour, Arry Geld																		
	Title: Padang's Tsunami Blue Line Project: a status update																		
	Number:																		
5	Authors: Phil Glassey, Michele Daly, T. Faisal Fathani, Wahyu Wilopo																		
	Title: Measuring the impacts of StIRRRD: A disaster risk reduction capacity activity in Indonesia																		
	Number:																		
6	Authors: Finn Scheele, Sheng-Lin Lin, P. Holland, Ryan Paulik, Shaun Williams, Richard Woods																		
	Title: Applying New Zealand's risk tools internationally: A case study from Samoa and Vanuatu																		
	Number:																		
7	Authors: Richard Woods, Nick Horspool, Ryan Paulik, Finn Scheele, Sally Potter, B. Popovich																		
	Title: Evaluating the impacts of natural hazards using risk tools in New Zealand's urban centres																		
	<i>Workshop Session</i>																		
8	Authors: Esti Anantasari, Michele Daly, Arry Retnowati																		
	Title: The Role of Women in DRR in Indonesia																		
	Number: 82																		
9	Authors: Agung Setianto																		
	Title: Geological Analysis of Palu-Koru Fault																		
	Number:																		

NGO Skala, a key non-governmental organisation involved in the Palu-Koro Fault Expedition (<https://act.id/en/news/detail/signing-mou--act-skala-to-undertake-palu-koro-expedition>) have confirmed they have received funding to attend the conference. MFAT has provided support to publish a book and make a documentary film about the Expedition along the Palu-Koru fault. These will be launched at the conference together with a photo exhibition.

(3.2) Members of the StIRRRD team (Phil Glassey, Faisal Fathani, Wayhu Wilopo), represented StIRRRD at the "International Conference on Disaster Management (ICDM) 2018" conference in Padang between 2-4 May. Andalas University, BNPB and the Indonesian Disaster Expert's Association (IABI) jointly organised the conference. The conference (<http://icdm.ft.unand.ac.id/>) was part of the 5<sup>th</sup> Annual Scientific Meeting (PIT) of IABI (<http://www.iabi-indonesia.org/>). Phil Glassey presented a paper on StIRRRD on behalf of the team entitled: "*Measuring the Impacts of StIRRRD: A Disaster Risk Reduction Capacity Building Activity in Indonesia.*"

Involvement by StIRRRD team members at the conference supported the capability building and profile of UNAND and UGM in the DRR field in Indonesia.



*Figure 5: StIRRRD team members supported the 5<sup>th</sup> Annual Conference of Disaster Risk Experts in Padang, hosted by Andalas University.*

**Output 4: District Vulnerability Assessment and Profiles for the New Participating Districts.**

No activity for the reporting period.

**Output 5: LG-SAT Adaptation and Application.**

No activity for the reporting period. The next round of the LG-SAT questionnaire is expected to be undertaken in 2019.

**Output 6: DRR Action Plan Support Provided**

This Output has been completed.

**Output 7: Finalising Action Plans**

This Output has been completed.

**Output 8: New Zealand Comparative Study Visits**

(8.1)(8.2) The reports for the Study Visits held in 2015 and 2016 have been completed.

**Output 9: Expert Training – Hazard and Risk Training**

This Output has been completed.

**Output 10: Community Projects**

**(10.1) Seismometers in Schools Community Project**

During the week 5 to 9 March, StIRRRD team members were based in Palu, Central Sulawesi to launch Indonesia's first *Seismometers in Schools (SIS)*

programme. *Seismometers in Schools* is an education initiative already present in Australia, New Zealand and the United States, which involves installing seismometers in schools as tools to increase awareness of seismic hazards and risks. Information from the seismometers can be analysed by mathematics, physics or geography students to assess earthquakes recorded locally or from around the world.

The pilot SIS programme has been established in Central Sulawesi province with seismometers installed in four schools and a more sophisticated three component device installed at the University of Tadulako, Palu. The participating public schools are SMA Negeri Model Terpadu Madani and MAN 1 in Palu City, SMA N 1 Banawa in Donggala and SMA N 1 Bahadopi in Morowali. All installations were undertaken in the first week of March, except for Morowali which was installed at a later time. The equipment installation was accompanied by student and teacher training at all the schools on hazards, risks, DRR and earthquake science. For this schools training in Palu, the UGM and GNS teams were supported by LIPI.

The project has been supported by a range of Indonesian agencies willing to assist the schools with technical support and further training. Their commitment was recognised in a MoU signing ceremony on 5 March. The agencies signing the MoU include:

- Palu's local university – Universitas of Tadulako (UNTAD)
- The provincial office of the national seismic monitoring agency – Kantor Stasiun Geofisika Palu (BMKG)
- The local emergency management offices – BPBD Kota Palu & BPBD Kabupaten Donggala
- The provincial office of the national education office – Dinas Pendidikan Provinsi Sulawesi Tengah
- The provincial office of the national Ministry of Religion – Kakanwil Kemenag Provinai Sulawesi Tengah

All agencies were very enthusiastic about the SIS programme and agreed to help with technical assistance, further capacity building for teachers, help with assessing earthquake traces and providing ideas on how students might develop future projects. This enthusiasm was further reflected by the extensive media coverage the project received during the week in Palu (refer under Output 0 above and the blog on the website).

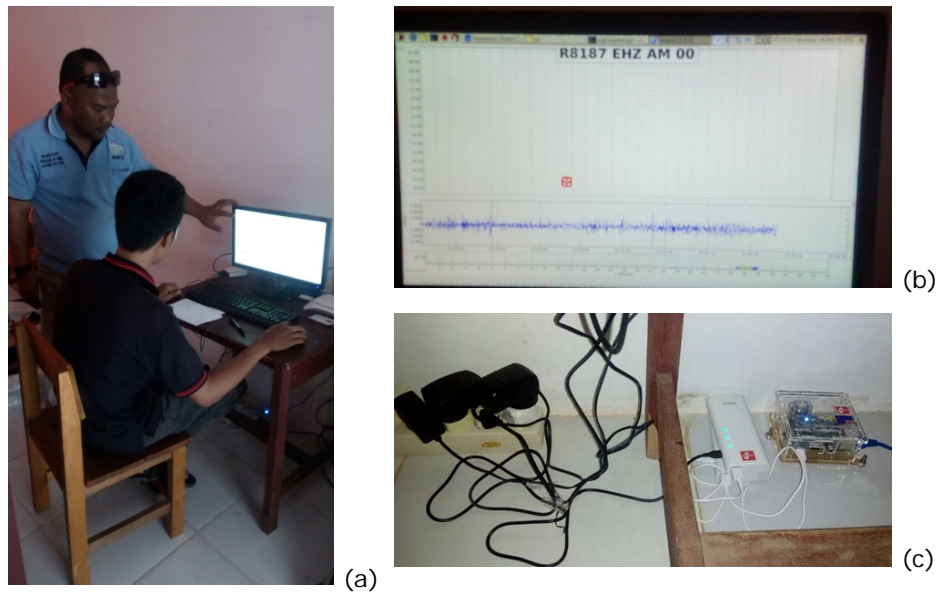
All of the seismometers are now part of the global raspberry shake seismic network with real time data from each of the devices available here: <http://raspberyshake.net/stationview>.



**Figure 6:** (a) *Raspberry Shake seismometers are commonly used in school education programmes around the world, (b) SMA N 1 Banawa school in Donggala, (Photo credits: Richard Woods, GNS Science)*

- The fifth seismometer was installed on 16 April at SMA1 Bahodopi school in Morowali as part of the *Seismometers in Schools* Community Project (Figure 7). This was undertaken by a team from UGM and BMKG. UNTAD was also to have participated but the staff member concerned was sick at the time of the visit. While the seismometer is up and running, it is not connected to the internet due to the poor internet connection in this part of Indonesia. GNS Science technicians are looking at ways of using WiFi to connect to the Raspberry Shake network. Training for teachers was also provided in a similar manner to the schools in Palu and Donggala.
- Many of the teachers at the schools have been requesting additional assistance in developing student projects. In response, UGM, UNTAD and BMKG scheduled a workshop on Saturday 7 July in Palu. This workshop provided refresher training for teachers on how to use and read the seismometer traces and provided targeted training on potential student projects. In addition, the details of the proposed student competition were also discussed with teachers.

The next scheduled visit for the Seismometers in Schools (SIS) project is November.



**Figure 7:** *Seismometers in Schools Community project (a) Technicians from BMKG and UGM setting up the software at Bahodopi School in Morowali, (b) seismograph from the working seismometer, (c) seismometer in place on the ground (far right) (photo credits: Agung Setianto, UGM).*

- April was a busy month for the Tsunami Awareness and Preparedness Community Project and included a visit of 5 days (24-28 April 2018) to the village of Rawa Indah to engage with the community and stakeholders to further develop a draft Tsunami Safe Action Plan. While in the village, the team conducted and participated in a number of village activities including:
  - discussions with women’s and men’s prayer groups about tsunami awareness and preparedness (Figure 8),
  - engagement with the local community groups (POLMAS – Community Police, Tagana (Youth) PANSER, KSB) seeking their input into Actions to be taken under 5 overlapping themes that had emerged from the initial visit, namely; 1) Shelter Management, 2) Evacuation Planning, 3) Local Access, 4) Resilient Infrastructure and 5) Prepared and Knowledgeable Community,
  - Distribution of tsunami awareness and response posters/calendars to each household (Figure 8),
  - Team participation in a regular morning women’s aerobics session at the tsunami shelter and discussion about tsunamis prior to a health seminar,
  - Engagement with schools through an art competition held at the shelter (Figure 9),
  - Tsunami evacuation simulation involving the local school,
  - Tsunami awareness for the village as part of a movie night at the shelter, which about 500 people attended (Figure 8). Prior to the feature movies tsunami safe preparedness videos in Bahasa Indonesian developed by ITIC/UNESCO were shown, as well as aerial videos of Rawa Indah taken during the first visit from a drone.

Highlights of the visit included the tsunami/disaster art competition for years 5 and 6 at the village school. The artwork produced in a 3-hour session is spectacular and the children stayed well after school to complete their group projects. The intent is that these will be on permanent display in the tsunami shelter.



(a)



(b)



(c)

**Figure 8:** Tsunami Awareness and Preparedness Community Project: (a) Tsunami Awareness poster distributed to all households, (b) Women's prayer group, (c) movie night at the Tsunami Evacuation Shelter (photo credits: Phil Glassey; Michael Goldsmith).



(a)



(b)



(c)

**Figure 9:** Tsunami Awareness and Preparedness Community Project: (a)(b) Example of art produced as part of the school art session during engagement, (c) School children learning about tsunami (photo credits: Phil Glassey; Michael Goldsmith).

Planning is well advanced for the next visit to Rawa Indah on 23-27 July. Information boards will be installed, an evacuation simulation undertaken and



the tsunami awareness survey will be repeated. The Village Community Response Plan will be formally handed over to the people of Rawa Indah to implement along with the local BPBD.

- Scoping of the third community project (in Sumbawa) has started and a draft budget developed. This project is aimed at increasing the capacity of social science faculty staff at Mataram University (UNRAM) and better integrate their skills with the Center for Disaster Management (CDRM) in the Engineering Faculty. It is anticipated that this engagement will improve the social science support to local government, in particular BPBD, when delivering local Disaster Risk Reduction (DRR) initiatives. DRR training workshops will be held at the CDRM with a focus on utilising social science skills, including gender, to deliver risk management activities rather than wholly engineering focussed solutions as is currently preferred. A pilot project, in partnership with Sumbawa BPBD, will deliver community DRR activities, such as evacuation simulation programmes, evacuation route identification methods and the identification of vulnerable village members, with an emphasis on flood hazards. It is intended that cross-faculty members from the CDRM will deliver this programme supported by the StIRRRD team.

## Review of Progress to Date

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### ***Progress Against Costed Workplan (Budget)***

A summary of actual expenditure to date against planned expenditure for the Outputs active in this reporting period can be found in Appendix A. Where the variance is greater than 10% a brief explanation is provided.

Note that Appendix A reports against the new budget (version 9.7) as agreed in the *Letter of Variation* signed 11 April 2016. The total contracted value remains unchanged (New Zealand \$7.266M), however costs have been redistributed across different outputs.

The total actual spend to date is \$6.216 M against a planned budget of \$6.389M. Overall the budget is 3% underspent to the end of June 2018. This compares to an underspend of 7% at the end of December 2017. Activity has increased significantly in Output 1 (Toolkit) and Output 10 (Community Projects). Additional unbudgeted tasks such as the Mid-Term Review and the March visit by an Indonesian delegation to New Zealand have also contributed to the extra expenditure in this quarter.

### ***Progress Against Delivery of Outputs***

The six months to the end of June 2018 has been another intense period with a number of activities taking place. Appendix B shows the estimated percentage completed for each high level output.

Some key programmed tasks were undertaken this reporting period and are now completed:

- The reports of the New Zealand Comparative Study Visits held in 2015 and 2016.

Currently the only reporting that remains outstanding is the Kemendesa Workshop report and the Letter Report on the New Zealand visit held in March 2018. Draft reports have been completed and require finalisation, which has been held up due to other programme priorities taking staff time.

Some tasks are behind schedule, namely Community Project 3 and the Toolbox. Community Project 3 has been delayed due to effort required by the team on Community Projects 1 and 2, and also due to waiting on outcomes from the Mid-Term Review. In addition, the Final Workshop (Output 2.6) has had to be deferred from November 2018 to February 2019 due to the aforementioned activities being behind schedule.

### ***Progress with Action Plan Implementation***

No specific assessment of DRR Action Plan implementation has been undertaken this reporting period. Where information on activities in the districts has been gathered through UGM contact with the districts, it has been captured in Appendix C.

### ***Progress with a second Letter of Variation (LoV)***

The extra costs associated with the Mid-Term Review and other proposed tasks are the subject of a Variation currently under discussion with MFAT.

Key areas the LoV is intended to address are:

- o Extension to the completion date of the contract to December 2019 to adjust for some tasks being delivered later than planned and also to accommodate Mid-Term Review recommendations,
- o Revised delivery dates for tasks during the last 12 months of the project,
- o UGM costs for the Mid-Term Review (as agreed verbally by MFAT),
- o Costs for attendance at DRR weeks in October 2018 and potentially also 2019 (as agreed verbally by MFAT),
- o Costs for additional coaching visits to Pessel, Agam and Morowali,
- o Costs for an initial discovery/feasibility workshop and associated meetings for the socio-economic indicators/risk project with Bappenas,
- o Dropping Community Project 4 (and associated redistribution of costs).

Table 3 shows the estimated costs associated with each of the tasks listed above. An additional \$264,670.00 is being requested. This represents an additional 3.5% of the contract value.

Costs associated with the implementation of selected Mid-Term Review recommendations were also intended to be covered, however discussions are ongoing with MFAT and there has been no decision made regarding how the recommendations will be addressed. Suggestions by GNS and UGM have included gender training for StIRRRD team members, a re-analysis of FGD (Focus Group Discussion) transcripts and data, and a review of the targets and indicators in the Results Framework.

**Table 3** Summary of LoV estimated costs.

<b>Project Output and task</b>	<b>Cost \$</b>
<b>Output 0: Project Management</b>	
0.1 Extension to completion date of contract to December 2019. Project admin, budget monitoring, logistics, project team meetings.	51600
0.2 1 Revised and 1 new Additional AGG.	24310
0.5 Monthly Project reporting up until Sep 2019, 1 additional 6 monthly report.	13875
<i>Less</i> 0.614 Community Project 4 reporting.	-13265
0.7 (new task) UGM costs for the mid-term review.	16170
<b>Output 2: DRR Network</b>	
2.8 (new task) Attendance by GNS and UGM at the Medan DRR week October 2018 (3 GNS & 3 UGM people).	42228
<b>Output 3: Mentoring &amp; Coaching</b>	
3.3 (new task) 2 Additional visits to Pessel and Agam – Jul 2018 (2 UGM Only) and Oct 2018 (2 GNS, 3 UGM).	50303
3.4 (new task) Additional visit to Morowali (2 GNS, 3 UGM) Nov 2018.	45875
<b>Output 9: Expert Training</b>	
9.4 (new task) Funding an initial discovery/feasibility workshop/meeting for the socio-economic risk project with Bappenas.	96280
<b>Output 10: Community Projects</b>	
10.1 Seismometers in Schools (SIS) Additional costs.	16814
10.2 Tsunami Awareness Additional costs.	10330
<i>Less</i> 10.4 Community Project 4 - Remove project 4.	-89850
<b>Additional Funding Requested</b>	<b>\$264,670.00</b>

## Learning and Action Points Arising from the Services

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### 1. Mid-Term Review

The recent Mid-Term Review of StIRRRD undertaken by MFAT has resulted in a positive review of the Activity.

*“The StiRRRD partnership is a valuable and innovative initiative that fills a current gap in the DRR sector in Indonesia and delivers strong reputational, institutional and technical benefits to MFAT, GNS, UGM and their downstream Gol partners. StIRRRD has been well implemented and planned outputs have been delivered to a high standard. Indeed, the uptake of training and mentoring support has exceeded initial plans and expectations. In a relatively short time, the partnership has delivered significant outcomes including the establishment of UGM Gama Ina-TEK as a Centre of Excellence for DRR, contribution to the development of the first ever ISO Standards for DRR in Indonesia (flood, landslide and tsunami) and the adoption of the Tsunami Blue Line Evacuation Programme in West Sumatra and Bengkulu. Significantly StIRRRD has demonstrated the importance of a multi-sectoral, multi-stakeholder approach to DRR and created linkages across line Ministries and subnational agencies and has contributed to building capacity of DRR actors at the national and subnational level.” (Donna Leigh-Holden, Reviewer)*

The review recommends a number of enhancements to the programme for the remaining 18 months and beyond. These include,

- Changes to the Results Framework to provide better indicators for the way the programme is assessed. Some of the current indicators are cumbersome to measure, some can't be attributed to StIRRRD interventions and some of StIRRRD's results and achievements aren't captured by the current set of indicators.
- More of an emphasis and focus on gender. Although eight gender FGDs (Focus Group Discussions) were held in each of the districts and results reported back at workshops and meetings, there hasn't been the resources to make the most of this information and do a more thorough analysis of the data we've collected. As a consequence this information hasn't been available to inform gender strategies going forward. The review recommends gender specific skillsets be brought into the team (or training provided) to help to do this.
- Expanding engagement to include some additional executive level roles within local government.
- Include a greater evaluation component in the community projects and for the last project (still being scoped) consider including ways of helping the village prioritise the use of village funds for DRR and also look at how gender aspects can be incorporated.

The review noted that the programme was ambitious and going forward (beyond the current programme) and recommended additional skillsets into the team to help manage the breadth of activities, including more project management support at partner Universitas Gadjah Mada, more language skills across the team and increased relationships with NGO's to help with community project implementation.

The project team is currently working with MFAT to embed some of the recommendations within the programme for the remaining 18 months. At the time of writing this report, the Final Report had not been received.

Action Points:

- Discuss the Final Report with MFAT to prioritise the recommendations and determine which ones can be implemented with the remaining term of the contract.

## 2. Additional Coaching Visits

As reported in the last six-monthly report (to end December 2017), the additional coaching visits to the districts have proven to be important in keeping DRR and Action Plan implementation at the forefront of the priorities of the districts visited. While the Community Projects provide additional opportunities to engage with the districts and demonstrate the commitment StIRRRD has in supporting them, there are a number of districts that have had personnel changes (Agam, Pesisir Selatan) or are more difficult to get to (Morowali). The team continue to revise coaching strategies and look for opportunities to visit districts in person (either by UGM or by both UGM and GNS Science together).

Action Points:

- Add three additional visits, two to each of Agam and Pesisir Selatan, and one to Morowali into the LoV for discussion with MFAT (refer Table 3 above).

## Significant Highlights

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Significant highlights this reporting period include the following:

- StIRRRD has had a favourable Mid-Term Review as reported above.
- A very intense period of activity in-country compounded by two unplanned activities (the Mid-Term Review and the delegation to New Zealand). This made for very challenging workloads over the first 3 months of the year, however, a highlight was how well the team performed to pull this all together.
- The trusted relationships the team have developed with the village leaders at Rawa Indah village. This has led to a very wide ranging engagement programme as part of the *Tsunami Awareness and Preparedness* community project.
- The level of buy-in to, and support for, the *Seismometers in Schools* project from BMKG. The provincial BMKG team provided exceptional support and this was reported to the Head of BMKG. BMKG have indicated they will continue to support this project and will be key to the sustainability of the project moving forward.
- In a very positive outcome from StIRRRD, UGM met with the University of Bengkulu on 28th April, and were advised that the Faculty of Engineering will:
  - open a masters course in Civil Engineering (UGM will share an academic paper for the opening of the masters course). The course will have 2 main areas of focus: renewable energy and disaster management.
  - Further collaboration between the Departments of Civil, Electrical, and Mechanical Engineering, Archaeology and IT will be sought in supporting disaster management. UNIB will invite UGM to share how this collaboration could be started.
  - conduct an EQ microzonation study in Bengkulu city as a pilot project resulting in a guideline on EQ resistant buildings (Ade Sriwahyuni and Lindung Zalbuin Mase will lead the team). UGM will share the results of their similar study in Yogyakarta.
  - create a new subject for undergraduate course: Disaster Management (UGM will send an example of a syllabus).
- StIRRRD Programme Director Faisal Fathani is awarded a Professorship by UGM at a ceremony on 3 May 2018 (Figure 10). This is a very prestigious honour and is recognition for his many years of hard work and achievements in landslide early warning systems, teaching, community service, and the establishment of GAMA-InaTEK. His role in StIRRRD has played a significant part in this achievement.
- The depth of the relationships developed during the visit by the Indonesian delegation to New Zealand in March. There is a lot of potential for further engagement and opportunities for further collaboration.



**Figure 10:** Professor Faisal Fathani at his ceremony at UGM. (Photo credit: UGM)



## Other Related Activities

1. Bappenas have requested support from New Zealand to help look at where investment is required across the government sector to lower Indonesia's risk index. A letter of invitation has been sent to MFAT who have requested GNS look at how this support could be provided. A scoping mission is planned for late September which will involve 1 GNS staff member, 1 UGM staff member and 2 economists from New Zealand meeting with several government agencies to understand current economic modelling capability and existing economic datasets. This project will help give effect to the new partnership agreement MFAT has signed with Bappenas.
2. UGM, supported by BNPB attended an ISO meeting in Sydney in March 2018 in relation to their Landslide Early Warning System, where it was confirmed that they will be awarded an ISO standard. Indonesia becomes the first developing country to gain an ISO standard. This was celebrated by BNPB on twitter (Figure 11). Because of this success, Indonesia (UGM-BSN-BNPB) was asked by the ISO secretariat to propose a new ISO draft on the Multi Hazard Early Warning System.



**Figure 11:** News of UGM's Early Warning System ISO standard shared on BNPB's Twitter feed. (Photo credit: UGM)

3. StIRRRD Director, Faisal Fathani has recently been appointed as the Director for the multi-disciplinary Masters Programme in Disaster Management at UGM. Students come from a variety of organisations, including BNPB. Established eight years ago, it already has hundreds of alumni (from Bappenas, BNPB etc)- there are about 30 students/year. The two best students go to the Netherlands on an exchange programme. International collaboration is needed in order to get an 'A' accreditation. Once the course achieves an 'A' they will be able to offer a doctoral degree. Collaboration with universities in New Zealand (e.g. Massey, AUT) was suggested as a way to help with the accreditation.

4. A delegation from North Sumatra visited New Zealand during the first week of June and visited GNS offices in Lower Hutt. A presentation was given to the delegation about StIRRRD. The Mayor of Medan was very keen to host GNS and UGM team members in October for DRR Week and offered to make a special effort with a visit. The delegation requested support with understanding the impacts of Mt Sinabung.

## Significant Issues or Risks

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The Activity's risk register can be found in Appendix F. Significant risks and other issues are identified below:

1. The additional effort required by both UGM and GNS to participate in the Mid-Term Review was unscheduled and un-budgeted for. While some budget adjustment for UGM has been agreed to for costs associated with district visits (flights, accommodation etc), GNS costs have been had to be absorbed into the existing budget which is coming under pressure.
2. The additional visit in March by a delegation from BNPB, UGM, BMKG and Padang City was larger than originally planned for and put significant strain on the team to organise in the midst of delivery of other tasks. This has meant that some tasks such as the Toolkit and scoping of Community Project 3 are behind schedule.
3. The LoV is taking longer than planned to finalise. Agreement with MFAT is still required on priorities for additional tasks. It is hoped this can be resolved within the next few weeks, otherwise activities such as the economic indicators project for Bappenas will need to be delayed.
4. The Mid-Term Review has highlighted the need for more gender socialisation of the team and greater attention to gender (and other vulnerable groups) required across the programme. The team are currently looking into how this could be accommodated in the remaining tasks e.g. community projects and in the time left. Other recommendations need to be discussed with MFAT and agreement reached as to which recommendations can be accommodated within the remaining timeframe.
5. The *Tsunami Awareness and Preparedness* community project has highlighted a potential issue with the vertical evacuation shelter at Rawa Indah. A key theme of the project has been to help the community understand how to use the shelter for it's intended use and help the community keep the structure in a fit state for it's intended purpose (maintenance; other uses etc). The integrity of the structure has been called into question (design, construction etc), and while not part of the project itself, a preliminary structural assessment of the shelter will be undertaken to identify any potential problems. An above-ground only structural assessment of the structure will be undertaken based on measurements taken on site (size of columns, quality of concrete, steel etc). As much information as possible will be gathered on the site ground conditions and interviews with the contractor will be undertaken to find out about the building's foundations. UGM will use the exercise to lift the capacity of UNIB in forensic engineering.

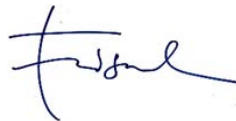
Depending on the results of the preliminary investigation, a communication plan will need to be developed to convey the results of the assessment and suggested next steps to the village, BPBD and BNPB. Before the village/community is told, a plan for addressing any defects will need to be thought through so solutions can be discussed. Shelters now come under Lilik Kurniawan at BNPB. Mr Kurniawan is aware of the planned testing being undertaken.

## Authorisation

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Michele Daly  
Programme Director (GNS Science)



Teuku Faisal Fathani  
Programme Director (UGM)

We declare that the information contained in this report is true and correct.

## Appendices

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This report includes the following appendices:

- Appendix A: Progress Against Agreed Workplan and Budget
- Appendix B: Progress Towards Completing Outputs
- Appendix C: Activity Impacts per District
- Appendix D: New Zealand Organisations involved in StIRRRD as at 30 June 2018
- Appendix E: Activity Risk Matrix
- Appendix F: Abbreviations

## Appendix A: Progress Against the Agreed Workplan and Budget

### StIRRRD – As at 30 June 2018 Financial Report

#### Combined (UGM and GNS Science) Financial Report

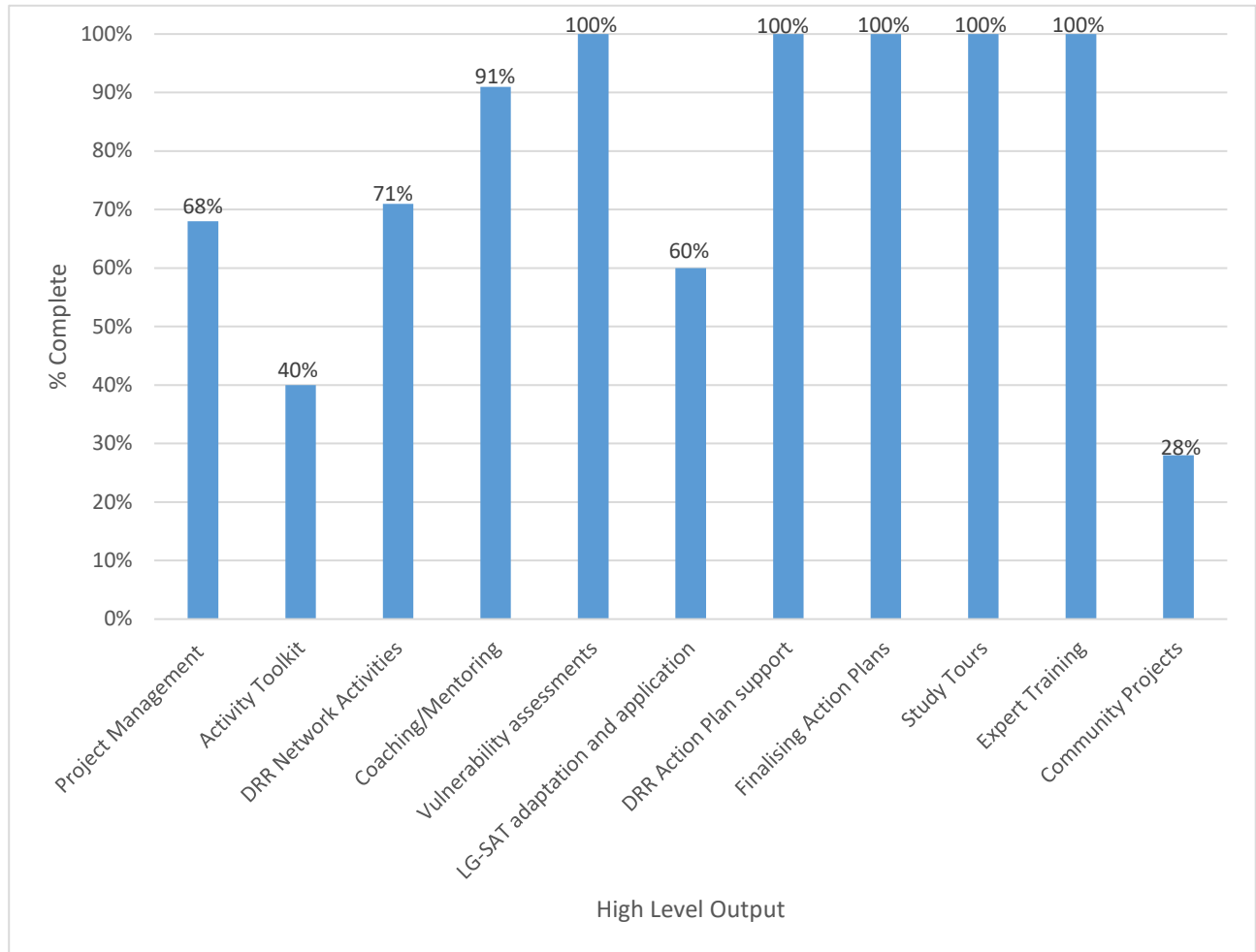
Reasons for variances are given where variance > ±10%

Output	Description	Actual Expenditure		Planned Expenditure		Total Actual Expenditure	Total Planned Expenditure	Total Variance	Reason for variance
		Time	Disbursement	Time	Disbursement				
<b>Output 0 Project Management</b>		1,089,497	143,657	924,950	155,510	1,233,154	1,080,460	14%	
	0.1 Project Management	539,223	25,642	387,000		564,865	387,000	46%	Expected due to additional project management tasks including scoping LOV, additional project team meetings and managing an additional visit to New Zealand. Disbursements are for GNS staff attending project team meetings in NZ.
	0.2 AGG Meeting	82,009	41,613	67,200	91,580	123,622	158,780	-22%	Some disbursement costs (i.e. flights) have been recorded against other activities (i.e. meetings in Jakarta have been arranged around other visits).
	0.3 Liaison Jakarta	105,468	28,735	243,100	41,230	134,202	284,330	-53%	Not as many mtgs have been held as planned due to people not being available when we are in Jakarta. Mtngs will be programmed in for future visits. MFAT has not held a joint donor meeting for some time.
	0.4 Activity Communications Plan	61,169	13,305	28,500	6,050	74,474	34,550	116%	More time spent than planned on communications (website updates; blogs; videos etc) and printing StIRRRD brochures. Offset in part by underexpenditure in 2.7. Time spent presenting at conferences on StIRRRD is captured here.
	0.5 Reporting – Monthly, Quarterly, Task, Annual, Completion	152,943	1,769	102,250	315	154,712	102,565	51%	Reporting requirements are taking more time than budgeted.
	0.6 -0.14 Major milestone reporting	62,087	3,077	96,900	16,335	65,164	113,235	-42%	Most reports have been completed under budget, however a couple of reports are still only partially complete.
	0.15 Mid term Review	36,382	9,546			45,927		100%	<b>Additional unbudgeted task.</b> UGM disbursements are being recovered through an LoV (TBC).
	0.16 NZ visit March 2018	50,128	19,970			70,098		100%	<b>Additional unbudgeted task.</b> Most costs picked up by MFAT, however GNS and UGM time and GNS direct disbursements that weren't covered by MFAT are captured here.
	Output 0. Project Management	89	0			89			(internal adjustment)
<b>Output 1 Activity Toolkit</b>		99,152	8,586	226,250	15,200	107,738	241,450	-55%	
	1.1 Prepare Draft Activity Template	28,155	5,730	29,250		33,884	29,250	16%	GNS are spending more effort here than budgeted. UGM have spent less time to date. Compensated in part for underspend in 1.3.
	1.2 Annual reports learnings	13,661	1,422	48,000		15,082	48,000	-69%	Work on this has been captured elsewhere.
	1.3 Activity Toolkit - Draft	57,337	1,434	72,700		58,771	72,700	-19%	Underspent as time is being captured in 1.1.
	1.4 Activity Toolkit - Review			38,150			38,150	-100%	Not yet started.
	1.5 Activity Toolkit - Finalise			38,150	15,200		53,350	-100%	Not yet started.
<b>Output 2 DRR Network</b>		332,765	225,352	362,750	348,510	558,117	711,260	-22%	
	2.1 Development of University MoU's and letters of support	19,200	0	19,200		19,200	19,200	0%	
	2.2 MoU Finalisation and sign-off	12,000	2,100	12,000	2,100	14,100	14,100	0%	
	2.3 2014 KPDT 70 District workshop - UGM	40,694	34,126	88,850	83,775	74,820	172,625	-57%	The workshop was 1.5 days instead of 2 days as budgeted. Airfares were lower than expected. Fewer NZ specialists participated due to timing and changed format.
	2.4 Bi annual DRR meetings	3,198	72	19,100	49,880	3,270	68,980	-95%	Airfares budgeted have been associated with other outputs. The mtgs have been shorter than planned due to timing with the Hazards 101 training and the Mid-Term seminar. A meeting planned to coincide with the national DRR event in Sorong in Oct17 did not take place due to the low number of attendees at that event. Additional DRR meetings will need to be scheduled to compensate.
	2.5 Mid term Workshop	145,221	146,020	151,350	149,915	291,241	301,265	-3%	
	2.7 Other Activities - website, newsletters	2,552	2,400	30,000		4,952	30,000	-83%	Included in part under 0.4 Communications Plan. Communications with districts is mostly through WhatsApp and not via website or newsletters as originally envisaged.
	2.8 Additional Liaison (Provinces National DRR Events)	93,394	40,634	42,250	62,840	134,028	105,090	28%	Time costs higher than budgeted, offset in part by reduced disbursements.
	Output 2. DRR Network	16,507	0			16,507			(internal adjustment)

<b>Output 3 Coaching &amp; Mentoring</b>		420,658	158,456	355,270	71,608	579,114	426,878	36%	
	3.1 Coaching & Mentoring All District Visit	218,248	100,870	202,870	47,608	319,118	250,478	27%	Costs for this visit exceeded budget.
	3.2 Ongoing Support – Other	130,157	29,918	152,400	24,000	160,075	176,400	-9%	
	3.3 July 17 West Sumatra coaching visit	49,706	18,807			68,513		100%	<b>Additional unbudgeted task.</b>
	3.4 Aug17 Seluma_Morowali Coaching Visit	22,547	8,861			31,408		100%	<b>Additional unbudgeted task.</b>
	Output 3. Coaching & Mentoring	0				0			
<b>Output 4 District Vulnerability Assessment &amp; Profiles</b>		432,275	108,547	347,250	148,338	540,822	495,588	9%	
	4.1 Vulnerability assessment - Donggala, Pessel, Bengkulu, Mataram	249,716	59,524	187,650	91,568	309,240	279,218	11%	More time has been spent on profiles than budgeted. Offset by savings in airfares.
	4.2 Vunerability assessments – Bengkulu Seluma, Sumbawa	71,293	14,292	92,400	28,407	85,586	120,807	-29%	Time charged to other outputs (4.1). Savings made in airfares.
	4.3 Vunerability assessments – Morowali, Agam	100,127	34,730	92,400	28,363	134,858	120,763	12%	More time and travel costs needed for Morowali.
	4.4 National, Province, District Budget			14,800			14,800	-100%	Budget analysis has been recorded in other outputs (0.5). No budget analysis has been undertaken at Natl. and Provincial levels to date.
	Output 4 District Vulnerability Assessment & Profiles - Donggala, Agam, Bengkulu	11,139	0	-40,000		11,139	-40,000		(internal adjustment)
<b>Output 5 LG-SAT Adaptation &amp; Application</b>		69,416	5,385	117,900	7,350	74,801	125,250	-40%	
	5.1/5.2 Review & Revise ISDR	20,498	2,865	18,800	1,680	23,362	20,480	14%	Completed under budget.
	5.3/5.4 LG-SAT Palu & Padang	7,200	1,680	22,800	1,680	8,880	24,480	-64%	Completed under budget. Co-funded by Kemendesa.
	5.5 Distribute, Collect, input baseline data	28,331	840	15,300	840	29,171	16,140	81%	Analysis took more time than expected. Time from (5.6) is also captured in part here.
	5.6 LG-SAT Survey and Analysis	20,811		61,000	3,150	20,811	64,150	-68%	Time charged to other outputs (5.5).
	Output 5. LG-SAT Adaptation & Application	-7,423	0			-7,423			(internal adjustment)
<b>Output 6 DRR Action Plan support provided</b>		498,592	300,774	604,550	389,858	799,366	994,408	-20%	<b>COMPLETED</b>
	6.1 Action Plan template	6,016	315	14,700	315	6,331	15,015	-58%	Completed under budget.
	6.2 Preliminary Action Plan Workshop 1 - Donggala, Pesisir Selatan, Bengkulu Kota, Mataram Kota	205,412	144,153	270,800	158,283	349,565	429,083	-19%	Airfares and simultaneous translation costs were less than budgeted.
	6.3 Preliminary Action Plan Workshop 2 - Seluma, Sumbawa	37,779	82,125	157,800	106,515	119,904	264,315	-55%	Airfares and simultaneous translation costs were less than budgeted. Efficiencies in time were able to be made.
	6.4 Preliminary Action Plan Workshop 3 - Morowali, Agam	83,569	74,181	161,250	124,745	157,750	285,995	-45%	Airfares and simultaneous translation costs were less than budgeted. Efficiencies in time were able to be made.
	Output 6 DRR Action Plan support provided	165,816	0			165,816			(internal adjustment)
<b>Output 7 Finalising Action Plan</b>		393,891	131,487	355,720	161,849	525,379	517,569	2%	<b>COMPLETED</b>
	7.1 Finalising Action Plan - Group 1 Workshop	150,176	57,850	166,050	81,304	208,026	247,354	-16%	Less GNS time inputs than budgeted (staff unable to travel at last minute)
	7.2 Finalising Action Plan - Group 2 Workshop	206,688	73,104	170,670	78,445	279,792	249,115	12%	More time inputs required than budgeted.
	7.3 Analysis of training attendance records		534	19,000	2,100	534	21,100	-97%	Time has been captured in other tasks (0.5)
	Output 7 Finalising Action Plan	37,027	0			37,027			(internal adjustment)
<b>Output 8 Study Tours</b>		325,745	615,534	413,350	496,490	941,279	909,840	3%	<b>COMPLETED</b>
	8.1 NZ Study Tour 1 Donggala (A2), Pesisir Selatan(B2), Bengkulu Kota(C1), Mataram Kota (D1), Bengkulu, NTB Universities	240,241	282,161	202,850	244,740	522,402	447,590	17%	Budget required was underestimated.
	8.2 NZ Study Tour 2 Morowali(A3), Agam (B3), Bengkulu Seluma (C2), Sambawa (D2), Bengkulu, NTB Universities	280,356	333,373	210,500	251,750	613,729	462,250	33%	A change to the scope (a move away from city to more rural locations) for this visit resulted in higher costs.
	Output 8 Study Tour	-194,852	0			-194,852			(internal adjustment)
<b>Output 9 Expert Training in Base isolation &amp; Riskscape</b>		238,206	272,262	206,722	294,123	510,468	500,845	2%	<b>COMPLETED</b>
	9.1 Base isolation project	54,980	110,757	56,450	109,853	165,738	166,303	0%	
	9.2 Riskscape Implementation	107,046	100,405	160,550	121,820	207,451	282,370	-27%	Time inputs were reduced due to volcanic ash problems reducing the length of the workshop.
	9.3 Hazard & Risk 101 - Yogyakarta	27,691	61,100	32,750	62,450	88,791	95,200	-7%	
	Output 9. Expert Training in Base isolation & Riskscape	48,489	0	-43,028		48,489	-43,028		(internal adjustment)
<b>Output 10 Community Projects</b>		223,317	122,785	290,828	94,270	346,102	385,098	-10%	
	10.1 Community Proj. 1 Seismometers in School	118,148	39,563	108,250	34,865	157,711	143,115	10%	
	10.2 Community Proj. 2 Tsunami Preparedness	86,395	52,331	87,250	53,555	138,726	140,805	-1%	
	10.3 Vision Matauranga	15,524	30,891	43,100	5,850	46,415	48,950	-5%	
	10.4 Community Proj .3	3,251		9,200		3,251	9,200	-65%	Behind schedule.
	Output 10.0 Community Projects		0	43,028		0	43,028		(internal adjustment)
<b>Grand Total</b>		<b>4,123,515</b>	<b>2,092,825</b>	<b>4,205,540</b>	<b>2,183,106</b>	<b>6,216,340</b>	<b>6,388,646</b>	<b>-3%</b>	

## StIRRRD PROGRAMME OVERVIEW

% Complete per Output (for entire duration of programme to date)





# StIRRRD PROGRAMME OVERVIEW

Scheduled tasks completed to date (in red) as at 30 June 2018.

Work plan by Output (to highlight period output will be produced)	Start Date	End date	Year 1				Year 2				Year 3				Year 4				Year 5			
			Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
			Jul to Sep 2014	Oct to Dec 2014	Jan to Mar 2015	Apr to Jun 2015	Jul to Sep 2015	Oct to Dec 2015	Jan to Mar 2016	Apr to Jun 2016	Jul to Sep 2016	Oct to Dec 2016	Jan to Mar 2017	Apr to Jun 2017	Jul to Sep 2017	Oct to Dec 2017	Jan to Mar 2018	Apr to Jun 2018	Jul to Sep 2018	Oct to Dec 2018	Jan to Mar 2019	Apr to Jun 2019
Project Administration	1-Oct-2014	30-Jun-2019																				
Activity Toolkit	1-Jul-2015	31-Dec-2018																				
Risk Reduction Network support	1-Jan-2015	31-Dec-2018																				
Coaching and Mentoring Support	1-Oct-2014	30-Sep-2018																				
District Vulnerability assessments	1-Oct-2014	31-Dec-2018																				
LG-SAT adaptation and application	1-Oct-2014	31-Mar-2019																				
DRR Action Plan support provided	1-Oct-2014	30-Jun-2016																				
Finalising DRR Action Plan Workshop	1-Oct-2015	31-Mar-2017																				
Study Tours	1-Apr-2015	30-Jun-2016																				
Expert Training in Base Isolation and Riskscape	1-Oct-2014	31-Mar-2015																				
Community Projects	1-Jan-2017	31-Mar-2018																				

Showing behind schedule are:  
Activity Toolkit, and Community Projects.

### Tasks 100% Completed in the six months to 30 June 2018

<b>0</b>	<b>Project Administration</b>	0.1 0.2 0.3 0.5 0.52 0.604 0.605	Project administration as scheduled
<b>3</b>	<b>Coaching and Mentoring</b>	3.1 3.2	Coaching as scheduled
<b>8</b>	<b>New Zealand Comparative Study Visit</b>	8.1 8.2	First New Zealand Comparative Study Visit - Report Second New Zealand Comparative Study Visit - Report
<b>10</b>	<b>Community Projects</b>	10.1.2 10.1.3	Community Project #1 Preparation & start of Implementation
		10.2.2 10.2.3	Community Project #2 Preparation & Implementation

### Tasks 100% Completed to date

<b>0</b>	<b>Project Management</b>	0.1 0.2  0.3  0.4  0.5	Project administration as scheduled AGG Meeting #1 AGG Meeting #2 AGG Meeting #3 AGG Meeting #4 AGG Meeting #5 AGG Meeting #6 AGG Meeting #7  Liaison-Jakarta as scheduled  Activity Communications Plan  Monthly reports as scheduled 2 Quarterly Reports 3 Annual Reports 4 Six-monthly Reports RiskScape Training Report Base Isolation Training Report ALGG Meeting Minutes (x2) Mid-Term Workshop Report First New Zealand Comparative Study Visit Report
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			Second New Zealand Comparative Study Visit Report
2	<b>DRR Network Activities</b>	2.2 2.3 2.4 2.5	MoU finalisation and sign-off KDPDTT (Kemendesa) DRR Workshop Two bi-annual DRR district meetings (ALGG) Mid-Term Workshop
3	<b>Coaching and Mentoring</b>	3.1 3.2	All Districts Visit On-going Support as scheduled
4	<b>Vulnerability assessments</b>	4.1-4.3	Introductory visits and profiles: Donggala, Pesisir Selatan, Mataram, Bengkulu, Seluma, Sumbawa, Morowali, Agam
5	<b>LG-SAT</b>	5.1 5.2 5.3 5.4 5.5	LG-SAT review and revision LG-SAT deployment (trial) Finalise LG-SAT tool Collect baseline data – all 8 districts LG-SAT survey analysis
6	<b>DRR Action Plan Support</b>	6.1 6.2-6.3	Finalise Action Plan template First Action Plan workshops; Bengkulu, Donggala, Pesisir Selatan, Mataram, Seluma, Sumbawa, Morowali, Agam
7	<b>Finalising Action Plan Workshops</b>	7.1 7.2	Pesisir Selatan, Bengkulu, Donggala, Mataram, Sumbawa, Morowali, Seluma, Agam
8	<b>New Zealand Comparative Study Visit</b>	8.1 8.2	First New Zealand Comparative Study Visit Second New Zealand Comparative Study Visit
9	<b>Expert Training</b>	9.1 9.2 9.3	Base Isolation Training Riskscape Training Hazard & Risk 101 - Yogyakarta

### Key Tasks Deferred to Next Reporting Period

0	<b>Project Management</b>	2.3	KDPDTT (Kemendesa) Workshop Report
1	<b>Activity Toolkit</b>	1.6	Present activity toolkit to provinces. Will now be done at the the programme final workshop in early 2019
10	<b>Community Project</b>	10.3.1 10.3.2	Community Project 3 Scope, Preparation and start of Implementation


### Tasks Undertaken Additional to Scope in the six months to 30 June 2018

0	<b>Project Management</b>	0.15 0.16	MFAT initiated project Mid-term Review Visit to New Zealand in March 2018 from BNPB, BMKG, UGM and Padang City staff.
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## Appendix C: Activity Impacts per District and in Other Areas

The following contains a summary of impacts (and sizeable natural events) recorded to date in each of the StIRRRD districts and elsewhere. This Appendix is in addition to Action Plan Progress reports for the eight new StIRRRD Districts when these are available. Impacts reported in the Pilot Districts (Padang and Palu) as well as in other districts and by central government agencies will continue to be recorded here.

### West Sumatra Province

<p><b>Pesisir Selatan</b></p> 	
30 June 2018	<ol style="list-style-type: none"> <li>1. Little or no communication with Pesisir Selatan BPBD. UGM province coordinator, Arry Retnowati has gone to Taiwan for 3 months. A simulation was held on National DRR day on 26 April in a village. Head of BPBD being replaced and deputy is retiring.</li> </ol>
31 Dec 2017	<ol style="list-style-type: none"> <li>1. BPBD worked with Salido Saiyo village – a coastal community - on a tsunami simulation (received from Dally Usman) during October 2017.</li> <li>2. In September, KSB from Pesisir Selatan participated in the West Sumatra Jamboree where they gained further skills and knowledge on disaster preparedness and management.</li> <li>3. BPBD Pesisir Selatan were unable to participate in DRR activities in Sorong as part of DRR month.</li> <li>4. In November, staff from BPBD Pesisir Selatan held focus group meetings to share knowledge about DRR with women groups</li> </ol>
30 June 2017	<ol style="list-style-type: none"> <li>1. Some coastal villages have been supported by ASB (Arbeiter Samariter Bund - a German aid and welfare organisation) to help increase their DRR capacity. This work complements other DRR activities planned by BPBD Pesisir Selatan, and they worked with ASB to coordinate this project.</li> <li>2. On 26 April, BPBD Pesisir Selatan coordinated the 'Disaster Preparedness Day'.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>1. Capacity is being developed for a Disaster Preparedness Group, which involves local government, representatives from the sub-districts and BPBD. There is a stipulation that at least 30% of the participants be female. The first meeting was held on 22 October, 2016</li> <li>2. BPBD Pessel received a speed boat from BNPB. In a ceremony, the Head of Pessel District handed over the key to BPBD Pessel on 28 October 2016.</li> </ol>

	<ol style="list-style-type: none"> <li>3. As part of the implementation stage of the action plan, BPBD Pessel proposed 9 activities for preparedness funding to the parliament.</li> <li>4. Because of central government budget reductions, there is concern within the BPBD that their budget will be severely cut.</li> <li>5. BNPB have established a collaboration with UGM to install landslide early warning systems.</li> </ol>
<p>30 June 2016</p>	<ol style="list-style-type: none"> <li>1. UGM have received an invitation from Pesisir Selatan to provide training in the construction of earthquake resistant houses for local artisans. This invitation followed the earthquake of February 2016 and demonstrates the growing relationship between UGM and BPBD.</li> <li>2. Pesisir Selatan's DRR Action Plan contained an action to improve women's involvement in DRR. To progress this action, a meeting was held on 24 May 2016 in Painan, Pesisir Selatan to develop a set of actions relating specifically to women's participation in DRR. The meeting was attended by over 100 women. Outcomes of the meeting were that women and associated groups were willing to be DRR agents in their homes, starting from their core family and will endeavour to: <ul style="list-style-type: none"> <li>- initiate designing an action plan for their village and Nagari (sub-district), and</li> <li>- speak their thoughts and to be involved in more activities related to capacity building.</li> </ul> <p>BPBD Pesisir Selatan will facilitate these activities related to DRR.</p> </li> </ol>
<p>31 Dec 2015</p>	<ol style="list-style-type: none"> <li>1. BNPB look likely to fund a pilot in Pesisir Selatan based on the "Blue-Line" tsunami preparedness initiative in Wellington.</li> <li>2. The budget for Activities planned for the first year of the Action Plan, 2016, has been approved by the district parliament.</li> <li>3. Feedback from central government and other districts during the New Zealand comparative study visit encouraged Pesisir Selatan to prioritise Action Plan items and to change focus from response to DRR.</li> <li>4. The discussions conducted during the introductory visit and communication via telephone, emails, and meetings during the base isolation training in Padang has generated awareness for the government staff/personnel to focus their disaster management on DRR instead of emergency response and recovery. The head of Pesisir Selatan District (Bupati) is very keen to support the StIRRRD Activity and is willing to facilitate related activities. Based on the results of the base isolation training, a pilot programme in the form of public hospital construction using base isolation technology is planned. Funding could be sourced from a mix of New Zealand MFAT and JICA. UGM-GNS Science-Beca could facilitate the design and the training, and JICA could support the provision of base isolation.</li> </ol>

## Agam



30 June 2018	<ol style="list-style-type: none"> <li>1. New head of BPBD has been appointed but little or no contact with Agam BPBD. UGM province coordinator, Arry Retnowati has gone to Taiwan for 3 months.</li> </ol>
31 Dec 2017	<ol style="list-style-type: none"> <li>1. Between September and October, the head of BPBD - Bambang Warsito – was rotated out. His replacement is M. Lufti.</li> <li>2. BPBD Agam hosted the West Sumatra Jamboree in October.</li> <li>3. BPBD Agam actively participated in DRR month and attended the meeting in Sorong.</li> <li>4. Agam has a program to empower women for DRR, the link <a href="https://kaba12.co.id/2017/02/23/peran-perempuan-penting-prb/">https://kaba12.co.id/2017/02/23/peran-perempuan-penting-prb/</a></li> </ol>
30 June 2017	<ol style="list-style-type: none"> <li>1. On 26 April, BPBD Agam coordinated the 'Disaster Preparedness Day', which involved a wide range of sectors and agencies.</li> <li>2. On 22 April, BPBD Agam signed an MoU with a local university from Bukittinggi. This was followed by a joint workshop on 29-30 April, with a theme of 'DRR based on a spiritual perspective'.</li> <li>3. On 4 June, there was a series of explosions on the Marapi volcano <a href="http://volcano.si.edu/volcano.cfm?vn=261140">http://volcano.si.edu/volcano.cfm?vn=261140</a>. The alert level remained at 2 (on a scale of 1-4), and people were advised not to enter an area within 3 km of the summit. BPBD Agam continues to monitor activity on the volcano, and are prepared for emergency events.</li> <li>4. To raise awareness and help reduce risk associated with landslides, BPBD Agam issued a map showing 'landslide prone areas', in preparation for Eid Mubarak in May. This initiative was particularly focused on areas where heavy traffic passes through steep and landslide-prone land.</li> <li>5. In February, a group of Maori travelled to Agam to share cultural aspects of DRR as a part of the Vision Maturanga programme.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>1. An active socialisation programme has begun that includes staff from BPBD Agam travelling to schools to discuss the hazards posed by earthquakes, volcanic eruptions, floods, landslides, and tsunami and how to be prepared for their impacts.</li> <li>2. A fire simulation exercise involving BPBD Agam and the local community was conducted on the slopes of Gunung Marapi on 25 October, 2016.</li> <li>3. Discussions occurred between BPBD Agam, the locally active NGO (Jamari Sakato), Law Bureau and representatives of the sub-districts/villages regarding the disaster management regulation on 27 October, 2016.</li> </ol>

	<ol style="list-style-type: none"> <li>4. In conjunction with the aforementioned NGO, BPBD Agam are involved in capacity building with coastal area communities, especially in relation to tsunami planning.</li> <li>5. Three new BPBD staff were inaugurated on 12-13 November 2016.</li> <li>6. BPBD staff were involved in a socialisation programme related to the new landslide early warning system in Lubuk Basung, Agam on 27 November 2016.</li> <li>7. Early December BPBD Agam together with related stakeholders, including Nagari government, responded to landslide in Malalak, Maninjau, Balinka. The Head of District responded and visited the site. This is a good example of regional government involvement and good networking.</li> <li>8. BNPB have established a collaboration with UGM to install landslide early warning systems.</li> </ol>
30 June 2016	<ol style="list-style-type: none"> <li>1. Good support from Head of District, including fronting a disaster preparedness music video.</li> <li>2. Improving preparedness facilities and infrastructure, for instance to be able to utilise landslide EWS to be installed by UGM.</li> <li>3. Budget has been assigned to develop a purpose built BPBD building in 2016 indicating that DM is being prioritised.</li> <li>4. Most sub-districts are engaged, as are NGOs, as represented at the AP workshop. There are 12 sub-districts that have become disaster preparedness groups (KSB), one of them located in Sungai Puan sub-district whose head of the district used to be BPBD officer. Working with local and international NGOs for DRR activities.</li> <li>5. Jamboree for disaster preparedness groups adopting National activities to district level. The participants come from trained KSB of 16 sub-districts.</li> <li>6. Regional act and regulations for Disaster Management were approved in May 2016 and are being "socialised"</li> </ol>
31 Dec 2015	<ol style="list-style-type: none"> <li>1. Following The Introductory Visit in August, Agam BPBD paid from their own budget, representatives to attend the DRR Week in Solo and to RiskScape Training in Palu.</li> </ol>

**Padang  
(Pilot District)**



<p>30 June 2018</p>	<ol style="list-style-type: none"> <li>1. The head of Padang BPBD (Edi Hasymi) came to Wellington in March 2018 and signed a Letter of Intent with Wellington City outline collaboration on DRM. Edi gave two presentations on the Smart Cities DRR initiatives in Padang City at the one-day workshop, including their implementation of the tsunami blue line.</li> <li>2. Phil Glassey attended and presented as an invited key note speaker on the impacts of the StIRRRD Activity at the International Conference on Disaster Management in held at Andalas University in Padang.</li> </ol>
<p>31 Dec 2017</p>	<ol style="list-style-type: none"> <li>1. In July, the head of BPBD Padang hosted a mini-Jamboree, which gathered a range of agencies and stakeholders responsible for the implementation of DRR activities.</li> <li>2. BPBD Kota Padang participated in the DRR meeting in Sorong and gave a short presentation of their experience.</li> <li>3. Agreement has been obtained to establish a formal collaboration between Padang and Wellington cities concerning DRR. A Collaboration Agreement has been drafted and plans are underway for a visit to New Zealand in March 2018.</li> </ol>
<p>30 June 2017</p>	<ol style="list-style-type: none"> <li>1. BPBD Padang are establishing a comprehensive “Blue Line” project, to address the significant risk from tsunami in this city of 1 million people. Although the project has its origins in the StIRRRD project (see below), BPBD have taken the concept to a new level (Disaster Smart City) by undertaking widespread socialisation and detailed technical analysis and plans.</li> <li>2. DRR practitioners in Padang have grasped the need for good communication and coordination between agencies. An inclusive DRR forum is hosted on a monthly basis by BPBD, and includes NGO’s, universities, community representatives, scouts, meteorologists / hydrologists, and various OPD agencies.</li> <li>3. Discussions have begun regarding a potential Sister City relationship with Wellington City with an emphasis on DRR. Both cities have adopted the Blue Line initiative.</li> </ol>
<p>31 Dec 2016</p>	<ol style="list-style-type: none"> <li>1. Pak Rudy Rinaldi has been rotated to the Head of BPBD Padang. Pak Rudy was Head of Bappeda for the Pilot Project and then was moved to the district financial investment office.</li> <li>2. A Tsunami Blue Line project has been implemented in Padang. As at 30 December 2016 two main roads had been targeted together with evacuation route signage. Additional roads will be added in 2017. Consultation to date</li> </ol>



	<p>was undertaken with stakeholder agencies including ITB, UNAND and LIPI. This project was inspired by the Blue Line project in New Zealand, which Pak Rudy learned about during the Pilot Project's Study Visit to New Zealand in June 2012.</p>
30 June 2016	<ol style="list-style-type: none"> <li>1. Regulations are being put in place to require that all buildings over 20 m height within the tsunami allocation zone be designated as vertical evacuation shelters.</li> </ol>
31 Dec 2015	-
Previous	<ol style="list-style-type: none"> <li>1. Tsunami inundation maps – Andalas University successfully facilitated a session whereby BPBD and other stakeholders agreed to settle on one version of tsunami inundation maps for the district. Several had been prepared by various organisations/donors with slightly different results and there was confusion as to which one should be used. This particular task was in the Action Plan developed as part of the pilot activity.</li> </ol>

## Other West Sumatra Province Activity



30 June 2018	1. No updates for this reporting period
31 Dec 2017	1. No updates for this reporting period
30 June 2017	1. StIRRRD alumni from Andalas University have been doing some DRR work in Padang-Pariaman retro-fitting residential houses to make them more safe to earthquakes. An extension of this programme is being considered for Agam.
31 Dec 2016	<p>1. StIRRRD was invited to Sawahlunto District by BPBD West Sumatera Province to present at a DRR workshop of all Head of BPBDs and Head of DRR Divisions. Presenters included: Pak Wisnu and Pak Medi BNPB, the Vice Governor, Pak Faisal UGM, Pak Hakam UNAND, Head of Bappeda Province, and Head of BPBD West Sumatera. The province wanted to know why StIRRRD only worked in three districts and did not support the DRR activities at all districts. Faisal explained about budget and time limitations, the possibility of all districts adopting the concept and the role of UNAND in extending the activity in West Sumatra. Outcomes of the workshop were:</p> <ul style="list-style-type: none"> <li>- UNAND will establish a Master's programme in disaster management with the support from UGM and GNS Science. BPBD staff are willing to enrol in this Master's programme.</li> <li>- Provincial BPBD staff will conduct a meeting with UNAND and if possible will visit UGM for further discussions.</li> </ul> <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div> <p style="text-align: center; margin-top: 10px;">(a). Participants at the West Sumatra DRR Workshop. (b) Pak Faisal and Pak Hakam (nearest camera) attended and presented at the Workshop.</p> <p>2. West Sumatra had a BPBD District Jamboree at the end of September 2016. Agam District won the jamboree.</p>

## Bengkulu Province

### Bengkulu City



30 June  
2018

1. Some of the StIRRRD team caught up with Kota Bengkulu BPBD in March 2018. It seems that the BPBD are working well across OPDs and also involving local universities, industries and NGOs. Initiatives include:
  - a. A local hotel close to the beach has been designated as a tsunami evacuation shelter and a new access road will be constructed by PU.
  - b. They are rethinking their tsunami blue line initiative and utilising the experiences and resources from Padang City. They have had offers of support for evacuation signage from local car companies (i.e branded signage). They are updating tsunami hazard and evacuation maps.
  - c. They are working with University of Muhammadiyah in Identifying evacuation shelters on the campus.
  - d. The US Navy are building Evacuation shelters and doing socialisation and simulations in Bengkulu City.
  - e. The BPBD have been allocated a site next to the Mayor's office to run building clinics for local artesans and build an earthquake resistant house. They are negoatiating with Padang Cement on collaborative funding.
  - f. New draft decree (PURDA regulation) that all new development must consult with BPBD re. hazards.
  - g. They are maintaining school DRR education.
  - h. They have a letter from UNISDR invitving them to particpate in a Making Cities Resilient project.
  - i. It was noted that unfortunately there are political issues regarding the tsunami shelter at Teluk Sapang, and the shelter is not being well maintained.

31 Dec  
2017

1. A major storm event in October resulted in flooding and damage to roading infrastructure. The image shows the loss of a bridge on the Bengkulu – Lampung (westbound) road, on 15 October, due to exceptionally high flows.
2. Political support for DRR activities remains strong, with commitment expressed publicly by DPRD and the Mayor of Bengkulu.
3. There has been further progress to develop and implement DRR regulations. A mayoral regulation on Disaster Management has been prepared, although still in a draft format. A Regional Disaster Regulation has also been developed, to improve institutional capacity.
4. Kota Bengkulu BPBD continue to undertake a range of DRR-related activities. Some of these are related to specific activities identified in the Action Plan, while others have been informed by general StIRRRD-related activities. These activities include:
  - a. The gradual roll-out of the Blue Line project, which is intended to improve tsunami awareness and help inform evacuation route planning. Evacuation drills involving all stakeholders have also been undertaken.
  - b. Regular discussions with related OPD and UNIB, to help coordinate DRR activities.
  - c. Dissemination of DRR material, and presentations / discussions with schools. This occurs on a regular basis (every Monday morning), at different schools throughout the city.
  - d. Engagement with the private sector on DRR activities, including media agencies, hotels and universities.
  - e. Collaboration between BPBD and UNIB, to encourage students to undertake DRR-themed community service activities.



1. Pak Farid from UNIB, an alumni of the StIRRRD program, published reports on disaster mitigation and preparedness.
2. BPBD has a MoU with Putri Gading Hotel in Sepanjang Beach for utilized the hotel a shelter during tsunami or evacuation drill.
3. BPBD of Bengkulu Province has added six sirens, a tsunami early warning tool for coastal communities. A total of six sirens to be placed in densely populated coastal areas spread over 7 districts / cities in Bengkulu.

30 June 2017	<ol style="list-style-type: none"> <li>1. Support for the StIRRRD programme from city politicians and parliament remains strong, and a competent BPBD leadership team (Head: Selupati / 2IC: Noprisman) was appointed in January.</li> <li>2. An informal DRR forum is in place, including representatives from Red Cross and OPD's such as Sosial, BPBD, Bappeda, Public Works and Health. Plans are also in place to host the forum in a formal setting, once DRR regulations are approved by the parliament.</li> <li>3. Links with public and private utility agencies are improving, and there is a growing realisation about the important role of utility and infrastructure providers, both pre- and post-disaster. Recent improvements include the creation of new evacuation routes, and asphaltting of existing routes from coastal areas to higher ground; and replacing damaged or missing evacuation route signs.</li> <li>4. Knowledge about the characteristics of natural hazards continues to improve, particularly around flooding. Methods to reduce risk from those hazards (rather than just waiting to respond following an event) are increasingly being given consideration. For example, the Mayor has stated he would like to target the construction of reservoirs in flood prone catchments across the city, to help minimise flooding <a href="http://www.bengkulukota.go.id/berita-648_cegah-banjir-walikota-target-bangun-waduk-di-2017.html">http://www.bengkulukota.go.id/berita-648_cegah-banjir-walikota-target-bangun-waduk-di-2017.html</a>. Bengkulu BPBD have also committed to implementing more tsunami 'Blue Lines' along the coast, and working with local communities to raise awareness and upgrade signage.</li> <li>5. UNIB are looking to facilitate the establishment of a Lifelines Group in Bengkulu and/or Seluma and undertake research around lifelines vulnerability.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>1. Pak Farid remains interested in facilitating the construction training for Seluma and Bengkulu at UNIB.</li> <li>2. The tsunami Blue Line project is going ahead in Bengkulu along with evacuation drills and training as part of the Resilient Village programme. Socialisation is including parts of the community, school students and NGO's. The Blue Line will be implemented around 10-20 December, 2016 with Support of BNPB. Pak Wahyu will visit as part of the project implementation - hopefully some information on the calculated distances will be clarified by BNPB</li> <li>3. The budget for the BPBD has been slashed by ~50 % due to central government budget restrictions. Some complaints were made to local government but changes are unlikely.</li> <li>4. Flooding has been affecting parts of the city. 8/11/2016 Padang Serai Village, Stables, West Loop Villages of Tanjung Agung, Tanjung Jaya, Bumi Ayu, Swamp and Bentiring <a href="http://harianrakyatbengkulu.com/ver3/2016/11/10/banjir-landa-kota-dan-seluma/">http://harianrakyatbengkulu.com/ver3/2016/11/10/banjir-landa-kota-dan-seluma/</a></li> <li>5. All sectors were involved in EQ and tsunami simulation activities conducted 24-26 October 2016. UNIB represented StIRRRD.</li> </ol>
30 June 2016	-

31 Dec 2015	<ol style="list-style-type: none"><li>1. Kota Bengkulu Parliament endorsed Action Plan in principle.</li><li>2. There is support from city politicians for the programme and from parliament to support budget for DRR activity.</li><li>3. There is a commitment to hold more regular coordination meetings for all stakeholders in the city for DRR.</li><li>4. The local university do not play a prominent role in DRR in Kota Bengkulu, but good relationships are being developed between University of Bengkulu and local government regarding targeted research, especially for flood, DRR education for students, student community service and earthquake resistant construction.</li></ol>
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## Seluma



30 June  
2018

The increased level of DRR activity (and associated impacts) observed in Seluma in 2017 has continued through to the first half of 2018, despite the departure of the longstanding head of BPBD, Pak Azwardi in February. The new (acting) head is Pak Mirin Ajib, previously the government assistant for community welfare. Although the involvement of StIRRRD in the tsunami community awareness project has probably helped to maintain the focus on DRR, it is clear that Seluma BPBD is becoming more confident and ambitious in its plans to reduce disaster risk in the district. DRR improvements and impacts observed in the reporting period are outlined below:


1. BPBD, together with BMKG have installed a small network of monitoring devices which are monitored 24/7 by BPBD staff. These can be used to warn communities of approaching flood events, including via sirens and social media.
2. The capacity of BPBD staff has continued to increase. A recent addition is Andika Diel, who previously led the Seluma PMI team, and who specialises in community engagement and DRR socialisation in schools.
3. The 2019 program and budget for Seluma BPBD was presented to the Bupati on 2 July. The overall budget requested was \$NZD 281,000 to fund 7 programs and 34 specific activities, many of which have been derived from the StIRRRD program, including Action Plan development. Activities with a specific DRR focus include:
  - a. An early prevention and response program for natural disasters.
  - b. Preparation of disaster-specific contingency plans - forest fire, flood, extreme weather.
  - c. Procurement of radio communication equipment for the Rawa Indah Tsunami Shelter.
  - d. Additional units for BPBD's Early Warning System.
  - e. Dissemination of disaster information to 14 sub-districts.
  - f. Data collection and mapping of disaster-prone areas.
  - g. A preparedness simulation for 200 people
  - h. An increased budget for maintaining the Rawa Indah Tsunami Shelter.
  - i. Resources (including 2 staff) to establish additional Disaster Resilient Villages.
  - j. A requirement that the Disaster Risk Reduction Forum holds 3 meetings throughout the year.
4. As noted elsewhere in this report, the tsunami community awareness and preparedness project started in Rawa Indah in February 2018 and has been very well supported by BPBD, UNIB, PMI and local agencies in Rawa Indah Village (Polmas, KSB, Tagana).

<p>31 Dec 2017</p>	<p>There were 2 StIRRRD visits to the Seluma District in the 2<sup>nd</sup> half of 2017 (July and August), and regular telephone / email communication to both UGM and GNS. Support and commitment from DPRD and the Mayor for DRR activities has also remained strong. As a result, there have also been some significant DRR improvements and impacts, as outlined below.</p> <ol style="list-style-type: none"> <li>1. The district has made considerable effort to coordinate and communicate with central government on DRR initiatives. As a result, several activities have been supported through BNPB, Kemendesa, or other government ministries.</li> <li>2. There has also been increased private sector involvement in DRR activities, particularly the palm oil industry.</li> <li>3. Seluma BPBD are also working hard to improve their coordination with other OPD agencies and UNIB, on a regular basis. A DRR forum has now been established, which was a major focus of the StIRRRD visit in July 2017. One consequence of this important milestone is that PU (Public Works) has invited BPBD to provide advice, regarding the revision of spatial regulations.</li> <li>4. Collaboration between BPBD and UNIB has resulted in students undertaking DRR-related community service in the Seluma District.</li> <li>5. There have been improvements made to the district's hazard risk maps (particularly for tsunami), and vulnerability maps.</li> <li>6. The vertical evacuation shelter at Rawa Indah was a focus for StIRRRD efforts in 2017, and a community project in this village is planned for 2018. Seluma BPBD have recruited local personnel to undertake security / cleaning / maintenance work at the shelter, which will help to ensure this facility is kept in a good state of preparedness.</li> <li>7. A tsunami evacuation exercise, organised by Seluma BPBD, and involving Tagana (Social Welfare unit); PMI (Seluma Red Cross), Pramuka (Boy scout), Police, Army, etc.</li> <li>8. The Ministry for Villages (Kemendesa) provided assistance to install a reasonably sophisticated early warning system for flooding. The system provides rainfall and water level information directly to the BPBD office.</li> <li>9. Two existing roads, identified as important evacuation routes, have been upgraded from gravel to macadam.</li> <li>10. BPBD have improved their GIS capability (another important StIRRRD focus during 2017). They have used their skills to determine village evacuation routes, particularly for vulnerable groups.</li> <li>11. BPBD have developed a good relationship with PMI Seluma (Red Cross). PMI have undertaken presentations to more than 100 schools in the district, on the importance of preparing for disasters. A register of the main vulnerabilities of each school has also been prepared as part of this work.</li> <li>12. BPBD Kabupaten Seluma has installed a detection device in Air Periukan area supported by Kemendesa. This detection device has a siren-equipped capable of reaching a radius of 5 km.</li> </ol>
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30 June 2017	<ol style="list-style-type: none"> <li>1. There was a landslide in Talo Sub-District, Seluma on May 19, 2007 <a href="http://penanggulangankrisis.kemkes.go.id/Tanah%20Longsor-di-SELUMA-BENGGKULU-19-05-2017-28">http://penanggulangankrisis.kemkes.go.id/Tanah%20Longsor-di-SELUMA-BENGGKULU-19-05-2017-28</a></li> <li>2. UNIB are looking to facilitate the establishment of a Lifelines Group in Bengkulu and/or Seluma and undertake research around lifelines vulnerability.</li> <li>3. Responsibility for the tsunami vertical evacuation shelter at Rawa Indah was transferred to Seluma's Regional Government on 16 June. The District now needs to allocate a budget for its maintenance and security. BPBD have submitted a plan to recruit 5 officers from the village, and if approved by regional government, this would comprise a mix of guards to ensure security of this asset, and coordinators to ensure that the shelter is utilised fully.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>1. Recent rainfall events have caused significant flooding that has destroyed some bridges leaving some villages isolated and requiring assistance. Temporary bridges are being built in the interim.</li> <li>2. There has been some progress with the private sector including the Palm Oil sector. This may open up the possibility of greater cooperation in other DRR related activities.</li> <li>3. BNPB is providing support to Seluma for developing structures for coastal erosion mitigation (around 9 billion Rupiah).</li> <li>4. BNPB have established a collaboration with UGM to install landslide early warning systems.</li> <li>5. Kemendesa are providing financial support to Seluma for water supply and sanitation distribution (around 1 billion Rupiah).</li> </ol>
30 June 2016	<ol style="list-style-type: none"> <li>1. DRR mainstreaming amongst social groups and family is now being prioritised along with Disaster preparedness schools. Initial roll out has started.</li> <li>2. Landslide EWS equipment has been delivered from UGM to be installed at a location prone to landslide or debris flood as part of the BNPB rollout.</li> <li>3. Some areas have not been included into evacuation route map. BNPB and regional government built the route to the evacuation shelter. Evacuation shelter from public works cost IDR 14 billion, and in 2016 another shelter will be built. Some warning signs have been made and set up.</li> <li>4. Participative plan for earthquake resistant construction clinics has been developed.</li> </ol>
31 Dec 2015	<ol style="list-style-type: none"> <li>1. Good engagement in Action Plan workshops.</li> </ol>

## Nusa Tenggara Barat Province

<h3>Mataram</h3>	
<p>30 June 2018</p>	<ol style="list-style-type: none"> <li>1. Installation of evacuation signs has been completed in 10 Primary Schools and Junior High Schools.</li> <li>2. Stretchers have been donated by BPBD to the 10 Primary and Junior High Schools that installed evacuation signs.</li> <li>3. Dissemination on DRR in schools.</li> </ol>
<p>31 Dec 2017</p>	<ol style="list-style-type: none"> <li>1. No update for this reporting period.</li> </ol>
<p>30 June 2017</p>	<ol style="list-style-type: none"> <li>1. Minor changes occurred at the second level of BPBD Kota Mataram. Pak Kurnia was appointed as the coordinator of the Prevention and Preparedness Unit.</li> <li>2. A mayoral regulation (Perwal) on DRR has been approved by the mayor.</li> <li>3. A special committee of Perda RTRW (Rencana Tata Ruang Wilayah/Spatial Planning) was formed to ensure that the DRR concept has been accommodated in the draft of the Perda RT RW amendment, covering the zoning of abrasion prone areas.</li> <li>4. RJPMD Kota Mataram (Regional Medium-Term Development Plan) has already covered the perspective of disaster.</li> <li>5. The MOU between UNRAM and BPBD Kota Mataram is currently being approved by the mayor.</li> <li>6. The Centre for Disaster Risk Management of UNRAM were asked by the Bima District Government to participate in finding the solution of Bima's flood issues. The centre will conduct this by compiling three research activities in flood mitigation in Sumbawa, Bima, and Mataram.</li> </ol>
<p>31 Dec 2016</p>	<ol style="list-style-type: none"> <li>1. Major changes occurred in staffing at the senior level of Kota Mataram, BPBD late 2016. The Head of BPBD (Pak Supardi) passed away in September 2016. Pak Dedy Supriyadi appointed in the interim with formalisation scheduled for January 2017. The coordinator of Prevention and Preparedness Unit, Ir. Nasruddin passed away in November 2016. The Secretary of BPBD, Drs. Gusti Pahriawan, retired in December 2016.</li> <li>2. Risks to the project associated with the changes in staff reported above are to be mitigated by a UGM team visit to Mataram in January 2017 to meet the newly appointed BPBD officials.</li> <li>3. Budget cuts from central government impeded progress for some of the existing Action Plan tasks.</li> </ol>

	<ol style="list-style-type: none"> <li>4. Mataram's Parliament supports the proposed MOU between UGM, Kota Mataram and UNRAM</li> <li>5. New mayoral regulation (Perwal) supported by Parliament and to be prepared and submitted in 2017.</li> <li>6. Mataram's Bappeda supports additional funds for DRR activity for BPBD</li> </ol>
30 June 2016	<ol style="list-style-type: none"> <li>1. DRM (incl. DRR) bylaw has been approved by parliament and district. This is one of the first local regulations to include DRR in Indonesia.</li> <li>2. The Centre for Disaster Risk Management has been established at UNRAM in the Engineering Faculty. University staff from the Centre are arranging a meeting with the local district to discuss priority issues which will feed into the Centre's implementation plan.</li> </ol>
31 Dec 2015	<ol style="list-style-type: none"> <li>1. As a result of the discussions at the women's Focus Group Discussion, disaster risk reduction will be recommended to be included on the agenda of the village women's committees (BKK).</li> <li>2. StIRRRD invited lectures provided by Iman Satyarno, Faisal Fathani (UGM) and Nico Fournier (GNS) on DRR at UNRAM (Mataram university). This fed into the wider effort to raise UNRAM's profile and encourage the creation of a centre for disaster studies. The setup of the Centre is advancing. A key discussion point is whether it is to be hosted under the Faculty of Engineering or outside any faculties. StIRRRD has provided input into these discussions.</li> </ol>


## Sumbawa



30 June 2018	<ol style="list-style-type: none"> <li>1. There were no activities conducted between January and June 2018 because of a lack of funding. In July, a disaster resilient village will be established in Karang Dima Village, Labuan Badas sub District. The village is very prone to flooding.</li> </ol>
31 Dec 2017	<ol style="list-style-type: none"> <li>1. The Regional Regulation No 5 Year 2016 on Disaster Management was approved in October. The regulation strengthens the policies related to the DRR efforts as the legal umbrella. The establishment of disaster resilient villages, hazard prone villages mapping is expected to bring positive investment in Sumbawa.</li> <li>2. DRR training for three Resilient Villages (Baru Tahan, Songkar and Kukin vilages) was held on 10 to 18 July. The focus of the sessions was to increase the capacity of the memembers of the Resilient villages in DRR activities.</li> <li>3. Sumbawa BPBD are working with BNPB to develop landslide and flood contingency plans. One four day meeting has been held to progress this project.</li> <li>4. One more safe school was established in the village of Alas. BPBD are using this programme to raise the profile of DRR and promote public education activities.</li> <li>5. Four more Resilient Villages, located in disaster prone areas, were established in Berora Village, Lopok Village, Kalimango Village and Baru Village.</li> <li>6. Training has been delivered to fire fighter staff to increase their competence and knowledge of fire hazards.</li> <li>7. Training with 30 volunteers in Maronge village was conducted in July. Volunteers had previously been trained by OXFAM to facilitate disaster response activities but they required a refresher. Training helps to identify vulnerable groups in the villages, such as pregnant women, to improve response activities such as evacuations.</li> </ol>
30 June 2017	<ol style="list-style-type: none"> <li>1. Severe flooding triggered by heavy rain occurred in the Sumbawa district (NTB) on the 12th December 2016. Thousands of homes were submerged but no casualties were reported. Discussions during a meeting held in January 2017 between BPBD, Government staff, Sumbawa Parliament and UGM-based StIRRRD team members concluded that the lack of casualties were a credit to the Resilient Village project and the general DRR effort in the region. A range of activities including community training and stakeholders engagement, some of which are part of the Action Plan monitored through the StIRRRD project, contributed to the general increase in resilience to natural disasters in the district.</li> </ol>

	<ol style="list-style-type: none"> <li>2. The DRR Action Plan (March, 2017) workshop which invited all of Sumbawa's OPDs (Sumbawa district government agencies) inspired them to allocate budget for DRR. This is planned to be followed up with a Perbup (district regulation) to regulate all OPD to allocate budget for DRR activities.</li> <li>3. Coastal safety has been built in Alas sun district and the Alas Timur subdistrict and coastal area. This is supported by the Public Works agency.</li> <li>4. Jempol beach has had coastal protection works added (sea wall and resulting promenade) to protect the beach from erosion and also to turn the area into a tourism destination. The promenade provides for vehicle and foot traffic and offers coastal protection to restaurants and markets.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>1. Major changes occurred in staffing at the senior level of Sumbawa, BPBD late 2016. The Head of BPBD (Pak Mukmin) was transferred to the Department of Transportation in September 2016. Pak Zainal Abidin was appointed interim Head of BPBD. He was previously Head of Sanitation and is accustomed to work and interact with local communities. Zainal also worked as Parliamentary Secretary and is well acquainted with the members of the Parliament. Pak Dedy Supriyadi appointed in the interim with formalisation scheduled for January 2017. Other changes in staffing include a new Secretary, Logistics Unit Coordinator, and Coordinating Unit for Rehabilitation and Reconstruction</li> <li>2. Risks to the project associated with the changes in staff reported above are to be mitigated by a UGM team visit to Sumbawa in January 2017 to meet the newly appointed BPBD officials.</li> <li>3. BNPB is providing support to Sumbawa for developing structures for coastal erosion mitigation.</li> </ol>
30 June 2016	<ol style="list-style-type: none"> <li>1. New bylaw being created with greater focus on mitigation and DRR (vs. response only previously).</li> <li>2. Coastal infrastructure (seawall and road) extended in Sumbawa to mitigate erosion.</li> </ol>
31 Dec 2015	<ol style="list-style-type: none"> <li>1. The project has attracted a strong level of support by the local government. Both the Head of Parliament and the Vice Head of the District opened the Action Plan workshop and strongly encouraged participation and engagement.</li> <li>2. Two directors from central government (P. MediHerlianto - BNPB and P. Hasman Ma'ani - KPDT) participated in the Action Plan workshop in Sumbawa and provided support for the activities. BNPB challenged BPBD and other local government agencies to become an example that other districts and provinces could follow.</li> <li>3. Sustained involvement in activities from Mataram University (UNRAM).</li> <li>4. BPBD is now more conscious that all three groups of stakeholders must be involved in discussions and activities (Government, Community and Private sector).</li> </ol>

## Central Sulawesi Province

<h3>Donggala</h3>	
<p>30 June 2018</p>	<ol style="list-style-type: none"> <li>1. BPBD Donggala is committed to support the implementation of the Seismometers in Schools Program in SMAN 1 Banawa Donggala and will involve the school in their DRR activities.</li> <li>2. StIRRRD has made a cooperation agreement on the Implementation of Seismometers in Schools Program with 4 SMAs/MANs (SMA N Madani Palu, MAN 1 Palu, SMA N 1 Banawa Donggala, SMA N 1 Bahudopi Morowali), 3 BPBDs (Palu, Donggala, Morowali), Geophysics Station Palu-BMKG, Ministry of Religious Affairs of Central Sulawesi Province, Education Office of Central Sulawesi Province, and Universitas Tadulako.</li> <li>3. BPBD Donggala continues to carry out Program Juru Bencana “Disaster Preparedness Officers Program” that has been implemented since 2016.</li> </ol>
<p>31 Dec 2017</p>	<ol style="list-style-type: none"> <li>1. On 14 September, Donggala BPBD conducted post-disaster training sessions in collaboration with UNTAD.</li> <li>2. On 3 October, ‘Disaster Management Community Groups’ (kelompok masyarakat penanggulangan Bencana (KMPB)) were established in six villages in Sindue sub-district. As a part of this initiative, ‘Fast Response Teams’ undertake tree planting activities every Friday.</li> <li>3. On 11 October, student and teacher disaster education sessions we held at SMP Negeri (Public Junior High School) 2, Sindue subdistrict and at SDN (Public Primary School) 2, Lero Village, Sindue subdistrict.</li> <li>4. The Government of Donggala in collaboration with Balai Wilayah Sungai (BWS) (River Basin Management Organisation) III Sulawesi undertook normalisation works in rivers to anticipate flooding, landslides or coastal erosion. BWS III Sulawesi also constructed breakwater structures in Lembasada, Timbe and Riopakava as a part of coastal management programme on 20 October 2017.</li> <li>5. Head of Donggala district inaugurated Zone II Disaster Preparedness Units new building (see photo). The opening ceremony was followed by the establishment of a ‘Disaster Management Community Group Committee’.</li> </ol>



6. UNTAD, in collaboration with Palu BPBD and Central Sulawesi Provincial BMKG held a coordination meeting to discuss the deployment of further seismic monitoring equipment (microtremor) in Palu City in 2018.

30 June  
2017

1. Hazards and DRR training was delivered by UGM and UNTAD to BPBD, OPD and Sub-district Heads in March at the request of BPBD.
2. The Environment Office will involve BPBD in the evaluation of environmental impact assessments for activities e.g. mining, agriculture, buildings. This provides an opportunity for DRR issues to be considered in the early stages of projects.
3. BPBD are recruiting one person in every village to be a local liaison officer to deliver DRR and preparedness socialisation.
4. Local building regulations have been reviewed and updated as a result of StIRRRD.
5. A physical Centre of Communications, Operations and Logistics has been established.
6. The Environmental Office is now collaborating with BPBD to encourage community participation for better environmental outcomes which will also have good outcomes for DRR e.g. reducing waste in streams and rivers.

31 Dec  
2016

1. BPBD Donggala held a coordinating meeting, inviting 40 participants from related stakeholders: public works, social agency, health agency, environmental agency etc. Pak Akris (Head of BPBD) explained the achievements of the 2016 Action Plan one by one: priorities, innovations, obstacles and their plan for 2017. Donggala have in place a structured programme which is well reported and well documented.
2. Budget for DRM in Donggala has increased from IDR 3 billion in 2014 to IDR 16 billion in 2017.
3. BNPB is providing support to Donggala for developing structures for coastal erosion mitigation.
4. BNPB have established a collaboration with UGM to install landslide early warning systems.

30 June 2016	<ol style="list-style-type: none"> <li>1. BPBD and PU staff seem to have successfully lobbied for spatial control of aggregate mining activities along the coast.</li> <li>2. Physical coastal protection measures have been constructed at one of the beaches on advice from StIRRRD experts present during the Action Plan Workshop.</li> </ol>
31 Dec 2015	<ol style="list-style-type: none"> <li>1. The Head of Parliament, (Mr. Yasin) opened and attended the DRR Action Plan workshop in February 2015, and was able to stay for a number of presentations. He stated his support for DRR prior to leaving the workshop, promising to discuss the importance of DRR with Parliament.</li> <li>2. The Donggala fieldtrip was an opportunity for BPBD staff to seek on-the-spot technical advice on a number of issues they were facing: <ul style="list-style-type: none"> <li>- UGM staff were able to advise on an appropriate course of action concerning stabilising a landslide adjacent to one of the main roads in the district.</li> <li>- UGM and GNS staff were able to advise on where to best locate seawalls for storm surge protection. Existing seawalls had been constructed in the wrong place and were proving ineffective and in one case would cause ponding behind the wall (landward side) as surge water would be unable to escape. Bathymetric data needed for seawall design (and other coastal protection) was relatively easy to collect and could be done for each village by villagers themselves with the assistance of staff from Tadulako University.</li> <li>- Villagers in Limboro were concerned about the loss of mangroves (which over the years they had felled for firewood and construction materials) and after a discussion undertook to start planting more mangroves with the assistance of BPBD.</li> </ul> </li> <li>3. Tadulako University is already starting to share information with the local government. UNTAD is attempting to bridge the information gap between the government and NGOs and villages. The disaster situation in the province is added to courses at the university. Tadulako is particularly active in geology, engineering, environment and disasters.</li> </ol>



## Morowali



<p>30 June 2018</p>	<ol style="list-style-type: none"> <li>1. BPBD Morowali is committed to support the implementtaion of the Seismometers In Schools Program in SMAN 1 Bahudopi Morowali and will involve the school in their DRR Activity.</li> <li>2. StIRRRD has made a cooperation agreement on the Implementation of Seismometers in Schools Program with 4 SMAs/MANs (SMA N Madani Palu, MAN 1 Palu, SMA N 1 Banawa Donggala, SMA N 1 Bahudopi Morowali), 3 BPBDs (Palu, Donggala, Morowali), Geophysics Station Palu-BMKG, Ministry of Religious Affairs of Central Sulawesi Province, Education Office of Central Sulawesi Province, and Universitas Tadulako.</li> <li>3. BMKG Palu considers to propose to BMKG to establish a geophysics station in Morowali as the nearest one is in Palu (12 hour drive from Bungku, the Capital City of Morowali) and in Kendari (8 hour drive from Bungku, Morowali).</li> </ol>
<p>31 Dec 2017</p>	<ol style="list-style-type: none"> <li>1. From May to July, UNTAD have influenced land use plans regarding disaster prone areas, the management of the airport and the 'Integrated Industry Area'.</li> <li>2. Over the same period, UNTAD and public works have been consulting on earthquake resilient infrastructure construction.</li> <li>3. Between June and November, UNTAD and Public Works established an 'Advisory Team for Building Development (TABG)' (Tim Ahli Bangunan Gedung).</li> <li>4. In July, an MoU was developed between Morowali BPBD and BNPB regarding post-disaster grant assistance.</li> <li>5. Also in July, normalisation activities were undertaken on the Kontobamalanga River.</li> <li>6. In late July, a MoU between Morowali BPBD and Telkomsel was formed for the dissemination of text messages as a means of early warning. Morowali is one of Indonesia's pilots districts for this technology. A test of the technology was implemented during the national DRR month event in October.</li> <li>7. Morowali BPBD has developed agreements with the army, head of subdistricts and head of villages regarding DRR activities.</li> <li>8. A river revetment was constructed on the Umbele River in August while breakwaters and river revetments were constructed in Keura Village in Septmeber.</li> </ol>
<p>30 June 2017</p>	<ol style="list-style-type: none"> <li>1. May was a shaky month for Central Sulawesi with 2 significant earthquakes and a number of aftershocks. On 24 May a 5.7 magnitude earthquake struck in Morowali district. This was shallow (10km) and caused some building damage. On 29 May there was a 6.6 magnitude earthquake near Poso. This larger event was deeper (38km) and also caused some damage to some buildings in and around Poso. More info can be found on the StIRRRD</li> </ol>

	<p>website: <a href="https://stirrrd.org/2017/07/02/may-a-shaky-month-for-central-sulawesi/">https://stirrrd.org/2017/07/02/may-a-shaky-month-for-central-sulawesi/</a></p> <ol style="list-style-type: none"> <li>2. Morowali BPBD have partnered with Telkomsel and Indosat (national mobile providers) to develop better alerting systems e.g. emergency text messages.</li> <li>3. Staff from the Information Agency are working to establish clear information about mining impacts to clarify misunderstanding that mining is the sole cause of river flooding; this initiative has been inspired by discussions during StIRRRD visits.</li> <li>4. Morowali Parliament are reviewing the consideration of hazard and risk information in spatial planning which includes land use policies (RTRW).</li> <li>5. A project to develop a Perda (District Decree) for DRR is underway being led by BPBD and Parliament.</li> <li>6. A review has been conducted of the Morowali risk assessment document and is being reviewed by BNPB this year.</li> <li>7. A disaster management plan has been developed by a consultant on behalf of BPBD as a result of StIRRRD activities. BNPB are supporting the development of this plan.</li> <li>8. BPBD have constructed a structure on Sambori Island to be used as a tsunami vertical evacuation shelter targeted for tourists.</li> <li>9. Numerous physical works have been undertaken on river channels to reduce flood risk including; Katrmbalana River, Siungbatu River (Bahadopi), Bahoruruk channel, Pebotoka River, Umbele River and Keurea River.</li> <li>10. Breakwaters to reduce the impacts of waves in coastal areas have been constructed in Bahomotepe, Kamurea and Bahururu.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>4. A meeting was held with senior staff from Indonesia Morowali Industrial Park (IMIP) in Jakarta on 22 July. The meeting identified that flooding is a major problem for the mining company in Morowali. They recognise they play a role in broader DRR delivery for the community. As such, they invited us on site to meet at their nickel mine the following week.</li> <li>5. A meeting on site at IMIP was held on 26 July. The mining company are very keen to see better education on hazards and are open to working with BPBD. They have invited BPBD and StIRRRD representatives back to discuss future opportunities for IMIP's involvement in DRR and discuss future private sector initiatives. This meeting is expected to be held in March 2017.</li> <li>6. There is a desire from Morowali parliament representatives to develop DRR regulations for the district. This has been included in the AP.</li> <li>7. BNPB is providing support to Morowali for developing structures for coastal erosion mitigation (around 38 billion rupiah).</li> </ol>
30 June 2016	<ol style="list-style-type: none"> <li>1. Advice was provided to local government members and Head of Parliament to reconsider physical stream works on a particular debris fan. Proposed works could initiate land movement and exacerbate flood and debris flooding for downstream communities. Alternative debris management methods were recommended to manage the impact of future debris flooding.</li> <li>2. Meetings have been scheduled with the Morowali Mining company in Jakarta and in Morowali to discuss DRR initiatives and community concerns. To be held in July 2016 visit.</li> </ol>

31 Dec 2015	-
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**Palu City  
(Pilot District)**



<p>30 June 2018</p>	<ol style="list-style-type: none"> <li>1. BPBD Palu collaborated with UNTAD to carry out a microzonation assessment for earthquake hazard.</li> <li>2. BPBD Palu is committed to support the implementation of Seismometer In School Program in SMAN 1 Madani and MAN 1 Palu and will involve the schools in their DR Activities.</li> <li>3. StIRRRD has made a cooperation agreement on the Implementation of Seismometers in Schools Program with 4 SMAs/MANs (SMA N Madani Palu, MAN 1 Palu, SMA N 1 Banawa Donggala, SMA N 1 Bahudopi Morowali), 3 BPBDs (Palu, Donggala, Morowali), Geophysics Station Palu-BMKG, Ministry of Religious Affairs of Central Sulawesi Province, Education Office of Central Sulawesi Province, and Universitas Tadulako.</li> <li>4. BPBD, BMKG and Untad carried out Microzonation mapping in Palu.</li> </ol>
<p>Dec 2017</p>	<ol style="list-style-type: none"> <li>1. Significant progress has been made in cementing relationships and cooperation as a result of the coordination meeting concerning the <i>Seismometers in Schools</i> Community Project. Agencies involved include Palu BPBD, UNTAD, the local office of BMKG, LIPI, UGM and the schools involved.</li> <li>2. The Palu-Koru Fault Seminar was moved to Jakarta and held in December 2017. The event was unable to take place as scheduled in Palu in November due to a lack of funding. It is hoped that the event can take place sometime in 2018.</li> </ol>
<p>30 June 2017</p>	<ol style="list-style-type: none"> <li>1. The Palu-Koru Fault Expedition project has been initiated by NGO Skala. This project seeks to raise awareness of the fault amongst multi-stakeholders. It comprises a number of activities, including field visits, books, videos and a seminar (scheduled for November 2017). This project has its origins in the StIRRRD Pilot project when Dr. Abdullah from UNTAD visited. He was taken by the multi-stakeholder research platforms in New Zealand. The Palu-Koru Fault Expedition is based on the Wellington <i>It's Our Fault</i> programme.</li> <li>2. On 14th April 2017, Pak Rahmad Kawaroe (Head of BPBD Kota Palu during the StIRRRD Pilot; more recently Head of the Licensing Agency) passed away. Pak Rahmad has been a big supporter of StIRRRD and was responsible for many of the DRR initiatives and progress made in Palu over recent years.</li> </ol>

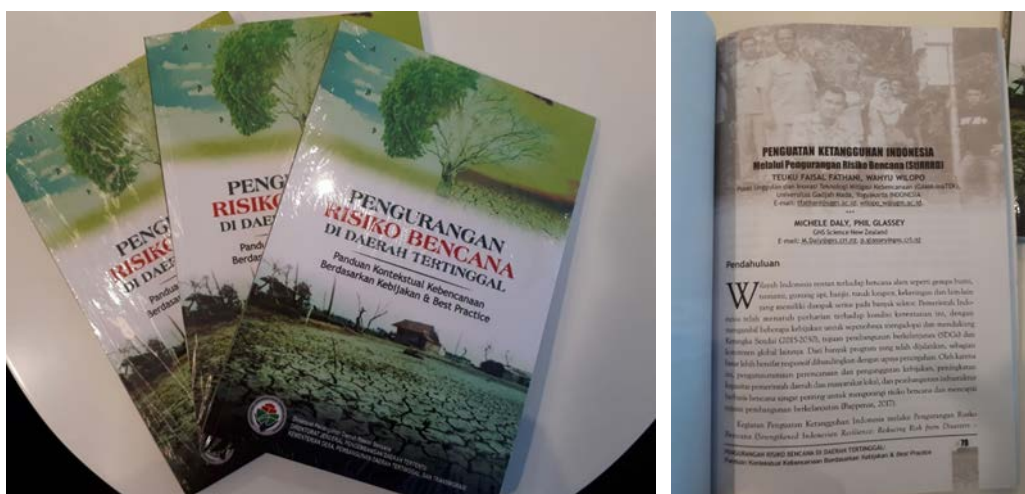
31 Dec 2016	<ol style="list-style-type: none"> <li>1. There has been significant staff rotation in Palu City this year. <ul style="list-style-type: none"> <li>- Pak Singgih has moved from the head of Spatial Planning to the Head of Public Works. He had this position back in the Pilot in 2012.</li> <li>- Pak Rahmat has moved from the Head of Public Works to the Head of the licensing Agency. He was previously the head of BPBD in the Pilot in 2012.</li> <li>- Pak Asri has moved from the Head of BPBD to the Mayor's Secretary.</li> <li>- Pak Presely Tampubolon has moved from the Head of the Industry Agency to the Head of BPBD.</li> </ul> </li> <li>2. BNPB have established a collaboration with UGM to install landslide early warning systems.</li> </ol>
30 June 2016	-
31 Dec 2015	<ol style="list-style-type: none"> <li>1. UNTAD had considerable input into RiskScape training in Palu in October 2015. Spatial Planning and BPBD from Palu endorsed the training and representatives from both organisations attended. There was commitment by participants to continue to develop risk modelling in the StIRRRD Districts, and in particular from Palu City and UNTAD.</li> <li>2. Pak Singgih B Prasetyo, Head of Spatial Planning, Kota Palu attended the DRR week in Solo (October 2015) and outlined some of the impacts of the StIRRRD programme. These include: <ul style="list-style-type: none"> <li>- Compilation of Threats / Disaster Prone Maps (liquefaction, landslides, debris floods, tsunamis),</li> <li>- Rapid screening of lifeline facilities to gauge resilience to hazards,</li> <li>- Evacuation Management in Public Buildings,</li> <li>- Disaster socialization problems through various media (television, radio, leaflets),</li> <li>- The establishment of a Regional Planning Department, in the faculty of Engineering UNTAD,</li> <li>- The formation of geological engineering study programmes at the Faculty of Engineering UNTAD in 2014,</li> <li>- The formation of a geology department at UNTAD,</li> <li>- Adding special education courses on DRR in the Physics Department (UNTAD) and in City Government departments.</li> </ul> </li> </ol>

## Other Impacts



30 June  
2018

1. Kemendesa have finally published their book on DRR (*DRR in Disadvantaged Regions: Disaster Management Guidelines based on Policy and Best Practice. Dec 2017*). It includes a chapter on StIRRRD, and also a chapter on one of StIRRRD' districts, Seluma.



*Kemendesa's DRR Book which features a chapter on StIRRRD and a profile of one of StIRRRD's districts.*

2. Esti Anantasari (UGM) was invited to be the resource person for Regular Discussion in the Department of Anthropology UGM, topic: "Anthropology and Study on Disaster" on 25 April 2018.

31 Dec  
2017

1. A mini-StIRRRD Activity was held at Trenggalek District in the Province of East Java on 15 September 2017. StIRRRD Team members Faisal Fathani and Wahyu Wilopo presented on DRR and held a focus group discussion with 70 participants. UGM are increasingly in demand to help set-up such workshops in non-StIRRRD districts.
2. UGM invited Lilik Kurniawan (BNPB), Dr. Sumedi Mulyo (Bappenas) as well as colleagues from Basarnas and LAPAN to give a training session on Competency Improvements in DRM. This was held on 22-24 August 2017 at UGM. 50 participants with 10 trainers attended and the session was fully supported by UGM. A competency framework for DRM has been advocated by StIRRRD for some time (it appears on the AGG Policy Framework Matrix).
3. At the National DRR Awareness Week event in Sorong, Bappenas gave a presentation in which it was apparent that StIRRRD featured prominently in

	its work programme moving forward. This is a positive indicator for the sustainability of StIRRRD
30 June 2017	<ol style="list-style-type: none"> <li>1. UGM has established a Centre of Excellence (Gama-Inatek) which focuses on Technical Innovations in Disaster Mitigation. It will pull a number of UGM's disaster risk management programmes together under one umbrella (including StIRRRD and CaRED). The Centre will play a key role in the sustainability of StIRRRD into the future. This initiative positions UGM as a leading university in this field.</li> <li>2. Member of the StIRRRD team, Avanti Pramaditya has been accepted for a New Zealand Aid programme scholarship to New Zealand. He starts in January 2018 and will attend Canterbury University working on aspects of liquefaction.</li> <li>3. The Springer Academic Publication on DRR in Indonesia was published in May 2017. It contains a Chapter written by StIRRRD team members on the LG-SAT and discusses results of the baseline survey of StIRRRD districts. Lead author Esti Anantasari has already been approached by other researchers, including from Australia. Encouraging StIRRRD team members to write papers about StIRRRD's activities is assisting their professional development. Academic (and other) publications are required to be identified and reported through to UGM's Management and is a requirement in order for staff to be permitted to allocate time for participation in programmes like StIRRRD.</li> </ol>
31 Dec 2016	<ol style="list-style-type: none"> <li>4. Kemendesa are looking to establish a resilience district programme similar to the StIRRRD programme. This programme would support the resilience village programme (DESTANA) in place by BNPB.</li> <li>5. In Central Java Province, a StIRRRD inspired DRR programme has been implemented in three districts (Cilacap, Purworejo and Karanganyar). These programmes do not cover the full range of StIRRRD activities due to limited budgets. The programmes in these districts are referred to as "Mini-StIRRRD."</li> <li>6. During the MOHA Nasional meeting, the minister urged the Head of districts/provinces not to replace head/staff of BPBD who are already experienced. UGM are seeking support to make this a regulation in future.</li> <li>7. Some staff from BNPB have been accepted to take a Masters degree at university in New Zealand supported by NZAID. Final acceptance is conditional on English language requirements being met. (<i>update: English requirements were not met</i>)</li> </ol>

## Appendix D: New Zealand Organisations involved in StIRRRD as at 30 June 2018

<i>Main Sub-Contractors</i>		
NIWA	Subject matter expert – flooding; coastal hazards, Risk, RiskScape.	Crown Research Institute
Beca	Subject matter expert – base isolation and EQ mitigation	Consultancy
Otago Regional Council	Subject matter expert – local govt. hazard management; debris flows; coastal hazards	Local Government
Greater Wellington Regional Council	Subject matter expert – local govt. hazard management; flooding; catchment management	Local Government
Absolutely Organised	Event Organisation (New Zealand Study Visits)	Privately owned company
Block Seven Ltd (Michael Goldsmith)	Subject matter expert – local govt. hazard management. Province Coordinator role (temporary replacement for Phil Glassey)	Privately owned company
<i>Other sub-contractors and/or in-kind participation (New Zealand Study Visits)</i>		
Ngāi Tāmanuhiri tribe Muriwai Marae	Indigenous knowledge on risks	Iwi
Ngati Porou, Gisborne	Indigenous knowledge on risks	Iwi
Joe McLeod	Facilitation/cultural expert	Self employed
Massey University	Subject matter expert – social sciences and New Zealand education sector	University
Canterbury University	Subject matter expert – volcanic ash impacts	University
Auckland University of Technology	Function host ; New Zealand education sector	University



Auckland University	Subject matter expert – volcanic hazards; community participation; resilience in the built environment	University
University of Waikato	Subject matter expert – coastal hazards	University
Canterbury Regional Council	Subject matter expert – Christchurch EQ	Local Government
Christchurch City Council	Subject matter expert – Christchurch EQ	Local Government
Auckland Council	Geographical and subject matter expert – emergency management	Local Government
Wellington City Council	Subject matter expert – tsunami blue line; emergency management; Resilient Cities; Mayoral visit	Local Government
Napier City Council	Geographical & subject matter expert – Napier EQ; Community engagement; emergency management	Local Government
Hawkes Bay Regional Council	Geographical & subject matter expert – Napier EQ; Community engagement; coastal hazards; East Coast Lab; emergency management	Local Government
Gisborne District Council	Geographical & subject matter expert – mayoral visit; iwi-local govt engagement	Local Government
Ministry of Business, Employment and Innovation	Subject matter expert – Building regulations	Government Department
Landcare	Subject matter expert – catchment management	Crown Research Institute
Kestrel Group	Subject matter expert – Lifelines Groups	Consultancy
Earthquake Commission	Subject matter expert – insurance	Government Entity
Dave Peacock	Subject matter expert – coastal hazards	Self employed
Cutriss Consultants	Subject matter expert – Resource consents	Consultancy

Department of Conservation	Subject matter expert – Volcanic hazards management	Government Department
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## Appendix E: Activity Risk Matrix – as at 30 June 2018

Risk ID	Risk categories	Author	Date Registered	Description	Impact severity	Probability of occurring	Overall Risk Rating	Risk Treatment	Risk Status	Risk Owner	Risk Actionee
1	Contract Performance	Michele Daly	13/05/2015	If actions are not completed after meetings then project may be delayed in part.	Minor	Likely	Medium	Allowing realistic time for actions to be completed. Actions Log for meetings.	Open	Michele	Sylvia
4	Contract Performance	Michele Daly	13/05/2015	If communication becomes an issue with UGM due to distance then project could become fragmented.	Moderate	Low	Medium	Regular joint project team meetings. Regular province coordinator meetings being held.	Open	Michele	Sylvia
6	Financial/Resourcing	Michele Daly	24/06/2015	If review of other MFAT work (Response Framework) being undertaken in Indonesia results in the Activity being impacted then unplanned costs or delays could be incurred	Minor	Unlikely	Low	Seek regular updates from MFAT; Keep in touch with National Response Framework project manager (=Jane Rovins). Seems to be limited connectivity between the two and unlikely we'll get asked to contribute.	Closed	Michele	Michele
9	Financial/Resourcing	Michele Daly	24/06/2015	If UGM are asked to contribute to other similar projects or replicates of the project (e.g. Java districts) they may not have the capacity to finish the original project.	Major	Unlikely	Medium	UGM asked to prioritise StIRRRD. UGM have assigned non-StIRRRD personnel to other spin-off projects and recognise this as a risk. Appropriate action is being taken.	Open	Michele	Michele
11	Financial/Resourcing	Phil Glassey	8/07/2015	If GNS needs to spend additional money to use specialist non-GNS staff to cover capacity issues, we may be overspent.	Minor	Possible	Medium	Build capacity within the team; identify preferred suppliers (e.g. NIWA)	Open	Michele	Michele/Phil
13	H&S	Sylvia Riches	8/07/2015	<i>Driving Conditions in Indonesia.</i> If GNS staff, secondees or contractors are involved in a car accident this could have immediate and long term impacts on staff in the project.	Major	Unlikely	Medium	H&S guidelines provided to GNS & UGM staff listing expectations and appropriate behaviours. Use fit for purpose vehicles (e.g. 4WD to Morowali). Require experienced drivers. Require appropriate speed. Require adequate rest periods for drivers.	Open	Sylvia	Sylvia
14	Contract Performance	Michele Daly	8/07/2015	If people change jobs or get overloaded, we may lose key project staff. <b>Project Team members taking on additional tasks particularly as the end of the project gets closer. (updated May 2018)</b>	Moderate	Almost Certain	High	Keep project staff engaged. Have back-ups in place. Introduce more staff into the project. More staff have been introduced (Richard; Emily; Maureen; Michael) Discuss stress management techniques. Keep discussing at PTMs.	Open	Michele	Michele
15	Contract Performance	Michele Daly	8/07/2015	If the Project Director (GNS or UGM) moves on this could compromise the completion of the project (delays and reduced quality)	Moderate	Unlikely	Medium	Have back-ups in place (done). Phil as Deputy Director on extended leave in 2017. Consider appointing this role temporarily. Current plan is to spread duties across the team.	Open	Michele	Michele/ Faisal
16	Financial/Resourcing	Michele Daly	9/09/2015	If we are asked to undertake additional work (by e.g. Indonesian Government), we may not have the resources to do so affecting delivery of the main Activity.	Moderate	Possible	Medium	Ensure work is kept within project scope. Regular communication via AGG. Ensure enough capacity to be responsive to a degree. The Government currently have no budget for additional work due to budget cuts.	Open	Michele	Michele/ Faisal
17	Contract Performance	Michele Daly	9/09/2015	The pace of the Activity may lead to milestones and tasks not able to be completed in the timeframe required (slippage)	Moderate	Likely	Medium	If required provide additional GNS and UGM resource (done but ongoing and requiring regular review). Regular communication with client. Maintain focus on timelines.	Open	Michele	Michele/ Faisal
18	Reputation/Brand	Michele Daly	9/09/2015	A lack of communication with UGM Rektor could adversely affect the high level UGM/GNS Relationship	Major	Unlikely	Medium	UGM programme director to keep regular communication lines open with UGM Rektor. GNS to keep CEO and DD regularly updated. UGM and GNS behaviour is as trusted partners (open and full communication).	Open	Michele	Michele/ Faisal

Risk ID	Risk categories	Author	Date Registered	Description	Impact severity	Probability of occurring	Overall Risk Rating	Risk Treatment	Risk Status	Risk Owner	Risk Actionee
19	Contract Performance	Michele Daly	9/09/2015	If UGM's capacity is not increased, some specific tasks may not get completed.	Moderate	Possible	Medium	Open and direct conversations with UGM programme directors. Build more capacity into the project.	Open	Michele	Michele/ Faisal
20	Contract Performance	Michele Daly	9/09/2015	If there is a lack of focus on the DRR Network, it may not get started.	Moderate	Possible	Medium	Regular communication with UGM programme directors.	Closed	Michele	Michele
21	Contract Performance	Michele Daly	9/09/2015	If there is a lack of focus on Action Plan coaching & support (UGM milestone), then there could be limited AP implementation	Moderate	Likely	High	Regular communication with UGM programme directors. Fortnightly Province Coordinator meetings established.	Open	Michele	Michele
22	Financial/Resourcing	Michele Daly	10/12/2015	If we are asked to contribute to Indonesia's Sendai Framework Reporting (expectations of UNDP), we may not be able to meet timeframes or standards required. This needs to be carefully managed.	Minor	Possible	Medium	Don't over-promise; regular communication. Risk has not eventuated.	Closed	Michele	Michele
23	H&S	Michele Daly	10/12/2015	If travelling to West Sumatra, there is the potential for rabies (also NTB)	Major	Unlikely	Medium	Regular review; Consider immunisation.	Open	Phil	Sylvia
24	Reputation/Brand	Michele Daly	10/12/2015	If the Blue Line Project in Pesisir Selatan/Bengkulu is managed poorly, GNS & UGM reputations could be at risk and the community not well served by the resulting outcome.	Moderate	Unlikely	Medium	Communication with BNPB; Have letter to BNPB drafted and ready to send if needed (re concerns); maintain oversight and provide regular advice to BNPB and BPBD. Consider including socialisation aspects in Community project. Recent visits have indicated projects in Padang and Bengkulu are being managed reasonably well -lessons to be learned for NZ in the Padang experience.	Open	Phil	Phil
25	Contract Performance	Michele Daly	10/12/2015	If AGG meetings are not better run & organised, Gol could lose interest in the Activity and the project will not be sustainable.	Major	Likely	High	Adequate AGG meeting preparation; better communication with AGG between meetings; hold mtg/email with MFAT prior to AGG meeting; provide translation at mtg; provide more regular email updates. MFAT taking on more duties. Special session AGGs to be held to focus on single issues (e.g. sustainability)	Open	Michele	Michele/ Faisal
26	H&S	Michele Daly	21/01/2016	Bombings /unrest in Jakarta while team on the ground	Major	Possible	High	Mitigation - avoid obvious hot spot;; keep up to date with advisory notes from MFAT; Where possible avoid meetings in public places, hotel foyers and the like. Choose Business class hotels with good security. Continue to have risk assessments completed each time a team or individual travels to Indonesia. Avoid Jakarta during Asian games 18 August-2 September or any other large events we are aware of.	Open	Michele	Sylvia
27	Contract Performance	Michele Daly	4/02/2016	West Sumatra province feel like they are not included in the activity and are not keen on signing the MOU.	Moderate	Possible	Medium	Follow up with UGM. Ensure issue is resolved as soon as possible. Resolved.	Closed	Phil	Phil
28	Contract Performance	Michele Daly	2/03/2016	Under-delivering on project tasks (i.e. quality of some outputs - lack of time and effort in places)	Major	Likely	High	Bring in additional resources. Focus on catching up. Additional resources brought in (Richard; Emily; Maureen; Michael; others?)	Open	Michele	Michele/ Faisal
29	Contract Performance	Michele Daly	18/03/2016	Reports getting behind schedule Refer also #17	Moderate	Almost Certain	High	Bring in additional resources. Focus on catching up. Good communication with MFAT.	Open	Michele	Michele/ Phil
30	Contract Performance	Michele Daly	18/03/2016	Action Plan Implementation - loss of momentum and district interest. Delays in AP revision and translation.	Moderate	Likely	High	Pro-active district contact between visits by UGM; topic for UGM-GNS Project team meetings; Pro-active implementation plan and response log created; More structure around final AP workshops. Involve Firlu at MFAT to assist in resolving this issue. Physical visits required. May resolve itself once Community projects get underway.	Open	Michele	Michele/ Faisal

Risk ID	Risk categories	Author	Date Registered	Description	Impact severity	Probability of occurring	Overall Risk Rating	Risk Treatment	Risk Status	Risk Owner	Risk Actionee
31	Financial/Resourcing	Michele Daly	12/05/2016	Other workload affecting time on StIRRRD by Province Coordinators/ Directors Refer also #14 & #15.	Moderate	Almost Certain	High	Have back-ups in place. Introduce more staff into the project. Delegate other project tasks where possible. Prioritise time to StIRRRD. Trial Province Coord. Mtgs (e.g. 4 people covering two provinces). Use mtgs for info gathering as well. Copy Sisca into all emails. Proactive monitoring of due dates. Early heads-up if timelines not able to be met.	Open	Michele	Michele/ Faisal
32	H&S	Michele Daly	26/05/2016	Zika virus - may be more of a problem in Indonesia than previously thought.	Major	Unlikely	Medium	Check SOS and other sources (MFAT; WHO) for most up-to-date info before each visit.	Open	Nico	Sylvia
33	Contract Performance	Michele Daly	5/11/2015	Volcanic eruptions and bush fires could disrupt air travel in and out of Indonesia as well as within, impacting on being able to undertake scheduled visits.	Minor	Possible	Medium	Keep on top of information relating to eruptions and bush fire events. Note: one such event has occurred already.	Open	Nico	Sylvia
34	Contract Performance	Kelvin Beryman	9/06/2016	If a major natural event such as the 2004 EQ/tsunami occurs, it could cause a major national distraction causing StIRRRD to lose momentum.	Moderate	Unlikely	Medium	Contract re-negotiation. Respond to the event by way of communication with affected districts. Leverage off StIRRRD to get resources for affected districts.	Open	Michele	Michele/Faisal
35	Business Continuity	Michele Daly	27/10/2016	Leadership changes in Sumbawa & Mataram - risk to the project if not carefully managed. Sumbawa seems to be in hand? Staff rotation in general across all districts. Refer also #35.	Moderate	Likely	High	communication with BNPB, by province co-ordinators and UGM representatives. Esti will visit District in person to maintain relationship. Mataram will need following up in person. Additional training to be provided. Coaching Strategy for each district to be established (Province Coordinators). List of strategies created for Toolbox (as will be an ongoing problem). Note: Likely to have to accept Mataram will fall by the wayside. <b>No longer higher than any of the other districts, UGM are actively working with the relevant districts.</b>	Open	Michele	Province co-ordinators
36	Business Continuity	Michele Daly	27/10/2016	Donggala disconnection (lack of contact) affecting AP implementation. Refer also #30	Major	Unlikely	Medium	Additional visits and communication by UGM province co-ordinators. Draft up specific questions for Donggala representatives. Agung to visit in person. GNS to follow-up. Resolved - Donggala ok.	Closed	Michele	Agun & Esti
37	Business Continuity	Michele Daly	9/11/2016	Internal Resources - Phil Glassey unavailable April 17-November 17. Refer also #10.	Major	Almost Certain	closed	Share the workload across the other team members. Appoint a temp Deputy over this period. Current plan is to spread duties across the team.	Open	Michele	project team
38	Reputation/Brand	Michele Daly	19/04/2017	Change in Rektor from August 2017 means new Rektor unfamiliar with StIRRRD and we won't necessarily have the same support. Refer also #18.	Moderate	Almost Certain	High	UGM to manage communications during transition to new Rektor. Enlist Bu Rita's help with transition. Risk has not materialised - good support from the new Rektor.	Closed	Michele	Michele/Faisal
39	Contract Performance	Michele Daly	4/05/2017	When Pak Yoga leaves Kemendesa we lose a key person in Kemendesa which may affect the sustainability of the project going forward.	Moderate	Almost Certain	Medium	Make contact with Kemendesa -ensure continuity of contact by UGM.	Open	Michele	Michele/Faisal
40	Reputation/Brand	Michele Daly	15/06/2017	If other MFAT contracts are under-performing it could affect our relationship with MFAT.	Moderate	Possible	Medium	Focus on good performance of this contract. MFAT-GNS reln. likely to be affected only for future contracts.	Open	Kelvin	Kelvin
42	Contract Performance	Michele Daly	26/07/2017	If GoI (particularly BNPB) don't take responsibility for the roll-out of StIRRRD the sustainability of the project will be affected affecting evaluation of the Activity overall and negatively impacting future projects.	Major	Possible	High	See #25 above. Develop Engagement Strategy with MFAT; more regular meetings with individual agencies; work at next level down in agencies (than AGG reps). Next AGG meeting to focus on sustainability issues. More confident that StIRRRD is being referred to in long term strategies.	Open	Michele	Michele
43	Financial/Resourcing	Michele Daly	21/09/2017	Dropping the 4th community project due to pressure on the budget as a result of unscheduled visits and additional tasks (e.g. National DRR Awareness Week)	Moderate	Likely	closed	Early communication with MFAT (monthly and 6-monthly reports). A decision to be made early 2018 as likley LOV will be required as 4 community projects are contracted.	Open	Michele	Sylvia
44	Financial/Resourcing	Michele Daly	19/10/2017	Support by MFAT of the Massey (Johnston/Rovens/ADPC) project could put future revenue at risk and eventually itself become StIRRRD3 (reducing \$ available to support other StIRRRD3 projects).	Catastrophic	Possible	High	Meet with Massey team and seek input to ADD (for alignment); meet with MFAT and understand drivers; ensure StIRRRD review is well managed; maintain good relationships with GoI stakeholders (so they continue to support StIRRRD) e.g. at AGG meetings. <b>The joint venture between Massey and GNS is currently being reviewed, as is the working relationship, this will inform the risk going forward.</b>	Open	Michele	Michele/Faisal
45	Financial/Resourcing	Michele Daly	19/10/2017	<b>60 year anniversary celebrations.</b> A lack of effort here will result in a missed opportunity for StIRRRD and reduced visibility. This is important for next steps and sustainability.	Moderate	Possible	Medium	Arrange meetings with the Embassy. Focus on a few agreed tasks, e.g. MoU with UGM, LIPI? And possibly a visit of key stakeholders (will need additional budget support). Pull in additional resources (Suzy Paisley)	closed	Michele	Sylvia/ Susie
46	Financial/Resourcing	Michele Daly	10/11/2017	<b>MFAT initiated review of StIRRRD.</b> A bad review will put StIRRRD3 at risk and impact on future contracting opportunities.	Catastrophic	Possible	Medium	Cooperate and resource effort in preparing for the review. GNS workshop to provide input to the review. Complete outstanding reports and other deliverables. <b>Overall review is a success, a large amount of work and effort was put into the review by both UGM and GNS.</b>	Open	Michele	Michele
47	Financial/Resourcing	Richard Woods	10/05/2018	New funding announced by the Government, new funding, not at the expense of any existing funding in Indonesia.			Medium	<b>Opportunity to use the money, clarity around money. Shift of direc</b>	Open		

## APPENDIX F – Abbreviations

AADMER	ASEAN Agreement for Disaster Management and Emergency Response
AGG	Activity Governance Group
AHA	Asean Humanitarian Agency
AIFDR	Australia-Indonesia Facility for Disaster Reduction
ASEAN	Association of Southeast Asian Nations
AusAID	Australian Agency for International Development
BAPPEDA	Badan Perencanaan Pembangunan Daerah (Indonesian Regional body for planning and development)
BAPPENAS	Badan Perencanaan Pembangunan Nasional (State Ministry for National Planning and Development Agency)
BMKG	National Meteorological and Geophysical Monitoring Agency
BNPB	Badan Nasional Penanggulangan Bencana (National Disaster Management Agency)
BPBD	Badan Penanggulangan Bencana Daerah (Local Disaster Management Agency)
BPPT	Badan Pengkajian dan Penerapan Teknologi (Agency for the Assessment and Application of Technology)
DRM	Disaster Risk Management. Includes reduction (DRR), as well as preparedness, response and recovery (DM)
DRR	Disaster Risk Reduction
GAMA-Inatek	
GFDRR	Global Fund for Disaster Risk Reduction (administered by the World Bank)
IMDFF-DR	The Indonesian Multi-Donor Fund Facility for Disaster Recovery (administered by the World Bank)
ISO	International Standards Organisation
ITB	Bandung Institute of Technology
JICA	Japan International Cooperation Agency
Kemendagri	Ministry of Home Affairs (MOHA)
Kemendesa	Ministry of Village Development, Disadvantaged Regions and Transmigration (formerly KPDT then KDPDPT)
KPDT	Kementerian Pembangunan Daerah Tertinggal (Ministry of Disadvantaged Areas Development)
MoHA	Ministry of Home Affairs
NGO	Non-Governmental Organisation
PMT	Project Management Team

PU	Public Works Department
SCDRR	Safer Communities Through Disaster Risk Reduction (SCDRR) in Development (UNDP funded programme, BAPPENAS & BNPB implementing agencies)
UGM	University of Gadjah Mada
UNAND	Andalas University
UN-OCHA	United Nations office for the Coordination of Humanitarian Affairs
UNDP	United Nations Development Programme
UNRAM	Mataram University
UNTAD	Tadulako University
USAID	United States Agency for International Development