

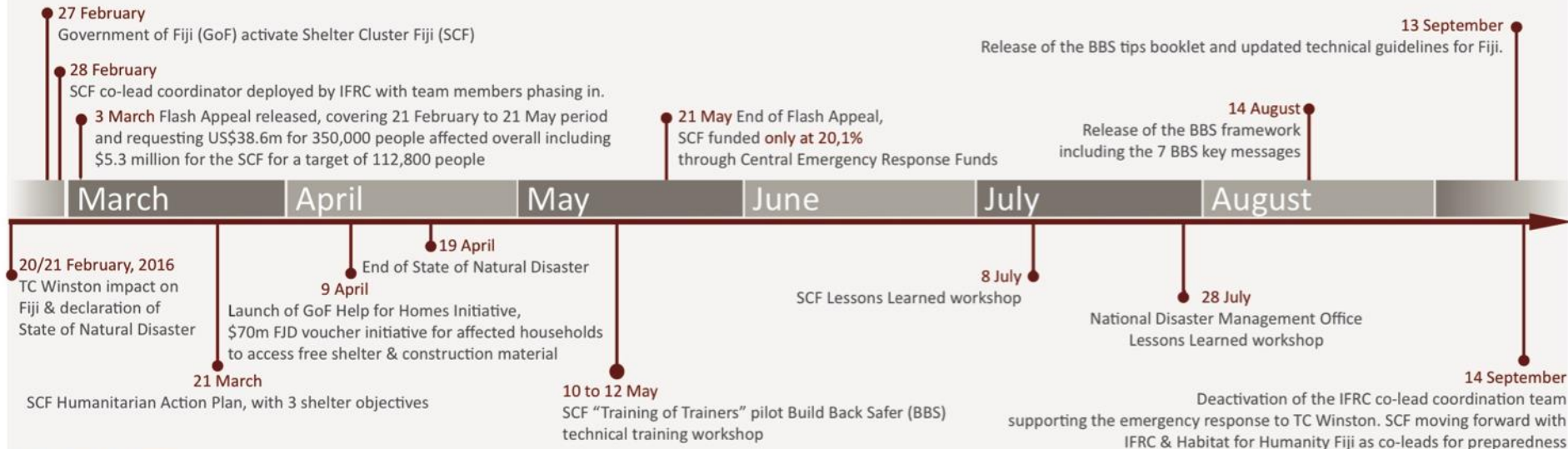
Help for homes & Shelter Cluster Fiji

How to engage in massive Government cash/voucher based response

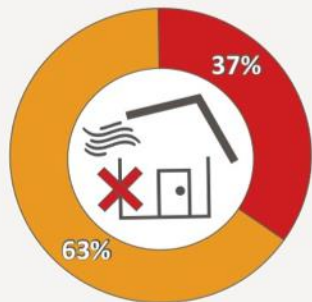
Overview

- **Category 5 Severe Tropical Cyclone Winston**, the most severe ever recorded in the South Pacific, hit Fiji on **20 and 21 February**.
- 44 people have been confirmed dead.
- **62,000 people were evacuated** in close to 900 evacuation centres.
- **Nearly 350,000 people** are living in the cyclone's path were affected.
- **More than 31,200 houses** damaged or destroyed
- The government declared a **State of Natural Disaster for 30 days** and officially requested international assistance.

TIMELINE

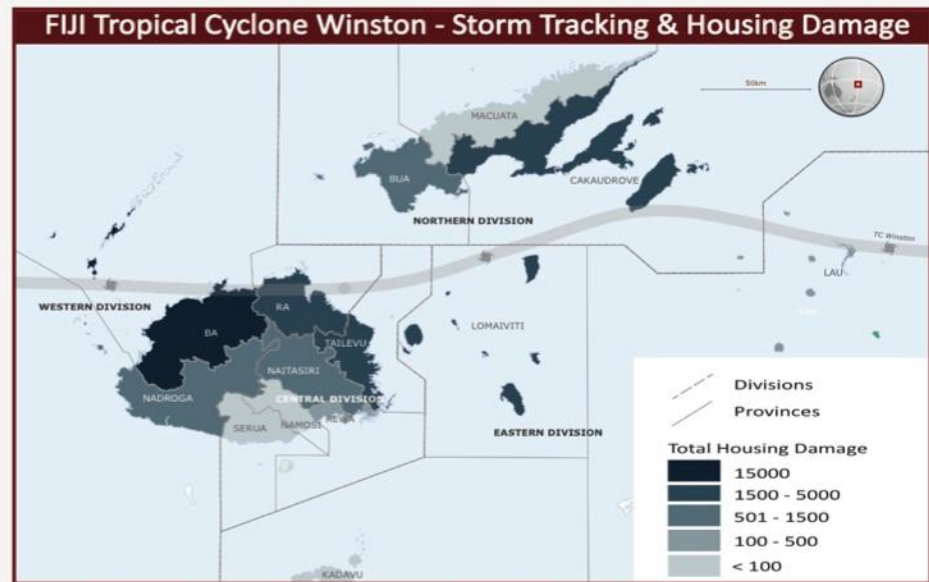


IMPACT



more than
31,200 houses
damaged or destroyed
19,700 (63%) damaged
11,500 (37%) destroyed

In the most affected islands, such as **Koro**, **100% of houses were damaged or destroyed** (Source: PDNA)



Goal

The goal of the Shelter Cluster is to support owner-driven recovery by investing in disaster preparedness and risk reduction while prioritising the most vulnerable people, families and communities.

Objectives

■ Objective 1: Emergency Shelter

- **Provision of emergency shelter items and NFIs such tents, tarpaulins, shelter kits, kitchen sets and solar lights, supported by appropriate IEC material.**

■ Objective 2: Support to self-recovery

- Support the most vulnerable households through **the early stage of owner-driven recovery** with items such as CGI, fixing kits, toolkits, core shelter or their cash/voucher equivalent, along with appropriate training and IEC material.

■ Objective 3: Technical support

- Provide **education information and communication on safer construction principles**, and community-based hazard awareness, preparedness and DRR, during all phases of the response.
- Provide **technical training on building back safer houses** for skilled/semi-skilled carpenters during all phases of the response.



Help for Homes

- HfH initiative will provide **financial assistance for homeowners to rebuild their homes themselves** by giving them access to building materials.
- **\$70 million FJD** available for this initiative
- **Target** - affected Fijians households earning less than \$50,000 FJD a year
- **pre-paid electronic card** will be provided with a set amount on it and a pin number **to purchase the building materials from selected hardware outlets** (can be purchased at different hardware stores)
- **3 packages**
 - F\$ 1,500 for partial roofing damage
 - F\$ 3,000 for serious roofing damage
 - F\$ 7,000 for almost and completely destroyed
 - F\$ 1,500 for informal settlers

Shelter Cluster & Help for Homes

- **IEC material to households**
 - ✓ Build Back Safer poster in A2 formats at **distribution points & in flyer/booklet** distributed by Ministry of information
 - ✓ **Build Back Safer tips booklet developed for the second round** of \$20 million FJD. First printing target 35,000 copies by Fiji Red Cross, Habitat for Humanity and private sector (hardware stores)
- **Coordination Support** Between **relevant HfH ministries and the Shelter Cluster NGOs and partners** to ensure a coordinated approach and encourage information flow.
- **A three day “Training the Trainers” pilot BBS technical training** program was run by Shelter Cluster and Habitat for Humanity Fiji, to be replicated in most of the affected communities.
- **At least 2,300 semi-skilled builders/skilled carpenters** will access Build Back Safer technical training, through construction of **300 transitional and core shelters**

THESE TIPS WILL
MAKE YOUR HOUSE
STRONGER

NA VEIKA ME TAURIVAKI
OQO ENA TAQOMAKA NA NOMU
VALE KEI NA NOMU MATAVUVALE
ENA GAUNA NI CAGILABA

ये टिप्स आपके घर और
परिवार को तूफान से बचायेंगे

Tips to Build Back Safer

Na veika me taurivaki e na kena tara vou tale vakamatau e dua na vale

अच्छे ढंग से पुनःनिर्माण करने का तरीका

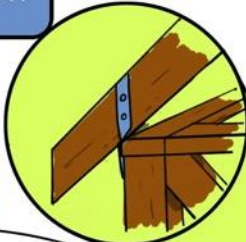


Shelter Cluster Fiji
ShelterCluster.org
Coordinating Humanitarian Shelter

PURLIN TO RAFTER
VAKOVAKO NI KAVA KI NA I SA
पेलिन से राफ्टा तक



RAFTER TO TOP PLATE
TOP PLATE TO STUD
I SEMA NI SA
राफ्टा से टोप प्लेट टोप
प्लेट से स्टड तक



BUILD SAFER
BUILD WISER. THIS WILL SAVE
YOU MONEY. MAKE SURE YOU DON'T MISS ANYTHING
OUT... HAPPY BUILDING!!
TARA NA VALE E KALUKALUA, TARA VALE E NA YALO
YALOMATUA. KAKUA NI CALATA E DIA NA KA. TARAVAKE E NA
MADAU!!
सुरक्षित रूप से बनाइए, बुद्धिमानी से बनाइए, इससे आपके
पैसे बचेंगे। याद रहे किसी चीज़ को मत
भूलिएगा। खुशी खुशी से बनाइए।



TOP PLATE
VELETI E CAKE
पेलिन

STUD TO
BOTTOM PLATE
BOTTOM PLATE TO
FLOOR JOIST
I SA KI NA VELETI E RA. VELETI
E RA KI NA I VAKOVAKO
NI FLOOR
स्टड से बोटम प्लेट बोटम
प्लेट से फर्श की जोड़



POST
DURU
खंटा

BEARER-TO POST
SEMA NI COKA KI
NA DURU
बीम से खंटा तक



PURLIN
VAKOVAKO NI
KAVA
पेलिन

RAFTER
I SA
राफ्टा

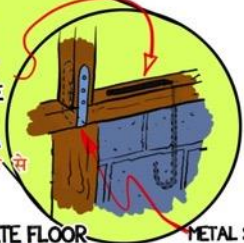
ROOF BRACING
I VAKADEI NI DOKA
छत बंधनी

STUD
LATU
स्टड

CORNER WALL BRACING
VAKAUKAUWA NI TUTU
कोने की गीवार के लिए ब्रेस

BOTTOM PLATE
VELETI E RA
बोटम प्लेट

REINFORCEMENT ROD BENT
THROUGH BOTTOM PLATE
KAUKAMEA MET VAKAUKAUWA
KA MULOI KI NA VELETI E RA
मजबूत लोहा मोड़ा गया बोटम प्लेट से



STUD TO BOTTOM PLATE,
BOTTOM PLATE TO CONCRETE FLOOR
I SA KI NA VELETI E RA. VELETI E RA
KI NA BUTURARA SIMEDE
स्टड से बोटम प्लेट बोटम
प्लेट से सीमेंट का फर्श

METAL STRAP
NAILED TO TIMBER
VAKADEI VAKO ENA
KAUVARO
लोहे की पट्टी लकड़ी
से ठोका गया

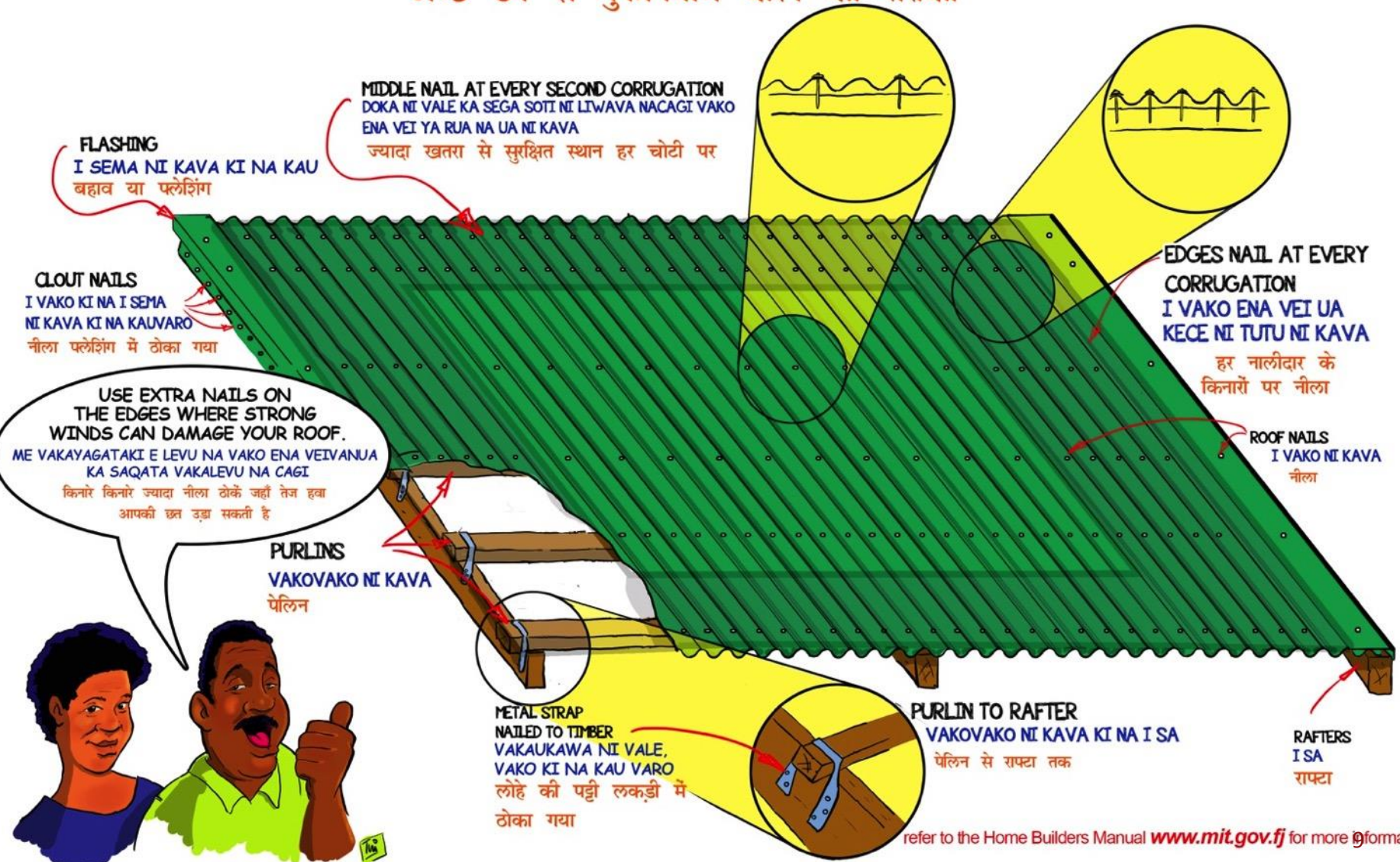
Tips to Build Back Safer

NA VEIKA ME TAURIVAKI ENA KENA TARA VOUE TALE E DUA NA VALE

अच्छे ढंग से पुनःनिर्माण करने का तरीका



Shelter Cluster Fiji
ShelterCluster.org
Coordinating Humanitarian Shelter



BASELINE DATA ON LOCAL BUILDING CULTURE



STEEPLY PITCHED, FOUR SIDED -HIP-ROOFS



Traditional *jure* house with steeply pitched and hip roof

NARROW EAVES TO AVOID ROOF TEARING



Eaves are narrow in traditional bure houses in order to minimise roof tearing caused by wind.

BUILT ON A MOUND OR ON STILTS TO HELP DRAINAGE AND PREVENT FLOODING



Traditional bare house built on a mound

6 LARGE HARDWOOD POSTS BURIED DEEPLY IN THE GROUND



Interior of pure house with wooden structure

5 ROUNDED CORNERS FOR IMPROVED AERODYNAMICS



Rounded corners are found in either traditional and new built houses. This house is built with CI sheet

4 HOUSES SURROUNDED BY VEGETATION TO REDUCE WIND IMPACTS



This house's surroundings are full of trees which will mitigate wind effects.

LEARNING FROM HISTORY

3.1. LAND TENURE

More than 80 percent of the land is registered by the land owning unit (*mosogal* / clan) of indigenous Tjars while the others include State hold, freed land and leases.

3.2. LOCAL HOUSING & CONSTRUCTION TYPES

Existing housing can be subdivided according to various quality and materials used. Low-cost and/or owner-built houses can be classified into one of the three categories: traditional, transitional or formal housing.



lightweight flexible construction and 8-degree tipped roof for better wind resistance



Transitional justice: Unsettling
past damage after 2011 capture-Washington



Form low-cost housing:
concrete block masonry with anchoring for roof structure



Transitional O-shirt: housing
a sliver on ribs for better protection from fluids

REMARKS ON THE THREE CONSTRUCTION TYPES.

- According to recent census, only a very limited portion of the population is actually living in traditional housing, so-called *bure*. Most of the families live in "temporary" (lean-to, walk wiskered) and "permanent" (bungalows, walk-tiled) dwellings.
- Building materials for the traditional and formal types must be imported in significant quantities from outside the country and then shipped from distribution points. This increases the overall cost and can result in long waiting periods before a house can be assembled. This situation is further exacerbated in the aftermath of a disaster increasing recovery time and costs.
- Generally, traditional and transitional houses have external kitchens in a detached small building and pit toilet located outside.
- Kitchens and additional buildings, which are usually much less sturdily built than the homes, are frequently almost totally wiped out during cyclones and earthquakes. Flying debris from the structures (occasionally even the entire units become airborne) often causes severe damage to houses that might otherwise have withstood the storm.

FBI | Bureauwide Sale of John Edwards' Car, M. & C. Corp.'s Records | October 2011

62734

A LITTLE MONEY GOES A LONG WAY TO MAKING YOUR HOUSE CYCLONE RESISTANT

Making your house more cyclone resistant need not take a lot of money. But it will take plenty of planning and work.

Here are some of the ways you can start to strengthen your home with small amounts of money to buy key materials

1. Strapping and wrapping:

1. Strapping nailed with clouts
2. Wrapping tightly with flexible wire
3. Reinforcing with fishing line
4. Wrapping with coconut string or similar
5. Nailing a block of wood

Joints can be strengthened by longer nails, using square twist nails, and skewing them at an angle.

BUT EVERY JOINT NEEDS MORE THAN NAILS

2. Shutters:

Make shutters for every window. These can be made using either timber or CGI. Keep the cyclone on the outside of your house.

3. Brace your roof, walls and stumps:

Diagonal bracing from the top to the bottom of each of your wall and roof panels increases the strength of your house to resist collapse.

4. Replace roofing nails with cyclone screws:

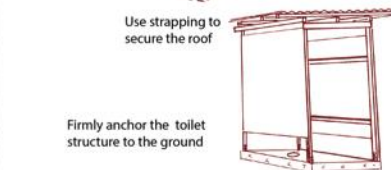
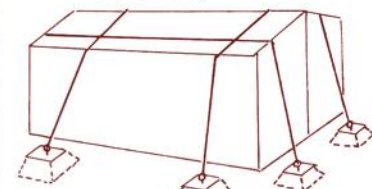
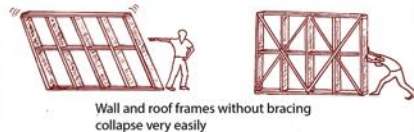
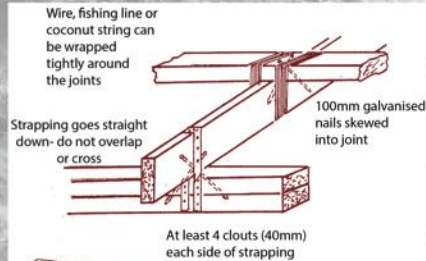
This can be done bit by bit as you can afford it. Start around the edges as this is where the roof can start to lift. Screw every ridge.

5. Pour concrete anchors with exposed rings or hooks

These can be used to tie ropes over your house. Make sure the concrete is wider at the bottom than at the top.

6. Build your toilet properly

Many toilets are the first structures to get blown away. Repairs can be expensive, not to mention the inconvenience of having no toilet.



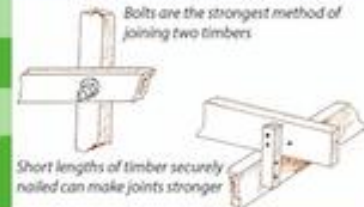
Partager

WHEN NAILS ARE NOT ENOUGH

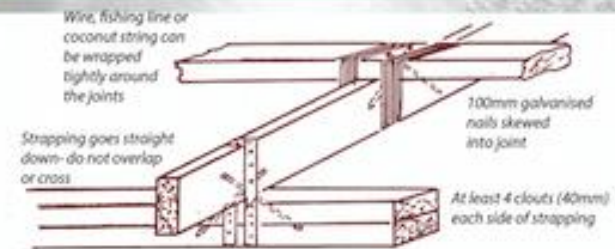
All the materials that make up a house have to be strongly joined to each other, and then the whole house has to be firmly anchored to the ground.

When a house is subjected to the force of a cyclone, nails are not strong enough to hold it together. Where materials are joined together, those joints must be reinforced with one or more of the following:

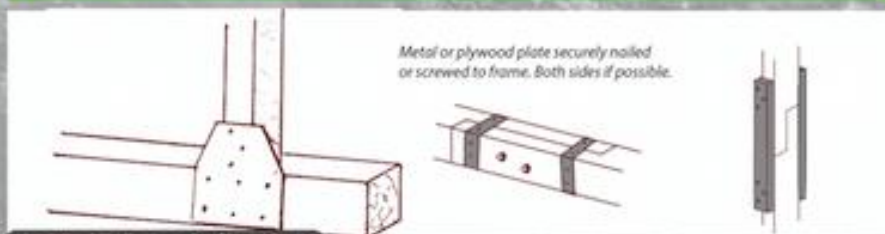
- longer nails strengthen joints, especially if they are twisted and skewed. ✓
- Screws hold stronger than nails ✓✓
- and coachbolts are stronger than screws ✓✓✓
- joints that are drilled and bolted are the strongest. ✓✓✓✓



All the above methods of fixing a joint are made stronger by the use of strapping, wire, fishing line or wooden blocks.



Where two or more lengths of timber meet, as in roof trusses, the joints can be further reinforced by metal or plywood plates that are screwed or nailed over the joint.



refer to the Home Builders Manual www.mit.gov.fj for more information



Retrofit Your **EXISTING** House For Cyclones

**WHEN RENAILING
ROOF & WALL FRAMES,
USE 100mm NAILS
RATHER THAN 75mm.**

STRAP ROOF FRAME TO TOP PLATE

Materials: 25mm strapping,
40mm clouts.
Tools: hammer, tin snips.

STRENGTHEN ROOF STRUCTURE

Materials: plywood or steel plates,
25mm strapping, 40mm clouts.
BRACE UNDERSIDE OF PURLINS OR
RAFTERS.
Materials: 25mm strapping, 40mm
clouts.

STRAP PURLINS TO TRUSSES OR RAFTERS

Materials: 25mm strapping, 40mm
clouts.
Tools: hammer, tin snips.

STRAP STUDS TO TOP & BOTTOM PLATES

Materials: 25mm strapping
40mm clouts.
Tools: hammer, tin snips

SECURE ROOF CAPPING

Materials: 65/75mm Roofing
nails with washer or 65mm
cyclone screws.
Tools: Hammer, punch,
tech or ratchet drive.

CYCLONE SCREW YOUR ROOF.

Materials: 65mm
cyclone screws with
washers. Punch.
Tools: tech driver, or
ratchet drive, hammer,
punch

SHUTTER YOUR WINDOWS

Materials: 75x25 T&G Timber
60mm nails, 2 hinges & screws
sliding bolt lock.
Tools: saw, hammer, screwdriver,
tape, square.

**CAST CONCRETE PIERS AROUND
YOUR HOUSE WITH HOOKS TO
SECURE ROPES OVER YOUR HOUSE.**

ANCHOR TOP PLATE

Materials: 3mm x 50mm steel strap.
cement, gravel, sand, rocks, screws
and bolts.
Tools: shovel, drill bits, adjustable
spanner, hammer, screwdriver.

BOLT BEARERS TO POSTS, STRAP JOISTS TO BEARERS AND BOTTOM PLATE

Materials: 175mm x 12mm bolts,
25mm strapping, 40mm clouts.
Tools: Drill & bit, tin snips, hammer.

BRACE ALL WALL & ROOF PANELS

Materials: 25mm strapping, 40mm
clouts.
Tools: tin snips, hammer.



Shelter Cluster & Response

- **58 organizations & agencies have attended Shelter Cluster Fiji (SCF) meetings for the TC Winston response** (Source: SCF meeting attendance/contact list)
- **30 organizations & agencies have been contributing to the shelter response through the Government of Fiji & 17 partners** (Source: SCF 3Ws)

| Response – material support | Total nb HouseHolds supported | GoF | Partners |
|--------------------------------------|-------------------------------|--------|----------|
| Objective 1 Emergency Shelter | 36,609 | 12,607 | 24,002 |
| | | 35% | 65% |
| Objective 2 Support to Self Recovery | 28,376 | 24,505 | 3,871 |
| | | 86% | 14% |